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Pakistan Poverty Trends, Scenarios and Drivers

Rose Lopez-Calix, Carolina Mejia, David Newhouse and Carlos Sobrado

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Abstract

This policy paper examines recent poverty trends in Pakistan. Official statistics continue to indicate strong poverty reduction through 2010-11, thanks in large part to policies and investments that boosted productivity in the non-agricultural sector. Poverty fell a bit more than other countries with similar rates of growth, as growth was slightly pro-poor and also benefited the bottom 40 percent. Alternative indicators such as access to public services have also improved, though at a slower rate since 2008—the year of twin global and domestic crises that hardly hit Pakistan. While increased productivity among non-agricultural workers has been a key factor driving poverty reduction, cash transfers through the Benazir Income Support Program (BISP) and workers' remittances from abroad also made moderate contributions. Simulations suggest that higher growth rates would further accelerate poverty reduction, but would have smaller effects on attaining other Millennium Development Goals.

Despite this progress on poverty reductions, a major concern is that large numbers of people still remain concentrated just above the poverty line, thus remaining vulnerable to even small shocks, like natural disasters. Furthermore, the Pakistani economy has failed to create enough salaried and non-agricultural jobs, and female labor force participation remains unusually low by regional and worldwide standards. BISP cash transfers have helped reduce poverty and are well-targeted, but their coverage still is small; while remittances accrue mainly to non-poor households. If Pakistan can address these remaining constraints and also achieve more rapid growth, in particular with less frequent load-shedding and high levels of investment in human capital, the labor market has the potential to absorb new workers and further accelerate the improvement in living standards for the poor and near-poor.

This Working Paper disseminates the findings of work in progress to encourage the exchange of ideas about development issues. An objective of the paper is to get the findings out quickly, even if the presentations are less than fully polished. The papers carry the names of the authors and should be cited accordingly. The findings, interpretations, and conclusions expressed in this paper are entirely those of the authors. They do not necessarily represent the views of the International Bank for Reconstruction and Development/World Bank and its affiliated organizations, or those of the Executive Directors of the World Bank or the governments they represent.

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Abbreviations and Acronyms

BISP	Benazir Income Support Program
CCT	Conditional Cash Transfer
CEM	Country Economic Memorandum
CPI	Consumer Price Index (CPI)
FY	Fiscal Year
GDP	Gross Domestic Product
HOI	Human Opportunity Index
ILO	International Labor Organization
KPK	Khyber Pakhtunkhwa
MAMS	Maquette for MDG Simulations
MDG	Millennium Development Goals
PBS	Pakistan Bureau of Statistics
PKR	Pakistani Rupee
PPP	Purchasing Power Parity
PSLM	Pakistan Social and Living Standard Survey
UCT	Unconditional Cash Transfer
US	United States
WB	World Bank
WDI	World Development Indicators

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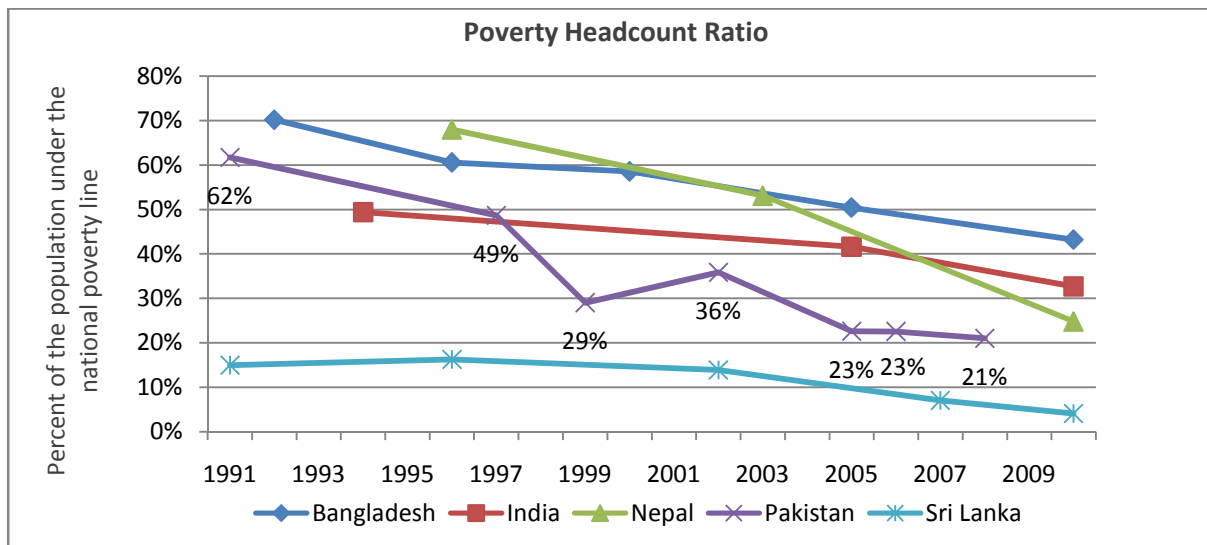
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Recent Developments in Poverty and Shared Prosperity

1. Over the past 20 years, Pakistan has made great progress in reducing poverty. According to international poverty rates, the incidence of poverty fell 40 percentage points, from about 60 percent to about 20 percent, between 1991 and 2008. In the region, only Nepal has seen comparable progress. Despite a temporary setback between 1999 and 2002, poverty resumed its rapid decline, falling to 23 percent in 2006 and slightly further to 21 percent in 2008.

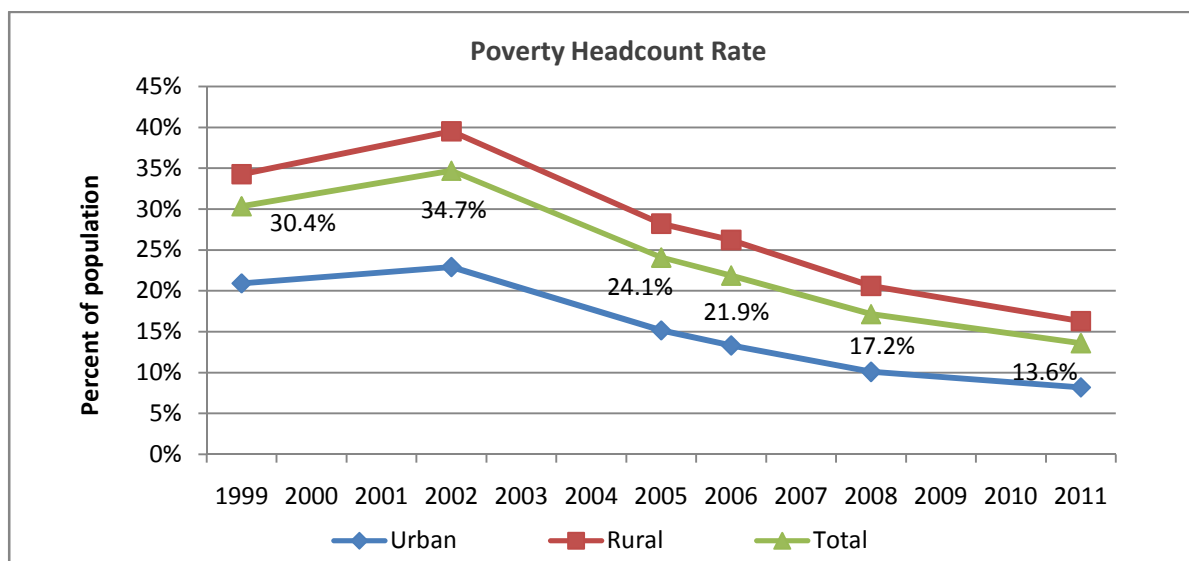
Figure 1 Pakistan Had Made Great Progress in Reducing Poverty



Notes: Based on international poverty line (US\$ 1.25 in 2005 PPP). Year indicates final year of data collection.

Source: World Development Indicators

2. National estimates show continued poverty reduction since 2008. The national poverty line, unlike the international poverty line, has been calculated for 2011. According to the former, headcount poverty fell nationally from 35 percent in 2002, to an estimated 13.6 percent in 2011 (Figure 2). Compared to international estimates, national estimates show only a slightly weaker decline from 2002 to 2005, but more rapid improvement since then, as national poverty declined from 17 to 13 percent between 2008 and 2011. Reductions in poverty were strong in both urban and rural areas, and the fall in rural poverty from 40 to 16 percentage points between 2002 and 2011 is particularly striking. Furthermore, the household survey used to measure poverty is large enough to generate precise estimates (Table 1).

Figure 2 According to the National Poverty Rate, Progress Has Continued Since 2002

Notes: Based on national poverty line. Year indicates final year of data collection. Rates differ slightly from official numbers due to differences in data cleaning procedures.

Source: World Bank staff calculations based on Pakistan Social and Living Standards Measurement surveys.

