Multidimensional Poverty in Pakistan: Regional and Temporal Analysis

By

Sania Rehmat

Ph.D. Economics

Registration No: 03091613008

School of Economics

Quaid-i-Azam University

Islamabad, Pakistan

Multidimensional Poverty in Pakistan: Regional and Temporal Analysis

By
Sania Rehmat
Ph.D. Economics

Supervisor

Dr. Muhammad Idrees
Professor
School of Economics
Quaid-i-Azam University, Islamabad.

Submitted in partial fulfillment of the requirements for the
Doctor of Philosophy in Economics
at School of Economics, Faculty of Social Sciences,
Quaid-i-Azam University, Islamabad.
2024

Acknowledgements

All praise be to Allah, on Whom we depend for sustenance and guidance. I am grateful to Almighty Allah for granting me the opportunity and endurance to successfully complete my research endeavor. I extend my deepest gratitude to my supervisor, Prof. Dr. Muhammad Idrees, for his invaluable guidance, support, and expertise that aided me through this demanding process. I am humbly thankful to him for his kind attitude, valuable suggestions, cooperative and affectionate behavior, impetuous guidance, and moral support.

I also express sincere gratitude to my brothers, Dr. Waqar Azeem and Dr. Sikander Azeem, for their continuous support, motivation, and encouragement throughout my career. I want to thank my sisters, Zinnia, Irum, and Rooma; their prayers were instrumental in helping me fulfill this challenging task. Words are insufficient to praise them. Special acknowledgment goes to my sister Rooma, who sacrificed her job twice to care for my son during my absence.

I am very sincerely grateful to my mother for her tireless efforts in enabling me to seek higher values in life, as well as for her financial and moral support, patience, and prayers for my success. After getting married, my great husband Mumtaz Alam played a significant role in helping me complete my Ph.D. I am grateful to him for providing unwavering support. I extend my thanks to all my in-laws as well.

Furthermore, I express heartfelt gratitude to all my teachers for their unwavering dedication to enhancing my understanding of various subjects throughout my coursework. Sincere thanks go to my friends Maimoona,, Wassai, Asma, Hafsa, Saba, Haseena and Afsha for their prayers and consistent moral support. Additionally, I would like to acknowledge and commend the invaluable support and prompt responses from the administrative staff of the School of Economics, particularly Mr. Sajid, Mr. Zahid, and Mr. Asif. Your assistance played a crucial role in making my academic journey a rewarding experience. Thank you all for your contributions to my education and personal growth.

Sania Rehmat

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

LIST OF ANNEXURES

Abstract

The concept of poverty has evolved into a complex interplay of socioeconomic factors rather than mere monetary deprivation. There is an urgent need for researchers to move away from basic, one-dimensional assessments. As a result, the use of multidimensional diagnostics becomes critical for generating realistic and relevant policy recommendations. The study focuses on mapping multidimensional poverty in Pakistan from 2004–2005 to 2019–20, employing Amartya Sen's capability approach and the Alkire Foster (2011) methodology. The present study has considered education, health and living standard as the dimensions of wellbeing. It is based on micro data sets of Pakistan Social Living Standard Measurement. It identifies improvements in education, with a decline in deprivation over the last fifteen years, particularly in rural areas. Health deprivation, especially in child vaccination, decreased overall, with notable improvements in women's health. House quality and access to basic facilities improved across provinces, though rural areas faced more challenges. Asset deprivation decreased nationwide. Despite overall improvement, regional disparities persist, notably in Baluchistan, experiencing the lowest living standards.

The research employed the Alkire Foster (2011) approach to assess magnitude and intensity of poverty in Pakistan, along its provinces and all districts. Poverty is measured in two ways, first is assigning equal weights to all dimensions and second is assigning weights according to relative importance of each dimension The study found that assigning same weights suppresses poverty. The results in general revealed that poverty has declined over last fifteen years in all parts of the country. Further we also found that poverty in rural areas is relatively higher in country due to lack of infrastructure and other basic facilities including schools and health care centers. Provincial comparison revealed that Punjab is the most privileged and Baluchistan is most deprived province of the country. Deprivation in Baluchistan is mainly due to inefficient infrastructure. The study also found intensity of poverty has substantially reduced over time.

The study also explored the role of regional, social and household characteristics in poverty. We found that the education is one of the fundamental determinants of poverty, it has negative effect on poverty and thus can be useful in reducing poverty. We also found that dependency ratio is one of the strongest factors causing poverty. The probability of a household to be poor increases with the increase in dependency ratio. It was also seen that the probability of urban residents to be poor is less than the households living in rural areas. In general, urban areas of Pakistan have better infrastructure, better school system and better health facilities. Therefore, access to school and health care centers is relatively easy in urban areas. Secondly the quality of education and health care facilities are also better in urban areas. We also found that the age of the household head has negative effect on poverty, indicating that in general, households with aged heads are less prone to poverty. Regarding regional factors, we observed that income inequality in a region has a negative effect on poverty, the role of population density, number of hospitals and number of higher secondary schools is negligible in defining poverty. The study recommends policy measures, including enhancing education infrastructure, health campaigns, rural facilities, and overall living conditions.

INTRODUCTION

1.1 INTRODUCTION

In general poverty is conceived as lack of control over resources. Individuals are considered poor if they are unable to meet the subsistence level of consumption. Poverty is one of the utmost problems and its elimination has always been the primary focus of development policies. The poor population is burden on the resources of the country as they are unable to meet their requirements. Thus, eliminating poverty in all its dimensions is one of the biggest challenges for sustainable development. To reduce extreme poverty in any country, well-organized and effective policies must be put into practice. While the effectiveness of such policies depends upon the appropriate identification and description of the poor, Certainly, improper identification of the poor will hinder the success of anti-poverty policies.

To end all forms of poverty is the first and foremost Sustainable Development Goal. According to World Development Indicators Global poverty has substantially reduced over time. For instance, in 1981, 43.6% of the world population was poor and in 2019 it has reduced to 8.5%. It is worth mentioning that due to huge disparities and lack of resources the situation is still worse in low-income countries where around 45% of the population is poor. In 2019, Sub-Saharan Africa alone was home to 59% of the world's poor population, while South Asia and Sub-Saharan Africa together accounted for 83% of the world's poor population. The comparative situation is relatively better in Pakistan, where only 4.5% of the population is poor.[1]

However, it is pertinent to mention that poverty estimates based on a standardized benchmark such as $ 2.15 a day are sometime not the true representative of poverty, such as it fails to account for non-monetary indicators including sanitation, access to clean drinking water and medical facilities etc. All such factors also affect the quality of life and should be considered while measuring poverty. Even if only monetary indicators are considered, huge variation in

[1] The estimates are extracted from World Development Indicators (https://databank.worldbank.org/source/world-development-indicators) based on $2.15 a day adjusted to purchasing power parity.

monetary based national and international poverty lines are dubious, such as national poverty line for Pakistan is around US $0.46 a day.

1.2 A BRIEF SYNOPSIS OF APPROACHES TO MEASURE POVERTY

Broadly speaking there are two approaches to measure poverty. The first approach focuses on consumption of necessities including food and non-food baskets. Individuals are considered poor if they are unable to meet the subsistence level of consumption. In terms of money, poverty is measured by comparing a household's income or consumption to a certain threshold, below which a household is considered poor. The second approach of analyzing poverty is referred to capability approach; where the focus is on lack of capabilities i.e., self-insecurities, low confidence, inadequate education, and poor health (Sen, 1983). Lack of capabilities causes a lack of wellbeing which refers to poverty. So, poverty is either a lack of control over resources (like not getting enough food and energy) that are thought to be necessary for minimum subsistence level or a lack of "capacity" to function in a society.

According to Sen's "capabilities framework," poverty is defined by the absence of key capabilities, such as the ability to avoid starvation and illiteracy, rather than a lack of sufficient income (Sen, 1979). Even though Sen recognizes the importance of income growth in determining success. The importance of income lies not in the amount of money it provides, but in access to some of life's most basic necessities. Sen (1983) cites "health, or education, or social equality, or self-respect, or freedom from social harassment" as examples of this category's requirements. This is shifting from the concept of income to the concept of entitlement, or whether a person has a right to some of the resources available to them. This includes determining whether the good is available and a person is capable to purchase (for example, a school for education or a hospital for health care), as well as whether the social structure ensures that one has the rights and quality of life that a human being requires. “Entitlement" is a complicated concept that can't be indicated by one real indicator like income. This gave an idea of considering multiple indicators for measuring poverty. The phenomenon of considering multiple indicators for analyzing poverty in its refined form is referred as Multidimensional poverty approach.[2]

[2] A brief discussion on various approaches to measure multidimensional poverty is given in Chapter 2.

The multidimensional approach investigates poverty beyond monetary deprivations by including non-monetary indicators, therefore it is more comprehensive. The multidimensional poverty index (MPI) developed by United Nations Development Program (UNDP) and Oxford university considers health, education and living standards as the prime indicators of wellbeing, deprivation in these indicators is aggregated to measure poverty. The MPI worked out by World Bank (2022) is considerably different, it considers monetary poverty line (US $2.15 a day) as an additional indicator.[3]

The comparative analysis of monetary based (national or international poverty line) and multidimensional poverty reveals that in general, multidimensional poverty approach is more stringent, as it considers deprivation in multiple dimensions. For instance, the estimates of poverty for Pakistan obtained through different approaches are reported in Table 1.1.

Table 1.1. Estimates of Poverty in Pakistan (2018-19)

Methodology	Benchmark	Head Count
Monetary Deprivation Approach***	US $2.15 a day	4.5%
Monetary Deprivation Approach**	123.54 PKR a day	21.9%
Multidimensional Deprivation Approach*	Multiple indicators (Health, Education, Living Standards)	38.3%

Sources: (Meyer, 2023; Governement of Pakistan, 2022-23; Alkire, et al., 2023)

Table 1.1 displays the headcount calculated using two monetary methods based on different poverty lines and a multidimensional approach. According to the findings, the percentage of people living in poverty at the international poverty line of $2.15 per day is only 4.5%. This figure rose to 21.9% at the domestic poverty line of 123.54 PKR per day. At the same time, the multidimensional approach recorded headcount as 38.3%. The higher head count index is due to comprehensiveness of multidimensional deprivation approach, as it included various dimensions. In monetary terms, a non-poor person can be deprived of good health, nutritious food, safe drinking water, and education. As a result, multidimensional poverty is more

[3] (Alkire, et al., 2023)

stringent and provides a more accurate and comprehensive picture of poverty.[4] Nevertheless poverty measured through monetary benchmark is strongly correlated with deprivation in other dimensions. This correlation may be stronger in underdeveloped countries because non-monetary deprivation tends to be concentrated among the families who are financially weak. Undoubtedly, a person who is poor and has little money will not have access to adequate health care, education, and other living standards.

1.3 MOTIVATION OF THE STUDY

Pakistan is the fifth most populous country with around 61% living in rural areas and 39% living in urban areas. One of the biggest problems the nation is now experiencing is political instability. Other problems include gender inequality, rising income inequality, and the terrible repercussions of climate change. The hot-button issue in Pakistan is poverty. With a score of 26.1 on the Global Hunger Index (2022), Pakistan ranks 99th out of 121 nations most severely affected by severe hunger problems. This was due to dangerously high levels of hunger and a persistent decline in real per capita income. The report also highlights that 18% of Pakistani children under five have inadequate nutrition and that 20.5% of the country's population is experiencing acute food shortages.[5]

The empirical analysis of poverty has always been an area of interest for researchers and policy makers. However, most of the earlier studies utilized monetary approach to analyze poverty and a very few emphasized on multidimensional approach. In this regard studies by (Jamal, 2009; Naveed & Islam, 2011; Awan, Waqas, & Aslam, 2011; Khan, et al., 2014; Saboor, et al., 2015; Idrees & Baig, 2017; Saleem, Shabbir, & Khan, 2019; Khan & Sloboda, 2022; Qadir, et al., 2023) are very important. They empirically analyzed poverty by considering different dimensions of wellbeing. Secondly the studies also differ in methodologies, deprivation cutoffs and data set. These differences made them incomparable, and result of one study cannot be compared with other. Further, in spite of huge differences across rural and urban areas, most of the earlier studies considered same deprivation cutoffs

[4]Alkire, et al., (2023) also found that multidimensional poverty is often more prevalent than monetary poverty. World Bank Report, (2022) also revealed that in general, around 39% of the multidimensionally poor individuals are not captured by monetary based poverty line.

[5]For more detail, see the (Grebmer, et al., 2022) at www.globalhungerindex.org

across rural and urban areas. Moreover, most of the earlier studies were confined to Pakistan overall, provinces or rural-urban areas, least was analyzed at district level. Finally, no significant work was done on the correlates of poverty.

All these factors motivated us to conduct a comprehensive analysis of poverty for a long period by incorporating rural – urban differences and exploring determinants of poverty.

1.4 OBJECTIVES OF THE STUDY

As mentioned earlier that in Pakistan, nearly all studies considered the same benchmarks for both rural and urban areas. However, the country's rural and urban areas do not have the same benchmarks of wellbeing. For example, the benefits of higher education are much more in cities, so using the same educational standard may not be the best idea. Similarly, facilities available in rural-urban areas have vast differences. The current study aims to scientifically examine poverty using a multidimensional approach while considering different benchmarks for the rural and urban areas of country.

The second gap in the literature is that very few studies have tried to estimate multidimensional poverty at the district level, even though economic development policies need to know how poor is each area. The present study aims to empirically analyze multidimensional poverty at provincial and district level.

Understanding the causes of poverty is crucial for developing an effective plan to combat it. Previous studies have examined the primary causes of multidimensional poverty from micro and macro perspectives. A micro-level data strategy is crucial for developing countries whose immediate problems are firmly rooted at the local level since aggregates or averages used in macro-data-based studies do not sufficiently reflect the effects of those problems. From the literature, it has been found that hardly any study has considered regional factors such as the availability of schools in the districts, the provision of health facilities in each region, and the education and income disparities in each province. All these factors significantly affect poverty and poor living conditions. A healthy and educated person will have fewer chances of being poor or deprived.

Finally, the present study aims to conduct analysis for 15 years. This will give comparable results and enable us to understand the trends in poverty in all regions of the country. Our study is based on the seven latest surveys covering data from 2004 - 05 to 2019 - 20. Hence, an empirical investigation of multidimensional poverty in Pakistan is a primary goal of the current study. The study will examine many aspects of poverty. These are, more specifically, the goals of the present study:

i. **To measure multidimensional poverty in Pakistan's its districts, provinces, and rural-urban areas from 2004-05 to 2019-20. In this regard, the seven latest rounds of Pakistan Social & Living Standards Measurement (PSLM) surveys will be utilized.**

- In this regard we shall consider three dimensions of wellbeing including education, health and living standards.
- First, we will analyze the deprivation in education for different age groups; children (age 6 to 11 years), youngsters (age 12 to 15 years) and adults (age 16 years and above). Later overall deprivation in education will be measured at household level.
- Second, we will analyze the deprivation in health for children and married women. Later the overall deprivation in health will be measured at household level.
- Third, we will analyze the deprivation in living standards. In this regard we will focus on the house quality, access to basic facilities, ownership of assets and ownership of the means of transportation. The household level deprivation in living standard will be measured by aggregating the deprivations in these sub dimensions.
- Finally, we will estimate overall poverty. In this regard will estimate incidence and severity of poverty. For this Headcount indices, poverty gap and multidimensional poverty indices will be estimated.

ii. **To work out correlates of Poverty in Pakistan by exploring the role of household, social and regional characteristics. The analyses are based on the two rounds of PSLM (2004-05 and 2019-20) covering a period of fifteen years.**

- In this regard we will empirically analyze how different household, socioeconomic and regional factors the impact of wellbeing of households. In specific we will explore the effect of household education, characteristics of household head, household dependency ratio, region of residence, availability of health facilities, population density and income inequalities. Further we will also investigate how role of these factors have changed over the last fifteen years.

1.6 LAYOUT OF THE STUDY

Chapter 2 of the thesis provides a brief survey of various methods to measure poverty. In Chapter 3, the theoretical and empirical literature on multidimensional poverty in Pakistan has been discussed along with the literature related to the determinants of poverty. The discussion related to data and regions is presented in Chapter 4. The procedures used to cnstruct the different variables and the methodology are given in Chapter 5. In Chapter 6, the results for each dimension of deprivation (based on education, health, and standard of living) are presented in detail. The deprivation results in each dimension at the district level are given in Chapter 7. The results regarding magnitude and intensity of multidimensional poverty in Pakistan, its provinces and districts are discussed in Chapter 8. Moreover, the findings on correlates of poverty are explained Chapter 9. The summary and conclusions are presented in Chapter 10.

Chapter 2

AN OVERVIEW OF THE APPROACHES TO MEASURE POVERTY

2.1 INTRODUCTION

In general poverty refers to the deprivation in wellbeing. The next question will be, What is wellbeing?. There are different approaches to describe wellbeing. One is "command over resources," which implies that people having more control over resources are better off. Another approach of measuring poverty is to compare household income or consumption with a specific threshold, this approach has been the primary methodology for measuring poverty till 1980's. Later it was thought that merely depending upon income or consumption does not cover all aspects of poverty rather it is a multidimensional phenomenon, the factors like education, health, shelter and command over other resources are important dimensions of poverty. In this chapter we will present a crux of approaches to measure poverty. This chapter comprises of four sections. After introduction, we will present crux of unidimensional approaches to measure poverty in Section 2.2. The summary of different approaches to estimate multidimensional poverty are explained in section 2.3. The chapter is concluded in Section 2.4.

Broadly speaking the are two approaches to measure poverty. The first and the traditional approach is to consider income / consumption as the only indicator of welbeing and the second approach referred as capability approach, not only focuses on income / consumption but consider individual's command over resources. These two approaches of analyzing poverty can be termed as unidimensional and multideimnsional approaches to measure poverty .

a. Unidimensional Approach to Measure Poverty

The unidimensional approach merely considers income / consumption as the indicator of wellbeing. A minimum threshold level of income / consumption is defined and individuals falling short of that threshold level are considered poor. This threshold level is defined as poverty line. The literature has suggested three types of poverty lines including subjective, relative, and absolute poverty lines. The subjective poverty line is based on subjective assessment; it is an expert opinion. Relative poverty line is defined relative to entire

population, such as income below median. An absolute is defined as a minimum cost of survival, such as money required to purchase the minimum required calories.

b. Multidimensional Approach to Measure Poverty

Sen (1979) criticizes the excessive emphasis on income and consumption measures to describe and quantify poverty but rather advocates for the implementation of a "capability approach". The capability is an essential aspect in determining a person's overall standard of living (Sen, 1999). Instead of focusing on minimal income or consumption, the capability approach urges us to consider what individuals can achieve (Shubhabrata & Ramsundar, 2012) and each person has the capability to live the sort of life they value. (Sen, 1984; Sen, 1985) defined "functionings" as various living circumstances and activities that one can engage in. The term "capabilities" refers to the freedom to pick amongst various combinations of functionings that an individual has a good reason to value. The capabilities approach shifts the emphasis from means materials to goals, what they can achieve with those resources. Poverty, in this view, is defined as a loss of freedom caused by a lack of capabilities. The fundamental idea behind this approach is how resources of an individual may be transformed into capabilities, accomplished resources, and opportunities, leading to wellbeing. In nutshell, capability approach refers to an individual's actual access to resources and freedom to convert these resources into functions such as receiving an education, healthy diet, etc. Therefore, merely focusing on resources doesn't capture all aspects of wellbeing, for instance, if we just consider household income when measuring poverty, we will infer that the only important factor causing poverty is a dearth of financial resources, which is not true. Additionally, we assume that people with identical household incomes have an equivalent range of functional options and equal mental, biological, and cultural conditions for their decisions. But because people are mentally, physically, environmentally, and biologically distinct from one another, they live in various surroundings, and their social contexts are also varied, so they have different needs that must be met (Sen, 1999). Thus, poverty is a multidimensional phenomenon.

2.2 CRUX OF APPROACHES TO MEASURE POVERTY THROUGH UNIDIMENSIONAL APPROACH

As discussed in previous section that the poverty line for unidimensional approach can be subjective, relative or absolute. The first one is merely based on individuals' assessment and second is defined relative to some benchmark such as income below median. The third one is

more scientific and is based on the cost of basic needs. In this section we will present a crux of the approaches to measure absolute poverty line. The key factor in finding the absolute poverty line is estimating the minimum expenditure required to escape from poverty. In this regard the Food Energy Intake approach and Cost of Basic Need approach are most commonly used approaches.

2.2.1 Food Energy Intake Approach

This approach defines the poverty line based on the minimum expenditure needed to purchase the minimum required calories. This method is prevalent in countries where a significant portion of income is allocated to food expenses. It has been employed in various studies, including Dandekar & Rath (1971) and Greer & Thorbecke (1986). This approach relies on determining a person's food energy intake sufficient to meet caloric needs, making it a straightforward method with modest data requirements. In this approach Log of household per adult equivalent food expenditures are regressed on the respective number of calories consumed by each household. Finally, food poverty line is estimated by working out estimated per adult equivalent household expenditures required to purchase the minimum number of respective calories. It is acknowledged that the estimation depends upon the chosen functional form. Once the food poverty line is estimated, it is adjusted for nonfood requirements to get overall poverty line.

2.2.2 Cost of Basic Needs Approach

The cost of basic requirements method is regarded as one of the most important techniques for measuring absolute poverty. According to this approach an absolute poverty line is defined as the value of consumption judged essential to achieve minimal basic needs. The poverty line in this approach is estimated through different methods. The simplest method is to calculate the unit of calories consumed by a household. It is obtained by dividing the calories consumed with food expenditure. After calculating unit cost of calories, the average calories consumed and required are calculated. The food poverty line is estimated by multiplying the average calorie requirement with the unit cost of calorie. Finally, the food poverty line is adjusted for non-food expenditures to get overall poverty line. In this regard the weighted average of non-food within 5% to 10% interval of food poverty line is considered as non-food poverty line.

Once the poverty line is estimated (through any approach) the next step is the measurement of poverty. In this regard the most used measures are Head Count Index, Poverty and Square

Poverty Gap. The head count index gives the proportion of population below poverty line but fails to capture the intensity of poverty. Intensity of poverty is captured by Poverty gap, but this measure is insensitive to income transfers within poor, the squared poverty gap takes care of this limitation.

The income / consumption-based approaches to measure poverty have certain limitations, such as (Meyer & Sullivan, 2003) pointed out that current income might be a false predictor of the family's financial situation as transitory events like unemployment or modifications in the family situation cause periodic wage swings. Although these transient changes lead current income to fluctuate more than consumption, they may not always relate to wellbeing shifts. Further (Ringen, 1988) mentioned that income base approach often considers the current income and leaves out additional wealth, like saving or other cash reserves and loans. Fahme & Ali (2019) criticized this approach due to underreporting of income, which is common in developing countries where a significant proportion of economic activities are unreported. Merely focusing on income / consumption ignores the non-income-based resources. Further one benchmark may not represent the true cost of living in a region due to price variations.

2.3 CRUX OF APPRAOCHES TO MEASURE POVERTY THROUGH MULTIDIMENSIONAL APPROACH

There are various methods to measure multidimensional poverty. Here, we have presented the crux of these methods.[6]

2.3.1 Dashboard Approach

A multidimensional poverty dashboard is a visual tool that presents diverse indicators across dimensions like education, health and living standards. This approach assesses the degree of deprivation in each dimension independently. It offers a concise and accessible overview through charts and graphs, allowing for quick assessments of poverty status and trends in each dimension, in many cases this also becomes the limitation, as joint deprivation is completely ignored. Alkire & Foster, (2011) pointed out that dashboard approach measures every dimension individually without hierarchy among dimensions.

[6] Discussion of various multidimensional approaches is mainly extracted from (Alkire S. , et al., 2015).

2.3.2 Composite Indices

A composite index in measuring multidimensional poverty combines diverse wellbeing indicators, such as education, health, and living standards, into a single measure. The process involves assigning weights to indicators based on their significance, resulting in a comprehensive numerical value that reflects overall wellbeing or poverty. Anyway, this approach fails to consider the joint distribution of deprivation and is indifferent to the severity of deprivations.

2.3.3 Venn Diagrams

Venn diagrams visually represent multidimensional poverty by illustrating intersections and relationships among different dimensions of deprivation. Each circle corresponds to a specific dimension, and overlapping areas indicate individuals experiencing deprivation in multiple dimensions. Used in contexts like education, health, and living standards, the diagrams help policymakers and researchers to grasp the complexity of poverty, revealing who is deprived in one or more dimensions and how these deprivations intersect. This approach is effective only for a small number of dimensions. Further it fails to capture the depth of deprivation and does not provide numerical values.

2.3.4 Dominance Approach

The basic model of the Dominance Approach in measuring multidimensional poverty involves comparing individuals or groups based on their deprivation across various dimensions. The key idea is to determine which person or group dominates another by assessing who is more deprived overall. This approach identifies those who are uniformly better off and those who are uniformly worse off, offering a good understanding of poverty that considers the broader range of dimensions. The process includes selecting relevant indicators, setting thresholds for deprivation, comparing individuals or groups, and ranking them based on the extent of their overall deprivation. The Dominance Approach provides a straightforward method to compare and rank entities in terms of their multidimensional wellbeing, emphasizing a more comprehensive assessment of poverty beyond single-dimensional measures. Moreover, this approach fails to compare poverty depth between two regions.

2.3.5 Fuzzy Sets Approach

The basic concept of the Fuzzy Set Approach in measuring multidimensional poverty involves incorporating the idea of fuzziness or uncertainty into the analysis. Instead of categorizing

individuals strictly as either poor or non-poor, this approach allows for shades of deprivation and tackles the underlying vagueness of being poor. It represents dimensions of wellbeing as fuzzy sets, where individuals can partially belong to the set of the poor based on their level of deprivation in each dimension. A comprehensive measure of multidimensional poverty can be obtained by combining and aggregating these fuzzy sets across dimensions. It is to mention that subjectivity of this approach makes it conditional to arbitrary choices.

2.3.6 Alkire – Foster Counting Approach

The counting approach is one of the widely used methodologies to measure multidimensional poverty. In this approach the aggregate of deprivations in each dimension is compared with deprivation cut-off. A household is categorized as multidimensionally poor if the count of deprivations in each dimension exceeds the overall cut-off.[7] The foremost step in Alkire - Foster counting approach is the selection of the indicators / dimensions of wellbeing and defining their weights. Once the dimensions and weights are specified, the next step is to define the deprivation cutoffs for each dimension. This enables us to identify whether household is deprived in a particular dimension, the next step is to calculate the weighted sum of deprivations. The weighted sum of deprivations is compared with overall poverty cutoff and households falling short of overall cutoff are categorized as multidimensionally poor. Once the poor households are identified, the next step is aggregation, i.e., to work out the proportion of poor households. This is the head count ratio and measures the incidence of poverty. The next step is to work out the deprivation scores by calculating the average share of indicators in which poor households are deprived. Finally, the intensity of poverty is calculated by dividing the average weighted deprivations with number of poor households.[8]

[7] Chakravarty, Mukherjee, & Ranade (1998), Tsui (2002) and Bourguignon & Chakravarty (2003) also suggested poverty measures based on counting approach. (For details see (Chakravarty & Silber, 2009). The Alkire – Foster (2007 & 2011) is most useful as it is the only measure that satisfy several desirable properties of a good poverty measure. Further it is capable of considering the joint distribution of deprivations and can be applied on binary or ordinal data. Therefore, we have restricted our discussion to Alkire – Foster counting approach.

[8] The present study shall use Alkire – Foster (2011) methodology to estimate poverty. A description of this approach is presented in Chapter 5.

2.4 CONCLUSION

In this chapter we have presented an overview of the different approaches to measure multidimensional poverty. It was concluded that Alkire – Foster counting approach is the most comprehensive and capable of analyzing multidimensional poverty from various aspects.

Chapter 3

REVIEW OF EARLIER STUDIES ON THE EMPRICAL ANALYSIS OF MULTIDIMENSIONAL POVERTY IN PAKISTAN

3.1 INTRODUCTION

The empirical analysis of multidimensional poverty is of great significance; it helps in identifying people experiencing poverty and provides an accurate picture to policymakers to formulate poverty alleviation policies. This chapter will present an overview of the earlier studies that empirically analyzed multidimensional poverty in Pakistan. This chapter comprises seven sections. After an introduction, a brief on the period and regions covered by earlier studies is given in Section 3.2. Multiple dimensions of wellbeing are used in literature; in the next section we shall summarize the dimensions covered by earlier studies to analyze multidimensional poverty. Similarly, the earlier literature differs in allocating weights to the dimensions, a summary of the weights given to various dimensions of wellbeing is presented in Section 3.4. A review of the estimates of multidimensional poverty is given in Section 3.5. Further, comprehensive discussion of literature regarding correlates of multidimensional poverty is given in Section 3.6. Finally, the discussion is concluded in Section 3.7.

3.2 A REVIEW OF PERIOD AND REGIONS COVERED BY EARLIER STUDIES

Since 1970's a large number of studies are conducted to empirically analyze poverty in Pakistan. However, most of the earlier literature is confined to monetary based poverty line. The empirical analysis of multidimensionally poverty were initiated in late 2000's, in this regard studies by Jamal (2009), Naveed & Islam (2010), Jamal, (2011), Awan, et al., (2011) and Khan, et al., (2011) are significant. Since then, a large number of studies have empirically analyzed multidimensional poverty in Pakistan.

From the previous literature, we found that most of the studies (Khan, et al., 2011, 2014; Jamal, 2012; Saboor, et al., 2015; Saleem & Khan, 2017; Saleem, et al., 2019; Mustafa, Nosheen, & Khan, 2021; Qadir, et al., 2023; Nawab, et al., 2022) covered one, two, or a

maximum of ten years' time period for analyzing multidimensional poverty. The summary of the period and region covered by earlier studies is given in Table 3.1.

Table 3.1 Summary of the Regions and Period Covered by Earlier Studies for Empirical Analysis of Multidimensional Poverty in Pakistan.

Study	Year of Analysis	Region of Analysis				
		Pakistan	Rural	Urban	Provinces	Districts
Jamal (2007)	2004-05		✓	✓	✓	
Naveed and Islam (2010)	2005-06				✓	
Jamal (2011)	2004-05 and 2008-09		✓	✓	✓	
Awan, Waqas, & Aslam, (2011)	2003-04					Districts of Punjab
Khan, et al., (2011)	1998-99, 2001-02, 2004-05, 2005-06 and 2007-08		✓	✓	✓	
Salahuddin & Zaman, (2012)	2006-07	✓				
Awan, Waqas, & Aslam (2012)	2005-06		✓	✓	✓	
Jamal (2012)	2004-05, 2008-09 and 2010-11		✓	✓	✓	
Naveed & Ali, (2012)	2008-09				✓	✓
Khan, et al.,(2014)	1998–1999, 2001–2002, 2004–2005, 2005–2006 and 2007–2008.		✓	✓	Sindh	
Begum (2015)	2010-11		✓	✓	✓	✓
Saboor, et al., (2015)	1998–99, 2001–02, 2004–05, 2005–06 and 2007–08,		✓	✓		26 Regions
Sial, Noreen, & Awan (2015)	2005-06 and 2010-11	✓				
Arif , Wood, & Ghaus (2016)	2008-09 to 2012-13		✓	✓	✓	
Hameed, Padda, & Karim, (2016)	2013		✓			All, Except Baluchistan
Government of Pakistan (2016)	2004-05, 2006-07, 2008-09, 2010-11, 2012-13, 2014-15		✓	✓	✓	✓
Idrees & Baig (2017)	2012-03	✓				
Saleem & Khan, (2017)	2004-05, 2006-07, 2008-09, 2010-11, 2012-13 and 2014-15		✓	✓	✓	
Khan & Akram (2018)	2004-05 and 2014-15		✓	✓		
Abbas, et al.(2018)	2017					Sargodha District
Padda & Hameed (2018)	2013		✓			✓
Naveed & Ghaus, (2018)	2012-13 to 2014-15		✓	✓	✓	✓
Mahmood & Hussain (2020	2013-14				✓	
Afzal & Nazir (2021)	2011 and 2014					Lahore Division
Mustafa, Nosheen, & Khan (2021)	2013–14 to 2018–19.		✓	✓	✓	
Qadir, et al., (2023)	2010–11 to 2015–16				✓	
Nawab, et al.,(2021)	2007 to 2018					Districts of Punjab
Khan & Sloboda (2022)	2019-20				✓	

It can be concluded that most of the earlier studies covered rural – urban regions along with provinces and very few studies conducted research at the district level. Even the studies

conducted at district level focused on selected districts. Further most of the studies are restricted to one or two years.

It is also to mention that all studies, except (Jamal, 2007, 2011, 2012; Padda & Hameed, 2018) used Alkire and Foster methodology to measure poverty. Studies by Jamal (various years) and Padda & Hameed (2018) used the Composite index to examine multidimensional poverty. Jamal (2009) estimated indexes like the headcount index, poverty gap, and poverty severity gap by taking 15 indicators of education, health, and household expenditures. He employed Principal Component analysis to construct composite index. Further, Jamal (2012) used seven more non-monetary factors estimated by Categorical Principal Components Analysis. Padda & Hameed (2018) also used Principal Component Analysis to estimate multidimensional deprivation and poverty in rural Pakistan.

This was a brief on the period and regions covered by earlier studies. We found that most of the studies are restricted to province and rural-urban areas, further no long period analyses are conducted. In the next section we will discuss the dimensions used by earlier studies.

3.3 A REVIEW OF DIMENSIONS COVERED BY EARLIER STUDIES TO EMPRICALY ANALYZE POVERTY IN PAKISTAN

There is considerable debate regarding the definition, quantification, and choice of indicators for poverty (Alkire, Roche, & Vaz, Changes, 2017). The capability method argues that several characteristics must be considered when determining poverty levels because it emphasizes human variation. So, a critical question is how to ensure the accuracy of the dimensions and metrics used to assess poverty. Alkire, (2008) mentioned that the dimensions should either be able to reduce poverty on their own, help reduce poverty in other dimensions, or predict the desired outcome of a project. Also, the chosen traits must be seen as necessary, represent human goals rather than just methods, and consider many different ideas of what makes a good life (Alkire, 2002). Most of the time, poverty dimensions are made by using already-existing data, going by what everyone agrees on, or picking things that people are likely to value (Alkire, 2008).

Several researchers, including Townsend (1979) and Alkire & Santos (2010), contributed to the list of fundamental aspects of poverty. The variables that should be included in a multidimensional examination of poverty are not generally agreed upon. It has been

emphasized that some factors, such as education, health, housing, safety, income, sanitation, and clean water, have a more significant impact on alleviating poverty than others (Qizilbash, 2003). Although there are still some differences of opinion, efforts to compile complete lists of poverty indicators have finally resulted in a growing consensus on the dimensions. For example, health, nutrition, and education are often referred to as the essential components of poverty, appearing nearly uniformly in all established lists of essential capacities (Robeyns, 2000; Saith, 2001; Kim, 2016). compiling a single authoritative list of core functions is complex, and utilizing various dimensions to quantify poverty would be more acceptable (Alkire, 2008). Creating a universal poverty measure is also doubtful since poverty takes diverse forms depending on the nation and living conditions. Nonetheless, attempts are being made to create new universal poverty metrics continually. Thus, it is essential to debate the best dimensions actively.

In the case of Pakistan, considerable research is carried out to empirically quantify multidimensional poverty while considering both social and economic wellbeing variables. In Pakistan, earlier studies employed several wellbeing dimensions. Most of the studies considered housing, health, and education. While few studies such as (Naveed & Islam, 2011; Jamal, 2011; Awan, Waqas, & Aslam, 2012; Jamal, 2012; Naveed & Ali, 2012; Salahuddin & Zaman, 2012; Idrees & Baig, 2017; Padda & Hameed, 2018; Abbas, et al., 2018; Khan & Sloboda, 2022; Mahmood & Hussain, 2020) have taken into account assets. Income is one of the most important indicators of poverty, which has been taken by (Naveed & Islam, 2011; Awan, Waqas, & Aslam, 2011; Khan, et al., 2011; Awan, Waqas, & Aslam, 2012; Sial, Noreen, & Awan, 2015; Hameed, Padda, & Karim, 2016; Saleem & Khan, 2017; Saleem, Shabbir, & Khan, 2019; Khan & Sloboda, 2022; Qadir, et al., 202). In the same way, indicator women empowerment is taken only by Awan, Waqas, & Aslam, (2012) and Idrees & Baig (2017). Transport and communication are used by Naveed & Islam (2010) and Idrees & Baig (2017). Table 3.2 summarizes the aspects of wellbeing that previous research took into account.

It is evident from Table 3.2 that earlier studies took different dimensions to analyze multidimensional poverty. Most of the studies considered education, health and living standard and a few considered additional dimensions like empowerment, transport, land holding and assets etc.

Table 3.2 Summary of dimensions covered by Earlier Studies to Measure Multidimensional Poverty in Pakistan

Study	Education	Health	Income /Consumption	Living Standard	Assets	Land holdings	Basic Facilities	transport/ communication	Empowerment
Jamal (2007)	✓		✓	✓					
Naveed & Islam (2010)	✓	✓	✓	✓	✓	✓	✓	✓	
Jamal (2011)	✓			✓	✓	✓			
Awan, Waqas, & Aslam, (2011)	✓		✓	✓		✓			
Khan et al., (2011)	✓	✓	✓	✓					
Awan, Waqas, & Aslam (2012)	✓		✓	✓	✓	✓			✓
Jamal (2012)	✓			✓	✓	✓			
Naveed & Ali (2012)	✓	✓		✓	✓	✓	✓		
Salah Uddin & Zaman (2012)	✓	✓		✓	✓				
Khan et al. (2014)	✓	✓		✓					
Sial, Noreen, & Awan (2015)	✓	✓	✓	✓					
Begum (2015)	✓	✓		✓					
Saboor et al (2015)	✓	✓		✓					
Arif , Wood, & Ghaus (2016)	✓	✓		✓	✓	✓	✓		
Hameed, Padda, & Karim, (2016)	✓	✓	✓	✓					
Saleem & Khan (2017)	✓	✓	✓	✓					
Idrees & Baig (2017)	✓	✓		✓	✓		✓	✓	✓
Padda & Hameed (2018)	✓			✓	✓		✓		
Abbas, et al., (2018)	✓	✓		✓	✓				

Continued on next page

(Continued) Table 3.2 Summary of dimensions covered by Earlier Studies to Measure Multidimensional Poverty in Pakistan

Study	Education	Health	Income /Consumption	Living Standard	Assets	Land holdings	Basic Facilities	transport/ communication	Empowerment
Khan & Akram (2018)	✓	✓		✓					
Naveed & Ghaus, (2018)	✓	✓		✓	✓				
Saleem, Shabbir, & Khan, 2019	✓	✓	✓	✓					
Mahmood & Hussain (2020)	✓	✓		✓	✓		✓		
Mustafa, Nosheen, & Khan (2021)		✓		✓					
Afzal & Nazir (2021)	✓	✓		✓					
Nawab, et al, (2022)	✓	✓		✓					
Khan & Sloboda (2022)	✓	✓	✓	✓	✓		✓		
Qadir, et al, (2023)	✓	✓	✓	✓					

This is worth mentioning that studies considering the same dimensions follow different definitions and benchmarks. Now we will highlight the definitions and benchmarks considered by earlier studies.

3.3.1. Indicators for Education Considered by Earlier Studies in Pakistan

Education is one of the fundamental factors that improves a person's knowledge, creativity, and technological skills, which in turn improves the social welfare of society and makes life better for everyone. Further, education is an effective tool to improve income distribution and eliminate poverty. It is generally acknowledged that there is a bi-directional causal relationship between education, poverty, and wellbeing (Berg, Burger, Burger, Louw, & Yu, 2006): both poverty and educational achievement impact wellbeing. As one element may affect the other, there is a two-way causal relationship between education and wellbeing. Due to a lack of resources, the poor often cannot attend school, and on the other hand, since they lack education, they cannot find a job, which impacts their wellbeing. Poor individuals cannot obtain a desired education due to inadequate financial means or are compelled to leave school early due to financial constraints (Wangenge-Ouma, 2012).

In this section we will discuss the definitions / benchmarks considered by earlier studies to capture education. In this regard most of the earlier studies took a specific level of education, expressed in years of successful education. Most of the earlier studies including Jamal (2007, 2011, 20120, Naveed, Arif, Wood, & Ghaus (2016), Idrees & Baig (2017), and Khan & Sloboda (2022) considered used primary education as the minimum benchmarks and considered household as deprived in education, if no one among adults have completed primary education. Few other studies like Khan, et al., (2011; 2014) and Begum (2015) took six years of education as the deprivation cutoff. While Abbas et al. (2018) and Nawab, et al., (2022) took middle class as the benchmark. Afzal & Nazir (2021) considered matric level as the minimum required education. Benchmarks considered by earlier studies are summarized in Table 3.3. It can be seen from the table that few studies are confined to education of adults only and most of the studies have considered both adult and child education. Interestingly there is hardly any study which has separately focused on the education of adolescent who are neither children nor adults.

Table 3.3 Benchmark for Education Considered by Earlier Studies in Pakistan.

Studies	Cutoffs for Deprivation in Education
Jamal (2007)	Education of all adult members is below primary
Naveed & Islam (2010)	Education of all adult members is below primary and none of child age(6-13 years) is enrolled
Jamal (2011)	Education of all adult members is below primary and none of the child (5 – 9 years) is enrolled
Awan, Waqas, & Aslam, (2011)	No literate person in household
Khan, et al., (2011)	Education of all adult members is below 6 years
Awan, Waqas, & Aslam (2012)	Education of all adult members is below primary
Jamal (2012)	Education of all adult members is below primary and none of the child (5 – 9 years) is enrolled
Naveed & Ali (2012)	Education of all adult members is below primary and none of the child (6 – 14 years) is enrolled
Khan, et al., (2014)	Education of all adult member is below 7 years
Sial, Noreen, & Awan (2015)	Education of all adult members is below primary and none of the school age child is enrolled
Begum (2015)	Education of all adult members is below 6 years and no literate person in household
Saboor, et al., (2015)	Education of all adult members is below 6 years and no literate person in household
Naveed, Wood and Ghaus (2016)	Education of all adult members is below primary and none of child (5-14 years) is enrolled
Hameed, et al., (2016)	Education of all adult members is below primary and none of school age child is enrolled
Idrees and Baig (2017)	Education of all adult members above 14 years is below primary and at least one child of school age (5-13years) is not enrolled
Saleem & Khan (2017)	Education of all adult members is below 6 years and no literate person in household
Abbas, et al., (2018)	Education of all adult members is below 10 years and at least one child of school age (up to 8 class) is not enrolled
Padda &Hameed (2018)	Education of all adult members is below primary and none of child age(5-18 years) is enrolled
Naveed & Ghaus, (2018)	Education of all adult members is below primary and none of child age(5-14 years) is enrolled

Continued on next page

(Continued) Table 3.3 Benchmark for Education Considered by Earlier Studies in Pakistan

Studies	Cutoffs for Deprivation in Education
Saleem, et al., (2019)	Education of all adult members is below 6 years and no literate person in household
Mehmood & Hussain (2020)	Education of all adult members is below primary education and none of child age(4-8 years) is enrolled
Afzal & Nazir (2021)	Education of all adult members is below 6 years and none of adult member has completed five years of education
Nawab, et al., (2022)	Education of all adult members is below primary and at least one child is not attending school up to age middle class.
Khan & Sloboda (2022)	Education of all adult members is five years and at least one child (6 to 16 years) is not attending school
Qadir, et al., (2022)	Education of all adult members is below primary and no literate person in household

3.3.2 Indicators for Health Considered by Earlier Studies

One of the significant factors determining welfare is good health. An individual's health is associated with income, education, access to healthcare services, and living conditions. In developing countries, economic status is linked with the health status of their inhabitants. Health is essential for reducing poverty and inequality. Moreover, poor health also affects the quality of the labor supply. In order to meet the Millennium Development Goals, health indicators must be prioritized. Health expenditures in a developing country like Pakistan are out of pocket, requiring savings, borrowing, and asset sales. As a result, health shock has a negative impact on an individual's socioeconomic status (Nayar, 2007). According to Alkire & Fang (2019), poverty is a purely multidimensional phenomenon, with the highest dimensional deprivation in the health sector, such as a lack of access to safe sanitation and purified drinking water, as well as a high mortality rate.

In the case of Pakistan, most of the studies have used immunization and prenatal and postnatal care as proxies for measuring health status (Khan, et al., 2011; Arif, Wood, & Ghaus, 2016; Saleem, et al., 2019; Khan & Sloboda, 2022). The benchmark for immunization is that the household will be considered deprived if the children are not fully immunized. The other indicator related to health is about women health i.e. if the women did not get any pre and postnatal consultation will be considered deprived. While some studies (Arif, Wood & Ghaus, 2016; Idrees & Baig, 2017; Nawab, et al., 2022; Khan & Sloboda, 2022) have employed

malnutrition and access to health centers and safe drinking water as health variables, others (Naveed & Islam, 2010) have used the body mass index as a proxy of health. The following studies (Hameed, Padda, & Karim, 2016; Idrees & Baig, 2017; Abbas, et al., 2018; Mehmood & Hussain, 2020) also used child mortality.

The summary of different Benchmarks for health considered by earlier studies is given in Table 3.4.

Table 3.4 Benchmark for Health Considered by Earlier Studies in Pakistan

Studies	**Deprivation Cutoffs**
Naveed & Islam (2010)	No woman (age 20-60) has BMI below 18.5
Khan, et al., (2011)	Not immunized and didn't get pre-natal consultation
Naveed & Ali (2012)	It takes more than 30 min to clinic/hospital and didn't get post-natal care
Salah Uddin & Zaman (2012)	Not immunized
Khan, et al.,(2014)	Not immunized and didn't get pre-natal consultation
Begum (2015)	Did not visit hospital at all or once in a while
Saboor, et al., (2015)	Not immunized and didn't get pre-natal consultation
Sial, Noreen, & Awan (2015)	Not immunized and didn't get any post-natal care
Arif , Wood, & Ghaus (2016)	It takes more than 30 min to clinic/hospital and didn't get pre-natal & post-natal consultation
Hameed, Padda, & Karim, (2016)	At least one women is malnourished (through BMI) and one or more child died (under age 0 to 5)
Saleem & Khan (2017)	Not immunized and didn't get pre-natal & post-natal consultation
Idrees & Baig (2017)	One or more child died (under 60 months) and none of the women lie in standard normal Body Mass Index (18.50-24.99)$^{kg}/_{m^2}$
Abbas, et al., (2018)	One or more child died during last 5 years and any adult (age$< 70\ years$) and child is malnutrition
Naveed &Ghaus (2018)	It takes more than 30 min to clinic/hospital and didn't get pre-natal & post-natal consultation

Continued on next page

(continued) Table 3.4 Benchmark for Health Considered by Earlier Studies in Pakistan

Studies	Deprivation Cutoffs
Saleem, et al., (2019)	Not immunized and didn't get pre-natal consultation
Mehmood & Hussain (2020)	Any child died (under age 0 to 5)
Afzal & Nazir (2021)	Not immunized and didn't get pre-natal consultation
Mustafa, Nosheen, & Khan (2021)	It takes more than 30 min to clinic/hospital and didn't get pre-natal & post-natal consultation
Nawab, et al., (2022)	Any child (less than 5 years) is malnutrition
Khan & Sloboda (2022)	Not immunized and didn't get pre-natal & post-natal consultation and distance to hospital is greater than 1 km.
Qadir, et al., (2022)	Not immunized and didn't get pre-natal & post-natal consultation

It can be seen from the table that most of the studies took immunization, natal care or malnutrition as indicators of health. This is due to a lack of data on health indicators.

3.3.3 Indicators for Living Standard Considered by Earlier Studies

The indicator of living standards determines the quality of life. All indicators included in the global MPI to detect house quality are included in living conditions: access to basic life facilities such as safe drinking water, access to school and health institutions, proper sanitation, a source of light, and the ability to cook. All these variables provide detailed information about household wellbeing. The standard of living is the main factor causing multidimensional poverty (Bikorimana & Sun, 2020) . A single variable cannot determine the standard of living. Living Standard's indicators depend upon the data availability and the study's objective.

In the case of Pakistan, most of the studies (Naveed & Islam 2010; Sial, Noreen, & Awan, 2015; Idrees & Baig, 2017; Khan & Sloboda, 2022) considered access to clean water, electricity, gas, sanitation, fuel for cooking, overcrowding, and housing quality (walls, roof). The MDGs directly or indirectly cover these metrics. Without water, life is not possible. However, dirty, polluted water is a breeding ground for several illnesses, including hepatitis and diarrhea, which cause deaths in Pakistan. The seventh MDG has a connection to clean

water. If a household does not have access to clean drinking water or must travel minutes or distance to get to a source of safe drinking water, it is considered to be water-deprived (Naveed & Islam, 2010; Sial, Noreen, & Awan, 2015; Idrees & Baig, 2017; Mustafa, et al., 2022).

Hygiene issues are directly tied to sanitation. Access to adequate sanitation is crucial for health safety. Naveed & Ali (2012) have emphasized that the effects of unsanitary facilities might be very detrimental to human health. Further, MDG number 7 includes access to an improved sanitation system (toilet or without sharing a toilet). Access to better sanitation is a crucial requirement for maintaining human dignity and health. If a home does not have an upgraded toilet, the home is classified as poor (Naveed & Islam, 2010; Jamal, 2011; Sial, Noreen, & Awan, 2015; Idrees & Baig, 2017; Khan & Sloboda, 2022).

Another essential measure of living standards is electricity. Electricity can be used to operate technological equipment, improving work and leisure time. If a family cannot access power, it is lacking in this area (Naveed & Islam 2010; Sial, Noreen, & Awan, 2015; Saleem & Khan, 2017; Khan & Sloboda, 2022).

Gas has a tangential connection to the MDGs because biomass fuel harms the environment. Hence, gas indirectly contributes to environmental stability and is associated with the seventh MDG. A home with no gas hookup is perceived as being poor (Saboor et al., 2015; Idrees & Baig, 2017; Qadir, et al., 2022).

The term "crowding" represents the number of people who share similar sleeping spaces. An indication of a low living standard is when more people share one room. This indicator indirectly relates to MDG 5. If more than three people share one room, the home is considered small relative to family size **(**Awan, Waqas, & Aslam, 2011) . Similarly, Jamal (2011) used the benchmark if more than two persons share one room will be considered as overcrowd.

According to Naveed & Ali (2012), the absence of "asset ownership" seems to be the main factor affecting Pakistan's overall MPI score. Studies have used different benchmarks for asset ownership like if the household not owns at least one asset among radio, TV, telephone, bicycle, motorbike and refrigerator will be considered deprived (Abbas, et al., 2018; Nawab, et al., 2022). Similarly, Arif , Wood, & Ghaus (2016) observed a statistically significant reduction in the proportion of the deprived population regarding ownership of assets in urban and rural populations, including motorcycles, computers, air conditioners, coolers, and access

to health centers. Table 3.5 summarizes different benchmarks for living standards considered by previous studies.

Table 3.5 Benchmarks for Living Standard Considered by Earlier Studies in Pakistan

Studies	Deprivation Cutoffs
Naveed & Islam (2010)	No electricity OR live in KACHA house OR has no access to safe drinking water OR has no proper toilet facility OR has none of these assets air cooler, fridge, freezer, car, computer, tractor, thresher, generator and tube-well OR use "wood, cow dung or coal" for cooking.
Jamal (2011)	More than 2 persons are sharing a room OR walls and roof are not made of proper baked bricks / concrete OR no electricity OR no safe drinking water OR no proper toilet facility OR has no mobile/telephone OR use wood or kerosene oil for cooking OR has no physical assets
Awan, Waqas, & Aslam, (2011)	Persons per room more than 3 OR has no access to safe drinking water i.e. "Piped Water, Hand pump, motorized pumping/ tube well, closed well" OR has no proper toilet facility OR no electricity OR no physical assets
Khan, et al., (2011)	No access to safe drinking water OR no electricity OR no gas OR no proper toilet facility OR No mobile/telephone
Naveed & Ali (2012)	No safe drinking water OR no flush toilet OR use solid fuel for cooking OR walls are made of mud OR no electricity OR no physical asset
Salah Uddin & Zaman (2012)	Roof is made of "thatch/ bamboo/wood/mud, rudimentary roofing, cardboard/plastic" OR no electricity OR floor is made of earth/sand/mud floor, and bricks OR house walls are made of mud/stones, bamboo/sticks/mud, rudimentary walls: unbaked bricks/mud, plywood sheets, carton/plastic OR no safe drinking water OR no proper toilet facility OR no household assets
Begum (2015)	Roof is made of "Wood/Bamboo, other" OR don't has electricity, OR no safe drinking water i.e. "Open well, river/stream/pond, other" OR no proper toilet facility OR no has mobile/telephone OR use "Fire-wood, sticks, cow-dung cakes, coal/wooden coal, other" for cooking, OR no physical assets
Sial, Noreen, & Awan (2015)	No access to drinking water or "more than 30 minutes consume to reach" OR no electricity OR no gas facility, OR no toilet facilities OR persons per room greater than 3
Saboor, et al., (2015)	Deprived if has no access to safe drinking water i.e. "Piped Water" OR no electricity OR no gas facility, OR no toilet facilities OR no mobile/telephone
Naveed, Wood & Ghaus (2016)	Walls are made of "other than burnt bricks/blocks" OR no electricity OR no safe drinking water i.e. uncovered well, river, stream, pond, water tanker/water bearer" OR no toilet facility or using "raised latrine, pit latrine or other" OR use "firewood, dung cake, crop residue, charcoal, coal, other" for cooking, OR no physical assets
Hameed, Padda, & Karim, (2016)	No electricity, OR no safe drinking water OR no adequate sanitation OR use dirty cooking fuel OR has dirt floor, OR no physical assets
Idrees & Baig (2017)	No electricity, OR no safe drinking water OR no adequate sanitation OR use dirty cooking fuel OR has dirt floor, OR no physical assets OR has un-improved roof material "Rustic mat, wood planks, grass/leaf, irons sheet, bamboo" OR no mobile/telephone, OR no gas facility OR walls are made of "mud, unbaked bricks/blocks", OR no transport facility
Saleem & Khan (2017)	No electricity, OR no safe drinking water OR no adequate sanitation, OR no mobile/telephone, OR no gas facility

Continued on next page

(continued) Table 3.5 Benchmark for Living Standards Considered by Earlier Studies in Pakistan

Abbas, et al., (2018)	No safe drinking water or if it takes time more than 30 minutes. OR no improve toilet facilities or shared with household OR poor floor, i.e. "sand, clay" OR don't has electricity, OR use other source for cooking i.e. "animal dung, wood or charcoal" OR not having at least one assets (radio, TV, telephone, bicycle, motorbike or refrigerator)
Saleem, et al, (2019)	No electricity OR no gas facility, OR no toilet facilities OR no mobile/telephone OR no safe drinking water
Mehmood & Hussain (2020)	No toilet facilities OR persons per room more than 3, OR no electricity OR use other source for cooking, OR no physical assets,
Afzal & Nazir (2021)	Unimproved drinking water i.e. "(unprotected well, unprotected spring, pond, tanker-truck, cart, surface, other", OR inadequate sanitation, i.e." (flush to an unknown place, pit latrine without a slab, composite toilet, bucket, no facility/bush/field, other)" OR poor floor, i.e." (earth/sand, dung plastered))" OR unimproved roof, i.e." (no roof, thatch/palm leaf, wood planks, metal, wood)"
Mustafa et al., (2022)	No safe drinking water, OR no adequate sanitation
Nawab, et al., (2022)	No electricity OR no safe drinking water, "(unprotected well, unprotected spring, pond, tanker-truck, cart, surface, rainwater other" OR inadequate sanitation, i.e. "uncovered pit, bucket, public/communal latrine or no facilities", OR cook with "solid fuel, coal, wood, charcoal, grass, animal dung, crops residues", OR has floor like " Kacha, sand or dung" OR not having at least one asset from "TV, mobile phone, radio, telephone" and at least one asset from "bicycle, motorcycle/scooter, car/truck, or animal driven cart".
Khan & Sloboda (2022)	No electricity, OR distance to drinking water greater than 1 km OR inadequate sanitation OR cook with "Gas/LPG/Electricity/kerosene oil" OR not having "agricultural land/property/plot" OR no Television/LCD/LED OR no safe drinking water i.e. piped water/bottled/ filtered, 0 otherwise
Qadir, et al., (2023)	No electricity OR no gas, OR unimproved sanitation OR household is not owner OR no telephone

3.4 A REVIEW OF WEIGHTING SCHEME USED BY EARLIER STUDIES

The use of weights is a crucial step in developing a holistic understanding of poverty. According to (Kruijk & Rutten, 2007) weights show the relative importance of the factors being considered. Two alternate approaches have been considered in the literature on multidimensional poverty, i.e. (a) equal weight, which is acceptable in the absence of reliable data. Equal weights for each dimension are essentially an arbitrary and normative weighing system that is sometimes regarded to be a suitable approach. (A. B. Atkinson, 2003), and (b) nested weights, in which weights are applied unevenly both within and across dimensions

(Foster J., 2007). According to (Bossert, Chakravarty, & Ambrosio, 2009), wellbeing dimensions are not required to be given equal weight and may instead be given varied weights.

In Pakistan most of the earlier studies consider same weights. This was done primarily due to non-availability of data regarding weights of the dimensions. Giving each dimension the same weight indicates that they are all equally important. However, studies by (Naveed & Islam, 2010; Awan, Waqas, & Aslam, 2011, 2012; Idrees & Baig, 2017; Khan & Akram, 2018; Abbas et al., 2018) have used unequal weights. Considering unequal weights indicate that some dimensions of poverty are more important than others and weights reflect their relative significance.

3.5 REVIEW OF THE ESTIMATES OF MULTIDIMENSIONAL POVERTY IN POVERTY

The incidence of multidimensional poverty, as determined by several studies, is shown in Table 3.6. The estimates show that there are significant regional disparities in Pakistan. Rural areas experience multidimensional poverty at a higher rate than urban areas. At both the national and subnational levels, multidimensional poverty shows a declining trend over time. Table 3.7 provides estimates of multidimensional poverty among provinces. Provincial analyses show that the least multidimensional poverty is found in Punjab, whereas the highest is in Baluchistan for both rural and urban areas (Jamal, 2011; Saboor, et al., 2015; Padda & Hameed, 2018; Naveed & Ghaus, 2018; Mehmood & Hussain, 2020). This is because a lack of basic health facilities, a deficiency in safe drinking water, poor infrastructure, and a lack of employment opportunities are the main drivers of poverty disparity across provinces (Khan, et al., 2011).

This was an overview of the research that evaluated multidimensional poverty in Pakistan. Several studies have been undertaken to estimate multidimensional poverty with different benchmark and indicators. According to Jamal (2011), the multidimensional headcount index for 2004–2005 was overall 55.29, urban 18.66, and rural 51.03. Khan, et al., (2011) discovered that the incidence of multidimensional poverty was 54.68, urban 36.86, and rural 65.91 for the same year. The difference is due to the different benchmarks used, such as Jamal (2011), who do not use the health dimension. In contrast, Khan, et al., (2011) use two health indicators: immunization and prenatal care.

Table 3.6 Estimates of Multidimensional Poverty in Pakistan

Study	Region	1998-99	2001-02	2004-05	2005-06	2007-08	2008-09	2010-11	2012-13	2014-15	2016-17	2019-20
	Overall	-	54.98	53.64	-	-	-	-	-	-	-	-
	Urban	-	-	21.42	-	-	-	-	-	-	-	-
Jamal (2007)	Rural	-	-	68.61	-	-	-	-	-	-	-	-
Naveed & Islam (2010)	Overall	-	-	-	51.11	-	-	-	-	-	-	-
	Overall	-	-	55.29	-		57.30	-	-	-	-	-
	Urban	-	-	18.66	-		25.68	-	-	-	-	-
Jamal (2011)	Rural			51.03	-		53.35	-	-	-	-	-
	Overall	60.62	65.01	54.68	58.54	56.25	-	-	-	-	-	-
	Urban	40.62	47.30	36.86	43.16	40.82	-	-	-	-	-	-
Khan, et al., (2011)	Rural	71.90	75.14	65.91	68.11	65.79	-	-	-	-	-	-
Salah Uddin & Zaman (2012)	Overall	-	-	-	-	56.8	-	-	-	-	-	-
	Overall	-	-	49.42	-	-	47.36	48.17	-	-	-	-
	Urban	-	-	16.66	-	-	15.03	14.32	-	-	-	-
Jamal (2012)	Rural	-	-	64.86	-	-	63.21	64.89	-	-	-	-
	Overall	-	-	-	-	-	33	-	-	-	-	-
	Urban	-	-	-	-	-	18	-	-	-	-	-
Naveed & Ali (2012)	Rural	-	-	-	-	-	46	-	-	-	-	-

Continued on next page

(Continued) Table 3.6 Estimates of Multidimensional Poverty in Pakistan

Study	Region	1998-99	2001-02	2004-05	2005-06	2007-08	2008-09	2010-11	2012-13	2014-15	2016-17	2019-20
Sial, Noreen, & Awan (2015)	Overall	-	-	-	51.06	-	-	35.86	-	-	-	-
Arif , Wood, & Ghaus (2016)	Overall	-	-	-	-	-	36.9	34.5	31.3	-	-	-
	Urban	-	-	-	-	-	11.8	10.5	9.1	-	-	-
	Rural	-	-	-	-	-	49.2	46.3	42.3	-	-	-
Govt. of Pakistan (2016)	Overall	-	-	55.2	-	52.5	49.3	46.5	40.8	38.8	-	-
	Urban	-	-	24.0	-	19.4	17.3	13.9	10.1	9.4	-	-
	Rural	-	-	70.3	-	69.5	65.2	62.3	56.0	54.6	-	-
Idrees & Baig (2017)	Overall	-	-	-	-	-	-	-	44	-	-	-
Saleem & Khan (2017)	Overall	-	-	55.2	-	52.5	49.3	46.5	40.8	38.8	-	-
	Urban	-	-	24.0	-	19.4	17.3	13.9	10.1	9.3	-	-
	Rural	-	-	70.3	-	69.5	65.2	62.3	56.0	54.6	-	-
Khan & Akram (2018)	Overall	-	-	56.1	-	-	-	-	-	38	-	-
	Urban	-	-	35.3	-	-	-	-	-	8.8	-	-
	Rural	-	-	65.9	-	-	-	-	-	53.2	-	-
Naveed & Ghaus (2018)	Overall	-	-	-	-	-	-	-	31.3	29.1	-	-
	Urban	-	-	-	-	-	-	-	9.1	8.5	-	-
	Rural	-	-	-	-	-	-	-	42.3	40.2	-	-
Mustafa et al, (2021)	Overall	-	-	-	-	-	-	-	-	61.30	52.50	33.90
	Urban	-	-	-	-	-	-	-	-	51.80	48.80	23.40
	Rural	-	-	-	-	-	-	-	-	66.00	59.30	39.60
Khan & Sloboda (2022)	Overall	-	-	-	-	-	-	-	-	-	-	41.24

Table 3.7 Incidence of Multidimensional Poverty across Provinces in Pakistan

Study	Provinces	1998-99	2001-02	2004-05	2005-06	2007-08	2008-09	2010-11	2012-13	2015-16	2016-17	2019-20
Jamal (2007)	Punjab	-	-	-	-	-	36.93	-	-	-	-	-
	Sindh	-	-	-	-	-	47.63	-	-	-	-	-
	Khyber Pakhtunkhwa	-	-	-	-	-	56.10	-	-	-	-	-
	Baluchistan	-	-	-	-	-	78.53	-	-	-	-	-
Naveed & Islam (2010)	Punjab	-	-	-	39.2	-	-	-	-	-	-	-
	Khyber Pakhtunkhwa	-	-	-	26.1	-	-	-	-	-	-	-
Jamal (2011)	Punjab	-	-	31.73	-	-	36.93	-	-	-	-	-
	Sindh	-	-	44.24	-	-	47.63	-	-	-	-	-
	Khyber Pakhtunkhwa	-	-	58.27	-	-	56.10	-	-	-	-	-
	Baluchistan	-	-	79.24	-	-	78.53	-	-	-	-	-
Khan, et al., (2011)	Punjab	56.85	60.93	49.13	56.15	52.37		-	-	-	-	-
	Sindh	57.53	62.98	56.90	58.25	56.64		-	-	-	-	-
	Khyber Pakhtunkhwa	65.50	67.60	55.15	58.06	56.12		-	-	-	-	-
	Baluchistan	68.07	75.60	65.05	65.85	65.14				-	-	-

Continued on next page

(Continued) Table 3.7 Incidence of Multidimensional Poverty across Provinces in Pakistan

Study	Region	1998-99	2001-02	2004-05	2005-06	2007-08	2008-09	2010-11	2012-13	2014-15	2016-17	2019-20
Awan, Waqas, & Aslam (2012)	Punjab	-	-	-	57.63	-	-		-	-	-	-
	Sindh	-	-	-	63.32	-	-		-	-	-	-
	Khyber Pakhtunkhwa	-	-	-	66.73	-	-		-	-	-	-
	Baluchistan	-	-	-	89.5	-	-		-	-	-	-
Jamal (2012)	Punjab	-	-	-	-	-	-	43.67	-	-	-	-
	Sindh	-	-	-	-	-	-	46.79	-	-	-	-
	Khyber Pakhtunkhwa	-	-	-	-	-	-	58.32	-	-	-	-
	Baluchistan	-	-	-	-	-	-	76.76	-	-	-	-
Naveed & Ali (2012)	Punjab	-	-	-	-	-	19.0	-	-	-	-	-
	Sindh	-	-	-	-	-	33.0	-	-	-	-	-
	Khyber Pakhtunkhwa	-	-	-	-	-	32.0	-	-	-	-	-
	Baluchistan	-	-	-	-	-	52.0	-	-	-	-	-
Naveed, et al., (2016)	Punjab	-	-	-	-	-	30.1	27.6	24.3	-	-	-
	Sindh	-	-	-	-	-	39.4	37.4	37.5	-	-	-
	Khyber Pakhtunkhwa	-	-	-	-	-	48.5	45.5	39.3	-	-	-
	Baluchistan	-	-	-	-	-	70.3	67.1	62.6	-	-	-

Continued on next page

(Continued) Table 3.7 Incidence of Multidimensional Poverty across Provinces in Pakistan

Study	Region	1998-99	2001-02	2004-05	2005-06	2007-08	2008-09	2010-11	2012-13	2014-15	2016-17	2019-20
Govt. of Pakistan (2016)	Punjab	-	-	49.7	-	46.4	43.2	38.1	34.7	31.4	-	-
	Sindh	-	-	57.3	-	53.7	51.2	48.0	44.6	43.1	-	-
	Khyber Pakhtunkhwa	-	-	65.8	-	66.1	60.5	55.0	49.1	49.2	-	-
	Baluchistan	-	-	83.4	-	79.8	78.9	75.9	71.9%	71.2	-	-
Saleem & Khan (2018)	Punjab	-	-	49.7	-	46.4	43.2	40.0	34.7	31.5	-	-
	Sindh	-	-	57.3	-	53.7	51.2	49.5	44.6	43.2	-	-
	Khyber Pakhtunkhwa	-	-	65.8	-	66.1	66.1	57.0	49.1	49.1	-	-
	Baluchistan	-	-	83.4	-	79.8	78.9	76.7	71.9	71.0	-	-
Naveed & Ghaus (2018)	Punjab	-	-	-	-	-	-	-	-	22.0	-	-
	Sindh	-	-	-	-	-	-	-	-	34.0	-	-
	Khyber Pakhtunkhwa	-	-	-	-	-	-	-	-	37.3	-	-
	Baluchistan	-	-	-	-	-	-	-	-	61.1	-	-
Khan & Akram (2018)	Punjab	-	-	50.5	-	-	-	-	-	31.5	-	-
	Sindh	-	-	61.9	-	-	-	-	-	40.1	-	-
	Khyber Pakhtunkhwa	-	-	61.1	-	-	-	-	-	50.8	-	-
	Baluchistan	-	-	80.5	-	-	-	-	-	70.5	-	-

Continued on next page

(Continued) Table 3.7 Incidence of Multidimensional Poverty across Provinces in Pakistan

Study	Provinces	1998-99	2001-02	2004-05	2005-06	2007-08	2008-09	2010-11	2012-13	2015-16	2016-17	2019-20
Mehmood & Hussain (2020)	Punjab	-	-	-	-	-	-	-	-	83.0	-	-
	Sindh	-	-	-	-	-	-	-	-	91.0	-	-
	Khyber Pakhtunkhwa	-	-	-	-	-	-	-	-	87.0	-	-
	Baluchistan	-	-	-	-	-	-	-	-	93.0	-	-
Mustafa, et al., (2021)	Punjab	-	-	-	-	-	-	-	-	60.90	48.70	29.00
	Sindh	-	-	-	-	-	-	-	-	57.90	52.90	30.70
	Khyber Pakhtunkhwa	-	-	-	-	-	-	-	-	61.40	56.60	34.80
	Baluchistan	-	-	-	-	-	-	-	-	70.40	55.80	56.90
Khan & Sloboda (2022)	Punjab	-	-	-	-	-	-	-	-	-	-	25.50
	Sindh	-	-	-	-	-	-	-	-	-	-	51.74
	Khyber Pakhtunkhwa	-	-	-	-	-	-	-	-	-	-	50.39
	Baluchistan	-	-	-	-	-	-	-	-	-	-	71.16

Most importantly, methodologies differ; Jamal (2011) used the Composite Index to calculate multidimensional poverty, whereas Khan, et al., (2011) used Alkire Foster's methodology. We got different results for the same years because of these differences. The explanation above makes clear that these studies are quite different from one another, and as a consequence, the findings cannot be compared because of the disparity in techniques.

Our review of research that looked into multidimensional poverty comes to an end here. In next section we will review the studies that investigated the correlates of poverty

3.6 REVIEW OF THE STUDIES EXPLORING CORRELATES OF POVERTY

Numerous studies have examined the measurement of unidimensional poverty in Pakistan, with some focusing on investigating the correlates of poverty. Studies by (Irfan, 1985; Mahmood, Sheikh, & Mahmood, 1991; Shirazi, 1995) were among the first to investigate the causes of poverty and discovered that household factors had a sizable influence on it. Further studies on the economic and demographic factors influencing household poverty have been conducted by (Azid & Malik, 2000; Cheema & Sial, 2012; Bashir & Idrees, 2021; Kifayathullah, Majeed, & Mustafa, 2020). According to these studies, the likelihood of being poor decreased with an increase in the number of earners, the head of the household's educational level, age, and employment. However, large household sizes and a higher dependence ratio exacerbated the area's poverty. Further remittances have significantly reduced the likelihood of poverty, especially in rural areas.

In Pakistan, there has not been much empirical work on the correlate's poverty through multidimensional analysis. The pioneering study in this regard was conducted by (Kiani & Kazmi, 2020). The study found that household size had a negative impact on wellbeing, whereas the household head's age and gender had a favorable impact. Households with female heads performed better. Overall, the research highlighted education's essential role in raising living conditions for families in rural and urban locations.

Similarly, (Rani, Khan, Ali, & Khan, 2023) examined multidimensional poverty in Behram Dheri, a Union Council in Charsadda district, Pakistan. They used Alkire-Foster technique and binary-logit models. The results showed that families with female heads and non-owners of agricultural land were more vulnerable to poverty. Large households with more dependents

were more at risk, while nuclear family structures were less vulnerable. Lack of ownership of agricultural land raised the chances of deprivation, while female-headed families had higher probability of experiencing deprivation. Income from livestock and poultry reduced the likelihood of deprivation.

3.7 CONCLUSION

In this chapter we have reviewed the earlier literature on the empirical analysis of multidimensional poverty in Pakistan. The earlier studies considered different dimensions, methodologies, cutoffs, and weights. These studies used the same data set but different approaches and came to different conclusions. The earlier studies took the same benchmarks across rural and urban regions and thus treated them identically. The present study shall consider different benchmarks for rural and urban areas. Further the earlier studies are mainly confined to overall Pakistan, rural – urban areas or provinces and a little emphasis was laid on exploring poverty at district level. The present study is an attempt to fill the existing dearth of research by analyzing poverty at the provincial and district levels.

Furthermore, no consistent study has been undertaken over an extended period with the same benchmark and methodology. This research aims to measure multidimensional poverty for all available PSLM surveys from 2004–05 to 2019–20. Therefore, we will present consistent estimates of poverty for a period of 15 years. Moreover, an update is required to identify the leading causes of multidimensional poverty and develop policy measures to reduce deprivation. The literature demonstrates that several studies have been conducted to explore the correlates of poverty in Pakistan. None of the earlier studies focused explicitly on region-specific characteristics such as inequalities in education and income, population density, availability of education and health facilities. The present study is an effort to fill the gap by considering the impact of such regional characteristics along with other household variables in causing or controlling poverty.

Chapter 4

DATA AND REGION OF ANALYSIS

4.1 INTRODUCTION

In this chapter we shall explain the data, period and region of analysis. It comprises of four sections, after introduction the region and period of analysis of the present study are discussed. The data sources of the present study are explained in Section 4.3. Finally, the discussion is summarized in Section 4.4.

4.2 REGION AND PERIOD OF ANALYSIS

Pakistan is a diversified country; there are substantial regional disparities. Administratively, Pakistan is divided into seven units including four provinces (Punjab, Sindh, Khyber-Pakhtunkhwa, and Baluchistan), Azad Jammu & Kashmir, Gilgit – Baltistan and Federally administrative areas. All units are topographically diversified with significant variation in climate, people speak different languages and have distinct cultural values. This all leads to diversified occupations and unequal employment opportunities. In addition to Pakistan's other economic concerns, interregional disparities are amongst the most visible issues. Disparities are not only confined across provinces and rural and urban areas, but also across cities and towns. Fundamental facilities like schools, hospitals, roads, parks and markets are not equally available in all regions. For a long time, Pakistan has seen unbalanced growth, with some regions and districts making significant progress while others are underperforming. In such a diverse country, instead of relying on overall poverty solutions, it is essential to understand and explore the regional disparities across the regions.