Table 1 Poverty Headcount Rates and 95% Confidence Intervals, Pakistan

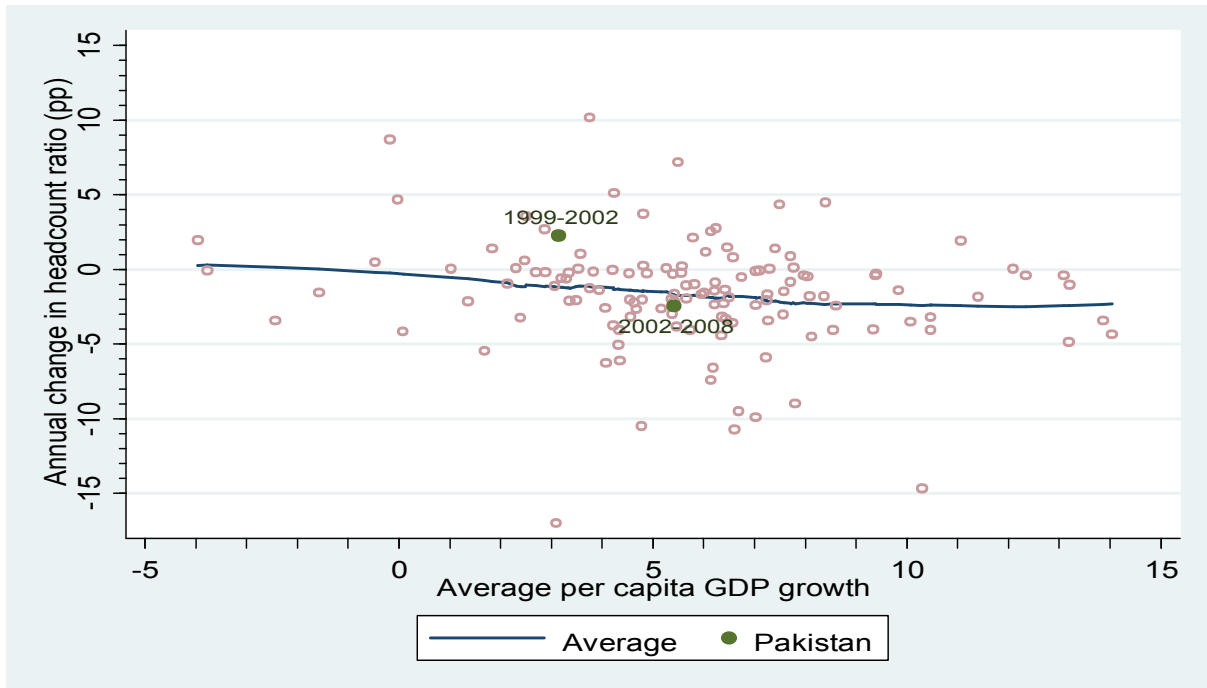
		1999	2002	2005	2008	2011
Urban	Upper	23.1%	25.2%	17.2%	11.6%	9.5%
	Mean	20.9%	22.9%	15.2%	10.1%	8.2%
	Lower	18.7%	20.7%	13.1%	8.6%	6.9%
Rural	Lower	36.4%	41.7%	30.3%	22.4%	17.8%
	Mean	34.3%	39.5%	28.2%	20.6%	16.3%
	Upper	32.1%	37.4%	26.1%	18.8%	14.8%
Pakistan	Lower	28.7%	33.0%	22.4%	15.8%	12.5%

Notes: Based on international poverty line (\$1.25 in 2005 PPP). Year indicates final year of data collection.

Source: WB Staff estimates based on PSLM 1999-2011.

3. Since 2002, Pakistan has reduced poverty slightly faster than countries with similar growth rates. Figure 3 shows how growth is associated with the reduction in poverty, defined according to the international standard of US\$ 1.25 per day, in a sample of 133 periods in 44 developing countries. The black circles represent Pakistan's performance in growth and poverty reduction between 1999 and 2002, and again from 2002 to 2008, which is the most recent year for which US\$ 1.25 per day estimates exist. In the earlier period, Pakistan grew at about 3 percent per year, but that growth did not reach the poor, as Pakistan's poverty performance was substantially worse than countries with similar growth rates. Between 2002 and 2008, not only did growth pick up to over 5 percent, but the pace of poverty reduction improved as well, so that Pakistan's fall in poverty was slightly larger than the average among countries with similar levels of growth.

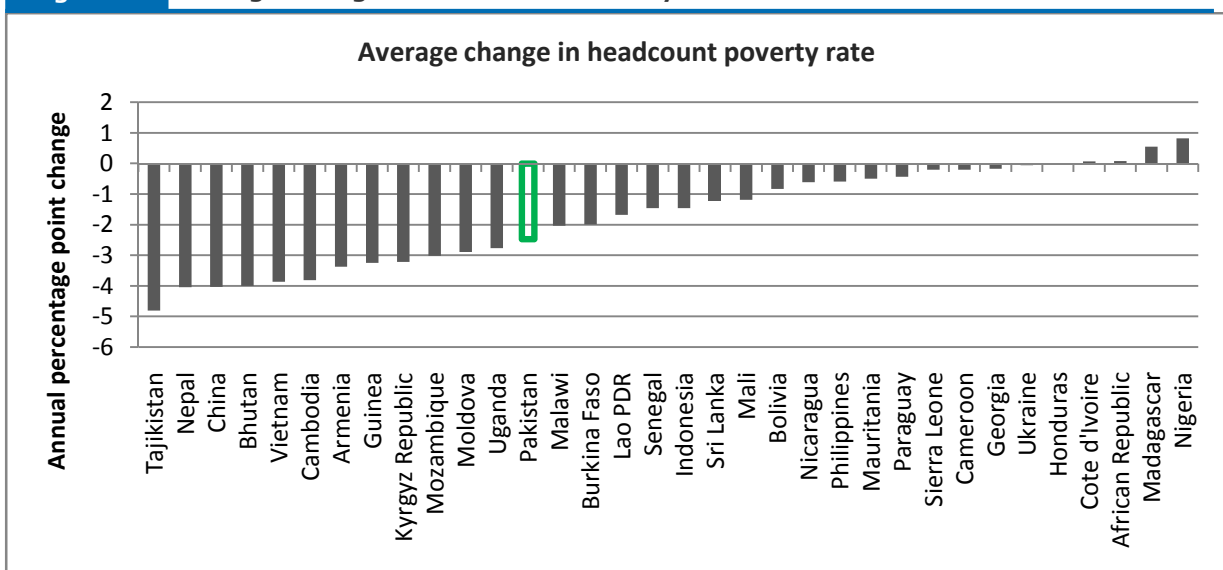
Figure 3 Poverty Reduction of Countries with Similar Growth Rates



Note: International Poverty rates at US\$ 1.25 per day are unavailable in Pakistan in 2011
 Source: WB Staff calculations based on World Development Indicators.

4. Overall, the pace of poverty reduction since 2002 has been strong by international standards. Figure 4 shows the annualized change in headcount poverty (at US\$ 1.25 per day) in selected countries, from the early 2000's to the most recent period in which data are available. Pakistan's poverty rate declined about 2.5 percentage points per year during this time. According to this measure, Pakistan ranks 13th out of the 34 countries with available data.

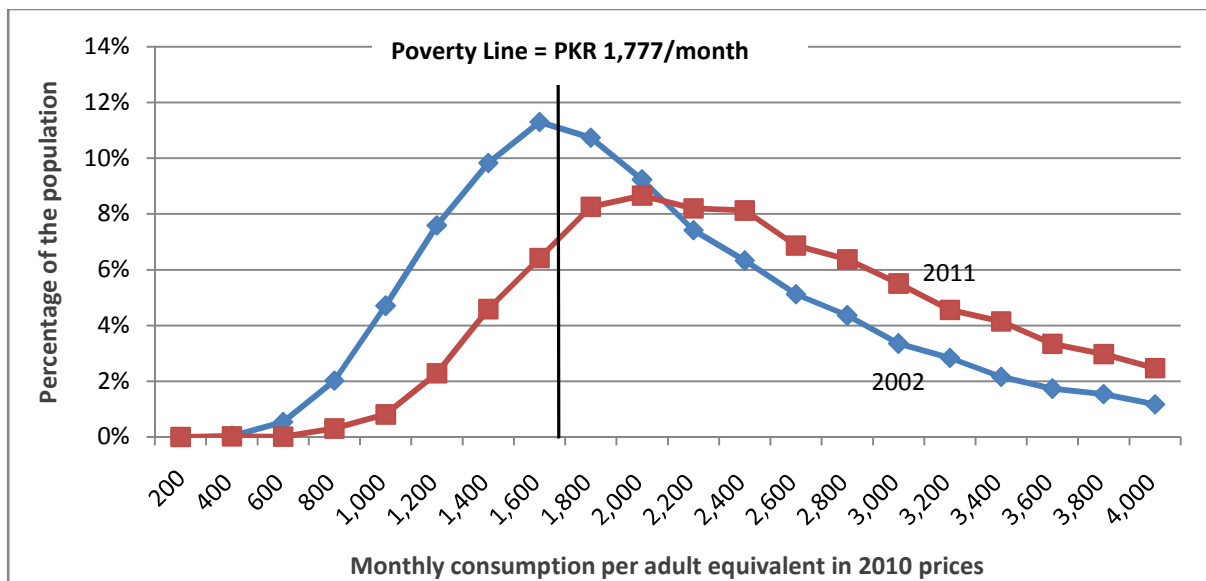
Figure 4 Average Change in Head Count Poverty Rate



Notes: Based on international US\$ 1.25 per day poverty line. Initial year lies between 2000 and 2004 and final year is most recent year with data available. Years for Pakistan range from 2002 to 2008.
 Source: World Development Indicators

5. Pakistan's solid record of poverty reduction since 2002 is partly due to the large share of households moving from just below to just above the poverty line. Figure 5 shows the full distribution of household adult-equivalent consumption, which is the indicator used to measure poverty. In 2002, the consumption of nearly 12 percent of the population lay just below the poverty line, at about PKR 1,600 per person per month. By 2011, nearly a third of the population consumed just above the poverty line, between PKR 1,800 and PKR 2,400 per person per month. In short, although headcount poverty has fallen at an impressive rate, a significant fraction of the population subsists on an amount just above the poverty line.

Figure 5 A Large Share of Households are Clustered Near the Poverty line

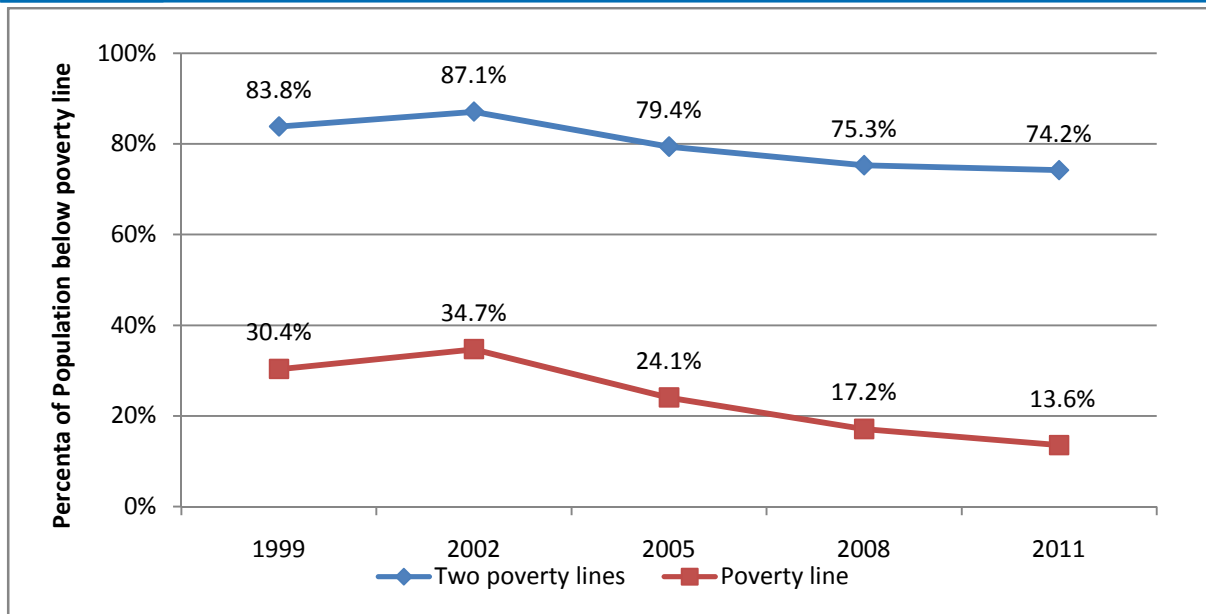


Source: World Bank staff calculations based on 2001-02 and 2010-11 Pakistan Social and Living Standards Measurement surveys.

6. Because many households are just above the poverty line, the share of vulnerable households is high and increasing. We define people as vulnerable if their per capita consumption lies between one and two poverty lines, which in 2011 ranged from PKR 1,777 to PKR 3,554 per month per person. This is equal to about US\$ 16 to US\$ 33 in current dollars and US\$ 48 to US\$ 96 in international dollars. Figure 6 gives the share of households that are either poor or vulnerable according to this definition, which is nearly three quarters of the population. Throughout this period over half of the population was vulnerable. Moreover, since more people managed to move above the poverty line than the vulnerability line, the vulnerability rate increased from 53.5 percent in 1999 to 60.1 percent in 2011.

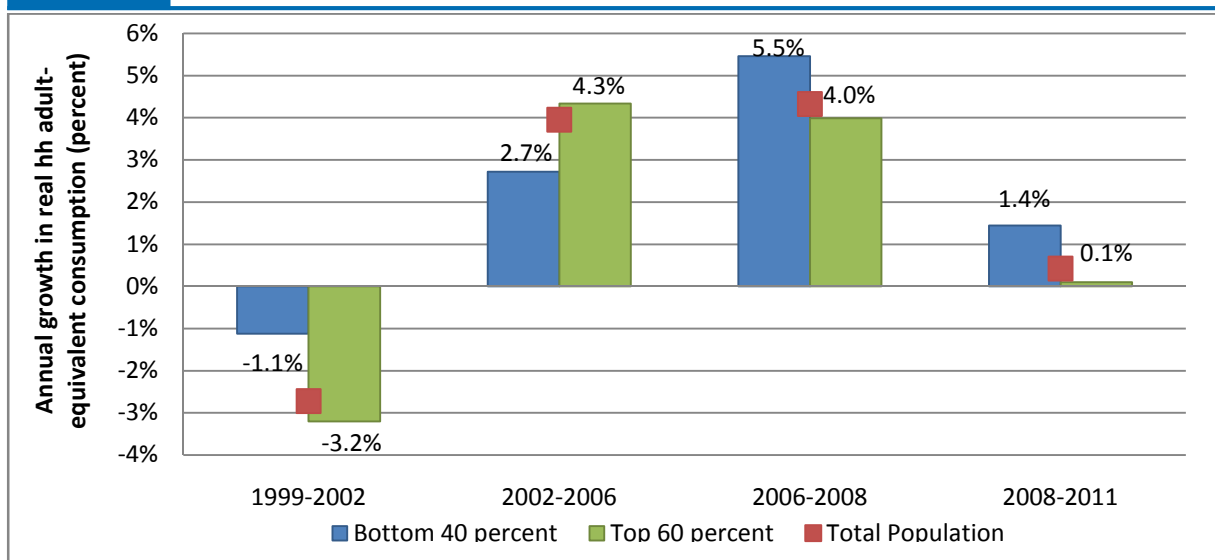
7. Given these high rates of vulnerability, even small shocks can have large effects on poverty. Because of the large concentration of households with consumption just above the poverty line, a small reduction in consumption can greatly increase poverty rates. For example, if consumption for each household was reduced by as little as PKR 10 per day per person, poverty would increase to 27.8 percent, which is more than double the 2011 headcount rate.¹

¹PKR 10 a day is equivalent to PKR 304 a month per person.

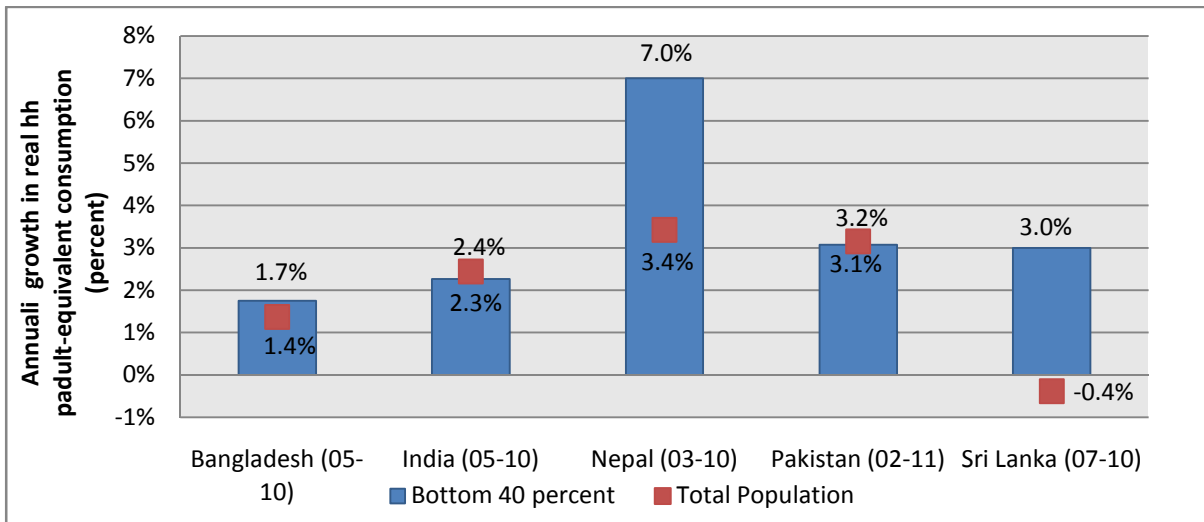
Figure 6 A Large Share of the Population Remains Vulnerable

Source: World Bank staff calculations based on Pakistan Social and Living Standards Measurement Surveys.

8. Although vulnerability remains high, poverty has fallen because growth is leading to shared prosperity. Shared prosperity—defined as growth in real consumption of the bottom 40 percent of the population—has been encouraging. Since 2006, the annual growth in real adult-equivalent consumption of the bottom 40 percent has exceeded that of the top 60 percent (Figure 7). The 5.5 percent annual growth in the average adult-equivalent consumption of the bottom 40 percent between 2006 and 2008 was particularly impressive. Although per capita consumption growth overall subsequently slowed to 0.4 percent, the consumption of the bottom 40 percent still rose 1.4 percent per year. Within the region, the average gain experienced by Pakistan's bottom 40 percent is exceeded only by Nepal and Sri Lanka (Figure 7).

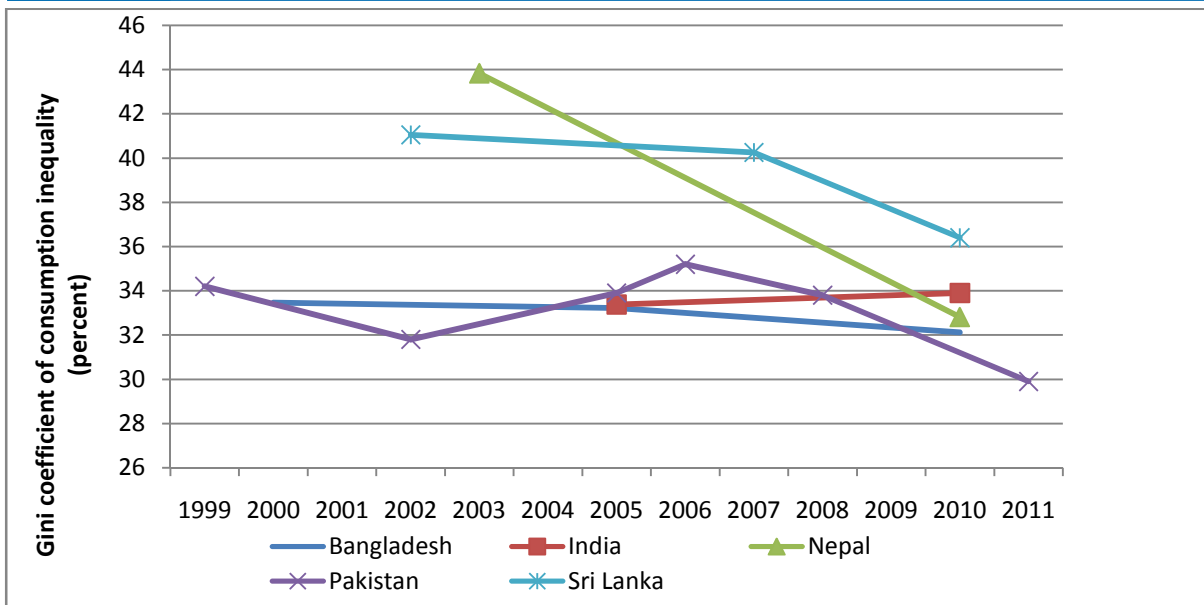
Figure 7 Growth Is Leading to Shared Prosperity

Source: World Bank staff calculations based on Pakistan Social and Living Standards Measurement Surveys.