Therefore, a consistent long period poverty estimates at the district level are crucial for policy makers to eliminate poverty. The present study shall examine the poverty trends for fifteen years (2004–05 to 2019–20) at the national, regional, provincial, and district levels. In

Pakistan there is a vast disparity in socioeconomic deprivation, therefore, the present study aims to analyze deprivation at the regional, provincial and district level over the past fifteen years.

4.3 DATA SOURCES

The prime objective of present study is to estimate the magnitude, depth, and intensity of multidimensional poverty in Pakistan, its provinces, districts, and rural-urban areas. The analysis of poverty needs household level information at micro level with detailed information on household size, employment, house quality, education, health and living standards. In this regard we have two alternative sources of primary micro data that provide detailed information at household level, i.e., the Pakistan Social and Living Standard Measurement (PSLM) and the Pakistan Demographic Health Survey (PDHS). The present study is based on seven most recent surveys of PSLM, as they directly provide information at district level.

After estimating poverty, the next objective of present study is to explore the role of household characteristics, socioeconomic conditions, and regional factors in causing or controlling poverty in Pakistan. The data on regional factors is extracted from various issues of Provincial Development Statistics (various issues), the reports are periodically issued by Provincial Bureau of Statistics.

4.3.1 Pakistan Social and Living Standard Measurement

The present study is primarily based on microdata sets of Pakistan Social and Living Standard Measurement Surveys which are periodically conducted by Pakistan Bureau of Statistics. The Pakistan Social Living Standard Measurement surveys were initiated in July 2004, the idea was to provide economic and social indicators at the district and provincial levels. So far seven district representative surveys have been conducted. The first survey was conducted in 2004-05, it covered 73,411 households. The sample size gradually increased and the latest survey of 2019-20 covered 1,60654 households. It is also worth mentioning that initial surveys were confined only to four provinces. Since the present study aims to present the consistent time series of poverty trends in Pakistan, therefore we have restricted our analysis only to four provinces which captures around 94% of the total population.

The questionnaires of PSLM are continuously revised and updated. For instance, the latest survey of 2019-20 has data on information communication technology, food insecurity and migration. The present study has extracted data from following sections of the questionnaires:

a). Household Roster: It gives information on all household members with gender, age, relation to head, marital status

b). Education: This section gives comprehensive information on the educational status of household members of an age above 3 years.

c). Employment and Income: This section gives complete information on the employment status, earnings, and occupation of household members of the age of 10 years or more.

d). Housing: This section provides information regarding house conditions and amenities, such as occupancy status, house type, number of rooms, roof quality, wall quality, cooking fuel, heating fuel, lighting fuel, internet connection, ownership of computer laptops, and tablets. Furthermore, information regarding drinking water, sanitation and hygiene is also available.

e). Ownership: This section covers a wide range of topics, including land ownership, ownership of durable goods, ownership of means of transportation

f). Vaccination: This section contains information about childhood vaccinations of children below 6 years.

g). Natal Care: This section covers married women with age between 15 to 49 years. Different questions related to prenatal and postnatal care are asked from a married woman who gave birth during last 3 years.

h). Use of Services and Facilities: The purpose of this section is to learn how people use and can access various services and facilities like hospitals, schools, transportation, post office etc.

4.3.2 Sample Design of PSLM Data

The surveys have been designed with a two-stage stratified random sample. Every enumeration block in urban and rural domains is recognized as a Primary Sample Unit which consists of 200 to 250 households and in second stage households are selected from within the Primary Sample Units. It is to be noted that for true representation, rural – urban and province wise distribution of households in the sample is according to the actual population shares. The provincial and regional distribution of sampled households is depicted in Table 4.1. The sample size has substantially increased over time.

Table 4.1 Distribution of Households from PSLM 2004-05 to PSLM 2019-20

Regions	2004-05	2006-07	2008-09	2010-11	2012-13	2014-15	2019-20
Pakistan	**73411**	**73953**	**75188**	**76546**	**75516**	**78635**	**160654**
Rural	47232	47680	48601	49745	48918	64670	110672
Urban	26179	26273	26587	26801	26598	13965	49982
Punjab	**32252**	**32242**	**32053**	**32380**	**31916**	**36571**	**79674**
Rural	19053	19074	19002	19201	18979	29465	54784
Urban	13199	13168	13051	13179	12937	7106	24890
Baluchistan	**10037**	**10654**	**11650**	**12065**	**11647**	**10247**	**15241**
Rural	7804	8325	9320	9765	9241	8971	12425
Urban	2233	2329	2330	2300	2406	1276	2816
Sindh	**18628**	**18532**	**19284**	**19622**	**19480**	**18735**	**37106**
Rural	10954	10838	11150	11358	11358	14336	18302
Urban	7674	7694	8134	8264	8122	4399	18804
Khyber Pakhtunkhwa	**12494**	**12525**	**12201**	**12479**	**12473**	**13082**	**28633**
Rural	9421	9443	9129	3058	9340	11898	25161
Urban	3073	3082	3072	9421	3133	1184	3472

Source PSLM (various issues)

It is also worth mentioning that PSLM is district representative survey, as it covers a reasonable number of households from almost all districts of the four provinces of Pakistan.[9] In 2004-05, 99 out of 100 districts were covered and in 2019-20, 126 out of 131 were covered by PSLM in 2019-20.

4.3.3 Provincial Development Statistics

For the determinants of wellbeing, district-wise data has been collected from several publications of the Pakistan Bureau of Statistics. Since 1971, the Bureau of Statistics has published the Development Statistics Publication for each province. The Bureau of Statistics is a provincial statistical institution with an associated Planning & Development Department division. Its mission is to gather, organize, evaluate, and disseminate official data on economic, social, demographic, and other significant characteristics. At both the aggregate and sectoral levels, it offers crucial information about the economy's social, economic, and financial sectors. The Pakistan Bureau of Statistics publications include information on nearly all local economic industries, broken down as much as possible by tehsil, district, and division. In this study, we have taken district level data of population, area, number of schools and hospitals.

4.4 CONCLUSION

In this chapter we have explained the data and region of our analysis. The microdata of seven latest rounds of Pakistan Social Living Standard Measurements will be utilized to estimate multidimensional poverty from 2014-15 to 2019-20. We shall estimate magnitude, depth and intensity of poverty in all districts, provinces, rural-urban areas and overall Pakistan. The region-specific data for correlates of multidimensional poverty will be extracted from Provincial Development indicators.

[9] All districts of four provinces are covered in each round of PSLM, except Kohlu in 2004-05, Panjgur in 2013-12 Chaghi, Jhal Magsi, Zhob, Musakhail and Panjgur in 2019-20.

Chapter 5

ANALYTICAL FRAMEWORK AND METHODOLOGY

5.1 INTRODUCTION

In this chapter we will explain the analytical framework and methodology of the present study. There are seven sections in this chapter. The unit of analysis is explained in Section 5.2, and the dimensions of wellbeing are described in Section 5.3. The indicators for each dimension and their cutoffs are explained in Section 5.4. A brief discussion on overall deprivation cutoffs and methodology for measuring poverty is given in Section 5.5. The next section explains the variables and methodology for exploring correlates of poverty. Finally, the discussion is summarized in Section 5.7.

5.2 UNIT OF ANALYSIS

Unit of analysis is of great importance in empirical analysis of poverty. In general, the unit of analysis for the empirical analysis of poverty is the individual or a household. Considering individual as a unit of analysis allows us to analyze the wellbeing of individual by focusing on the indicators like education, health, employment etc. On the other hand, considering the aggregate household as a unit of analysis permits us to analyze aggregate welfare of all household members.

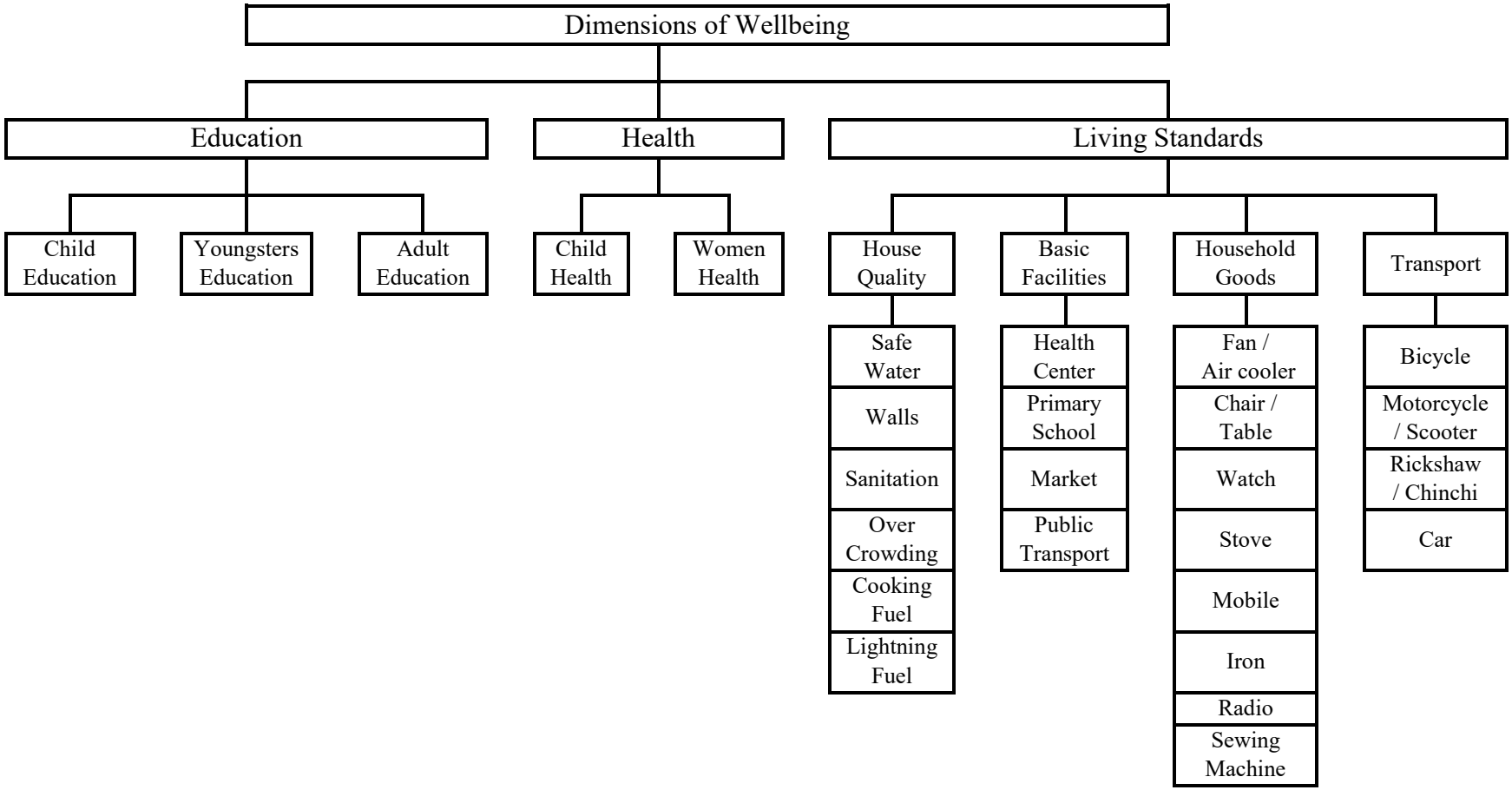
In a multidimensional assessment of poverty, the concentration is on the lack of access to multiple dimensions of wellbeing such as education, health and living standard. Aspects like housing and related amenities are tied to the household, whereas other dimensions like education and health are related to individuals. As a result, there is somewhat of a hybrid approach to the unit of analysis. For instance, the unit of measurement for variables like education and health will be the individual, whereas the unit of analysis for house quality will be the household. However, the final deprivation cutoffs will be defined in terms of households.

5.3 DIMENSIONS OF WELLBEING

Recent research has shown that poverty is a multifaceted phenomenon. It considers various dimensions, such as inability to meet basic needs, not having control over resources, not having access to education, health care, clean water and hygienic sanitation, and political freedom or voices. Identifying pertinent dimensions and indicators is the most crucial step in the empirical analysis of multidimensional poverty. These selections reflect a conclusion regarding what is crucial for the welfare of families and individuals within a society.

As mentioned in previous chapter, microdata sets of Pakistan Social and Living Standards Measurement are the primary data sources of present study. Data on factors like freedom of expression, the right to cast a vote, and law & order situations is not available. Therefore, the present study is confined to the fundamental dimensions of wellbeing including education, health and living standards. Education is the fundamental right of all human beings. A high-quality education has numerous benefits that go beyond its impact on economic growth and have an influence on a variety of other aspects of wellbeing. As educated people have better employment opportunities, less earnings stress, better health, and improved living standards. Moreover, educated individuals have better understanding, they can think critically, and their mental agility is also high. Education is essential to build a good society. Similarly, health is intimately related to human welfare and prosperity, which in turn strongly influences economic growth. A healthy person is likely to be more efficient, earn more money, and tends to live longer. Good health is a prime source of happiness. In general, healthy, and educated persons are constructive human resources and contribute significantly to overall wellbeing of household and society. The last dimension of our study is living standards, it refers to the quality of life. A better living standard is one of the ultimate indicators of wellbeing. In this regard we shall focus on house quality, ownership of household goods, access to basic facilities of life and means of transportation, as all these contribute to the wellbeing of household. Dimensions of wellbeing are elaborated in Figure 5.1

Figure 5.1 Dimensions of Wellbeing to Analyze Multidimensional Poverty



5.3.1. Education

Education is one of the most crucial factors in elevating a nation from its current status to international prominence. For socioeconomic success to be sustainable, a nation must make a substantial investment in its human capital through skill development and education (PES, Pakistan Economic Survey 2021-22, 2011-22). Prolonged, high-quality education has numerous benefits beyond its impact on economic growth and affects various other aspects of wellbeing. As an illustration, in OECD nations, those with higher levels of education live, on average, six years longer than those with lower levels of education (Nozal , Martin, & Murtin, 2019). Educated individuals have better access to labor market and can effectively utilize resources. In general, educated individuals are not a burden on others and non-deprivation in education is regarded as a symbol of wellbeing.

Numerous studies conducted in the past stressed the value of education and demonstrated that a higher degree of education improves peoples' economic potential and social welfare (for instance, Awan, Waqas, & Aslam, 2011; Masood, et al., 2011; Awan, Sarwar, Malik, & Nouman, 2011; Sial, Noreen, & Awan, 2015). The findings of earlier studies (such as Tilak, 2006; Julius & Bawane, 2011; Buarque, Špolar, & Zhang, 2006; Paraschiv, 2017) also show that having more years of schooling helps to lower poverty. Thus, it is believed that education is a crucial component of wellbeing. Most of the studies considered education by focusing on indicators like literacy, enrolment, and schooling. Literacy refers to a person's ability to read and write, enrollment refers to whether a person of school age is enrolled in school or not, and schooling refers to the successful years of schooling, such as primary or middle pass (Saboor, et al., 2015). [10]

5.3.2 Health

Health is a fundamental component of wellbeing. A healthy person is more productive and tends to live longer. On the other hand, poor health places a heavy financial burden on society

[10] Pakistan's educational system is structured as follows; primary education refers to five years of successful schooling after pre schooling. Middle refers to another three years of successful education after primary. Secondary School Certificate comprises of ten years of successful education after pre schooling. Higher Secondary School Certificate is awarded after two years of Secondary School Certificate. The next level is BS which comprises of four years of successful education after Higher Secondary School. The next degree is M.Phil. which is obtained after another two years of education. The highest formal degree is Ph.D., its duration is normally between 3½ and 7 years. This is to mention that BS (four years degree after HSSC) was initiated in 2010, before that and even now partially, we had a 2 year degree after HSSC, called Graduation.

and governmental resources (Nozal , Martin, & Murtin, 2019). The Sustainable Development Goals (SDGs) are focused on improving health and wellbeing. To "ensure healthy lifestyles and promote wellbeing for everyone at all ages" is the third goal of the SDG. The importance of health for achieving a subsistence level of wellbeing is emphasized in several studies including (Asselin & Anh, 2005; Yu, 2013; Wagle, 2008; Tulchinsky, Varavikova, & Cohen, 2014; Wang, et al., 2021). In contrast to hunger and poor health, which are seen as barriers to socioeconomic growth, good health, and nutrition are crucial for the socioeconomic development of a nation. It is a critical factor in determining the wellbeing of individuals.

5.3.3. Living Standard

Standard of living is another critical determinant of wellbeing. Better living conditions imply a better life. Living standards are determined by the quality of a house with emphasis on quality of structure, good sanitation system and access to basic facilities of life. The structure includes a roof, walls, and floor. Sanitation system refers to proper flow of waste and basic facilities refers to market, school, hospital, play area, police station and park. A large number of studies including (Jamal, 2007; Sial, Noreen, & Awan, 2015; Idrees & Baig, 2017; Qadir, et al,2022) has considered living standard as an important indicator of wellbeing. Ray, (2006) highlights the significance of public utilities like electricity, gas, and telephone in raising social welfare. Similarly, many studies like (Naveed & Islam, 2010; Jamal, 2011; Abbas, et al., 2018; Mehmood & Hussain, 2020; Khan & Sloboda, 2022) has considered ownership of assets as a proxy of wellbeing. The present study will consider house quality, ownership of household goods, access to basic facilities and ownership of means of transportation as proxies of living standards.

5.4 INDICATORS AND DEPRIVATION CUTOFFS FOR EACH DIMENSION

After deciding the dimensions of wellbeing, the next step is to define the minimum threshold of each dimension. An individual / household falling below the threshold is considered deprived in a particular dimension. In this section we will define the cutoffs for each dimension.

5.4.1. Indicator and Poverty Cutoffs for Education

The benchmark for education mainly depends upon the age of individual, as same benchmark cannot be defined for children and adults. In countries like Pakistan, along with age the benchmark of education depends upon the region of residence. For instance, the education profile of urban areas is relatively better and the need of education for individuals is much more in urban areas. Offices, shopping malls, supermarkets where only educated person can deal are mostly located in urban areas. On the contrary, in rural areas education is not much needed in day-to-day affairs. Farming, fishing, and livestock are the major occupations in rural areas and overwhelming majority of people employed in these occupations are uneducated.[11] In present study the benchmarks for education are separately defined for different age groups and the benchmarks also differ across rural and urban areas. In this regard individuals are divided in three groups; the first group comprises of children with age between 6 to 11 years, the second group comprises of minors / adolescence / youngsters with age between 12 to 15 years, the third group comprises of adults with age 16 years or above. Now we will define deprivation cutoffs for each age groups and across rural – urban areas

5.4.1.1 Deprivation Cutoffs for Children (6 to 11 years)

a) Individual Cutoff: A child of school age will be considered deprived of education if he / she is neither enrolled nor has passed the primary class.

b) Household Cutoff: The household is considered deprived of child education, if even a single child did not complete primary school or is not enrolled. Hence, a non-deprived household is that in which all children are enrolled or at least primary pass.

The deprivation cutoffs for children are the same across rural and urban areas.

5.4.1.2. Deprivation Cutoffs for Youngsters (12 to 15 years)

a) Individual Cutoff: In rural areas, an individual with an age between 12 to 15 years is considered deprived of education if he/she is neither enrolled, nor completed primary education. This benchmark for urban areas is middle school.

[11] According to the microdata of PSLM (2019–20), the average education of earners in urban and rural areas of Pakistan is 7.25 and 5.92 years respectively, while the average years of schooling for individuals engaged in agriculture and livestock are 3.44 only.

b) Household Cutoff: A household would be classified as deprived in this category if any of the members (age 12 – 15 years) have an education below the defined benchmark and is currently not enrolled. In our analysis the benchmark is primary and middle class for rural and urban areas respectively.

5.4.1.3. Deprivation Cutoffs for Adults (above 16 years)

a) Individual Cutoff: For an individual (16 years or older), the deprivation cutoffs are defined as primary and middle class for rural and urban areas respectively.

b) Household Cutoff: A household will be deprived if no member is primary passed in rural and middle passed in urban regions.

The overall cutoff for deprivation in education is determined by considering the deprivations of each age group. A household is considered deprived in education if it is deprived in education of one or more groups. In other words, a household is non-deprived in education if it is not deprived in education of children, youngsters and adults. The deprivation cutoffs for education are summarized in Table 5.1.

Table 5.1 Deprivation Cutoffs for Education

Indicators	Rural Areas	Urban Areas
Child (Age 6 to 11 years)	Neither Enrolled nor Primary pass	
Youngsters (Age 12 to 15 years)	Not Primary pass	Neither Enrolled nor Middle pass
Adults (Age at least 16 years)	Not primary pass	Not Middle pass
Deprivation Cutoff at Household Level	If even one household member is deprived in any of the above categories of education, the entire household is deemed to be deprived in education.	

5.4.2. Indicator and Poverty Cutoffs for Health

Health is another curtail factor affecting the productivity of individuals. Healthy individuals are in general more effective and productive. Therefore, health can be vital in reducing poverty. There are various ways to measure the health status of an individual. In this regard

the Body Mass Index is the most used indicator. This index is based on age, weight, and height but we don't have data on weight and height. The primary data sources of present study are micro data sets of PSLM which provides information on health status of child and married women by focusing on indicators like child mortality, immunization, pre and postnatal health care facilities. The present study shall consider these indicators to evaluate child and women health.[12]

5.4.2.1. Child's Health

In general food intake and proper vaccination are the indicators of child health. Due to non-availability of data on food intake, the present study shall consider vaccination as a proxy of child health. Child health is at a big risk without vaccines, a child with all essential vaccination will be considered healthy. In this regard we will consider the following cutoffs.

a) **Deprivation in Immunization:** The data set of PSLM reports 12 vaccines, most of them are essential to protect children from chronic diseases like polio and measles. We have considered a benchmark of nine, a child will be considered deprived if he / she is given less than nine vaccines. A household will be considered deprived in child health if even a single child is not properly vaccinated, i.e., given less than 9 vaccines.

5.4.2.2 Married Women's Health

Considering the available information, we shall consider prenatal and postnatal health care as the proxies of married women's health who has given birth to a child within the last 3 years.

a) **Deprivation in Prenatal Health Care:** In case of rural areas, a woman is considered deprived if she receives traditional birth assistance at home. On the other hand, in urban areas a woman if considered deprived if she received any of the following assistance at home, traditional birth assistance, lady health worker or lady health visitor. The reason for setting relatively stringent benchmark for urban areas is that in general health facilities are better in urban areas. A woman is non deprived in both rural and urban areas, if she got treatment from home doctor, clinic or hospital.

[12] This is one of the data limitations that our analyses are confined to the health of child and married women, as information on health of other household members is not available in PSLM.

b) Deprivation in Postnatal Health Care: For rural areas a woman is considered deprived in postnatal if she is assisted by a family member, neighbor, friend, or any untrained person. In case of urban woman is considered deprived in postnatal if she is assisted by any untrained person or even midwife.

A household is considered deprived in health care of married women if even a single woman is deprived in pre or postnatal health care services. Regarding overall health, a household is considered deprived in health if any of its member (child or married woman) is deprived in health. The deprivation cutoffs for health are summarized in Table 5.2

Table 5.2 Deprivation Cutoffs for Health

<table>
<tr><th colspan="3">Dimensions</th><th>Rural</th><th>Urban</th></tr>
<tr><td rowspan="2">Child Health</td><td colspan="2">Individual Child</td><td colspan="2">Not properly vaccinated,
(Got less than 9 vaccines out of 12)</td></tr>
<tr><td colspan="2">Household</td><td colspan="2">Even a single child is not properly vaccinated</td></tr>
<tr><td rowspan="3">Women Health</td><td rowspan="2">Individual Woman</td><td>Prenatal Health Care</td><td>received traditional birth assistance at home</td><td>received traditional birth assistance or through lady health worker / lady health visitor.</td></tr>
<tr><td>Postnatal Health Care</td><td>assisted by a family member, neighbor, friend, or any untrained person.</td><td>assisted by a family member, neighbor, friend, untrained person, or midwife.</td></tr>
<tr><td colspan="2">Household</td><td colspan="2">if even a single woman is deprived in pre or
postnatal health care services.</td></tr>
<tr><td colspan="3">Deprivation Cutoff
at Household Level</td><td colspan="2">A household will be categorized as deprived in Health care if any member (child or married woman) is deprived in health</td></tr>
</table>

5.4.3. Indicator and Poverty Cutoffs for Living Standards

Living standard refers to the quality of life. In general living standard is measured through house quality and associated amenities, such as sanitation facilities, availability of clean drinking water, access to health center / hospitals, schools, and market. In addition to these factors like house quality, assets, ownership of essentials, and means of communication & transportation are also important components of living standard. The present study shall

consider house quality, access to basic facilities, ownership of household goods and means of transportation as the proxies of living standards.

5.4.3.1. House Quality

Housing is a crucial component of the 2030 agenda for Sustainable Development and an essential driver for achieving many Sustainable Development Goals. Proper shelter is a basic need, it not only safeguards from extreme weather but also provides safety and leads to a comfortable life.

According to (Foster J., 2007) electricity, gas, and proper sewerage system as the core indicators of house quality. Gianoli (2019) emphasized that adequate and proper housing quality enhances health, education, and economic opportunities. The present study will consider six indicators to measure house quality including availability of clean drinking water, crowding, sanitation, quality of walls, and the availability of electricity and gas. A household lacking 3 or more indicators will be considered deprived of house quality.

a) Safe Drinking Water: Water is essential for human life. It performs multiple functions, such as, it delivers oxygen throughout the body, protects from dehydration, prevents kidney damage, regulates body temperature, flushes body waste, and helps in digestion. Therefore, access to clean water is essential for human health and that is why it is the 17th millennium development goal. The PSLM reports multiple sources of drinking water. In present study a household shall be considered deprived of drinking water if it is obtained from a closed (unprotected dug) well, an unprotected pond, or unfiltered water from river, canal, or stream, as all these are unhygienic sources of drinking water. For this study, we used the same benchmark for safe drinking water in both urban and rural areas.

b) Sanitation: Sanitation refers to a proper sewage system, ensuring cleanness and a hygienic environment which is essential to prevent various diseases and ensuring good health. Poor sanitation is associated with the spread of typhoid, cholera, and intestinal worm infections, all of which are diarrheal illnesses. According to the annual report of (WHO, Sanitation, 2022), each year 0.83 million people in low and middle income countries pass away due to poor access to water, sanitation, and hygiene, accounting for 60% of all diarrheal deaths. Some 0.43 million of these fatalities are thought to have been caused chiefly by poor sanitation.

The proper sanitation system is essential for healthy life, it includes safe collection and hygiene disposal of human waste. In the present study, a household in urban areas is perceived as deprived in sanitation if it lacks a flush toilet, semi-flush latrine (flush to septic tank), flush connected to open drains or dry raised latrine connected to sewerage, whereas in rural areas even pit latrine is also considered non-deprived, as due to improper sewerage system pit latrine is too common in rural areas. Both measures; safe drinking water and sanitation are aspects of the domestic environment that have an impact on health and are linked to infectious diseases.

c) Walls: Building material is very important in ensuring house quality. Low quality material and primitive construction methods can expose households to extreme climate and heavy rainfall. An adequate house provides shelter from cold, heat, and extreme weather (World Health Organization , 2018). The present study will consider wall quality as one of the indicators of house quality. In this regard, a house in an urban area will be considered deprived if its walls are made of mud / raw bricks, wood, bamboo, stones, or any other similar material. While walls made of mud bricks/mud are considered non-deprived in rural areas. In rural areas, only walls made of wood, bamboo, or stones will be considered deprived. Because mud brick houses are safer and durable relative to wood and stone houses.

d) Overcrowding: Another important determinant of a house's quality is the house size. The appropriateness of the house size depends upon the number of residents. The house is overcrowded if a large number of people are sharing one living room. In this regard we have considered a benchmark of three, a house is considered overcrowded if on average three or more people are sharing one living room. This benchmark is identical for rural and urban areas.

e) Cooking fuel: The source of cooking fuel is another determinant of house quality. PSLM reports Gas, electricity, firewood, kerosine oil, cow dung-cakes, sticks and wooden coal as the main sources of cooking fuel in Pakistan. Cooking with sticks, dung-cakes, coal, and other solid fuels are risky and may cause diseases like asthma and other respiratory illnesses. Further such sources of cooking fuel are also a source of smoke pollution and concocting many harmful chemicals which directly affect health. In specific women are more likely to suffer, as in Pakistan domestic cooking is mainly confined to females.

The present study shall consider different deprivation cutoffs for rural and urban areas. In urban areas, a household using firewood, dung-cakes, crop residue or coal as cooking fuel are considered deprived. On the other hand, households are considered deprived in rural areas if they use crop residue as cooking fuel. The reason for recognizing the use of firwood and dung-cakes is the non-availability of gas and electricity in most of the rural areas.

f) Lighting fuel: Lightning is very important for households. Like rest of the world, electricity is the main source of lightning in Pakistan. Nevertheless, in some deprived regions of the country, due to the non-availability of electricity people rely on other sources, such as candles, kerosene oil, firewood, and others. In present study households using kerosene oil, petrol, diesel, firewood, or candle as a source of lightning are considered deprived. This benchmark is same for rural and urban areas.

5.4.3.2 Access to Basic Facilities

The second indicator of living standard considered by present study is access to basic facilities. In this regard we shall consider access to health unit, primary school, safe drinking water, market and public transport. In the current study, we used the benchmark that if it takes more than 14 minutes to get to any nearby health institutions, primary schools, markets, public transportation, or water, it will be considered deprived. The same cutoffs are used for rural and urban areas.

a) Access to Health Unit: Access to health unit is a proxy of health care facilities which are the essential needs of human life. Easy access to health units is an indicator of living standard. This is one of the reasons that people prefer to live in areas where health units / hospitals are easy access, among two similar houses, one near the health unit will be preferred.

b) Access to Primary School: Basic education is a fundamental right of all human beings. It not only creates awareness but also enhances the employability of individuals. In general, educated individuals are more responsible and are not dependent upon others. According to Jim Yong Kim, President of the World Bank Group, "To end poverty, boost shared prosperity, and achieve the Sustainable Development Goals, we must use development financing and technical expertise to effect radical change. We must work together to ensure that all children have access to quality education and learning opportunities throughout their lives, regardless of where they are born, their gender, or their family's income" (Mundial & UNICEF, 2015). The availability of free primary and secondary education is one of the goals

of the Government of Pakistan. This is also reflected in Constitution of Pakistan that providing free and adequate education for children is mandatory.

c) Access to Market: Access to market / shop is very important to purchase groceries and other daily needs including essential food items and medicines. It is another indicator of living standard, availability of a market in the vicinity is normally preferred. This is the reason that we have local markets in all urban areas. These markets cater to the daily need of households living in the vicinity.

d) Access to Public Transport: Access to public transport is another crucial factor that affects the quality of life. This is very important for low-income families, who do not own transport and a good public transport system also facilitates middle-income families. The public transport system of Pakistan is not very good, and it is unable to attract high income families. Therefore by and large the users of public transport belong to low or middle-income families. Nevertheless, in empirical analysis of poverty, it is agreed that access to public transport is very important.

e) Access to Water for other Uses: Water is one of the most important needs of human life. Apart from drinking, it has multiple uses, such as cleaning, laundry, cooking and personal hygiene. Therefore, having access to water is vital.[13]

5.4.3.3. Ownership of the Means of Transportation

Ownership of the means of transportation is an important indicator of wellbeing. Its importance is much greater if school, market, and other facilities are not available in the surroundings. Having one's own mode of transportation demonstrates a person's wellbeing and quality of life. In the present study, we will consider bicycles, motorcycles, scoters, rickshaws, and cars as the domestic modes of transportation. A household living in rural areas will be deprived if it does not own any of the means of transportation. Further the urban dwellers are considered deprived of any means of transportation even if they own only a bicycle, as in urban areas people in general travel more and the bicycle is not appropriate for long travels.

[13]In section 5.4.3.1, the focus was on clean drinking water and here the focus is availability of water for laundry, personal hygiene and such other purposes.

5.4.3.4. Household Goods

Basic household goods are proxy of the financial condition of household. The present study shall consider basic household goods including chair, table, iron, radio, fan or water cooler, TV or LCD, cell phone or landline, and a sewing machine. These are the very basic household goods which represent the subsistence living standard and economic wellness of any household. A household will be considered deprived if it does not own five or more of these household goods. In other words, a non-deprived household owns at least five of these goods. A summary of the deprivation cutoffs for living standards is given in Table 5.3.

Table 5.3 Deprivation Cutoffs for Living Standards

Dimensions	Cutoffs for Rural areas	Cutoffs for Urban areas
1. House Quality	If Household is Deprived in three more sub dimensions of House Quality	
Safe Drinking Water	deprived if it is obtained from a closed (unprotected dug) well, an unprotected pond, or unfiltered water from river, canal, or stream.	
Sanitation	deprived if it lacks a flush toilet, semi-flush latrine (flush to septic tank), flush connected to open drains, dry raised latrine connected to sewerage or pit latrine.	deprived if it lacks a flush toilet, semi-flush latrine (flush to septic tank), flush connected to open drains or dry raised latrine connected to sewerage
Walls	Deprived if walls are made of wood, bamboo, or stones or any other similar material	deprived if its walls are made of mud / raw bricks, wood, bamboo, stones, or any other similar material.
Crowding	Deprived if on average three or more people are sharing one living room	
Cooking Fuel	Deprived if using crop residue as cooking fuel.	Deprived if using firewood, dung-cakes, crop residue or coal as cooking fuel.
Lightning Fuel	Deprived if using kerosene oil, petrol, diesel, firewood, or candle as a source of lightning	
2. Access to Basic Facilities	If Household is Deprived in three more sub dimensions of Access to Basic Facilities	
Health Unit	Deprived if it takes more than 14 minutes to reach nearby Health Unit	
School	Deprived if it takes more than 14 minutes to reach nearby Primary School	
Market	Deprived if it takes more than 14 minutes to reach nearby Local Market	
Public Transport	Deprived if it takes more than 14 minutes to reach nearby Public Transport	
Water	Deprived if it takes more than 14 minutes to reach nearby Water Source	
3. Ownership of Basic Household Goods	Deprived if not own any five of the following basic items; chair, table, iron, radio, fan or water cooler, TV or LCD, cell phone or landline, and a sewing machine.	
4. Means of Transportation	Deprived if does not own any of the bicycle, scoter, motorcycle, rickshaw or car.	Deprived if does not own any of the scoter, motorcycle, rickshaw or car.
Overall Deprivation in Living Standards	**If Household is Deprived in two or more Dimensions of Living Standards.** (House Quality, Access to Basic Facilities, Ownership of Basic Household Goods and Ownership of Means of Transportation)	

5.5 MEASUREMENT OF POVERTY

The present study is based on Alkire and Foster's (2011) methodology. Once the dimensions of wellbeing, their indicators and respective cutoffs are defined, the next step is to define overall deprivation cutoff and assign weights of each dimension. This will enable us to identify poor households and calculate the intensity and depth of poverty. In this regard first we will define the overall deprivation cutoff and then calculate Head Count Index, adjusted Head Count Index and Multidimensional Poverty Index.

5.5.1 Defining Overall Deprivation Cutoff

In this study, we have used the Alkire Foster methodology, which uses a "dual cutoff" counting method to classify household as multidimensionally poor. This entails a deprivation cutoff for each indicator and a cross-indicator cutoff (or poverty cutoff); a household is marked as poor if overall deprivation exceeds the poverty cutoff. In this regard we will consider unweighted (also known as uniform weights) and weighted approaches. In the unweighted approach all dimensions are given the same weight and thus considered equally important. The weighted approach is based on the notion that all dimensions are not equally important, and weights are assigned according to the relative importance of each dimension.

5.5.1.1. Unweighted Approach

After defining the deprivation cutoff, the next step is aggregation. In this regard the most common and traditional approach is to consider that all dimensions are equally important in determining the overall wellbeing of households. Therefore, each dimension is given equal weight. Following studies utilized equal weights for the measuring multidimensional poverty (Alkire & Seth, 2013; Wang, et al., 2021; Saboor, et al., 2015; Idrees & Baig, 2017; Dutta, Nogales, & Yalonetzky, 2021: Qadir, et al., 2022). This equal weight method is an unweighted approach, it is simple and direct but has a limited scope, as all dimensions are not equally important. Foster (2007) pointed out that this approach should be used only if solid evidence regarding relative importance of weights is not available. Secondly, even if weights are defined at national level, they may not represent the true ranking of all households.

The present study is based on three dimensions of wellbeing (education, health and living standards) considering same weights will imply that weight of each dimension is $\frac{1}{3}$. Now there could be two approaches:

a) Each Dimension is assigned same weight and overall deprivation is decided on the basis of complete deprivation in each dimension. Since we have considered three dimensions, so there can be four possibilities; household is deprived in all dimensions, household is deprived in two dimensions, household is deprived in one dimension and household is not deprived in any of three dimensions. The present study shall consider deprivation cutoff (d_{u1}) of 2 out of three. A household will be considered poor if it is deprived in at least 2 out of 3 dimensions (education, health and living standards). The non-poor households are those who are deprived of at most one dimension.

$$Household = \begin{bmatrix} poor & if\ d_{u1} \geq 2 \\ non-poor & otherwise \end{bmatrix} \quad (5.1)$$

Where, d_{u1} is the deprivation cutoff when all dimensions are given same weights

b) Each dimension is assigned the same weight and the weight of each subdimension is also defined accordingly by assuming that each subdimension is equally important. For instance, the overall weight of education is $\frac{1}{3}$ and weight of each subcomponent of education will be same. Since we have considered 3 subdimensions of education, the weight of each subdimension of education will be one-third of the overall weight of education. Similarly, the weight of overall health is $\frac{1}{3}$ and it has 2 subdimensions. Therefore, the weight of each subdimension of health will be one-half of the overall weight of health. Finally, the four subdimensions of living standards will be assigned one-fourth of the overall weight of living standards. The present study shall consider overall deprivation cut off (d_{u2}) of $\frac{1}{3}$. A household will be considered poor if it is deprived in at least $\frac{1}{3}$ of the weighted subdimensions. Therefore, non-poor households are those whose subdimension weighted deprivation is less than $\frac{1}{3}$.

$$Household = \begin{bmatrix} poor & if\ d_{u2} \geq \frac{1}{3} \\ non-poor & otherwise \end{bmatrix} \quad (5.2)$$

Where, d_{u2} is the deprivation cutoff when all dimensions are given same weights and the weights of subdimensions are also unform within the overall weight of dimension.

5.5.1.2. Weighted Approach

According to (Kruijk & Rutten, 2007), the inclusion of weights demonstrates the relative significance of the considered dimensions. In general, all dimensions of wellbeing are not equally important. However, assigning weights is not a straightforward task, most of the time we do not have solid evidence regarding the relative significance of each dimension. Further assigning unique weights for all households is also objectionable, as relative importance of each dimension may vary across households. Despite these problems, a weighted approach gives a better insight into the relative importance of each dimension.

The following are some reasoning for why unequal weights are crucial for quantifying multidimensional poverty: The degree to which various aspects of poverty affect general wellbeing can vary. Uneven weights make it possible to represent each dimension's relative importance in a subtle way. Uneven weights can help to capture variations in the severity of deprivation across dimension (Alkire & Foster, 2011). In analyzing poverty, context is important. For certain populations or circumstances, some aspects could be more important than others. Policymakers might give more priority to characteristics that are especially important to their area or target population by using unequal weighting (Alkire & Seth, 2012). Similarly, which factors are prioritized for wellbeing might vary depending on societal norms and beliefs. For instance, in one community, having access to education may be more important than having access to clean water. These social choices may be included in the framework for measuring poverty by using different weights (Alkire S. , et al., 2015). In the same way, the accuracy of multidimensional poverty assessment is subject to data constraints. When there are accurate data for certain dimensions but not others, unequal weights may be used to account for these scenarios (Foster & Alkire, 2011). The unequal weight structure has been used by multiple studies including (Naveed & Islam, 2010; Awan, Waqas, & Aslam 2012; Idrees & Baig, 2017; Najera Catalan, 2019; Deyshappriya & Feeny, 2021).

In present study we will follow the weighing scheme used by Government of Pakistan (2015) with minor adjustments. The overall deprivation cut off (d_w)for weighted approach is $\frac{1}{3}$. A household will be considered poor if it is deprived in at least $\frac{1}{3}$ of the weighted dimensions. Therefore, non-poor households are those whose weighted deprivation is less than $\frac{1}{3}$.

$$Household = \begin{bmatrix} poor & if\ d_w \geq \frac{1}{3} \\ non-poor & otherwise \end{bmatrix} \quad (5.3)$$

Where, d_w is the deprivation cutoff when all dimensions are given unequal weights

The weighing scheme and deprivation cutoffs to be followed by the present study are summarized in Table 5.4.

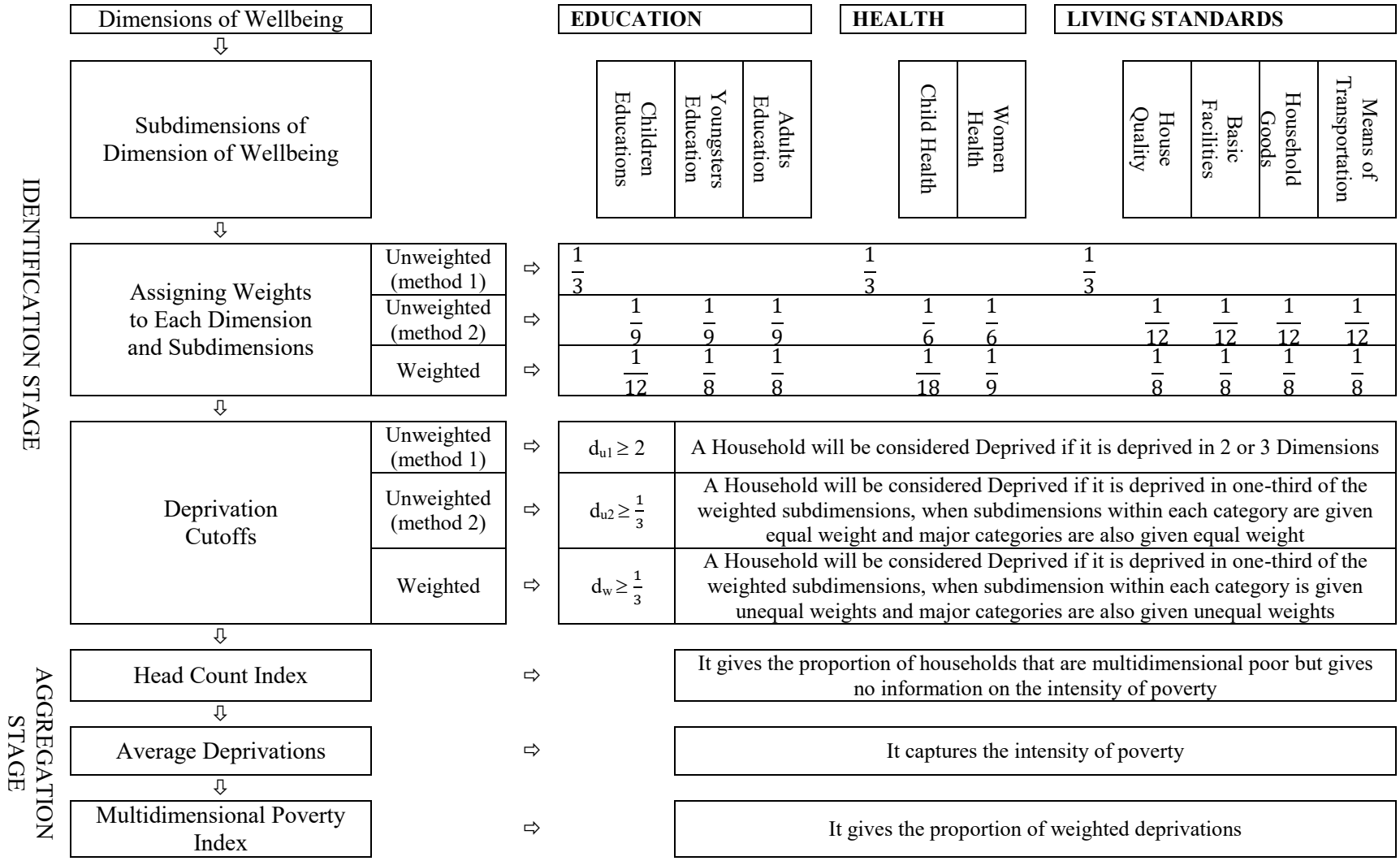
Table 5.4 Weighing Scheme for the Dimensions of Wellbeing and Deprivation Cutoffs

Dimensions	Sub-Dimensions	Unweighted Approach		Weighted Approach	
		1st Method	2nd Method		
Education	Child Education	$\frac{1}{3}$	$\frac{1}{3}\ of\ \frac{1}{3} = \frac{1}{9}$	$\frac{1}{3}$	$\frac{2}{8}\ of\ \frac{1}{3} = \frac{1}{12}$
	Youngsters Education		$\frac{1}{3}\ of\ \frac{1}{3} = \frac{1}{9}$		$\frac{3}{8}\ of\ \frac{1}{3} = \frac{1}{8}$
	Adult Education		$\frac{1}{3}\ of\ \frac{1}{3} = \frac{1}{9}$		$\frac{3}{8}\ of\ \frac{1}{3} = \frac{1}{8}$
Health	Child Health	$\frac{1}{3}$	$\frac{1}{2}\ of\ \frac{1}{3} = \frac{1}{6}$	$\frac{1}{6}$	$\frac{1}{3}\ of\ \frac{1}{6} = \frac{1}{18}$
	Women Health		$\frac{1}{2}\ of\ \frac{1}{3} = \frac{1}{6}$		$\frac{2}{3}\ of\ \frac{1}{6} = \frac{1}{9}$
Living Standards	House Quality	$\frac{1}{3}$	$\frac{1}{4}\ of\ \frac{1}{3} = \frac{1}{12}$	$\frac{1}{2}$	$\frac{1}{4}\ of\ \frac{1}{2} = \frac{1}{8}$
	Access to Basic Facilities		$\frac{1}{4}\ of\ \frac{1}{3} = \frac{1}{12}$		$\frac{1}{4}\ of\ \frac{1}{2} = \frac{1}{8}$
	Ownership of Basic Goods		$\frac{1}{4}\ of\ \frac{1}{3} = \frac{1}{12}$		$\frac{1}{4}\ of\ \frac{1}{2} = \frac{1}{8}$
	Ownership of Means of Transportation		$\frac{1}{4}\ of\ \frac{1}{3} = \frac{1}{12}$		$\frac{1}{4}\ of\ \frac{1}{2} = \frac{1}{8}$
Deprivation Cutoff for Overall Poverty		$d_{u1} \geq 2$	$d_{u2} \geq \frac{1}{3}$	$d_w \geq \frac{1}{3}$	

5.5.2 Calculation of Multidimensional Poverty Index

Once the poor households are identified, the next step is to calculate the Head Count Index which gives the proportion of households that are multidimensional poor and ignores the depth of poverty. The next step is to calculate Average deprivation which measures the intensity of poverty. Finally, we will calculate Multidimensional Poverty Index which in words of Alkire and Foster (2011) reflects the proportion of weighted deprivations that the poor experience in a society out of all the total potential deprivations that the society could experience. The steps in measuring poverty through Alkire & Foster (2011) methodology are summarized in Figure 5.2.

Figure 5.2 Illustration of the Steps in Measuring Multidimensional Poverty through Alkire & Foster Methodology (2011)



a) Head Count Index

The Head Count Index gives the proportion of households that multidimensionally deprived as per defined cutoffs. It is simply the ratio of multidimensionally deprived households to total households in a region. Mathematically it can be written as:

$$HCI = \frac{Number\ of\ Multidimensionally\ Deprived\ Households\ (as\ per\ defined\ cutoffs)}{Total\ Number\ of\ Households\ in\ a\ Region} = \frac{n_p}{N} \qquad (5.4)$$

Where, n_p is the number of poor households and N is the number of total households in a region.

The Head Count index is useful in identifying the poor households, but it gives no information about the intensity of poverty, i.e., how much a household is below the set benchmark (deprivation cutoff). In this regard Average Deprivations are calculated.

b) Average Deprivations

Average Deprivations measures the poverty gap. It is obtained by dividing the weighted deprivations with total number of poor households. Therefore, it gives an average deprivation which households of a region are facing. Mathematically it can be written as:

$$AD = \frac{Sum\ of\ Deprivations\ faced\ by\ Poor\ Households}{Total\ Number\ of\ Poor\ Households\ in\ a\ Region} = \frac{\sum_{i=1}^{n_p}(d_{fixed} - d_i)}{n_p} \qquad (5.5)$$

Where, d_{fixed} is the prefixed deprivation cutoff for all households and d_i are the deprivations being faced by ith household (note: $d_{fixed} \geq d_i$) and n_p is the number of poor households in a region.

c) Multidimensional Poverty Index

Multidimensional Poverty index adjusts the poor households with intensity of poverty. In the words of Alkire and Santon (2011) "it reflects the proportion of weighted deprivations that poor household experiences out the total potential deprivations that a society could experience". Therefore, it is also known as the Adjusted Headcount index. Mathematically it is obtained by multiplying Head count index with Average Deprivations.

$$MPI = HDI\ x\ AD \qquad (5.6)$$

Where HDI is the Headcount index and AD is the Average Deprivations that poor households of a region are facing.

5.6 CORRELATES OF POVERTY

After measuring poverty, our next objective is to explore the correlates of poverty. The idea is to explore the role of various household, regional and social variables in determining poverty.

5.6.1 Household Characteristics

The household characteristics such as education, employment and age composition are pivotal in defining the wellbeing of household. To capture the role of education we will consider the proportion of adults who have completed at least 14 years of successful education (bachelor's degree).[14] It is likely that the higher the proportion of bachelor's degree holders, the less will be chances of household being poor. To grasp the role of household head we will consider the age and gender of household head. In additional we shall consider dependency ratio which can also be vital in affecting poverty.

a) Dependency ratio

Household size and number of earners are very important in influencing the wellbeing of household. Large households are more likely to be poor and the number of earners helps in reducing poverty. Therefore, in general household size has a positive effect on poverty and number of earners have negative effect on poverty. The dependency ratio gives the proportion of dependent household members; therefore, it captures both household size and number of earners. In general, dependence ratio and poverty are positively related.

Many earlier studies have explored the role of dependency ratio in poverty. However, dependency ratio is defined in different ways. For instance, (Akerele, Momoh, Adewuyi, Phillip, & Ashaolu, 2012) considered dependency ratio as the ratio of gainfully unemployed to gainfully employed members of a household. (Chaudhry, 2009; Cheema & Sial, 2014;

[14] In Pakistan 14 years of successful education after pre schooling is traditionally called bachelor's degree in arts, Sciences or Commerce, depending upon subjects. It is a gateway for competitive examinations of civil services and many gazette officers.

Cheema & Nadeem, 2020) defined the dependency ratio as the ratio of the number of members aged 14 to 65 to the total number of members in the household. Bashir & Idrees (2021) considered the proportion of non-earning members as the dependence ratio. Kifayathullah, Majeed, & Mustafa, (2020) calculated the dependency ratio by dividing the non-working age groups by the working age groups. The present study shall consider dependency ratio as a proportion of non-earners in a household.

$$DR = \frac{Number\ of\ Non\ Earning\ Members}{Total\ Members\ of\ a\ Household} \quad (5.7)$$

Where DR is dependency ratio.

b) The proportion of Illiterates (Below primary education)

Illiteracy is closely connected to poverty because it restricts people's access to useful employment opportunities and reduces their earning potential. Illiterate people are frequently constrained to low-skilled, low-paying professions, making it difficult to escape poverty. A lack of basic reading skills limits their capacity to access information, resources, and social services, increasing their vulnerability to economic exploitation and prolonging the poverty cycle. Furthermore, illiteracy tends to be passed down through generations, posing a continuous impediment to upward mobility and maintaining the link between educational deprivation and poor living conditions (Thengal, 2013; Lal, 2015).

To examine the significant relationship between illiteracy and poverty incidence, one might measure the prevalence of illiteracy within a family. For this purpose, we have used proportion household members with age 10 years or more and education below primary, as primary education is the first benchmark of minimum desirable education in Pakistan.

$$PI = \frac{No.of\ individuals\ (age\ 10\ and\ above) with\ \ education\ below\ primary\ in\ a\ Household}{Total\ individuals\ (age\ 10\ and\ above) in\ a\ Household} \quad (5.8)$$

Where, PI is proportion of individuals (age 10 and above) with education below primary in a household.

c) The proportion of Bachelor's degree holders (14 years' education)

Education is one of the vital causes of employment. In general, educated individuals are likely to earn more relative to illiterates. Various studies including Nasir & Nazli (2000), Qureshi & Arif (2001), Malik (1996) and Arif & Bilquees (2007) highlighted the importance of education

in eradicating poverty. In Pakistan 14 years of successful education (after pre schooling) is considered as a benchmark of higher education. Individuals with at least 14 years of successful education are mostly employed and contribute to the wellbeing of the household. The present study will consider the proportion of adults (age 21 years or more) in a household with at least 14 years of successful schooling as a proxy of the education profile of household. It is likely that this variable will have a negative effect on poverty.

$$PE = \frac{No.of\ individuals\ (age\ 21\ and\ above) with\ \ at\ least\ 14 years\ of\ Education}{Total\ individuals\ (age\ 21\ and\ above) in\ a\ Household} \qquad (5.9)$$

Where. PE is proportion of individuals (age 21 and above) with at least 14 years of education.

d) Age of Household Head

Age of the household is another important variable in determining the wellbeing of household, especially if he / she is the sole earner.[15] In general at initial stages the age of household head has positive impact on wellbeing of household, as he / she gains experience and earns more. After a certain limit, such as age of retirement or elderly the impact may reverse, but at the same time elderly receive additional benefits from state or past savings. Most of earlier studies including Baulch (1998), Qureshi & Arif (2001), Khalid et al. (2005), Hashmi et al., (2008) and Chaudhry (2009) found that age of household head has negative effect of poverty. The present study shall consider the age of the household head in completed years.

e) Gender of Household Head

The gender of the household head can also influence poverty. Pakistan is a male dominated society, the employment opportunities for males are much more relative to females and traditional practices also discourage females to join labor market. In general, females experience prejudice regarding access to essential services, earnings, and education. A male-headed household is less likely to be impoverished than a female-headed one. The earlier studies in this regard found mixed results. Farooq (2012) and Majeed & Malik (2015) discovered that being the male family head increases the likelihood of being impoverished. Hyder (2010) found that wellbeing of female headed household is more, might be due to more

[15] According to PSLM (various rounds), in 60.1% to 64.8% households head is only sole earner.

support of society. Khalid et al., (2005) observe that female heads of homes often spend more on their kids' welfare, nutrition, and health and in comparison, male heads spend more on land, housing, travel, and smoking. On the contrary, many studies like Arif & Bilquees (2007) and Haq et al. (2015) found that female headed households are more exposed to poverty. The present study will consider head of a household as a binary variable with '1' for male and '0' for female.

$$GH = \begin{bmatrix} 1 & Male \\ 0 & otherwise \end{bmatrix} \quad (5.10)$$

Where, GH is the gender of Household heads

5.6.2 Social and Regional Characteristics

In addition to household characteristics, several social and regional traits may be linked to poverty. The fundamental indicators of wellbeing are the availability of healthcare and educational institutions. Ali & Ahmad (2013) pointed out that better health and educational opportunities increase household production and income potential, which lowers poverty. In addition, variables like population density and inequality also affect poverty. In the present study we shall explore the role of region, availability of health facilities, availability of schools, income inequalities, education inequalities and population density in causing / controlling poverty.

a) Region of Residence

There are huge regional disparities in Pakistan. People living in rural areas often face issues like improper access to markets, inadequate infrastructure, unsatisfactory education facilities, improper medical facilities. All these directly affect the wellbeing of households. These facilities are relatively better in urban areas but overcrowding, congestion, pollution and violence are few problems which are mainly confined to urban areas of Pakistan. Many studies considered the role of region and found mixed results. Most of the earlier studies (Arif and Bilquees, 2007; Kyzyma 2018; Ding 2022) found that prospects of a household to be poor are relatively more in rural areas. Kemal (2001), Qureshi & Arif (2001) and Cheema (2014) found

a negative association between poverty and urban locations. The present shall consider region as a binary variable with '1' for urban areas and '0' for rural areas.

$$RG = \begin{bmatrix} 1 & Urban\ Areas \\ 0 & otherwise \end{bmatrix} \quad (5.11)$$

Where, RG is the region of residence

b) Population Density

Population density is another factor which can affect poverty. Normally thickly populated areas have better facilities. Individuals living in such areas have easy access to markets, school, hospital, and other such facilities. Further congested regions have more employment opportunities. The present study shall explore the effect of population density on poverty, it is calculated by dividing population with area of district. In specific population density is calculated by dividing population (in 000) with area in square kilometers.

$$P_D = \frac{Population\ (in\ thousands) of\ a\ District}{Area\ (in\ Square\ km) of\ District} \quad (5.12)$$

Where P_D is the population density of a district.

c) Income inequality

Income distribution also affects poverty. However, earlier studies found different results. Few studies like (Kamal, 1997; Wodon, 1999; Bourguignon, 2004; World Bank Report 2006; Corak, 2013; McKnight 2018) found that income inequality causes poverty. They concluded that higher income disparities widen the gap between lower and higher segments of society and fruits of growth do not reach to lower segment which results in mounting poverty. On the contrary couple of studies including (Norris et al., 2015; Bergstrom, 2022) found a negative relation between income inequality and poverty. These studies argue that if society is growing then lower tail may also get benefits of growth which shifts them out of poverty but at the same time middle- and high-income groups are more benefited which widens inequalities but reduces poverty.

The present study will also examine the impact of income inequality on poverty. In this regard we will calculate Gini Coefficient to measure income inequality in a district. It is attributed to Gini (1912) and is the most widely used measure of income inequality. It satisfies all desirable

properties of a good inequality measure and has limits between '0' and '1' with '0' representing perfect equality and '1' representing perfect inequality.[16] Rao (1969) gave the following formation of Gini Coefficient.

$$YD = 1 - \sum_{i=1}^{n} PS_i(CY_i + CY_{i-1}) \qquad (5.13)$$

Where, YD is Gini Coefficient of income inequality in jth district, CY_i and PS_i are the cumulative income and population shares of ith household respectively. Household members are converted into adult equivalents and households are arranged in ascending order of per adult equivalent incomes.[17]

e) Education inequality

Disparities in education are the prime source of income differentials. In general, earnings are positively related to education. Mallory (2008) pointed out that educational disparities may also cause poverty. The present study shall use Gini Coefficient to calculate earning inequalities. The formula of Gini coefficient given in equation 5.10 will be transformed by replacing income with successful years of schooling:

$$ED = 1 - \sum_{i=1}^{n} PS_i(CE_i + CE_{i-1}) \qquad (5.14)$$

Where, ED is Gini Coefficient of Education inequality in jth District, CE_i and PS_i are the cumulative education and population shares of ith household respectively. Households are arranged in ascending order of education.

Gini Coefficient of education inequality also has the limits of '0' and '1' with '0' representing perfect education equality and '1' representing perfect education inequality. Table 5.5 presents a summary of the correlates of poverty considered in present study:

f) Number of Hospitals / Rural Health Centers

Availability of adequate health care facilities is an indicator of wellbeing. Better health care facilities may improve quality of life and reduce poverty. Kifayatullah & Majeed (2020) and Bashir & Idrees (2021) found that availability of adequate health care facilities helps in reducing poverty. The present study shall explore the impact of health care facilities on poverty. In this regard we shall consider the number of hospitals in urban areas and health

[16] For a detailed description of Gini Coefficient see Yitzhaki (2013) and Idrees (2016).
[17] Per Capita Household Income gives same weight of all household members, but consumption requirements vary with age and gender. Therefore, based on consumption requirements, all household members are expressed as adult equivalents. (For details, see Fatima, 2019).

centers in rural areas as the proxy of health care facilities. To standardize the variable, we shall consider the number of hospitals / health care centers available per '000' population in a district.

$$H_D = \frac{Number\ of\ Hopsitals/Health\ Centers\ in\ a\ District}{Population\ of\ District\ (in\ thousands)} \qquad (5.15)$$

Where H_D is the number of hospitals / health care centers per '000' population in a district

g) Number of High Schools

Education is one of the basic determinants of wellbeing. Availability of schools in a region are also indicators of welfare, schools may significantly impact poverty reduction. In this regard we will take the number of high schools as a proxy of education facilities in a district. To standardize the variable, we will consider the number of high schools available per '000' population with age above 15 years.

$$S_D = \frac{Number\ of\ High\ Schools\ in\ a\ District}{Population\ of\ District\ (in\ thousands) with\ age\ above\ 15\ years} \qquad (5.16)$$

Where S_D is the number of primary schools per '000' population (age above 15 years) in a district

Table 5.5: Summary of the Correlates of Poverty Considered in Present Study

Variables	Construction of Variables
Dependency Ratio of Household	$= \frac{Number\ of\ Non\ Earning\ Members}{Total\ Members\ of\ a\ Household}$
Proportion of Below Primary (at most 4 years of successful education) in a Household	$= \frac{No.of\ individuals\ (age\ 10\ and\ above)\ with\ at\ most\ 4\ years\ of\ Education}{Total\ individuals\ (age\ 10\ and\ above)\ in\ a\ Household}$
Proportion of at least Graduates (14 years of successful education) in a Household	$= \frac{No.of\ individuals\ (age\ 20\ and\ above)\ with\ at\ least\ 14\ years\ of\ Education}{Total\ individuals\ (age\ 20\ and\ above)\ in\ a\ Household}$
Age of the Household Head	Measured in Years

Continued on next page

(Continued) Table 5.5: Summary of the Correlates of Poverty Considered in Present Study

Variables	Construction of Variables
Gender of the Household Head	$= \begin{bmatrix} 1 & Male \\ 0 & otherwise \end{bmatrix}$
Region of Residence	$RG = \begin{bmatrix} 1 & Urban\ Areas \\ 0 & otherwise \end{bmatrix}$
Population Density of a District	$= \frac{Population\ (in\ thousands) of\ a\ District}{Area\ (in\ Square\ km) of\ District}$
Income Inequality in a District	$= 1 - \sum_{i=1}^{n} PS_i(CY_i + CY_{i-1})$
Education Inequality in a District	$= 1 - \sum_{i=1}^{n} PS_i(CE_i + CE_{i-1})$
Number of Hospitals / Rural Health Centers in a District	$= \frac{Number\ of\ Hopsitals/Health\ Centers\ in\ a\ District}{Population\ of\ District\ (in\ thousands)}$
Number of High Schools in a District	$= \frac{Number\ of\ High\ Schools\ in\ a\ District}{Population\ of\ District\ (in\ thousands)}$

5.6.3. Econometric Model for Correlates of Poverty

The dependent variable in present study is 'poverty'. It is a binary variable with '1' if household is multidimensionally poor and '0' otherwise. The linear probability model, Logistic model, and the Probit model are three alternative models to estimate a model with binary dependent variable.

The linear probability model is simplest but has serious limitations, such as the variance of error term is non homoscedastic, and the estimated values are most likely to cross the limits of zero and one. The most important is that marginal effects remain constant.

The Logit and Probit model are free from these serious limitations and widely used to estimate binary dependent models. The Logit model is based on logistic distribution and the Probit

model is based on normal distribution. In the present study, a discrete result of an event shall be predicted using a logistic regression model.

The Logit regression model, in its simplest form can be written as:

$$\frac{p}{1-p} = e^{[\alpha_0+\alpha_1(PI_i)+\alpha_2(PE_i)+\alpha_3(HA_i)+\alpha_4(HG_i)+\alpha_5(DR_i)+\alpha_6(RG_i)+\alpha_7(HD_i)+\alpha_8(SD_i)+\alpha_9(PD_i)+\alpha_{10}(YD_i)+\alpha_{11}(I}$$

$$\Rightarrow \ln\left[\frac{p}{1-p}\right] = \alpha_0 + \alpha_1(PE_i) + \alpha_2(PE_i) + \alpha_3(HA_i)+\alpha_4(HG_i) + \alpha_5(DR_i)+\alpha_6(RG_i)+\alpha_7(HD_i) + \alpha_8(SD_i) + \alpha_9(PD_i) + \alpha_{10}(YD_i)+\alpha_{11}(ED_i) + \mu_i \quad (5.17)$$

Where,

PI_i = Proportion of Household members (age 10 years or greater) with education below primary

PE_i = Proportion of Household members (age 20 years or greater) with 14 years of success education

HA_i = Age of the Household Head (measured in years)

HG_i = Gender of the Household Head ('0' male and '0' otherwise)

DR_i = Dependency Ration of Household

RG_i = Region of residence of Household

HD_i = Number of Hospitals / Health Centers (per '000' population) in a District of ith Household.

SD_i = Number of High Schools (per '000' population) in a District of ith Household

PD_i = Population Density ('000' population per square km) in a District of ith Household

YD_i = Gini Coefficient of Income Inequality in a District of ith Household

ED_i = Gini Coefficient of Education Inequality in a District of ith Household

The equation (5.17) gives log of the odd ratio as a linear function of α_s and explanatory variables. Further in logistic regression p_i probability tends to go from 0 to 1 and the logit is unbounded. In the logit model, odd ratios rather than coefficients are used to explain the findings. The chance of being poor rises with an increase in the value of the explanatory variable, and vice versa, if the logit is positive. The present study shall workout the marginal effect at mean values.

5.7 CONCLUSION

In this chapter we have discussed the analytical framework and methodology of the present study. The unit of analysis for present study is aggregate household, variables like education and health will initially be analyzed at individual level and then final deprivation cutoffs will be defined at household level. Due to data limitations, our study is confined to three fundamental dimensions of wellbeing, i.e., education, health and living standards. Regarding education, we will categorize household members into three age groups and a household will be considered deprived of education even if one member is deprived. For health our focus will be on health status of child and married women, which is measured through immunization and natal care respectively. Household will be deemed deprived in health, if any of the married woman or child is deprived. Our last dimension is living standards, it comprises of house quality, access to basic facilities, ownership of basic household goods and ownership of the means of transportation. A household will be labeled as deprived of living standards if it is deprived of two or more sub dimensions. Regarding overall deprivation, we shall consider both weighted and unweighted approaches. In the unweighted approach household will be considered poor if it is deprived in two or more dimensions and in weighted approach the deprivation cutoff is 0.33. The Alkire-Foster (2011) methodology will be used to estimate multidimensional poverty. Finally, for the correlates of poverty we will estimate logit regression model by considering various household and regional and social variables.

Chapter 6

DEPRIVATION IN EACH DIMENSION AT NATIONAL AND PROVINCIAL LEVEL

6.1 INTRODUCTION

In this chapter, deprivation in each sub dimension at the national and provincial levels is thoroughly explained.[18] Our study is based on three dimensions of wellbeing including education, health and living standards. These dimensions are further subdivided into nine indicators.[19] In this chapter we will explain household level deprivation in each dimension. This chapter is divided into five sections. Deprivations in education will be discussed in Section 6.2, and health deprivation will be presented in Section 6.3. Similarly, the deprivations in standard of living will be explained in Section 6.4. Finally, the chapter will be concluded in Section 6.5.

6.2 DEPRIVATION IN EDUCATION

One of the core components of the multidimensional poverty assessment is lack of education. We have analyzed deprivation in education for three age groups: children (age 6 – 11 years), youngsters (age 12 – 15 years) and adults (age above 15 years). The years of successful schooling and enrollment are considered to estimate educational deprivations.

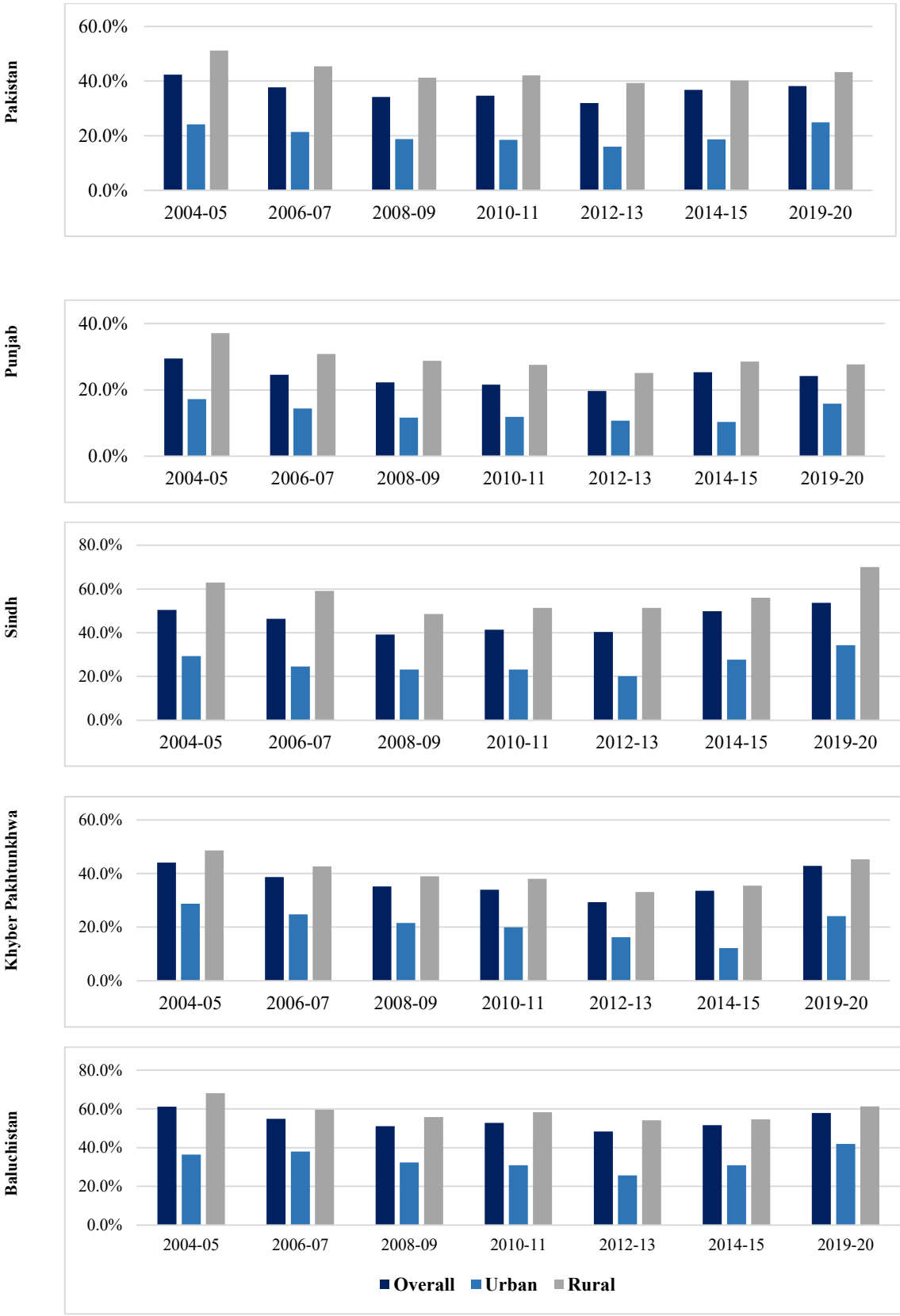
6.2.1. Deprivation in Education of Children at National and Provincial level

A household will be considered deprived of the education of children if any child between the ages of 6 to 11 is neither enrolled in school nor has completed primary school education. The household level estimates of deprivation in child education are presented in Figure 6.1.

[18] The estimates for Districts are presented in next chapter.

[19] Deprivation in education is investigated separately for children, youngsters and adults. Similarly, health deprivation is examined for children and married women. The deprivation in standard of living is captured through house quality, access to basic facilities, means of transportation and household assets.

Figure 6.1 Deprivation in Education of Children at National and Provincial Level



The benchmark is the same for rural and urban areas.[20] According to the results, in Pakistan during 2004-5 over 42% households with school-age children had at least one child who was not enrolled in school or had not completed primary school, making the household deprived in children education. This deprivation declined till 2012-13 and started growing in 2014-15. The increase in 2014-15 was mainly due to a shift in the distribution of data samples, with rural samples increasing by 32% while urban samples decreasing by half. Given that rural areas have higher levels of educational deprivation than urban areas, this impacted an increase in reported child deprivation during 2014-15. Moreover, the devastating floods of 2014 harmed around 2.6 million people, 4,065 towns (destroying 107,102 residences), and claimed approximately 367 lives (GOP, 2014). As a result, the children's access to school was hindered which caused fall enrollment rates. A further increase in education deprivation was observed in 2019-20, this recent rise can be one of the adverse effects of the COVID-19 pandemic. Despite of rising trend in last few years the deprivation in child education in Pakistan has decreased by 4.3%. over the last fifteen years.

The rural-urban comparisons reveal that deprivation in child education has decreased significantly in rural areas while almost remain same in urban areas. This may be due to the adverse effects of rising inflation, increased population density, inadequate educational infrastructure, and urbanization. The Annual State of Education Report (2019) also reported that unplanned and poorly managed urbanization has adversely affected education in urban areas.

The estimates for provinces show that over the last 15 years the deprivation in child education has decreased in all provinces, except Sindh where an increase of 3.3% is recorded. There could be multiple factors behind this increase, such as economic hardship, inadequate school facilities, gender bias, and underqualified instructors. Parveen (2020) pointed out that the majority of the primary school teachers in Sindh are unskilled, contributing to the high student dropout rate.

The highest reduction is observed in Punjab; it is mainly due to multiple initiatives of the Government of Punjab such as "Punjab Education Sector Reform Program" (PESRP). The program was sponsored by the World Bank and the UK "Department for International

[20] Primary schooling is the basic requirement. Therefore, we have taken the same benchmark across rural and urban areas.