Figure 8 Shared Prosperity in Pakistan Compares Favorably with its Neighbors

Source: World Bank staff calculations based on Household Survey Data.

9. Inequality has also declined and is low by regional standards. Growth has been poor since 2006, and consequently inequality is lower than in 1999. In 2011, the Gini coefficient in Pakistan fell below 0.3 for the first time (Figure 9).

Figure 9 Inequality has fallen in Pakistan since 2006 and is low by Regional Standards

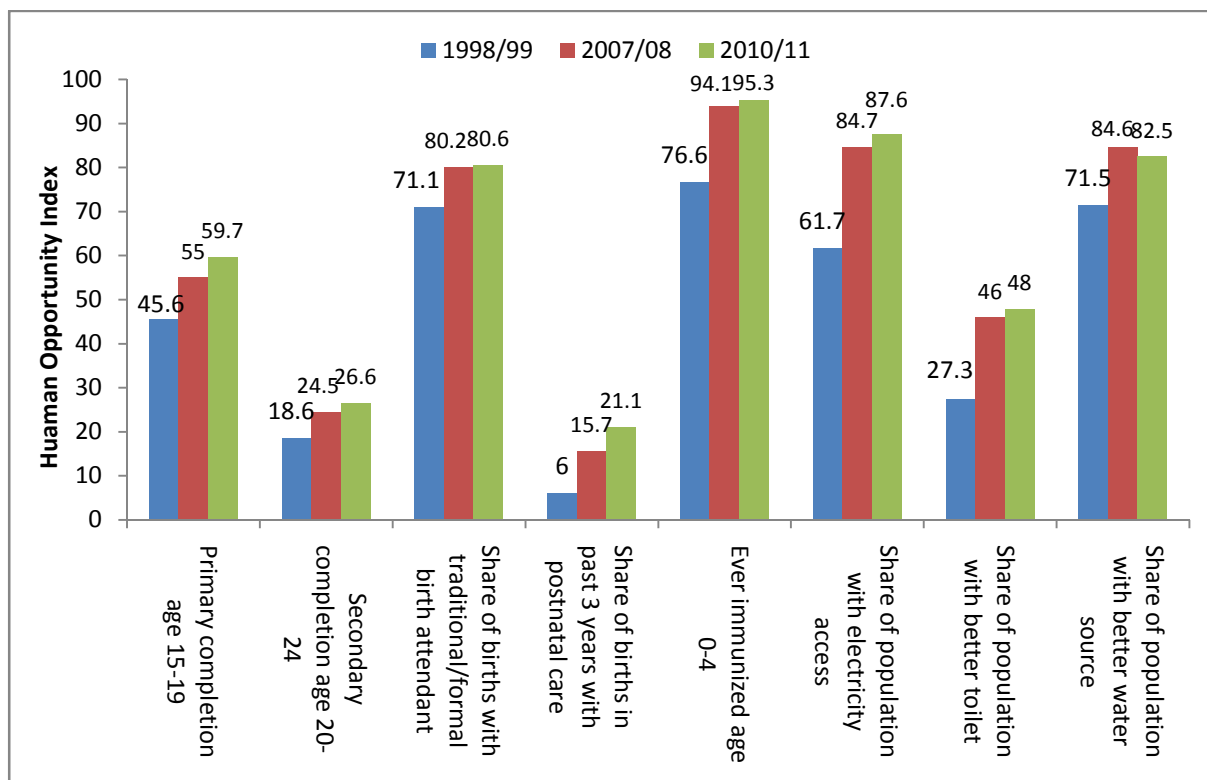
Source: World Development Indicators (WDI) World Bank.

10. Although there are legitimate concerns about data quality, these are unlikely to have a major effect on poverty trends. The official poverty line was most recently calculated in 2001, using survey data from 1998-99 and therefore has not adjusted to households' changing consumption patterns as poverty has fallen. In addition, the poverty line has been deflated using the overall CPI, which isn't designed to measure the price increases of goods

consumed by the poor.² Finally, data collection in Balochistan and Khyber Pakhtunkhwa provinces face special challenges, raising questions about the quality of the data, particularly from Balochistan. Annexure 2 describes these issues in greater detail.

11. Alternative welfare indicators also show improvement, although progress has slowed since 2008. Given concerns about the quality of the consumption and price data, it is useful to examine alternative indicators of economic well-being. Figure 10 shows trends in Human Opportunity Indexes (HOI) applied to children's education and health indicators, as well as the general population's access to infrastructure. The HOI index combines a measure of the frequency of an indicator with a penalty for the coverage being distributed unequally across consumption groups (see Annexure 3 for more details on the calculation of the HOI index). There has been notable progress in equality of opportunity for health related services between 1998 and 2011: postnatal care access rose from 6 to 21 percent, immunization increased from 76.6 to 95.3 percent, and access to better quality toilets almost doubled, from 27 to 48 percent. Although the adjusted access to electricity has improved considerably, from 61.7 in 1998 to almost 90 percent in 2011, electricity service suffers from constant interruptions in Pakistan. Furthermore, the rate of improvement in most indicators slowed considerably between 2008 and 2011, demonstrating the importance of efforts to continue to expand access to services.

Figure 10 Progress on Human Development Indicators Has Slowed



Note: The Human Opportunity Index reflects access to benefits and a penalty for inequality of that access across consumption groups. See Annexure 2 for details.

Source: World Bank staff calculations based on Pakistan Social and Living Standards Measurement Surveys

² In fact, food prices increased faster than non-food prices. Therefore, because the poor consume a greater share of food, deflating the poverty line with the CPI underestimates the increase in the poverty line and poverty levels by about 3 percentage points in Punjab (Newman, 2013).

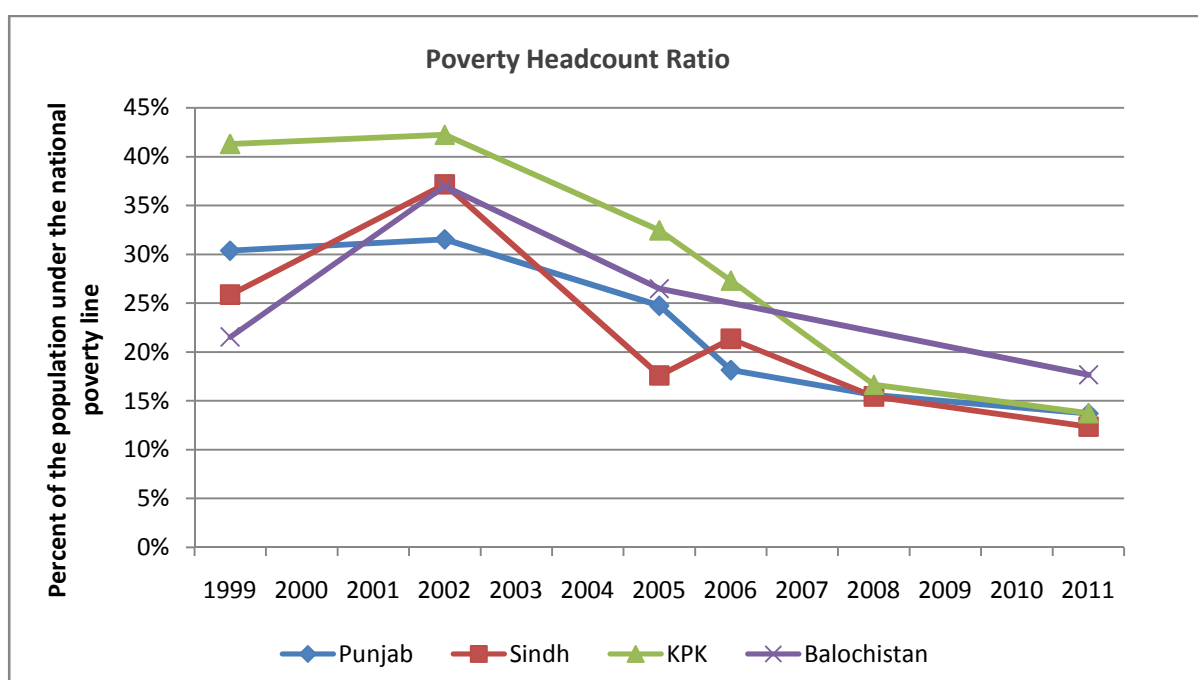
12. Equal access to education seems to remain a major challenge in Pakistan, particularly for women. Despite an increase in the HOI for both primary and secondary education completion between 1998 and 2011, secondary completion (adjusted for an equitable access) for youngsters aged 20-24 remains low, increasing from 18.6 percent in 1998 to 26.6 percent in 2011. Progress in expanding educational attainment will help further boost productivity and expand opportunities for young people to obtain more productive and stable jobs.

Provincial Differences

13. Poverty has fallen fastest in KPK. Punjab and Sindh are the most populous provinces, accounting for roughly 60 and 23 percent of the population respectively. In Punjab, poverty rose slightly between 1999 and 2002 before falling steadily since then. Sindh and Balochistan saw poverty rise between 1999 and 2002, but recovered rapidly between 2002 and 2005 (Figure 11). In KPK, despite an increase in conflict, poverty plummeted from 42 percent in 2002 to 17 percent in 2008, and fell further to 13.7 percent in 2011. Although KPK and Balochistan have traditionally had higher poverty rates, since 2002 these outlying provinces have made impressive strides in reducing poverty. By 2011, poverty rates were similar for all provinces, ranging from 12.4 percent in Sindh to 17.7 percent in Balochistan.