Development" (DFID), it was launched with three main objectives: enhancing educational access, excellence, and accountability. The Punjab Schools Reform Roadmap was started in 2010 and it was created specifically as a framework to accelerate the achievement of educational outcomes under the PESRP (Habib, 2013).

Child education in Khyber Pakhtunkhwa province has slightly improved. The reduction in child education deprivation is greater in urban areas than in rural areas of province. According to (Khyber Pakhtunkhwa-EIP, 2021), the province's numerous education indicators have improved significantly over time. Khyber Pakhtunkhwa has achieved an adjusted net enrollment rate of 87% in primary education with a seven percent increase in attendance at schools. Similarly, teacher attendance has risen to 90%. These achievements were mainly due to consistency in the policies multiple initiatives like the Khyber Pakhtunkhwa Free Compulsory Primary and Secondary Education Act 2017 which establishes the right to obligatory schooling for all children aged 5 to 16 in the province.

Similarly, in Baluchistan, deprivation in children's education has decreased over the years. This reduction in child deprivation is mainly due to increased awareness of the importance of education. The Government of Baluchistan has initiated various programs to enhance child education, such as the Baluchistan Basic Education Program. This program is a partnership between the European Union, UNICEF, and the Baluchistan Secondary Education Department, aiming to improve the quality of the education system in Baluchistan and strengthen its management.

In contrast, the deprivation rate in urban areas of Baluchistan has increased from 36.4 percent to 41.9 percent. That may be because of high poverty and inadequate educational facilities; one main factor is ghost schools. That is, educational institutions listed in official records receive funding for their yearly budget and instructor salaries but need to be in operation to provide education to pupils. Nisa & Nasir (2019) pointed out that lack of proper facilities is one of the main hurdles in promoting education, they held government responsible for school dropout.

The comparative analysis shows that across provinces the highest deprivation in child education is observed in Baluchistan, followed by Sindh, Khyber-Pakhtunkhwa, and Punjab. The disparity between rural and urban regions is highest in Sindh, followed by Khyber Pakhtunkhwa, Punjab and Baluchistan.

6.2.2 Deprivation in Education of Youngsters at National level and Provincial level

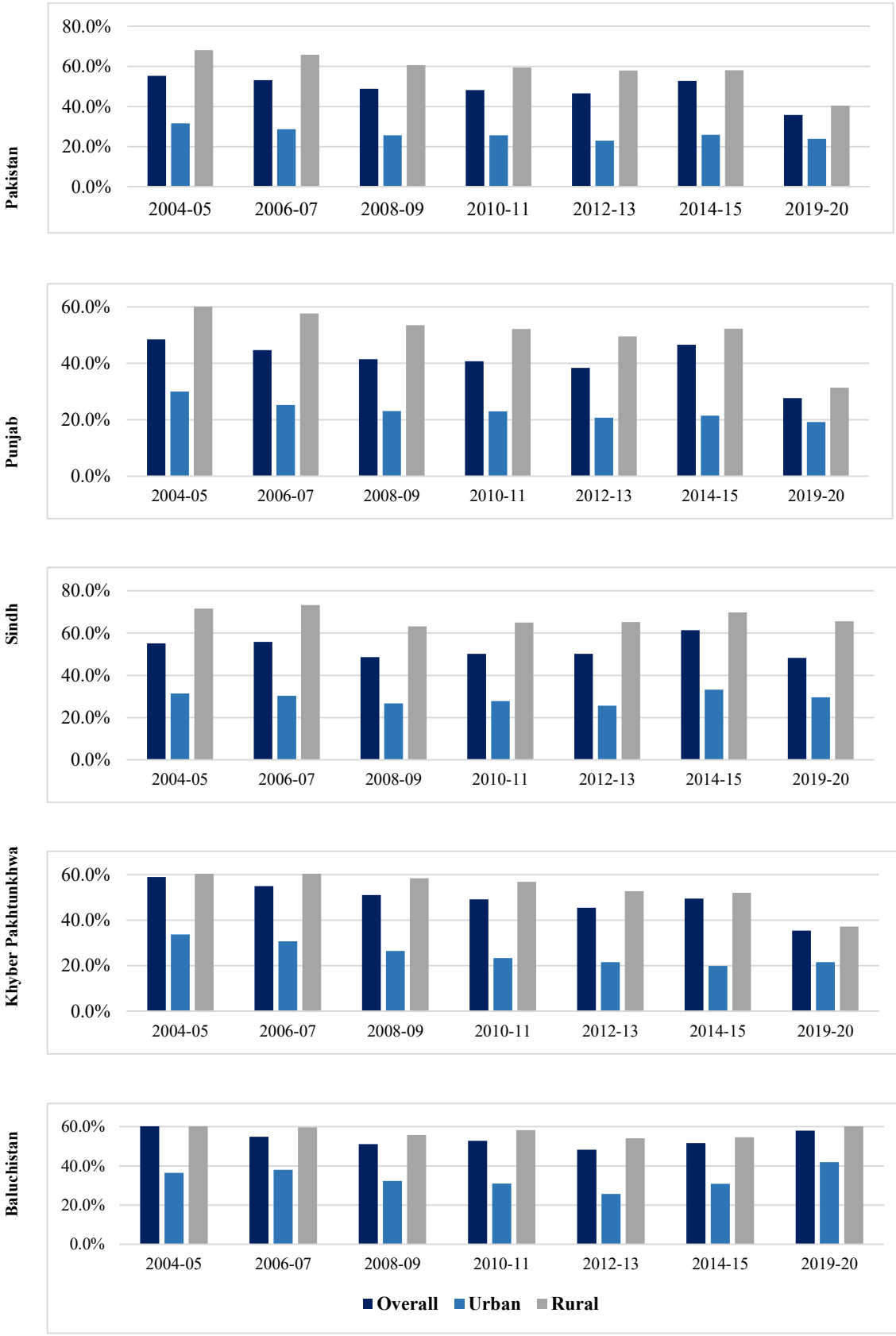
In the present study the age group from 12 to 15 is labeled as youngsters. In this group a household is considered deprived if any youngster (age 12 to 15 years) is neither enrolled nor has completed primary school in rural areas or middle school in urban areas. The deprivation in education of youngsters for overall Pakistan and provinces with the rural–urban region is presented in Figure 6.2. It is encouraging to note that deprivation in the education of youngsters has significantly declined during the past 15 years. The Government has recently taken multiple initiatives to improve both the quality and accessibility of education. In this regard UNICEF supported the Government of Pakistan to significantly reduce the number of out-of-school children, to accelerate development and to ensure the equitable extension of quality education (Shaikh, 2022).

Further, in Pakistan, the constitution places a high priority on education. Article 37-B was restated in the 18th constitutional Amendment, which the Pakistan Parliament unanimously passed in 2010. The right to education is guaranteed under Article 25-A of the Pakistani Constitution, which states that "The State shall provide compulsory & free education to all children of the age of five to sixteen years in such comportment as may be determined by law" (N. A. O. Pakistan, 2012). The 18th Constitutional Amendment made education a provincial matter in Pakistan. More autonomy is granted to provincial and local governments in several social and business areas, including education.

Interestingly the reduction in deprivation is more pronounced in rural areas than in urban areas. In this regard the Rural Support Program played a vital role. Rasmussen et.al. (2004) mentioned that effective rural support programs alleviated poverty and indirectly enhanced health and education.

In Punjab the deprivation in education of youngsters has recorded a decline of 21.7% during the last fifteen years. There could be multiple reason of this decline, such as Waseela-e-Taleem Program and Zawar-a-taleem program of the government of Punjab improved female enrolment rates in high schools. In addition, the government also opened many new schools to cater for the requirements of higher school education. The number of higher secondary schools in Punjab increased from 899 to 1284 during the past 15 years and 4895 new schoolteachers were also appointed. All these initiatives improved the education profile of the province.

Figure 6.2 Deprivation in Education of Youngsters at National and Provincial levels



Interestingly the drop in deprivation of education is relatively higher in rural areas of Punjab. This finding is encouraging, as deprivation levels are higher in rural areas and a rapid decline in rural areas can help to bridge the rural-urban gap.

Sindh province has also shown an improvement in the education of youngsters, like Punjab, the relative decline is more in rural areas. In rural areas, many incentives are provided by the government of Sindh. With the passage of time the dynamics are changing in rural Sindh, and now people are more willing to send their children to school.

The deprivation in education of youngsters has substantially declined in the province of Khyber Pakhtunkhwa. The deprivation level was 59% in 2004-05 which declined to 35.4% in 2019-20. The disparity between rural and urban regions in Khyber Pakhtunkhwa remains high throughout the period of analysis. In the same way, Baluchistan also has witnessed a significant reduction in the deprivation of young people's education. Deprivation reduced by 18% during the last 15 years, further like other provinces the reduction was much high in rural areas of Baluchistan. However, unlike other provinces the deprivation in education of youngsters slightly increased in urban areas of Baluchistan, this is alarming.

The comparative analysis among provinces reveals that the highest deprivation in the education of youngsters is observed in Baluchistan, followed by Sindh, Khyber Pakhtunkhwa and Punjab. Over time, the highest decline in deprivation is observed in Khyber Pakhtunkhwa, followed by Punjab, Baluchistan and Sindh. By and large deprivation reduced both in urban and rural areas, but the drop is relatively higher in rural areas.

6.2.3 Deprivation in Education of Adults at National Level and Provincial Level

In present study a household will be considered as deprived of adult education if no member (above 16 years) completed primary school in rural areas or middle class in urban areas. Figure 6.3 illustrates the estimates of deprivation in education for adults. Compared to the deprivation in education of youngsters, the adult showed a slight improvement of only 4%. Further deprivation in urban areas is consistently lower than rural areas; interestingly the gap is narrowing over time. The estimates of Punjab also show similar trends. However different trends were observed in Sindh where in rural areas, deprivation in adult education increased by 7.5% during 2004-05 to 2019–20 and remained almost the same in the urban areas.

Figure 6.3 Deprivation in Education of Adults at National and Provincial levels

This increase in deprivation of adult education can be due to inappropriate facilities, poverty, lower incentives for poor households, and lack of scholarships and subsidies. The deprivation in adult education has reduced in Khyber Pakhtunkhwa from 39 percent to 37 percent. At the same time, deprivation has also reduced across rural and urban regions of the province.

Regional analysis shows that deprivation in adult education has reduced in Punjab, Khyber Pakhtunkhwa and Baluchistan. Further the highest deprivation in education of adults was observed in Baluchistan, followed by Sindh, Khyber Pakhtunkhwa, and Punjab. Even though the initial condition of Baluchistan was very miserable among provinces, Baluchistan has much improved in adult education over time than Sindh and Khyber Pakhtunkhwa. The lowest disparity between rural and urban is observed in Punjab and the highest disparity is found in Sindh. While Khyber Pakhtunkhwa and Baluchistan have almost equal disparities between rural and urban regions.

In the case of Baluchistan, there are many sociocultural and environmental difficulties in education. Chronic poverty, a weak economic foundation, a limited private sector, and a weak institutional and human resource basis, in addition to the province's low population density, are other significant obstacles to the delivery of public services. The delivery of educational services is also impacted by migration and natural disasters like earthquakes, floods, and droughts. Over time, these limitations have resulted in low socioeconomic development, poor growth performance, and significant gender and geographical inequities in obtaining public services. Among all the provinces, this one has the highest percentage of multidimensional poverty, the lowest vaccination coverage for children, the most considerable nutritional deficiencies, and the lowest literacy rates (44% for those ten and older), notably among rural females (17%) (PSLM 2019-20).

For the last ten years, public policy has given education a higher priority due to the devolution of education to the provinces. The provincial political elite has shown a readiness to increase funding for education. Between 2009–10 and 2019–201, the province's education budget nominally grew by over five times. Similarly, throughout the previous five years, the percentage of the province's budget allocated to education has generally been between 17 and 18 percent, somewhat higher than the 15% average budget allocation for education in low- and middle-income countries (Baluchistan, 2020).

6.2.4 Household's Deprivation in Education at National and Provincial level

In the previous three sections we separately discussed deprivation in education of children (age 6 – 11 years), youngsters (12 – 15 years) and adult (16 years and above). Now we will discuss the overall household deprivation with respect to education. A household is considered deprived of education if it is deprived in one or more age groups. In other words, a household is considered poor in the dimension of education if it is deficient in education of any age group, children, youngsters, and adults. The estimates of household deprivation of education are presented in Figure 6.4. The findings show that overall, household deprivation in education has reduced from 58 percent to 46.8 percent between 2004-05 and 2019-20, showing a decline of 11.2 points.

Rural and urban trends show a fall in deprivation over the past fifteen years. Interestingly the drop is more evident in rural areas, but still rural areas are relatively more deprived of education. Since the drop is relatively higher in rural areas, so rural-urban disparity is reducing overtime, for instance in 2004-05 the deprivation in rural areas was 25.2 point greater than the deprivation in urban areas and this difference has shrunk to 16.6 point in 2019-20. This is a good sign that households in rural areas are also realizing the importance of education.

Figure 6.4 indicates that deprivation in education has declined in all provinces of Pakistan. The highest reduction in deprivation over the fifteen years is observed in Punjab followed by Baluchistan, Khyber Pakhtunkhwa and least in Sindh. It is also to be noted that only 1 point decline is observed in rural Sindh. The government of Sindh has taken multiple steps to improve the education profile of its residents. Over the previous seven years, the entire education budget increased by 166%, its recurrent component by 176%, and the development budget by just 10% (Sindh, 2020). However, the results show that the government of Sindh has to do much more, especially in rural areas. The government should make it possible for all kids to get a quality education to provide them with the fundamental abilities and knowledge they need to become productive employees. The low caliber of the teaching staff is another factor contributing to Sindh's poor educational performance. According to UNICEF, in Sindh over 52% of the poorest children are still out of school. This is a big challenge for the government of Sindh.

Figure 6.4 Deprivation in Education at National and Provincial level

During the past 15 years, the educational deprivation in Baluchistan has reduced by11% and it is encouraging to note that deprivation has reduced for all age groups. Further the decline is relatively higher in rural areas than in urban areas of Baluchistan and the rural-urban disparity is least in Baluchistan after Punjab. Anyway, in Baluchistan 64% of households are still deprived of education which indicates that the education sector needs revolutionary measures. Baluchistan is the most scattered province of Pakistan, and it is reported that on average a primary school covers the radius of 30 km, and a middle school is located after every 260 km (Alif Ailaan 2017). This makes it too difficult for the poor residents of the province to educate their children.

6.3 DEPRIVATION IN HEALTH

One of the most important components of wellbeing is health. Living a healthy life has been referred to as one of the fundamental functions and abilities by Sen (1985), who also stated that it significantly affects one's living level. In our study, we have considered woman health (with a focus on married women) and child health. To analyze deprivation in health of married woman we relied on proxies such as prenatal and post-natal care. Similarly, in assessing child health, we used the proxy of child vaccination. Therefore, our focus is on access to health care facilities, as access to health care facilities are essential or prerequisites for healthy life. Now we will explain the results for deprivation in health care facilities for married women and children.

6.3.1 Deprivation in Women's Health Care at National and Provincial Level

In present study we have used two proxies for measuring women health care i.e. antenatal and postnatal care. The detailed results of these two variables are given in Annexure A1. A household is considered deprived of women's health care if it is deprived of any attribute (prenatal and postnatal health care). We have considered only those households in which a woman (or women) has given birth to child / children during the past three years. Therefore, the sample has reduced significantly, for instance 2019-20 out of 160654 households the valid households are only 54021. The estimates of women health care are presented in Figure 6.5

Figure 6.5 Deprivation in Women Health Care at National and Provincial Level

It is encouraging to note that in Pakistan the deprivation in women health care has substantially reduced over time, it reduced from 82.5% in 2004-05 to 47.4% in 2019–20. The improvement in women health care overtime can be due to various factors such as women's education, availability of health facilities, awareness about importance of prenatal and postnatal health care, household income, employment or earnings of female means of transportation, and education of husband.

Over time, the Government of Pakistan has enhanced healthcare services. For instance, the number of registered nurses in 2005 were 51,270, which increased to 116,659 in 2020. Similarly, the number of reported midwives were 23,897 in 2005, and this number rose to 43,129 in 2020. Lady health workers during the same period increased from 7,073 to 21,361 (Hussain et al., 2020). These healthcare practitioners play a crucial role in providing natal services and raising awareness. Pregnant women are educated by lady health workers, nurses, and midwives on the significance of prenatal care, good nutrition, and the necessity for regular check-ups. Moreover, the number of visits by lady health workers to households has increased from 30,311 in 2004-05 to 74,211 in 2019-20 (PSLM 2004-05 and 2019-20).

Additionally, the Government of Pakistan has increased development expenditure on health from Rs. 6,649 million in 2005 to Rs. 76,254.0 million in 2020 (Hussain et al., 2020). Increased health expenditure enhances women's health by building and upgrading healthcare facilities, ensuring access to skilled professionals, and adopting modern medical technology.

One of the significant factors contributing to the improvement in women's health is an increase in female education. According to PSLM data from 2004-05 and 2019-20, the percentage of females who have completed primary education increased from 33% in 2004-05 to 42% in 2019-20. Education is a crucial factor in improving women's health as it is expected to increase female autonomy, giving women more confidence and skills to make informed decisions about their health and their children's health. Women with higher levels of education are expected to seek out better services and utilize healthcare resources more effectively to improve their health.

The earnings of women may also have positive effects on their health. According to the Household Integrated Economic Surveys the proportion of female earners has increased from

8.46% in 2005-06 to 22.8% 2018-19, though the increase is not promising, but still moving in right direction.

Moreover, income levels can also enhance the health condition of women. The inflation adjusted average household annual income has increased by more than 70% during the last fifteen years. Compared to the poor, the wealthier strata use prenatal care more often and are more aware of scheduling prenatal check-ups and the significance of prenatal care (Marti-Castaner et al., 2022). Nowadays, most households have mobile phones, which has increased access to information regarding prenatal care, nutrition, and postnatal recovery. With the increasing use of mobile phones, text messages, mobile apps, voice call services, and other social media apps are used to disseminate information about prenatal and postnatal care practices. It also promotes awareness of available healthcare services, leading to timely check-ups, vaccinations, and better overall maternal wellbeing.

The provincial analysis shows that for the year 2019-20, the least deprivation in women's health care is found in Punjab, followed by Khyber Pakhtunkhwa, Sindh, and Baluchistan. The results for Punjab showed a significant improvement over the fifteen years it decreased 41% points. The deprivation in women health care reduced in all provinces of Pakistan. The highest decline is observed in Punjab, followed by Khyber Pakhtunkhwa, Sindh, and Baluchistan. The poor state of women's health care in Baluchistan can be attributed to a combination of geographical, socio-economic, cultural, and infrastructural challenges. Baluchistan is the largest province in Pakistan, characterized by vast and rugged terrain, including deserts and mountainous regions. The scattered population, combined with limited road infrastructure, limited financial resources makes it challenging for women in remote areas to reach healthcare facilities. Most importantly, Baluchistan has lowest literacy rates compared to other provinces in Pakistan.

6.3.2 Deprivation in Child Health Care at National and Provincial Level

This study used immunization as a proxy for child health care. The household will be considered deprived if any child is not vaccinated. In this regard we have considered eight basic vaccines including Bacillus Calmette-Guerin (BCG), Diphtheria, Pertussis, Tetanus (DPT)/Combo/Penta1, DPT/Combo/Penta2, DPT/Combo/Penta3, Polio1, Polio2, Polio3 and

Measle1. A child will be considered deprive if he / she did not get these eight basic vaccines, as vaccines save children for many diseases. The result for child vaccination is given in Figure 6.6. All seven surveys on deprivation in child vaccination yielded mixed results.

The deprivation in child health care has reduced over the years gradually as the government of Pakistan took multiple initiatives for expanding the coverage of child vaccination; the most important is Expanded Program on Immunization (EPI). Moreover, governments often conduct nationwide immunization campaigns to raise awareness about the importance of vaccinations and to provide access to vaccines. In Pakistan the EPI was introduced in 1978 by the World Health Organization to eradicate childhood diseases like diphtheria, pertussis, tetanus, tuberculosis, polio, and measles. However, during the last ten years EPI efficiency has remained stagnant. Research reveals that the EPI's underperformance is caused by several variables, including poor performance in the service areas of delivery, program administration, evaluation and monitoring, logistical control, human resource management, and funding, as well as community health-seeking habits and other demand-side concerns (UNICEF, 2018).

Regional analysis shows that deprivation in child health care is more in rural areas than urban areas. Poor vaccination coverage, particularly in rural regions, is caused by ongoing shortages, unequal distribution of vaccines, and restricted outreach efforts owing to logistical issues. Other hurdles to vaccination in Pakistan include restricted EPI center hours and poor geographic access in isolated rural regions (UNICEF, 2018).

The deprivation in child heath has increased in urban areas of Pakistan. The rise may be due to ignorance, which result in poor vaccination demand, contribute to inadequate immunization coverage (UNICEF), 2018). Moreover, there is still some local community hostility to vaccinations and misinformation about them. Some people still view vaccination as an unpleasant and harmful procedure that could endanger their child's health, while others disregard the significance of vaccination. The traditional cultural and religious rites should include health education about the advantages of immunization. Mosques, schools, and other community meeting spaces should be utilized to clarify common misunderstandings about the communities and lessen hostility (Shaikh et al., 2010). Furthermore, the mother’s limited access to information increases the chance that her kids would get partial immunizations (Bugvi et al., 2014).

Figure 6.6 Deprivation in Child Health Care at National and Provincial Level

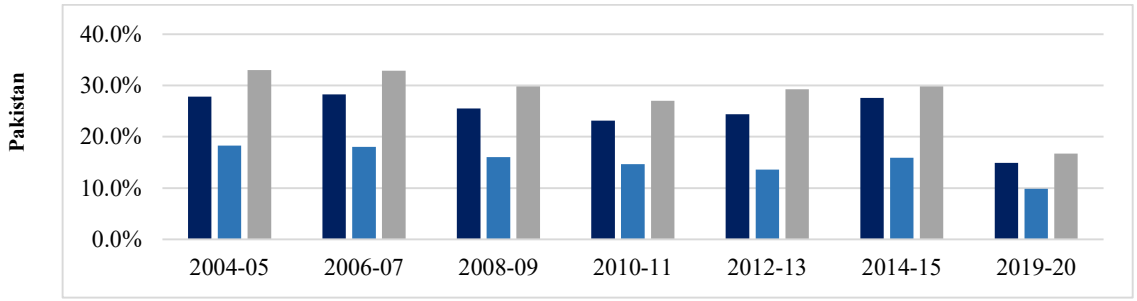
The deprivation in health care declined from 2006-07 to 2010-11, then increased in 2012-13 and 2014-15, then again reduced in 2019-20. There could be multiple reasons for this fluctuating trend. For instance, Pakistan's healthcare system witnessed a dramatic transition in 2011, with health services being decentralized from the federal to the provincial levels. Primary healthcare and immunization services were provided. The devolution caused some early uncertainty over the functions and funding of Expanded Program on Immunization workers at various levels. Furthermore, the provinces experienced funding limits, making substantial regular vaccination efforts difficult in comparison to national ones (Butt, 2023).

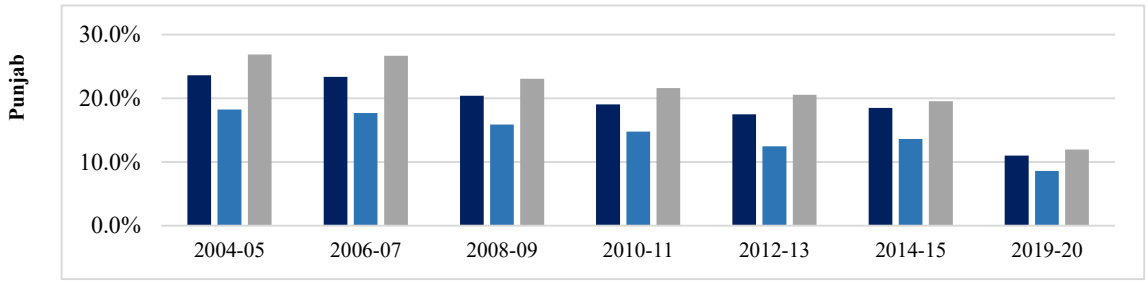
The province wise result shows that the least deprivation is observed in Punjab and the highest in Baluchistan, where the deprivation is double that of Punjab. Our results are consistent with the studies of Fatima (2021) and Jamal (2009). The rural-urban disparity in child vaccination is minimum in Punjab. Rural areas are relatively more deprived of child vaccination in all the provinces. A similar result was shown by (Shabbir Hussain, 2018). Over time deprivation in child health has improved in Khyber Pakhtunkhwa and Punjab while it deteriorates in Baluchistan and Sindh. These both provinces of Pakistan are the most deprived regions. Baluchistan and certain areas of Sindh face significant challenges in child vaccination due to high poverty levels and limited socio-economic development. These regions lack adequate access to education, awareness programs, and economic resources, resulting in lower demand for vaccinations and reduced accessibility to healthcare facilities. Moreover, cultural beliefs and social norms also play a role, as some communities' harbor misconceptions or concerns about vaccines, leading to hesitancy or refusal. Addressing these cultural factors is crucial for fostering vaccination acceptance. Additionally, language diversity and low literacy rates in these areas pose communication challenges, hindering effective outreach and conveying the importance of vaccinations, thereby contributing to lower vaccine uptake.

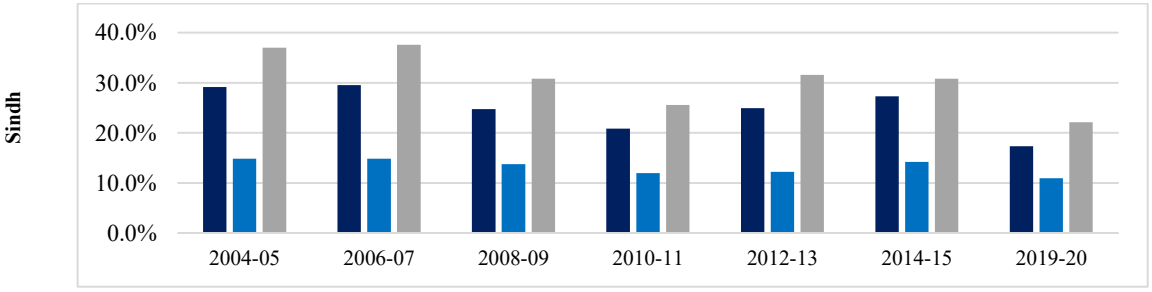
6.3.3 Household's Deprivation in Health Care at National and Provincial Level

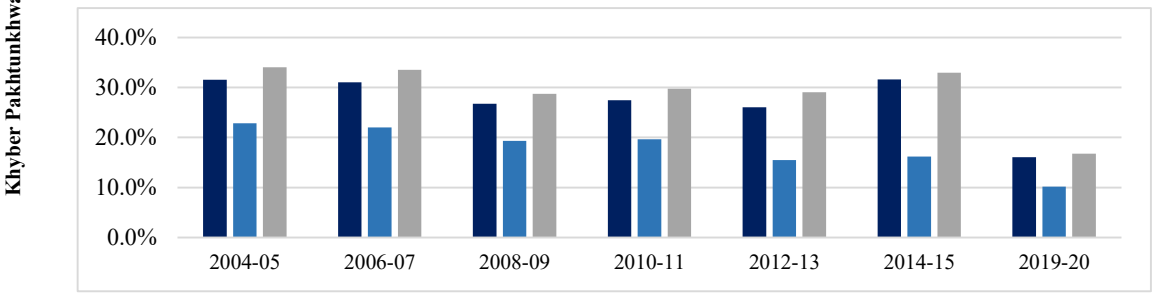
If the household is considered deprived in health care, if it is deprived any of the child or women health care. The result for deprivation in health care at national and provincial along rural-urban regions is given in Figure 6.7.

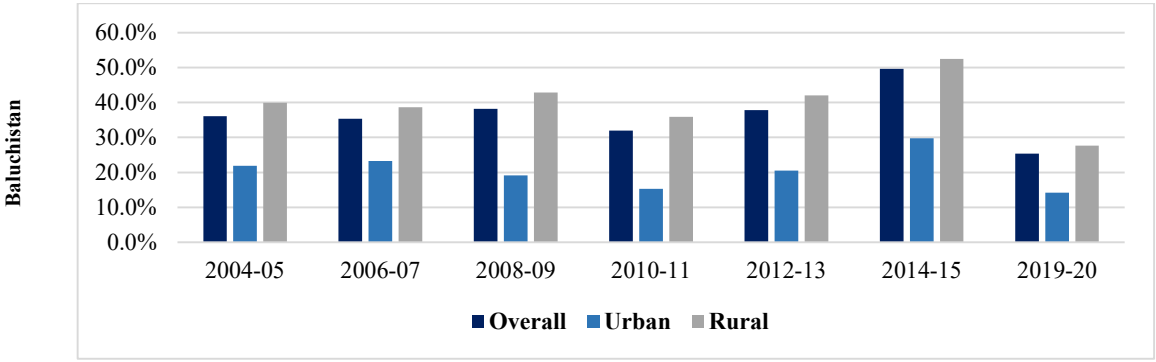
Figure 6.7 Deprivation in Health Care at National and Provincial Level











6.4 DEPRIVATION IN LIVING STANDARD

The quality of life takes into account factors such as the living conditions of each household, the number of people living in each house, the type of fuel used for cooking, lighting, and heating, as well as solid waste management systems. The SDGs' sixth goal is clean water and sanitation. All these indicators were used to calculate the global MPI (Alkire & Foster, 2011a). In this study, we have assessed the deprivation in living standards by utilizing four indicators: house quality, access to basic facilities, means of transportation, and household assets. We will now discuss the results for each indicator in detail.

6.4.1 Deprivation in Subdimensions of House Quality at the National and Provincial Level

One of a person's necessities is a quality house. Housing conditions influence many aspects of life, including health, safety, comfort, and social interactions. The materials used in construction, the availability of necessary infrastructure, and congestion are only a few variables determining housing quality. The present study has considered provision of safe drinking water, quality of walls, source of lightning, source of cooking, sanitation facilities and overcrowding as the proxies of house quality and a household lacking in three or more indicators is categorized as deprived of house quality. Figure 6.8 depicts the deprivation in house quality indicators at the national and provincial levels.

a) **Safe drinking water:** Clean drinking water is the basic need for a healthy and quality life. Access to clean drinking water is essential to protect human health, reduce exposure to harmful germs and viruses, and enhance the quality of the living environment (WHO, 2016). The results show that in 2004–05, 12.6% of households were deprived of safe drinking water. Over time, this percentage shrunk to 8.3%. Further rural areas are relatively more deprived of safe drinking water. than urban region in Pakistan. Province wise results reveal that Baluchistan and Khyber Pakhtunkhwa are much more deprived of drinking water than Sindh and Punjab. The results show that in Punjab, only 2.5% of households are deprived of safe drinking water, whereas in Baluchistan 23.5% are deprived of safe drinking water.

Figure 6.8 Deprivation in Indicators of House Quality at National and Provincial level


Pakistan
Punjab
Sindh
Khyber Pakhtunkhwa
Baluchistan
80.0
60.0
40.0
20.0
0.0
100.0
O U R
2004-05
2006-07
2008-09
2010-11
2012-13
2014-15
2019-20
Walls
Toilet
Drinking water
Overcrowding
Cooking fuel
Lighting

Similar results were found by (Daud et al., 2017) that Punjab's best water supply system relies on rivers and dug wells for water in all the provinces. In Sindh, unprotected sources are being used by people to get water. Khyber Pakhtunkhwa and Baluchistan communities use water from the surface and dug wells.

b) **Walls:** The construction material is one of the fundamental factors in determining the quality of a house. A good house should have the ability to absorb climate shocks and should be resilient to extreme weather. A house constructed of hazardous materials is prone to damage and even accidents. In the present study the quality of constructed walls is taken as one of the proxies of house quality, the houses with walls constructed of burned bricks/blocks and cement are considered as non-deprived. The result shows that 7.6% of households used mud or stones or wood/bamboo to construct their walls. Deprivation in wall has reduced in Pakistan's four provinces from 2004–05 to 2019–20. The highest deprivation is observed in Khyber Pakhtunkhwa and Baluchistan, with 22.1 and 11.9%, respectively. At the same time, deprivation is much lower in Punjab and Sindh, i.e., 1.5 and 7.7%, respectively. A minor rural-urban disparity is observed in Punjab and Sindh, while the highest is in Khyber Pakhtunkhwa and Baluchistan.

c) **Cooking fuel:** Cooking fuel is another parameter of a good life. A household having proper access to cooking fuel like gas / electricity is better than one using firewood, charcoal, or paraffin for cooking. The health of the occupants is directly correlated with the quality of cooking fuel. Those who live and breathe in an atmosphere where wood, coal, charcoal, paraffin, and oil are regularly used for cooking face more risks to health (WHO, 2016). The result for overall Pakistan shows that 13.3% of homes don't have electricity, gas or oil for cooking for 2019-20. Over the fifteen years, the deprivation in cooking fuel has reduced in all provinces except Baluchistan, where the deprivation has increased from 17.3% to 18%.

d) **Sanitation:** Access to sanitary facilities, which is directly tied to the health of family members, is another indicator for measuring living conditions within homes. The results indicate that in 2019-20, 33.8% homes do not have access to flush toilets and the deprivation level was 61.9% in 2004-05. This indicates a substantial improvement in

sanitation facilities. Further, the deprivation in rural areas is less than in urban areas, it is to be noted that in general slums lack good sanitation facilities and almost all slums are in urban areas. According to estimates of UN, the population of slums is over 32 million (Shaikh & Nabi, 2017). The provincial result shows that the highest deprivation is found in Baluchistan and least in Punjab.

e) **Overcrowding:** The availability of space for each family member is another factor in determining house quality. The number of individuals sharing a room is often used to calculate crowding. The lives of family members, particularly youngsters, might suffer by living in a crowded home. These effects may include interrupted sleep, a loss of privacy, and the absence of a relaxing and private environment for completing schoolwork or communicating with family members. In the present study a household is considered overcrowded, if on average 3 or more people are sharing one room. The statistics in Figure 6.8 reveal that in 2019-20, 20% households are overcrowded. The overcrowding has reduced over time in all provinces and throughout Pakistan. Overcrowding is more severe in rural areas than in urban areas. Further, the highest overcrowding is found in Sindh, followed by Baluchistan, Khyber Pakhtunkhwa, and Punjab. Similarly, the highest disparity between rural and urban in terms of overcrowding is found in Sindh.

f) **Source of Lighting:** The household will be considered deprived of lighting if they use other than gas or electricity for lightning. In specific a household is deprived if it is using kerosene oil, petrol, diesel, firewood, or candle as a source of lightning. Figure 6.8 indicates that in 2019-20 only 4.1% were deprived of lightning. The highest deprivation was found in Baluchistan and the least in Punjab. Overtime deprivation in lighting has reduced in all provinces except Baluchistan.

6.4.2 Deprivation in Overall House Quality at the National and Provincial level

In the previous section we discussed the state of deprivation in each sub dimension of house quality. Now we will discuss the results of overall deprivation in house quality, as mentioned earlier that a household will be considered deprived if it is deprived in at least three out of six indicators of house quality. Figure 6.9 depicts the deprivation of house quality at the national and provincial levels.

Figure 6.9 Deprivation in House Quality at National and Provincial Level

In Pakistan the deprivation of house quality has reduced from 25.1% in 2004-05 to 19% in 2019–20. The disparity between rural and urban regions with respect to house quality has also reduced over time. The provincial result shows that the highest deprivation in house quality is observed in Baluchistan, followed by Sindh, Khyber-Pakhtunkhwa, and Punjab. The deprivation in Baluchistan is six times higher than in Punjab.

6.4.3 Deprivation in Subdimensions of Access to Basic Facilities Indicators at the National and Provincial level

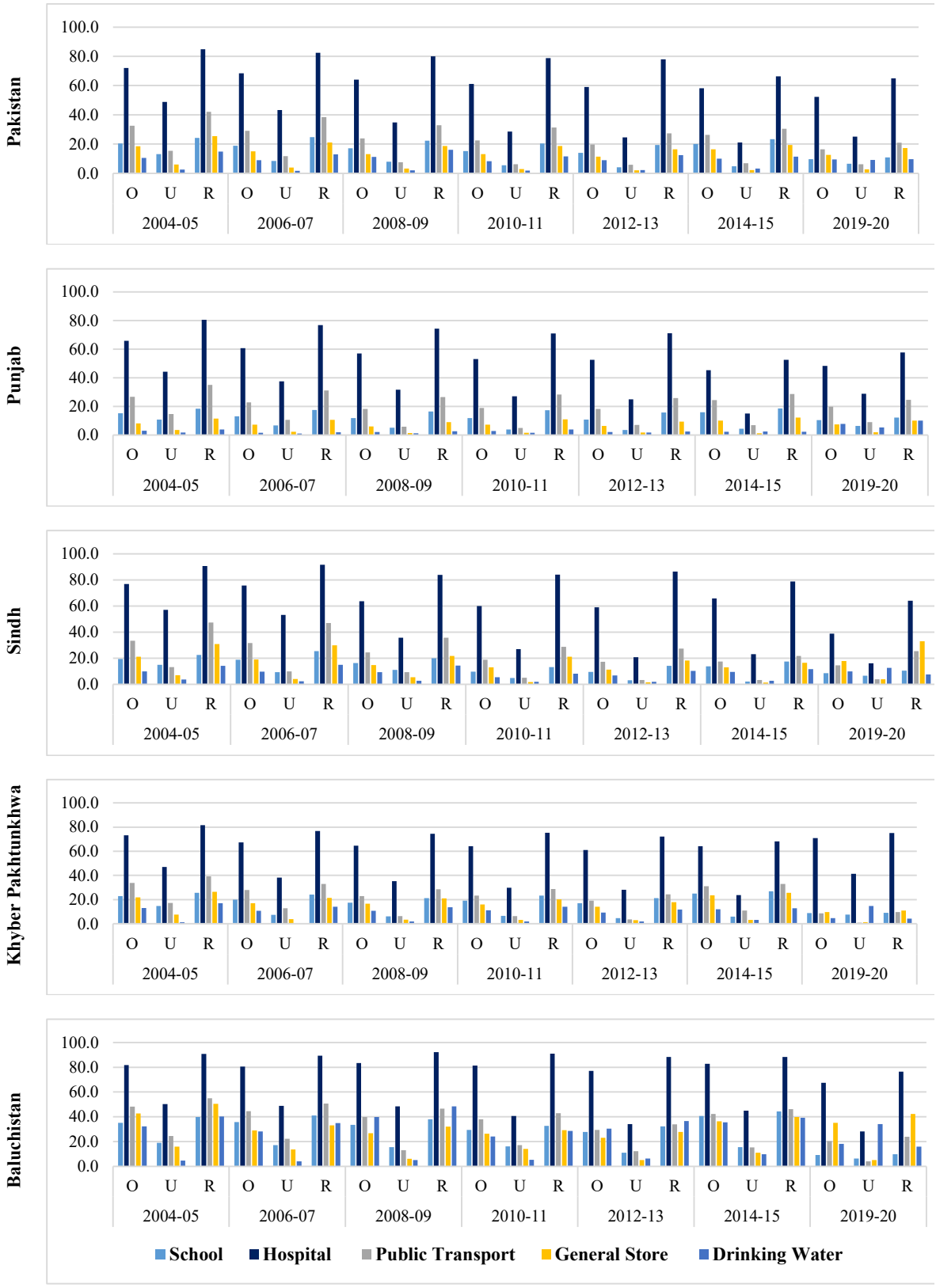
Access to basic facilities is essential in measuring the wellbeing of individuals. It is necessary for social interaction, economic activities, accruing education, purchase of household goods and maintaining a healthy life. In this study, we focused on access to five fundamental facilities: hospitals, primary schools, grocery shops, drinking water, and public transport.

a) Access to health centers: The household will be considered deprived if it takes more than 14 minutes to reach any basic health unit or hospital. The estimates presented in Figure 6.10 show that over the last 15 years, the deprivation in access to health care centers has reduced but still the overwhelming majority of households are deprived in all regions of the country. Further, like all other indicators deprivation is more visible in rural areas.

b) Access to primary school: In present study a household is categorized as deprived of access to primary school if it takes more than 14 minutes to reach school. It is nice to see that the deprivation in this category has substantially reduced in Pakistan and all provinces. For instance, in 2004-05, 20.3% households were deprived of this category and the deprivation level reduced to 9.6% in 2019-20. The rural-urban comparison reveals that deprivation is relatively higher in rural areas.

c) Access to general stores: In this category a household is considered deprived if it takes more than 14 minutes to reach the grocery shop or market. The results show that deprivation in this category has also reduced overtime. The highest deprivation is found in Baluchistan.

Figure 6.10 Deprivation in Indicators of Access to Basic Facilities at National and Provincial Level



d) Access to public transport: Access to public transport is very important for the low-income class and especially those who do not own any means of transportation. It is encouraging to note that deprivation is this category has reduced in all provinces of Pakistan. Interestingly, the highest reduction is reported in Baluchistan.

e) Access to clean drinking water: Clean drinking water is a necessity and one of the six goals of SDGs. This is alarming that overtime the deprivation has increased in urban areas of Pakistan. Interestingly the highest reduction was observed in Baluchistan province and in contrast the deprivation increased in Punjab.

6.4.4 Deprivation in Access to Basic Facilities at the National and Provincial Level

In the previous section we highlighted deprivation in each subdimension of access to basic facilities. In general, we found that deprivation in almost all subdimensions has reduced overtime. Now based on our results of the previous section, we will present results of overall deprivation in access to basic facilities. The estimates of deprivation in access to basic facilities are presented in Figure 6.11.

In the present study a household is categorized as deprived in access to basic facilities if it is deprived in 3 or more dimensions. Regarding Pakistan, the estimates show that during the past 15 years the deprivation in access to basic facilities has reduced by 12.2% which is satisfactory. The highest reduction is found in Baluchistan, where it was reduced by 26%. The results are encouraging and indicate that over time the access to basic facilities has substantially improved in Baluchistan, which is still the victim of the highest poverty.

The rural-urban comparison reveals that deprivation in access to basic facilities is noticeably more in rural areas, this is quite understandable. Most of the rural areas of Pakistan do not have proper roads and mobility is limited. A similar result was found by (Shabbir Hussain, 2018). It can also be seen from Figure 6.11 that deprivation in access to basic facilities has reduced in both rural and urban areas. This indicates that by and large access to basic facilities has improved in all parts of the country.

Figure 6.11 Deprivation in Access to Basic Facilities National and Provincial Level

6.4.5 Deprivation in Transportation at the National and Provincial Level

Means of transport have a vital role Human development. Better facilities of transport increase mobility and boost economic activities. In this study, we have considered four means of transportation (bicycles, motorcycles, cars and rickshaws/chinchy) and a household is categorized as deprived in ownership of the means of transportation if it does not own any of these means of transportation. The results of deprivation in each means of transportation are given in Figure 6.12 and the estimates of overall deprivation in ownership of transportation are depicted in Figure 6.13.

The category wise results show that overall, the deprivation in cars is more than motorcycle and bicycle, which is obvious. Moreover, we don't have any data on rickshaw / chinchy till 2014-15. The deprivation in motorcycle substantially decreased over time while the deprivation in bicycle increased as the people prefer motorcycle over the bicycle. In Pakistan motorcycle has by and large replaced bicycle, this is mainly due to rapid urbanization and development of new towns. The better infrastructure has increased the mobility of individuals and traveling 10 to 15 km for job, shopping or education is now very normal. The routine travelling of 10 to 15 km is very difficult with a bicycle and motorcycle is efficient, time saving and a cheap alternative. Therefore, the demand for motorbikes has substantially increased overtime, many jobs such as delivery boy and postman are largely restricted to motorbike owners.

Car is relatively expensive mean of transportation and masses in Pakistan cannot effort it, therefore deprivation in ownership of car is much higher in all regions of country. The deprivation in car ownership is considerably high in Baluchistan and Khyber Pakhtunkhwa. Regarding rickshaw / chinchi, the highest deprivation is found in this category. It is also to be noted that rickshaw / chinchi are mainly used for commercial purposes, people don't own them merely for domestic needs. However, people owning rickshaw / chinchi use it for domestic purposes also.

In general, the category wise results of deprivation in means of transportation show that deprivation in bicycles has increased over time and bicycles are largely replaced by motorbikes. The deprivation in ownership of motorbikes has largely reduced. The deprivation in ownership of cars is very high throughout the period of analysis.

Figure 6.12 Deprivation in the Ownership of Means of Transport at National and Provincial Level

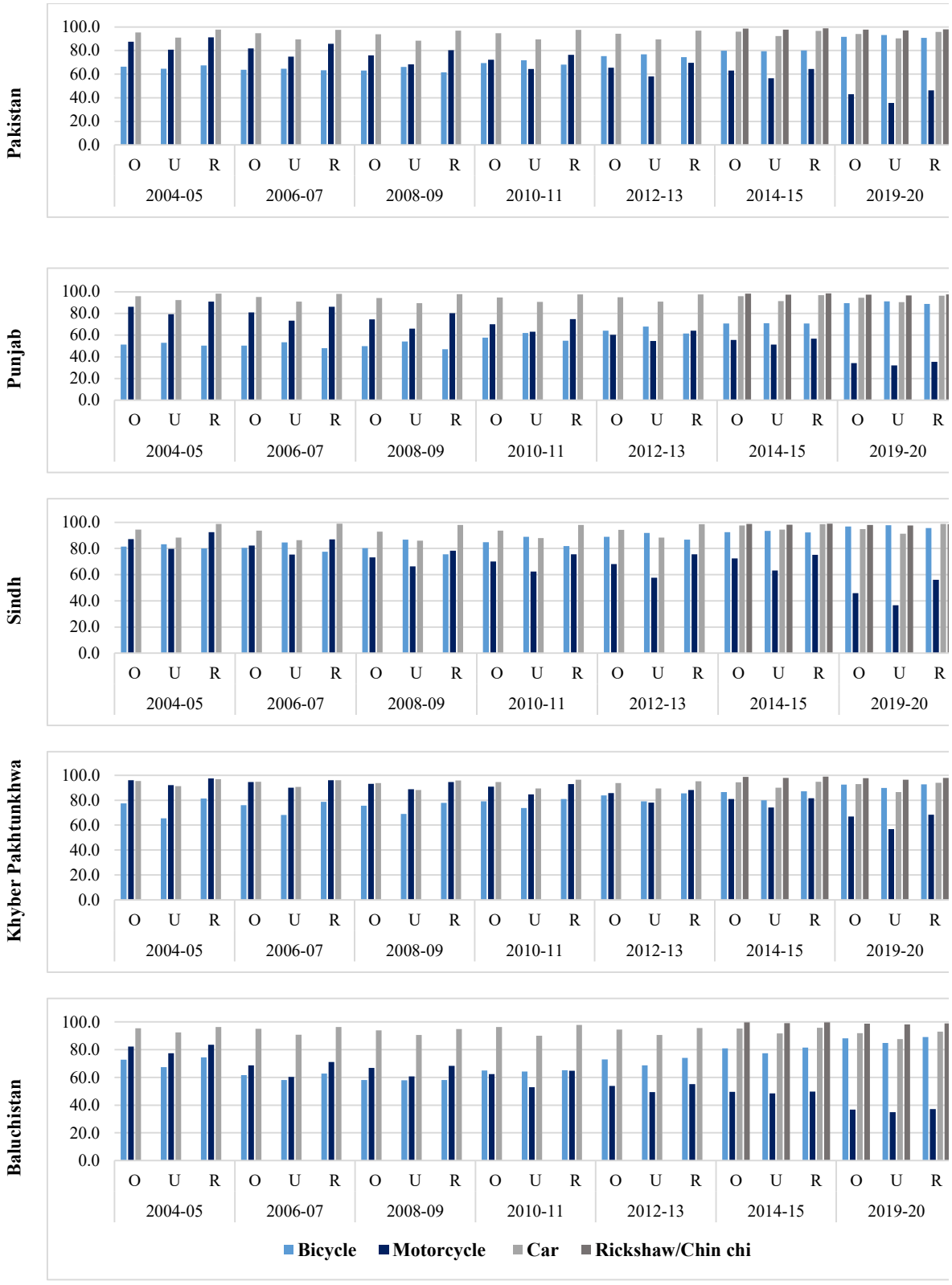
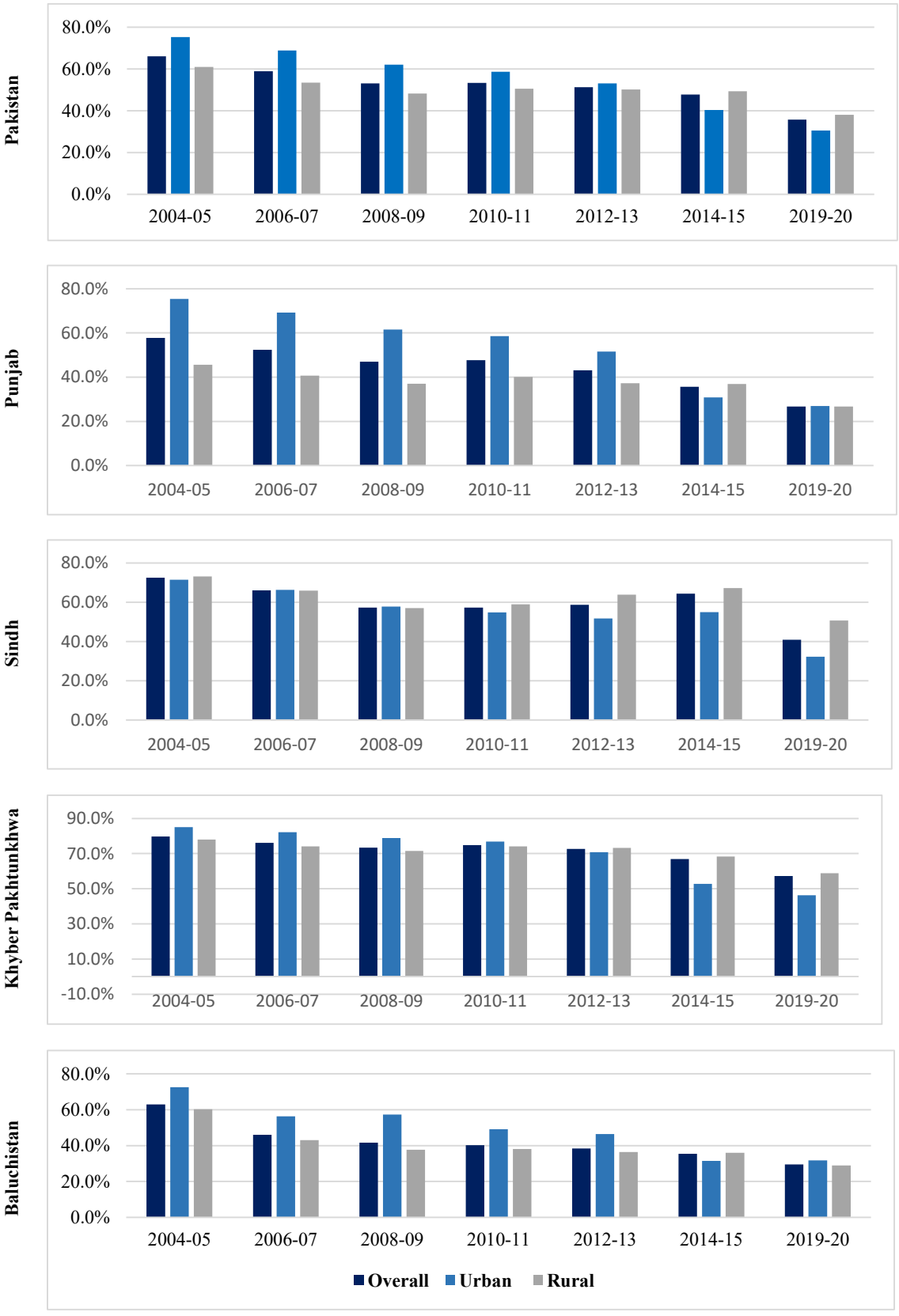


Figure 6.13 Deprivation in Transportation at National and Provincial Level



The result in Figure 6.13 depicts that deprivation in transport has declined over time. In 2004-05, 66% households were deprived of owning any type of domestic transport and this declined to 35.8% in 2019-20. One of the main reasons for this decline is improvement of infrastructure and roads which induced people to purchase or hire houses away from workplace. The province wise results show that the deprivation has reduced in all provinces of Pakistan. The least deprivation is found in Punjab followed by Baluchistan.

6.4.6. Deprivation in the Ownership of Basic Household Goods at the National and Provincial Level

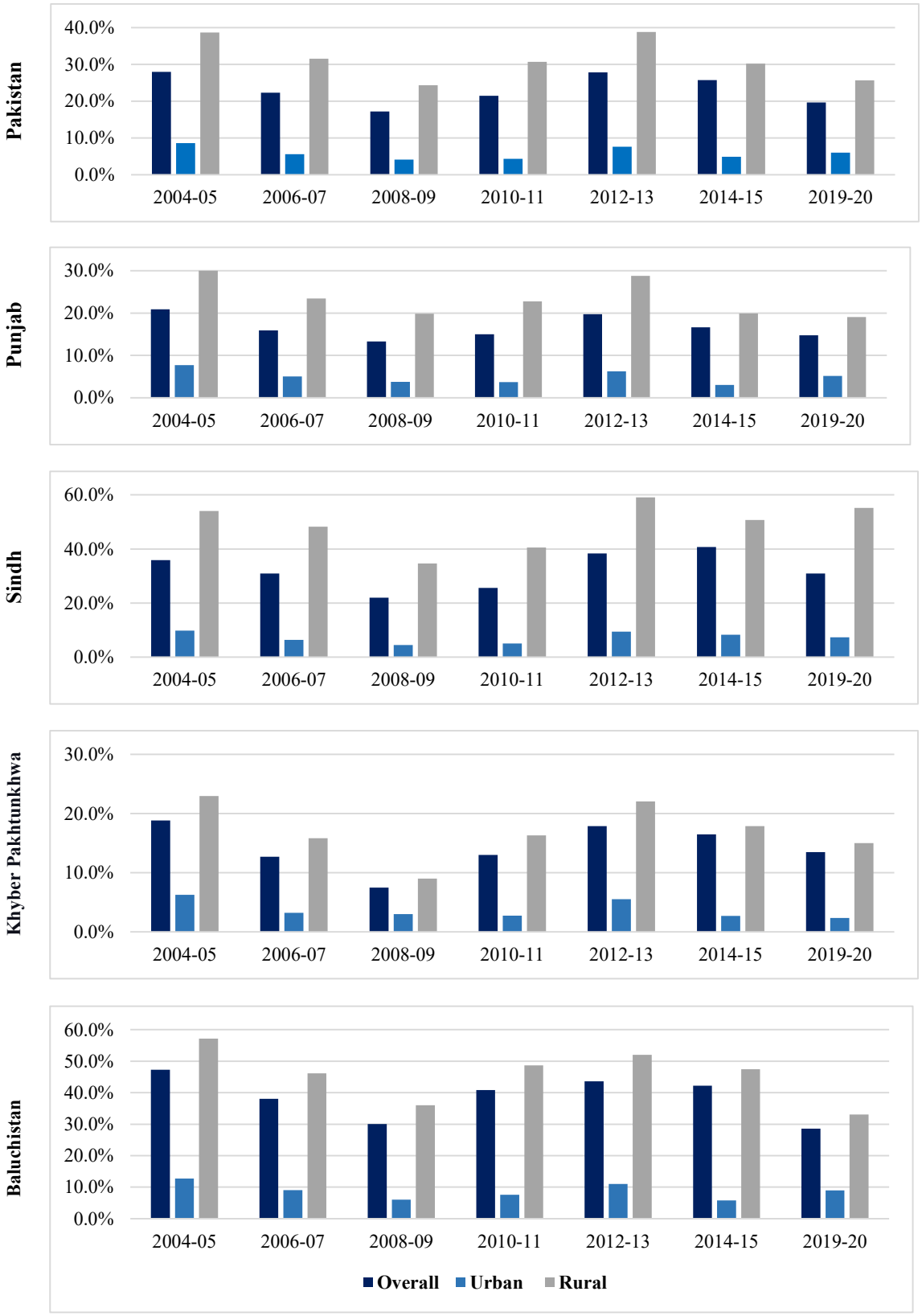
In this category we have basic household appliances, means of communication and information. In specific we considered the ownership of chair, table, iron, radio, fan or water cooler, TV or LCD, cell phone or landline, and a sewing machine. In the present era these goods are considered as the basic needs. A household is categorized as deprived of the ownership of basic goods if it owns less than five of these goods.

The result in Figure 6.15 and 6.16 reveals that deprivation in the ownership of basic goods has declined over time. The rural-urban comparison reveals that deprivation is much higher in rural areas, for instance during 2019-20, 25.7% households of rural areas were deprived, and the deprivation level was only 6% in urban areas.

Deprivation in household assets has decreased in all provinces from 2004-05 to 2019-20. The highest deprivation is observed in Sindh, followed by Baluchistan, Khyber Pakhtunkhwa, and Punjab. The rural-urban disparity in terms of assets is greatest in all provinces. Further, the rural areas of Sindh and Baluchistan are in miserable conditions where the result for Sindh shows 55% of households do not have at least five of the listed goods. The increase in deprivation may be because of the economic downturns, recessions, high levels of unemployment, cost of living rises faster than income, households may experience a decrease in real income and struggle to accumulate assets in Pakistan. So, people prioritize fulfilling their food and health expenditures over expenses on acquiring assets

Figure 6.14 **Deprivation in Subdimensions of Basic Household Goods at National and Provincial Level**

Figure 6.15 Deprivation in Ownership of Basic Household Goods at National and Provincial Level



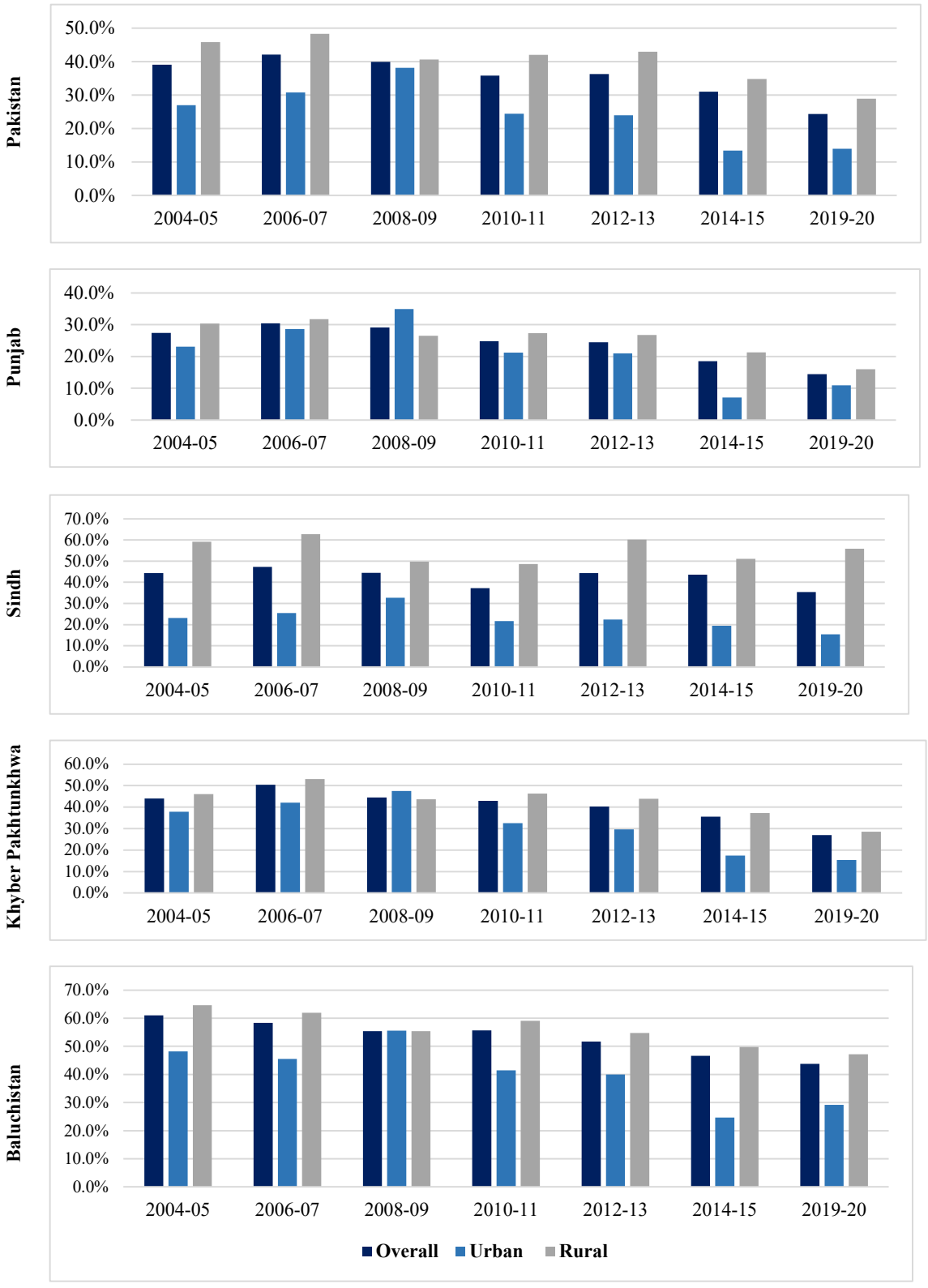
6.4.7 Household Deprivation in Living Standards at the National level and Provincial level

The standard of living is one of the crucial aspects of wellbeing that affects a household's socioeconomic standing. In the present study we have considered four indicators of the living standard. The indicators are house quality, access to basic facilities, ownership of means of transportation and ownership of basic household goods. Each indicator is further subdivided into subdimensions. The deprivation in each subdimension and all major indicators of living standards are discussed in preceding sections. Now we will discuss the findings of overall deprivation in living standards. In this regard a household is categorized as deprived of living standards if it is deprived of two or more indicators of living standards.

The estimates of deprivation in living standards are presented in Figure 6.16. In Pakistan during last 15 years the overall deprivation in living standards has decreased by 14.9% which is a decent fall, but still almost one-fourth households are deprived of living standards indicating that on average every 4^{th} household is deprived of living standards. It is also to be noted that rural households are relatively more deprived, even in the last year of analysis 28.9% households are deprived of living standards in rural areas and this deprivation is 13.9% in urban areas of country. The statistics reveal that deprivation level in rural areas is more than twice the deprivation level in urban areas. Therefore, there is still much to do to further improve the living standards in rural areas. There could be multiple reasons of relatively better quality of life in urban areas, such as better infrastructure, more planned housing schemes, strict rules of the regulatory authorities, better sanitation system and proper monitoring by municipal committees. In comparison infrastructure is not good in rural areas, houses are built without planning and largely there is no proper drainage system.

It is encouraging to note that during last 15 years, living standards have enhanced in all provinces of Pakistan. The results for Punjab are quite satisfactory where deprivation in living standards has reduced to 14.4% and rural-urban differences are also not much pronounced in Punjab. The highest rural-urban disparity is found in Sindh, where during 2019-20 the deprivation in rural areas is more than three times the deprivation in urban areas. Baluchistan is still victim of highest deprivation where 43.8% households are still deprived of living standards. The results show huge regional disparities in terms of living standards.

Figure 6.16 Deprivation in Standard of Living at National and Provincial Level



6.5 CONCLUSION

In this chapter we highlighted the deprivation in education, health and living standards in Pakistan and its provinces. Each dimension of wellbeing was further subdivided into multiple indicators. According to estimates the deprivation in education, health and the living standard has reduced in Pakistan during the last fifteen years. The conditions are still challenging in Sindh and especially Baluchistan, where deprivations were relatively high. It was also observed that rural households are in general more deprived in all dimensions of wellbeing.

Chapter 7

DEPRIVATION IN EACH DIMENSION AT DISTRICT LEVEL

7.1 INTRODUCTION

In this chapter deprivation in each dimension is examined at the district level. In terms of policy, examining poverty at the district level may improve the scope of programs to reduce poverty by targeting areas with persistent and high concentrations of poverty. This chapter consists of four sections. In Section 7.2 we will describe household deprivation in education. The estimates of household deprivation in health at the district level will be discussed in Section 7.3. Similarly, estimates of household deprivation in terms of living standards will be discussed in Section 7.4. Finally, the discussion is summarized in Section 7.5.

7.2 DEPRIVATION IN EDUCATION AT DISTRICT LEVEL

The following section of the chapter presents estimates of deprivation in education at the district level. Due to the inclusion of more than a hundred districts in each of the seven survey, discussing the results of each district is cumbersome and lengthy. Therefore, we have categorized districts into five groups with respect to the level of deprivation. The first group comprises of districts with deprivation score below 0.40, the second group covers districts with deprivation ranging between 0.40 and 0.49, the range for third next group is 0.50 to 0.59, fourth group comprises of districts with deprivation 0.60 to 0.69 and the last group consists of districts with extreme level of deprivation exceeding 0.69.[21]

The district-level estimates of deprivation in education are illustrated in Figure 7.1. The results are depicted through cartography, enabling us to compare deprivation across the country. The findings for 2004-05 indicate very few districts fall in the first two groups and only 22 districts have deprivation score between 0.50 to 0.59. The majority have a deprivation score of 0.60 or more, among which 35 districts are extremely deprived with deprivation score over 0.69. Notably, districts such as Lahore, Karachi, Sialkot, Rawalpindi, Chakwal, Attock, Jhelum,

[21] Deprivation in education's indicators across districts are given in Annexure 2.

Abbottabad, Haripur, Gujrat, and Toba Tek Singh fall in group 1, with deprivation score below 0.40. These regions have a relatively good educational profile and are mostly concentrated on small and medium-scale industries.

In 2006-07, a modest improvement is observed, with the number of districts experiencing above 0.70 deprivation decreasing to 29 districts. Meanwhile, the districts with below 0.40 deprivation increase from eleven to fourteen. The subsequent year, 2008-09, presents a more favorable scenario for districts in terms of education deprivation. The number of districts with less than 0.4 deprivation increases from fourteen to nineteen, and those with more than 0.7 deprivation decreases from 29 to 17 districts. Continuing this trend, the years leading up to 2019-20 witness a gradual reduction in education deprivation. By 2019-20, the conditions are markedly improved. The results reveal that the number of districts with less than 0.40 deprivation has increased to 28 districts which were only 11 in 2004-05.

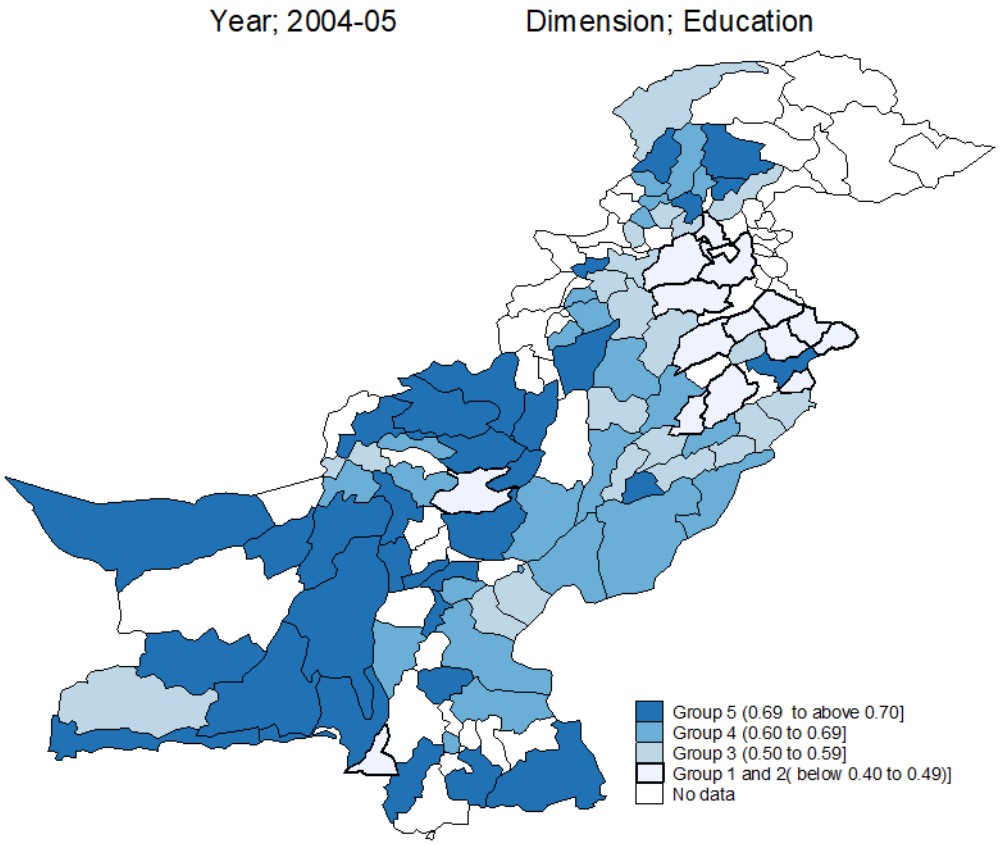
Several districts consistently remain in group one (below 0.4) throughout the years, including Chakwal, Rawalpindi, Gujrat, Sialkot, Lahore, Attock, Karachi, Jhelum, Abbottabad, Haripur, and Toba Tek Singh. Over the fifteen-year period from 2004-05 to 2019-20, numerous districts consistently fall into group five, indicating deprivation above 0.70. These districts include Awaran, Barkhan, Batagram, Buner, Chaghi, Zhob, Kharan, Kohlu, Dera-Ismail-Khan, Dera-Bugti, Hangu, Jacobabad, Jaffarabad, Jhal-Magsi, Killa-Saifullah, Kohistan, Khuzdar, Gwadar, Loralai, Musakhail, Muzaffargarh, Nasirabad, Rajanpur, Shangla, Tank, Thatta, and Upper Dir. Most of the districts, such as Awaran, Barkhan, Chaghi, Zhob, Kharan, Kohlu, Dera-Bugti, Jaffarabad, Jhal-Magsi, Killa-Saifullah, Khuzdar, Gwadar, Loralai, Musakhail, and Nasirabad, belong to the most deprived province, Baluchistan. The people in these districts face various challenges such as insufficient schools, limited roads, a sparse population scattered across vast and mountainous terrain, and a scarcity of resources.

A couple of districts, namely Muzaffargarh and Rajanpur, are from south Punjab, which is a more deprived region than north Punjab. South Punjab faces greater challenges in terms of development and wellbeing. Deprivation in South Punjab compared to North Punjab can be attributed to various factors, including historical neglect in terms of development projects, insufficient infrastructure, and lower levels of investment in social services.

Other districts like Batagram, Buner, Shangla, Tank, Hangu, and Upper Dir belong to Khyber Pakhtunkhwa. Similarly, Jacobabad and Thatta are from Sindh. Despite being only a hundred

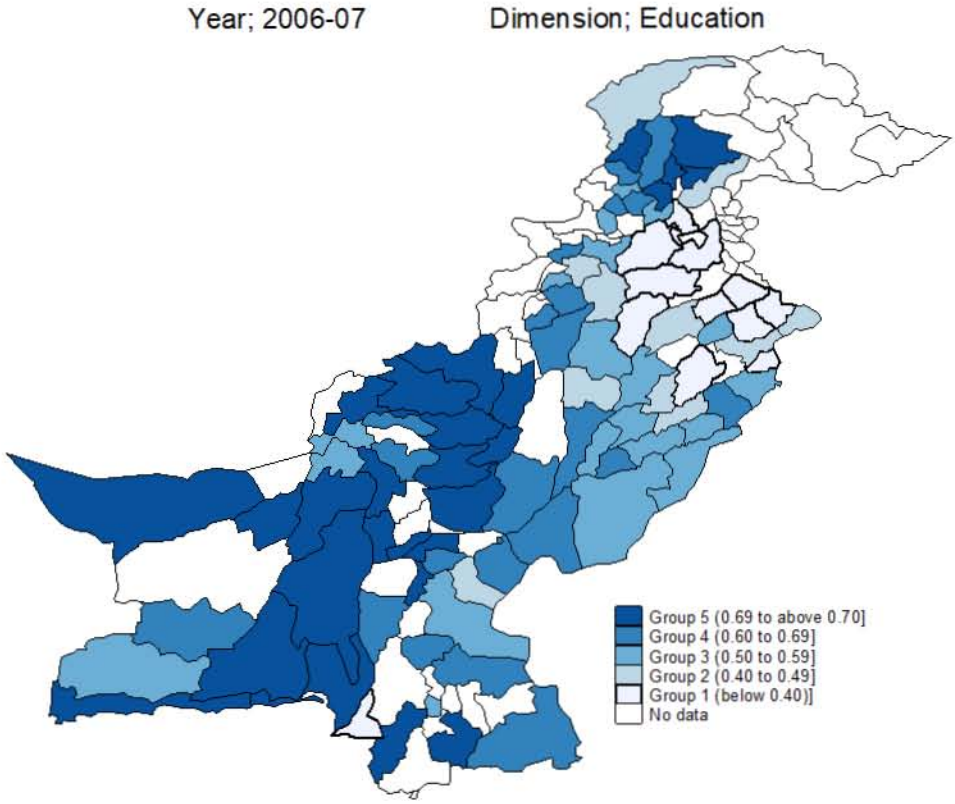
kilometers from Karachi, Thatta remains one of Pakistan's worst-performing districts and the worst in Sindh. Further, the results show that, among all districts, Dera-Bugti exhibits the highest education deprivation for 2019–20, while Chakwal has the lowest, followed by Sialkot, Rawalpindi, and Jhelum. Notably, three districts; Awaran, Dera-Bugti, and Khuzdar suffer with deprivation levels exceeding 0.90, indicating that 90% of households in these areas lack a member with at least a primary education in rural areas or middle education in urban areas. All three districts belong to the province of Baluchistan. Dera-Bugti consistently reports nearly 90 percent deprivation in education over the years, underscoring the challenging educational landscape in Baluchistan.