14. Provincial disparities were more apparent when looking at vulnerability, defined as the percentage of households consuming less than twice the poverty line. In all provinces, just like the country as a whole, a large share of the population in each province is clustered near the poverty line (See Annexure 1). The vulnerability rate remains especially high in Balochistan, where only a little over 10 percent of the population consumes more than twice the poverty line

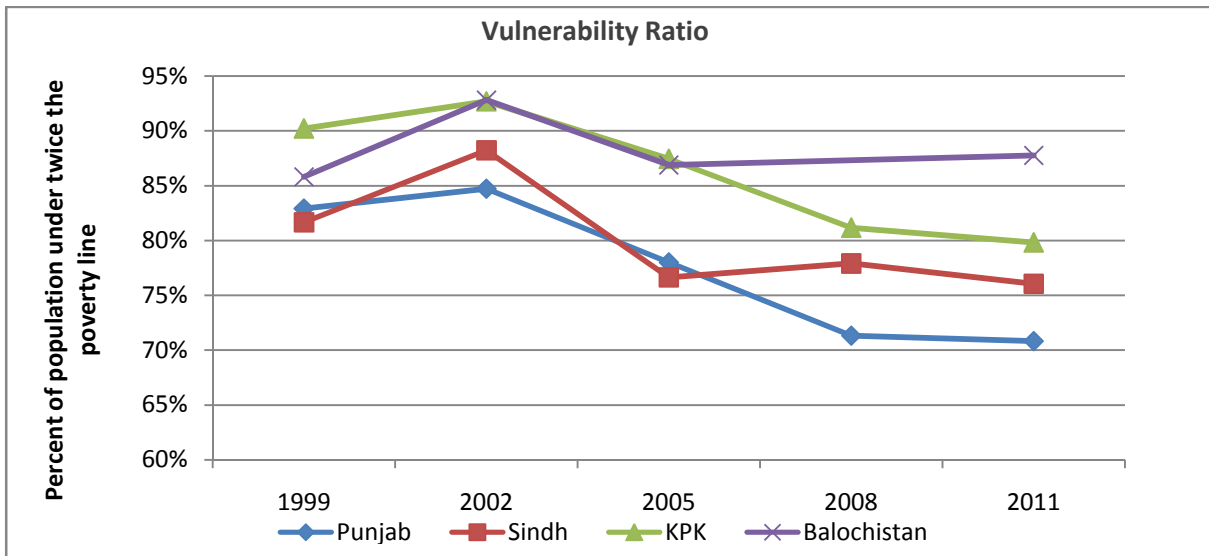
Figure 11 Trends in Head Count Poverty Rates by Province



Note: Estimated figures for Balochistan in 2006 and 2008 not reported due to data quality concerns.

Source: WB staff calculations based on Pakistan Social and Living Standards Measurement Surveys.

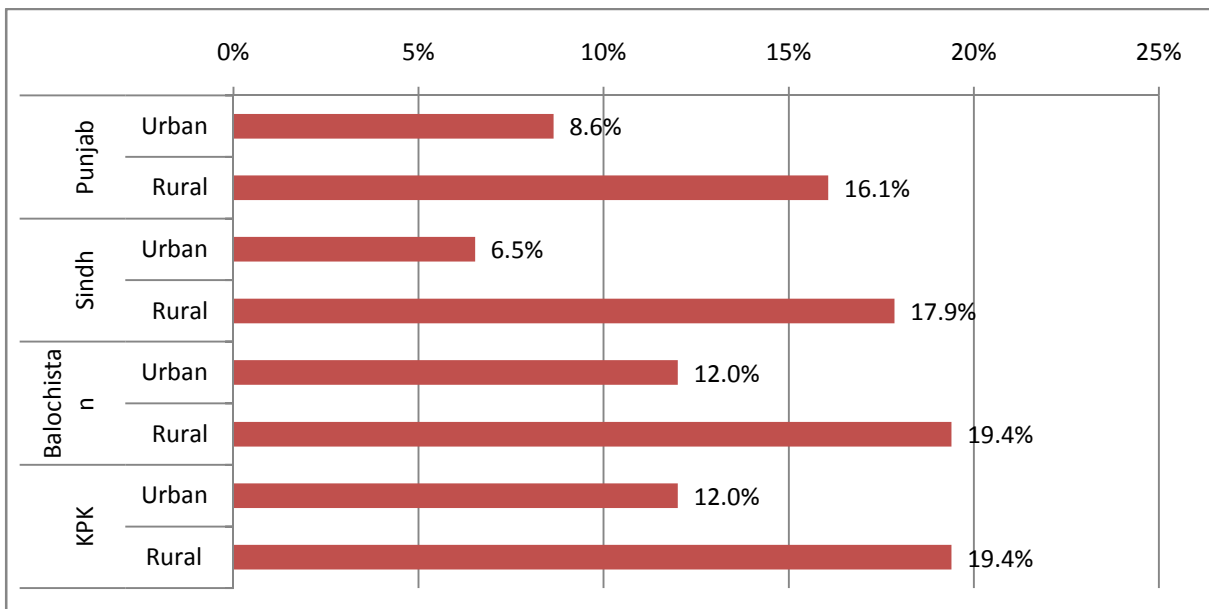
Figure 12 Trends in Vulnerability by Province



Notes: See notes to Figure 8. Vulnerability is defined as the share of household living below twice the poverty line. Source: WB staff calculations based on Pakistan Social and Living Standards Measurement Surveys.

15. In rural areas, poverty rates are highest in KPK and Sindh. Although headcount poverty rates in 2011 were similar for each province, there are significant differences in the urban and rural parts of each province. Poverty remains above 15 percent in rural KPK and Sindh. In contrast, urban Sindh has the lowest poverty rates, as only about 5 percent of the population is poor (Figure 13)

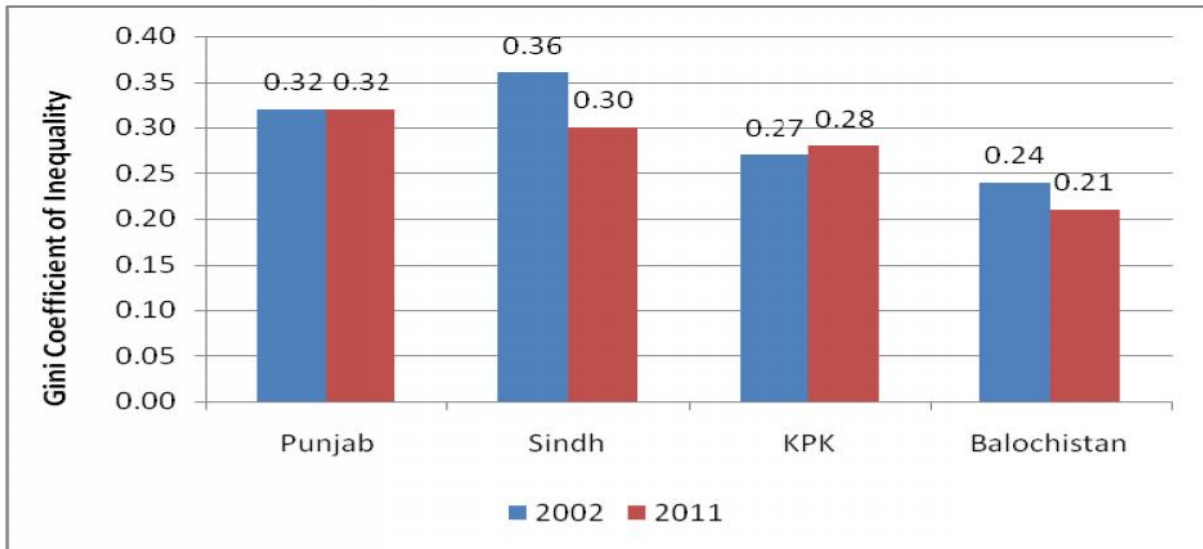
Figure 13 Headcount Poverty Rates by Province and Urban/Rural Location in 2011



Source: WB staff calculations based on Pakistan Social and Living Standards Measurement Surveys.

16. Inequality remains highest in Punjab and Sindh. These provinces have been growing most rapidly and have a larger concentration of wealthier households. However, the continuing decline in poverty in Sindh has coincided with a significant fall in inequality. Inequality also fell slightly in Balochistan. There was little change in KPK and Punjab as both rich and poor households reaped the benefits of increased growth in these provinces.

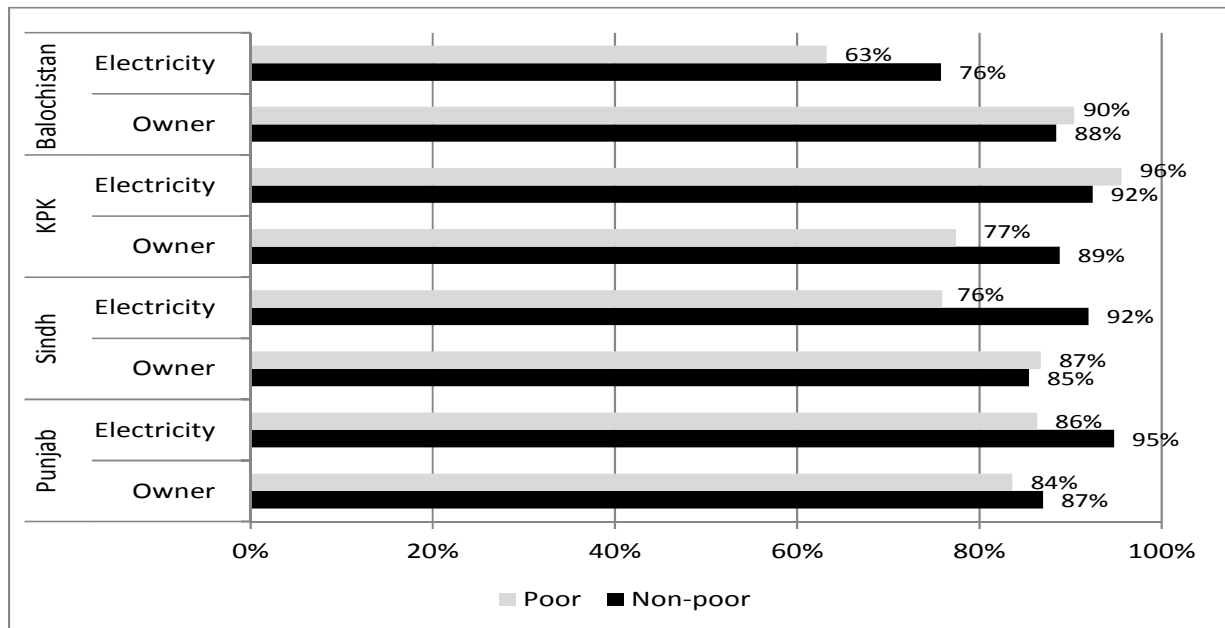
Figure 14 Trends in Inequality by Province



Source: WB staff calculations based on Pakistan Social and Living Standards Measurement Surveys.