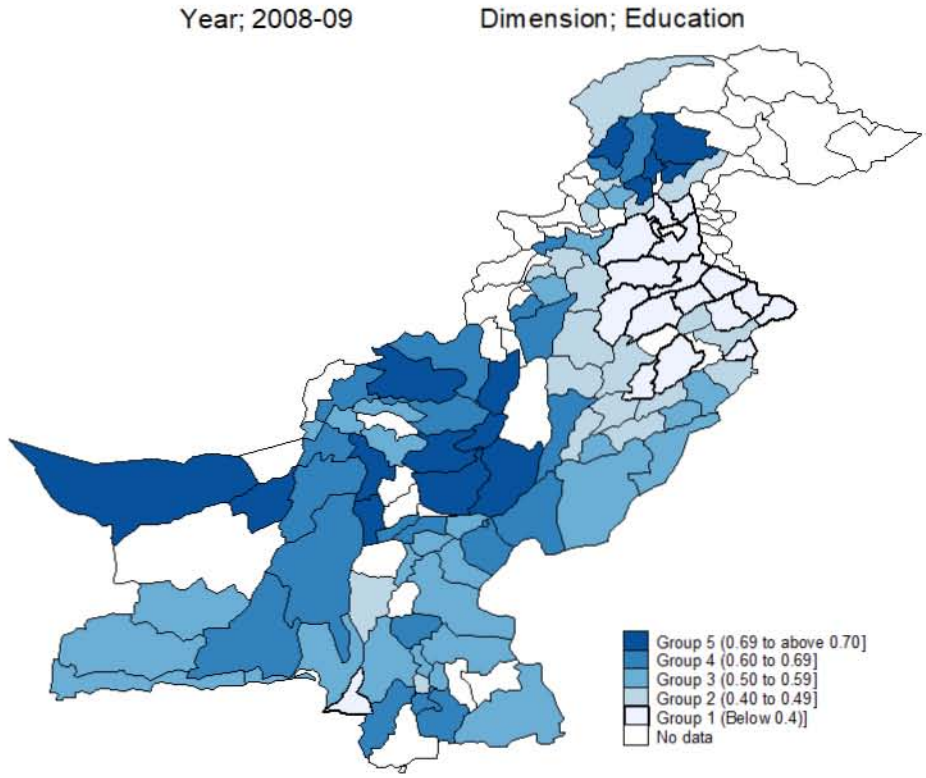
Figure 7.1 Deprivation in Household Education at District Level



Continued on next page

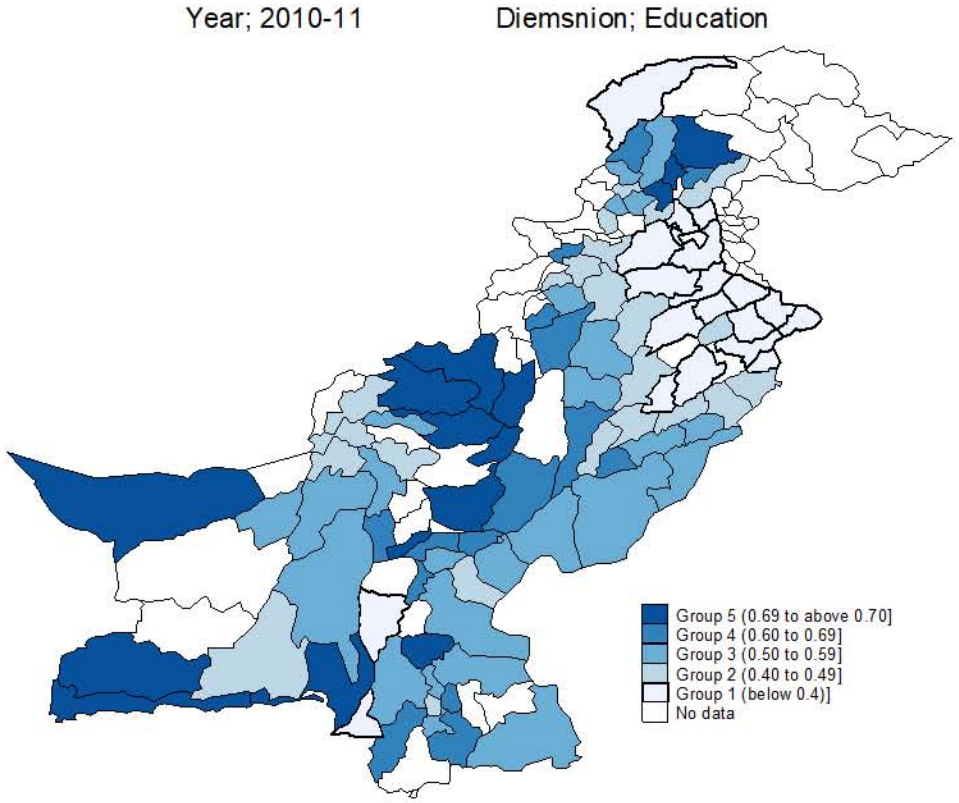
(Continued) Figure 7.1 Deprivation in Household Education at District Level

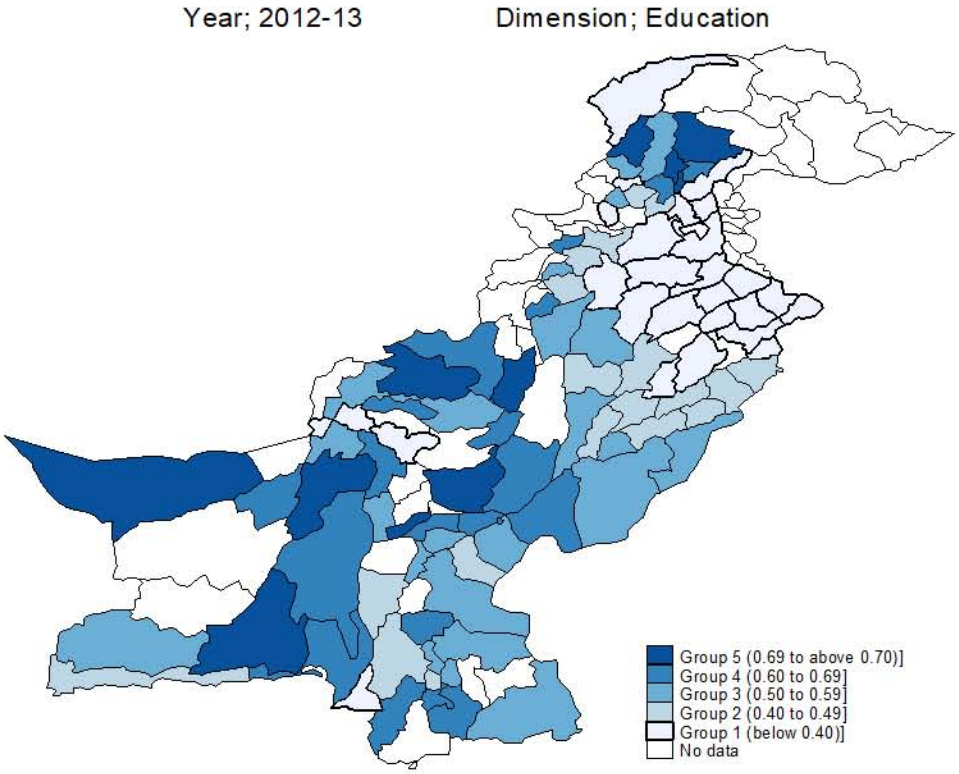




Continued on next page

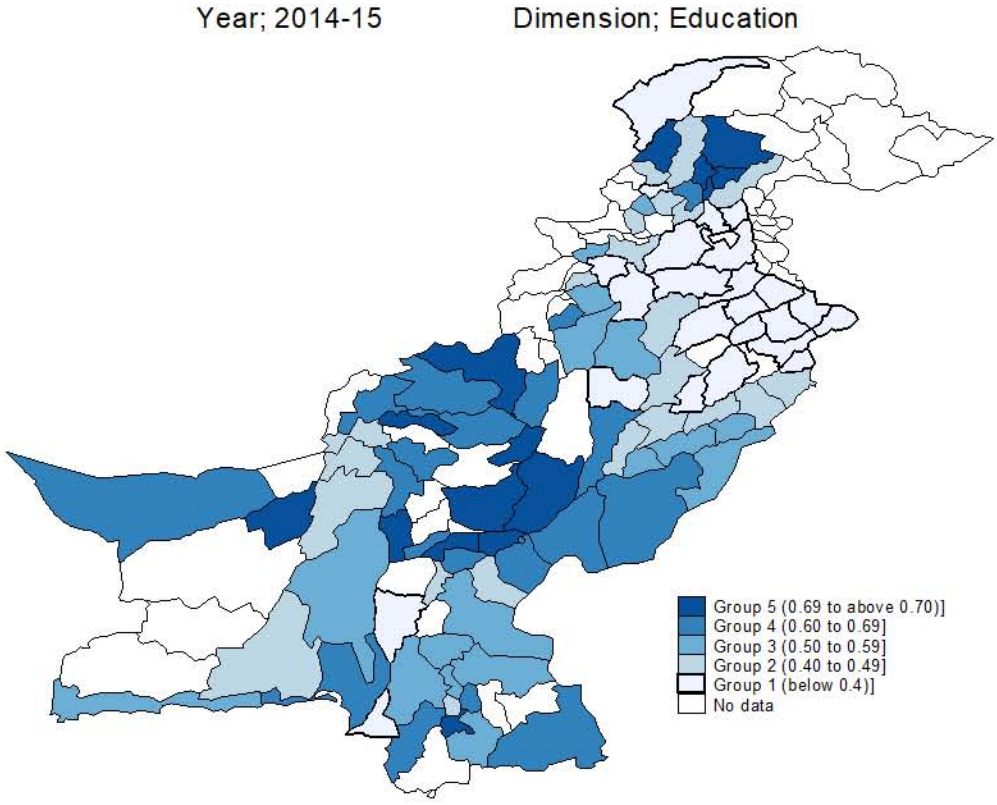
(Continued) Figure 7.1 Deprivation in Household Education at District Level

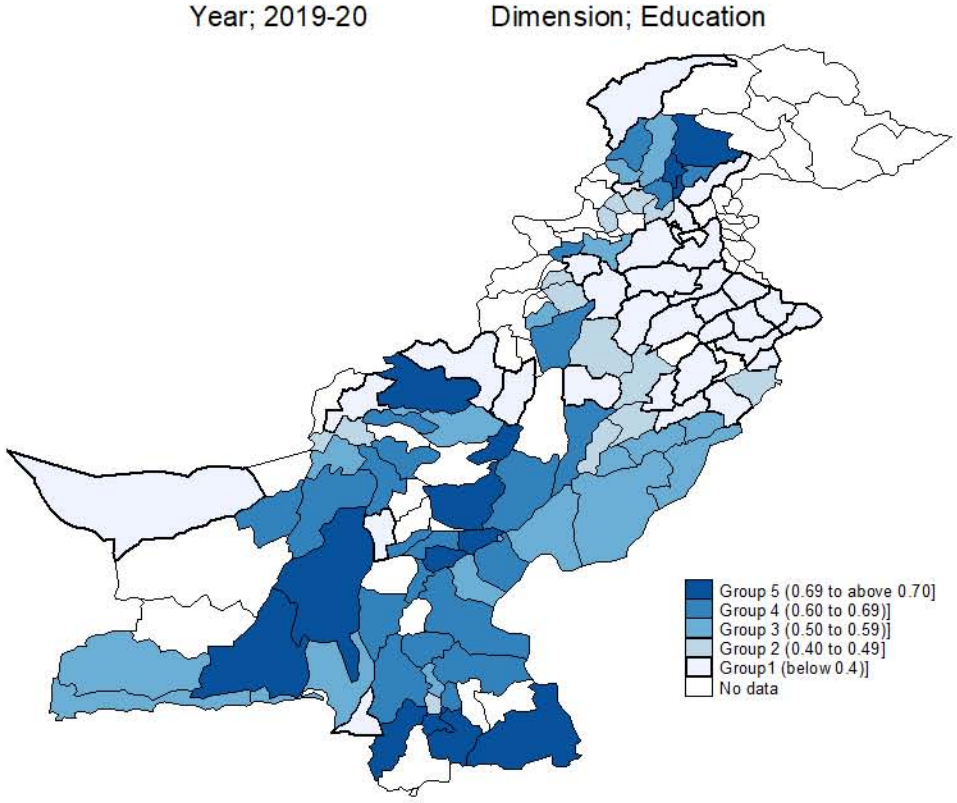




Continued on next page

(Continued) Figure 7.1 Deprivation in Household Education at District Level





The district-level analysis also highlights the miserable condition of Baluchistan in terms of education. There are multiple challenges, such as lack of proper school infrastructure, lack of trained teaching staff, insufficient facilities. Further vast and challenging geography makes it difficult to reach remote areas and leading to limited access to education. Cultural barriers also limit the opportunities for girls. During past many years, the province is victim of terrorism, in addition strong tribal system is also a hurdle in promoting education in far flung areas of province. By the end of 2020, Baluchistan had lost 138 people due to terrorist attacks and counter-terror operations, followed by Khyber Pakhtunkhwa (122), Sindh (92) and Punjab (40). Baluchistan and Khyber Pakhtunkhwa (including FATA) accounted for 75% of all violent deaths. Sindh accounted for 15% of the deaths. Only 8% of all fatalities occurred in Punjab (Annual Security Report, 2020). Furthermore, one of the causes of Baluchistan's poor education conditions is the issue of ghost teachers and ghost schools, with hundreds reportedly taking payment but not actually teaching (Raza, 2013). Baluchistan faces the challenge of improving student enrollment, and the prevalence of ghost teachers remains a significant obstacle.

Over time, the highest increase in education deprivation is observed in districts Shangla, Ghotki, and Khuzdar. Conversely, districts like Badin, Tharparkar, Sheikhupura, Pishin, Karak, Narowal, Lasbella, Hyderabad, Jacobabad, Jhal Magsi, Lakki Marwat, Lodhran, and others shown improvement in education. Among these districts, the most substantial reduction in education deprivation is noted in Sheikhupura, followed by Pishin, Karak, and Narowal. The Khyber Pakhtunkhwa government started an effort to enhance elementary school enrollment in District Karak by providing free books. The availability of free educational resources has boosted attendance for both male and female pupils in the first and fifth grades (Ullah, 2023). Pishin is one of the dense districts of Baluchistan where the education has improved over the last fifteen, mainly due to Baluchistan Basic Education Program which is a joint project of the European Union, UNICEF, and the Baluchistan Secondary Education Department. (BBEP, 2020). The districts with the lowest reduction in education deprivation include Mirpurkhas, Dera-Bugti, Sibi, and Dadu. Some districts, such as Sukkur and Ziarat, have maintained consistent levels of education deprivation over the last fifteen years.

7.3 DEPRIVATION IN HEALTH AT THE DISTRICT LEVEL

The estimates of district level deprivation in child and women health are illustrated in Figure 7.2. The districts based on deprivation scores are divided into five groups. The first group includes districts with deprivation below 0.10, the second group contains districts with deprivation that ranges from 0.10 to 0.19, the third group encompasses districts with deprivation ranging from 0.20 to 0.29, the fourth group comprises of districts with deprivation ranging from 0.30 to 0.39, and the final group covers districts with extreme deprivation above 0.40.[22]

The results for the year 2004–05 indicate that only one district had less than 0.10 deprivation in health. The number of districts with less than 0.10 deprivation remained two in 2006-07 and 2008-09. However, by 2019-20, the number of districts with less than 0.10 deprivation in health increased to 25. Karachi, Rawalpindi, Chakwal, Attock, Abbottabad, and Gujrat are among the districts having less than 10 percent deprivation in health. In contrast, districts such as Tharparkar, Khuzdar, Killa Saifullah, Bolan Kachhi, and Kohistan consistently experience more than 0.4 deprivation.

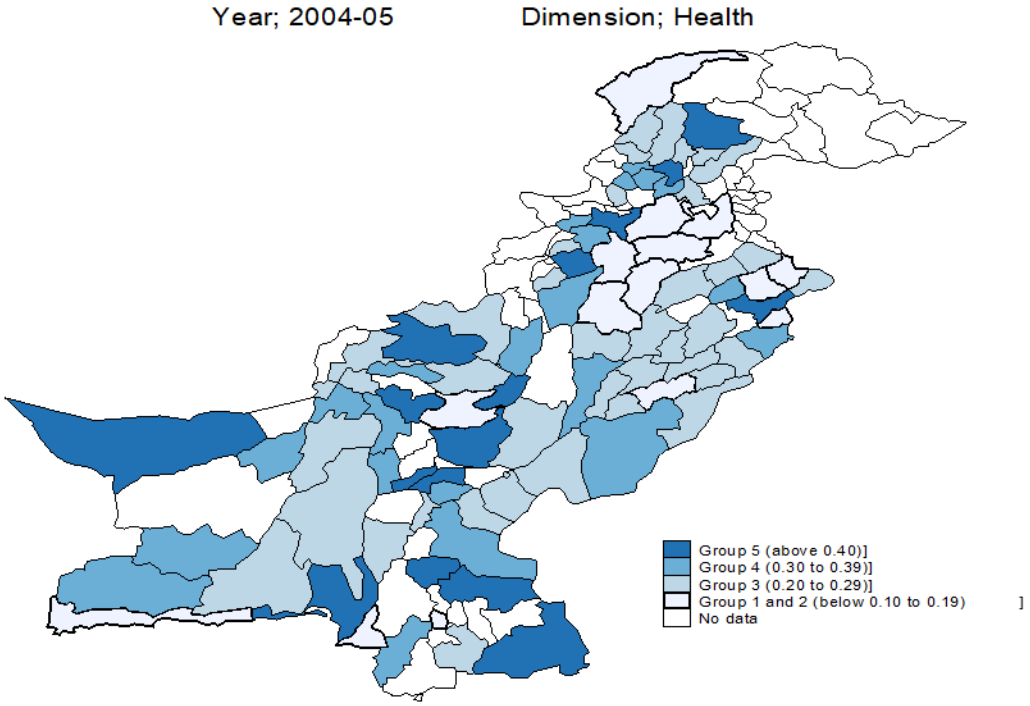
In 2019-20, the highest health deprivation is observed in Khuzdar, followed by Awaran, Tharparkar, and Kohistan. On the other hand, the lowest health deprivation is found in Jhelum, followed by Jacobabad and Gujrat. Khuzdar and Awaran are the districts of Baluchistan. Despite its enormous area, Baluchistan has one of Pakistan's poorest healthcare sectors. Substandard urban and rural healthcare facilities are to blame for the slow progress of health care facilities. The reduction in service quality is the consequence of a combination of poor governance, political corruption, and internal politics inside healthcare organizations that involve both professionals and non-professionals. These issues, taken together, impede the essential reforms to the healthcare system, limiting Baluchistan's accomplishment of health-related goals (Ali, 2023).

Moreover, Kohistan districts is from Khyber Pakhtunkhwa. The current Health Sector Strategy faces numerous challenges in Khyber Pakhtunkhwa, including poor access and utilization of health services, low-quality care, limited managerial capacity, weak accountability, underfunding, inefficient resource allocation, and fragmented reform

[22] Deprivation in health care's indicators across districts are given in Annexure 3.

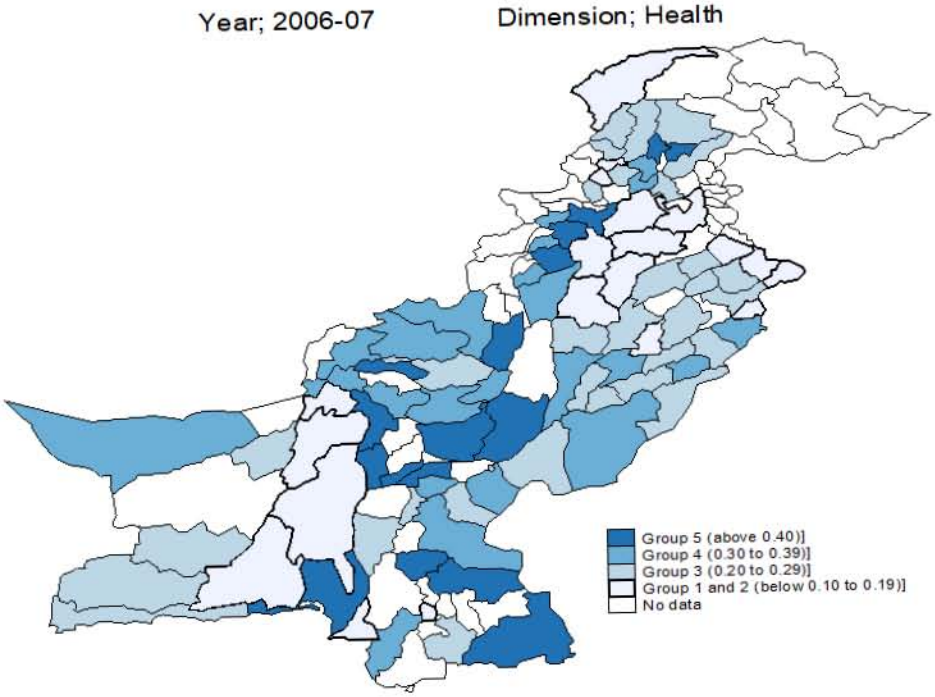
initiatives. Substantial improvements are needed in health outcomes to achieve Sustainable Development Goals. Key concerns include 17.3% of children not receiving any vaccination, over 40% of women facing nutritional issues, and alarming rates of child underweight (24%), stunting (48%), and wasting (17%). Addressing these challenges is critical for advancing public health in the region (Asian Development Bank, 2019). Further, Tharparkar faces enormous challenges, including administrative neglect, extreme poverty, insufficient health care, and a deteriorating infrastructure, which increases susceptibility to climatic disasters. Due to cultural attitudes and a lack of reproductive health services, women's health is especially ignored. Only 14% of deliveries are attended by qualified personnel, and fewer than half of women undergo prenatal consultations. Furthermore, fewer than half of children are completely vaccinated, with just 60% of infants under one-year receiving measles immunization, revealing severe inadequacies in the region's healthcare facilities (Rana & Naim, 2014).

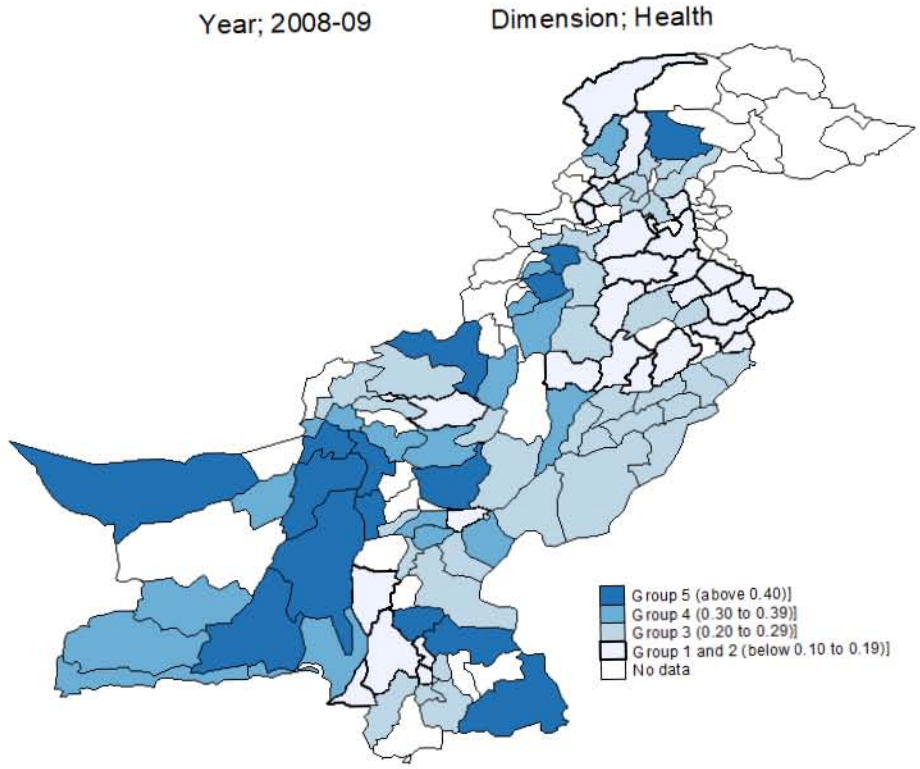
Figure 7.2 Deprivation in Household Health at District Level



Continued on next page

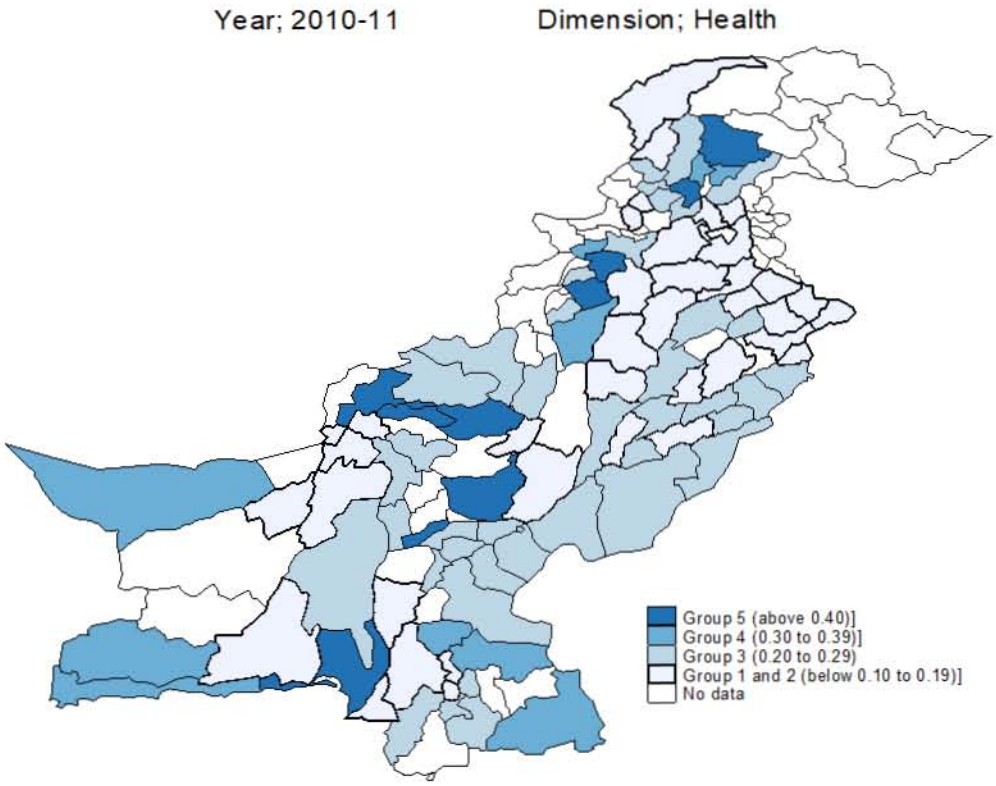
(Continued) Figure 7.2 Deprivation in Household Health at District Level

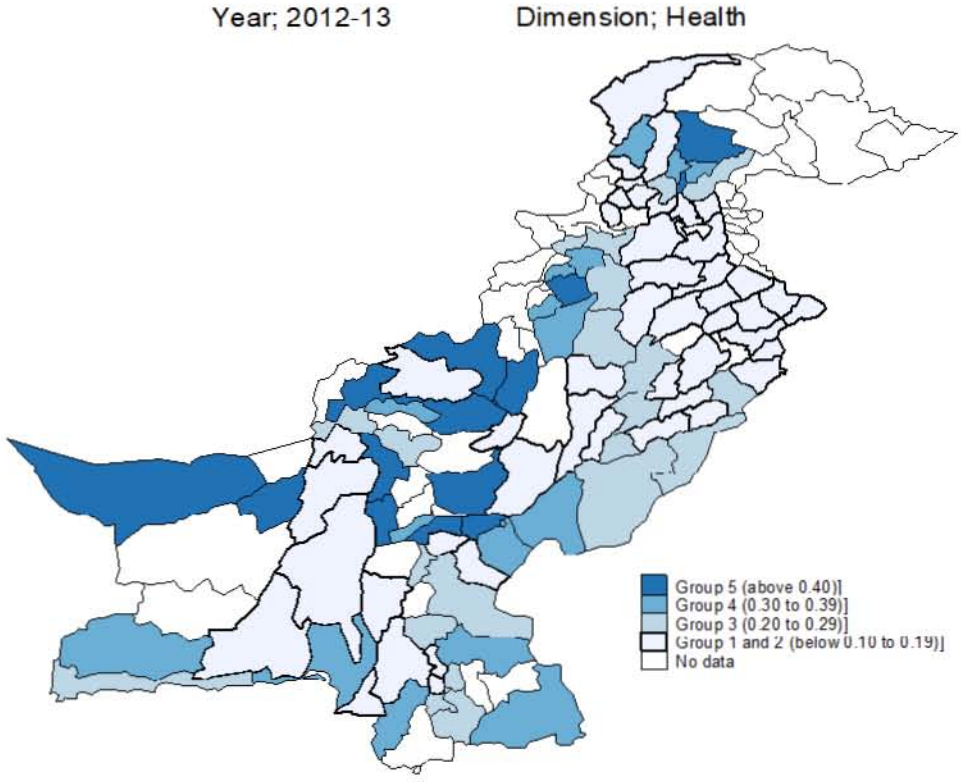




Continued on next page

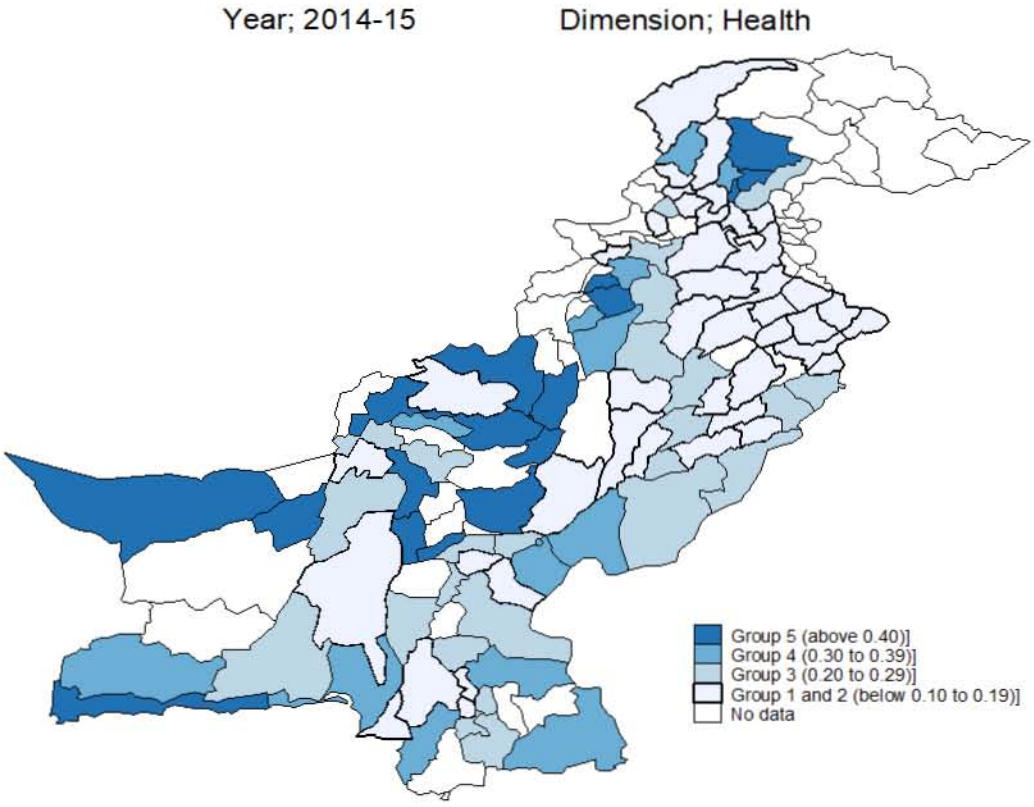
(Continued) Figure 7.2 Deprivation in Household Health at District Level

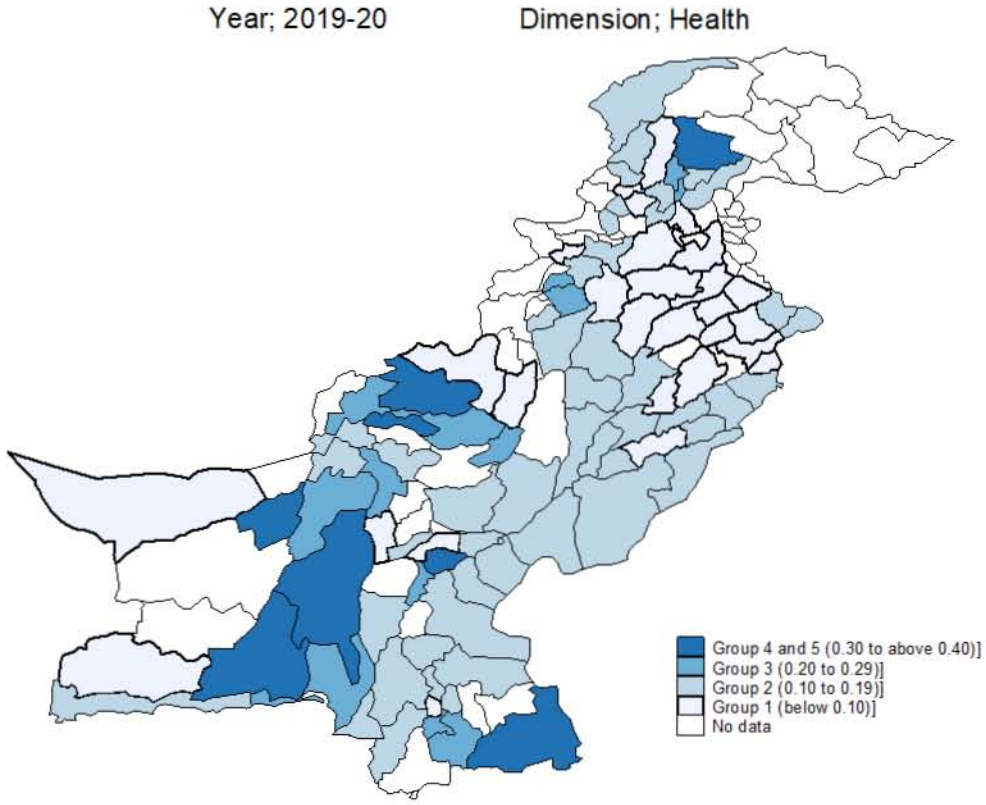




Continued on next page

(Continued) Figure 7.2 Deprivation in Household Health at District Level





Over the years, some districts have shown improvement in health conditions, with the highest reduction in health deprivation found in districts Sukkur, Chaghi, Jhelam, Mandi Bahauddin, Zhob, and Swat, where the deprivation in health has been reduced by more than 40% percent. Conversely, the lowest improvement is observed in Badin, Kalat, Dera Ghazi Khan, and Mansehra. Additionally, some districts have experienced a deterioration in health conditions, with the highest increase in health deprivation found in districts Khuzdar, Awaran, and Tharparkar, while the lowest increase in health deprivation is found in Narowal, Naushahro Feroze, and Rahim Yar Khan.

It is also to be noted that districts showing an increase in health deprivations are also victims of high income and education inequalities. These disparities adversely affect health, exacerbating inequities in healthcare access, contributing to mental health issues, limiting nutritional options, and elevating the incidence of chronic diseases.

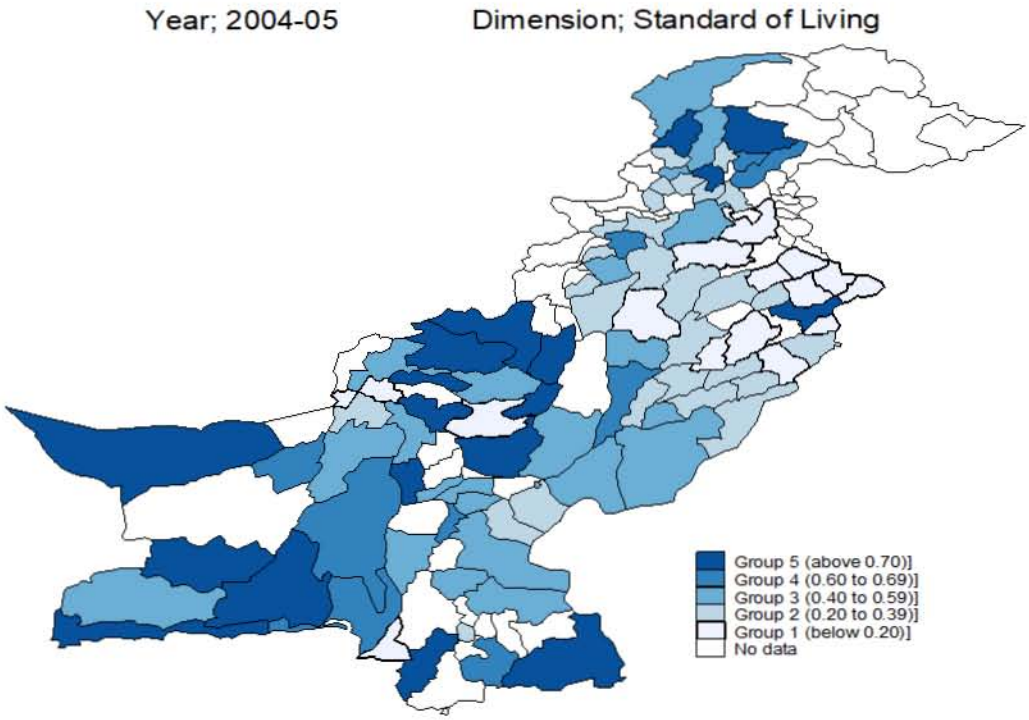
7.4 DEPRIVATION IN LIVING STANDARDS AT THE DISTRICT LEVEL

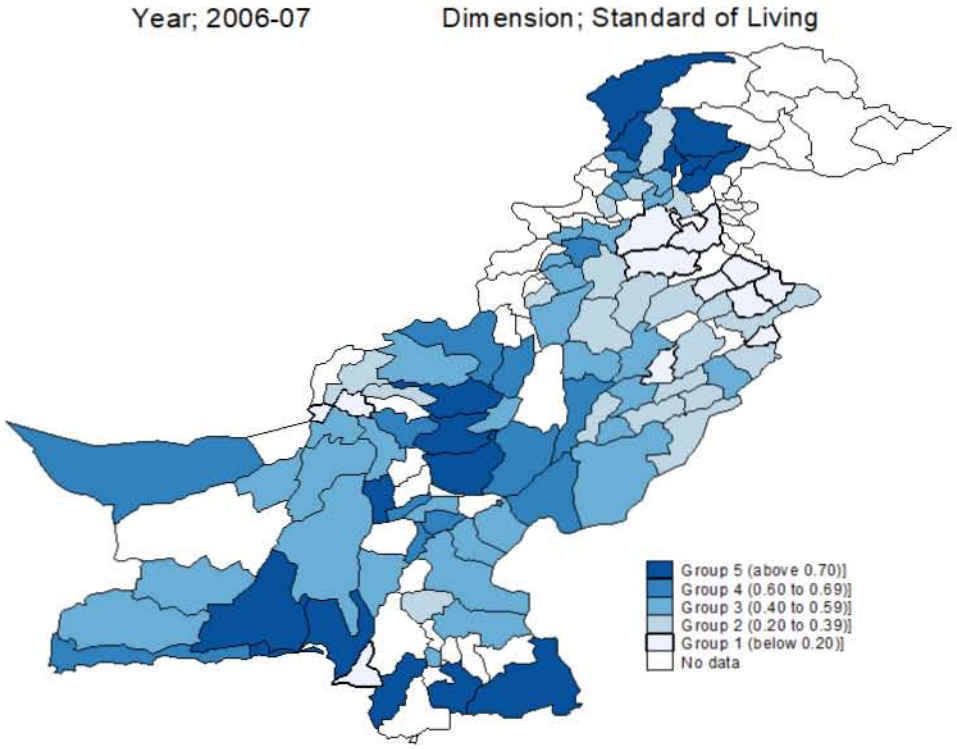
To explain household deprivation in living standards across districts of Pakistan, the districts are classified into five clusters based on their deprivation scores. The first cluster comprises districts with a deprivation level of less than 0.20. The second cluster includes districts with deprivation levels ranging from 0.20 to 0.39. The third cluster includes districts with deprivation levels between 0.40 and 0.59. The fourth cluster consists of districts with deprivation levels ranging from 0.60 to 0.69. The final cluster comprises districts experiencing excessive deprivation, with levels above 0.70.[23] The estimates of district level deprivation in living standards are presented in Figure 7.3

In 2004-05, sixteen districts had less than 20% deprivation, 29 had less than 40%, and 26 had less than 60%. The remaining 28 districts reported more than 60% deprivation with 18 showing extreme level of deficiency in living standards. The lowest deprivation was found in Sialkot, Gujrat, Lahore, Karachi, Rawalpindi, Quetta, Faisalabad, Gujranwala, and Chakwal. Except Quetta and Karachi all districts are from Punjab. These districts have metropolitan and industrial zone cities.

[23] Deprivation in living standard's indicators across districts are given in Annexure 4.

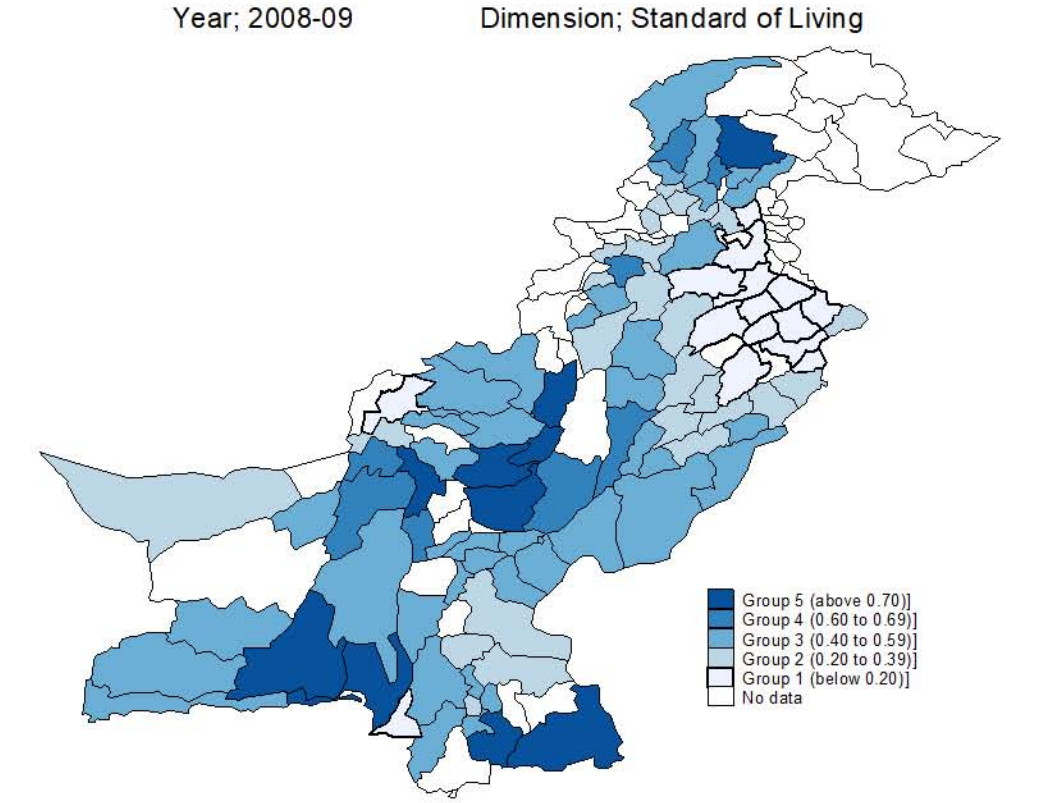
Figure 7.3 Deprivation in Household Living Standards at District Level

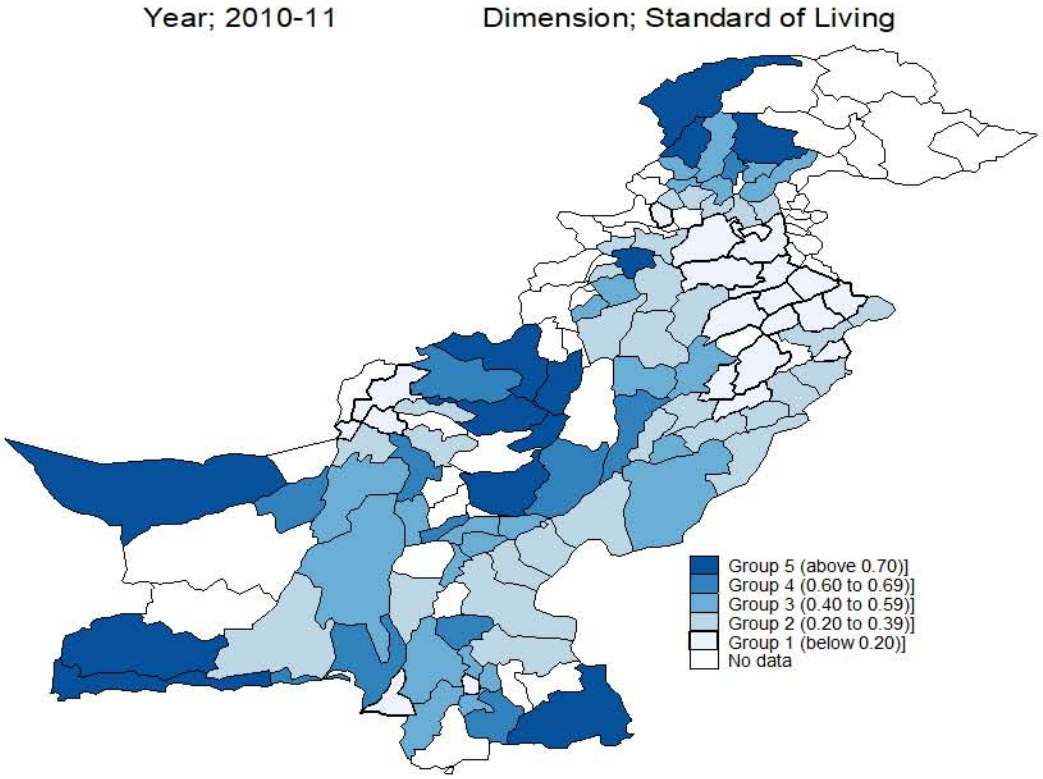




Continued on next page

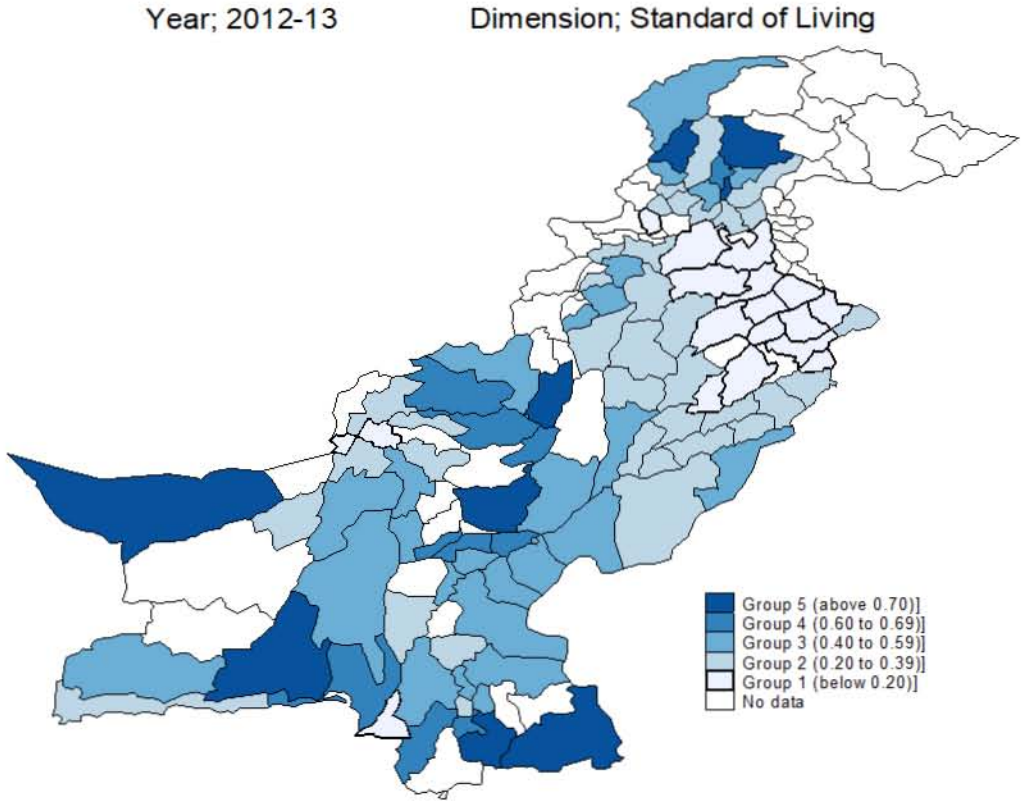
(Continued) Figure 7.3 Deprivation in Household Living Standards at District Level

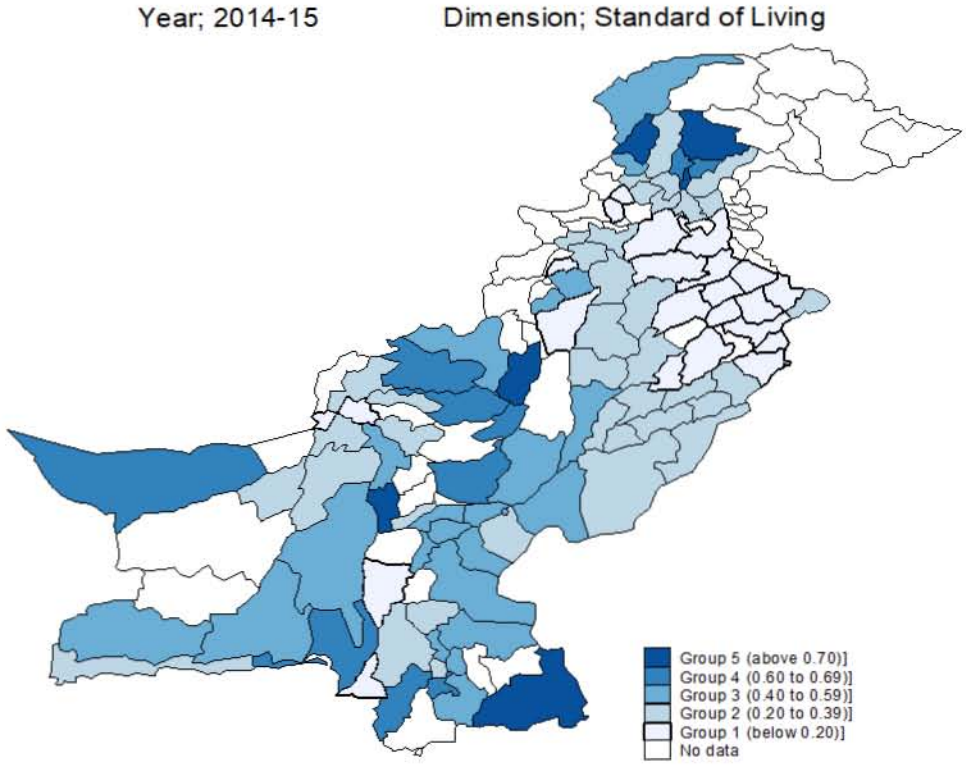




Continued on next page

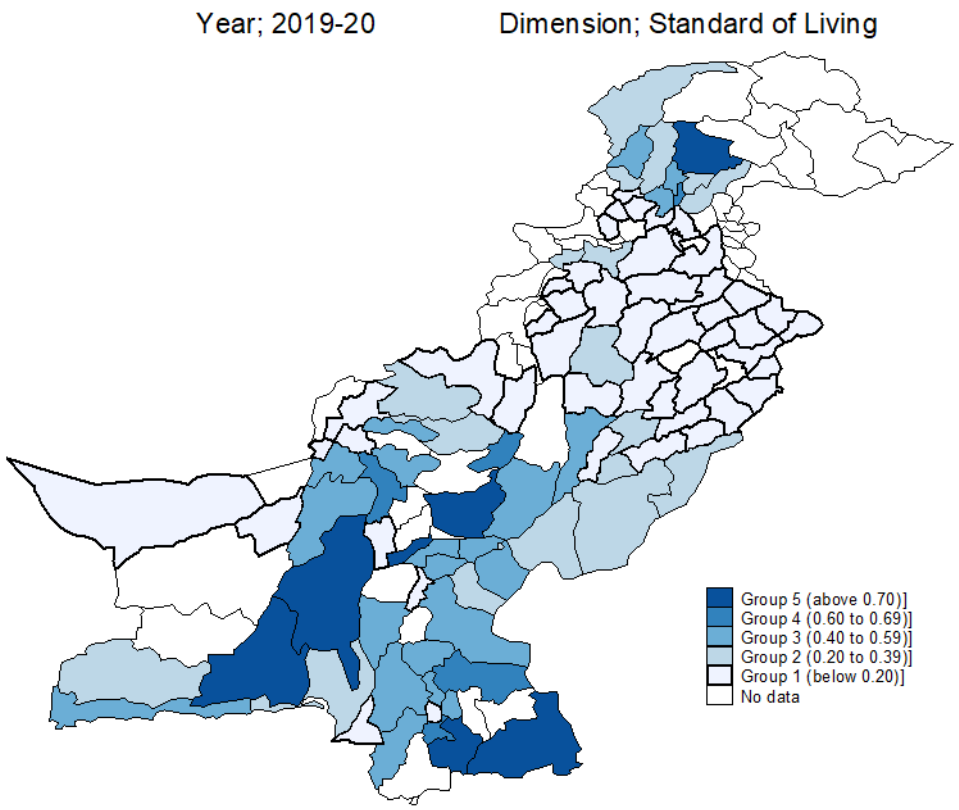
(Continued) Figure 7.3 Deprivation in Household Living Standards at District Level





Continued on next page

(Continued) Figure 7.3 Deprivation in Household Living Standards at District Level



In Pakistan, metropolitan and industrial cities enhance living standards by providing diversified work opportunities, stimulating economic growth, giving access to quality education and healthcare services, and fostering infrastructural development. These variables together improve the living conditions of inhabitants and thus promote general wellbeing. Similarly, extreme deprivation (more than 80%) in living standard is found in Thatta, Barkhan, Jhal Magsi, Killa Saifullah, Tharparkar, Musakhail, Kohistan and Dera Bugti. Except Thatta and Tharparkar all other six districts are from Baluchistan. Factors such as inadequate infrastructure, restricted access to education and healthcare, economic hardships, political instability, and geographic isolation all contribute to poor living conditions in Baluchistan. These issues contribute to a lack of basic services, higher poverty rates, and hindered socio-economic development in the region.

Over time, there has been an improvement in living standards, as in 2019-20 the number of districts with less than 40 percent deprivation increased to 44, and the number with more than

70 percent decreased to 9 from 18 in 2004-05. Four districts; Kohistan, Dera Bugti, Tharparkar, and Jhal Magsi have consistently experienced more than 0.70 deprivation over the past fifteen years. It is to be noted that (Naveed & Ali, 2012) also pointed out that Kohistan is the poorest district of Khyber Pakhtunkhwa and Tharparker district has the greatest incidence of poverty in Sindh, with 47% of households living below the poverty line and Dera Bugti is one the most deprived districts of Baluchistan.

On the other hand, districts like Attock, Chakwal, Rawalpindi, Quetta, Karachi, Peshawar, Lahore, Faisalabad, Sialkot, Gujranwala, Toba Tek Singh, Mianwali, Okara, Nawabshah, Jamshoro, and Jhelum consistently had less than 0.20 deprivation from 2004–05 to 2019–20. Districts like Quetta, Karachi, Peshawar, Lahore, Faisalabad, Sialkot, and Gujranwala are industrial zones with more employment opportunities and better facilities. Industrial concentration draws investments, creating a vibrant urban environment that improves wellbeing and general quality of life. (Jamal, 2003) identified that Attock and Toba Tek Singh are among the least deprived provinces of Punjab with relatively good education profile.

Over time the deprivation in living standards has improved in most of the districts, results show that living standards improved in 82 districts and deteriorated in 30 districts. The most significant improvements were observed in Nowshehra, Jhal Magsi, Jhelum, Zhob, Chaghi, Gujrat, Faisalabad, Killa Saifullah, Sialkot, Mandi Bahauddin, and Sukkur. On the other hand, deprivation of living standards further deteriorates in Awaran, Tharparkar, Badin, and Khairpur. One of the possible reasons could be the presence of huge education and income disparities. Limited educational access hinders employment opportunities and access to the labor market.

7.5 CONCLUSION

In this chapter, we presented estimates of deprivation in education, health and living standards at district level. In general, we found that overall deprivation has reduced in most of the districts. In education, there was significant improvement, except a few districts from Baluchistan, Sindh and Khyber Pakhtunkhwa including Awaran, Khuzdar, Killa Saifullah, Barkhan, Nasirabad, Dera Bugti, Tharparkar, Thatta, Badin, Kohistan and Tor Garh. The education profile of Punjab is far better than other provinces of the country.

The analysis of health deprivation also showed a considerable reduction over the past fifteen years. The districts with extreme health deprivation include Awaran and Khuzdar from Baluchistan, Kohistan from Khyber Pakhtunkhwa, and Tharparkar from Sindh. Almost similar trends are found regarding deprivation in living standards, there has been an improvement over time. However, a few districts like Khuzdar, Dera Bugti, Jhal Magsi, Kohistan, Upper Dir, and Tharparkar remained extremely deprived of living standards. Meanwhile, Sialkot, Gujrat, Lahore, Karachi, Rawalpindi, Quetta, Faisalabad, Gujranwala, and Chakwal experience the least deprivation in living standards.

Overall, certain districts consistently exhibit the highest levels of deprivation across all three dimensions from 2004-05 to 2019-20. These districts include Dera Bugti, Kohistan, Tharparkar, Khuzdar, Killa Saifullah, and Bolan Kachhi. Notably, there has been a reduction in deprivation across all three dimensions over time. Moreover, the severity of deprivation is relatively more pronounced in Baluchistan and least in Punjab.

Chapter 8

MULTIDIMENSIONAL POVERTY IN PAKISTAN

8.1 INTRODCUTION

Pakistan is a developing nation where addressing the core causes of poverty is essential. The multidimensional analysis of poverty is a thorough approach to measure deprivation in all major aspects of wellbeing. The present study is based on three fundamentals dimensions of wellbeing (education, health and living standards) which are further divided into nine subdimensions. In previous chapters we first discussed deprivations in each subdimension and then separately explained household level deprivations in education, health and living standards. In this chapter we will discuss the results of overall poverty in Pakistan, its provinces, rural-urban areas, and all districts. The present study is based on microdata of seven latest surveys of PSLM covering a period of fifteen years.

This chapter comprises of five sections. After Introduction we will discuss trends in multidimensional poverty with emphasis on magnitude and intensity of poverty. In Section 8.3 the emphasis is on the intensity of multidimensional poverty. After discussion on intensity of poverty, we will explain the results of multidimensional poverty indices in Section 8.4. Finally, the discussion is summarized in Section 8.5.

8.2 ESTIMATES OF HEAD COUNT INDICES

We have identified poor households in two ways, first by assigning equal weights to all three dimensions and second by assigning them unequal weights. The first approach in which uniform weights are assigned to each of three dimensions is basically an unweighted approach, as all dimensions are considered equally important for the wellbeing of individuals and households. This approached is applied in two ways; **a)** each dimension is given a weight of $\frac{1}{3}$, deprivation in each dimension is calculated separately and a household is considered

multidimensionally poor if it is deprived in 2 or all 3 dimensions. **b)** each dimension is given a weight of $\frac{1}{3}$ and this weight is uniformly divided in subdimensions of each indicator (education, health and living standards). The deprivation in each subdimensions is calculated separately and a household is considered multidimensionally poor if it is deprived in at least $\frac{1}{3}$ of the weighted deprivations in subdimensions.

In the second approach, the three dimensions (education, health and living standards) are assigned unequal weights revealing the relative importance of each dimension. These weights are further ununiformly segregated in subdimensions according to relative significance of each subdimension.[24]

Therefore, Headcount indices are estimated in three ways, two schemes with equal weights and one with unequal weights. This section is divided in two parts; first we will discuss the estimates of headcount indices for Pakistan and its provinces and in second part our focus will be on headcount indices of the districts of Pakistan.

8.2.1 Headcount Indices for Pakistan and its Provinces

The estimates of Headcount indices for Pakistan, its provinces with rural-urban distinction are given in Table 8.1. Regarding the comparative analysis of the results of three approaches, we found that estimates of the first approach revealed lower numbers as compared to the other two approaches. The reason being very simple that in the first approach the poverty cutoff was set at a higher side, i.e., 2 out of 3, a household is marked poor if it is deprived in 2 or all three dimensions. Considering a cutoff of $\frac{2}{3}$ implies that household is deprived if it is deprived in at least 66.67% of the dimensions. This higher cutoff suppressed the figures of poverty.

It can also be seen that headcount indices of second approach are also in general higher than the headcount indices of third approach. In second approach each dimension was assigned a weight of $\frac{1}{3}$ and subdimensions were also given uniform weights. This implies that at first stage dimensions were considered equally important and at second stage subdimensions were also given equal value. This approach is questionable, as all dimensions and sub-dimensions

[24] The weighting scheme is explained in Chapter 5.

never contribute equally to the overall wellbeing of individuals / households. Therefore, the estimates of headcount indices through this approach are also biased.

Regarding the third approach, we assigned unequal weights to all dimensions and sub-dimensions. Each dimension and subdimension was assigned weights according to its relative importance in defining the overall wellbeing of households. This approach seems to be more realistic as all dimensions of wellbeing can never have the same significance in determining overall wellbeing.

The estimates of head count indices through three approaches are given (Table 8.1) only for the comparative analysis and to highlight the biasedness of unweighted approaches. In subsequent discussion on magnitude, depth and intensity of poverty is based on estimates of weighted approach.

The estimates through all approaches reveal that proportion of poor households had declined overtime in all provinces and regions of Pakistan. Further rural poverty is much more pronounced relative to poverty in urban areas. The province wise comparison shows that Baluchistan is most exposed to poverty followed by Sindh and Khyber Pakhtunkhwa. Punjab is the most prosper province with less poverty as compared to other provinces.

According to the estimates of weighted approach, the national headcount index recorded a decrease of 20.5 points during the last fifteen years. A significant reduction in percentage of poor population can be attributed to several important factors, including targeted poverty alleviation programs such as Benazir Income Support Program, Poverty Alleviation Fund, Microfinance incentives, Pakistan Bait-ul-Mal, Nojawan Kamiab Jawan Program, Apna Rozgar Scheme and Youth Business loan scheme.

Pakistan's Benazir Income Support Program is a social safety net initiative. It was established in 2008 with the goal of assisting the country's neediest and financially excluded groups. The total number of beneficiaries from this program has reached 9.10 million in 2019-20 and assistance of 944.74 billion PKR is distributed among the targeted deserving individuals (PES, Pakistan Economic Survey, 2019-20).

Table 8.1 Estimates of Head Count Indices at National and Provincial level

Approaches		Unweighted Approach (dimensions are assigned uniform weights)														Weighted Approach (dimensions are assigned un equal weights)							
		1st Method							2nd Method														
Regions and Years		2004-05	2006-07	2008-09	2010-11	2012-13	2014-15	2019-20	2004-05	2006-07	2008-09	2010-11	2012-13	2014-15	2019-20	2004-05	2006-07	2008-09	2010-11	2012-13	2014-15	2019-20	Change
Pakistan	O	36.2	36.5	30.9	29.6	29.9	29.7	21.8	63.1	39.3	33.6	31.9	31.5	32.8	23.0	43.9	43.8	37.4	36.3	35.8	34.6	23.4	-20.5
	U	21.8	22.5	20.0	17.2	16.3	12.6	11.1	36.7	22.9	19.3	18.0	16.9	15.4	11.3	27.9	27.9	23.5	21.6	20.3	14.0	12.8	-15.1
	R	44.1	44.2	36.7	36.2	37.4	33.4	26.5	77.7	48.3	41.2	39.3	39.6	36.7	28.3	52.8	52.5	45.0	44.2	44.2	39.0	28.1	-24.7
Punjab	O	25.3	25.8	22.1	20.3	19.5	18.0	12.8	52.6	28.0	23.7	21.9	20.4	21.1	13.5	30.8	30.6	25.6	24.5	23.4	21.3	13.3	-17.5
	U	18.9	20.3	17.6	14.6	14.1	7.3	8.5	33.4	20.1	16.4	15.0	14.3	9.2	8.3	23.2	24.4	19.4	18.0	17.1	7.0	9.4	-13.8
	R	29.8	29.7	25.1	24.3	23.1	20.6	14.8	65.9	33.5	28.7	26.6	24.6	23.9	15.9	36.1	34.9	29.9	29.0	27.7	24.7	15.1	-21.0
Sindh	O	40.4	40.8	31.9	30.2	35.5	39.6	30.5	64.2	43.6	35.2	33.3	36.6	41.8	29.6	49.5	49.5	40.1	38.5	43.1	47.3	33.4	-16.1
	U	19.7	19.4	17.0	15.4	15.5	17.4	12.5	33.1	20.6	18.5	16.4	16.2	21.0	13.0	26.5	24.9	21.6	19.9	19.9	21.4	14.8	-11.7
	R	54.9	55.9	42.8	41.0	49.8	46.4	48.9	86.0	59.9	47.4	45.6	51.2	48.2	46.6	65.7	67.0	53.7	52.1	59.7	55.3	52.5	-13.2
Khyber Pakhkunkh	O	41.1	42.4	36.0	34.1	32.0	32.8	25.5	74.2	45.4	38.7	36.9	34.1	36.5	30.2	51.4	51.6	43.7	42.6	38.7	37.9	28.9	-22.5
	U	28.9	30.0	27.5	21.5	15.5	13.1	12.0	48.0	29.0	24.7	23.3	16.2	14.4	12.4	36.9	37.0	32.6	27.6	22.8	12.5	15.4	-21.5
	R	45.1	46.5	38.8	38.2	49.8	34.8	27.3	82.8	50.8	43.4	41.3	51.2	38.7	32.6	56.2	56.4	47.4	47.4	44.1	40.4	30.7	-25.5
Baluchistan	O	57.0	54.5	48.5	48.6	47.2	49.5	40.2	80.9	58.7	52.8	51.0	51.3	54.3	43.1	66.4	64.6	58.6	57.6	55.4	54.5	41.4	-25.0
	U	36.6	35.9	34.1	32.1	29.5	25.4	22.9	52.9	38.4	30.9	33.2	31.3	31.5	24.5	48.4	46.4	40.6	40.7	37.8	28.6	27.0	-21.4
	R	62.9	59.7	52.1	52.5	51.9	52.9	44.1	88.9	64.4	58.3	55.2	56.5	57.5	47.3	71.6	69.8	63.1	61.6	60.0	58.2	44.7	-26.9

Where, O = Overall, R = Rural areas, U = Urban areas

The Pakistan Poverty Alleviation Fund is a non-profit organization established in 2000 to address poverty and empower Pakistan's vulnerable groups. For the past 20 years 224.64 billion PKR have been disbursed in all districts of the country. An aggregate of 8.4 million microcredit loans was granted, with women receiving 60% of the loans and rural regions receiving 80% of the funding. In addition, several micro finance schemes are initiated in all parts of the country, almost 8 million active borrowers benefited from this scheme. Pakistan Bait-ul-Mal is a social welfare institution; it was established to eradicate poverty by supporting the needy people. There are multiple programs of Pakistan Bait-ul-Mal, on average more than 8000 individuals annually get medical assistance, 22000 students get scholarships / stipends and thousands are getting meal and accommodation. In addition, a significant amount is distributed in the form of Usher and Zakat. For instance, an aggregate amount of Rs 9.25 billion were disbursed FY2020 (PES, Pakistan Economic Survey, 2019-20).

These all programs help the poor by shielding them from hunger, exploitation, misery, and social marginalization. It is evident from head count indices reported in Table 8.1 that poverty has substantially reduced in Pakistan.

Relatively higher poverty rates in rural areas reveal that rural residents have less access to educational and health services. Kiran (2011) pointed out that a child living in rural areas is 32% less likely to go to school. Rural families also find it difficult to access essential health and social services due to a lack of reliable transportation options. As a result, access to social services and healthcare professionals is limited. Our results showing relatively more poverty in rural areas are in line with findings by Jamal (2012; SDPI,2016; UNDP, 2016; OPHI,2016).

High poverty rates in Baluchistan and Sind also indicates provincial imbalances. The rural areas of Sindh and Baluchistan do not have sufficient health and education facilities. Furthermore, the rural areas of these provinces are mainly controlled by Feudal lords who are not much interested in educating the families of their tenants.

8.2.2 Head Count Indices for District of Pakistan

In this section we will discuss estimates of Headcount indices through weighted approach, as this approach is more realistic and emphasizes the relative importance of each dimension and subdimension of wellbeing.

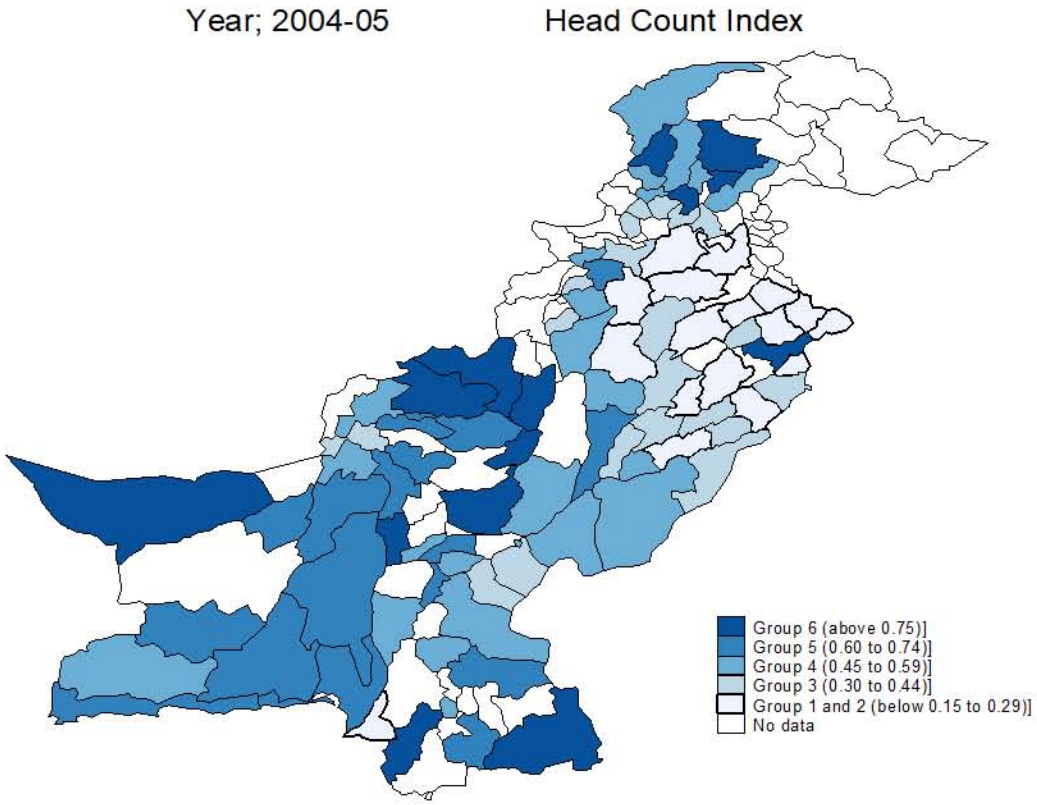
The estimates of Headcount indices will enable us to identify the impoverished and privileged districts in terms of the proportion of poor population. The district level analysis will be helpful in identifying the poorest areas of the country and thus providing evidence for effective poverty eradication policies. Identifying areas of high and low poverty allows for the investigation of distinct social, economic, cultural, historical, and geographic differences which cause regional disparities. A closer examination of these processes can reveal both the circumstances that promote socially inclusive economic development and those that maintain and prolong social and economic disadvantage for a significant proportion of the population. From a policy standpoint, a district-level examination of poverty may improve the reach of poverty reduction programs by allowing for the targeting the areas with a high concentration of poor people and areas where poverty has persisted for some time. Moreover, it offers a standard for evaluating how equitable and pro poor is the general distribution of public resources at the district level. Furthermore, achieving regional equality and reducing extreme poverty are prerequisites for constructing a socially equitable and politically secure society. Producing such an analysis has tremendous political relevance as Pakistan sets off on a new road of democracy and power decentralization.