17. Disparities between the poor and non-poor in terms of access to electricity, water, and sanitation are particularly large in Sindh. Although consumption inequality is highest in Punjab and Sindh, the picture changes slightly when we look at access to basic services such as electricity and water. Figure 15 shows differences between poor and non-poor households, in terms of access to electricity and rates of homeownership. In Sindh, only 3 out of every 4 poor people have access to electricity, while over 90 percent of non-poor households do. Of course, as noted above, even households with access to electricity face frequent power outages. Disparities in access to water and sanitation are also large in Sindh and KPK. In Sindh, only 25 percent of poor households have access to water, while 40 percent of non-poor households do—the disparities for toilet ownership are even greater (Figure 16). Differences in access between the poor and non-poor are substantially greater in Sindh than in Punjab or the two outlying provinces.

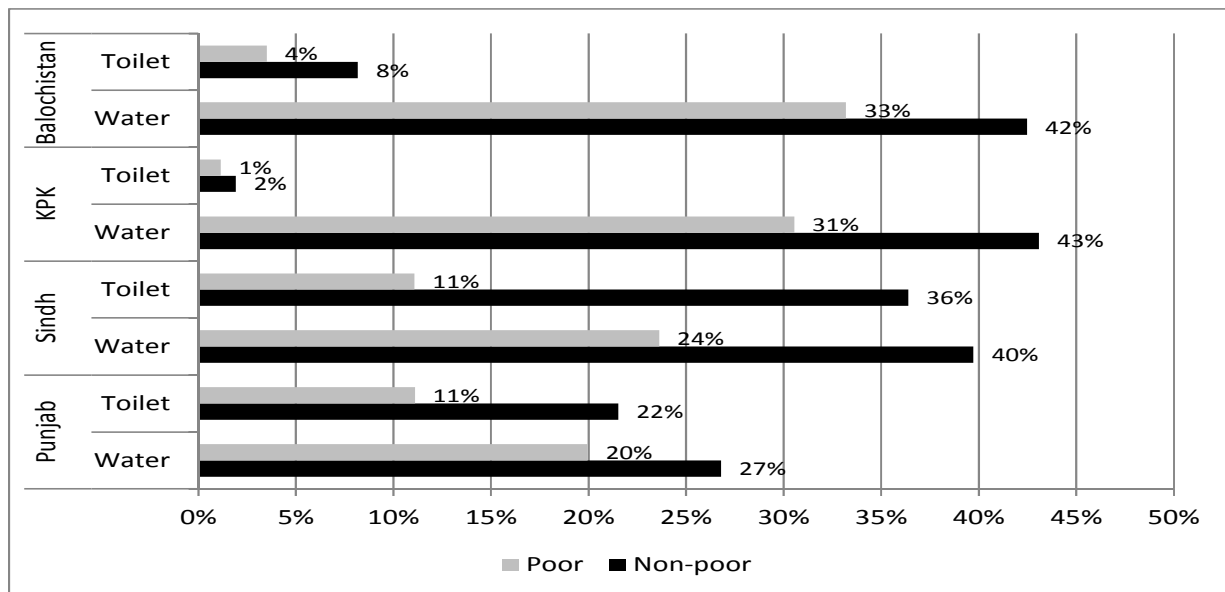
Figure 15 Rates of Electricity Access and Homeownership in 2011, by poverty status



Note: Bars indicate proportion of people living in poor or non-poor households that report having access to electricity or live in an owner-occupied home.

Source: WB staff calculations based on Pakistan Social and Living Standards Measurement Surveys.

Figure 16 Rates of Access to Toilets and Piped Water in 2011, by poverty status



Source: WB staff estimates based on 2011 Pakistan Social and Living Standards Measurement Survey.

Future Scenarios for Poverty Reduction

18. Poverty is projected to continue to fall. Poverty projections for Pakistan are based on two growth projections: a base scenario that assumes 4.2 percent GDP growth rate per year, and a high growth scenario that assumes 7.0 percent GDP growth rate per year (WB, CEM 2013)³. Poverty is projected by first converting the GDP growth projections into per capita terms by adjusting by population growth. Second, the per capita GDP projections are used to estimate average consumption growth based on the historical relationship between those two variables from 1998 to 2010. Finally, the average consumption growth projection is distributed among quintiles according to historical trends.

19. The projections are based on Pakistan's historical trends in growth and household consumption. From 1998 to 2012, the average annual per capita GDP growth rate in Pakistan was 2.4 percent and is projected to increase slightly to 2.6 (base scenario) or up to 5.3 percent (high growth scenario). During 1998-2011 per capita GDP in Pakistan grew from PKR 25,815 to PKR 35,743 per person (38.5 percent). At the same time, monthly consumption per adult equivalent increased from PKR 2,679 to PKR 3,174 (18.5 percent). In other words, for each one percent increase in the per capita GDP, consumption increased 0.48 percent.⁴

20. Consumption is therefore projected to grow between 1.2 percent and 2.1 percent per year. Consistent with past trends, growth is assumed to be distributed equally across the consumption distribution. Under the base scenario, this leads to growth in consumption per adult equivalent of 1.2 percent from 2011 to 2018. For the high growth scenario the consumption growth was estimated at 2.1 percent (Table 2).⁵

Table 2 Average Consumption Growth Rates Projections in Pakistan 2011-2018

	2011	2012	2013	2014	2015	2016	2017	2018
Base: Average Growth	0.6%	1.2%	1.1%	1.2%	1.2%	1.2%	1.4%	1.4%
High growth	0.6%	1.2%	2.5%	2.5%	2.5%	2.5%	2.6%	2.6%

Source: WB staff estimates

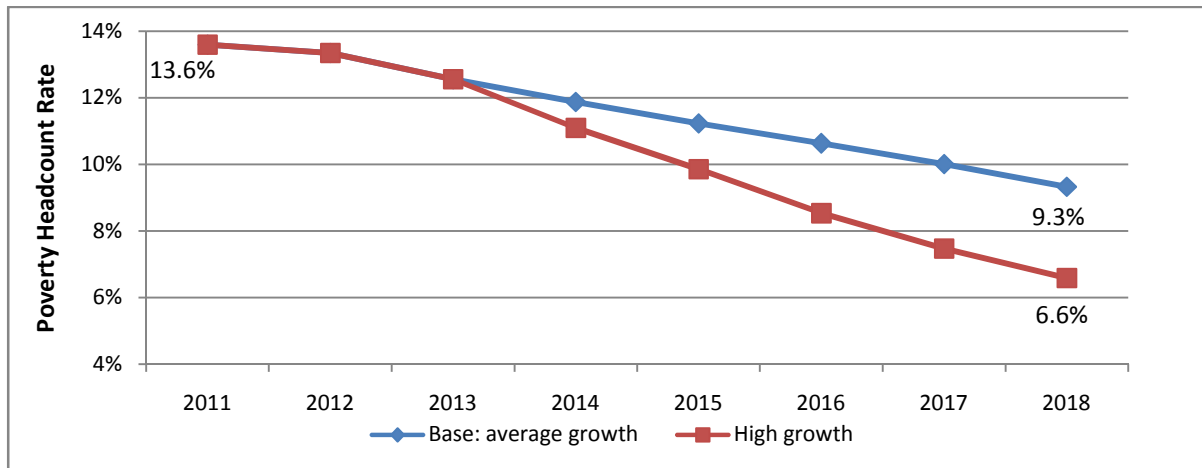
21. Under the base scenario poverty headcount rate is projected to be 9.3 percent in 2018 under the base scenario, and as low as 6.6 percent under the high growth scenario. After taking into consideration population growth projections, the consumption elasticity to poverty, and distributional characteristics, poverty is estimated to decrease on average 0.7 percentage points per year, reaching 9.3 percent in 2018. Under the high growth scenario the average yearly reduction is estimated at one percentage point, reaching a headcount rate of 6.6 percent in 2018 (Figure 17).⁶

³ The poverty projections were estimated by WB staff based on the MAMS GDP growth projections and parameters derived from the WDI indicators and the PSLM household survey. The actual projection from the MAMS model for the base scenario is a GDP growth of 4.09% (2013-2016) and 4.49% (2017 and 2018). The high growth scenario is 6.98% for the entire period (2013-2018). Growth rates for 2011 and 2012 are the official figure from the government of Pakistan.

⁴ Elasticity estimates for shorter periods are highly volatile and very sensitive to the starting value in each period. This becomes a problem especially when there is high fluctuation in GDP growth, as in Pakistan.

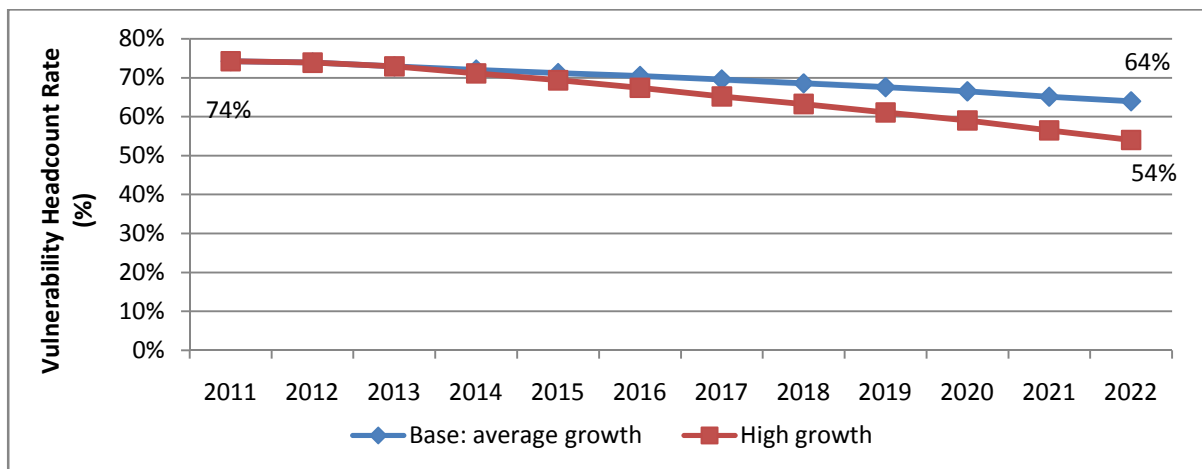
⁵ 2011 and 2012 estimates use the reported GDP growth rates. Other years are based on the projected GDP.

⁶ Projections using the MAMS model were similar, with yearly poverty reductions of 0.64 percentage points for the base scenario and 1.18 percentage points for the high growth scenario (WB CEM, 2013)

Figure 17 Projected Poverty Rates under Two Growth Scenarios

Source: WB staff estimates based on PSLM Household Survey

22. Higher GDP growth would also substantially reduce the size of the vulnerable population. Higher growth is not only expected to reduce poverty faster and improve socioeconomic indicators like the MDGs, but it will also reverse past trends and reduce vulnerability from 60.6 percent in 2012 to 56.7 percent in 2018, at a pace of 0.6 percent per year (Figure 18).

Figure 18 Projected Vulnerability Rates under Two Growth Scenarios

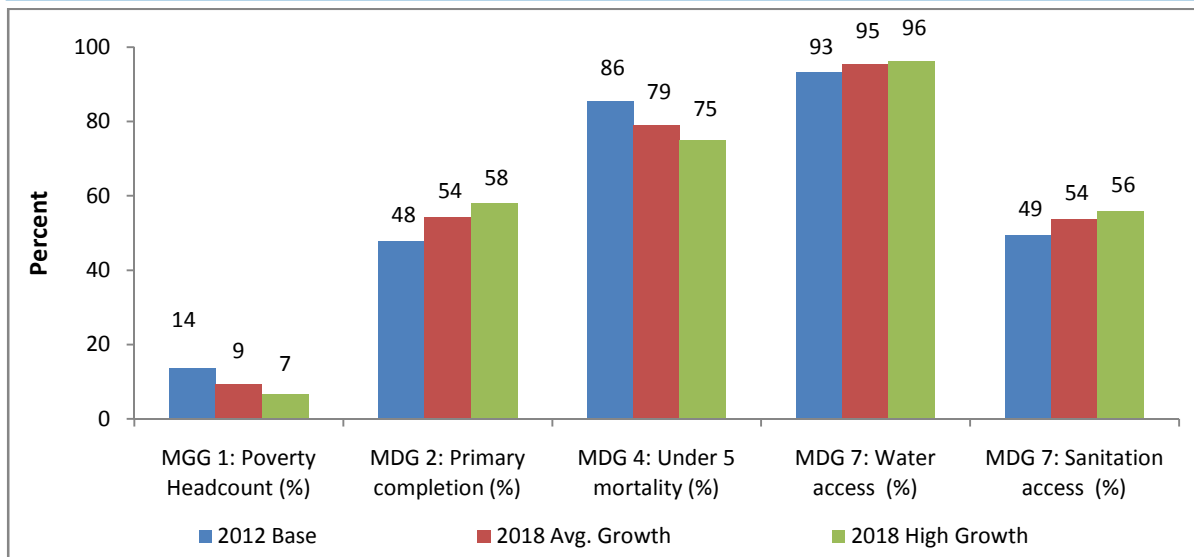
Note: A person is defined as vulnerable if their household per capita consumption falls below twice the poverty line.

Source: WB staff estimates based on PSLM Household Survey

23. Higher GDP growth would only move Pakistan slightly closer to achieving the MDG goals. The effect of growth on socioeconomic indicators, including those used for the Millennium Development Goals (MDGs) was simulated using a computer general equilibrium model. As expected, higher economic growth would improve socioeconomic indicators, but the simulated effects are generally modest. For example, compared to the average GDP growth rate, a higher growth rate is projected to improve Net Primary

Completion rates from 54 to 58 percent by 2018, whereas for sanitation, the higher growth rate only improved access from 54 to only 56 percent.⁷

Figure 19 MDG Projections, Pakistan, 2012-2018



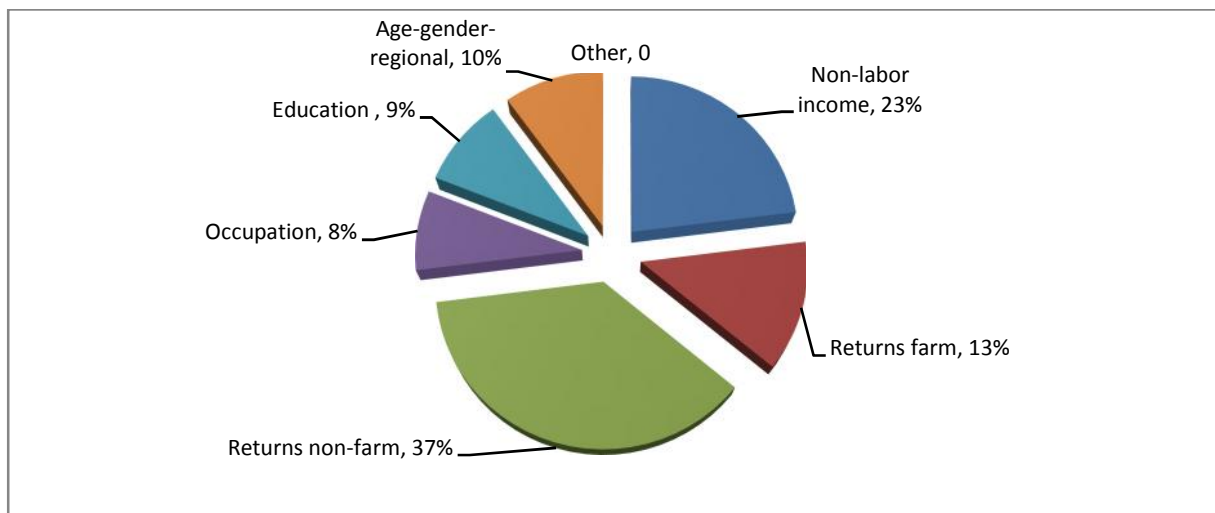
Source: World Bank staff estimates based on MAMS model (Kinnunen and Lofgren, 2013)

⁷ MDG 1 results are taken from the previous section. All other MDG values are based on the MAMS model (Kinnunen and Lofgren, 2013)

Drivers of Poverty Reduction: Jobs

24. Pakistan's labor market performance has been mixed. On the positive side, growth in labor income, particularly increasing returns to employment in the non-farm sector, contributed greatly to poverty reduction. According to a micro-decomposition exercise, this accounted for about one third of the observed reduction in poverty. It is difficult to know what is causing off-farm productivity to rise, but it seems plausible that investments in infrastructure, as well as a rise in exports in more productive activities, may have played a role.

Figure 20 Increased Returns to Non-farm Employment Non-labor Income



Source: Inchauste and Winkler (2012)

25. Although non-agricultural workers have become more productive, employment in good jobs has stagnated. Since 2002, the share of workers in salaried jobs has declined, from 40 to 36 percent of the population (Figure 21). At the same time, the share of workers in agriculture increased from 43 to 44 percent. This is unusual, because the structural transformation in employment, from agriculture to salaried employment outside of agriculture, is typically a defining feature of poverty reduction.

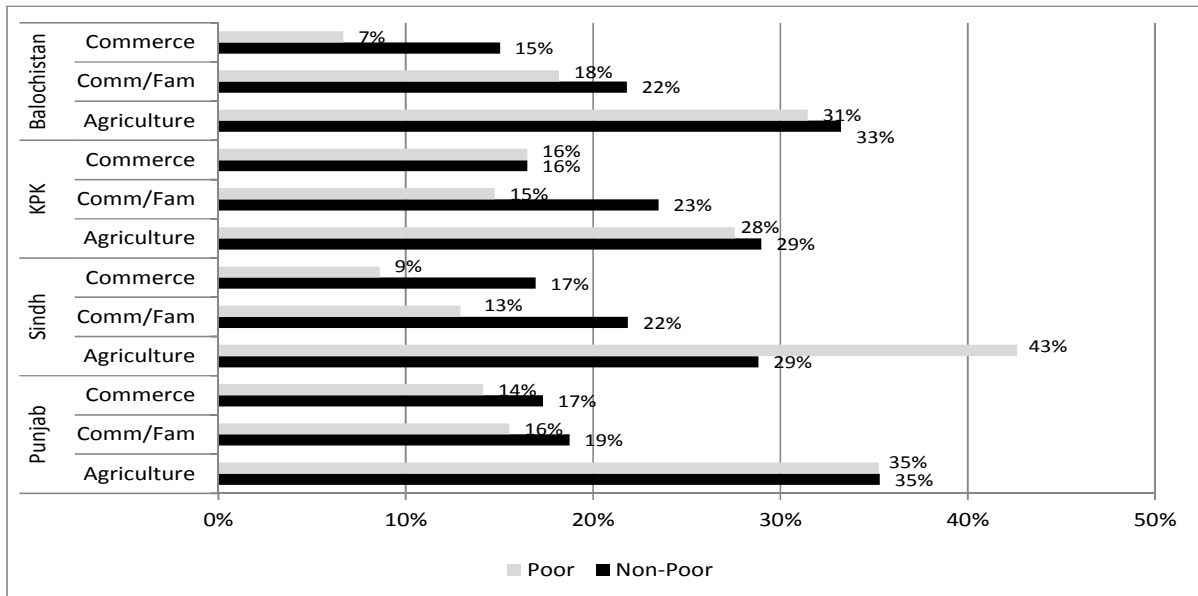
Figure 21 The Share of Workers in Salaried Jobs Declined



Source: ILO Key Indicators of the Labor Market

26. The link between agricultural employment and poverty appears to be weak in Pakistan. Unlike in most developing countries, where agricultural workers are disproportionately poor, there is a weak relationship between employment in agriculture and poverty rates in most provinces (see Figure 22). Only in Sindh, which is the most urbanized province, are the poor disproportionately working in agriculture.