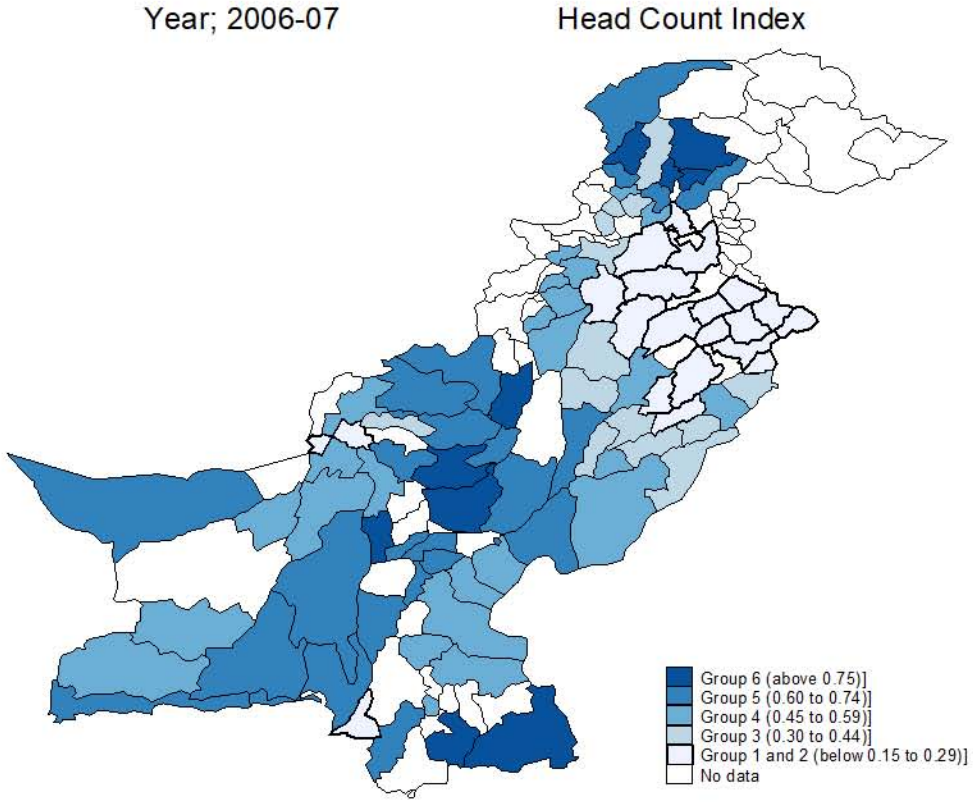
There are large number of districts in Pakistan and numbers are growing over time, many large districts are divided into two districts. The number of districts covered in various rounds of PSLM ranges from 99 to 126. We calculated head count indices for all districts covered in various rounds of PSLM, presenting and discussing the estimates of each district is cumbersome and lengthy. Therefore, based on the values of Headcount indices we have categorized districts into six groups. The first group comprises of the districts with Headcount indices below 0.15, second group consists of the districts with Headcount indices between 0.15 to 0.29, the range for next group is 0.30 to 0.44, fourth group contains the districts with Headcount indices ranging from 0.45 to 0.59, for next group the range is 0.60 to 0.74 and last group comprises of the districts that are extremely poor with headcount indices above 0.74.

For easy viewing and meaningful comparison, the estimates are plotted through cartography. The group wise estimates of Headcount indices are presented in Figure 8.1.[25]

[25] Estimates of Headcount indices, Intensity of Poverty and Multidimensional Poverty Indices for all Districts are given in Annexure A5.

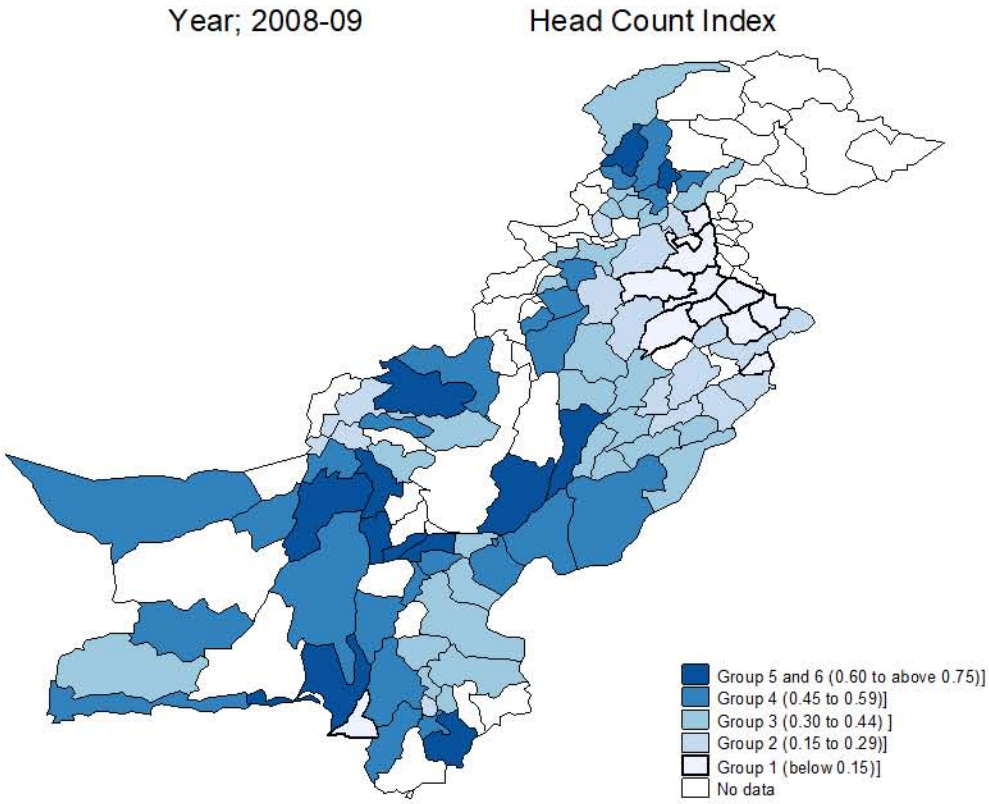
Figure 8.1 Estimates of Headcount Indices at District Level.

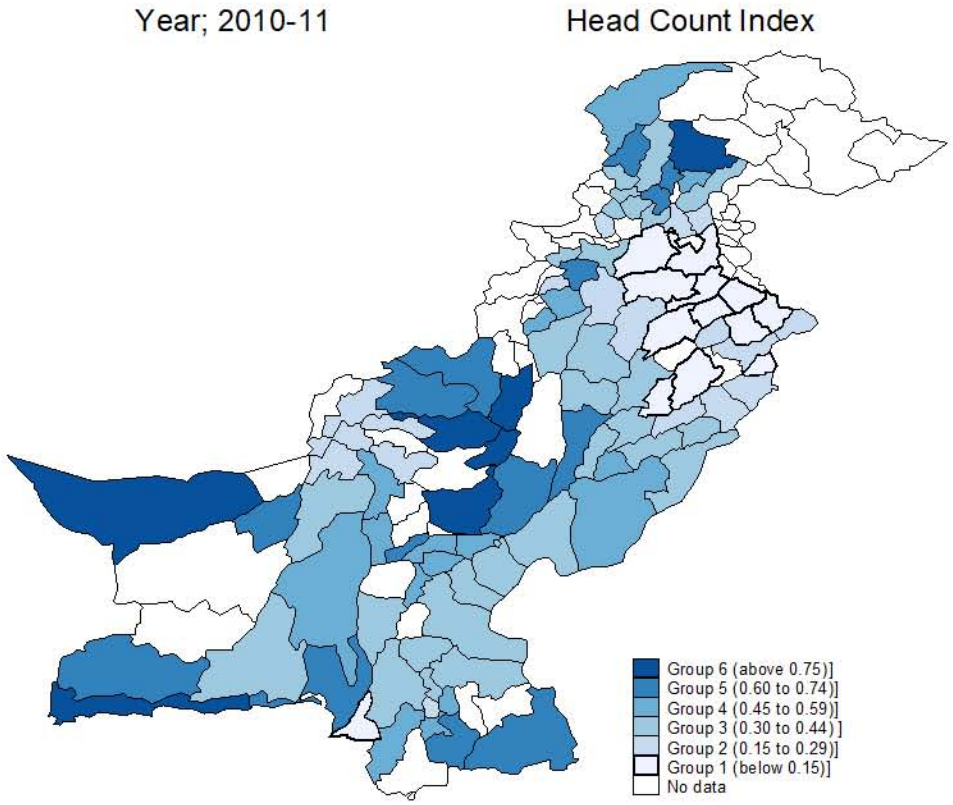




Continued on next page

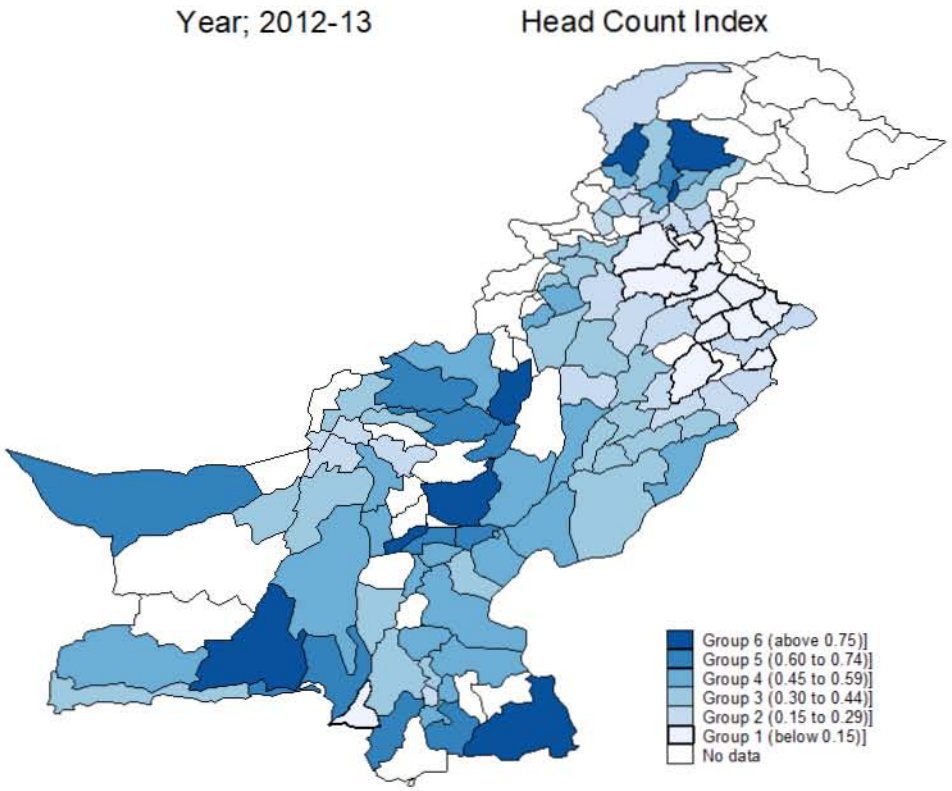
(Continued) Figure 8.1 Estimates of Headcount Indices at District Level.

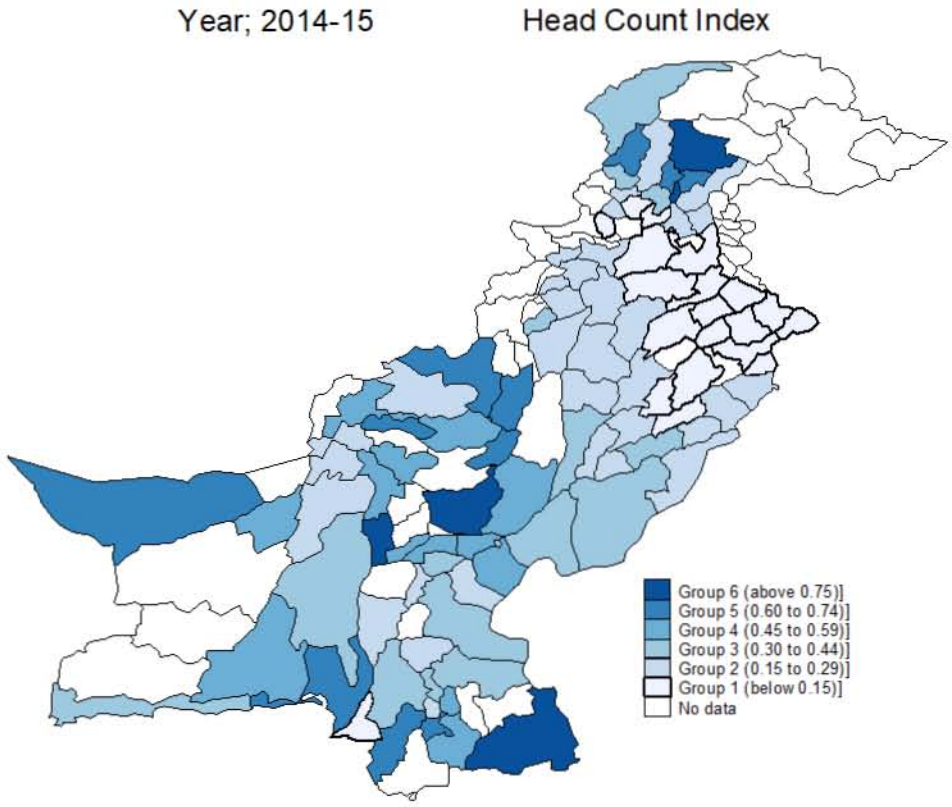




Continued on next page

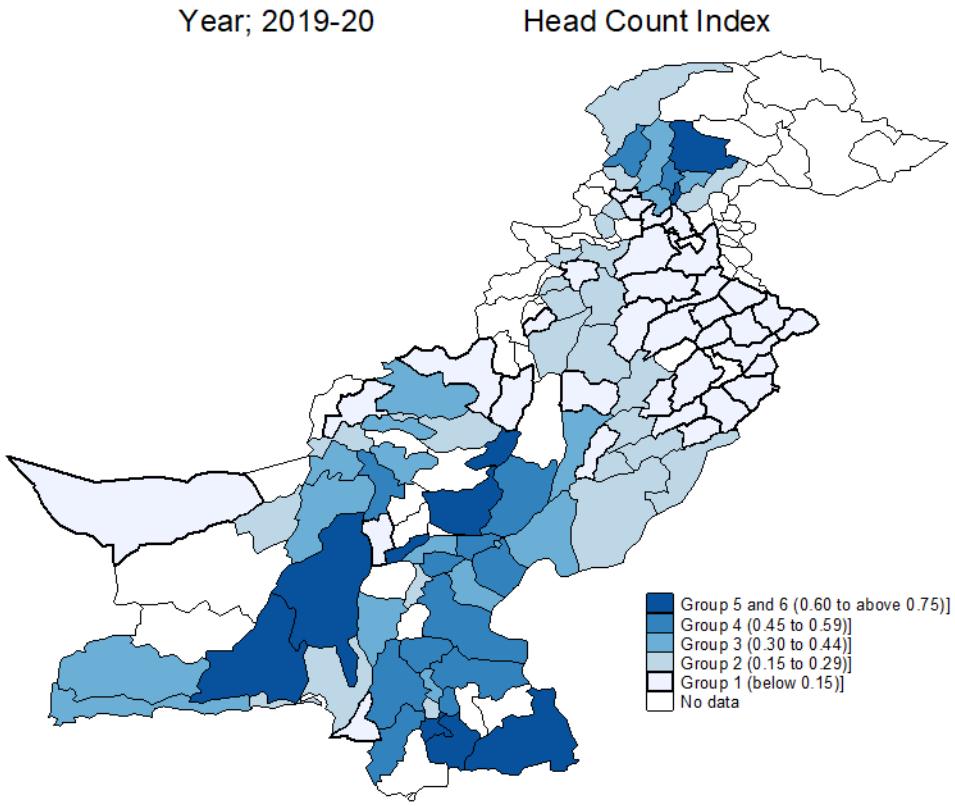
(Continued) Figure 8.1 Estimates of Headcount Indices at District Level.





Continued on next page

(Continued) Figure 8.1 Estimates of Headcount Indices at District Level.



In 2004-05 only 5 districts were in the first group and 13 were in the second group. Due to the very small number, the software has merged the first two groups in map. The districts with the least poverty are Chakwal, Sialkot, Gujrat, Lahore, and Rawalpindi. The cluster is found in the next three groups with headcount indices ranging from 0.30 to 0.74. In specific 22 districts fall in third group, 25 fall is fourth group and 20 fall in fifth group. The remaining 14 districts are in groups six, which shows more than 75 percent of poor.

After 15 years, in 2019-20, the number of districts falling in group one increased to 40 and the number of districts falling in group two increased to 30. This indicates a substantial decline in poverty over the last fifteen years. Similarly, the number of extremely poor districts reduced from 14 to 6 during the last fifteen years and these districts are mostly from Baluchistan.

Over the past fifteen years, the districts of Rawalpindi, Lahore, Sialkot, Karachi, Gujranwala, Faisalabad, Jhelum, Attock, Chakwal, and Gujrat have consistently maintained a head count index of below 0.15. Notably most of these districts have industrial cities and are hubs of

economic activities. There are relatively more employment opportunities, and these districts have relatively better infrastructure which facilitates mobility of human resources. The health and education facilities of these districts are also good relative to the rest of the country.

In contrast, the impoverished districts of Dera Bugti, Jhal Magsi, Barkhan, Tharparkar, Kohistan, Awaran, and Musakhel have a poverty rate exceeding 75%, with most situated in economically challenged Baluchistan. Despite being rich in gas, coal, gold, and copper resources, Baluchistan grapples with the highest poverty rates. Various factors contribute to this, including historical resource neglect, economic underdevelopment, infrastructural gaps, safety concerns, limited education opportunities, and healthcare issues. These challenges, exacerbated by tribal and cultural factors, perpetuate a cycle of poverty in the region, underscoring the need for targeted development programs and fair resource allocation (Baloch, 2016). Furthermore, Tharparkar is acknowledged as one of Pakistan's most impoverished districts. The desert landscape, characterized by periodic droughts, features sand dunes and sparse flora, leading to a concentration of impoverished residents (Qureshi & Shaukat, 2019).

Over time, certain districts have witnessed improvements in poverty rates. The most significant reduction is observed in Sheikhupura, Karak, Killa Saifullah, Larkana, Lasbela, Pishin, Malakand, and Kharan. Regarding Sheikhupura, one possible factor of poverty reduction can be the improved infrastructure and better road connectivity with major cities of Punjab. The improved infrastructure encourages industrial expansion, making Sheikhupura an attractive investment destination and promoting economic development (Punjab Cities Improvement Investment Program, 2021). Killa Saifullah, Lasbela, Pishin, and Kharan are situated in Baluchistan. The Pakistan Poverty Alleviation Fund has played a significant role in these districts. Furthermore, Lasbela is the economic hub of Baluchistan, it connects Baluchistan and Sindh provinces and is situated near Karachi. The district is renowned for its historical sites, coastal landscapes, minerals, industry, and strategic military location. Lasbela plays a pivotal role in the economic landscape (Muhammad, Sheikh, & Yousaf, 2022).

On the contrary, poverty has escalated in various regions, with districts like Tharparkar, Jaffarabad, Awaran, Shangla, Ghotki, and Khuzdar witnessing an increase in the percentage of poor individuals. These areas, prone to some of the deadliest natural disasters, have borne the brunt of intense rainfall and floods. In 2010, over 50,000 people in Baluchistan were

affected by torrential rain, impacting areas like Barkhan, Sibi, Kohlo, Bolan, and Naseerabad, with up to 10,000 households affected. Floods struck Jaffarabad, Naseerabad, Jhal Magsi, Sibi, Khuzdar, Lasbela, and Loralai, along with Killa Saifullah, in 2013 (Naveed & Khan, 2018). Similarly, regions in Khyber Pakhtunkhwa with high poverty levels, including Swat, Lower Dir, Chitral, Shangla, and Kohistan, have faced recurrent floods. The flood in 2010, impacting nearly 3.8 million people, was the worst in the province's recent history, causing significant damage to districts such as Nowshera, Swat, Charsadda, Kohistan, Upper Dir, Lower Dir, Shangla, DI Khan, Tank, Mansehra, Haripur, and Chitral. Flooding during the monsoon season affected numerous villages and towns in Upper and Lower Dir, Nowshera, Charsadda, Malakand, Shangla, Mansehra, and Swat in 2012 (Naveed & Khan, 2018). Natural disasters can substantially increase the number of people living in poverty by destroying infrastructure, homes, and livelihoods. The sudden loss of assets and income sources, coupled with long-term effects on job opportunities and economic productivity, often pushes vulnerable communities into poverty. In contrast, districts like Dera Ismail Khan, Swabi, Karak, Pishin, Larkana, and Quetta have shown better results.

8.3 ESTIMATES OF THE AVERAGE INTESNITY OF DEPRIVATION

In previous section we discussed the estimates of head count indices for Pakistan, its provinces, and districts. The headcount index merely gives the proportion of the poor population and fails to capture the intensity of poverty. In this section we will discuss the trends in poverty with focus on intensity of poverty. This section is subdivided in two parts; first we will discuss the estimates for Pakistan, its provinces and rural-urban areas of each province. Later the district level estimates will be discussed.

8.3.1. Intensity of Poverty for Pakistan and its Provinces

Table 8.2 displays estimates of poverty intensity at the national and provincial levels. In 2004-05, the average intensity of deprivation at the national level was 21.3%. It implies that, on average a poor household experiences a 21.3 percent deprivation across the considered dimensions of wellbeing. The average deprivation has further reduced to 14.8% in 2019-20 indicating around 6% reduction. In the previous section we saw that proportion of poor households is relatively greater in rural areas, similar trends are found in intensity of poverty. It is encouraging to note that average intensity of poverty has consistently reduced in rural

and urban areas of Pakistan. Interestingly, the reduction in intensity of poverty across the rural region is more than urban region except for Khyber Pakhtunkhwa.

Table 8.2 Estimates of Intensity of Poverty at National and Provincial level

Regions		2004-05	2006-07	2008-09	2010-11	2012-13	2014-15	2019-20
Pakistan	Overall	21.3%	20.6%	19.1%	19.5%	19.8%	19.6%	14.8%
	Urban	16.4%	14.5%	13.9%	13.9%	14.8%	14.7%	12.2%
	Rural	22.8%	22.4%	20.6%	21.0%	21.1%	20.0%	15.4%
Punjab	Overall	18.0%	17.5%	16.8%	16.5%	16.0%	16.6%	11.5%
	Urban	15.3%	13.7%	12.6%	12.3%	13.4%	11.5%	10.3%
	Rural	19.2%	19.4%	18.7%	18.3%	17.1%	16.9%	11.8%
Sindh	Overall	22.1%	22.9%	20.4%	19.8%	21.1%	19.2%	16.3%
	Urban	17.4%	15.0%	15.9%	15.4%	16.6%	16.8%	14.1%
	Rural	23.4%	25.0%	21.7%	21.0%	22.1%	19.5%	17.0%
KHYBER	Overall	20.9%	18.9%	17.2%	18.5%	19.1%	22.0%	15.7%
	Urban	16.5%	13.8%	12.7%	12.7%	13.7%	12.4%	9.7%
	Rural	21.8%	20.0%	18.3%	19.5%	20.0%	22.3%	16.1%
Baluchistan	Overall	25.8%	23.3%	21.8%	23.6%	23.1%	22.2%	16.6%
	Urban	17.3%	16.8%	14.8%	16.7%	16.1%	14.7%	12.9%
	Rural	27.4%	24.5%	22.9%	24.7%	24.2%	22.8%	17.1%

Relatively rapid decline implies that on average the poverty gaps have considerably reduced in rural areas. This indicates that the welfare level of the poor segment is significantly improving in rural areas relative to urban areas. For instance, over the past fifteen years the average poverty gap in rural areas has reduced by 7.4 percentage points and this decline in urban areas is 4.2 percentage points. Our results reveal that over time the availability of the

basic facilities like access to schools, access to health centers and sanitation etc. to poor segment has shown more improvement in rural areas relative to urban areas. A plausible reason can be that in rural areas the margin of improvement was much more relative to rural areas. Therefore, rural areas showed relatively better performance (Lee & Kind, 2021).

The comparative analysis of provinces reveals that Baluchistan has the highest average level of deprivation (16.6%) among the poor, with 17.1% in rural regions and 12.9% in urban areas for the year 2019-20. Sindh had the second-highest intensity level, where, on average, poor people experience 16.3 percent deprivation. Similarly, Khyber Pakhtunkhwa has an average intensity of deprivation of 15.7%, with 16.1% in rural regions and 9.7% in urban areas. In the last, the lowest levels of the intensity of poverty are found in Punjab, which was 11.8% for the rural population group and 10.3% for the urban population group.

One encouraging result of our study is that, over time, the highest decline in the intensity of poverty is found in Baluchistan, followed by Punjab, Sindh, and Khyber Pakhtunkhwa. Overall, the condition of the poor in rural areas has improved more than in urban areas. In Sindh and Baluchistan, the rural poor conditions have improved twice as much as in urban areas of these provinces. The lower intensity of poverty in rural areas, compared to urban regions, can be attributed to factors such as a lower cost of living, higher employment opportunities in agriculture, targeted social welfare programs, and better access to natural resources (Chen et al, 2023; Kurre, 2003). Moreover, urban areas typically have more developed infrastructure, and the returns on additional capital investments may be diminishing. In contrast, rural areas might experience higher marginal returns as they undergo infrastructure development.

The rural-urban gap analysis shows that in 2004-05, Baluchistan and Sindh had the greatest gap between rural and urban regions, which reduced by 2019-20. Meanwhile, Punjab had the lowest 1 percent discrepancy between rural and urban areas. Baluchistan's rural areas have experienced the greatest reduction in poverty, followed by Punjab and Sindh. Although Khyber Pakhtunkhwa's urban regions have seen a bigger drop in average impoverishment compared to other provinces. The next section provides a district-level examination of the intensity of poverty from 2004-05 to 2019-20 to further investigate the distribution of poverty intensity within each province and discover inequities covered by the provinces.

8.3.2 Intensity of Poverty in Districts of Pakistan

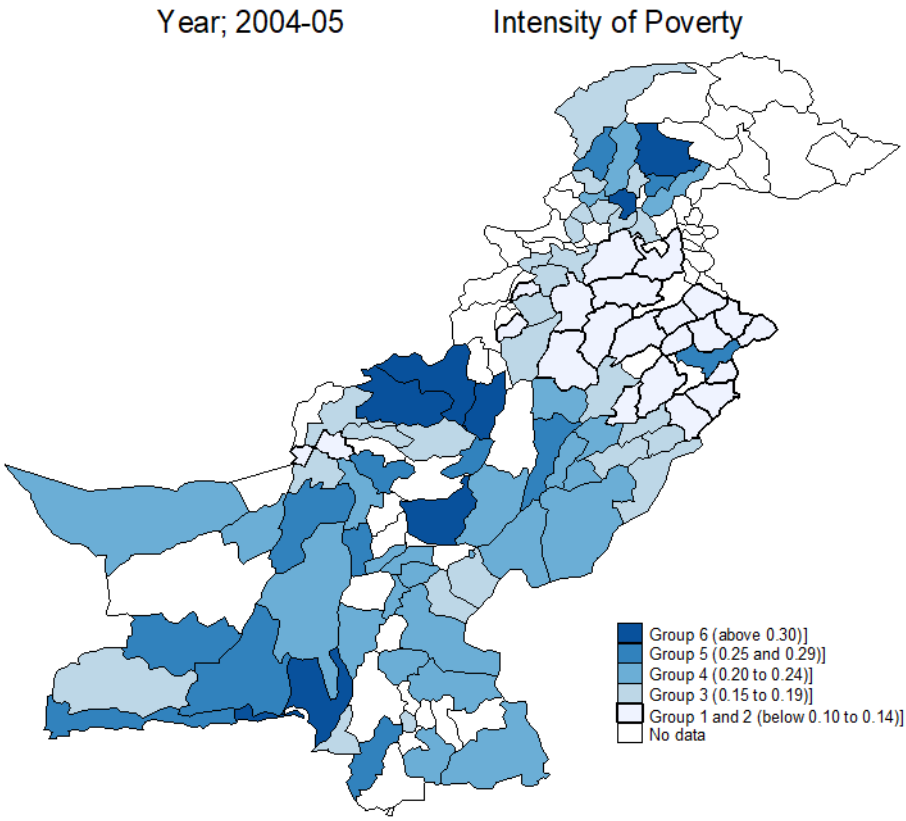
In this section we will examine disparities in poverty levels across districts and analyze their historical tendencies. This will enable us to pinpoint the areas where people living in poverty experience the most hardship. Presenting information for more than a hundred districts at once is challenging. Therefore, the districts are divided into six groups. The first group includes districts with a deprivation level of less than 0.10, while the second includes districts with a deprivation value of 0.10 to 0.14. The third group contains districts with a deprivation score of 0.15 to 0.19, followed by the fourth category, which includes districts with a deprivation value of 0.20 to 0.24. The fifth group includes districts with a deprivation score between 0.25 and 0.29, while the sixth category includes districts with a deprivation value more than 0.30. On the basis of these groups, we present the average deprivation at the district level by cartography.

In 2004-05, only four districts are in Group one, which shows average deprivation less than 0.10; these districts are Sialkot, Chakwal, Jhelam, and Narowal. While most of the districts experience an average deprivation score between 0.20 to 0.30. The Group sixth, which shows the average deprivation of more than 30 percent, has 7 districts including Kohistan, Dera Bugti, Musakhail, Killa Saifullah, Zhob, Lasbela, and Buner. Over time, the average deprivation experience by poor people has decreased in most districts, as the number of districts in Group one (having less than 0.10 average deprivation) increased from 4 districts to 42 districts in 2019-20. Similarly, Group six, which consists of having more than 0.30 average deprivation, has shrunk significantly. It had only one district in 2014-15 (Dera Bugti), and no districts fall in Group six in 2019-20. That means in 2019-20, no district has more than 0.30 average deprivation. Group four has 6 districts, and Group five has 2 districts, due to which STATA has merged group 4, and the upper range value is group 4 and 6, meaning it presents the maximum average deprivation from 0.20 to 0.30. As we mentioned earlier, no district has more than 0.30 average deprivation in 2019-20.

Over the 15 years from 2004-05 to 2019-20, the average deprivation experience by the poor has decreased in all the districts. In 2019-20, all the districts show a reduction in the intensity of poverty. The highest decrease in the intensity of poverty is found in Dera Bugti, Sheikhupura, Lasbella, Killa Saifullah, and Malakand. Similarly, the lowest reduction is

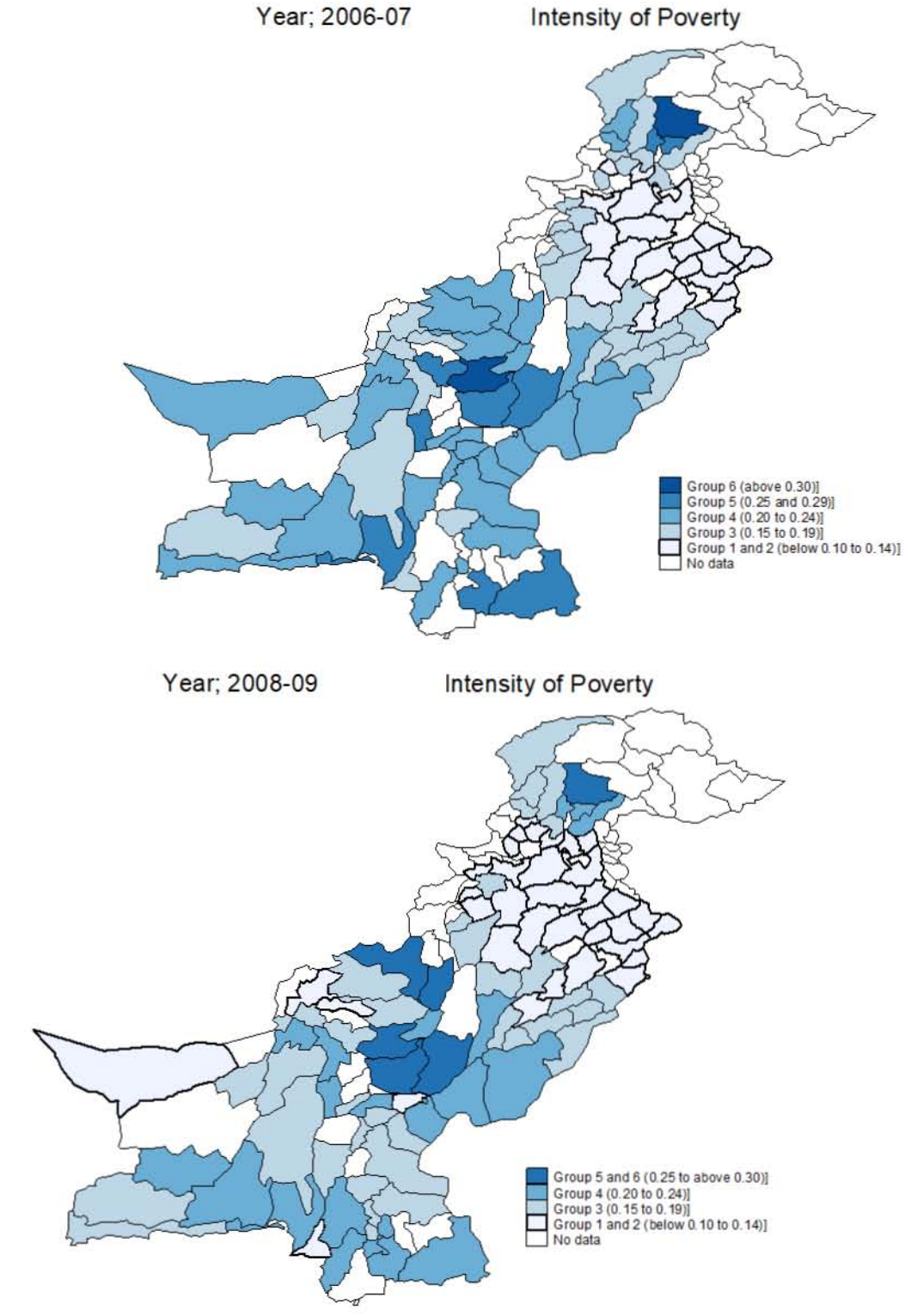
observed in Bannu, Chakwal, and Sialkot. While the only one-point increase in the intensity of poverty is observed in Tank, Nowshero Feroz, and Khuzdar. Throughout the years, the severity of poverty is highest in Zhob, Killa Saifullah, Musakhail, Kohistan, Dera Bugti, Chaghand Khuzdar. While the least intensity of poverty is in Karachi, Lahore, Attack, Sialkot, Rawalpindi, Chakwal, Jhelam, Gujrat, Narowal, and Gujranwala.

Figure 8.2 Estimates of Intensity of Poverty at District Level



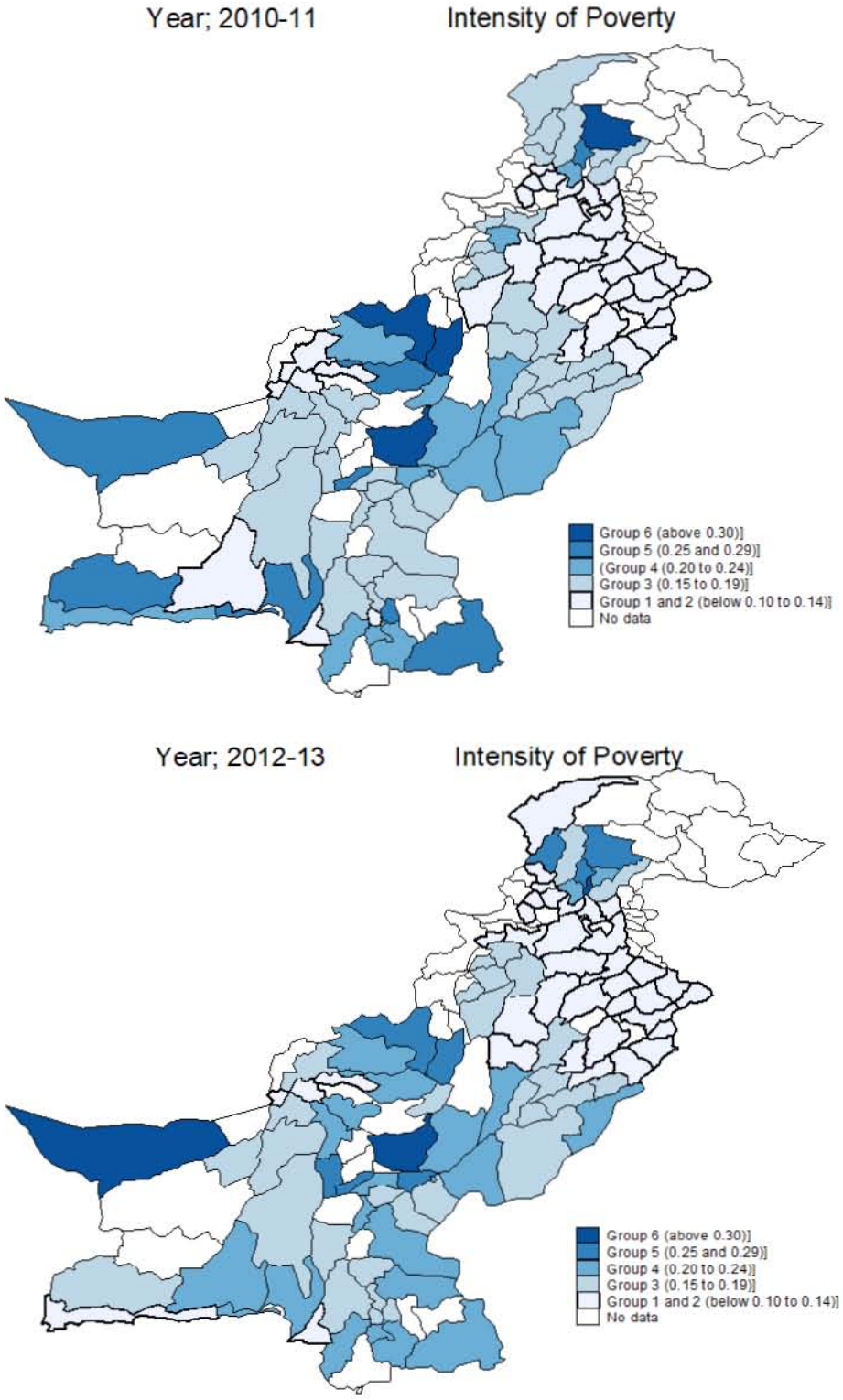
Continued on next page

(Continued) Figure 8.2 Estimates of Intensity of Poverty at District Level



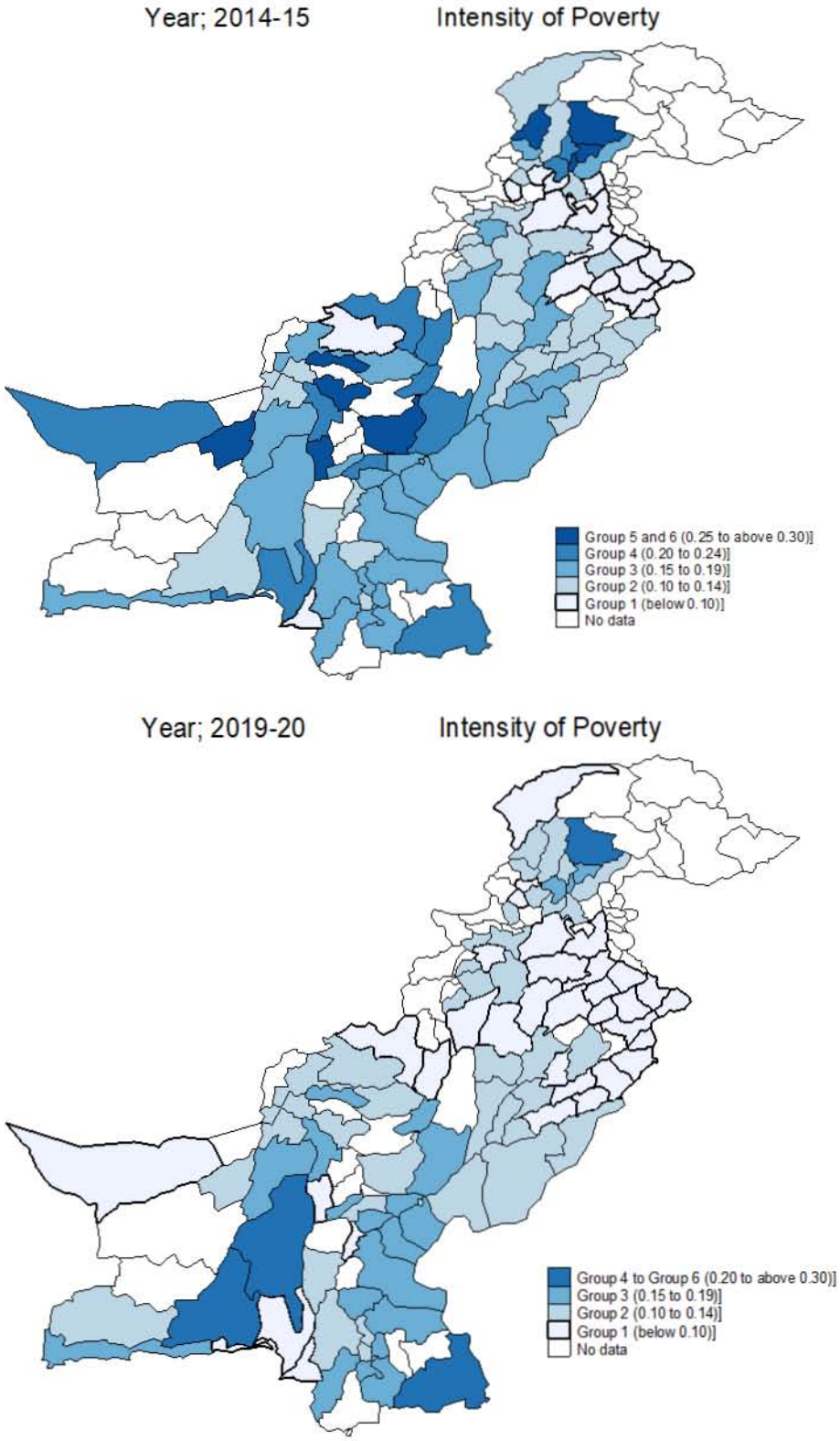
Continued on next page

(Continued) Figure 8.2 Estimates of Intensity of Poverty at District Level



Continued on next page

(Continued) Figure 8.2 Estimates of Intensity of Poverty at District Level



8.4 ESTIMATES OF MULTIDIMENSIONAL POVERTY INDEX

The headcount index measures the proportion of poor population and average deprivations considers the weighted average deprivations faced by poor households. The multidimensional poverty index captures both and gives the proportion of weighted deprivations that poor households experience out the potential deprivations that a society could face. It is also known as adjusted headcount index. In this section we will discuss the estimates of multidimensional poverty indices.

8.4.1. Multidimensional Poverty Indices for Pakistan and its Provinces

The estimates of Multidimensional Poverty Indices for Pakistan, its province and rural urban segments are given in Table 8.3. In 2004-05, the multidimensional poverty index for Pakistan is 0.094 indicating that poor segment of the country is experiencing 9.4% of the total potential deprivations that could occur if everyone in the country is poor and deprived in all dimensions of wellbeing.

It is encouraging to note that over the last fifteen years the estimates for Pakistan have shown a decline of 0.059 indicating in 2019-20 poor households are merely facing 3.5% of the potential deprivations. The overtime decline is much pronounced in rural areas, as the decline is 0.077 relative to a decline of 0.030 in rural areas. This continuous decline in multidimensional poverty indices is due to multiple reasons such overtime increase in foreign remittances, effective social safety net programs of Government.

The multidimensional poverty indices have shown a significant reduction in all provinces and their rural-urban segments. The highest decline of 0.103 is recorded in Baluchistan followed by Khyber Pakhtunkhwa and Sindh. The least reduction is observed in Punjab. Similar patterns are followed in rural and urban areas of these provinces. It is to be noted that the relative decline is maximum in Baluchistan but still the multidimensional poverty index of Baluchistan is 3.4 times greater than that of Punjab. Many socioeconomic factors, including inefficient institutions in the province, contribute to Baluchistan's higher multidimensional poverty indices relative to other provinces of country. Rather than being a hub of economic activity, it is plagued by the difficulties of the fields and rangelands, as well as tribal conflicts.

Table 8.3 Estimates of Multidimensional Poverty at National and Provincial level

Province	Regions	2004-05	2006-07	2008-09	2010-11	2012-13	2014-15	2019-20
Pakistan	Overall	0.094	0.090	0.071	0.071	0.071	0.068	0.035
	Urban	0.046	0.041	0.033	0.030	0.030	0.021	0.016
	Rural	0.120	0.118	0.093	0.093	0.093	0.078	0.043
Punjab	Overall	0.055	0.054	0.043	0.040	0.038	0.035	0.015
	Urban	0.036	0.033	0.025	0.022	0.023	0.008	0.010
	Rural	0.069	0.068	0.056	0.053	0.047	0.042	0.018
Sindh	Overall	0.109	0.114	0.082	0.076	0.091	0.091	0.055
	Urban	0.046	0.037	0.035	0.031	0.033	0.036	0.021
	Rural	0.154	0.168	0.116	0.109	0.132	0.108	0.089
Khyber Pakhtunkhwa	Overall	0.107	0.098	0.075	0.079	0.074	0.083	0.045
	Urban	0.061	0.051	0.041	0.035	0.031	0.015	0.015
	Rural	0.123	0.113	0.087	0.093	0.088	0.090	0.049
Baluchistan	Overall	0.171	0.151	0.128	0.136	0.128	0.121	0.069
	Urban	0.084	0.078	0.060	0.068	0.061	0.042	0.035
	Rural	0.196	0.171	0.145	0.152	0.145	0.133	0.076

Baluchistan's inherent geographic disadvantages have contributed to its low population density in a variety of ways over the years. Not all provinces have profited equally from modernization, which changed the country from an impoverished rural nation to a semi-industrialized economy. This, along with political neglect, relegated Baluchistan to the margins of institutional and economic progress.

Sindh has the second highest figures of multidimensional poverty indices; it is mainly due to rural areas where in 2019-20 the multidimensional poverty index was 0.089 which is more than four times the urban areas of province. The rural belt of Sindh is largely controlled by

the feudal lords who own large lands and give a very small share to tenants. The education facilities are also bad in rural areas of Sindh. Relative to rural areas the urban segment of Sindh has performed better. Karachi, the capital of Sindh, is one of the biggest mega cities in the world with an estimated population of 16 million. It is the hub of trade and commerce and textile. The situation is relatively better in Khyber Pakhtunkhwa, the multidimensional poverty index in 2019-20 was 0.045 indicating the poor households of Khyber Pakhtunkhwa are experiencing 4.5% of the potential deprivations that can be faced with all households deprived in all dimensions. The situation is much better in Punjab, where in 2019-20 the poor households are merely facing 1.5% of the potential deprivations. There are multiple reasons for the relatively better situation in Punjab. It is the hub of textile industry with a share of around 70% which as significant share in total exports of country (www.pbit.gop.pk). In additional Punjab has a strong agricultural base, 69% of the total cropped area of country is from Punjab. It contributes a major share of cotton, wheat, rice, sugarcane and maize. Punjab is also the major supplier of many fruits including mango, citrus and guava. (Khurshid et al 2021).

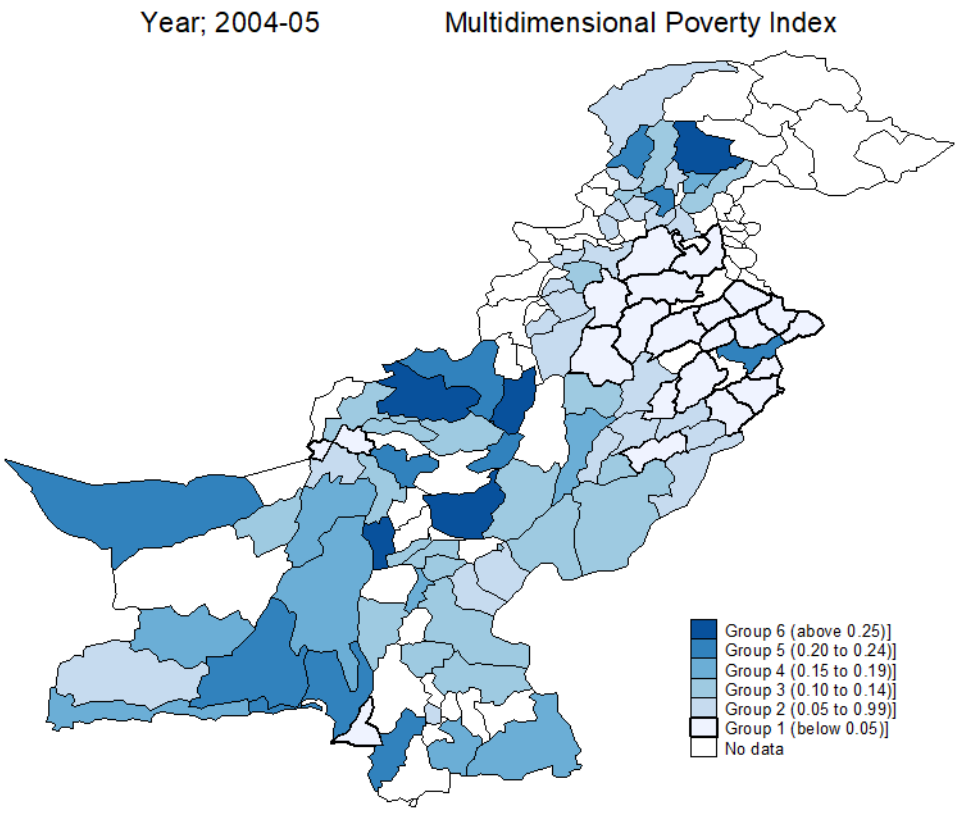
8.4.2 Multidimensional Poverty Indices for District of Pakistan

The investigation of the adjusted headcount ratio is expanded beyond the provincial level to explore further discrepancies within provinces. The district-level estimates from 2004–05 to 2019–20 are presented in Figure 8.3. The districts are divided into six groups; Group 1 comprises of districts with Multidimensional Poverty Indices below 0.050, Group 2 comprises of districts having Multidimensional Poverty Indices between 0.051 to 0.99, the districts with Multidimensional Poverty Indices ranging from 0.10 to 0.14 are placed in Group 3. Next group covers the districts with Multidimensional Poverty Indices ranging from 0.150 to 0.199, districts with Multidimensional Poverty Indices between 0.200 to 0.249 are included in fifth group and Group 6 comprises of the districts with Multidimensional Poverty Indices exceeding 0.249.

In 2004-05, twenty-two districts fell in Group 1, twenty-eight districts were covered in Group 2, twenty-three districts were in Group 3, the next two groups have ten and elven districts respectively. Jhal Magsi, Killa Saifullah, Musakhail, Kohistan, and Dera Bugti were the districts with Multidimensional Poverty Indices greater than 0.25. This indicates that, on average, the poor households in these districts are experiencing more than 25% of the total

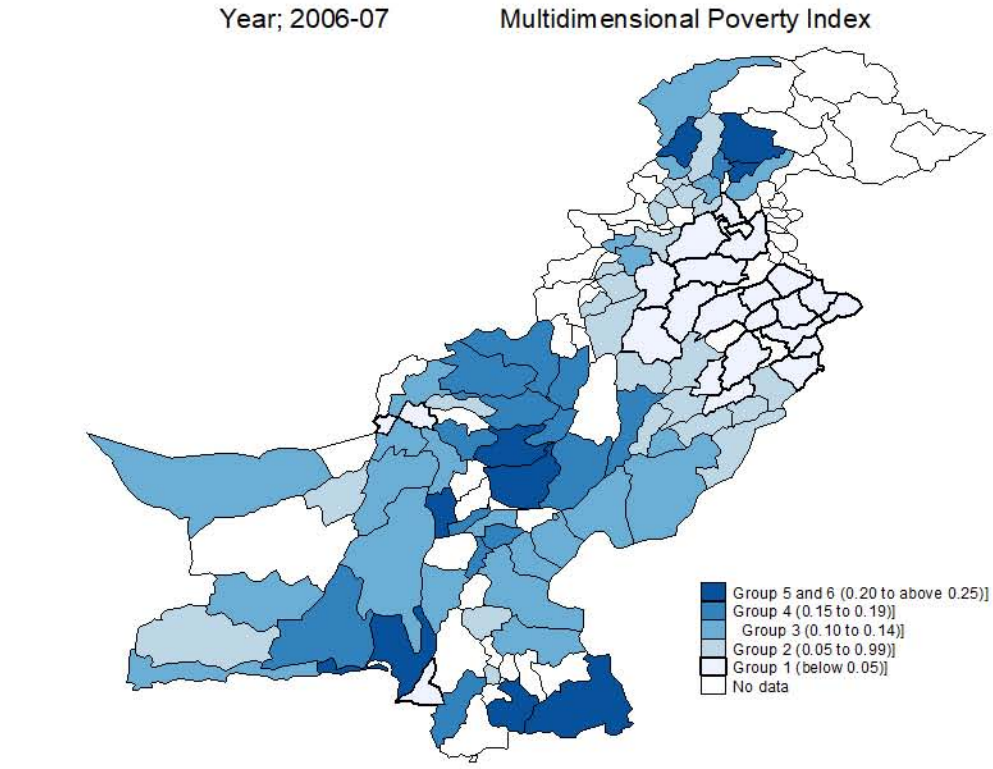
potential deprivations that could occur if all households in districts were poor and deprived in all dimensions. Most of these districts are in Baluchistan, which is the most deprived province of the country. It is good to see that in general Multidimensional Poverty Indices reduced in all districts. The number of districts falling into the last group, which indicates Multidimensional Poverty Indices above 25%, decreased to three districts in 2006-07 and continued to decrease in subsequent years. By 2019-20, no district fell into the last group. In the same way, 23 districts in 2004-05 had Multidimensional Poverty Indices below 0.15 and this number shrunk to only 14 in 2019-20. Similarly, the number of districts in fourth and fifth group reduced to three and two in 2019-20. This is an exceptional improvement over the last fifteen years.

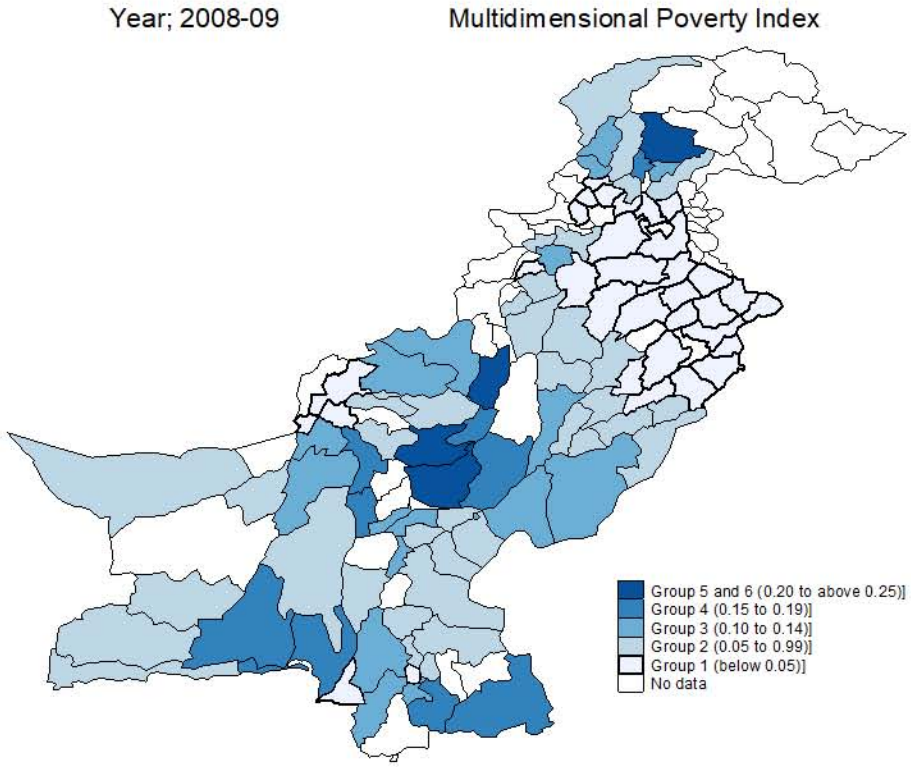
Figure 8.3 Estimates of Multidimensional Poverty at District Level



continued on next page

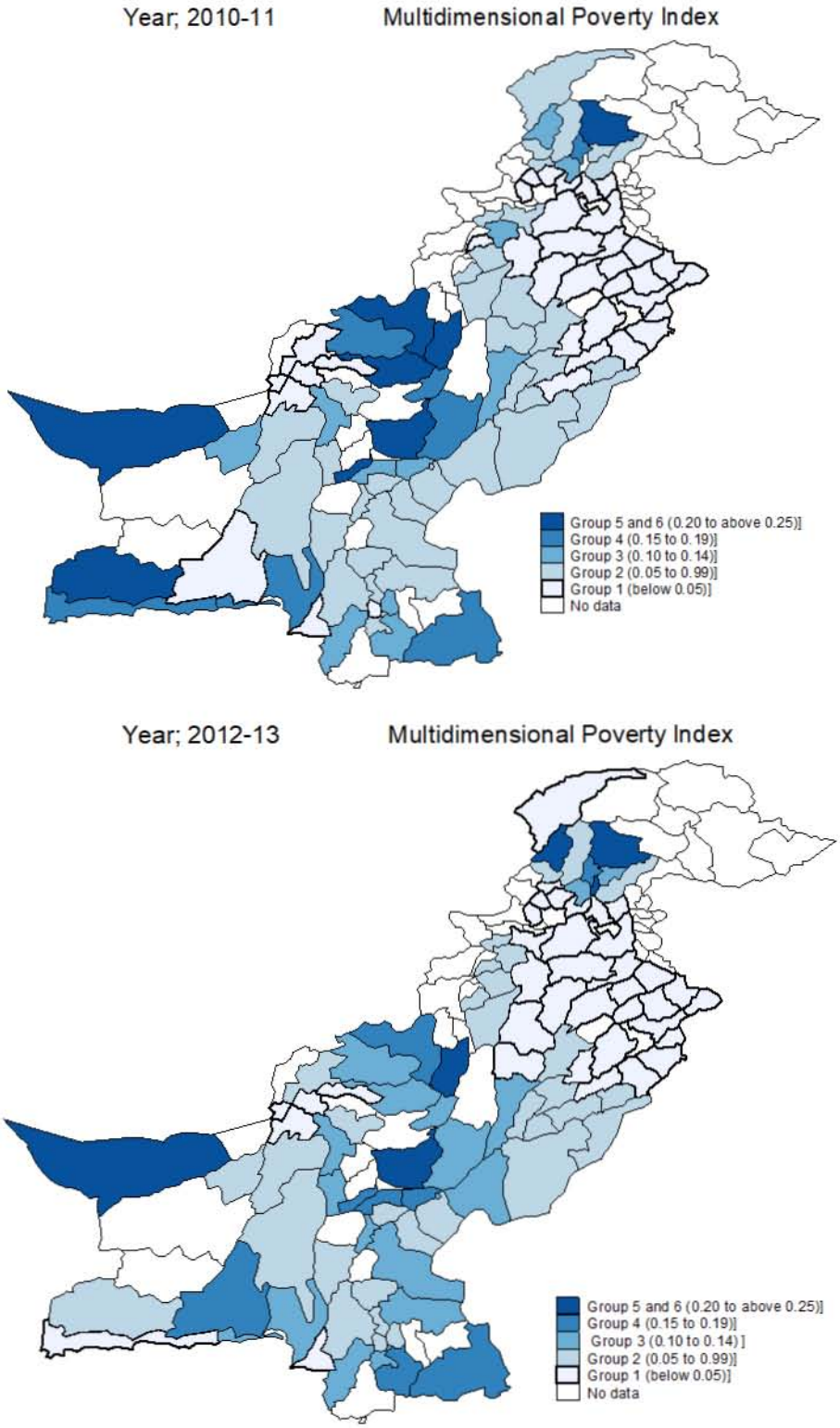
(Continued) Figure 8.3 Estimates of Multidimensional Poverty at District Level





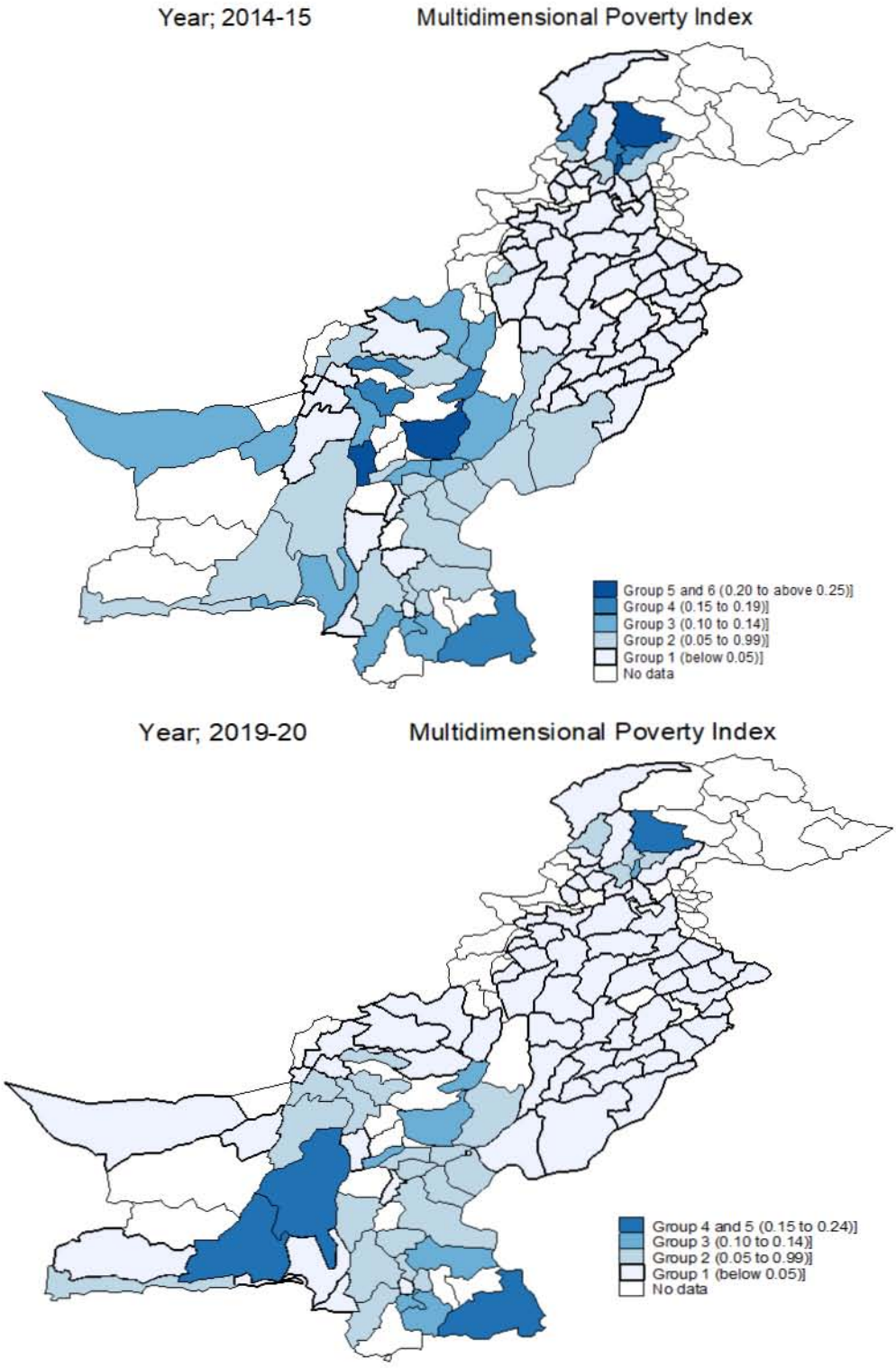
continued on next page

(Continued) Figure 8.3 Estimates of Multidimensional Poverty at District Level



continued on next page

(Continued) Figure 8.3 Estimates of Multidimensional Poverty at District Level



In 2019-20, the districts with relatively higher values of Multidimensional Poverty Indices includes Tharparkar, Awaran, Khuzdar, Kohistan, and Khuzdar, where poor households are facing at least 15% of the total potential deprivations. On the other side, Gujrat, Karachi, Gujranwala, Lahore, and Attock are the districts with the lowest Multidimensional Poverty Indices. The majority of these are hubs of trade and commerce.

The results show that the poor district of Dera Bugti has recorded the highest decline of almost 30 percentage points, indicating a favorable and pro-poor trend. After Dera Bugti, the highest decline is found in Sheikhupura, Killa Saifullah, and Lasbella. The least fall is observed in Lahore, Rawalpindi, and Jhelum.

8.5 CONCLUSIONS

In this chapter, we discussed the estimates of Headcount indices, Average Deprivations and Multidimensional Poverty Indices for Pakistan, its provinces, rural-urban segments of provinces and all districts. The estimations are based on microdata of seven recent rounds of the PSLM surveys covering a period of fifteen years from 2004 - 2005 to 2019 - 20. The estimates in general revealed that over the last fifteen years, poverty has declined in almost all regions of the country. It was also observed that poverty in general is relatively higher in rural areas of the country. The comparative analysis of provinces shows that Baluchistan is the most deprived province of the country followed by Sindh and Khyber Pakhtunkhwa. The situation is relatively better in Punjab, which accounts for almost 53% of the population of the country. The district level analysis revealed that Sialkot, Gujrat, Lahore, Rawalpindi, Attock, Gujranwala, Karachi, and Faisalabad are the least deprived districts. In contrast, districts like Kohistan, Dera Bugti, Jhal Magsi, Killa Saifullah, Kohlu, Tharparkar, and Musakhel are identified as the most deprived districts in Pakistan. The most deprived districts are largely in Baluchistan and the least deprived districts are from Punjab.

Chapter 9

CORRELATES OF MULTIDIMENSIONAL POVERTY

9.1 INTRODUCTION

Poverty is a complex phenomenon that cannot be quantified in a single dimension. It can be defined as a deprivation of multiple interrelated factors such as health, awareness, ownership of essential goods, access to basic facilities, education, freedom of choice, proper shelter, basic rights, and fundamental freedom. The deprivation of all such factors leads to a low standard of living and dependency on others. As discussed, is previous chapter that poverty is a widespread problem of Pakistan and still 23.4% population is poor. Most alarming is the unbalanced regional distribution of poverty, for instance numerous districts including Sherani, Dera Bugti, Awaran, Khuzdar, Tharparkar and Umerkot are victims of extremely high poverty rates of more than 70%. On the contrary in many districts like Attock, Rawalpindi, Chakwal, Jhelum, Gujrat, Gujranwala, Sheikhupura, Okara, Sahiwal and Lahore, the poverty rates are below 15%. Poverty reduction is one of the top priorities and the government has initiated several social safety net programs including Benazir Income Support program, Pakistan Bait-ul-Mal and Poverty alleviation fund to eradicate poverty in all parts of country. It is the success of these programs that poverty in Pakistan has reduced by 20.5% during last 15 years. However unbalanced distribution of poverty across various districts still needs more attention. To combat poverty effectively, it is essential to have a solid understanding of the factors contributing to poverty at regional level. It can be useful to identify the role of regional, household, and social characteristics in causing poverty. This chapter is an attempt to analyze the role of these factors. This chapter is divided into three sections. After introduction the correlates of poverty are described in Section 9.2 and the discussion is summarized in Section 9.3.

9.2 CORRELATES OF MULTIDIMENSIONL POVERTY

In this section we will identify the role of various household, regional and social factors in determining poverty. Regarding household characters, we shall explore the role of the

education profile of household, number of earners in a household, household size, gender and age of head in causing or controlling poverty. The influence of regional and social characteristics will be identified through income and educational disparities, population density, availability of health care and education facilities. In addition, we will also explore rural – urban differences.

The analyses are based on microdata sets of 2004-05 and 2019-20, separate regressions are estimated for each period. This will enable us to understand that how the role of household, regional and social factors change have changed over the past 15 years. Households are categorized as poor and non-poor, and the logistic regression models are estimated. The marginal effects at average values are calculated for better understanding and easy interpretation, as the interpretation of odd ratios is not straightforward. The estimates of regression models are given in Table 9.1.

First, we will discuss the results of 2004-05. It can be seen from Table 9.1 that all variables are highly significant. The marginal effects for the proportion of graduates in a household, age of household head, region of residence, number of hospitals in a district, income inequality and number of high schools are negative indicating that on average these variables are helpful in reducing poverty. On the other hand, dependency ratio, the proportion of below primary passed in a household, education inequalities and population density of district are the factors that trigger poverty. Further in 2004-05, the male headed households are also more exposed to poverty.

The dependency ratio is the proportion of dependents (non-earners) in a household. It is most likely that dependency ratio boosts poverty, as dependent household members are reliant on others for their economic desires. The marginal effect of dependency ratio in 2004-05 was 0.05954, it implied that one percent increase in dependency ratio was likely to increase the probability of a household to be poor by 5.95 percent. Since a one percent rise in the dependency ratio is not easily interpretable, to make it simple we will find the likely effect of one additional dependent member in a household. The average household size in our data is 6.821, one member (out of 6.821) represents 14.661 percent of the average household size. Multiplying 14.661 with the marginal effect gives 0.872. Therefore, in terms of a unit change, adding one dependent member will increase the probability of a household to be poor by 0.872 percent points. Earlier studies like Mahmood (1991), Malik (2015), Khalid et.al (2005),

Cheema (2014), Hassan (2019), Fatima & Idrees (2022) also showed that dependency ratio has positive outcome on poverty. It is worth mentioning that the results of the present study on multidimensional poverty reveal 85.4% of poor households have a dependency ratio greater than or equal to 0.67.

Table 9.1 Marginal Effects of Logit Regression for Correlates of Multidimensional Poverty in Pakistan (2004-05 and 2019-20)

Dependent Variable: Multidimensional Poverty Status of Household ('1' for poor and '0' otherwise)

Explanatory Variables	2004-05			2019-20		
	Marginal Effects	z - values	p - values	Marginal Effects	z - values	p - values
Dependency Ratio of a Household (Proportion of non – earning members in a Household)	0.0595	4.69	0.000	0.0520	11.58	0.000
Below Primary in a Household (Proportion of members with age above 9 and education below primary)	0.0877	6.88	0.000	0.4027	106.90	0.000
Graduates in a Household (Proportion of members with age above 19 and with at least degree in 14 years of education)	-1.4873	-29.18	0.000	-.35820	-18.14	0.000
Region of Residence ('1' for urban and '0' for rural)	-0.1166	-26.71	0.000	-0.0165	7.91	0.000
Gender of the Household Head ('1' for male and '0' otherwise)	0.0306	3.71	0.000	0.0139	5.53	0.000
Age of the Household Head (in years completed)	-0.0022	-14.82	0.000	-0.0013	-22.10	0.000
Population Density of a District (Average population (in 000) per square kilometers in a district)	0.00003	8.32	0.000	0.00007	28.52	0.000
Education Inequality in a District (Gini Coefficient of education inequality for a district	1.5139	62.90	0.000	1.0103	76.47	0.000
Income Inequality in a District (Gini Coefficient of income inequality for a district)	-0.0708	-2.50	0.012	-0.0047	-3.71	0.000
Hospitals in a District (Hospitals / Health care centers available per 000 population of a District)	-0.0030	-7.17	0.000	0.0010	3.68	0.000
High Schools in a District (High schools available per 000 population with age above 12)	-0.0021	-18.88	0.000	0.0030	8.06	0.000
Psedu R^2	0.1492			0.3075		

Source: Self Estimations

Education is the basic prerequisite for a successful life. In general, educated individuals earn more and are not dependent upon others. In Pakistan, primary schooling is the gateway to education, it is considered as a minimum required education for everyone. In our present study we have considered the proportion of individuals with age above 9 years and education below primary as an indicator of the lack of education in a household. The marginal effect for

proportion of individuals below primary is 0.0877, which shows that with one percent increase in proportion of below primary in a household, the probability of the household being poor also increases by 8.7 percent. To make it more understandable we worked out the effect of a unit change. In 2004-05, the average number of people per household with age above 9 are 4.829. One member out of 4.829 is 20.71% percent of the average household size. Multiplying 20.71 with the marginal effect yields 1.816. This implies that with each additional person below primary in a household, the probability of the household being poor rises by 1.816 percentage points. The results imply that the prevalence of illiterates and individuals with extremely low education is one of the reasons for poverty.

Now we shall explore the effect of educated members. In this regard we have estimated the marginal effect of the proportion of household members with at least 14 years of successful education.[26] The marginal effect -1.4873 which implies that the one percent increase in number of graduates, the likelihood of a household to be poor decreases by 1.487 percent. Converting into unit change indicates that on average with one additional graduate the probability of household to be poor reduces by 48.01%. The results indicate that higher education is vital for reducing poverty, as education increases awareness and in general educated individuals earn more and help to take the household out of the poverty trap. Studies like Shirazi (1995), Arif (2001), Kifayathullah (2020) and Fatima & Idrees (2021) also found that education profile of household has negative effect on poverty. The statistics of per capita income also support our results, as the microdata of PSLM (2004-05) reveals that per capita income of households with at least one adult having education 14 years of education or more is on average 25% greater than other households. Further out results of multidimensional poverty also exhibit that out of 43.9% poor households, only 2% have an individual with education of 14 years or more and the remaining 99% households do not have any member with 14 years of education.

The statistics show that the likelihood of an urban dweller to be poor is 11.66 percentage points less than a rural dweller, indicating that urban inhabitants are less likely to be poor than rural inhabitants. This is because urban residents have relatively more access to health and

[26] In Pakistan 14 years of successful education are considered as a good level education, In 2019-20 only 7.4% individuals with age above 19 were holding a degree of 14 years education. Individuals with a degree of 14 years education are eligible for competitive examinations of civil services and many other white-collar jobs with a reasonable salary.

educational facilities, the infrastructure of urban areas is far better and there are much diversified employment opportunities in urban areas. Similar results were found by Kamal (2001) and Cheema. Our results of multidimensional poverty also support the finding, as in 2004-05 the proportion of poor households in rural areas was 1.89 times the proportion of poor households in rural areas.

The characteristics of household head are also very important in determining the overall wellbeing of household. In this regard we consider the age and gender of the household head. Age is measured in years and its marginal effect is negative which indicates that on average the age of household head has negative effect on poverty. To be specific the marginal effect for 2004-05 is -0.0022 indicating that as age of household head increases by a year, the probability of a household to be poor decreases by 0.22 percentage points. One possible reason could be that individual gains experience with age and in general earnings are positively related with income, more earnings lead to savings which ultimately improve quality of life by spending more on education, health care facilities and housing. Similar results were found by Iqbal (2020) who mentioned that with age and more experience, one can collect sufficient assets or resources up to old age to avoid becoming impoverished in old age.

Regarding gender of the household head, the marginal effect for 2004-05 is 0.0306. This indicates that the likelihood of male headed household to be poor is 3.06 percent points more than female headed household. Pakistan is a male dominant society with male as a head of more than 90% households, similarly more than 80% of earners are male and further the average earnings of male earners are almost twice the average earnings of female, with these statistics it is surprising that probability of male headed household to be poor is relatively more than a female headed household. There could be several reasons behind this, such as Hyder (2010) mentioned that female-headed households relatively receive more assistance from close family members and other members of society which help them to escape from poverty. Khalid (2005) pointed out that female heads of households often spend more on their children's health, nutrition, and welfare. In contrast, male heads spend more on land, housing, travel, and smoking. Bashir & Idrees (2021) found that significant numbers of households with a female head are educated, wealthy, homeowners, recipients of remittances, or have several income sources.

The marginal effects presented in Table 9.1 show that population density has positive but negligible influence on multidimensional poverty. There could be several reasons for the increase in poverty due to increase in population density such as more pressure on available resources, more demand for houses, food and nonfood consumption goods. This may result in higher costs and make it more challenging for individuals to purchase the basic needs. Awan (2012) and Tahir (2012) also found that poverty is positively associated with population.

The present study has also explored the upshot of income inequalities in a district on household poverty. Income inequality can be pro poor if it is benefiting the lower tale of income distribution. In the present study the marginal effect for 2004-05 is -0.0708 indicating that a one percent increase in income inequality in district will on average cause 7.08 percent decrease in poverty. In Pakistan the upper and top middle tail of income distribution largely do not use the education and health facilities provided by government because it is a general perception that these facilities are not very good. This indirectly facilitates the poor segment of society who solely rely on the free facilities provided by government. Therefore, high income inequalities enable the top segment to shift on private resources, this creates a space for bottom tale of income distribution to take maximum benefit of such facilities.

Further, the positive upshot of income inequalities can be justified as a certain amount of disparity may not be an issue as long as it encourages individuals to perform well, compete, save money, and make investments to advance in life. For instance, while linked to increasing income disparity, returns to education and wage differentials may promote the expansion of human capital. According to Lazear and Rosen (1981), inequality may also have a beneficial impact on growth by encouraging innovation and entrepreneurship and, probably most importantly for developing nations, by enabling at least a small number of people to amass the necessary resources to launch firms and pursue high-quality education (Era Dabla-Norris, 2015).

We found that educational disparities have a weak but positive significant influence on poverty. The marginal effects show that during 2004-05, with a one-unit increase in educational inequality, the probability of a household being poor will be increased by 1.5139 units. Unequal access to education, disregarding income level and region, disempowers poor individuals to identify their inner talent and capabilities. Inequality in education pulls the gap

further between rich and poor. Further education can change people's lives and save kids from the darkness of deprivation and exclusion. (Walker, 2019)

The availability of quality healthcare services in a region is also crucial in the struggle to eradicate poverty. A better healthcare system can lessen poverty. We used the number of hospitals available per 1,000 inhabitants to gauge the region's healthcare infrastructure. The marginal effect shows that each 1,000 more hospital reduces poverty by 0.30 percentage points. This indicates the negligible effect of the quantity of available health care centers. Kifayathullah & Majeed (2020) and Bashir & Idrees (2021) also found similar results.

The role of schools in the fight against poverty is also examined. In this regard we considered the number of high schools in a district available to per thousand children with ages above 15 years. The marginal effect for 2004-05 is -0.0021, indicating that that for every additional high school available for one thousand children (above 12 years) the probability of a household to be poor decreases by 0.21 percent. Hence, we found negative belongings of the number of high schools. Hillman (2004) identified that the actual problem is lack of facilities and untrained teaching staff.

The results for 2019-20 show that almost similar trends, except for the number of secondary schools and number of hospitals in a district. In 2004-05 these two variables had negative effect on poverty indicating that these facilities help in eradicating poverty. However, in 2019-20 the marginal effects of these two variables are positive indicating that these facilities are causing poverty. Anyway, this is worth mentioning that like 2004-05, the magnitude is negligible indicating almost no effect.

Regarding dependency ratio, the marginal effects adjusted to a units change in number of dependents reveal that for 2019-20 an increase in one dependent household member raises the risk of the household being poor by 0.954 percent, this was 0.872 percent in 2014-15.[27] This indicates that overtime dependency ratio is becoming more crucial in causing poverty. Similarly, the comparative analysis of the effect of the proportion of members below primary uncover that with an additional person below primary the likelihood of a household to be poor increases by 10.12 percent and this was just 1.82 percent in 2004-05. This indicates that

[27] This is interesting to note that though marginal effect of dependency ratio has decreased overtime, but the magnitude increased when adjusted to average household because in 2004-05 the average household size was 6.82 which reduced to 5.45 in 2019-20.

overtime illiterates and individuals below primary are burdening households and the need for education has substantially increased. The results of higher education are even more noteworthy, in 2019-20 with one additional individual having 14 years or higher degree the probability of a household to be poor decreases by 12.96% and this probability was substantially higher in 2004-05. Our results indicate that over the past 15 years, the role of illiterates in causing poverty has increased and the role of well-educated individuals in controlling poverty has reduced. Apparently, the results are strange and contradictory, but the dynamics of education have changed, skilled based education is now more productive and the effectiveness of conventional 14 years of education has reduced. Further the education model in Pakistan has changed, now 2 years degree after intermediate is replaced by 4 years degree. The outflow of 2 years degree after intermediate has almost wiped out.

The statistics reveal that in 2019-20, the probability of urban residents being poor is just 1.65% less than the rural resident, the difference was noticeably higher in 2004-05. This indicates that the rural-urban gap in terms of poverty is dropping over time. This is due to the substantial improvement in basic facilities in rural areas. The rural areas are not well connected with urban areas, the facility of basic education has also improved in rural areas. The relative improvement in urban areas is much higher, but in poverty analysis the comparison is done with reference to the minimum required facilities, urban areas were already better in terms of primary school, basic health units and infrastructure. These basic facilities have also improved in rural areas. The age and gender of household heads have similar results over time and there is no significant change in their marginal effects. Similarly, the effect of disparities in income and education on poverty remains the same as in 2004-05 but with a decrease in its magnitude.

Like 2004-05 the effect of number of hospitals available per 1,000 inhabitants on poverty is negligible, though marginal effect is positive, but the magnitude is exceptionally low. Similarly, the role of number of high schools in a district available to per thousand children with ages above 15 years has also changed over the past 15 years. The marginal effect for 2019-20 is 0.0003 and it was -0.0021 in 2004-05. The estimates for 2019-20 indicate that for every additional high school available for one thousand children (above 12 years) the probability of a household to be poor increases by 0.03 percent. This might be the case that the rise in the number of high schools is not matched by improvements in educational quality, resulting in a situation in which people complete high school but do not acquire the essential

skills for work. As a result, there is more unemployment or underemployment, which contributes to poverty. Furthermore, the Pakistani economy is not producing enough work opportunities for those with a high school diploma; a surplus of high school graduates may lead to increasing poverty rates.

9.3 CONCLUSION

In this chapter we explored the role of different factors in causing or reducing poverty. We found that the education profile of household members is a very important determinant of poverty. In general, education of household members helps in controlling poverty. We also found that dependency ratio is one of the strongest factors causing poverty. The likelihood of a household to be poor increases with the increase in dependency ratio. It was also found that the probability of urban residents to be poor is less than the households living in rural areas.

Regarding the characteristics of household head, we found that age of the household head has negative effect on poverty, this is quite understandable as in general earnings increase with age. Similarly, we found that female headed households are likely to be less prone to poverty. This is because a significant proportion of female heads have enough through inheritance and further female headed household get more support from community and relatives and this support is most in education and healthcare of kids. We also found that income inequality in a region has a negative effect on poverty. The role of population density, number of hospitals and number of higher secondary schools is negligible in defining poverty.

Chapter 10

SUMMARY AND CONCLUSIONS

Poverty reduction has always been a challenge for developing countries like Pakistan where a significant proportion of total population is poor. The National MPI report (2016) revealed that in 2014-15, 38.8% of the population was multidimensionally poor. The economy of Pakistan is still in the recovery stage, low growth and high inflation rates have badly hampered the masses. In specific the poor households are severely impacted by a continuous rise in food and other essentials. During past few years the Government of Pakistan has taken multiple measures to eradicate poverty in all regions of country. In this regard social safety net programs including Benazir Income Support Program, Poverty Alleviation Fund, Microfinance incentives, Pakistan Bait-ul-Mal, Nojawan Kamiab Jawan Program, Apna Rozgar Scheme and Youth Business loan scheme are very important.

The empirical analysis of poverty has always been an area of interest for researchers and policy makers. Most of the earlier studies are confined to the poverty lines defined in terms of money and thus focus on monetary deprivations. The multidimensional approach investigates poverty beyond monetary deprivations by including non-monetary indicators, therefore it is more comprehensive. In Pakistan many studies are conducted on multidimensional poverty. In this regard studies by Jamal, 2009; Naveed & Islam, 2010; Awan et al., 2011; Khan et al. 2014; Saboor et al. 2015; Idrees & Baig, 2017; Saleem et al., 2019; Qadir et al, 2022 and Khan 2022 are very important. The earlier studies considered different dimensions, methodologies, cutoffs, and weights. These studies used the same data set but different approaches and came to different conclusions. The earlier studies took the same benchmarks across rural and urban regions and thus treated them identically. The present study shall consider different benchmarks for rural and urban areas. Further the earlier studies are mainly confined to overall Pakistan, rural – urban areas or provinces and a little emphasis was laid on exploring poverty at district level. The present study is an attempt to fill the existing dearth of research by analyzing poverty at the provincial and district levels.

Furthermore, no consistent study has been undertaken over an extended period with the same benchmark and methodology. This study aims to measure multidimensional poverty for all available PSLM surveys from 2004–05 to 2019–20. Therefore, we will present consistent estimates of poverty for a period of 15 years. Moreover, an update is required to identify the leading causes of multidimensional poverty and develop policy measures to reduce deprivation. The literature demonstrates that several studies have been conducted to explore the correlates of poverty in Pakistan. None of the earlier studies focused explicitly on region-specific characteristics such as inequalities in education and income, population density, availability of education and health facilities. The present study is an effort to fill the gap by considering the impact of such regional characteristics along with other household variables in causing or controlling poverty.

The present study has utilized Alkire and Foster (2011) dual-cutoff identification approach to measure poverty. Due to data limitations, we chose three dimensions i.e. education, health, and living standards. In the identification stage, we determined the deprivation in each dimension and its indicators using the Alkire and Foster (2011) dual cutoff methodology. Education is crucial to the socioeconomic growth of a nation. Education also increases awareness, tolerance, and self-worth, allowing one to defend oneself confidently. The benefits of education include improving and eliminating inequality and poverty in terms of governance and health conditions through implemented socioeconomic policies. In order to analyze disparity in education, we divided individuals into three groups: children, youngsters and adults. If a household has a child between 6 and 11 who is not in school or has not finished primary school, the household is considered deprived of child education. The same standards apply to urban and rural areas. During the last fifteen years, Pakistan has seen a decline in the educational deprivation of children. Youngsters' deprivation in education means a household is "deficient" if members aged 12–15 are not enrolled in or have not finished primary school in rural areas or middle school in urban areas. Pakistan's youth have become more educated over the past 15 years. Baluchistan had the worst youth education deprivation in 2019–20, followed by Sindh, and Punjab. Moreover, Khyber Pakhtunkhwa has seen the most significant drop in education deprivation of youngsters, followed by Punjab, Baluchistan, and Sindh. This study suggests that Sindh needs an appropriate education policy for its youngsters. In the same way, a household will be deprived of adult education if no member with age 16 years or more completes primary school in rural or middle-class urban regions. Over the fifteen years the

deprivation in adult education has decreased in Pakistan. A provincial analysis found that over the years, reduction in adult education deprivation is of same points in Punjab and Baluchistan. While the deprivation in adult education has increased in Sindh.

If a household has deficiencies in at least one of the indicators for children, youngster, or adults, it is considered poor in the education dimension. According to results, household deprivation in education has been decreased from 2004–2005 to 2019–20. A rural-urban comparison shows surprising results i.e. deprivation in education has decreased more in rural areas than urban regions. The provincial results show that over time the highest decrease in educational deprivation is observed in Punjab and the situation is worst in Baluchistan. The district-level results show that the lowest rates in educational deprivation are found in Lahore, Rawalpindi, Sialkot, Gujrat, Gujranwala, Abbottabad, Attock, Toba Tek Singh, Chakwal, and Karachi. While Awaran, Dera-Bugti, Kohistan, Barkhan, Tor Garh and Khuzdar are the districts with the alarming levels of deprivation. Most of the deprived districts are in Baluchistan. In general, we found that deprivation in education has decreased in Pakistan over time.

The state of health is another crucial factor in determining the well-being and quality of life. In this regard we considered health care of married women and children. This is also one of the data limitations of present study, as no tangible information on health status is available further no information is available on health care of men and unmarried women.[28] Women health care is measured through antenatal and postnatal care and children health care is measure through vaccination. We found that women health care has significantly improved while an trivial improvement was observed in child health care. This may be because the lack of information and the restricted mobility of the vaccination workforce. Further a reasonable illiterate people still believe that child vaccination is harmful for their kids. There is a need to eliminate the misconception regarding child vaccinations. An awareness campaign through masjids, mudersas and schools can be effective. The provincial and federal governments took various steps to improve child vaccination and natal care facilities, but the situation is still unsatisfactory. Far-flung areas are still deprived of basic health facilities.

[28] PSLM provides a binary information (yes or no) regarding the visit of hospital / doctor / health care center during last two weeks. This cannot be considered as an indicator of health, as sometime healthy persons may visit doctor for a minor issue and individuals with chronic disease or any disability may not have visited doctor during the last two weeks.

Province-wise analysis reveals the least deprivation is found in Punjab and the highest in Baluchistan, with rural areas consistently more deprived across all provinces. Khyber Pakhtunkhwa and Punjab show improvement over time, while Baluchistan and Sindh faced persistent challenges due to high poverty levels, limited socio-economic development, lack of education and awareness, and cultural beliefs. The results of districts revealed that in 2019-20 the highest deprivation in health care is recorded in the districts of Khuzdar, Awaran, Tharparkar, Sherani and Kohistan. On the other hand, Rawalpindi, Attock, Gujrat, Chakwal, Lahore, Jhelum and Gujrat have the least health deprivation.

The third dimension of wellbeing considered by present study is the standard of living. In this regard we focused on house quality, access to basic facilities, means of transportation, and ownership of household goods. To determine a house quality, we considered the number of people sharing a room, fuel used for cooking, lighting source, access to safe water, quality of walls and sanitation system. The household is deemed impoverished if it is deprived of more than two indicators. The results showed that deprivation in house quality had reduced in all provinces with Punjab at the top and Baluchistan at the bottom.

The second variable for measuring living standards is access to basic facilities including hospital, grocery shop, primary school, water and public transport. A household is considered deprived if less than three out of five facilities are accessible. According to the findings, deprivation of access to basic facilities has substantially decreased in all provinces during the past fifteen years. The rural-urban comparison revealed that the situation is relatively better in urban areas. Regarding districts, we found that in general facilities are much better in districts having metropolitan cities and industrial zones.

The third variable is owning basic household goods such as radio, fan/air-cooler, watch, mobile/landline, TV/LED, iron, stove/burner and sewing machine. The household is considered deprived of goods if it does not own at least five basic goods. The finding for the year 2019-20 reveals that 19.6% of the households do not hold at least five household items. The situation is more severe in rural regions, where 25.7% of families lack in owning at least five household goods. The situation is far better in urban areas where only 6% households are deprived of household goods. The deprivation in household goods has decreased across all provinces from 2004–2005 to 2019–20. The last variable for measuring living standards is the means of transportation. For this purpose, we considered four modes of transportation, and a

household is classified as deprived in transportation ownership if it does not own any of these modes of transportation. Overall transportation deprivation has decreased from 66% in 2004-05 to 35.8% in 2019-20. This trend is supported by improved infrastructure and transportation, which facilitated people to live away from the workplace. The data show that deprivation has decreased in all provinces, with Punjab suffering with least deprivation and Baluchistan having highest deprivation.

The study assesses the overall deprivation in living standards based on four indicators: house quality, access to basic facilities, ownership of transportation, and ownership of household goods. A household is considered deprived if it lacks two or more of these indicators. Over the last fifteen years in Pakistan, overall deprivation in living standards has decreased by 14.9%, but nearly one-fourth of households still face deprivation. Rural households are more affected, with 28.9% deprived, compared to 13.9% in urban areas. Urban areas have better infrastructure, planned housing, regulatory rules, sanitation, and municipal monitoring, contributing to a relatively higher quality of life. The rural-urban disparity is most pronounced in Sindh, where rural deprivation is over three times that of urban areas. Punjab showed satisfactory improvement, with a 14.4% reduction in deprivation. Baluchistan faces the highest deprivation, with 43.8% of households still deprived of living standards, indicating significant regional disparities.

The study evaluates living standards across districts in Pakistan, and we found that notable regional variations exist, with districts in Punjab and industrial zones consistently showing lower deprivation, while Baluchistan faces higher deprivation due to factors like inadequate infrastructure, limited access to education and healthcare, economic hardships, and political instability. Over the past fifteen years, there has been an overall reduction in deprivation, with improvements observed in districts like Nowshehra, Jhal Magsi, Jhelum, Zhob, Chaghi, Gujrat, Faisalabad, Killa Saifullah, Sialkot, Mandi Bahauddin, and Sukkur. However, districts such as Awaran, Tharparkar, Badin, and Khairpur have experienced worsening living standards, potentially due to increased education disparities. Among the 112 districts, 30 have shown a rise in deprivation, while conditions in others have improved over time. Consistently deprived districts include Awaran, Barkhan, Dera Bugti, Kohistan, Chaghi, Tharparkar, Battagram, Bolan/Kech, and Nasirabad.

The primary goal of present study is to estimate the incidence and depth of poverty in Pakistan, its rural – urban segments, all provinces, and administrative districts. We employed Alkire and Foster methodology and analysis were carried out in two ways. First is the unweighted approach which assumes that all dimensions of wellbeing are equally important. This is unrealistic, as all dimensions of wellbeing cannot be of the same importance. In the second approach we attached different weights to each dimension of wellbeing and the subdimensions were also given different weights. Attaching weights is not straightforward and has certain issues, such as all households do not give same importance to each dimension. In this regard we considered the weights suggested by Government of Pakistan (2015) with minor adjustments, as our subdimensions are different.

The estimates of head count indices showed that the unweighted approach in general suppresses poverty, as it gives equal weight to all dimensions of wellbeing. Therefore, adjusted poverty gap and multidimensional poverty were estimated only with unequal weights. The estimates of head count indices show that in general poverty reduced in all parts of the country. It was also observed that poverty is relatively more pronounced in rural areas. This indicates that people in rural areas have less access to educational and medical facilities and worse living conditions than those in urban areas. The estimates reveal various policy implications for eliminating poverty in rural areas of Pakistan. The Government should provide more education opportunities, and other essential health facilities. In addition, loans may be provided to low-income individuals to establish their means of subsistence, such as stores or different types of small businesses. Further government should encourage the growth of agricultural production by promoting agro-based industries.

The province wise analysis revealed that Punjab is the most privileged province with least head count indices and Baluchistan is the most deprived province with highest head count indices. The dynamics of Baluchistan are quite different from other provinces of country. The population is scattered, therefore schools and hospitals are located at far distances and infrastructure is also not very good. The province has a long history of fighting against terrorism. The far-flung areas are dominated by Sardars and vaderas, who in general are not interested in educating the children of tenants.

The estimates of average intensity of poverty and multidimensional poverty indices also showed decreasing trends in almost all parts of country. A significant reduction in poverty can

be attributed to several important factors, including targeted poverty alleviation programs such as Benazir Income Support Program, Poverty Alleviation Fund, Microfinance incentives, Pakistan Bait-ul-Mal, Nojawan Kamiab Jawan Program, Apna Rozgar Scheme and Youth Business loan scheme.

The last objective of present study is to explore the effect of regional, social and household characteristics on poverty. In specific regarding household characteristics, we explored the role of the education profile of household, number of earners in a household, household size, gender and age of head in causing or controlling poverty. The impact of regional and social characteristics was identified through income inequalities, educational inequalities, population density, availability of health care and education facilities. In addition, we will also investigate rural - urban differences. The logit regression was estimated on microdata sets of 2004-05 and 2019-20.

It was exposed that the education is one of the fundamental determinants of poverty, it has negative effect on poverty and thus can be useful in reducing poverty. The households with relatively better education profile have least chances of being poor. We also found that dependency ratio is one of the strongest factors causing poverty. The probability of a household to be poor increases with the increase in dependency ratio. This is obvious, as dependency ratio measures the proportion of dependents in a household. More the dependents, more are the chances of a household to be poor. It was also seen that the probability of urban residents to be poor is less than the households living in rural areas. In general, urban areas of Pakistan have better infrastructure, better school system and better health facilities. Therefore, access to school and health care centers is relatively easy in urban areas. Secondly the quality of education and health care facilities are also better in urban areas.

We also found that age of the household head has negative effect on poverty, indicating that in general, households with aged heads are less prone to poverty. This is quite understandable as in general earnings and savings increase with age. Interestingly the present study found that female headed households are likely to be less exposed to poverty. This is because in Pakistan, a significant proportion of female heads have enough through inheritance and further female headed household get more support from community and relatives and this support is most in education and healthcare of kids. We also found that income inequality in a region has a

negative effect on poverty. The role of population density, number of hospitals and number of higher secondary schools is negligible in defining poverty.

According to our findings, the disparity in educational attainment and a high dependency ratio are burdensome problems in Pakistan, which undoubtedly contribute to poverty. Therefore, a comprehensive strategy should be designed to decrease educational disparities by focusing on higher education. Further to reduce dependency ratio, government should improve the infrastructure, more emphasis should be given to agri-based industries. This will create more employment opportunities. Assisting financial inclusion and microfinance can also facilitate in reducing dependency ratio. Further, to resolve the educational inequality, Government of Pakistan should prioritize policies which provide equal access to high-quality education for all, regardless of socioeconomic status. This involves investing in early childhood education, ensuring appropriate resources, and developing scholarship programs to assist underrepresented kids.

The current study considered education, health and living standards as the fundamental dimensions of wellbeing. The study can be extended by incorporating other dimensions such as women empowerment, political awareness, and access to information etc. However, this can possible only with a survey-based study, as these variables are not available in national level public surveys. Further a study can be extended by conducting comparative analysis across countries with similar socioeconomic conditions.

References

Abbas, A., Awan, D. S., Waqas, M., & Ashraf, A. (2018). Measuring the Multidimensional Poverty:A Case Study of District Sarghoda.

A. B. Atkinson. (2003). Multidimensional Deprivation: Contrasting Social Welfare and Counting Approaches. *Journal of Economic Inequality*, 51-65.

Afzal, M., & Nazir, A. (2021). Measurement of LIiving Standard Deprivation in Lahore District Pakistan (A Periodical Comparison Approach). *Pakistan Journal of Applied Economics,*, 31-45.

Akerele, D., Momoh, S., Adewuyi, S., Phillip, B., & Ashaolu, O. (2012). Socioeconomic determinants of poverty among urban households in South-West Nigeria. *International Journal of Social Economics*, 168-181.

Ali, M. (2023, march 13). *The health system in Awaran*. Retrieved from Pakistan Today: https://www.pakistantoday.com.pk/2022/03/13/the-health-system-in-awaran/

Alif Ailaan. (2018). *Five Years of Education Reform – Sindh: Wins, Losses and Challenges for the Future. Islamabad.* Government of Pakistan.

Alkire, S. (2002). Dimensions of Human Development. *World Development*, 181–205.

Alkire, S. (2008).). Choosing Dimensions: The Capability Approach and Multidimensional Poverty.

Alkire, S., & Santos, M. E. (2010). Acute Multidimensional Poverty: A New Index for Developing Countries. *OPHI Working Papers 38* , University of Oxford.

Alkire, S., & Seth, S. (2013). *Multidimensional Poverty Reduction in India 1999-2006: Slower Progress for the Poorest Groups.* University of Oxford: Oxford Poverty and Human Dveleopmen tInitiative.

Alkire, S., Roche, M. J., & Vaz, A. (2017). Changes Over Time in Multidimensional Poverty: Methodology and Results for 34 Countries. *World Development*, 232-249.

Alkire, S., Belchior, I., Blumberg, M., Cecilia, C., Pedro , C., Evans, M., . . . Hwang,, S. B. (2023). *GLOBAL MULTIDIMENSIONAL POVERTY INDEX 2023;Unstacking global poverty:Data for high-impact action.* Oxford Poverty & Human Development Initiative (OPHI); United Nation Development Program (UNDP).

Alkire, S., & Foster, J. (2011). Counting and Multidimensional Poverty Measurement. *Journal of Public Economics*, 476–487.

Alkire, S., & Fang, Y. (2019). Dynamics of Multidimensional Poverty and Uni-dimensional Income Poverty: An Evidence of Stability Analysis from China. *Social Indicators Research: An International and Interdisciplinary Journal for Quality-of-Life Measurement*, 25-64.

Alkire, S., & Seth, S. (2012). Identifying BPL Households A Comparison of Methods. *Oxford Poverty & Human Development Initiative (OPHI) Working Paper no 54*.

Alkire, S., Foster, J., Seth, S., Santos, M. E., Roche, J., & Paola , B. (2015). Multidimensional Poverty Measurement and Analysis:Chapter 3 – Overview of Methods for Multidimensional Poverty Assessment. *Oxford Poverty & Human Development Initiative (OPHI) WORKING PAPER NO. 84*.

Alkire, S., Foster, J., Seth, S., Santos, M., Roche, J., & Ballon, P. (2015). Multidimensional Poverty Measurement and Analysis: Chapter 9 – Distribution and Dynamics. *Oxford Poverty & Human Development Initiative (OPHI) Working Paper no 90*.

Annual Security Report. (2020). *CRSS Annual Security Report.* Center of Reseach and Securityy Studies.

Annual State of Education Report . (2020). *Annual Status of Education Report ASER-PAKISTAN 2019.* Lahore: ASER Pakistan Secretariat; Idara-e-Taleem-o-Aagahi (ITA) .

Arif , N., Wood, G., & Ghaus, M. U. (2016). *Geography of Poverty in Pakistan 2008-09 to 2012-13: Distribution, Trends and Explanations.* Pakistan Poverty Alleviation Fund & & Sustainable Development Policy Institute.

Arif, & Khan, S. (2018). *The Overlapping Geography of Poverty and Natural Disasters in Pakistan.* Pakistan Poverty Alleviation Fund (PPAF).

Arif, G., & Bilquees, F. (2007). Chronic and transitory poverty in Pakistan: Evidence from a longitudinal household survey. *The Pakistan Development Review*, 111-127.

Asian Development Bank. (2019). *khyber pakhtunkhwa Health Sector Review.* Philippines: Asian Development Bank.

Asselin, L.-M., & Anh, V. (2005). Multidimensional poverty monitoring: A methodology and implementation in Vietnam. *PEP working paper; 2005-06*.

Awan, M. S., Waqas, M., & Aslam, M. A. (2012). Multidimensional Measurement of Poverty in Pakistan: Provincial Analysis. *Munich Personal RePEc Archive*.

Awan, M., Sarwar, M., Malik, M. N., & Nouman. (2011). Impact of education on poverty reduction. *MPRA Paper 31826, University Library of Munich, Germany*.

Awan, M., Waqas, M., & Aslam, M. A. (2011). Multidimensional Poverty in Pakistan: Case of Punjab Province. *Journal of Economics and Behavioral Studies*, 133-144.

Azid, T., & Malik, S. (2000). Impact of Village-specific, Household-specific, and Technological Variables on Poverty in Punjab. *The Pakistan Development Review*, 793-806.

Baloch, I. (2015, February 23). *Balochistan: Rich In Natural Resources And Poor In Living Conditions*. Retrieved from The Balochistan Point View of Nation: http://thebalochistanpoint.com/balochistan-rich-in-natural-resources-and-poor-in-living-conditions/

Baluchistan. (2020). *Balochistan Education Sector Plan 2020-2025.* Secondary Education Department; Government of Baluchistan.

Bank, W. (2021). *Monitoring Global Poverty.* The World Bank.

Bank, W. (2022). *Poverty and shared propserity; correcting course* . Washington: The World Bank.

Bank, W. (2023). *Poverty & Equity Brief South Asia Paksitan.* The World Bank Group.

Bashir, F., & Idrees, M. (2018). Addressing the Pitfalls of Single Poverty Line in the Estimation of Poverty in Different Regions of Pakistan. *Forman Journal of Economic Studies,* .

Bashir, F., & Idrees, M. (2021). Correlates of Poverty in Pakistan: A Rural-Urban Comparative Analysis. *Forman Journal of Economic Studies*, 47-67.

BBEP. (2020). *Balochistan Basic Education Programme.* UNICEF.

Begum, S. (2015). The Livelihood and Poverty Mapping Analysis at Regional Level in Pakistan. *Wageningen University and Research Centre; MSc Development Economics Thesis code: DEC 80433*.

Bergstrom, K. (2022). The Role of Income Inequality for Poverty Reduction. *The World Bank Economic Review,* , Volume 36, Issue 3, Pages 583–604.

Berg, S. v., Burger, R., Burger, R., Louw, M., & Yu, D. (2006). Trends in Poverty and Inequality since the Political Transition. *Development Pol icy Re search Unit Work ing Pa per 06/104. University of Cape Town*.

Bikorimana, G., & Sun, S. (2020). Multidimensional poverty analysis and its determinants in Rwanda. *International Journal of Economic Policy in Emerging Economies*, 555-584.

Bossert, W., Chakravarty, S., & Ambrosio, C. (2009). Multidimensional poverty and material deprivation. *ECINEQ Working Paper Series*.

Bourguignon , F., & Chakravarty , S. (2003). The Measurement of Multidimensional Poverty. *The Journal of Economic Inequality*, 25–49.

Bourguignon, F. (2004). The Poverty Growth Inequality Triangle. *Working Paper 125*.

Buarque, C., Špolar, V., & Zhang, T. (2006). Introduction: Education and Poverty Reduction. *Review of Education*, 219-229.

Bugvi, A., Rahat , R., Zakar, R., Zakar, M., Fischer, F., Nasrullah , M., & Manawar, R. (2014). Factors associated with non-utilization of child immunization in Pakistan: evidence from the Demographic and Health Survey 2006-07. *BMC Public Health*.

Butt, M. (2023). Why Have Immunization Efforts in Pakistan Failed. *Risk Management and Healthcare Policy*.

Chakravarty, S., Mukherjee, D., & Ranade, R. (1998). On the family of subgroup and factor decomposable measures of multidimensional poverty. *Research on economic inequality : a research annual* , 175-194.

Chakravarty, S., & Silber , J. (2009). Measuring Multidimensional Poverty: The Axiomatic Approach. *Quantitative Approaches to Multidimensional Poverty Measurement*, 192–209.

Chaudhry, I. (2009). Poverty Alleviation in Southern Punjab (Pakistan): An Empirical Evidence from the Project Area of Asian Development Bank. *International Research Journal of Finance and Economics*, ISSN 1450-2887 Issue 23 .

Cheema, A., & Sial, M. (2012). Poverty, Income Inequality, and Growth in Pakistan: A Pooled Regression Analysis. *The Lahore Journal of Economics*, 137–157.

Cheema, A., & Nadeem, M. (2020). Poverty and Its Correlates in Pakistan. *International Journal of Disaster Recovery and Business Continuity*, Vol.11, No. 3, (2020), pp. 3675 – 3719.

Cheema, A., & Sial, M. (2014). Poverty and Its Determinants in Pakistan: Evidence from Pslm 2010-11. *Journal of Poverty, Investment and Development*.

Chen, M., Huang, X., Cheng, J., Tang, Z., & Huang, G. (2023). Urbanization and vulnerable employment: Empirical evidence from 163 countries in 1991–2019. *Cities, 135, 104208.*

Corak, M. (2013). Income Inequality, Equality of Opportunity, and Intergenerational Mobility. *The Journal of Economic Perspectives* , Vol. 27, No. 3 pp. 79-102.

Dabla-Norris , E., Kochhar , K., & Suphaph, N. (2015). *Causes and Consequences of Income Inequality: A Global Perspective.* International Monetary Fun (No. 2015/013).

Dandekar, V., & Rath, N. (1971). Poverty in India - I: Dimensions and Trends. *Economic and Political Weekly*, 25-27+29-48.

Daud, M., Nafees, M., Ali, S., Rizwan, M., Bajwa, R., Shakoor, M. B., . . . Zhu, S. (2017). Drinking Water Quality Status and Contamination in Pakistan. *BioMed Research International*, 18 pages.

Deyshappriya, N., & Feeny, S. (2021). Weighting the Dimensions of the Multidimensional Poverty Index: Findings from Sri Lanka. *Social Indicators Research*.

Dilawar, H., & Faridi, M. (2022). Population and Poverty Alleviation in Pakistan: An Aggregated and Disaggregated Analysis. *Journal of Policy Research*, 151-165.

Ding, S. (2022). A Comparative Analysis of Vulnerability to Poverty between. *Economies* .

Dutta, I., Nogales, R., & Yalonetzky, G. (2021). Endogenous Weights and Multidimensional Poverty: A Cautionary Tale. *Oxford Poverty & Human Development Initiative (OPHI) Working Paper no. 135*.

Elizabeth Howton, M. F. (2020, oct 7). *COVID-19 to Add as Many as 150 Million Extreme Poor by 2021*. Retrieved from The World Bank: https://www.worldbank.org/en/news/press-release/2020/10/07/covid-19-to-add-as-many-as-150-million-extreme-poor-by-2021

Fahme, A., & Ali, M. (2019). Difference between income and expenditure method in measuring poverty in Kelantan, Malaysia. *International Journal of Economics, Management and Accounting*, 1-40.

Farid, S., Fattahi, F., & Mohammadzadeh, Y. (2019). e Effect of Household Head Characteristics on Poverty and its Intensity in Rural Households of West Azerbaijan Province. *Journal of Research and Rural Planning* , Volume 8, No. 2, Serial No. 25.

Faruq, M., & Yuliana, I. (2023). The Effect of Population Growth on Poverty Through Unemployment in East Java Province in 2017-2021. *Journal of Social Research, 2(6), 1900-1915.*

Foster, J. (2007). A Report on Mexican Multidimensional Poverty Measurement. *Oxford Poverty & Human Development Initiative (OPHI) WORKING PAPER NO. 40*.

Foster , J., & Alkire, S. (2011). *Measuring Multidimensional Poverty:Insights from Around the World.* OPHI.

Gianoli, J. W. (2019). The Sustainable Development Goal on Water and Sanitation:. *Social Indicators Research*, 795–810.

Global Hunger Index . (2022). *FOOD SYSTEMS TRANSFORMATION AND LOCAL GOVERNANCE.* Concern Worldwide and Welthungerhilfe .

Global MPI Report. (2023). *Unstacking global poverty.* UNDP, OPHI.

GOP. (2014). *Government of pakistan ministry of water & power annual flood report* . Islamabad : Office of the chief engineering advisor & chairman federal flood commission.

Governement of Pakistan. (2022-23). *Pakistan Economic Survey.* Islamabad: Economic Adviser's Wing, Finance Division Government of Pakistan.

Government of Pakistan. (2016). *Multidimensional Poverty in Pakistan.* Oxford Poverty and Human Development Initiative (OPHI) and the United Nations Development Programme (UNDP),.

Government of Pakistan. (2019-20). *Pakistan Economic Survey.* Islamabad: Economic Adviser's Wing, Finance Division.

Grebmer, K., Bernstein,, J., Wiemers, M., Reiner, L., Bachmeier, M., Hanano,, A., . . . Foley, C. (2022). *Global Hunger Index; Food Systems Transformation and Local Governance* . Bonn / Dublin: Welthungerhilfe.

Greer, J., & Thorbecke, E. (1986). A methodology for measuring food poverty applied to Kenya. *Journal of Development Economics*, 59-74.

Habib, M. (2013). Education in Pakistan's Punjab: Outcomes and Interventions. *The Lahore Journal of Economics*, 21–48.

Hameed, A., Padda, I. H., & Karim, S. (2016). Multidimensional Poverty Mapping for Rural Pakistan. *1st International Conference on Business, Economics, & Education Management – ICBEM Organized by Institute of Business Administration Sukkur.* Sukkur.

Haq, M. A., Ayub, K., & Imdad Ullah, M. (2015). Micro Determinants of Rural Poverty in Pakistan. *International Journal of Scientific and Research Publications*, Volume 5, Issue 2.

Hillman, A., & Jenkner, E. (2004). *Educating children in poor countries. .* International Monetary Fund.

Hills, J., McKnight, A., Bucelli, I., Karagiannaki, E., Vizard , P., Yang, L., . . . Rucci, M. (2019). *Understanding the relationship between poverty and inequality.* The London School of Economics and Political Science.

Hussain, S., Babak, M., Ch, A., & Parveen, S. (2019). Urban-Rural Differentials of Health and Educational Inequality in District of Faisalabad: A Social Analysis. *European Online Journal of Natural and Social Sciences*, 65-75.

Hussain , Mazhar; Abdus Salam, Muhammad ; Sajjad Kiani, Muhammad ; Kiran, Humaira ; Bilal, Saadia. (2020). *Handbook of Statistics on Pakistan Economy 2020.* State Bank of Pakistan.

Hyder , A., & Sadiq, M. (2010). Determinants of Poverty in Pakistan. *Hamburg Review of Social Sciences*, Volume 4 , pp. 193-213.

Idrees, M., & Baig, M. (2017). An Empirical Analysis of Multidimensional Poverty in Pakistan. *FWU Journal of Social Sciences*, 297-309.

Idrees, M., & Ahmad, E. (2017). Measurement of Income Inequality: A Survey. *Forman Journal of Economic Studies2013*.

Iqbal, A., Siddiqui, A., & Zafar, M. (2019). A geographically disaggregated analysis of multidimensional Poverty in Punjab. *International Journal of Social Economics*, 365-383.

Irfan, M. (1985). *Poverty and household demographic behaviour in Pakistan - insights from PLM survey 1979.* Islamabad: Pakistan Institute of Development Economics.

Jamal, H. (2006). Does Inequality Matter for Poverty Reduction? Evidence from Pakistan's Poverty Trends. *The Pakistan Development Review* , Vol. 45, No. 3 pp. 439-459.

Jamal, H. (2003). Mapping the Spatial Deprivation of Pakistan. *Pakistan Institute of Development Economics, Islamabad*, 91-111.

Jamal, H. (2007). Income poverty at district level: An application of small area estimation. *Social Policy and Development Centre. Research Report (70)*.

Jamal, H. (2009). Estimation of multidimensional poverty in Pakistan. *Social Policy and Development Centre, Working Paper*, .

Jamal, H. (2011). Assessing Poverty with Non-Income Deprivation Indicators: Pakistan, 2008-09. *The Pakistan Development Review*, 913–927.

Jamal, H. (2012). *An Exploratory Analysis of Inter-Temporal Multidimensional Poverty.* Social Policy and Development Centre Research Report No.83.

Javaid, K. (2011). *Rural-Urban Divide in Education - Inequities Reinforcing Inequities.* Lahore: Development policy Research Center LUMS.

Julius, M., & Bawane, J. (2011). Education and poverty, relationship and concerns. A case for Kenya. *Problems of Education in the 21st Century*, 32, 72.

Khalid, U., Shahnaz , L., & Bibi, H. (2005). Determinants of Poverty in Pakistan: A Multinomial Logit Approach. *The Lahore Journal of Economics*, 10 : 1 (Summer 2005) pp. 65-81.

Kemal, A., Irfan, M., & Arif, G. (2001). MIMAP SYNTHESIS REPORT:Major Conclusions and Policy Implication. *Pakistan Institute of Development Economics*.

Khan, A. U., Saboor, A., Hussain, A., Sadiq, S., & Mohsin, A. Q. (2014). Investigating Multidimensional Poverty across the Regions in the Sindh Province of Pakistan. *Social Indicators Research*, 515-532.

Khan, A., Saboor, A., Hussain, A., Sadiq, S., & Mohsin, A. (2014). Investigating Multidimensional Poverty across the Regions in the Sindh Province of. *Social Indicators Research*, 515-532.

Khan, A., Saboor, A., Sarfraz , A. M., & Ikram , A. M. (2011). Approximation of Multidimensional Poverty across Regions in Pakistan. *European Journal of Social Sciences*.

Khan, F. N., & Akram, S. (2018). Sensitivity of Multidimensional Poverty Index in Pakistan. *The Pakistan Journal of Social Issues*.

Khan, H., Inamullah, E., & Shams, K. (2009). Population, environment and poverty in Pakistan: linkages and empirical evidence. *Environ Dev Sustain 11, 375–392*.

Khan, S. U., & Sloboda, B. W. (2022). Spatial analysis of multidimensional poverty in Pakistan: Do income and poverty score of neighboring regions matter? *GeoJournal*.

Khurshid, W., Qayyum, A., & Shera, M. (2021). Pakistan during 2015-16 TO 2020-21. *Journal of ISOSS, 7(4),* , 229-240.

Khyber Pakhtunkhwa Education Improvement Program. (2021). *Khyber Pakhtunkhwa Education Improvement Program (KP-EIP).* UNICEF on behalf of the Elementary & Secondary Education Department, Government of Khyber Pakhtunkhwa. Pakistan.

Kiani, A., & Kazmi, U. (2020). Determinants of multidimensional poverty index: micro analysis. *Pakistan Economic Review*, 44-60.

Kifayathullah, Majeed, M., & Mustafa, G. (2020). Exploring Spatial Patterns and Determinants of Poverty: New Evidence from Pakistan. *The Pakistan Development Review*, 439–459.

Kim, S.-G. (2016). What Have We Called as "Poverty"? A Multidimensional and Longitudinal Perspective. *Social Indicators Research*.

Kruijk, H., & Rutten, M. (2007). Weighting dimensions of poverty based on people's priorities; Constructing a Composite Poverty Index for the Maldives . *Institute for International and Development Economics (IIDE) discussion paper:200708-01*.

Kuree, J. (2003). Is The Cost of Living Less In Rural Areas. *International Regional Science Review*, 86–116.

Lal, B. (2015). The economic and social cost of illiteracy: an overview. *International Journal of Advance Research and Innovative Ideas in Education,*, 1(5), 663-670.

Lazear , E., & Rosen, S. (1981). Rank-Order Tournaments as Optimum Labor Contracts. *Journal of Political Economy Volume 89,Number 5*.

Lee, Y. F., & Kind, M. (2021). *World Social Report 2021; Reconsidering Rural Development.* United Nations.

Mahmood, R., & Hussain, I. (2020). Estimation of Provincial Multidimensional Ppverty Index (MPI) of Pakistan. *International Transaction Journal of Engineering, Management, & Applied Sciences & Technologies*.

Mahmood, S., Sheikh, K., & Mahmood, T. (1991). Food Poverty and its Causes in Pakistan. *The Pakistan Development Review*, 821-834.

Majeed, M., & Malik, M. (2015). Determinants of Household Poverty: Empirical Evidence from Pakistan. *Pakistan Development Review*, 54:4, Part II (Winter 2015) pp. 701–718.

Mallory, B. (2008). *The vicious cycle: poor children, risky lives.* University of New Hampshire.

Marti-Castaner, M., Pavlenko, T., Engel, R., Sanchez, K., Crawford, A., Engel, R., . . . Crawford, A. (2022). Poverty after Birth: How Mothers Experience and Navigate U.S. Safety Net Programs to Address Family Needs. *Journal of Child and Family Studies*.

Meyer, B., & Sullivan, J. (2003). Measuring the Well-Being of the Poor Using Income and Consumption. *The Journal of Human Resources*, 1180-1220.

Meyer, M. (2023). *Poverty & Equity Brief South Asia Pakistan.* World Bank.

Muhammad, F., Shaikh, P. A., & Yousaf, H. (2022). The socio-economic factors of poverty: Empirical evidence from district Lasbela, Balochistan. *Business Review*, 93-124.

Mundial, G., & UNICEF. (2015). *Education 2030: Incheon declaration and framework for action for the implementation of sustainable development goal 4.* World Bank UNICEF, UNHCR, UN, .

Mustafa, K., Nosheen, M., & Khan, A. (2021). Dynamic reflections of multidimensional health poverty in Pakistan. *PLOS ONE*.

Mustafa, K., Nosheen, M., & Khan, A. (2021). Dynamic reflections of multidimensional health poverty in Pakistan. *PLOS ONE*.

Nájera Catalán, H. (2019). Reliability, population classification and weighting in multidimensional poverty measurement: A Monte Carlo study. *Social indicators research,*, 887-910.

N.A.O Pakistan. (2012). *The Constitution of the Islamic Republic of Pakistan.* Islamabad: The Constitution of the Islamic Republic of Pakistan.

Naseebullah, Noor Ahmed, & Faiz Ur Rahim. (2022). The Impact of Demographic Factors, Household Characteristics and Locational Factors on Poverty in Pakistan. *Journal of Finance and Accounting*, Volume 4 Issue 2, Fall 2022.

Nasir, Z. (2023, October 17). *Ghost Teachers In Balochistan: An Unsolved Conundrum*. Retrieved from The Friday Ttimes: https://thefridaytimes.com/17-Oct-2023/ghost-teachers-in-balochistan-an-unsolved-conundrum

Naveed, A., & Ali, N. (2012). *Clustered Deprivation:District Profile of Poverty in Pakistan.* Sustainable Development Policy Institute (SDPI).

Naveed, A., & Ghaus, M. U. (2018). *Geography of Poverty in Pakistan Update Multidimensional Poverty in Pakistan at National Provincial and District level 2014-15.* Pakistan Poverty Alleviation Fund & Sustainable Development Policy Institute.

Naveed, A., & Islam, T.-u. (2011). Estimating Multidimensional Poverty and Identifying the Poor in Pakistan:An Alternative Approach. *Research Consortium on Educational Outcomes and Poverty Working Paper No. 28*.

Naveed, A., & Khan, S. (2018). *The Overlapping Geography of Poverty and Natural Disasters in Pakistan.* Pakistan Poverty Alleviation Fund.

Nawab, T., Raza, S., Shabbir, M. S., Khan, G. Y., & Bashir, S. (2022). Multidimensional poverty index across districts in Punjab,Pakistan: estimation and rationale to consolidate with SDGs. *Environment, Development and Sustainability*.

Nayar, K. (2007). Social exclusion, caste & health: A review based on the social determinants framework. *The Indian Journal of Medical Research*, 355-363.

Ngepah, N., Makgalemele, T., & Saba, C. S. (2023). The relationship between education and vulnerability to poverty in South Africa. *Economic Change and Restructuring* , 56:633–656.

Niazi, M., & Khan, A. (2012). The Impact of Education on Multidimensional Poverty. *Journal of Elementary Education*, Vol.21, No. 1 pp.77-89.

Nisa , G., & Nasir, M. (2019). Causes of Primary Level Dropout in Balochistan District Jaffarabad. *Bilingual/Bi-annual Pakistan Studies English / Urdu Research Journal VOl.No.10, Issue No. 02*.

Norris, D., Kochhar, K., Ricka, F., Suphaphiphat, N., & Tsounta, E. (2015). *Causes and Consequences of Income Inequality: A Global Perspective.* International Monetary Fund.

Nozal , A. L., Martin, N., & Murtin, F. (2019). The Economy of Well-being: Creating Opportunities for People's Well-being and Economic Growth. *Statistics and Data Direcorate (SDD) Working Paper No. 102*.

Padda, I., & Hameed, A. (2018). Estimating multidimensional poverty levels in rural Pakistan: A contribution to sustainable development policies. *Journal of Cleaner Production*, 435-442.

Paraschiv, C. (2017). The role of education in poverty alleviation. *Theoretical & Applied Economics*.

Paraschiv, C. (2017). The role of education in poverty alleviation. *Theoretical & Applied Economics*.

Parveen, N., & Sharjeel, M. (2020). Determinants of Factors Influencing Dropout in Public Primary Schools in Rural Sindh. *Pakistan Social Sciences Review*, Vol. 4, No. I pp; [669-687].

PES. (2011-22). *Pakistan Economic Survey 2021-22.* Islamabad.

Poverty and Shared Prosperity . (2022). *Correcting Course.* World Bank.

PSLM. (2021). *Pakistan Social and Living Standards Measurements (PSLM), Survey 2019-20; District Level Survey.* Islamabad: Pakistan Bureau of Statistics Ministry of Planning Development & Special Initiatives.

Punjab Cities Improvement Investment Program. (2021). *Punjab Cities Improvement Investment Program; Sheikhupura City Profile.* Asian Development Bank.

Qadir, A., Arshad, M., Ahmad, W., Rafique, M., & Rongdang, W. (2023). An Evaluation of Uni and Multidimensional Poverty Among Farming and Non-Farming Community. *Social Indicators Research*.

Qizilbash, M. (2003). Vague language and precise measurement: The case of poverty. *Journal of Economic Methodology* , 41-58.

Qureshi, S., & Arif, G. (1999). Profile of Poverty in Pakistan, 1998-99. *Pakistan institute of development economics. MIMAP Technical Paper Series No. 5*.

Qureshi, S., & Shaukat, Z. (2019). *Thar Coal Project and Local Community Documenting Views and Experiences of Stakeholders.* National Commission for Human Rights (NCHR).

Rana, R. S., & Naim, H. (2014, sept). *Tharparkar: a forgotten disaster*. Retrieved from the lancet global health: https://doi.org/10.1016/S2214-109X(14)70254-2

Rani, S., Khan, A., Ali, N., & Khan, K. (2023). The Prevalence and Correlates of Multidimensional Poverty: A Survey Analysis of District Charsadda. *Pakistan Journal of Humanities and Social Sciences*, 2078-2089.

Rashid, R., Saeed, M., & Ali, H. (2022). Impact of Human Capital on Poverty Reduction in Pakistan. *iRASD Journal of Economics*, 419 – 428.

Rasmussen, S., Piracha, M., Bajwa, R., Malik, A., & Mansoor, A. (2004). Pakistan: scaling up rural support programs. *Economics, Political Science*.

Ray, A. (2006). A Class of Decomposable Poverty Measures With Public Transfers. *Economics Bulletin, AccessEcon*, 1-8.

Ringen, S. (1988). Direct and Indirect Measures of Poverty. *Journal of Social Policy.*, 351-365.

Robeyns, I. (2000). An unworkable idea or a promising alternative? unworkable idea or a promising alternative? *Center for Economic Studies Discussions Paper Series (DPS) 00.30* .

Saboor, A., Khan, A. U., Hussain, A., Alia, I., & Mahmood, K. (2015). Multidimensional deprivations in Pakistan: Regional variations andtemporal shifts. *The Quarterly Review of Economics and Finance*, 57–67.

Saith, R. (2001). Capabilities: the Concept and its Operationalisation. *Queen Elizabeth House, University of Oxford Working Paper Series – QEHWPS66*.

Salahuddin, T., & Zaman, A. (2012). Multidimensional Poverty Measurement in Pakistan:Time Serie Trends and Breakdown. *The Pakistan Development Review*, 493–504.

Saleem, H., Shabbir, M. S., & Khan, B. (2019). Re-examining Multidimensional Poverty in Pakistan: A New Assessment of Regional Variations. *Global Business Review*, 1–18.

Saleem, H., & Khan, M. B. (2017). Multidimensional Poverty in Pakaistan; A Policy Perspective. *4th International Conference on Poverty and Sustainable Development* (pp. 35-51). TIIKM.

Sen, A. (1979). *Equality of What?* Stanford University: THE TANNER LECTURE ON HUMAN VALUES.

Sen, A. (1999). *Development as Freedom.* Oxford University Press.

Sen, , A. (1983). *Social theory, social understanding, and political action" In Social Theory".* New York: Oxford: Clarendon Press; Oxford University Press.

Sen, , A. (1984). *Resources, Values and Development .* Oxford: Blackwell, and Cambridge, Mass; Harvard University Press.

Sen, A. (1976). Capability Approach.

Sen, A. (1985). *Commodities and Capabilities.* Amsterdam: North-Holland.

Shabbir Hussain, B. M. (2018). Urban-Rural Differentials of Health and Educational Inequality in District of. *European Online Journal of Natural and Social Sciences* , 65-75.

Shaikh, N. A. (2022, OCTOBER 18). *Education in Pakistan: what we know.* Retrieved from pakistan gulf economist: https://www.pakistangulfeconomist.com/2022/08/29/education-in-pakistan-what-we-know/

Shaikh, S., Taj, T., Kazi, A., Ahmed , J., & Fatmi, Z. (2010). Coverage and Predictors of Vaccination Among Children of 1-4 Years of Age in A Rural Sub-District of Sindh. *Journal of the College of Physicians and Surgeons Pakistan* , 806-810.

Shirazi, N. (1995). Determinants of poverty in Pakistan. *Pakistan Economic and Social*, 91-101.

Shubhabrata, S., & Ramsundar, B. (2012). Capability Approach and Multidimensional Poverty Analysis–A Theoretical Discussion. *Journal of Economics*.

Sial, M., Noreen, A., & Awan, R. (2015). Measuring Multidimensional Poverty and Inequality in Pakistan. *The Pakistan Development Review*, 685-696.

Sindh. (2020). *School Education Sector Plan 2021-2024.* School Education & Literacy Department Government of Sindh.

Tahir, B. A., Mirza , N. A., & Sultana, R. (2018). Access to Safe Drinking Water and WASH Facilities in Schools of District Chiniot, Pakistan and Awareness on Waterborne Diseases among Teachers and Students. *Int. J. Econ. Environ. Geol*, 20-25.

Thengal, N. (2013). Social and economic consequences of illiteracy. *International Journal of Behavioral Social and Movement Sciences*, 2(2), 124-132.

Tilak, J. (2006). The role of post-basic education in alleviation of poverty and development.

Townsend, P. (1979). *Poverty in the United Kingdom.* armondsworth, UK: Penguin.

Tsui, K.-y. (2002). Multidimensional poverty indices. *Social Choice and Welfare*, 69-93.

Tulchinsky, T., Varavikova, E., & Cohen, M. (2014). Expanding the concept of public health. *The new public health*, 55-123.

Ullah, S. K. (2023). Understanding the Societal Impact of Government Programs on Public School Enrollment in District Karak. *Global Sociological Review*, 126 – 134.

Umer , K., Shahnaz, L., & Bibi, H. (2005). Determinants of Poverty in Pakistan: A Multinomial Logit Approach. *The Lahore Journal of Economics*, 65-81.

UNDP. (2016). *UNDP AND THE CONCEPT AND MEASUREMENT OF POVERTY.* New York: oct.

UNICEF. (2018). *PAKISTAN IMPLEMENTATION RESEARCH FOR IMMUNIZATION; A compilation of project objectives,results and recommendation.* New York: United Nations Children's Fund (UNICEF).

VIVEROS, S. K.-B. (2023, march 29). *March 2023 global poverty update from the World Bank: the challenge of estimating poverty in the pandemic.* Retrieved from world population review: https://blogs.worldbank.org/opendata/march-2023-global-poverty-update-world-bank-challenge-estimating-poverty-pandemic

Wang, C., Zeng, B., Luo, D., Wang, Y., Tian, Y., Chen, S., & He, X. (2021). Measurements and determinants of multidimensional poverty: Evidence from mountainous areas of southeast China. *ournal of Social Service Research*, 743-761.

Wagle, U. (2008). Multidimensional poverty: An alternative measurement approach for the United States? *Social science research*, 37(2), 559-580.

Walker, J., Pearce, C., Boe , K., & Lawson, M. (2019). *The Power of Education to Fight Inequality.* Oxfam GB for Oxfam International .

Walton, D. (2019). *Poverty trends: global, regional, and national.* https://devinit. org/resources/poverty-trends-global-regional-and-national.: Development Initiatives.

Wangenge-Ouma, G. (2012). Tuition fees and the challenge of making higher education a popular commodity in South Africa. *Higher Education*, 831-844.

Watts, H. W. (1968). The measurement of poverty – an exploratory exercise. University. *University of Wisconsin.; Institute for Research on Poverty.; Discussion papers*, 12-68.

WHO. (2016). *Sustainable Development Goals: 17 Goals to Transform our World.* World Health Organization.

WHO. (2022, march 21). *Sanitation.* Retrieved from World Health Organization: https://www.who.int/news-room/fact-sheets/detail/sanitation

World Bank Report. (2022). *Poverty and Shared Prosperity 2022: Correcting Course.* Washington, DC: World Bank.

World Health Organization . (2018). *Housing and Health Guideline.* World Health Organization: Geneva.

Yitzhaki , S., & Schechtman, E. (2013). *The Gini Methodology A Primer on a Statistical Methodology.* New York: Springer.

Yu, J. (2013). Multidimensional Poverty in China: Findings based on the CHNS. *Social indicators research*, 315-336.

Zahid, R. (2023, 07 05). *Challenges of Pakistans Urban Future*. Retrieved from Imarat Institute Policy Studies: https://iips.com.pk/challenges-of-pakistans-urban-future/

ANNEXURE: A1

DEPRIVATION IN WOMEN PRE AND POST-NATAL HEALTH CARE AT NATIONAL AND PROVINCIAL LEVEL

	REGION	DEPRIVATION	2004-05	2006-07	2008-09	2010-11	2012-13	2014-15	2019-20
PAKISTAN	Overall	Prenatal	62.3%	71.9%	54.9%	46.2%	43.3%	42.1%	30.0%
		Postnatal	75.6%	73.2%	69.8%	62.9%	56.1%	57.2%	38.6%
	Rural	Prenatal	69.1%	84.9%	61.8%	52.4%	48.8%	44.3%	33.4%
		Postnatal	83.8%	82.0%	78.7%	71.8%	63.9%	61.3%	43.4%
	Urban	Prenatal	47.8%	43.1%	39.6%	32.7%	31.2%	30.5%	20.2%
		Postnatal	57.8%	53.7%	49.9%	43.8%	38.8%	35.9%	24.7%
PUNJAB	Overall	Prenatal	57.1%	66.9%	48.0%	38.5%	35.7%	31.6%	21.7%
		Postnatal	73.6%	70.2%	63.9%	58.3%	50.5%	51.5%	32.9%
	Rural	Prenatal	63.2%	80.4%	52.8%	42.6%	38.9%	32.8%	23.8%
		Postnatal	81.1%	78.8%	73.0%	66.9%	58.4%	55.6%	36.8%
	Urban	Prenatal	46.7%	43.5%	39.9%	31.6%	30.2%	25.6%	16.5%
		Postnatal	60.6%	55.1%	48.1%	43.9%	37.0%	32.6%	23.1%
SINDH	Overall	Prenatal	58.8%	67.0%	51.3%	44.4%	43.7%	45.3%	33.3%
		Postnatal	68.5%	67.1%	65.9%	59.6%	55.5%	57.1%	35.4%
	Rural	Prenatal	69.3%	85.3%	63.5%	54.2%	52.2%	48.8%	41.3%
		Postnatal	83.1%	81.8%	79.3%	72.1%	67.6%	63.7%	44.8%
	Urban	Prenatal	40.4%	32.3%	28.7%	26.5%	27.6%	32.3%	22.3%
		Postnatal	42.8%	39.5%	41.1%	36.5%	32.8%	32.9%	22.7%
KHYBER PAKHTUNKHWA	Overall	Prenatal	67.8%	78.4%	60.4%	52.9%	46.4%	49.1%	38.0%
		Postnatal	80.1%	76.2%	74.0%	65.2%	56.9%	57.6%	43.6%
	Rural	Prenatal	69.9%	86.2%	62.7%	56.5%	49.3%	50.5%	39.7%
		Postnatal	83.5%	80.6%	77.6%	70.1%	60.9%	59.6%	45.7%
	Urban	Prenatal	60.5%	50.7%	51.6%	40.8%	36.1%	33.8%	24.3%
		Postnatal	67.8%	60.4%	60.5%	48.8%	43.0%	34.3%	26.3%
BALUCHISTAN	Overall	Prenatal	77.0%	86.6%	73.2%	61.1%	58.4%	59.6%	44.6%
		Postnatal	89.2%	88.8%	87.0%	77.9%	70.5%	73.9%	59.1%
	Rural	Prenatal	82.1%	92.9%	77.4%	65.1%	62.6%	61.8%	46.8%
		Postnatal	92.4%	91.4%	90.7%	82.9%	73.2%	75.9%	62.1%
	Urban	Prenatal	58.3%	62.6%	56.0%	44.9%	41.2%	43.5%	33.4%
		Postnatal	77.4%	78.9%	71.7%	57.8%	59.4%	59.8%	44.0%

ANNEXURE: A2 DEPRIVATION IN EDUCATION INDICATORS AT DISTRICT LEVEL

	2004-05				2006-07				2008-09				2010-11			
Districts	**CE**	**YE**	**AE**	**HHE**	**CE**	**YE**	**AE**	**HHE**	**CE**	**YE**	**AE**	**HHE**	**CE**	**YE**	**AE**	**HHE**
Abbotabad	10.2%	29.9%	22.4%	34.0%	6.2%	22.7%	18.1%	25.9%	4.3%	23.4%	15.5%	23.9%	10.6%	29.5%	15.4%	26.2%
Attock	10.1%	38.3%	24.6%	37.8%	11.1%	33.6%	22.0%	33.1%	13.8%	29.0%	24.0%	35.2%	11.3%	30.8%	20.9%	32.1%
Awaran	65.4%	71.7%	66.6%	81.3%	40.3%	76.5%	59.4%	73.4%	44.9%	61.3%	30.6%	61.6%	29.4%	40.9%	30.0%	43.8%
Badin	54.2%	73.0%	50.9%	71.1%	56.2%	76.9%	49.4%	70.6%	52.9%	72.5%	45.0%	66.0%	55.4%	64.5%	45.0%	67.0%
Bahawalnagar	39.7%	59.1%	44.7%	61.5%	29.3%	57.6%	40.4%	56.2%	32.6%	59.6%	43.1%	58.8%	25.2%	46.1%	39.7%	51.7%
Bahawalpur	43.0%	64.4%	48.4%	65.4%	41.4%	59.3%	44.6%	59.6%	40.7%	54.7%	41.9%	54.9%	37.1%	56.3%	42.0%	55.5%
Bannu	46.4%	64.3%	37.1%	67.4%	47.0%	57.4%	30.7%	59.9%	38.3%	51.7%	23.5%	49.0%	36.7%	48.7%	23.4%	49.4%
Barkhan	62.1%	77.3%	58.2%	82.9%	55.9%	75.8%	52.6%	79.9%	65.7%	79.6%	58.1%	82.8%	85.0%	93.4%	77.0%	91.6%
Batagram	51.5%	84.2%	53.5%	81.0%	45.9%	78.1%	41.9%	71.5%	32.2%	73.6%	40.7%	70.6%	35.1%	53.9%	35.0%	62.0%
Bhakkar	47.9%	48.3%	40.4%	60.1%	35.5%	47.5%	32.4%	52.8%	30.6%	48.3%	29.5%	47.8%	30.5%	51.2%	37.4%	53.0%
Bolan/Kachhi	66.3%	68.4%	57.6%	75.5%	64.0%	68.1%	49.8%	73.0%	53.0%	64.7%	59.7%	75.0%	39.5%	54.4%	30.0%	54.3%
Buner	56.6%	79.2%	54.0%	80.0%	45.8%	71.8%	42.5%	75.8%	35.1%	59.9%	40.5%	70.1%	34.8%	66.8%	51.7%	75.4%
Chaghi	63.9%	78.9%	61.0%	81.0%	51.4%	73.2%	49.3%	70.3%	55.1%	66.7%	47.9%	76.0%	66.9%	73.9%	51.8%	83.2%
Chakwal	9.7%	27.9%	15.3%	26.9%	10.9%	25.3%	12.3%	22.0%	4.2%	17.1%	14.2%	20.0%	2.4%	14.1%	10.4%	15.1%
Charsada	41.9%	63.0%	47.7%	68.2%	45.9%	54.1%	40.8%	62.5%	45.9%	51.8%	38.8%	59.7%	31.6%	48.2%	32.2%	51.3%
Chiniot													32.7%	52.5%	38.3%	51.0%
Chitral	33.6%	44.0%	31.4%	53.7%	29.1%	42.9%	26.6%	48.3%	21.6%	38.1%	20.3%	42.2%	19.4%	31.0%	15.1%	37.8%
D.G.Khan	46.4%	57.5%	49.8%	67.3%	36.9%	55.6%	39.9%	58.5%	40.6%	57.6%	40.3%	60.4%	41.1%	61.0%	42.6%	62.0%
D.I.Khan	64.7%	69.3%	47.7%	77.3%	50.9%	63.0%	41.6%	64.8%	57.6%	55.7%	37.5%	63.1%	56.1%	58.3%	38.5%	63.8%
Dadu	59.0%	65.2%	39.2%	65.8%	56.7%	66.3%	40.7%	65.5%	39.8%	39.5%	23.2%	47.5%	26.4%	34.0%	19.7%	38.4%
Dera Bugti	94.2%	99.2%	84.4%	95.3%	74.5%	78.8%	61.1%	86.6%	89.0%	86.4%	70.5%	88.6%	90.6%	92.9%	66.2%	88.9%
Faisalabad	23.3%	44.0%	33.2%	46.8%	14.6%	36.3%	27.5%	38.8%	14.9%	33.3%	26.4%	35.8%	15.8%	29.5%	23.9%	33.0%
Gawadar	55.0%	67.5%	58.2%	72.6%	44.1%	55.6%	71.5%	78.0%	30.1%	44.3%	33.2%	53.8%	39.4%	41.0%	58.0%	72.2%
Ghotki	45.6%	50.3%	38.4%	55.3%	47.6%	56.6%	42.2%	64.3%	47.4%	60.1%	33.6%	62.3%	49.4%	60.3%	26.2%	57.8%
Gujranwala	26.8%	46.6%	32.7%	49.2%	11.9%	38.7%	25.2%	38.6%	9.7%	30.8%	21.4%	32.2%	7.2%	31.8%	19.7%	30.7%
Gujrat	8.5%	32.7%	20.2%	30.3%	10.2%	37.4%	19.3%	31.7%	7.3%	26.1%	13.9%	24.6%	10.0%	29.4%	16.6%	27.4%
Hafizabad	28.2%	54.4%	40.9%	54.8%	17.7%	52.4%	37.4%	50.7%	15.5%	42.9%	31.1%	44.0%	11.0%	41.1%	32.6%	42.7%
Hangu	45.6%	62.9%	35.5%	71.7%	48.1%	63.1%	35.7%	67.1%	31.7%	54.9%	37.5%	63.9%	42.5%	56.8%	35.8%	62.1%
Haripur	17.4%	34.0%	25.8%	38.3%	9.5%	28.9%	19.8%	31.4%	8.9%	23.5%	17.0%	26.3%	8.5%	22.3%	13.3%	22.0%
Hernai													46.9%	56.1%	28.1%	67.4%
Hyderabad	54.0%	57.0%	41.7%	61.7%	45.7%	63.4%	41.6%	59.2%	30.7%	40.1%	27.9%	43.1%	30.1%	40.9%	26.6%	40.3%
Jacobabad	77.4%	72.3%	51.1%	80.6%	67.1%	77.1%	41.6%	75.1%	59.4%	67.8%	39.3%	68.6%	55.8%	61.0%	41.9%	66.5%
Jaffarabad	59.3%	71.1%	52.4%	75.2%	64.7%	75.6%	49.5%	77.9%	45.9%	66.0%	44.2%	64.2%	64.7%	72.4%	53.6%	74.3%
Jamshoro									51.8%	52.6%	38.0%	57.3%	43.5%	50.2%	34.6%	50.5%
Jhal Magsi	77.0%	83.3%	70.7%	85.8%	64.7%	78.0%	60.4%	82.1%	56.0%	72.5%	71.6%	85.1%	31.5%	56.1%	46.8%	60.8%
Jhang	37.8%	61.1%	42.7%	60.2%	40.3%	56.9%	39.5%	59.4%	30.5%	50.9%	33.7%	49.4%	28.2%	51.4%	33.8%	49.1%
Jhelum	12.3%	30.4%	22.9%	36.4%	8.3%	30.6%	18.2%	29.6%	3.1%	19.3%	11.8%	19.7%	6.7%	26.4%	13.6%	24.2%
Kalat	51.0%	76.0%	57.7%	74.0%	46.1%	64.1%	56.0%	73.4%	53.0%	67.3%	35.7%	69.4%	31.4%	53.9%	34.4%	58.6%

Continued on next page

CE: Deprivation in Child Education, YE: Deprivation in Youngsters Education, AE: Deprivation in in Adult Education, HHE: Deprivation in Household Education

(Continued) ANNEXURE: A2 DEPRIVATION IN EDUCATION INDICATORS AT DISTRICT LEVEL

	2004-05				2006-07				2008-09				2010-11			
Districts	**CE**	**YE**	**AE**	**HHE**	**CE**	**YE**	**AE**	**HHE**	**CE**	**YE**	**AE**	**HHE**	**CE**	**YE**	**AE**	**HHE**
Karachi	23.0%	26.6%	24.4%	34.2%	19.0%	24.3%	19.8%	27.4%	30.0%	46.1%	21.1%	49.2%	19.0%	24.9%	16.3%	23.0%
Karak	34.4%	48.4%	34.1%	58.4%	25.6%	39.5%	23.1%	49.6%	42.4%	43.4%	42.8%	59.9%	30.2%	36.3%	18.9%	45.2%
Kashmore													52.2%	62.5%	37.7%	61.6%
Kasur	29.5%	55.5%	40.1%	53.9%	23.2%	54.1%	43.2%	58.4%	18.8%	50.1%	38.3%	49.9%	23.3%	45.1%	30.9%	47.5%
Kech/Turbat	33.8%	53.8%	33.7%	57.4%	35.2%	46.9%	32.4%	51.1%	33.2%	51.3%	36.8%	56.9%	52.5%	64.0%	55.8%	75.4%
Khairpur	53.9%	62.2%	36.3%	64.4%	44.6%	57.3%	35.0%	55.5%	41.7%	44.8%	29.7%	52.6%	38.8%	48.8%	30.4%	50.3%
Khanewal	35.7%	55.2%	40.0%	56.7%	26.0%	55.3%	34.5%	52.1%	32.1%	57.1%	30.5%	49.4%	26.4%	50.0%	32.8%	48.6%
Kharan	63.5%	83.6%	59.3%	83.5%	43.5%	72.4%	53.2%	70.5%	48.0%	61.9%	58.6%	74.7%	45.7%	53.7%	30.9%	57.8%
Khushab	29.4%	54.6%	35.5%	52.7%	12.1%	38.9%	27.0%	38.4%	14.2%	39.5%	25.6%	38.3%	17.0%	37.0%	26.3%	40.9%
Khuzdar	61.1%	81.3%	62.4%	80.3%	56.7%	69.8%	62.8%	78.5%	44.9%	60.6%	34.7%	61.7%	25.2%	40.7%	45.2%	55.0%
Killa Abdulah	77.6%	79.3%	51.7%	86.1%	77.1%	88.1%	60.7%	87.7%	74.7%	81.7%	44.5%	83.7%	51.5%	56.0%	33.7%	54.7%
Killa Saifullah	69.7%	78.4%	67.7%	83.6%	54.9%	76.3%	59.8%	79.8%	56.4%	65.4%	53.3%	79.3%	72.0%	66.9%	61.0%	78.5%
Kohat	34.7%	52.8%	38.4%	59.8%	30.3%	51.9%	37.5%	57.1%	29.6%	43.9%	34.4%	53.4%	33.3%	46.8%	29.1%	48.8%
Kohistan	76.0%	86.4%	60.7%	83.7%	68.5%	83.7%	57.5%	77.0%	61.4%	85.7%	62.5%	88.0%	71.3%	88.8%	67.5%	83.5%
Kohlu					79.3%	88.8%	74.1%	91.6%	85.9%	93.9%	78.4%	95.0%	65.4%	77.8%	46.2%	74.4%
Lahore	15.4%	29.3%	24.1%	33.1%	14.6%	26.7%	20.8%	28.7%	11.4%	22.9%	19.2%	24.9%	11.2%	23.5%	17.0%	23.6%
Lakki Marwat	53.4%	58.0%	37.0%	67.9%	47.1%	57.4%	36.7%	64.3%	44.1%	51.8%	29.3%	55.7%	50.9%	55.1%	26.9%	59.3%
Larkana	61.3%	65.6%	45.9%	72.1%	64.8%	69.0%	46.5%	72.3%	49.1%	54.0%	28.7%	57.5%	49.4%	56.9%	32.3%	62.1%
Lasbela	59.5%	74.9%	54.3%	76.3%	63.9%	70.5%	48.5%	72.2%	48.0%	48.1%	49.0%	56.8%	67.0%	71.6%	55.7%	72.8%
Layyan	34.5%	47.3%	37.6%	52.0%	19.1%	46.4%	27.7%	44.5%	24.1%	46.9%	33.9%	49.4%	23.0%	49.0%	36.7%	50.2%
Lodhran	52.9%	67.5%	51.8%	71.1%	42.7%	63.6%	51.1%	67.8%	31.5%	56.3%	40.7%	55.4%	37.4%	54.5%	45.6%	60.4%
Loralai	63.1%	74.4%	49.0%	75.7%	58.1%	76.5%	52.0%	76.5%	46.1%	67.4%	45.6%	66.7%	85.2%	79.1%	67.9%	81.6%
Lower Dir	46.5%	65.0%	29.5%	67.3%	44.6%	63.5%	30.4%	66.1%	39.8%	61.7%	29.0%	64.5%	25.1%	44.7%	26.4%	50.8%
Malakand	36.1%	56.4%	34.5%	61.4%	29.9%	56.2%	30.9%	58.8%	21.6%	46.6%	26.0%	47.6%	26.0%	39.3%	22.0%	46.8%
Mandi Bahauddin	16.5%	45.2%	27.2%	42.7%	11.8%	35.8%	23.7%	35.2%	8.9%	32.6%	20.7%	31.7%	8.5%	28.0%	22.9%	31.0%
Mansehra	29.3%	48.6%	40.4%	55.8%	26.3%	43.1%	30.6%	45.5%	20.9%	42.2%	30.3%	43.1%	24.3%	51.5%	23.6%	42.0%
Mardan	34.9%	52.4%	32.7%	56.2%	30.4%	52.4%	38.7%	60.5%	33.5%	46.5%	36.0%	54.2%	29.9%	45.2%	31.9%	51.4%
Mastung	47.2%	62.9%	45.2%	67.8%	33.5%	55.3%	36.8%	52.9%	47.4%	64.3%	38.0%	64.2%	22.2%	42.0%	25.5%	41.1%
Mian wali	36.5%	49.4%	29.7%	50.5%	29.3%	40.3%	25.4%	46.2%	24.1%	44.5%	24.7%	43.9%	47.0%	61.4%	36.2%	54.7%
Matiari									44.2%	53.1%	37.0%	58.0%	16.0%	31.8%	28.3%	41.0%
Mirpurkhas	60.1%	66.5%	50.6%	69.2%	50.9%	60.7%	51.6%	66.0%	47.7%	52.7%	47.0%	59.3%	42.8%	52.5%	38.0%	53.7%
Multan	35.3%	56.4%	43.9%	59.1%	31.3%	51.2%	38.2%	52.5%	28.6%	50.7%	33.0%	48.3%	26.9%	43.1%	32.6%	43.5%
Musakhel	64.5%	58.3%	50.0%	77.7%	75.4%	87.3%	67.9%	88.6%	81.0%	91.3%	66.5%	83.8%	91.3%	81.9%	75.3%	90.6%
Muzaffargarh	55.7%	68.5%	47.3%	69.9%	46.7%	62.1%	47.1%	66.9%	48.0%	60.2%	44.4%	63.3%	45.5%	59.3%	45.4%	63.1%
Nankana Sahib									17.5%	35.7%	29.2%	38.7%	16.0%	39.2%	30.2%	41.7%
Narowal	14.3%	40.2%	30.3%	47.6%	9.2%	35.4%	28.9%	42.9%	10.2%	35.2%	21.2%	35.7%	8.4%	29.2%	21.7%	35.2%
Nasirabad	78.3%	80.7%	61.3%	83.3%	78.8%	75.7%	55.4%	81.1%	63.0%	70.2%	51.7%	77.9%	70.9%	73.4%	55.1%	81.4%
Naushehro Feroze	40.3%	55.1%	31.1%	58.5%	37.1%	52.7%	26.3%	52.5%	29.2%	27.6%	15.9%	35.7%	37.2%	48.6%	22.4%	44.4%

Continued on next page

(Continued) ANNEXURE: A2 DEPRIVATION IN EDUCATION INDICATORS AT DISTRICT LEVEL

	2004-05				2006-07				2008-09				2010-11			
Districts	**CE**	**YE**	**AE**	**HHE**	**CE**	**YE**	**AE**	**HHE**	**CE**	**YE**	**AE**	**HHE**	**CE**	**YE**	**AE**	**HHE**
Nawabshah/	59.3%	68.3%	50.2%	71.5%	48.1%	60.4%	38.8%	61.4%	44.0%	60.2%	36.4%	60.1%	47.4%	64.1%	35.7%	60.5%
Nowshera	36.4%	57.7%	42.7%	64.3%	24.6%	41.9%	35.8%	50.7%	26.5%	43.5%	32.4%	47.7%	24.7%	52.2%	34.9%	54.9%
Nushki									45.4%	59.7%	46.2%	69.1%	65.9%	67.8%	39.8%	76.0%
Okara	24.8%	52.7%	33.3%	51.3%	31.9%	55.0%	49.3%	60.2%	21.9%	46.3%	38.5%	51.1%	27.0%	49.5%	35.5%	49.7%
Pakpattan	36.0%	55.1%	41.1%	55.2%	32.2%	56.6%	41.9%	53.0%	26.7%	58.1%	39.1%	54.5%	30.7%	54.6%	39.9%	51.1%
Panjgur	74.4%	63.7%	60.9%	74.2%	43.3%	61.9%	36.6%	60.4%	32.8%	52.6%	27.5%	50.5%	47.5%	35.4%	57.4%	74.7%
Peshawar	40.5%	54.1%	33.9%	53.4%	36.6%	47.0%	33.5%	51.9%	31.3%	38.7%	30.9%	45.4%	30.5%	41.8%	28.7%	44.4%
Pishin	56.8%	73.6%	33.9%	74.5%	54.4%	70.4%	31.1%	71.3%	43.4%	59.1%	23.4%	60.0%	36.0%	52.9%	25.6%	41.2%
Quetta	48.9%	44.8%	29.8%	53.1%	37.6%	48.1%	28.6%	50.2%	37.2%	48.9%	23.7%	51.8%	29.1%	36.4%	24.6%	40.1%
Rahim Yar Khan	50.4%	67.7%	49.5%	68.5%	46.1%	67.0%	48.4%	67.8%	43.0%	60.8%	45.7%	62.4%	38.7%	59.9%	43.8%	59.0%
Rajanpur	45.1%	59.9%	46.4%	63.2%	53.6%	63.9%	49.0%	66.8%	53.6%	70.0%	53.3%	71.2%	46.2%	64.5%	52.8%	67.2%
Rawalpindi	11.6%	23.6%	17.3%	27.4%	7.8%	20.9%	13.7%	23.3%	6.1%	21.7%	13.2%	20.4%	6.9%	18.5%	11.6%	17.0%
Sahiwal	39.0%	67.1%	43.9%	65.5%	23.4%	46.5%	33.5%	46.3%	30.3%	46.6%	35.0%	48.9%	26.4%	45.9%	30.9%	44.1%
Sanghar	57.1%	69.3%	43.5%	68.1%	49.8%	65.7%	43.6%	64.5%	38.9%	56.9%	32.1%	56.8%	42.4%	57.5%	32.3%	57.0%
Sargodha	24.6%	52.9%	33.1%	49.7%	17.5%	38.6%	30.8%	42.1%	13.5%	37.7%	25.7%	35.7%	13.5%	40.8%	23.9%	36.4%
Shadatkot													60.4%	64.3%	38.1%	65.5%
Shaikhu pura	35.7%	60.5%	48.8%	62.6%	62.6%	76.2%	37.0%	78.2%	13.3%	42.2%	26.9%	40.9%	17.8%	45.3%	24.8%	39.8%
Shangla	66.6%	79.1%	46.1%	80.6%	64.4%	65.1%	43.3%	66.4%	56.5%	76.8%	50.0%	73.8%	58.8%	78.1%	47.5%	76.2%
Sherani													41.9%	79.0%	59.4%	76.7%
Shikarpur	53.1%	53.6%	39.8%	63.5%	10.6%	28.4%	19.2%	29.8%	43.2%	60.3%	31.2%	59.2%	49.1%	59.9%	29.2%	56.2%
Sialkot	10.4%	27.1%	20.4%	30.9%	50.2%	60.5%	38.3%	66.3%	6.1%	24.5%	15.8%	25.0%	6.8%	27.4%	15.8%	26.6%
Sibi	53.2%	59.0%	51.0%	66.7%	38.0%	49.7%	31.9%	49.0%	42.1%	55.1%	40.5%	56.9%	29.1%	39.1%	40.0%	47.5%
Sukkur	45.2%	42.2%	32.6%	52.4%	34.4%	46.0%	40.2%	58.0%	36.2%	51.1%	30.5%	50.6%	39.1%	44.6%	24.9%	46.3%
Swabi	33.0%	45.9%	40.4%	59.1%	23.3%	48.4%	33.1%	48.9%	54.8%	60.2%	36.1%	63.9%	18.8%	33.3%	32.9%	44.7%
Swat	45.9%	64.6%	34.6%	66.6%	36.2%	58.1%	29.9%	62.7%	43.3%	55.0%	30.9%	60.1%	33.3%	55.8%	29.0%	57.8%
T.T Singh	16.6%	36.5%	25.3%	39.1%	15.7%	41.5%	26.1%	41.3%	15.8%	35.7%	23.8%	36.2%	12.3%	35.1%	18.7%	30.9%
Tando M.Khan									50.7%	60.3%	43.0%	64.2%	49.8%	52.2%	42.0%	56.8%
Tando Allahyar									42.5%	60.1%	37.9%	58.4%	58.9%	68.0%	47.4%	65.1%
Tank	60.8%	59.7%	40.6%	66.7%	55.4%	61.4%	40.0%	67.9%	58.4%	57.3%	33.7%	66.3%	54.8%	60.7%	45.6%	65.1%
Tharparkar	57.6%	68.4%	53.9%	72.1%	52.7%	62.7%	50.4%	65.6%	15.7%	23.0%	18.2%	24.2%	40.7%	50.1%	37.9%	58.0%
Thatta	70.3%	78.5%	51.8%	79.8%	61.0%	77.3%	49.8%	71.5%	55.6%	72.5%	45.7%	65.4%	61.7%	79.2%	43.8%	68.7%
Umerkot									34.9%	57.1%	37.4%	54.6%	40.3%	53.2%	42.4%	59.7%
Upper Dir	65.8%	77.1%	51.3%	83.5%	48.4%	70.2%	42.7%	73.9%	44.8%	68.8%	30.9%	71.2%	34.3%	55.0%	34.2%	62.8%
Vehari	36.5%	56.2%	39.7%	59.2%	37.9%	57.3%	40.9%	58.0%	32.2%	50.2%	32.3%	49.8%	27.0%	54.2%	32.4%	50.3%
Washuk									40.6%	57.3%	45.2%	66.7%	35.4%	51.2%	38.8%	52.8%
Zhob	67.8%	78.3%	62.9%	82.6%	46.0%	59.6%	54.9%	70.6%	52.8%	57.1%	37.3%	65.3%	68.7%	76.3%	59.5%	76.6%
Ziarat	45.6%	72.0%	37.6%	68.7%	42.5%	62.6%	23.3%	60.5%	43.3%	52.6%	15.7%	52.6%	49.0%	62.9%	30.8%	50.6%

Continued on next page

(Continued) ANNEXURE: A2 DEPRIVATION IN EDUCATION INDICATORS AT DISTRICT LEVEL

	2012-13				2014-15				2019-20			
Districts	**CE**	**YE**	**AE**	**HHE**	**CE**	**YE**	**AE**	**HHE**	**CE**	**YE**	**AE**	**HHE**
Abbotabad	10.6%	29.5%	15.4%	26.2%	5.6%	39.0%	24.4%	36.6%	11.6%	13.9%	17.6%	24.1%
Attock	11.3%	30.8%	20.9%	32.1%	7.1%	32.1%	14.4%	25.6%	7.9%	10.5%	17.8%	21.6%
Awaran	29.4%	40.9%	30.0%	43.8%	34.8%	45.0%	24.2%	47.9%	62.2%	70.8%	79.5%	87.5%
Badin	55.4%	64.5%	45.0%	67.0%	49.5%	67.4%	44.4%	59.5%	70.6%	68.3%	63.1%	74.9%
Bahawalnagar	25.2%	46.1%	39.7%	51.7%	40.7%	63.3%	44.5%	60.0%	29.6%	39.2%	40.1%	51.1%
Bahawalpur	37.1%	56.3%	42.0%	55.5%	29.9%	54.8%	40.9%	56.3%	34.4%	41.1%	47.2%	55.9%
Bannu	36.7%	48.7%	23.4%	49.4%	36.0%	51.4%	19.5%	48.2%	44.4%	41.3%	27.8%	49.2%
Barkhan	85.0%	93.4%	77.0%	91.6%	57.8%	69.5%	62.9%	81.4%	65.8%	63.0%	65.3%	80.4%
Batagram	35.1%	53.9%	35.0%	62.0%	45.2%	67.3%	47.1%	72.9%	52.7%	40.4%	47.3%	64.4%
Bhakkar	30.5%	51.2%	37.4%	53.0%	25.9%	53.9%	33.4%	51.2%	27.7%	36.9%	34.1%	46.6%
Bolan/Kachhi	39.5%	54.4%	30.0%	54.3%	54.5%	69.0%	50.8%	67.4%	75.5%	57.1%	46.2%	68.1%
Buner	34.8%	66.8%	51.7%	75.4%	29.7%	48.2%	49.1%	67.8%	40.2%	44.2%	47.2%	67.2%
Chaghi	66.9%	73.9%	51.8%	83.2%	54.0%	68.0%	46.4%	70.0%				
Chakwal	2.4%	14.1%	10.4%	15.1%	3.8%	26.2%	13.2%	21.4%	9.6%	9.5%	11.1%	15.0%
Charsada	31.6%	48.2%	32.2%	51.3%	22.2%	44.7%	36.0%	53.4%	26.8%	29.9%	34.5%	47.8%
Chiniot	32.7%	52.5%	38.3%	51.0%	28.7%	47.9%	39.5%	52.4%	23.9%	38.5%	39.8%	49.7%
Chitral	19.4%	31.0%	15.1%	37.8%	16.5%	27.6%	18.3%	33.2%	28.7%	10.3%	27.0%	39.1%
D.G.Khan	41.1%	61.0%	42.6%	62.0%	40.7%	61.5%	44.5%	61.3%	45.6%	50.6%	45.0%	61.3%
D.I.Khan	56.1%	58.3%	38.5%	63.8%	48.0%	57.2%	34.3%	59.3%	49.9%	36.6%	50.7%	61.0%
Dadu	26.4%	34.0%	19.7%	38.4%	23.1%	38.6%	21.1%	39.0%	66.8%	48.0%	48.5%	63.5%
Dera Bugti	90.6%	92.9%	66.2%	88.9%	76.9%	76.5%	51.8%	77.6%	82.6%	88.2%	87.4%	93.3%
Duki									73.5%	37.3%	46.3%	62.3%
Faisalabad	15.8%	29.5%	23.9%	33.0%	13.9%	34.1%	23.5%	32.0%	21.5%	23.7%	25.7%	33.4%
Gawadar	39.4%	41.0%	58.0%	72.2%	26.7%	24.6%	43.3%	56.4%	48.5%	52.2%	36.9%	58.3%
Ghotki	49.4%	60.3%	26.2%	57.8%	60.0%	63.7%	37.1%	65.7%	74.9%	61.7%	46.4%	69.1%
Gujranwala	7.2%	31.8%	19.7%	30.7%	11.3%	32.2%	20.4%	30.5%	14.8%	19.3%	20.2%	28.7%
Gujrat	10.0%	29.4%	16.6%	27.4%	4.2%	25.0%	12.7%	23.4%	8.4%	12.2%	14.5%	19.9%
Hafizabad	11.0%	41.1%	32.6%	42.7%	14.6%	40.2%	30.1%	39.3%	16.1%	23.2%	28.9%	36.2%
Hangu	42.5%	56.8%	35.8%	62.1%	32.6%	48.1%	39.9%	59.6%	49.6%	41.3%	38.3%	63.8%
Haripur	8.5%	22.3%	13.3%	22.0%	7.6%	26.3%	13.6%	23.7%	11.7%	12.1%	18.4%	24.3%
Hernai	46.9%	56.1%	28.1%	67.4%	60.7%	76.8%	48.4%	76.5%	68.8%	59.9%	49.4%	70.1%
Hyderabad	30.1%	40.9%	26.6%	40.3%	35.5%	49.8%	37.7%	48.4%	36.2%	36.4%	32.1%	41.4%
Jacobabad	55.8%	61.0%	41.9%	66.5%	61.7%	68.0%	49.5%	70.4%	70.4%	60.6%	47.4%	64.8%
Jaffarabad	64.7%	72.4%	53.6%	74.3%	52.8%	59.1%	49.5%	65.2%	69.5%	61.5%	56.9%	69.4%
Jamshoro	43.5%	50.2%	34.6%	50.5%	38.8%	52.4%	38.4%	53.4%	59.9%	53.9%	53.2%	65.2%
Jhal Magsi	31.5%	56.1%	46.8%	60.8%	60.8%	78.2%	55.7%	80.3%				
Jhang	28.2%	51.4%	33.8%	49.1%	21.4%	44.1%	31.8%	45.3%	22.1%	32.4%	29.4%	41.6%
Jhelum	6.7%	26.4%	13.6%	24.2%	3.5%	20.7%	10.4%	18.4%	10.6%	11.4%	13.1%	18.1%
Kalat	31.4%	53.9%	34.4%	58.6%	29.0%	38.4%	33.4%	48.0%	52.5%	66.7%	50.2%	65.9%
Karachi	19.0%	24.9%	16.3%	23.0%	16.6%	24.2%	16.6%	24.8%	21.5%	22.1%	18.0%	24.8%

Continued on next page

(Continued) ANNEXURE: A2 DEPRIVATION IN EDUCATION INDICATORS AT DISTRICT LEVEL

	2012-13				2014-15				2019-20			
Districts	**CE**	**YE**	**AE**	**HHE**	**CE**	**YE**	**AE**	**HHE**	**CE**	**YE**	**AE**	**HHE**
Karak	30.2%	36.3%	18.9%	45.2%	20.1%	36.6%	15.2%	36.8%	30.5%	24.4%	16.2%	29.3%
Kashmore	52.2%	62.5%	37.7%	61.6%	68.6%	68.7%	52.1%	74.0%	79.9%	69.0%	57.5%	74.3%
Kasur	23.3%	45.1%	30.9%	47.5%	16.7%	43.3%	31.0%	43.4%	21.4%	24.4%	32.5%	40.5%
Kech/Turbat	52.5%	64.0%	55.8%	75.4%	41.3%	47.5%	33.7%	53.8%	43.2%	56.2%	34.3%	53.8%
Khairpur	38.8%	48.8%	30.4%	50.3%	28.3%	52.4%	30.5%	46.8%	64.2%	52.8%	38.1%	60.9%
Khanewal	26.4%	50.0%	32.8%	48.6%	41.8%	67.2%	50.0%	72.8%	30.6%	33.8%	32.6%	44.4%
Kharan	45.7%	53.7%	30.9%	57.8%	22.1%	43.1%	26.6%	40.5%	38.2%	44.3%	46.2%	62.0%
Khushab	17.0%	37.0%	26.3%	40.9%	36.2%	51.3%	35.4%	53.0%	15.9%	25.0%	25.6%	34.9%
Khuzdar	25.2%	40.7%	45.2%	55.0%	69.4%	78.5%	46.9%	85.6%	85.4%	80.0%	78.3%	91.9%
Killa Abdulah	51.5%	56.0%	33.7%	54.7%	54.9%	67.7%	34.8%	65.5%	69.6%	65.9%	53.8%	78.9%
Killa Saifullah	72.0%	66.9%	61.0%	78.5%	23.3%	35.0%	30.7%	44.3%	67.7%	51.8%	43.8%	74.9%
Kohat	33.3%	46.8%	29.1%	48.8%	74.0%	84.8%	62.8%	85.6%	46.2%	31.5%	33.0%	52.4%
Kohistan	71.3%	88.8%	67.5%	83.5%	56.9%	68.9%	48.2%	71.1%	79.6%	67.0%	54.7%	81.0%
Kohlu	65.4%	77.8%	46.2%	74.4%	6.1%	22.3%	15.0%	21.0%	60.9%	40.0%	16.5%	37.2%
Lahore	11.2%	23.5%	17.0%	23.6%	35.6%	49.8%	24.5%	50.5%	16.5%	17.4%	22.6%	28.1%
Lakki Marwat	50.9%	55.1%	26.9%	59.3%	37.5%	50.0%	27.0%	49.1%	46.2%	37.6%	25.7%	46.3%
Larkana	49.4%	56.9%	32.3%	62.1%	62.6%	67.0%	57.2%	69.8%	57.8%	65.8%	52.8%	69.3%
Lasbela	67.0%	71.6%	55.7%	72.8%	14.7%	43.2%	22.8%	39.5%	52.0%	56.5%	46.5%	56.7%
Layyan	23.0%	49.0%	36.7%	50.2%	35.7%	54.2%	37.6%	56.3%	21.6%	26.5%	26.7%	38.4%
Lodhran	37.4%	54.5%	45.6%	60.4%	39.5%	63.8%	42.4%	61.8%	49.0%	36.3%	42.0%	56.4%
Loralai	85.2%	79.1%	67.9%	81.6%	21.5%	39.5%	26.5%	49.7%	43.9%	38.9%	35.8%	52.0%
Lower Dir	25.1%	44.7%	26.4%	50.8%	11.8%	23.9%	21.4%	33.2%	37.9%	28.2%	34.5%	54.2%
Malakand	26.0%	39.3%	22.0%	46.8%	7.7%	31.7%	17.5%	28.6%	22.9%	17.7%	26.0%	38.3%
Mandi Bahauddin	8.5%	28.0%	22.9%	31.0%	15.6%	39.4%	26.3%	40.4%	10.9%	14.9%	21.0%	26.2%
Mansehra	24.3%	51.5%	23.6%	42.0%	12.3%	34.6%	31.5%	43.5%	23.5%	20.9%	28.5%	37.1%
Mardan	29.9%	45.2%	31.9%	51.4%	31.1%	32.9%	19.6%	40.4%	22.6%	21.7%	30.8%	42.6%
Mastung	22.2%	42.0%	25.5%	41.1%	45.5%	62.5%	36.0%	53.7%	55.6%	39.6%	29.3%	50.0%
Matiari	47.0%	61.4%	36.2%	54.7%	21.9%	34.5%	25.8%	39.5%	56.5%	51.6%	42.0%	57.8%
Mian wali	16.0%	31.8%	28.3%	41.0%	50.5%	63.8%	46.2%	60.7%	19.9%	26.9%	29.0%	35.3%
Mirpurkhas	42.8%	52.5%	38.0%	53.7%	31.2%	49.6%	32.8%	46.5%	72.7%	53.4%	52.7%	68.2%
Multan	26.9%	43.1%	32.6%	43.5%	50.4%	50.4%	56.1%	68.3%	33.3%	34.9%	34.6%	45.4%
Musakhel	91.3%	81.9%	75.3%	90.6%	37.5%	64.4%	44.3%	61.6%				
Muzaffargarh	45.5%	59.3%	45.4%	63.1%	15.7%	36.9%	23.0%	34.5%	48.6%	51.1%	51.4%	65.7%
Nankana Sahib	16.0%	39.2%	30.2%	41.7%	9.6%	26.9%	15.9%	27.8%	21.1%	24.1%	26.7%	34.0%
Narowal	8.4%	29.2%	21.7%	35.2%	58.7%	62.2%	55.2%	73.4%	8.3%	10.3%	12.5%	19.2%
Nasirabad	70.9%	73.4%	55.1%	81.4%	22.6%	35.1%	17.3%	36.5%	78.6%	58.5%	65.2%	75.9%
Naushehro Feroze	37.2%	48.6%	22.4%	44.4%	39.4%	52.9%	34.6%	52.8%	38.3%	48.1%	35.2%	48.9%
Nawabshah	47.4%	64.1%	35.7%	60.5%	21.3%	32.3%	32.2%	46.0%	58.4%	54.2%	42.1%	60.8%
Nowshera	24.7%	52.2%	34.9%	54.9%	39.9%	61.8%	32.9%	59.7%	31.1%	27.8%	29.6%	45.6%
Nushki	65.9%	67.8%	39.8%	76.0%	24.0%	49.4%	36.9%	49.1%	26.2%	24.3%	25.9%	42.1%
Okara	27.0%	49.5%	35.5%	49.7%	27.3%	55.2%	41.2%	53.9%	19.1%	28.1%	32.0%	39.9%

Continued on next page

(Continued) ANNEXURE: A2 DEPRIVATION IN EDUCATION INDICATORS AT DISTRICT LEVEL

	2012-13				2014-15				2019-20			
Districts	**CE**	**YE**	**AE**	**HHE**	**CE**	**YE**	**AE**	**HHE**	**CE**	**YE**	**AE**	**HHE**
Pakpattan	30.7%	54.6%	39.9%	51.1%	22.6%	41.7%	23.8%	43.4%	28.2%	37.0%	40.8%	50.8%
Panjgur	47.5%	35.4%	57.4%	74.7%	49.4%	72.7%	32.3%	67.4%				
Peshawar	30.5%	41.8%	28.7%	44.4%	25.5%	39.9%	27.3%	46.5%	36.0%	32.3%	29.5%	46.6%
Pishin	36.0%	52.9%	25.6%	41.2%	42.8%	63.7%	44.5%	62.7%	28.4%	33.6%	26.6%	38.6%
Quetta	29.1%	36.4%	24.6%	40.1%	58.8%	65.6%	51.9%	73.5%	44.4%	37.6%	29.0%	45.2%
Rahim Yar Khan	38.7%	59.9%	43.8%	59.0%	4.6%	15.9%	9.2%	14.2%	45.5%	48.4%	44.3%	58.2%
Rajanpur	46.2%	64.5%	52.8%	67.2%	19.7%	43.6%	30.3%	42.5%	54.6%	55.8%	57.0%	69.4%
Rawalpindi	6.9%	18.5%	11.6%	17.0%	43.4%	58.2%	37.7%	55.0%	12.2%	10.6%	11.6%	17.0%
Sahiwal	26.4%	45.9%	30.9%	44.1%	14.3%	37.7%	28.1%	38.9%	25.8%	30.6%	31.9%	39.4%
Sanghar	42.4%	57.5%	32.3%	57.0%	51.9%	68.9%	49.4%	69.6%	58.9%	54.5%	45.3%	61.0%
Sargodha	13.5%	40.8%	23.9%	36.4%	14.9%	38.6%	22.0%	33.8%	16.6%	24.9%	23.2%	31.7%
Shadatkot	60.4%	64.3%	38.1%	65.5%	57.0%	71.4%	49.4%	76.6%	59.9%	68.4%	55.7%	71.2%
Shaikhupura	17.8%	45.3%	24.8%	39.8%	65.7%	80.0%	54.9%	76.0%	16.1%	23.9%	27.1%	34.1%
Shangla	58.8%	78.1%	47.5%	76.2%	52.3%	62.8%	37.3%	61.9%	62.2%	47.3%	59.8%	76.6%
Sherani	41.9%	79.0%	59.4%	76.7%	7.4%	25.4%	8.9%	20.6%	69.9%	56.3%	64.3%	71.4%
Shikarpur	49.1%	59.9%	29.2%	56.2%	62.8%	62.8%	52.4%	68.6%	71.9%	67.0%	52.3%	71.2%
Sialkot	6.8%	27.4%	15.8%	26.6%	56.7%	82.1%	47.6%	64.6%	8.7%	10.8%	10.6%	16.6%
Sibi	29.1%	39.1%	40.0%	47.5%	43.9%	47.7%	24.6%	48.5%	60.8%	54.7%	52.3%	64.6%
Sujawal									67.8%	70.9%	63.2%	72.7%
Sukkur	39.1%	44.6%	24.9%	46.3%	18.5%	30.9%	38.6%	48.2%	54.9%	46.3%	34.7%	52.2%
Swabi	18.8%	33.3%	32.9%	44.7%	18.4%	34.1%	32.7%	48.2%	29.1%	24.4%	28.3%	43.9%
Swat	33.3%	55.8%	29.0%	57.8%	13.0%	34.9%	24.2%	33.0%	43.6%	29.2%	39.4%	56.7%
T.T Singh	12.3%	35.1%	18.7%	30.9%	55.2%	65.7%	47.0%	65.6%	17.1%	24.4%	21.9%	30.6%
Tando Allahyar	49.8%	52.2%	42.0%	56.8%	69.4%	80.7%	60.1%	75.0%	63.5%	54.3%	52.8%	66.1%
Tando M.Khan	58.9%	68.0%	47.4%	65.1%	50.7%	55.3%	32.3%	61.0%	72.6%	73.7%	64.0%	75.6%
Tank	54.8%	60.7%	45.6%	65.1%	54.7%	73.2%	44.7%	67.2%	39.2%	35.3%	45.4%	53.5%
Tharparkar	40.7%	50.1%	37.9%	58.0%	54.0%	77.1%	48.5%	66.2%	70.0%	69.9%	60.6%	76.7%
Thatta	61.7%	79.2%	43.8%	68.7%	55.3%	79.5%	65.1%	81.5%	70.2%	76.1%	66.0%	77.4%
Torgarh									70.2%	61.7%	71.4%	85.6%
Umerkot	40.3%	53.2%	42.4%	59.7%	57.7%	69.6%	52.4%	68.0%	72.8%	52.4%	52.0%	69.7%
Upper Dir	34.3%	55.0%	34.2%	62.8%	42.9%	62.1%	45.0%	70.3%	47.3%	36.1%	45.5%	67.8%
Vehari	27.0%	54.2%	32.4%	50.3%	28.9%	50.4%	41.1%	53.7%	33.2%	37.5%	44.0%	53.3%
Washuk	35.4%	51.2%	38.8%	52.8%	49.2%	51.2%	41.4%	62.8%	56.1%	48.8%	39.8%	55.9%
Zhob	68.7%	76.3%	59.5%	76.6%	54.4%	53.8%	54.6%	73.9%				
Ziarat	49.0%	62.9%	30.8%	50.6%	48.2%	68.6%	41.9%	71.3%	64.5%	58.3%	43.1%	68.6%

CE: Deprivation in Child Education, YE: Deprivation in Youngsters Education, AE: Deprivation in Adult Education, HHE: Deprivation in Household Education

ANNEXURE: A3 DEPRIVATION IN HEALTH INDICATORS AT DISTRICT LEVEL

	2004-05			2006-07			2008-09			2010-11		
Districts	**WHC**	**CHC**	**HHC**	**WHC**	**CHC**	**HHC**	**WHC**	**CHC**	**HHC**	**WHC**	**CHC**	**HHC**
Abbotabad	81.0%	28.2%	19.6%	76.7%	37.0%	26.0%	76.0%	30.6%	19.7%	55.7%	30.8%	14.6%
Attock	84.4%	19.8%	14.0%	65.8%	26.6%	16.8%	76.3%	20.9%	14.0%	68.6%	23.9%	16.3%
Awaran	100.0%	27.2%	20.4%	99.0%	17.6%	14.1%	100.0%	98.9%	55.1%	81.0%	14.3%	10.0%
Badin	78.1%	32.8%	25.5%	73.5%	42.7%	30.0%	80.5%	41.0%	28.3%	76.6%	43.5%	25.7%
Bahawalnagar	84.3%	26.4%	21.9%	81.7%	26.1%	21.0%	82.2%	27.4%	20.2%	76.2%	37.3%	26.0%
Bahawalpur	84.2%	48.1%	37.3%	84.0%	41.2%	31.3%	77.7%	37.1%	27.5%	70.5%	43.5%	29.7%
Bannu	88.0%	34.3%	25.0%	90.8%	51.9%	39.4%	85.4%	40.6%	31.2%	82.2%	30.8%	23.5%
Barkhan	98.7%	72.1%	54.8%	97.7%	48.3%	33.7%	98.1%	47.4%	28.7%	84.4%	25.3%	14.1%
Batagram	94.6%	36.5%	29.1%	85.2%	59.0%	45.7%	88.8%	40.9%	29.8%	84.6%	52.4%	38.7%
Bhakkar	98.1%	13.1%	11.5%	98.4%	19.9%	18.2%	91.0%	23.2%	21.0%	78.0%	25.7%	19.6%
Bolan/Kachhi	93.7%	44.9%	31.1%	88.8%	65.2%	49.2%	98.9%	60.7%	51.8%	91.5%	29.7%	23.7%
Buner	91.4%	62.7%	51.5%	94.6%	47.6%	39.9%	91.9%	30.6%	25.7%	85.1%	58.6%	46.8%
Chaghi	88.8%	60.2%	46.1%	93.8%	60.6%	35.7%	89.0%	66.7%	50.0%	91.4%	61.1%	34.3%
Chakwal	86.1%	25.1%	17.4%	57.5%	14.7%	8.7%	56.6%	24.6%	12.7%	50.3%	25.2%	9.9%
Charsada	85.1%	36.0%	30.3%	78.2%	21.9%	16.2%	90.0%	17.8%	15.5%	77.1%	26.4%	19.6%
Chiniot										70.5%	31.4%	20.3%
Chitral	90.2%	19.0%	15.4%	88.7%	16.5%	13.7%	84.2%	23.4%	18.8%	81.7%	24.6%	18.1%
D.G.Khan	96.2%	31.4%	27.6%	94.5%	34.3%	29.0%	94.3%	36.0%	27.4%	86.5%	27.3%	19.7%
D.I.Khan	97.4%	39.1%	31.4%	95.8%	39.4%	32.0%	95.8%	38.7%	31.8%	94.7%	45.4%	35.4%
Dadu	88.4%	30.4%	23.1%	88.0%	37.1%	27.4%	90.1%	20.1%	17.7%	85.1%	14.1%	12.2%
Dera Bugti	100.0%	97.1%	78.5%	93.7%	76.0%	57.8%	98.2%	73.5%	41.8%	98.2%	95.2%	60.1%
Faisalabad	74.1%	40.3%	28.4%	68.4%	40.0%	26.0%	66.4%	31.8%	20.0%	60.2%	29.6%	16.3%
Gawadar	87.6%	15.6%	13.0%	87.3%	33.1%	24.6%	83.1%	52.6%	32.5%	79.5%	53.1%	32.8%
Ghotki	87.6%	38.9%	29.9%	90.1%	50.0%	36.1%	85.2%	59.2%	38.6%	78.4%	38.3%	24.0%
Gujranwala	80.8%	22.9%	18.8%	69.0%	33.1%	21.3%	58.9%	28.1%	14.0%	54.0%	34.2%	18.5%
Gujrat	73.3%	29.8%	22.0%	68.0%	24.7%	13.8%	63.9%	24.0%	15.3%	42.8%	22.7%	8.7%
Hafizabad	79.7%	37.9%	31.1%	76.3%	30.9%	22.1%	81.9%	31.2%	24.9%	81.9%	30.9%	22.7%
Hangu	69.2%	53.6%	35.1%	84.7%	45.7%	36.6%	86.8%	31.8%	25.5%	86.1%	44.2%	30.7%
Haripur	80.5%	35.4%	24.1%	71.4%	40.2%	25.2%	61.0%	37.0%	24.0%	55.0%	28.5%	14.3%
Hernai										75.9%	81.5%	49.4%
Hyderabad	70.2%	24.0%	18.3%	58.8%	33.5%	18.4%	44.6%	27.1%	14.3%	44.4%	34.1%	18.1%
Jacobabad	91.3%	63.7%	47.4%	88.3%	61.0%	48.7%	83.5%	47.1%	33.3%	83.7%	42.9%	29.2%
Jaffarabad	76.0%	69.2%	40.7%	92.1%	62.4%	46.7%	88.7%	34.5%	27.9%	88.1%	76.3%	53.9%
Jamshoro							84.6%	26.6%	19.0%	77.7%	19.4%	12.8%

Continued on next page

WHC: Deprivation in Women Health Care, CHC: Deprivation in Child Health Care, HHC: Deprivation in Household Health Care

(Continued) ANNEXURE: A3 DEPRIVATION IN HEALTH INDICATORS AT DISTRICT LEVEL

	2004-05			2006-07			2008-09			2010-11		
Districts	**WHC**	**CHC**	**HHC**	**WHC**	**CHC**	**HHC**	**WHC**	**CHC**	**HHC**	**WHC**	**CHC**	**HHC**
Jhal Magsi	99.3%	54.8%	37.2%	99.4%	60.1%	47.4%	95.9%	63.4%	49.3%	86.9%	32.1%	22.9%
Jhang	88.3%	34.1%	26.8%	82.7%	33.8%	24.3%	77.7%	26.8%	18.2%	72.1%	31.4%	21.7%
Jhelum	78.8%	13.7%	8.5%	47.2%	25.8%	11.6%	44.4%	28.8%	11.8%	55.5%	24.1%	13.2%
Kalat	98.5%	34.2%	28.1%	92.1%	22.6%	16.0%	92.9%	72.8%	50.0%	93.5%	15.1%	10.5%
Karachi	39.0%	32.6%	15.8%	31.4%	31.6%	12.1%	88.8%	52.6%	42.0%	30.1%	22.4%	7.5%
Karak	87.0%	44.7%	35.4%	93.0%	53.2%	45.1%	86.4%	14.3%	11.2%	85.2%	51.9%	40.6%
Kashmore										85.9%	46.0%	26.3%
Kasur	88.0%	38.3%	31.7%	87.7%	42.5%	33.3%	79.3%	35.0%	25.8%	76.8%	33.9%	24.4%
Kech/Turbat	86.3%	39.8%	30.8%	92.9%	39.6%	28.5%	82.9%	49.0%	33.3%	86.7%	51.1%	39.0%
Khairpur	91.0%	49.5%	37.7%	82.9%	48.0%	36.3%	85.3%	32.4%	26.1%	85.5%	38.0%	26.9%
Khanewal	84.3%	37.5%	28.9%	86.5%	40.9%	31.1%	77.7%	30.9%	24.4%	77.8%	36.2%	26.6%
Kharan	82.9%	42.9%	33.8%	95.2%	29.9%	21.9%	96.3%	47.4%	37.7%	92.7%	24.8%	18.9%
Khushab	87.0%	25.2%	19.0%	76.1%	25.1%	18.8%	76.9%	24.2%	15.5%	68.4%	24.4%	16.4%
Khuzdar	97.5%	35.5%	28.7%	95.7%	11.5%	10.1%	95.1%	69.7%	51.4%	89.7%	28.3%	21.1%
Killa Abdulah	95.3%	65.8%	52.9%	84.9%	85.6%	60.1%	93.1%	45.9%	34.7%	88.0%	60.8%	50.8%
Killa Saifullah	96.3%	78.2%	62.4%	95.8%	60.9%	39.5%	97.9%	41.7%	28.3%	92.7%	38.9%	28.3%
Kohat	89.3%	50.9%	42.7%	86.6%	56.6%	44.5%	84.6%	40.4%	29.0%	76.3%	41.6%	24.9%
Kohistan	99.4%	66.4%	48.1%	94.4%	40.7%	28.5%	96.5%	69.4%	50.2%	98.0%	86.7%	61.8%
Kohlu				97.5%	60.5%	39.3%	97.9%	56.8%	33.8%	90.0%	65.7%	52.0%
Lahore	61.0%	28.3%	17.7%	55.6%	35.3%	19.8%	48.4%	33.7%	17.5%	45.2%	33.0%	15.5%
Lakki Marwat	89.3%	57.8%	46.0%	92.1%	58.9%	48.6%	91.6%	59.8%	47.5%	83.8%	58.2%	43.7%
Larkana	90.6%	34.0%	28.6%	94.4%	31.0%	23.9%	91.3%	23.7%	20.3%	78.4%	32.6%	21.5%
Lasbela	84.3%	59.0%	47.8%	85.7%	63.9%	52.1%	78.4%	51.6%	33.5%	83.1%	62.6%	48.0%
Layyan	89.1%	28.8%	25.4%	95.5%	24.6%	22.4%	95.6%	15.4%	14.2%	83.8%	22.9%	17.3%
Lodhran	92.9%	31.8%	25.7%	84.1%	32.0%	22.2%	84.8%	29.2%	22.9%	82.0%	32.7%	23.2%
Loralai	98.3%	39.9%	25.3%	95.5%	41.5%	27.5%	91.1%	22.1%	13.2%	95.7%	67.9%	48.5%
Lower Dir	83.8%	27.1%	22.4%	81.1%	30.9%	23.2%	70.4%	29.0%	20.9%	68.8%	33.3%	23.3%
Malakand	91.6%	37.7%	31.8%	85.1%	22.8%	18.8%	76.2%	23.9%	17.5%	65.7%	29.8%	20.4%
Mandi Bahauddin	84.3%	34.2%	24.9%	88.3%	25.8%	22.3%	80.3%	27.9%	19.1%	63.8%	30.9%	19.5%
Mansehra	90.9%	37.7%	27.6%	80.5%	38.9%	26.3%	82.5%	37.4%	27.1%	76.8%	34.9%	23.3%
Mardan	85.5%	38.6%	30.0%	85.6%	34.6%	28.5%	82.3%	32.0%	24.3%	74.3%	35.9%	25.4%
Mastung	96.4%	37.8%	31.2%	96.1%	6.0%	4.9%	85.3%	71.6%	56.7%	84.7%	12.7%	8.7%
Mian wali	94.3%	18.4%	15.8%	82.2%	18.4%	14.4%	77.3%	30.6%	22.5%	55.1%	22.7%	11.8%
Matiari							65.8%	27.8%	15.9%	69.3%	27.9%	17.0%
Mirpurkhas	81.9%	41.3%	32.0%	80.2%	45.7%	33.5%	82.8%	39.3%	28.6%	72.1%	36.7%	24.3%
Multan	80.0%	30.4%	22.5%	71.6%	35.4%	23.7%	65.3%	33.2%	22.0%	66.6%	26.6%	15.9%
Musakhel	100.0%	40.3%	30.6%	100.0%	57.9%	42.9%	99.3%	44.2%	36.4%	97.9%	35.1%	20.6%

Continued on next page

(Continued) ANNEXURE: A3 DEPRIVATION IN HEALTH INDICATORS AT DISTRICT LEVEL

	2004-05			2006-07			2008-09			2010-11		
Districts	**WHC**	**CHC**	**HHC**	**WHC**	**CHC**	**HHC**	**WHC**	**CHC**	**HHC**	**WHC**	**CHC**	**HHC**
Muzaffargarh	92.9%	43.0%	36.8%	91.4%	48.2%	39.0%	90.0%	40.2%	30.1%	88.6%	34.4%	26.7%
Nankana Sahib							66.7%	22.7%	15.2%	62.7%	23.3%	12.2%
Narowal	86.2%	28.0%	23.5%	81.4%	23.5%	17.3%	85.7%	21.1%	17.7%	84.3%	23.9%	18.2%
Nasirabad	97.5%	64.9%	46.0%	91.2%	76.6%	46.8%	96.9%	42.6%	33.8%	91.6%	81.9%	53.6%
Naushehro Feroze	90.6%	19.6%	15.2%	83.9%	28.9%	21.2%	83.7%	18.4%	13.9%	72.5%	38.5%	18.9%
Nawabshah	89.9%	62.5%	48.4%	88.9%	69.3%	55.4%	85.8%	53.0%	41.5%	76.9%	37.2%	24.0%
Nowshera	86.3%	37.4%	29.1%	79.4%	30.3%	24.8%	79.7%	22.5%	16.2%	70.5%	39.8%	28.5%
Nushki							93.4%	42.1%	36.0%	95.4%	58.7%	32.1%
Okara	81.7%	35.2%	28.6%	85.4%	37.3%	29.8%	79.2%	31.6%	24.7%	70.9%	31.3%	21.4%
Pakpattan	89.6%	29.4%	23.1%	84.0%	44.6%	32.5%	83.9%	33.9%	26.4%	78.8%	33.8%	25.4%
Panjgur	91.3%	46.1%	37.0%	94.7%	33.8%	25.5%	88.9%	55.9%	35.2%	87.1%	45.3%	30.9%
Peshawar	73.4%	34.1%	24.5%	73.1%	31.8%	23.0%	78.1%	17.0%	12.4%	56.5%	33.9%	17.5%
Pishin	92.1%	38.5%	29.3%	86.6%	46.9%	34.6%	87.0%	32.3%	22.3%	87.3%	61.6%	44.2%
Quetta	70.3%	36.0%	25.7%	76.9%	48.3%	34.3%	76.5%	42.4%	30.1%	57.9%	34.9%	17.1%
Rahim Yar Khan	91.1%	33.1%	27.2%	89.9%	31.6%	26.3%	89.9%	36.4%	29.6%	79.9%	39.6%	28.2%
Rajanpur	91.7%	33.6%	28.1%	95.1%	49.6%	41.4%	97.0%	30.7%	26.0%	93.1%	14.4%	12.1%
Rawalpindi	60.9%	25.2%	13.5%	46.1%	21.6%	11.1%	39.8%	21.3%	6.1%	41.8%	28.6%	10.8%
Sahiwal	85.4%	31.3%	25.6%	74.3%	35.6%	24.9%	81.7%	31.9%	22.6%	76.0%	32.0%	21.7%
Sanghar	93.0%	58.1%	45.8%	87.5%	53.7%	41.8%	79.8%	58.7%	43.8%	74.3%	45.2%	30.4%
Sargodha	75.9%	30.9%	21.1%	78.1%	30.5%	21.7%	73.9%	34.1%	24.6%	67.9%	31.6%	21.4%
Shadatkot							96.6%	39.0%	35.4%	83.9%	21.8%	16.7%
Shaikhu pura	89.2%	31.5%	25.7%	71.3%	31.1%	20.4%	76.4%	27.4%	19.4%	56.2%	31.9%	17.8%
Shangla	98.9%	59.3%	53.9%	96.4%	55.2%	44.5%	99.4%	41.6%	28.1%	87.9%	49.1%	35.6%
Sherani										96.0%	25.5%	17.8%
Shikarpur	84.9%	43.4%	32.9%	85.4%	53.9%	39.7%	77.9%	47.7%	31.2%	80.5%	43.2%	29.4%
Sialkot	66.6%	21.6%	13.5%	72.9%	26.1%	16.7%	66.7%	22.1%	14.1%	61.4%	25.1%	14.6%
Sibi	97.0%	55.5%	42.7%	85.6%	53.5%	39.4%	87.3%	49.5%	32.1%	61.4%	33.6%	21.4%
Sukkur	73.8%	39.3%	27.6%	65.0%	43.9%	28.2%	72.3%	39.0%	26.1%	56.8%	37.6%	20.8%
Swabi	87.9%	36.3%	32.3%	90.6%	38.3%	31.4%	81.1%	29.1%	22.7%	79.5%	35.1%	26.5%
Swat	91.3%	27.0%	24.2%	86.6%	29.1%	23.5%	77.3%	23.6%	17.4%	71.6%	34.4%	22.4%
T.T Singh	69.0%	32.0%	21.0%	65.6%	25.2%	17.7%	78.2%	25.0%	19.1%	70.8%	32.3%	19.5%
Tando M Khan							63.4%	41.5%	23.9%	66.1%	37.3%	25.0%
T.ando Allahyar							66.7%	39.1%	21.6%	71.6%	44.2%	28.4%
Tank	96.7%	32.1%	28.1%	96.0%	42.0%	35.1%	93.3%	36.0%	31.5%	82.6%	41.4%	26.2%
Tharparkar	97.8%	58.5%	49.9%	96.0%	61.1%	44.2%	26.1%	23.2%	7.9%	92.7%	45.5%	33.1%
Thatta	75.5%	48.7%	36.4%	77.0%	48.8%	33.5%	80.7%	41.5%	29.9%	82.1%	39.6%	27.9%
Umerkot							94.1%	57.4%	40.9%	79.4%	23.5%	14.8%
Upper Dir	92.3%	30.9%	25.4%	90.3%	34.0%	29.1%	93.5%	40.4%	35.2%	84.0%	17.7%	12.8%
Vehari	84.3%	23.4%	18.4%	84.8%	27.2%	20.5%	75.3%	29.0%	20.1%	68.2%	22.6%	13.2%

Continued on next page

(Continued) ANNEXURE: A3 DEPRIVATION IN HEALTH INDICATORS AT DISTRICT LEVEL

	2004-05			2006-07			2008-09			2010-11		
Districts	**WHC**	**CHC**	**HHC**	**WHC**	**CHC**	**HHC**	**WHC**	**CHC**	**HHC**	**WHC**	**CHC**	**HHC**
Washuk							95.9%	86.8%	67.3%	85.7%	33.9%	19.3%
Zhob	94.9%	37.3%	23.8%	98.7%	43.8%	33.5%	94.1%	44.5%	40.1%	96.5%	36.3%	21.9%
Ziarat	96.8%	38.5%	31.1%	84.4%	53.2%	40.8%	87.5%	35.3%	22.2%	70.7%	73.1%	56.6%

WHC: Deprivation in Women Health Care, CHC: Deprivation in Child Health Care, HHC: Deprivation in Household Health Care

(Continued) ANNEXURE: A3 DEPRIVATION IN HEALTH INDICATORS AT DISTRICT LEVEL

	2012-13			2014-15			2019-20		
Districts	**WHC**	**CHC**	**HHC**	**WHC**	**CHC**	**HHC**	**WHC**	**CHC**	**HHC**
Abbotabad	40.0%	19.7%	9.6%	47.1%	30.1%	13.5%	39.7%	24.1%	8.9%
Attock	51.0%	31.1%	13.3%	41.9%	28.7%	10.0%	29.8%	28.6%	7.6%
Awaran	71.7%	56.7%	17.8%	80.7%	42.8%	25.0%	92.4%	91.0%	62.1%
Badin	64.7%	49.7%	27.0%	55.7%	40.5%	22.3%	65.1%	43.1%	22.5%
Bahawalnagar	68.3%	41.2%	25.3%	63.9%	39.1%	24.1%	50.0%	29.4%	13.7%
Bahawalpur	75.7%	35.9%	26.9%	66.6%	37.9%	23.8%	45.8%	34.6%	15.1%
Bannu	75.5%	55.1%	36.6%	82.4%	56.1%	43.9%	72.5%	35.2%	22.5%
Barkhan	89.4%	20.0%	15.3%	82.3%	65.6%	46.0%	46.2%	86.0%	20.2%
Batagram	74.5%	53.1%	35.2%	67.9%	64.6%	41.4%	63.6%	37.5%	17.8%
Bhakkar	69.1%	32.7%	24.0%	61.0%	40.0%	22.3%	37.5%	31.4%	10.5%
Bolan/Kachhi	87.0%	74.3%	54.9%	73.9%	71.8%	49.5%	49.1%	74.9%	22.7%
Buner	70.6%	39.8%	27.4%	65.3%	34.4%	18.4%	50.4%	36.9%	17.5%
Chaghi	93.7%	76.1%	60.9%	71.8%	92.1%	55.4%	30.6%	22.2%	5.1%
Chakwal	39.9%	27.4%	6.7%	35.1%	29.5%	10.0%	42.9%	26.8%	11.1%
Charsada	63.8%	27.3%	14.7%	59.8%	35.5%	20.8%	30.7%	35.3%	8.6%
Chiniot	51.9%	35.2%	18.8%	55.6%	37.5%	19.5%	50.0%	20.0%	10.6%
Chitral	51.1%	25.1%	14.1%	72.1%	19.5%	14.6%	84.3%	26.7%	20.2%
D.G.Khan	81.5%	27.6%	21.6%	86.3%	32.0%	26.7%	78.1%	35.1%	19.8%
D.I.Khan	87.7%	53.0%	40.0%	82.9%	48.3%	34.0%	45.1%	22.2%	10.2%
Dadu	81.1%	19.4%	13.4%	70.2%	34.5%	22.2%	92.9%	17.7%	10.1%
Dera Bugti	96.5%	77.4%	57.9%	87.5%	78.5%	61.3%	58.3%	43.6%	20.8%
Faisalabad	54.9%	33.2%	18.2%	51.9%	33.7%	16.9%	30.7%	31.5%	9.0%
Gawadar	56.9%	42.3%	26.9%	66.0%	76.8%	48.9%	81.0%	20.9%	10.4%
Ghotki	76.4%	49.3%	32.7%	79.2%	47.9%	33.3%	61.0%	32.8%	17.5%
Gujranwala	50.2%	31.6%	14.4%	43.5%	35.7%	14.8%	21.6%	29.8%	5.8%
Gujrat	36.6%	28.0%	8.9%	34.5%	24.8%	8.1%	19.4%	23.5%	4.2%
Hafizabad	66.8%	30.2%	16.8%	62.3%	30.7%	18.1%	41.8%	18.9%	8.4%
Hangu	68.4%	56.6%	25.9%	52.6%	34.4%	16.4%	33.2%	32.7%	9.0%
Haripur	46.3%	27.3%	13.4%	45.3%	29.3%	15.3%	29.9%	20.8%	6.7%
Hernai	79.6%	58.0%	42.4%	89.6%	88.8%	67.7%	56.4%	70.1%	28.0%
Hyderabad	32.0%	29.6%	11.2%	37.7%	30.6%	10.8%	33.6%	32.6%	8.7%
Jacobabad	87.9%	68.1%	48.8%	74.2%	52.0%	29.7%	47.1%	13.5%	4.1%
Jaffarabad	92.5%	62.7%	39.7%	88.6%	66.8%	51.1%	51.3%	25.2%	12.0%
Jamshoro	59.8%	32.0%	17.4%	56.0%	35.2%	18.9%	39.0%	35.9%	12.2%
Jhal Magsi	62.2%	76.5%	47.9%	82.1%	89.0%	64.8%			
Jhang	69.1%	35.3%	24.6%	65.4%	36.0%	21.3%	38.6%	31.2%	10.5%

Continued on next page

(Continued) ANNEXURE: A3 DEPRIVATION IN HEALTH INDICATORS AT DISTRICT LEVEL

	2012-13			2014-15			2019-20		
Districts	**WHC**	**CHC**	**HHC**	**WHC**	**CHC**	**HHC**	**WHC**	**CHC**	**HHC**
Jhelum	34.7%	21.8%	6.2%	25.2%	21.9%	5.4%	11.9%	35.1%	3.1%
Kalat	62.0%	19.6%	6.5%	79.5%	35.3%	23.9%	67.3%	43.1%	22.1%
Karachi	25.5%	25.2%	7.7%	19.7%	34.9%	6.0%	24.4%	49.1%	10.5%
Karak	72.9%	46.9%	33.9%	77.9%	50.2%	35.7%	62.5%	39.5%	13.0%
Kashmore	92.2%	75.4%	54.7%	81.0%	38.8%	24.8%	62.4%	36.6%	17.1%
Kasur	55.1%	34.6%	17.5%	58.7%	41.0%	22.3%	37.1%	36.2%	13.5%
Kech/Turbat	75.8%	57.8%	34.3%				72.5%	16.8%	9.5%
Khairpur	78.3%	36.5%	23.3%	77.8%	41.2%	28.8%	58.8%	33.3%	16.6%
Khanewal	68.9%	33.0%	21.4%	57.6%	28.9%	15.0%	44.1%	41.7%	15.5%
Kharan	80.7%	80.3%	52.9%	75.9%	90.1%	53.5%	94.7%	41.7%	34.5%
Khushab	69.7%	26.6%	19.5%	56.5%	29.2%	17.6%	30.3%	29.6%	8.5%
Khuzdar	76.5%	17.2%	9.3%	85.5%	50.9%	37.0%	98.7%	84.7%	64.7%
Killa Abdulah	85.2%	81.9%	60.3%	81.9%	93.9%	72.2%	63.8%	78.2%	31.7%
Killa Saifullah	82.4%	22.2%	15.2%	96.0%	78.7%	66.5%	53.3%	80.4%	36.9%
Kohat	67.0%	39.8%	26.7%	61.9%	34.2%	17.9%	41.9%	36.4%	12.9%
Kohistan	92.4%	81.5%	59.8%	90.1%	84.9%	67.0%	80.7%	59.1%	40.9%
Kohlu	95.0%	56.2%	38.8%	96.8%	39.1%	30.7%	68.4%	48.1%	2.5%
Lahore	34.3%	32.8%	12.1%	25.5%	33.7%	10.0%	23.6%	31.0%	8.6%
Lakki Marwat	78.4%	65.5%	49.6%	90.6%	63.2%	51.9%	77.6%	34.5%	24.2%
Larkana	84.5%	35.1%	29.3%	62.8%	40.3%	19.8%	67.8%	79.3%	28.2%
Lasbela	62.5%	67.9%	37.4%	74.7%	55.3%	40.0%	42.0%	73.4%	20.8%
Layyan	72.7%	19.1%	14.7%	76.9%	23.2%	17.6%	61.5%	24.5%	13.5%
Lodhran	74.7%	28.9%	21.1%	68.8%	23.8%	14.0%	46.0%	27.6%	12.0%
Loralai	94.4%	68.3%	47.2%	96.7%	86.3%	45.0%	44.1%	60.2%	21.9%
Lower Dir	68.0%	27.5%	17.2%	63.3%	31.5%	18.3%	43.5%	26.4%	10.3%
Malakand	55.7%	24.4%	13.8%	60.1%	32.2%	16.1%	33.3%	15.4%	4.9%
Mandi Bahauddin	57.2%	25.9%	13.3%	55.2%	27.0%	13.9%	23.8%	24.5%	5.7%
Mansehra	64.7%	35.0%	20.9%	62.2%	33.6%	19.9%	54.6%	25.6%	15.8%
Mardan	62.9%	27.9%	15.6%	46.4%	32.6%	15.9%	39.6%	30.2%	9.3%
Mastung	68.7%	23.1%	12.8%	83.6%	51.7%	35.5%	82.5%	39.1%	18.2%
Matiari	40.3%	32.5%	10.9%	43.0%	34.6%	14.2%	37.5%	35.6%	10.7%
Mian wali	65.4%	31.3%	22.0%	54.0%	28.3%	14.3%	40.6%	27.0%	9.4%
Mirpurkhas	73.4%	59.1%	40.9%	72.2%	47.4%	29.1%	63.7%	65.6%	33.7%
Multan	63.3%	23.2%	13.1%	50.6%	30.3%	11.9%	47.7%	33.6%	13.2%
Musakhel	94.4%	88.6%	63.1%	94.0%	79.9%	38.4%			
Muzaffargarh	76.2%	28.3%	18.2%	70.2%	34.4%	23.1%	60.1%	34.3%	13.8%
Nankana Sahib	56.4%	26.9%	12.2%	36.5%	30.0%	10.4%	26.7%	31.2%	8.7%
Narowal	74.4%	27.8%	18.9%	72.1%	36.7%	25.7%	73.5%	25.8%	19.0%
Nasirabad	93.1%	70.3%	55.3%	89.1%	68.2%	50.6%	38.2%	36.3%	13.3%

Continued on next page

(**Continued) ANNEXURE: A3 DEPRIVATION IN HEALTH INDICATORS AT DISTRICT LEVEL**

	2012-13			2014-15			2019-20		
Districts	**WHC**	**CHC**	**HHC**	**WHC**	**CHC**	**HHC**	**WHC**	**CHC**	**HHC**
Naushehro Feroze	69.4%	37.7%	21.4%	62.6%	40.7%	20.7%	63.3%	17.2%	11.6%
Nawabshah	72.3%	41.4%	26.0%	77.4%	31.5%	19.8%	53.3%	37.3%	18.7%
Nowshera	60.2%	33.1%	18.9%	56.3%	29.3%	14.9%	49.7%	33.2%	15.0%
Nushki	98.6%	72.6%	48.6%	76.5%	81.6%	48.7%	92.9%	30.5%	24.6%
Okara	72.4%	30.5%	20.2%	75.9%	28.4%	22.2%	37.8%	30.3%	10.1%
Pakpattan	74.1%	28.4%	19.6%	72.0%	31.0%	22.7%	37.5%	41.7%	12.1%
Peshawar	49.0%	29.8%	13.1%	45.1%	23.2%	10.5%	42.3%	30.5%	11.3%
Pishin	80.2%	54.1%	41.0%	88.3%	85.9%	65.4%	71.5%	37.4%	20.1%
Quetta	60.2%	30.8%	20.2%	60.7%	57.1%	32.9%	41.2%	51.2%	16.9%
Rahim Yar Khan	78.6%	42.4%	31.5%	69.8%	35.9%	23.8%	56.6%	36.5%	19.4%
Rajanpur	83.4%	21.3%	16.2%	93.3%	21.1%	18.2%	79.9%	23.5%	17.3%
Rawalpindi	27.1%	23.6%	5.7%	16.0%	33.2%	6.5%	25.9%	28.3%	6.6%
Sahiwal	65.2%	29.1%	16.0%	50.5%	29.6%	14.6%	41.8%	36.2%	12.1%
Sanghar	71.4%	47.2%	31.1%	67.8%	34.4%	17.1%	44.1%	31.0%	11.3%
Sargodha	59.1%	33.0%	18.5%	49.7%	35.0%	15.9%	30.0%	28.6%	7.0%
Shadatkot	80.6%	24.4%	18.3%	73.9%	66.8%	44.4%	66.9%	83.7%	30.5%
Shaikhupura	48.3%	32.9%	12.5%	46.0%	33.1%	15.7%	31.7%	30.1%	10.0%
Shangla	75.6%	52.5%	35.8%	85.5%	65.6%	46.0%	61.5%	48.3%	22.1%
Sherani	91.4%	78.5%	63.3%	98.9%	58.2%	49.5%	50.5%	67.2%	37.3%
Shikarpur	69.0%	32.3%	17.2%	65.7%	53.8%	31.0%	59.7%	59.6%	30.1%
Sialkot	49.8%	22.5%	10.4%	51.5%	30.8%	13.9%	58.0%	29.5%	16.6%
Sibi	60.5%	42.4%	24.5%	71.8%	73.8%	53.1%	17.5%	81.3%	11.8%
Sujawal				61.7%	55.2%	30.9%	57.3%	68.8%	34.7%
Sukkur	55.5%	35.5%	18.3%	60.6%	39.9%	24.6%	50.2%	42.7%	15.5%
Swabi	74.5%	25.0%	19.0%	60.8%	20.8%	7.0%	44.2%	25.4%	12.2%
Swat	65.4%	30.3%	19.3%	60.1%	25.6%	12.0%	43.2%	21.7%	7.2%
T.T Singh	54.2%	31.4%	17.8%	55.4%	29.6%	17.4%	23.0%	27.5%	5.9%
Tando Allahyar	60.3%	35.1%	20.6%	55.8%	36.7%	17.3%	39.4%	46.5%	14.2%
Tando Muhammad Khan	57.9%	43.5%	27.8%	60.2%	49.1%	23.2%	63.0%	48.4%	21.6%
Tank	92.2%	45.7%	35.7%	86.0%	59.9%	43.7%	93.3%	27.5%	12.6%
Tharparkar	78.7%	51.1%	36.0%	92.2%	70.6%	50.2%	86.1%	86.4%	48.3%
Thatta	65.6%	57.7%	34.8%	64.7%	59.1%	40.5%	39.4%	58.1%	17.1%
Torgarh	92.6%	96.6%	65.3%	89.9%	88.9%	67.4%	92.6%	34.0%	29.2%
Umerkot	79.0%	60.2%	42.5%	83.2%	55.2%	35.0%	64.7%	69.1%	37.2%
Upper Dir	84.2%	43.2%	34.6%	83.1%	38.5%	30.0%	56.7%	22.6%	13.4%
Vehari	63.4%	31.3%	18.2%	62.0%	36.3%	22.1%	39.3%	24.5%	8.7%
Washuk	60.6%	44.5%	19.8%	81.6%	79.7%	49.0%	81.5%	47.0%	29.5%
Zhob	92.9%	71.9%	54.3%	91.0%	58.7%	38.4%			
Ziarat	75.7%	47.1%	31.0%	83.5%	80.2%	62.3%	67.7%	72.4%	36.6%

WHC: Deprivation in Women Health Care, CHC: Deprivation in Child Health Care, HHC: Deprivation in Household Health Care

ANNEXURE: A4 DEPRIVATION IN LIVING STANDARD INDICATORS AT DISTRICT LEVEL

	2004-05					2006-07					2008-09					2010-11				
Districts	**HQ**	**BF**	**BHG**	**TRA**	**HLS**	**HQ**	**BF**	**BHG**	**TRA**	**HLS**	**HQ**	**BF**	**BHG**	**TRA**	**HLS**	**HQ**	**BF**	**BHG**	**TRA**	**HLS**
Abbotabad	21.6%	42.9%	6.8%	88.4%	45.7%	23.6%	22.6%	5.1%	79.3%	35.7%	16.7%	35.2%	2.3%	84.8%	45.8%	20.5%	22.8%	2.5%	81.9%	32.1%
Attock	10.0%	10.5%	11.3%	68.1%	19.0%	15.1%	4.8%	5.0%	58.9%	14.3%	19.1%	1.6%	2.9%	65.2%	17.7%	10.8%	4.4%	5.0%	68.5%	14.4%
Awaran	52.5%	40.6%	75.3%	63.1%	72.5%	77.8%	40.0%	70.6%	45.6%	71.6%	79.4%	25.0%	77.2%	65.6%	85.3%	52.2%	1.3%	50.0%	19.1%	38.1%
Badin	51.6%	23.3%	61.1%	85.8%	69.7%	72.1%	27.6%	64.9%	83.2%	79.2%	62.1%	17.3%	53.7%	79.8%	70.9%	48.1%	17.9%	55.0%	69.5%	62.8%
Bahawalnagar	24.1%	5.6%	28.5%	52.8%	32.3%	43.0%	9.3%	22.1%	49.9%	39.9%	47.6%	7.3%	27.0%	44.6%	43.8%	29.1%	6.3%	23.3%	45.3%	32.6%
Bahawalpur	47.9%	24.5%	41.4%	62.6%	55.0%	57.7%	19.3%	31.7%	55.5%	51.1%	54.9%	19.6%	32.1%	52.0%	56.6%	38.7%	23.4%	33.7%	49.1%	44.1%
Bannu	8.6%	23.6%	16.4%	55.0%	26.1%	34.8%	22.6%	10.8%	52.2%	40.8%	21.0%	19.5%	6.0%	50.1%	28.1%	17.0%	15.9%	12.2%	39.3%	22.3%
Barkhan	57.3%	67.4%	59.1%	77.1%	80.5%	40.7%	57.0%	48.5%	41.0%	56.1%	81.4%	88.4%	47.7%	14.8%	79.8%	88.4%	45.3%	62.2%	42.4%	86.9%
Batagram	53.9%	48.1%	33.3%	97.9%	67.8%	62.9%	52.7%	42.0%	94.9%	76.6%	35.6%	34.5%	10.6%	93.1%	51.6%	35.7%	35.0%	12.6%	86.0%	56.6%
Bhakkar	9.6%	11.9%	13.7%	52.3%	19.3%	31.4%	9.3%	8.4%	54.3%	30.2%	30.1%	27.9%	9.4%	59.1%	41.4%	27.6%	16.9%	15.9%	60.0%	33.7%
Bolan/Kachhi	43.2%	38.0%	27.4%	57.9%	50.9%	63.3%	27.3%	20.5%	29.8%	43.8%	59.2%	47.0%	46.3%	63.4%	71.6%	61.5%	19.1%	46.2%	47.6%	61.0%
Buner	63.1%	45.0%	35.3%	90.2%	70.2%	55.0%	8.1%	10.0%	83.8%	53.3%	43.4%	10.0%	9.7%	83.9%	43.9%	45.8%	18.3%	17.4%	91.2%	52.9%
Chaghi	39.5%	42.5%	66.0%	82.0%	76.0%	85.1%	9.4%	50.5%	53.5%	67.3%	84.3%	4.4%	6.2%	18.0%	21.8%	76.4%	43.3%	71.5%	39.1%	71.5%
Chakwal	3.6%	10.6%	3.1%	61.1%	11.9%	7.7%	1.3%	2.6%	62.5%	8.2%	9.1%	0.3%	1.8%	56.3%	8.7%	8.0%	2.0%	3.2%	62.4%	10.3%
Charsada	20.1%	8.9%	12.9%	64.7%	27.4%	46.7%	0.2%	5.6%	72.1%	41.2%	44.6%	1.0%	3.1%	52.7%	32.9%	31.8%	7.1%	3.3%	61.7%	27.6%
Chiniot																25.8%	6.8%	15.6%	44.4%	26.2%
Chitral	40.5%	26.2%	24.6%	94.5%	54.6%	67.1%	24.5%	28.1%	95.1%	77.2%	39.9%	21.5%	16.5%	92.0%	50.0%	58.8%	21.2%	20.4%	94.3%	70.8%
D.G.Khan	37.1%	27.6%	47.5%	59.0%	57.5%	36.1%	41.9%	36.8%	45.2%	47.8%	42.7%	40.6%	32.7%	38.9%	48.8%	46.0%	31.3%	38.3%	40.3%	44.9%
D.I.Khan	17.9%	14.3%	16.1%	66.3%	29.3%	45.3%	22.8%	21.9%	36.1%	42.9%	39.9%	39.3%	17.6%	32.7%	39.7%	30.1%	7.9%	13.8%	41.6%	27.3%
Dadu	29.7%	33.4%	46.8%	73.6%	59.1%	46.6%	35.5%	38.0%	67.1%	59.6%	32.0%	51.4%	15.1%	51.8%	52.3%	30.1%	14.9%	23.4%	41.0%	31.4%
Dera Bugti	98.4%	85.4%	93.8%	58.9%	97.9%	88.9%	92.0%	54.0%	51.7%	92.6%	81.3%	74.7%	59.4%	44.9%	82.3%	93.5%	75.0%	76.1%	40.3%	91.8%
Faisalabad	10.4%	6.6%	11.9%	53.8%	17.5%	21.4%	1.5%	7.1%	52.5%	20.7%	18.1%	1.2%	4.8%	46.4%	19.7%	15.2%	1.0%	5.6%	44.3%	13.7%
Gawadar	66.0%	60.3%	52.4%	52.4%	70.9%	61.7%	25.8%	53.0%	60.9%	66.3%	59.8%	11.4%	30.2%	53.8%	56.6%	75.2%	44.4%	36.2%	65.1%	71.9%
Ghotki	15.2%	11.8%	32.3%	62.5%	35.6%	56.7%	18.4%	30.2%	58.2%	54.0%	40.1%	13.4%	28.6%	53.4%	42.7%	31.5%	11.1%	34.0%	52.5%	39.3%
Gujranwala	13.5%	5.0%	7.6%	51.2%	14.7%	17.5%	2.9%	3.9%	58.3%	17.8%	13.6%	0.2%	1.3%	45.8%	11.0%	8.0%	0.2%	3.0%	51.9%	8.4%
Gujrat	3.9%	4.5%	4.2%	61.3%	8.4%	14.2%	1.0%	2.3%	55.8%	12.7%	9.3%	0.3%	0.5%	42.2%	8.0%	9.2%	0.3%	3.6%	52.5%	9.1%
Hafizabad	13.5%	5.6%	20.4%	61.4%	26.6%	34.4%	1.6%	13.1%	53.9%	31.1%	24.7%	0.3%	2.7%	47.2%	18.1%	18.4%	2.8%	7.3%	41.1%	16.4%
Hangu	31.3%	10.7%	4.9%	82.1%	35.3%	52.7%	15.1%	9.5%	79.8%	47.8%	43.2%	5.2%	3.3%	59.7%	35.8%	37.4%	4.3%	11.6%	73.7%	37.0%
Haripur	16.9%	28.6%	11.3%	86.1%	35.5%	26.2%	23.3%	7.7%	84.2%	33.7%	17.4%	24.5%	2.5%	79.7%	29.4%	17.0%	19.8%	0.6%	82.9%	25.8%
Hernai																19.4%	16.3%	10.4%	6.6%	13.5%
Hyderabad	16.0%	19.4%	25.9%	80.3%	37.8%	31.7%	9.7%	34.0%	78.0%	45.4%	12.4%	6.1%	10.8%	57.1%	27.9%	14.8%	5.0%	9.2%	51.8%	18.6%
Jacobabad	23.9%	31.0%	39.6%	52.0%	42.4%	51.3%	39.7%	25.6%	48.1%	49.1%	51.6%	29.1%	31.6%	59.3%	54.0%	32.2%	10.7%	47.1%	61.2%	50.0%
Jaffarabad	34.9%	26.4%	37.0%	51.0%	44.7%	73.1%	47.1%	28.6%	45.7%	65.4%	63.9%	29.3%	32.5%	45.4%	55.4%	53.6%	50.0%	57.0%	61.8%	68.5%
Jamshoro											34.6%	38.2%	27.2%	70.3%	53.6%	39.5%	17.8%	26.8%	57.5%	44.2%
Jhal Magsi	58.0%	85.5%	55.3%	68.6%	81.9%	74.5%	68.6%	29.6%	57.5%	74.5%	61.7%	50.0%	39.8%	40.4%	63.7%	54.9%	20.3%	41.0%	33.1%	47.4%
Jhang	22.1%	14.1%	35.4%	57.6%	39.3%	49.3%	23.9%	31.1%	53.6%	50.9%	25.1%	20.2%	21.7%	47.5%	33.1%	33.6%	22.2%	27.6%	50.0%	41.4%

Continued on next page

HQ: Deprivation in House Quality, BF: Deprivation in Basic Facility, BHG: Deprivation in Basic Household Goods, TRA: Deprivation in Transportation HLS: Deprivation in Household Living Standard

(Continued) ANNEXURE: A4 DEPRIVATION IN LIVING STANDARD INDICATORS AT DISTRICT LEVEL

	2004-05					2006-07					2008-09					2010-11				
Districts	**HQ**	**BF**	**BHG**	**TRA**	**HLS**	**HQ**	**BF**	**BHG**	**TRA**	**HLS**	**HQ**	**BF**	**BHG**	**TRA**	**HLS**	**HQ**	**BF**	**BHG**	**TRA**	**HLS**
Jhelum	3.0%	10.8%	5.7%	74.4%	14.4%	10.8%	3.2%	0.5%	74.7%	10.8%	7.0%	0.7%	0.2%	68.3%	6.8%	12.1%	10.1%	5.3%	60.9%	16.1%
Kalat	50.0%	31.6%	44.4%	62.0%	57.9%	76.0%	20.2%	40.2%	34.5%	51.4%	58.2%	35.7%	27.8%	60.5%	64.8%	60.2%	13.4%	31.1%	29.8%	41.9%
Karachi	5.6%	11.0%	8.6%	60.7%	13.3%	5.5%	7.9%	6.5%	53.7%	10.7%	48.3%	45.2%	13.1%	82.0%	67.6%	3.4%	5.0%	2.9%	47.5%	6.6%
Karak	27.6%	64.4%	11.6%	81.3%	64.6%	44.9%	50.7%	9.7%	78.0%	64.3%	37.7%	6.1%	38.4%	44.1%	41.6%	57.9%	59.9%	29.0%	82.9%	72.9%
Kashmore																36.0%	7.0%	40.6%	56.1%	43.2%
Kasur	14.3%	4.2%	16.6%	59.5%	24.4%	37.5%	1.4%	10.8%	57.8%	33.1%	37.8%	2.5%	7.1%	49.4%	30.0%	31.8%	4.7%	10.1%	57.2%	28.5%
Kech/Turbat	34.4%	35.7%	40.0%	46.9%	48.9%	71.9%	0.0%	45.3%	45.8%	51.8%	54.2%	6.3%	31.0%	56.3%	48.7%	78.8%	32.4%	58.9%	51.1%	70.3%
Khairpur	24.1%	26.1%	40.8%	67.1%	46.4%	60.0%	21.4%	35.6%	59.1%	56.3%	44.3%	7.9%	22.8%	41.9%	36.5%	32.6%	18.8%	26.3%	47.6%	38.3%
Khanewal	37.5%	14.9%	34.2%	44.8%	38.2%	57.7%	17.5%	32.0%	37.6%	44.8%	44.0%	16.8%	23.5%	34.9%	34.8%	30.3%	21.4%	28.6%	36.7%	33.0%
Kharan	48.3%	5.6%	58.4%	65.6%	61.1%	72.4%	8.7%	41.6%	39.5%	52.4%	56.5%	13.1%	25.7%	44.5%	40.4%	73.5%	20.0%	61.6%	47.1%	69.5%
Khushab	17.5%	8.4%	19.8%	74.0%	31.7%	34.0%	13.0%	9.5%	54.8%	34.0%	27.0%	7.4%	9.4%	50.2%	30.2%	26.9%	6.5%	5.3%	45.8%	22.2%
Khuzdar	43.4%	41.2%	58.8%	57.5%	63.9%	78.5%	25.3%	38.6%	41.0%	59.2%	41.6%	34.7%	23.7%	39.2%	46.2%	65.6%	4.4%	32.2%	40.4%	48.6%
Killa Abdulah	33.7%	27.2%	35.1%	54.6%	47.4%	56.6%	29.9%	25.3%	47.2%	51.3%	48.8%	60.8%	11.1%	13.9%	49.5%	46.3%	27.6%	4.2%	43.4%	37.1%
Killa Saifullah	62.8%	55.2%	69.0%	79.2%	83.9%	57.0%	41.0%	35.8%	57.5%	54.8%	69.8%	59.3%	23.8%	36.5%	57.9%	61.5%	70.3%	38.3%	26.0%	64.3%
Kohat	29.6%	16.3%	12.1%	78.3%	33.3%	49.6%	0.5%	3.6%	76.3%	43.1%	42.1%	1.8%	5.5%	73.0%	39.1%	36.6%	8.9%	6.9%	73.4%	31.5%
Kohistan	85.7%	84.5%	62.1%	97.2%	94.7%	97.3%	87.0%	43.8%	95.8%	98.0%	95.8%	68.8%	29.8%	97.5%	95.8%	97.0%	80.8%	66.5%	98.0%	97.3%
Kohlu						89.2%	91.3%	84.3%	45.1%	89.0%	91.0%	92.7%	79.3%	60.1%	93.5%	83.4%	84.3%	31.1%	31.1%	86.3%
Lahore	4.4%	10.4%	4.0%	57.7%	12.7%	9.1%	5.4%	2.8%	55.0%	11.9%	7.3%	3.6%	2.6%	48.6%	15.3%	4.4%	0.4%	2.6%	47.6%	5.6%
Lakki Marwat	17.7%	14.2%	34.0%	77.7%	42.3%	40.6%	12.1%	14.2%	66.6%	43.4%	41.2%	14.5%	11.0%	67.0%	48.0%	34.6%	17.8%	21.7%	62.6%	41.1%
Larkana	22.8%	34.7%	52.1%	77.1%	63.0%	60.0%	37.9%	38.6%	72.9%	69.1%	46.3%	49.1%	15.3%	61.7%	59.8%	48.5%	6.6%	23.1%	65.5%	49.0%
Lasbela	55.8%	50.4%	55.8%	77.8%	69.8%	70.7%	57.8%	53.4%	69.2%	75.2%	74.7%	56.6%	55.9%	59.0%	81.2%	71.5%	33.0%	47.9%	48.8%	65.7%
Layyan	36.0%	30.1%	41.1%	58.9%	53.2%	45.7%	32.6%	28.9%	45.0%	50.2%	40.5%	14.0%	31.3%	43.0%	44.8%	53.0%	17.9%	29.3%	52.0%	53.4%
Lodhran	42.1%	32.8%	45.0%	51.8%	52.2%	62.3%	26.6%	40.0%	47.4%	57.9%	41.9%	19.6%	26.0%	40.1%	41.2%	43.5%	28.2%	26.8%	38.1%	44.7%
Loralai	32.6%	27.9%	50.2%	49.8%	55.4%	63.7%	53.2%	56.6%	45.6%	70.3%	43.6%	33.8%	10.5%	38.5%	40.5%	71.3%	49.5%	56.1%	51.0%	76.7%
Lower Dir	26.5%	9.0%	7.8%	91.0%	27.9%	63.0%	28.4%	6.9%	87.5%	62.5%	56.5%	18.7%	3.6%	84.3%	57.9%	48.4%	13.9%	7.9%	90.3%	51.4%
Malakand	44.1%	24.2%	17.2%	84.4%	53.2%	63.1%	18.9%	5.3%	84.2%	60.9%	41.2%	6.2%	1.9%	73.2%	38.4%	50.7%	11.9%	2.7%	79.9%	46.8%
Mandi Bahauddin	8.4%	1.5%	10.7%	56.2%	15.7%	22.6%	1.0%	4.6%	43.4%	16.7%	18.6%	0.0%	1.7%	40.3%	13.8%	14.9%	2.5%	4.2%	31.5%	11.1%
Mansehra	37.3%	49.3%	20.5%	96.9%	65.6%	63.4%	29.1%	28.4%	94.4%	72.7%	39.9%	31.0%	10.9%	92.6%	50.5%	36.7%	27.6%	10.5%	85.8%	47.3%
Mardan	24.4%	10.2%	13.1%	65.7%	28.1%	40.3%	6.9%	7.6%	65.7%	35.6%	34.6%	4.3%	5.0%	66.6%	33.4%	33.0%	4.3%	6.5%	64.6%	28.8%
Mastung	22.8%	13.0%	33.7%	50.2%	39.7%	49.3%	60.8%	26.2%	43.3%	52.6%	58.7%	45.7%	16.8%	39.2%	60.8%	39.4%	5.0%	19.0%	22.1%	22.1%
Mian wali	15.6%	13.6%	17.1%	59.9%	25.7%	22.3%	3.5%	4.3%	48.5%	21.7%	24.5%	4.3%	8.1%	47.6%	25.8%	29.9%	11.8%	15.1%	51.8%	33.8%
Matiari											22.5%	7.5%	24.1%	75.5%	41.3%	28.5%	2.5%	31.7%	70.2%	42.6%
Mirpurkhas	44.3%	38.0%	55.4%	86.8%	66.2%	56.6%	41.5%	50.3%	82.6%	67.3%	53.7%	48.2%	38.8%	67.5%	64.3%	41.4%	24.9%	26.9%	66.7%	49.0%
Multan	29.0%	20.1%	29.7%	53.8%	36.4%	40.9%	18.0%	22.1%	45.5%	36.8%	40.6%	14.9%	19.7%	39.2%	41.6%	28.1%	21.0%	21.8%	46.3%	33.1%
Musakhel	72.3%	76.8%	89.9%	96.4%	92.0%	55.3%	60.1%	46.0%	41.8%	67.9%	92.3%	99.1%	60.5%	48.3%	92.6%	63.4%	63.9%	59.7%	81.5%	85.8%
Muzaffargarh	52.1%	39.3%	51.6%	48.3%	60.0%	60.3%	52.1%	40.7%	48.6%	65.9%	59.3%	46.9%	35.4%	43.7%	62.2%	49.0%	47.0%	43.4%	50.7%	60.9%
Nankana Sahib											19.7%	5.3%	11.0%	45.6%	22.0%	27.7%	4.8%	10.4%	55.6%	28.1%
Narowal	8.8%	6.4%	10.5%	63.2%	19.3%	33.5%	7.9%	8.6%	53.8%	31.7%	26.9%	5.8%	11.7%	58.4%	31.3%	24.5%	6.9%	12.4%	49.6%	25.7%

Continued on next page

(Continued) ANNEXURE: A4 DEPRIVATION IN LIVING STANDARD INDICATORS AT DISTRICT LEVEL

	2004-05					2006-07					2008-09					2010-11				
Districts	**HQ**	**BF**	**BHG**	**TRA**	**HLS**	**HQ**	**BF**	**BHG**	**TRA**	**HLS**	**HQ**	**BF**	**BHG**	**TRA**	**HLS**	**HQ**	**BF**	**BHG**	**TRA**	**HLS**
Nasirabad	44.4%	47.3%	41.9%	53.7%	55.9%	78.2%	63.2%	42.9%	44.6%	77.7%	67.2%	50.2%	36.0%	38.2%	60.6%	58.3%	45.1%	61.3%	61.8%	68.6%
Naushehro Feroze	15.5%	32.0%	38.0%	67.1%	46.7%	30.7%	24.9%	27.1%	67.5%	44.2%	18.1%	20.0%	15.1%	41.8%	26.6%	27.6%	17.5%	30.5%	60.3%	43.6%
Nawabshah	17.9%	17.7%	33.0%	73.6%	42.3%	32.9%	11.4%	16.1%	63.2%	36.2%	30.0%	8.5%	11.1%	50.4%	25.9%	26.9%	10.6%	16.5%	49.5%	29.3%
Nowshera	16.8%	9.4%	7.6%	77.1%	27.0%	31.7%	9.1%	5.8%	67.7%	32.2%	31.4%	0.0%	3.3%	72.2%	30.4%	35.7%	7.3%	10.2%	70.6%	36.4%
Nushki											43.6%	15.8%	30.6%	36.4%	38.8%	71.6%	30.0%	58.6%	39.3%	60.2%
Okara	6.3%	9.0%	14.0%	64.9%	19.0%	54.9%	10.6%	25.9%	53.9%	46.1%	32.3%	8.7%	15.2%	41.7%	26.8%	29.2%	8.1%	14.1%	44.0%	27.3%
Pakpattan	25.7%	8.4%	34.0%	58.6%	36.1%	41.4%	8.3%	25.0%	52.0%	38.6%	44.0%	14.8%	19.4%	42.7%	41.1%	44.8%	13.5%	18.8%	43.5%	38.4%
Panjgur	53.5%	69.2%	60.6%	56.8%	77.3%	81.0%	20.5%	50.8%	38.6%	56.6%	57.6%	26.5%	31.1%	44.2%	45.3%	73.1%	46.9%	41.4%	65.4%	70.4%
Peshawar	12.4%	12.4%	8.8%	67.4%	21.0%	29.5%	7.8%	4.1%	65.3%	27.7%	19.4%	1.4%	2.7%	56.9%	20.2%	18.2%	1.9%	3.0%	61.5%	16.3%
Pishin	16.0%	37.1%	22.4%	68.3%	47.1%	35.5%	47.4%	17.1%	48.2%	39.2%	20.3%	25.5%	4.7%	16.1%	18.1%	19.6%	15.0%	1.0%	26.6%	15.0%
Quetta	9.3%	10.7%	9.1%	54.7%	16.2%	23.2%	9.3%	5.5%	38.5%	20.0%	28.5%	3.5%	8.5%	41.8%	27.0%	16.4%	14.9%	3.8%	25.4%	13.9%
Rahim Yar Khan	38.3%	31.9%	49.7%	51.4%	52.4%	66.7%	34.1%	42.6%	49.9%	60.3%	50.7%	23.7%	37.4%	51.0%	52.4%	31.8%	15.6%	37.4%	38.6%	36.8%
Rajanpur	27.1%	34.2%	43.1%	52.7%	44.2%	64.7%	32.0%	49.0%	55.4%	66.7%	64.5%	33.2%	46.1%	47.5%	63.7%	61.9%	46.1%	46.7%	37.6%	62.4%
Rawalpindi	5.3%	10.0%	6.3%	74.5%	15.8%	8.4%	6.4%	2.1%	66.2%	10.9%	6.2%	5.0%	1.2%	64.0%	11.3%	8.0%	12.0%	2.7%	66.8%	16.0%
Sahiwal	38.1%	13.0%	30.5%	49.3%	39.0%	29.5%	10.3%	19.0%	41.0%	25.9%	28.5%	7.3%	14.6%	37.4%	23.9%	18.9%	6.8%	16.2%	33.8%	19.0%
Sanghar	30.9%	32.4%	37.1%	82.5%	54.3%	50.0%	18.9%	32.5%	58.6%	49.6%	42.5%	8.4%	13.8%	55.1%	37.0%	33.3%	19.2%	26.4%	52.3%	38.4%
Sargodha	9.7%	12.5%	18.0%	51.5%	20.2%	26.8%	8.9%	8.3%	45.5%	25.0%	22.3%	6.0%	2.5%	33.9%	19.1%	17.6%	3.2%	7.9%	36.5%	15.5%
Shadatkot											50.3%	53.6%	24.0%	63.4%	60.8%	41.3%	10.6%	35.1%	68.5%	50.3%
Shaikhu pura	23.8%	14.4%	32.1%	60.4%	38.8%	22.9%	11.2%	9.0%	59.1%	26.0%	17.3%	3.1%	5.6%	54.9%	16.5%	18.4%	3.9%	9.9%	62.7%	21.3%
Shangla	63.5%	39.1%	34.2%	96.5%	71.4%	68.3%	35.4%	14.4%	96.3%	70.4%	67.1%	33.3%	4.6%	97.2%	69.2%	54.6%	44.9%	22.9%	94.2%	63.7%
Sherani																77.6%	41.2%	41.8%	28.4%	64.8%
Shikarpur	20.8%	19.4%	41.2%	79.3%	48.8%	57.3%	26.4%	32.4%	75.3%	63.3%	46.4%	7.7%	23.3%	75.2%	52.2%	31.4%	12.7%	36.8%	67.6%	49.8%
Sialkot	5.6%	5.3%	3.4%	62.0%	9.9%	15.3%	3.5%	2.1%	51.7%	11.9%	10.3%	0.5%	2.8%	48.4%	13.0%	10.8%	2.5%	2.5%	46.3%	10.9%
Sibi	48.3%	83.1%	42.0%	68.1%	72.5%	51.0%	82.3%	20.1%	58.3%	65.8%	50.8%	16.9%	11.3%	39.3%	43.5%	27.7%	24.1%	18.1%	21.4%	28.0%
Sukkur	15.2%	19.8%	25.0%	71.7%	34.3%	52.8%	18.0%	22.3%	71.7%	52.2%	40.4%	8.7%	16.3%	66.7%	43.9%	37.1%	5.7%	21.2%	57.9%	38.6%
Swabi	27.9%	15.6%	15.8%	70.6%	38.0%	43.7%	20.7%	10.0%	69.2%	46.6%	39.9%	6.9%	3.6%	76.6%	38.5%	30.5%	5.5%	12.7%	77.6%	33.8%
Swat	37.3%	20.4%	22.2%	88.9%	47.8%	33.7%	4.0%	5.9%	86.3%	35.1%	44.4%	16.0%	5.6%	90.3%	48.9%	38.4%	8.7%	11.8%	87.3%	40.5%
T.T Singh	6.5%	2.0%	5.9%	63.1%	11.6%	21.5%	0.0%	8.4%	45.0%	18.5%	20.8%	3.6%	10.2%	39.6%	21.7%	17.9%	4.9%	6.8%	37.2%	15.0%
Tando M.Khan											46.7%	15.3%	38.4%	77.2%	58.5%	29.6%	35.9%	19.0%	64.6%	46.5%
Tando Allahyar											28.5%	8.4%	32.2%	61.7%	45.0%	43.5%	29.5%	45.1%	74.0%	59.5%
Tank	19.5%	10.1%	19.5%	44.7%	27.8%	35.9%	19.2%	16.4%	37.4%	34.6%	30.9%	46.7%	13.3%	40.8%	41.3%	42.8%	23.7%	24.3%	36.2%	42.8%
Tharparkar	34.0%	28.8%	76.7%	97.9%	85.7%	83.1%	26.4%	76.0%	99.3%	89.5%	2.7%	5.7%	3.3%	45.8%	12.6%	80.7%	29.0%	55.4%	84.1%	79.4%
Thatta	61.0%	56.4%	66.9%	80.9%	79.5%	75.2%	40.7%	52.2%	62.0%	73.0%	72.3%	18.9%	42.0%	42.1%	56.4%	59.3%	24.6%	44.0%	49.8%	56.1%
Umerkot											71.1%	25.7%	55.5%	95.8%	81.5%	59.9%	11.7%	36.5%	71.2%	61.6%
Upper Dir	63.3%	35.7%	34.5%	96.8%	75.7%	82.9%	48.6%	13.5%	96.8%	86.7%	66.6%	20.6%	6.9%	92.2%	69.3%	78.6%	35.3%	10.7%	94.7%	82.6%
Vehari	15.5%	6.9%	24.8%	44.1%	23.6%	43.3%	8.8%	28.6%	39.8%	35.6%	42.0%	10.9%	25.3%	44.1%	38.9%	24.9%	14.7%	25.5%	40.3%	29.8%

Continued on next page

(Continued) ANNEXURE: A4 DEPRIVATION IN LIVING STANDARD INDICATORS AT DISTRICT LEVEL

	2004-05					2006-07					2008-09					2010-11				
Districts	**HQ**	**BF**	**BHG**	**TRA**	**HLS**	**HQ**	**BF**	**BHG**	**TRA**	**HLS**	**HQ**	**BF**	**BHG**	**TRA**	**HLS**	**HQ**	**BF**	**BHG**	**TRA**	**HLS**
Washuk											86.9%	57.5%	35.8%	38.1%	67.1%	76.1%	31.4%	60.0%	25.6%	63.7%
Zhob	66.1%	50.1%	52.2%	79.4%	75.6%	64.4%	45.6%	47.2%	44.2%	66.4%	55.1%	36.8%	13.2%	48.1%	49.6%	73.8%	53.7%	58.1%	60.2%	71.3%
Ziarat	31.4%	86.5%	31.4%	58.7%	71.9%	42.3%	30.9%	4.1%	31.1%	29.4%	52.0%	64.2%	11.9%	16.9%	47.2%	33.4%	15.4%	3.5%	28.2%	24.7%

Continued on next page

HQ: Deprivation in House Quality, BF: Deprivation in Basic Facility, BHG: Deprivation in Basic Household Goods, TRA: Deprivation in Transportation HLS: Deprivation in Household Living Standard

(Continued) ANNEXURE: A4 DEPRIVATION IN LIVING STANDARD INDICATORS AT DISTRICT LEVEL

	2012-13					2014-15					2019-20				
Districts	**HQ**	**BF**	**BHG**	**TRA**	**HLS**	**HQ**	**BF**	**BHG**	**TRA**	**HLS**	**HQ**	**BF**	**BHG**	**TRA**	**HLS**
Abbotabad	12.2%	11.5%	17.6%	80.6%	27.2%	5.8%	31.7%	7.5%	84.9%	35.7%	8.4%	6.2%	3.4%	75.5%	24.0%
Attock	9.0%	5.3%	5.3%	59.1%	13.3%	2.7%	12.0%	2.5%	52.9%	10.0%	1.8%	1.8%	2.0%	40.6%	3.8%
Awaran	85.0%	25.3%	88.4%	36.9%	88.8%	24.2%	6.7%	61.7%	35.8%	47.1%	98.1%	1.3%	56.8%	70.7%	80.8%
Badin	57.3%	18.9%	81.4%	79.2%	80.3%	28.0%	5.5%	55.1%	75.4%	55.9%	56.4%	18.0%	69.6%	62.0%	71.9%
Bahawalnagar	36.5%	24.7%	44.4%	45.0%	46.6%	22.0%	22.6%	31.8%	32.9%	32.6%	20.7%	6.9%	33.4%	26.5%	28.8%
Bahawalpur	32.9%	7.5%	33.4%	41.3%	37.7%	15.4%	9.5%	26.5%	34.5%	24.8%	17.1%	11.9%	35.0%	26.4%	29.0%
Bannu	24.3%	17.9%	25.9%	48.8%	35.4%	1.0%	6.1%	4.9%	31.4%	6.8%	8.7%	5.0%	12.1%	25.8%	11.9%
Barkhan	68.5%	52.2%	41.4%	38.1%	68.5%	32.0%	57.6%	70.8%	28.8%	69.3%	77.0%	53.1%	16.8%	23.0%	64.9%
Batagram	28.5%	39.3%	28.5%	93.4%	54.1%	25.1%	47.1%	40.3%	93.6%	62.0%	21.6%	6.1%	19.6%	73.9%	35.1%
Bhakkar	31.0%	24.7%	10.6%	58.8%	36.2%	5.5%	18.8%	14.4%	47.0%	21.2%	12.4%	14.4%	15.1%	40.9%	22.3%
Bolan/Kachhi	62.2%	16.5%	29.1%	35.1%	44.1%	28.2%	62.1%	41.8%	37.9%	54.7%	74.1%	21.1%	32.7%	28.6%	66.5%
Buner	38.8%	8.3%	27.6%	77.0%	43.6%	32.7%	14.6%	14.3%	72.6%	35.4%	34.8%	9.1%	18.9%	65.1%	40.0%
Chaghi	63.1%	56.0%	68.8%	45.0%	74.7%	40.7%	36.5%	68.5%	26.1%	61.3%					
Chakwal	6.0%	0.4%	5.3%	55.0%	8.9%	1.4%	11.1%	6.4%	52.4%	9.4%	1.4%	4.3%	2.7%	39.0%	7.0%
Charsada	36.7%	6.1%	12.9%	72.7%	36.5%	9.4%	1.0%	2.9%	50.3%	9.8%	15.1%	1.7%	5.8%	49.6%	14.7%
Chiniot	22.5%	1.5%	19.4%	45.9%	24.4%	7.0%	3.6%	13.3%	40.3%	13.6%	15.8%	8.0%	23.0%	27.6%	21.9%
Chitral	40.0%	18.7%	12.4%	86.1%	49.8%	14.0%	39.0%	10.6%	90.7%	49.6%	27.8%	1.2%	12.1%	66.1%	29.2%
D.G.Khan	29.5%	21.4%	43.5%	33.3%	38.2%	14.8%	23.0%	35.5%	36.3%	31.4%	25.8%	10.4%	59.4%	28.2%	40.4%
D.I.Khan	34.4%	15.5%	30.6%	36.5%	33.9%	9.0%	19.2%	16.8%	20.4%	15.7%	19.2%	11.7%	15.1%	14.6%	12.2%
Dadu	27.6%	31.5%	27.9%	43.0%	39.0%	9.4%	2.4%	12.4%	49.9%	16.1%	23.2%	11.2%	28.5%	59.6%	42.7%
Dera Bugti	80.7%	74.1%	62.2%	20.5%	75.6%	56.1%	71.9%	56.4%	50.2%	66.9%	70.0%	17.0%	68.1%	5.8%	76.0%
Duki											19.3%	80.5%	17.7%	2.0%	20.7%
Faisalabad	14.8%	0.1%	6.2%	39.0%	13.2%	3.6%	1.5%	4.0%	28.0%	5.6%	7.0%	7.0%	6.4%	19.6%	8.4%
Gawadar	50.6%	3.4%	23.6%	27.0%	29.9%	33.0%	52.5%	22.7%	22.7%	35.5%	53.5%	29.2%	38.4%	24.7%	48.5%
Ghotki	41.1%	7.7%	50.3%	54.2%	51.1%	10.9%	24.6%	36.9%	50.8%	35.9%	39.3%	16.0%	56.4%	37.3%	57.1%
Gujranwala	8.6%	0.0%	7.1%	49.4%	11.2%	0.4%	0.4%	1.8%	37.2%	2.0%	3.3%	2.3%	3.1%	27.3%	4.2%
Gujrat	6.7%	0.3%	3.7%	43.6%	7.3%	0.7%	0.3%	1.0%	43.0%	1.4%	1.8%	0.8%	2.3%	22.6%	2.5%
Hafizabad	17.1%	0.5%	11.6%	39.8%	15.6%	1.7%	0.8%	3.5%	38.8%	4.9%	7.5%	4.8%	10.3%	27.0%	10.4%
Hangu	30.0%	6.9%	6.2%	78.0%	35.1%	10.6%	6.6%	6.6%	66.2%	21.6%	18.4%	1.2%	8.6%	67.5%	23.5%
Haripur	10.9%	14.5%	5.6%	77.3%	20.5%	7.8%	28.4%	3.4%	64.0%	25.6%	5.4%	2.3%	3.1%	61.1%	13.6%
Hernai	43.8%	40.6%	46.1%	28.7%	48.7%	36.0%	78.7%	51.3%	57.1%	67.4%	73.6%	0.0%	19.1%	31.8%	43.7%
Hyderabad	17.7%	10.9%	23.2%	56.6%	29.3%	7.4%	4.1%	16.9%	56.6%	20.6%	11.4%	5.5%	13.6%	37.7%	17.4%
Jacobabad	52.5%	31.0%	47.9%	68.6%	66.7%	26.8%	20.7%	45.7%	69.7%	54.6%	25.9%	17.6%	43.0%	50.9%	49.2%
Jaffarabad	57.2%	47.1%	51.4%	56.3%	65.6%	23.1%	28.1%	31.7%	40.0%	35.9%	51.5%	6.9%	58.7%	63.1%	71.7%
Jamshoro	35.2%	7.2%	44.5%	61.4%	49.2%	13.5%	9.6%	23.8%	60.1%	27.7%	40.1%	23.0%	33.8%	48.2%	51.6%
Jhal Magsi	43.9%	26.9%	40.4%	36.5%	43.6%	37.1%	92.3%	49.1%	49.3%	71.2%					
Jhang	29.0%	20.1%	36.5%	44.5%	39.4%	13.5%	17.5%	23.5%	37.6%	24.0%	12.0%	11.2%	19.8%	28.7%	18.9%
Jhelum	7.6%	0.6%	3.1%	47.8%	9.2%	0.7%	2.5%	0.4%	51.3%	2.7%	2.4%	3.7%	1.8%	37.4%	6.6%
Kalat	44.4%	12.2%	35.2%	41.3%	43.9%	2.0%	48.6%	16.2%	24.7%	24.3%	42.7%	7.8%	54.7%	28.3%	49.5%

Continued on next page

(Continued) ANNEXURE: A4 DEPRIVATION IN LIVING STANDARD INDICATORS AT DISTRICT LEVEL

	2012-13					2014-15					2019-20				
Districts	**HQ**	**BF**	**BHG**	**TRA**	**HLS**	**HQ**	**BF**	**BHG**	**TRA**	**HLS**	**HQ**	**BF**	**BHG**	**TRA**	**HLS**
Karachi	3.1%	3.9%	3.0%	41.3%	5.3%	1.1%	2.6%	0.6%	47.3%	3.9%	0.1%	0.7%	1.3%	25.2%	2.8%
Karak	40.7%	34.0%	18.8%	69.5%	51.4%	13.9%	19.6%	9.5%	65.6%	23.3%	6.0%	4.8%	4.4%	44.5%	16.2%
Kashmore	42.3%	28.3%	62.1%	65.1%	64.3%	16.1%	17.8%	39.6%	61.9%	43.8%	37.9%	53.2%	31.6%	36.7%	51.3%
Kasur	23.2%	3.0%	21.8%	59.1%	29.8%	6.7%	3.6%	12.1%	49.7%	14.4%	6.4%	9.9%	8.3%	31.2%	10.2%
Kech/Turbat	54.4%	3.8%	51.8%	33.7%	48.7%						42.6%	9.8%	23.5%	29.9%	38.3%
Khairpur	43.3%	13.3%	54.1%	54.6%	52.7%	15.7%	12.6%	26.6%	39.1%	23.5%	44.1%	21.9%	38.6%	55.4%	51.5%
Khanewal	27.9%	20.2%	30.9%	33.4%	33.0%	20.5%	16.7%	16.8%	29.5%	21.4%	13.9%	11.2%	24.9%	29.2%	22.7%
Kharan	31.9%	4.1%	41.6%	41.2%	34.9%	31.0%	50.7%	39.8%	37.4%	46.3%	38.4%	0.2%	11.3%	18.1%	18.2%
Khushab	26.1%	9.8%	18.5%	45.6%	29.5%	7.0%	23.8%	19.6%	46.6%	24.1%	16.1%	9.1%	10.3%	32.0%	17.1%
Khuzdar	59.3%	10.4%	47.8%	39.8%	48.2%	11.3%	19.8%	35.1%	30.2%	24.7%	95.6%	25.6%	43.3%	57.5%	80.1%
Killa Abdulah	41.1%	45.7%	30.4%	24.9%	40.1%	28.3%	37.8%	25.0%	22.2%	30.6%	55.9%	19.0%	32.8%	38.1%	60.8%
Killa Saifullah	59.1%	41.4%	68.2%	23.7%	66.7%	14.9%	0.8%	0.0%	8.2%	2.4%	40.7%	4.3%	0.6%	15.1%	20.4%
Kohat	29.5%	2.9%	13.6%	77.4%	31.0%	16.2%	3.7%	5.3%	58.9%	17.3%	17.8%	6.4%	14.6%	56.6%	25.0%
Kohistan	96.4%	76.6%	29.5%	89.4%	95.5%	67.5%	84.7%	50.8%	91.4%	87.5%	87.9%	45.0%	57.5%	88.5%	93.3%
Kohlu	94.8%	50.6%	86.3%	49.1%	95.1%	52.3%	46.8%	43.8%	38.5%	51.1%	19.5%	11.0%	6.7%	9.1%	17.1%
Lahore	4.5%	1.1%	4.6%	40.8%	6.8%	0.4%	0.5%	2.3%	27.1%	1.6%	5.4%	2.7%	2.6%	20.5%	5.4%
Lakki Marwat	40.0%	13.7%	28.8%	63.4%	46.1%	10.6%	6.1%	10.1%	54.0%	18.2%	4.8%	5.1%	16.1%	46.8%	18.6%
Larkana	53.1%	6.0%	43.0%	60.9%	56.1%	9.8%	8.8%	16.7%	60.6%	23.2%	14.9%	6.7%	10.5%	29.0%	15.5%
Lasbela	58.8%	45.0%	44.5%	68.2%	67.8%	38.9%	44.7%	66.2%	68.2%	71.1%	28.0%	4.8%	6.8%	42.9%	27.2%
Layyan	28.9%	9.8%	17.7%	28.7%	23.4%	7.5%	19.8%	20.7%	27.2%	19.1%	14.4%	14.9%	14.6%	11.1%	15.6%
Lodhran	31.7%	17.5%	32.5%	34.6%	34.0%	21.8%	16.9%	25.6%	30.0%	26.4%	7.1%	9.4%	32.2%	21.9%	24.5%
Loralai	71.8%	70.8%	49.3%	30.7%	65.8%	36.8%	19.1%	34.7%	39.1%	38.5%	19.1%	38.5%	2.9%	28.2%	23.0%
Lower Dir	50.4%	16.4%	8.2%	84.0%	54.1%	26.9%	20.0%	6.6%	68.9%	33.3%	21.0%	0.3%	15.1%	64.7%	26.4%
Malakand	35.5%	5.3%	6.2%	69.9%	34.2%	18.8%	9.0%	1.5%	59.6%	19.4%	14.3%	3.4%	2.5%	42.4%	13.3%
Mandi Bahauddin	11.5%	0.3%	5.3%	32.6%	7.8%	0.3%	8.1%	1.6%	29.3%	2.6%	3.9%	9.4%	5.3%	22.5%	5.4%
Mansehra	24.1%	18.6%	18.2%	85.7%	38.9%	11.1%	28.5%	19.6%	87.6%	35.7%	7.1%	2.5%	7.6%	83.4%	25.3%
Mardan	27.2%	2.1%	17.1%	65.8%	30.2%	5.1%	3.8%	3.1%	46.7%	7.6%	12.0%	1.8%	6.6%	41.1%	12.5%
Mastung	22.1%	0.0%	35.8%	30.8%	27.9%	8.3%	15.4%	24.0%	32.1%	19.6%	36.9%	42.1%	35.0%	30.0%	45.5%
Matiari	25.8%	5.1%	51.4%	72.8%	53.7%	9.1%	1.9%	33.4%	68.7%	31.2%	25.0%	9.6%	45.5%	68.7%	48.7%
Mian wali	29.1%	36.3%	8.3%	50.1%	36.1%	5.3%	20.7%	13.7%	31.8%	17.0%	13.7%	14.8%	17.7%	25.3%	17.2%
Mirpurkhas	45.7%	22.9%	47.5%	65.1%	56.5%	29.2%	10.7%	48.0%	68.5%	52.2%	52.2%	4.2%	60.0%	49.1%	60.1%
Multan	27.1%	16.6%	27.9%	39.4%	32.7%	11.2%	10.9%	14.7%	26.2%	14.5%	7.3%	14.6%	17.5%	20.1%	15.7%
Musakhel	86.9%	86.9%	72.1%	38.5%	87.4%	51.9%	29.8%	50.0%	43.6%	59.6%					
Muzaffargarh	41.5%	32.9%	52.9%	42.7%	56.8%	26.6%	29.7%	37.4%	43.4%	41.9%	20.6%	23.9%	46.1%	32.8%	40.2%
Nankana Sahib	13.2%	0.9%	13.9%	47.3%	18.8%	6.4%	6.8%	11.6%	42.2%	13.0%	3.3%	0.7%	5.3%	27.1%	6.5%
Narowal	16.4%	22.1%	18.8%	49.2%	31.7%	2.4%	5.5%	7.1%	36.2%	8.6%	3.0%	12.4%	6.2%	33.1%	7.8%
Nasirabad	53.7%	62.0%	57.1%	59.6%	72.8%	27.7%	23.3%	25.7%	37.0%	33.9%	46.7%	16.9%	34.9%	42.3%	61.0%
Naushehro Feroze	28.6%	13.2%	41.1%	47.2%	42.9%	4.7%	5.7%	11.4%	47.9%	12.4%	11.9%	20.3%	20.1%	48.1%	32.5%
Nawabshah	35.2%	7.4%	24.2%	64.7%	39.2%	2.9%	17.5%	7.6%	52.3%	16.4%	35.1%	28.0%	55.0%	53.7%	56.4%
Nowshera	25.0%	4.6%	10.4%	62.6%	24.6%	3.7%	2.8%	2.8%	53.1%	6.2%	8.2%	0.3%	9.4%	49.4%	12.2%

Continued on next page

(Continued) ANNEXURE: A4 DEPRIVATION IN LIVING STANDARD INDICATORS AT DISTRICT LEVEL

	2012-13					2014-15					2019-20				
Districts	**HQ**	**BF**	**BHG**	**TRA**	**HLS**	**HQ**	**BF**	**BHG**	**TRA**	**HLS**	**HQ**	**BF**	**BHG**	**TRA**	**HLS**
Nushki	28.1%	0.3%	23.2%	58.4%	32.7%	11.3%	46.3%	15.9%	17.0%	20.1%	17.1%	0.3%	1.4%	14.4%	4.9%
Okara	20.8%	9.1%	21.2%	42.5%	25.2%	14.7%	5.8%	6.1%	32.4%	11.4%	1.9%	3.7%	5.8%	15.1%	3.1%
Pakpattan	31.8%	7.7%	27.3%	44.7%	33.6%	11.1%	7.9%	9.7%	22.3%	11.3%	7.8%	3.2%	8.5%	17.0%	7.2%
Peshawar	15.2%	0.3%	4.1%	52.4%	13.4%	6.0%	0.3%	1.3%	31.1%	3.5%	9.8%	1.4%	4.9%	41.0%	9.6%
Pishin	23.7%	15.9%	22.4%	47.0%	32.6%	12.2%	43.6%	20.1%	24.5%	28.8%	13.6%	11.4%	6.9%	14.2%	14.6%
Quetta	19.5%	9.1%	4.5%	33.2%	15.0%	12.1%	14.2%	5.0%	28.0%	10.3%	14.6%	3.8%	4.1%	25.5%	13.7%
Rahim Yar Khan	28.9%	20.8%	50.5%	39.7%	43.5%	21.8%	27.2%	28.3%	32.0%	31.8%	20.3%	9.6%	33.8%	23.7%	28.3%
Rajanpur	58.3%	29.7%	54.1%	39.2%	59.2%	20.9%	40.9%	35.1%	31.8%	37.8%	37.0%	27.5%	61.2%	26.2%	51.3%
Rawalpindi	5.7%	3.1%	2.1%	52.3%	7.5%	3.2%	16.4%	1.2%	50.4%	14.1%	4.3%	4.6%	3.1%	36.8%	8.4%
Sahiwal	11.7%	7.3%	24.6%	35.1%	20.5%	4.9%	4.8%	9.4%	20.4%	8.2%	3.6%	2.5%	5.6%	19.4%	4.6%
Sanghar	44.5%	14.3%	40.9%	59.2%	49.2%	9.7%	18.1%	25.4%	62.8%	32.6%	45.3%	25.0%	59.9%	57.7%	62.0%
Sargodha	21.6%	6.5%	9.9%	36.1%	19.8%	2.4%	13.1%	9.7%	26.7%	9.7%	7.9%	4.9%	7.6%	24.3%	8.7%
Shadatkot	52.6%	3.7%	50.5%	63.9%	58.2%	17.3%	31.6%	41.5%	70.3%	51.3%	10.0%	2.1%	24.4%	25.6%	22.9%
Shaikhupura	11.0%	4.6%	8.8%	56.8%	16.2%	0.9%	0.8%	3.7%	46.2%	4.0%	2.4%	1.8%	3.5%	33.2%	6.5%
Shangla	58.6%	42.4%	23.4%	98.2%	67.5%	36.2%	67.8%	15.1%	96.1%	73.4%	42.1%	0.0%	2.5%	89.7%	41.6%
Sherani	64.5%	41.2%	36.8%	43.6%	57.8%	31.1%	54.7%	76.4%	48.1%	73.6%	60.0%	98.1%	71.9%	1.4%	82.4%
Shikarpur	44.4%	6.1%	37.7%	63.8%	51.2%	12.9%	6.2%	31.4%	68.9%	34.6%	40.2%	2.6%	44.2%	53.3%	50.9%
Sialkot	5.9%	5.2%	5.6%	39.1%	9.6%	0.0%	1.4%	2.1%	29.7%	1.6%	2.1%	2.3%	2.6%	27.7%	4.5%
Sibi	31.4%	13.7%	24.0%	21.3%	28.2%	29.7%	63.9%	52.7%	31.1%	58.8%	50.2%	3.7%	30.9%	34.5%	44.0%
Sujawal						52.1%	34.9%	75.0%	59.3%	75.3%	53.5%	23.8%	55.4%	58.1%	65.0%
Sukkur	39.1%	5.0%	31.8%	54.2%	42.8%	16.4%	3.9%	17.0%	47.0%	20.1%	32.6%	19.3%	26.8%	34.4%	35.0%
Swabi	22.5%	3.7%	15.4%	69.7%	27.3%	3.9%	6.8%	2.3%	57.1%	10.0%	8.4%	3.2%	7.6%	48.9%	11.4%
Swat	27.1%	7.5%	12.6%	83.9%	31.4%	23.5%	6.6%	5.1%	67.9%	27.4%	26.0%	2.3%	13.7%	68.2%	29.1%
T.T Singh	17.8%	4.4%	9.5%	36.7%	17.6%	5.0%	9.0%	10.1%	28.9%	10.9%	6.8%	4.6%	9.2%	21.1%	9.5%
Tando Allahyar	36.3%	2.9%	48.9%	69.4%	53.7%	10.1%	9.5%	45.7%	71.4%	45.1%	33.7%	8.7%	42.3%	60.9%	48.1%
Tando M.Khan	43.4%	12.1%	60.0%	76.3%	64.9%	15.7%	7.8%	68.6%	81.8%	65.1%	50.8%	17.9%	68.9%	67.7%	69.0%
Tank	28.4%	18.1%	38.0%	46.0%	44.7%	14.8%	20.6%	11.5%	24.9%	18.4%	15.8%	4.1%	6.5%	21.2%	11.6%
Tharparkar	68.6%	10.1%	80.5%	89.9%	85.6%	59.7%	14.0%	82.6%	89.5%	85.6%	85.5%	1.4%	90.1%	81.9%	87.5%
Thatta	56.6%	33.0%	51.2%	64.7%	61.1%	46.6%	23.7%	64.3%	50.4%	61.3%	48.5%	12.9%	45.5%	41.9%	50.8%
Torgarh	83.5%	53.7%	51.5%	98.5%	91.5%	45.7%	46.2%	56.0%	95.2%	74.8%	36.8%	8.0%	36.6%	87.6%	67.5%
Umerkot	60.2%	22.6%	68.9%	82.1%	80.2%	43.8%	16.2%	63.5%	80.0%	69.5%	65.2%	9.2%	76.0%	57.1%	73.9%
Upper Dir	84.1%	51.7%	30.5%	91.0%	84.1%	53.9%	36.0%	37.5%	93.1%	71.5%	39.2%	0.4%	19.5%	72.4%	44.8%
Vehari	23.6%	11.7%	39.1%	41.0%	35.5%	20.1%	20.8%	24.4%	33.7%	26.2%	7.6%	13.5%	23.1%	25.0%	18.1%
Washuk	64.0%	16.7%	78.1%	29.6%	68.3%	25.6%	18.6%	59.1%	28.5%	40.0%	47.9%	8.6%	46.5%	26.6%	51.5%
Zhob	64.6%	29.5%	41.4%	45.7%	53.5%	36.4%	44.1%	49.3%	27.6%	56.6%					
Ziarat	20.6%	38.7%	5.2%	29.3%	22.3%	29.4%	68.1%	37.5%	41.3%	54.4%	71.0%	9.5%	26.3%	31.9%	45.7%

HQ: Deprivation in House Quality, BF: Deprivation in Basic Facility, BHG: Deprivation in Basic Household Goods, TRA: Deprivation in Transportation HLS: Deprivation in Household Living Standard

ANNEXURE: A5 ESTIMATES OF HEADCOUNT INDICES, INTENSITY OF POVERTY INDICES AND MULTIDIMENSIONAL POVERTY FOR ALL DISTRICTS

	2004-05			2006-07			2008-09			2010-11		
Districts	**HCI**	**IP**	**MDPI**	**HCI**	**IP**	**MDPI**	**HCI**	**IP**	**MDPI**	**HCI**	**IP**	**MDPI**
Abbotabad	35.7%	15.6%	0.06	12.5%	11.7%	0.01	14.8%	10.4%	0.02	12.3%	10.3%	0.01
Attock	18.1%	11.1%	0.02	23.8%	15.0%	0.04	26.9%	10.7%	0.03	24.7%	13.3%	0.03
Awaran	74.1%	29.0%	0.21	72.2%	23.8%	0.17	79.1%	20.8%	0.16	32.8%	13.9%	0.05
Badin	71.8%	24.9%	0.18	77.6%	26.2%	0.20	68.2%	22.5%	0.15	61.3%	22.7%	0.14
Bahawalnagar	38.0%	18.2%	0.07	41.5%	17.7%	0.07	42.1%	16.7%	0.07	32.9%	15.3%	0.05
Bahawalpur	56.9%	23.7%	0.13	52.8%	21.7%	0.11	49.6%	21.3%	0.11	45.0%	21.9%	0.10
Bannu	40.2%	14.1%	0.06	45.7%	15.7%	0.07	30.6%	13.5%	0.04	24.4%	15.7%	0.04
Barkhan	84.5%	29.4%	0.25	72.1%	21.1%	0.15	82.0%	23.1%	0.19	91.9%	21.0%	0.19
Batagram	76.4%	25.6%	0.20	76.1%	28.4%	0.22	56.0%	20.3%	0.11	55.5%	15.7%	0.09
Bhakkar	27.5%	14.5%	0.04	31.9%	12.1%	0.04	36.6%	14.7%	0.05	32.8%	17.4%	0.06
Bolan/Kachhi	61.0%	23.1%	0.14	55.8%	19.7%	0.11	74.5%	24.8%	0.18	58.3%	18.5%	0.11
Buner	78.3%	30.4%	0.24	65.0%	18.4%	0.12	52.8%	16.4%	0.09	62.0%	20.7%	0.13
Chaghi	82.0%	24.5%	0.20	68.8%	21.7%	0.15	51.0%	13.7%	0.07	77.7%	27.6%	0.21
Chakwal	9.6%	9.3%	0.01	7.7%	9.8%	0.01	6.3%	6.7%	0.00	5.0%	7.6%	0.00
Charsada	40.5%	15.1%	0.06	44.2%	13.2%	0.06	39.2%	12.3%	0.05	30.4%	13.0%	0.04
Chiniot										27.7%	14.6%	0.04
Chitral	52.6%	18.2%	0.10	61.2%	17.9%	0.11	41.8%	16.7%	0.07	50.6%	15.0%	0.08
D.G.Khan	59.2%	23.2%	0.14	50.0%	23.9%	0.12	50.0%	23.0%	0.12	47.9%	23.7%	0.11
D.I.Khan	52.0%	16.7%	0.09	49.9%	18.3%	0.09	49.8%	15.1%	0.08	40.1%	14.0%	0.06
Dadu	59.8%	22.3%	0.13	62.2%	22.7%	0.14	49.0%	18.9%	0.09	30.9%	16.3%	0.05
Dera Bugti	99.5%	41.3%	0.41	95.2%	28.7%	0.27	88.4%	32.5%	0.29	94.6%	32.6%	0.31
Faisalabad	22.7%	13.7%	0.03	20.3%	11.7%	0.02	15.8%	11.4%	0.02	13.8%	12.1%	0.02
Gawadar	69.3%	25.0%	0.17	67.1%	22.0%	0.15	50.5%	16.2%	0.08	76.3%	21.3%	0.16
Ghotki	39.8%	20.0%	0.08	55.8%	21.4%	0.12	48.3%	20.1%	0.10	42.6%	16.4%	0.07
Gujranwala	19.7%	12.5%	0.02	19.4%	10.9%	0.02	10.3%	10.2%	0.01	9.3%	10.3%	0.01
Gujrat	10.8%	11.2%	0.01	11.3%	12.2%	0.01	7.2%	9.7%	0.01	8.9%	10.6%	0.01
Hafizabad	31.5%	14.3%	0.05	29.5%	13.3%	0.04	18.2%	11.4%	0.02	17.7%	12.1%	0.02
Hangu	50.1%	15.2%	0.08	58.2%	18.4%	0.11	39.2%	14.4%	0.06	43.4%	15.9%	0.07
Haripur	31.3%	18.3%	0.06	29.5%	16.2%	0.05	22.0%	15.0%	0.03	18.9%	14.1%	0.03
Hernai										22.6%	26.3%	0.06
Hyderabad	46.8%	18.2%	0.09	47.5%	20.4%	0.10	22.7%	15.6%	0.04	22.5%	14.4%	0.03
Jacobabad	63.8%	20.1%	0.13	64.9%	22.5%	0.15	62.4%	21.2%	0.13	57.8%	17.9%	0.10
Jaffarabad	53.6%	24.8%	0.13	75.0%	23.0%	0.17	61.8%	19.2%	0.12	72.1%	28.9%	0.21
Jamshoro							51.2%	22.8%	0.12	44.4%	19.6%	0.09
Jhal Magsi	86.1%	29.9%	0.26	82.4%	26.4%	0.22	73.7%	23.0%	0.17	52.3%	17.4%	0.09
Jhang	41.4%	17.9%	0.07	49.5%	19.0%	0.09	32.6%	15.9%	0.05	39.1%	16.1%	0.06
Jhelum	15.6%	9.1%	0.01	10.1%	11.6%	0.01	5.0%	7.5%	0.00	11.9%	11.7%	0.01

Continued on next page

HCI: Head Count Indices, IP: Intensity of Poverty, MDPI: Multidimensional Poverty Indices

(Continued) ANNEXURE: A5 ESTIMATES OF HEADCOUNT INDICES, INTENSITY OF POVERTY INDICES AND MULTIDIMENSIONAL POVERTY FOR ALL DISTRICTS

	2004-05			2006-07			2008-09			2010-11		
Districts	**HCI**	**IP**	**MDPI**	**HCI**	**IP**	**MDPI**	**HCI**	**IP**	**MDPI**	**HCI**	**IP**	**MDPI**
Kalat	64.5%	25.2%	0.16	57.0%	20.1%	0.11	68.6%	19.8%	0.14	41.6%	16.8%	0.07
Karachi	17.2%	16.0%	0.03	12.7%	15.5%	0.02	9.5%	14.8%	0.01	9.3%	13.2%	0.01
Karak	61.5%	18.5%	0.11	57.0%	18.5%	0.11	57.6%	19.7%	0.11	65.6%	22.7%	0.15
Kashmore							42.3%	14.4%	0.06	50.0%	21.1%	0.11
Kasur	30.1%	14.1%	0.04	35.0%	13.6%	0.05	29.2%	12.6%	0.04	28.6%	11.9%	0.03
Kech/Turbat	50.2%	17.6%	0.09	52.7%	15.9%	0.08	44.6%	17.9%	0.08	74.6%	27.6%	0.21
Khairpur	53.6%	22.8%	0.12	57.0%	20.6%	0.12	40.4%	16.9%	0.07	38.8%	19.8%	0.08
Khanewal	41.8%	20.0%	0.08	44.3%	17.0%	0.08	35.6%	14.7%	0.05	33.5%	17.1%	0.06
Kharan	69.7%	20.7%	0.14	54.7%	17.7%	0.10	52.7%	17.5%	0.09	66.8%	19.0%	0.13
Khushab	32.9%	13.5%	0.04	26.6%	13.7%	0.04	23.2%	11.9%	0.03	19.4%	10.7%	0.02
Khuzdar	71.5%	24.0%	0.17	69.5%	19.6%	0.14	50.2%	18.1%	0.09	46.3%	16.2%	0.08
Killa Abdulah	61.5%	22.6%	0.14	69.2%	25.3%	0.18	62.5%	18.6%	0.12	42.1%	16.1%	0.07
Killa Saifullah	85.4%	31.4%	0.27	66.5%	24.0%	0.16	69.0%	19.5%	0.13	68.0%	22.1%	0.15
Kohat	43.1%	19.5%	0.08	42.2%	13.8%	0.06	40.4%	13.4%	0.05	34.1%	16.3%	0.06
Kohistan	95.0%	35.5%	0.34	94.5%	30.1%	0.28	95.0%	31.7%	0.30	97.3%	36.0%	0.35
Kohlu				89.0%	37.4%	0.33	93.0%	32.4%	0.30	82.8%	21.4%	0.18
Lahore	13.7%	12.1%	0.02	13.4%	12.6%	0.02	10.4%	12.8%	0.01	8.2%	11.0%	0.01
Lakki Marwat	55.8%	17.5%	0.10	53.8%	15.8%	0.09	47.5%	14.4%	0.07	50.0%	17.4%	0.09
Larkana	69.7%	22.1%	0.15	71.9%	24.9%	0.18	59.4%	19.8%	0.12	49.8%	17.7%	0.09
Lasbela	70.9%	30.8%	0.22	74.8%	29.7%	0.22	68.3%	23.5%	0.16	65.2%	26.8%	0.17
Layyan	51.6%	20.4%	0.11	43.3%	17.7%	0.08	36.2%	19.3%	0.07	44.7%	18.9%	0.08
Lodhran	59.2%	22.4%	0.13	57.1%	20.5%	0.12	39.7%	18.6%	0.07	47.0%	16.1%	0.08
Loralai	61.8%	19.4%	0.12	74.0%	23.4%	0.17	42.2%	19.5%	0.08	80.4%	27.0%	0.22
Lower Dir	47.3%	18.0%	0.09	62.5%	20.2%	0.13	55.6%	18.2%	0.10	42.1%	16.5%	0.07
Malakand	55.9%	22.4%	0.13	56.1%	17.2%	0.10	34.4%	12.9%	0.04	40.9%	14.6%	0.06
Mandi Bahauddin	17.8%	11.0%	0.02	15.7%	11.5%	0.02	11.4%	9.7%	0.01	10.1%	12.2%	0.01
Mansehra	56.5%	20.7%	0.12	61.4%	19.5%	0.12	43.3%	21.0%	0.09	40.7%	18.5%	0.08
Mardan	36.1%	16.2%	0.06	40.0%	15.2%	0.06	35.7%	13.7%	0.05	31.3%	14.1%	0.04
Mastung	46.4%	18.5%	0.09	53.4%	20.5%	0.11	59.6%	21.6%	0.13	24.8%	16.3%	0.04
Matiari							41.1%	17.3%	0.07	39.9%	18.6%	0.07
Mian wali	28.3%	13.6%	0.04	19.6%	12.2%	0.02	22.7%	12.9%	0.03	27.4%	12.3%	0.03
Mirpurkhas	67.7%	27.6%	0.19	66.7%	28.3%	0.19	60.8%	26.9%	0.16	48.9%	22.2%	0.11
Multan	40.6%	20.2%	0.08	39.3%	17.4%	0.07	34.8%	16.2%	0.06	31.4%	17.8%	0.06
Musakhel	92.3%	34.3%	0.32	84.9%	21.2%	0.18	92.0%	33.0%	0.30	89.5%	30.6%	0.27
Muzaffargarh	65.2%	25.5%	0.17	64.9%	23.9%	0.16	62.1%	21.9%	0.14	61.4%	21.7%	0.13
Nankana Sahib							20.9%	12.0%	0.02	25.2%	10.3%	0.03
Narowal	23.2%	8.9%	0.02	27.4%	10.5%	0.03	25.0%	10.3%	0.03	22.7%	12.0%	0.03
Nasirabad	69.6%	27.5%	0.19	84.6%	26.4%	0.22	70.6%	21.2%	0.15	75.0%	29.4%	0.22

Continued on next page

(Continued) ANNEXURE: A5 ESTIMATES OF HEADCOUNT INDICES, INTENSITY OF POVERTY INDICES AND MULTIDIMENSIONAL POVERTY FOR ALL DISTRICTS

	2004-05			2006-07			2008-09			2010-11		
Districts	**HCI**	**IP**	**MDPI**	**HCI**	**IP**	**MDPI**	**HCI**	**IP**	**MDPI**	**HCI**	**IP**	**MDPI**
Naushehro Feroze	49.5%	17.4%	0.09	43.8%	19.1%	0.08	24.2%	13.7%	0.03	38.9%	17.8%	0.07
Nawabshah/ Shaheed Benazirabad	53.8%	20.7%	0.11	46.5%	17.0%	0.08	35.7%	18.4%	0.07	35.2%	16.1%	0.06
Nowshera	37.1%	13.9%	0.05	33.0%	12.8%	0.04	31.6%	11.0%	0.03	36.2%	13.9%	0.05
Nushki							45.9%	17.7%	0.08	64.0%	29.8%	0.19
Okara	26.0%	12.5%	0.03	47.2%	18.8%	0.09	29.1%	16.6%	0.05	29.0%	13.8%	0.04
Pakpattan	40.3%	18.6%	0.07	40.8%	16.9%	0.07	38.6%	15.9%	0.06	37.7%	15.6%	0.06
Panjgur	74.0%	25.9%	0.19	59.1%	21.3%	0.13	46.2%	21.6%	0.10	75.3%	24.3%	0.18
Peshawar	33.9%	15.1%	0.05	35.3%	15.3%	0.05	23.1%	12.1%	0.03	24.0%	13.6%	0.03
Pishin	58.5%	18.4%	0.11	54.2%	19.0%	0.10	26.8%	11.9%	0.03	18.3%	13.5%	0.02
Quetta	31.0%	13.5%	0.04	27.7%	17.1%	0.05	29.1%	15.5%	0.05	18.2%	12.8%	0.02
Rahim Yar Khan	58.4%	24.3%	0.14	62.1%	23.8%	0.15	52.5%	24.1%	0.13	42.0%	20.8%	0.09
Rajanpur	50.9%	24.8%	0.13	68.1%	26.3%	0.18	63.9%	26.3%	0.17	62.3%	24.4%	0.15
Rawalpindi	13.7%	11.1%	0.02	9.1%	9.9%	0.01	6.9%	9.4%	0.01	11.9%	9.1%	0.01
Sahiwal	43.5%	19.7%	0.09	27.0%	18.3%	0.05	27.0%	15.1%	0.04	21.8%	15.1%	0.03
Sanghar	60.9%	23.2%	0.14	56.1%	23.6%	0.13	42.3%	20.0%	0.08	44.3%	20.0%	0.09
Sargodha	25.2%	13.8%	0.03	24.2%	13.7%	0.03	14.7%	10.3%	0.02	14.6%	11.3%	0.02
Shadatkot							64.5%	23.8%	0.15	56.5%	19.4%	0.11
Shaikhu pura	45.6%	16.9%	0.08	27.8%	14.4%	0.04	17.1%	12.3%	0.02	69.2%	28.2%	0.20
Shangla	79.6%	29.3%	0.23	75.5%	25.3%	0.19	71.1%	22.2%	0.16	18.9%	14.7%	0.03
Sherani										64.5%	19.3%	0.12
Shikarpur	55.2%	21.4%	0.12	64.5%	24.8%	0.16	50.2%	18.8%	0.09	48.8%	19.0%	0.09
Sialkot	10.3%	9.6%	0.01	13.2%	11.2%	0.01	9.6%	11.2%	0.01	8.8%	13.5%	0.01
Sibi	68.8%	29.4%	0.20	62.4%	28.0%	0.17	41.7%	18.9%	0.08	26.7%	19.7%	0.05
Sukkur	39.9%	19.2%	0.08	47.9%	21.4%	0.10	40.5%	19.2%	0.08	34.2%	18.7%	0.06
Swabi	44.2%	16.0%	0.07	46.2%	13.6%	0.06	35.0%	12.6%	0.04	32.5%	13.6%	0.04
Swat	56.2%	22.0%	0.12	43.8%	15.8%	0.07	47.2%	19.8%	0.09	43.6%	16.0%	0.07
Tando M Khan							55.1%	22.7%	0.13	46.7%	20.3%	0.09
Tando.Allahyar							42.3%	20.6%	0.09	58.6%	25.1%	0.15
T.T Singh	15.5%	12.5%	0.02	17.6%	11.0%	0.02	18.4%	12.5%	0.02	14.1%	13.8%	0.02
Tank	42.8%	13.8%	0.06	47.2%	18.3%	0.09	50.3%	16.3%	0.08	45.2%	17.6%	0.08
Tharparkar	80.1%	22.2%	0.18	84.9%	26.6%	0.23	75.8%	21.9%	0.17	74.8%	25.1%	0.19
Thatta	81.1%	29.5%	0.24	72.8%	24.2%	0.18	59.1%	21.4%	0.13	58.0%	23.2%	0.13
Umerkot										58.0%	19.2%	0.11
Upper Dir	82.7%	27.1%	0.22	86.1%	23.7%	0.20	74.6%	19.2%	0.14	69.5%	18.1%	0.13
Vehari	29.5%	15.3%	0.05	39.0%	17.7%	0.07	36.3%	17.0%	0.06	31.9%	15.4%	0.05
Washuk							72.1%	24.0%	0.17	55.6%	20.2%	0.11
Zhob	78.2%	31.2%	0.24	68.5%	22.5%	0.15	49.1%	25.6%	0.13	73.8%	31.5%	0.23
Ziarat	68.7%	19.9%	0.14	41.9%	16.5%	0.07	50.3%	13.8%	0.07	27.0%	11.8%	0.03

Continued on next page

(Continued) ANNEXURE: A5 ESTIMATES OF HEADCOUNT INDICES, INTENSITY OF POVERTY INDICES AND MULTIDIMENSIONAL POVERTY FOR ALL DISTRICTS

	2012-13			2014-15			2019-20		
Districts	**HCI**	**IP**	**MDPI**	**HCI**	**IP**	**MDPI**	**HCI**	**IP**	**MDPI**
Abbotabad	18.3%	12.3%	0.02	23.9%	9.3%	0.02	10.5%	8.4%	0.01
Attock	9.4%	8.9%	0.01	8.6%	8.1%	0.01	2.9%	7.2%	0.00
Awaran	80.3%	20.4%	0.16	45.4%	14.3%	0.07	84.8%	22.8%	0.19
Badin	72.9%	23.5%	0.17	53.2%	19.5%	0.10	67.1%	16.4%	0.11
Bahawalnagar	46.2%	21.3%	0.10	36.9%	18.8%	0.07	26.1%	12.3%	0.03
Bahawalpur	36.6%	16.7%	0.06	27.9%	14.9%	0.04	29.1%	12.0%	0.03
Bannu	36.1%	16.1%	0.06	18.0%	11.4%	0.02	15.9%	12.7%	0.02
Barkhan	72.4%	18.7%	0.14	74.6%	24.0%	0.18	63.2%	16.4%	0.10
Batagram	59.0%	23.2%	0.14	64.9%	26.6%	0.17	39.0%	18.0%	0.07
Bhakkar	35.1%	12.7%	0.04	23.5%	14.0%	0.03	19.0%	9.4%	0.02
Bolan/Kachhi	54.4%	21.4%	0.12	57.4%	23.6%	0.14			
Buner	48.5%	21.0%	0.10	40.8%	20.1%	0.08	43.1%	17.0%	0.07
Chaghi	74.0%	30.3%	0.22	63.3%	20.2%	0.13			
Chakwal	5.3%	8.7%	0.00	6.6%	11.5%	0.01	3.1%	8.0%	0.00
Charsada	32.7%	14.6%	0.05	15.9%	12.1%	0.02	17.8%	9.9%	0.02
Chiniot	22.0%	10.3%	0.02	16.8%	10.3%	0.02	18.2%	10.0%	0.02
Chitral	29.7%	14.5%	0.04	31.5%	12.8%	0.04	22.6%	8.4%	0.02
D.G.Khan	41.4%	19.0%	0.08	40.5%	21.3%	0.09	42.9%	14.5%	0.06
D.I.Khan	39.8%	18.0%	0.07	28.7%	17.2%	0.05	16.7%	8.2%	0.01
Dadu	35.3%	15.7%	0.06	20.3%	14.7%	0.03	37.8%	14.3%	0.05
Dera Bugti	83.5%	32.5%	0.27	76.5%	32.1%	0.25	72.6%	14.8%	0.11
Faisalabad	11.7%	12.5%	0.01	7.4%	10.6%	0.01	7.8%	10.3%	0.01
Gawadar	30.2%	14.0%	0.04	42.9%	19.0%	0.08	39.4%	16.3%	0.06
Ghotki	50.0%	19.0%	0.10	51.0%	18.7%	0.10	52.3%	16.4%	0.09
Gujranwala	11.4%	10.5%	0.01	5.9%	8.9%	0.01	4.8%	9.1%	0.00
Gujrat	5.8%	10.5%	0.01	1.7%	8.9%	0.00	2.0%	7.3%	0.00
Hafizabad	14.8%	11.4%	0.02	8.0%	9.4%	0.01	9.4%	8.3%	0.01
Hangu	42.0%	14.4%	0.06	25.4%	12.4%	0.03	27.7%	11.0%	0.03
Haripur	16.3%	13.5%	0.02	16.2%	14.5%	0.02	7.6%	10.9%	0.01
Hernai	56.8%	22.5%	0.13	76.3%	28.9%	0.22	41.4%	16.2%	0.07
Hyderabad	28.9%	18.5%	0.05	26.1%	14.4%	0.04	17.2%	13.0%	0.02
Jacobabad	66.3%	24.6%	0.16	59.8%	20.5%	0.12	42.9%	14.0%	0.06
Jaffarabad	76.2%	26.2%	0.20	49.5%	18.7%	0.09	60.6%	17.1%	0.10
Jamshoro	42.4%	19.6%	0.08	31.1%	17.6%	0.05	45.6%	14.0%	0.06
Jhelum	5.9%	7.9%	0.00	2.4%	4.7%	0.00	3.0%	6.9%	0.00
Jhal Magsi	45.3%	26.2%	0.12	80.3%	27.7%	0.22			
Jhang	37.1%	16.1%	0.06	24.7%	15.9%	0.04	15.1%	10.8%	0.02
Kalat	44.1%	18.0%	0.08	28.4%	16.9%	0.05	43.6%	15.6%	0.07

Continued on next page

(Continued) ANNEXURE: A5 ESTIMATES OF HEADCOUNT INDICES, INTENSITY OF POVERTY INDICES AND MULTIDIMENSIONAL POVERTY FOR ALL DISTRICTS

	2012-13			2014-15			2019-20		
Districts	**HCI**	**IP**	**MDPI**	**HCI**	**IP**	**MDPI**	**HCI**	**IP**	**MDPI**
Karachi	7.3%	12.2%	0.01	5.8%	9.5%	0.01	3.1%	5.9%	0.00
Karak	44.9%	16.9%	0.08	26.0%	16.3%	0.04	9.1%	6.9%	0.01
Kashmore	67.5%	27.2%	0.18	55.3%	19.3%	0.11	55.5%	15.1%	0.08
Kasur	26.8%	12.9%	0.03	16.2%	12.4%	0.02	9.5%	8.5%	0.01
Kech/Turbat	45.6%	19.9%	0.09				32.0%	12.9%	0.04
Khairpur	51.9%	21.3%	0.11	32.1%	19.4%	0.06	49.3%	15.9%	0.08
Khanewal	32.4%	16.0%	0.05	22.5%	14.5%	0.03	19.9%	12.1%	0.02
Kharan	40.5%	19.7%	0.08	55.1%	25.4%	0.14	27.8%	12.2%	0.03
Khushab	23.1%	13.5%	0.03	21.9%	16.5%	0.04	12.2%	9.8%	0.01
Khuzdar	52.2%	19.1%	0.10	35.4%	16.3%	0.06	87.8%	25.1%	0.22
Killa Abdulah	68.4%	22.6%	0.15	60.0%	18.0%	0.11	57.8%	15.2%	0.09
Killa Saifullah	67.4%	20.9%	0.14	15.2%	8.7%	0.01	34.6%	11.6%	0.04
Kohat	30.5%	14.9%	0.05	22.2%	13.5%	0.03	27.3%	10.3%	0.03
Kohistan	94.2%	26.9%	0.25	88.7%	33.7%	0.30	89.0%	27.4%	0.24
Kohlu	93.9%	29.6%	0.28	56.4%	26.8%	0.15	7.3%	5.5%	0.00
Lahore	7.6%	12.2%	0.01	3.4%	6.4%	0.00	5.2%	9.2%	0.00
Lakki Marwat	45.9%	18.9%	0.09	29.8%	14.9%	0.04	20.9%	10.5%	0.02
Larkana	50.7%	20.5%	0.10	27.2%	14.7%	0.04	20.6%	9.6%	0.02
Lasbela	66.9%	22.3%	0.15	66.9%	22.1%	0.15	22.4%	9.4%	0.02
Layyan	20.0%	12.5%	0.03	19.4%	13.9%	0.03	14.3%	11.7%	0.02
Lodhran	35.0%	16.0%	0.06	29.7%	16.4%	0.05	22.5%	10.8%	0.02
Loralai	62.4%	23.9%	0.15	45.9%	18.8%	0.09	22.6%	10.9%	0.02
Lower Dir	47.1%	14.7%	0.07	31.7%	17.8%	0.06	29.0%	12.5%	0.04
Malakand	28.6%	11.5%	0.03	17.7%	12.8%	0.02	11.6%	6.7%	0.01
Mandi Bahauddin	7.0%	11.4%	0.01	4.4%	10.3%	0.00	4.8%	8.5%	0.00
Mansehra	31.3%	18.1%	0.06	29.3%	19.1%	0.06	18.1%	10.1%	0.02
Mardan	28.8%	14.4%	0.04	12.5%	9.8%	0.01	12.5%	10.4%	0.01
Mastung	29.6%	15.0%	0.04	27.6%	12.6%	0.03	38.1%	14.4%	0.05
Mian wali	29.5%	15.3%	0.05	17.2%	14.7%	0.03	16.3%	10.7%	0.02
Matiari	42.2%	17.7%	0.07	33.9%	15.1%	0.05	43.4%	13.9%	0.06
Mirpurkhas	58.6%	23.1%	0.14	53.0%	20.7%	0.11	56.5%	19.8%	0.11
Multan	31.0%	17.5%	0.05	19.0%	13.8%	0.03	15.0%	10.9%	0.02
Musakhel	82.7%	26.0%	0.21	61.9%	21.5%	0.13			
Muzaffargarh	52.7%	20.2%	0.11	44.2%	19.3%	0.09	37.1%	13.4%	0.05
Nankana Sahib	17.5%	10.0%	0.02	13.0%	15.9%	0.02	6.7%	5.7%	0.00
Narowal	25.1%	11.5%	0.03	8.3%	8.8%	0.01	5.1%	7.0%	0.00
Nasirabad	80.1%	29.7%	0.24	51.2%	19.5%	0.10	50.2%	14.4%	0.07
Nushki	37.2%	15.6%	0.06	34.6%	15.3%	0.05	9.5%	8.4%	0.01
Nawabshah	46.1%	18.5%	0.09	24.9%	13.5%	0.03	50.1%	18.2%	0.09

Continued on next page

(Continued) ANNEXURE: A5 ESTIMATES OF HEADCOUNT INDICES, INTENSITY OF POVERTY INDICES AND MULTIDIMENSIONAL POVERTY FOR ALL DISTRICTS

	2012-13			2014-15			2019-20		
Districts	**HCI**	**IP**	**MDPI**	**HCI**	**IP**	**MDPI**	**HCI**	**IP**	**MDPI**
Nowshera	23.3%	15.8%	0.04	11.7%	8.4%	0.01	16.3%	9.1%	0.01
Naushehro Feroze	38.2%	18.3%	0.07	16.7%	15.9%	0.03	25.0%	14.8%	0.04
Okara	26.9%	13.6%	0.04	17.0%	12.1%	0.02	5.4%	7.0%	0.00
Pakpattan	34.2%	15.3%	0.05	17.3%	12.9%	0.02	9.4%	9.2%	0.01
Peshawar	16.5%	11.5%	0.02	10.5%	9.9%	0.01	15.3%	11.0%	0.02
Pishin	40.6%	18.6%	0.08	45.5%	16.5%	0.07	11.0%	10.8%	0.01
Quetta	17.7%	13.7%	0.02	18.4%	13.7%	0.03	15.2%	13.5%	0.02
Rahim Yar Khan	48.3%	22.2%	0.11	39.8%	19.3%	0.08	31.3%	14.1%	0.04
Rajanpur	59.3%	23.5%	0.14	46.4%	22.7%	0.11	51.6%	16.6%	0.09
Rawalpindi	6.0%	10.9%	0.01	6.6%	7.3%	0.00	4.3%	7.6%	0.00
Sahiwal	23.1%	13.1%	0.03	11.2%	13.3%	0.01	6.7%	8.7%	0.01
Sanghar	49.7%	24.3%	0.12	36.0%	18.3%	0.07	54.7%	18.9%	0.10
Sargodha	16.7%	9.6%	0.02	11.8%	9.9%	0.01	8.0%	8.4%	0.01
Shangla	69.0%	26.7%	0.18	72.9%	23.9%	0.17	56.7%	13.3%	0.08
Shadatkot	58.3%	20.5%	0.12	59.2%	20.7%	0.12	21.5%	10.5%	0.02
Shaikhupura	16.2%	11.8%	0.02	8.1%	8.4%	0.01	5.2%	7.9%	0.00
Shikarpur	51.2%	17.8%	0.09	43.4%	17.6%	0.08	52.9%	17.0%	0.09
Sherani	66.6%	26.5%	0.18	69.6%	18.0%	0.13	78.1%	18.6%	0.15
Sialkot	8.0%	8.4%	0.01	3.7%	6.8%	0.00	3.6%	8.8%	0.00
Sibi	28.4%	20.2%	0.06	59.5%	26.7%	0.16	40.2%	14.5%	0.06
Sujawal				69.6%	18.8%	0.13	59.4%	20.9%	0.12
Sukkur	39.5%	17.1%	0.07	27.9%	18.3%	0.05	32.9%	16.8%	0.06
Swabi	24.9%	14.0%	0.03	14.6%	10.0%	0.01	13.1%	10.8%	0.01
Swat	35.3%	16.4%	0.06	27.4%	13.3%	0.04	32.9%	13.8%	0.05
T.T Singh	15.3%	11.8%	0.02	12.3%	13.1%	0.02	7.7%	8.4%	0.01
Tando Allahyar	52.5%	19.0%	0.10	46.8%	18.1%	0.08	48.1%	15.0%	0.07
Tando M.Khan	59.5%	23.2%	0.14	65.8%	17.7%	0.12	66.2%	17.3%	0.11
Tank	48.6%	17.5%	0.08	33.5%	14.9%	0.05	12.9%	14.5%	0.02
Tharparkar	75.0%	21.6%	0.16	81.4%	23.1%	0.19	84.0%	20.1%	0.17
Thatta	60.5%	24.4%	0.15	62.1%	16.8%	0.10	49.3%	15.9%	0.08
Torgarh	90.4%	30.3%	0.27	80.4%	28.6%	0.23	69.3%	16.5%	0.11
Umerkot	76.3%	23.3%	0.18	67.2%	23.0%	0.15	66.9%	18.7%	0.12
Upper Dir	80.7%	26.9%	0.22	70.0%	25.5%	0.18	45.6%	14.1%	0.06
Vehari	36.7%	16.6%	0.06	30.1%	16.4%	0.05	17.3%	9.2%	0.02
Washuk	69.4%	21.2%	0.15	53.1%	21.4%	0.11	43.6%	17.0%	0.07
Zhob	58.6%	27.4%	0.16	62.1%	22.7%	0.14			
Ziarat	32.4%	14.9%	0.05	62.8%	25.9%	0.16	44.4%	16.7%	0.07

HCI: Head Count Indices, IP: Intensity of Poverty, MDPI: Multidimensional Poverty Indices

ANNEXURE: A6

MAP OF PAKSITAN WITH DISTRICTS NAME