Figure 22 Link between Agricultural Employment and Poverty

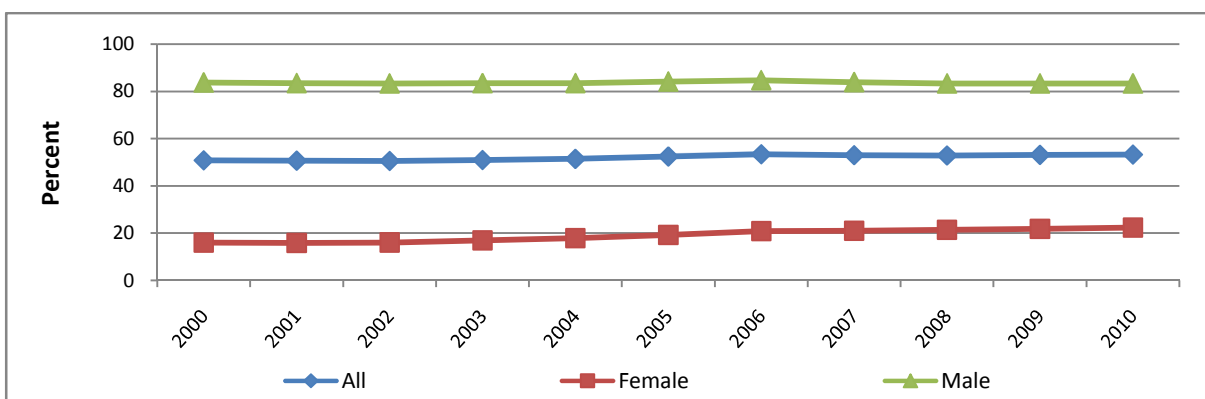


Notes: This figure shows the share of workers whose primary job is in different industries, according to whether their household is poor or non-poor. The three industries presented make up over 70 percent of total employment. Remaining industries are similar for poor and non-poor.

Source: World Bank staff estimates based on 2010-11 PSLM household survey

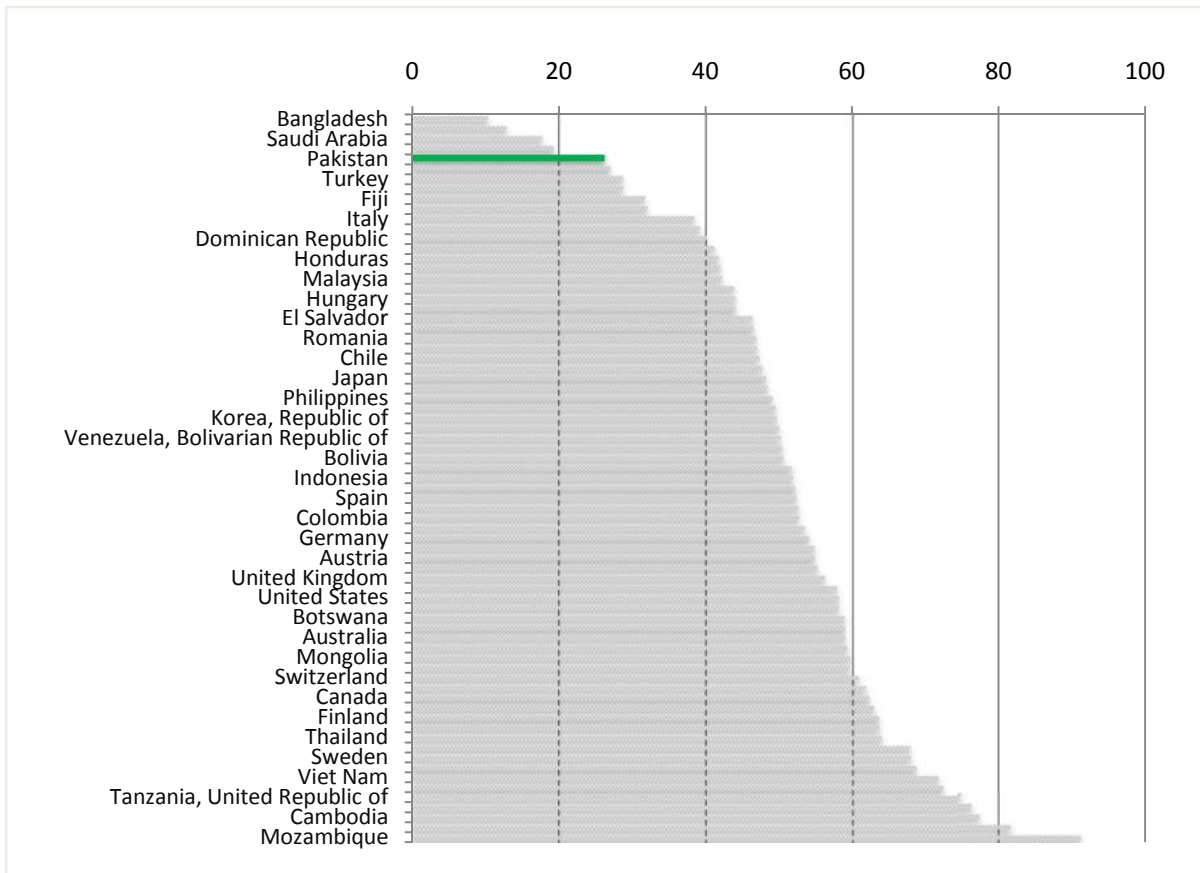
27. Female labor force participation remains unusually low, despite measured improvement. A decline in female labor force participation often coincides with growth and poverty reduction in low and lower-middle income countries, as more women can afford to forego working in low-productivity jobs in agriculture or petty sales. Despite this, Pakistan’s rate of female labor force participation is unusually low. Only 22 percent of women in 2010 were working in 2010, according to the labor force survey (Figure 23). Of the 73 countries with recent data, Pakistan ranks as the 5th lowest in this area (Figure 24).

Figure 23 Labor Force Participation Rates by Gender



Source: ILO, Key Indicators of the Labor Market

Figure 24 Female Labor Force Participation Rate



Source: ILO, Key Indicators of the Labor Market

Non-Labor Transfers

28. Because of scarcity of good jobs, non-labor transfers are playing an important role in reducing poverty. Four types of cash transfers are considered: international remittances, domestic transfers from family and friends, transfers from Zakat/Usher, and transfers from the Benazir Income Support Program (BISP). The first three are reported by households in the data, and in theory cover all private transfers in addition to Zakat/Usher. The BISP figures, on the other hand, come from simulations based on eligibility rules.⁸ Meanwhile, the BISP is a large targeted Unconditional Cash Transfer (UCT) Program launched after the 2007-08 food crisis to improve the living conditions of the poor.⁹

29. Overall, reported cash transfers are common in Pakistan, especially remittances from those outside the country and people in KPK province. In 2011, 16.1 percent of the population lived in a household that reported receiving international remittances, national transfers, or Zakat/Usher.¹⁰ International remittances alone are reported by one in ten persons in Pakistan. Cash transfers are most common in KPK, where more than one out of three persons received some form of transfer. But they are also quite common in Punjab, where almost one in five persons did.

30. Cash transfers represent an important share of households' budget and contribute to significantly reducing poverty in Punjab and KPK. Cash transfers received by households represented from 28 percent of household consumption (poorest) up to 48 percent of consumption (richest quintile)¹¹. Assuming households did not receive any cash transfers in 2010, poverty would have been 8.2 percentage points higher in Pakistan, more than double in KPK and close to two thirds higher in Punjab (Table 3).

⁸ Zakat/Usher is a form of publicly-run charity, particularly targeted at orphans and widows and distributed by local government committees and other institutions. The objective behind the system of Zakat is to provide financial assistance to the needy, indigent and the poor, with special consideration given to widows and orphans. The collection of Zakat is based on a compulsory levy from eleven types of assets including formal savings and investment instruments, securities, annuities, life insurance policies and provident funds (2.5 percent). The disbursement of Zakat takes place by transfer of funds to the Provincial Zakat Council which in turn transfers it to District Zakat Committees. The actual disbursement is made at local level through Local Zakat Committees and other institutions.

⁹ As the program is gradually rolling out to the bottom 22% population, total disbursement has increased from PKR 16.04 billion in FY 2009-10 to PKR 44.11 billion in FY 2012-13. In FY 2013-14, the amount of transfer will be increased from PKR 1,000 to PKR 1,200. Currently, 5 million families have been enrolled into the program and efforts to enroll the remaining 2.2 million families are under way. Some of the reasons for the remaining 2.2 million are the lack of Computerized National Identify Cards with female heads of the eligible families, which is one of the conditions of enrolment.

¹⁰ BISP is not included in this aggregate because the BISP results are based on simulations while receipts of the other three transfers are directly reported by households.

¹¹ The percentages are those of households receiving cash transfers and not of all households in the country.

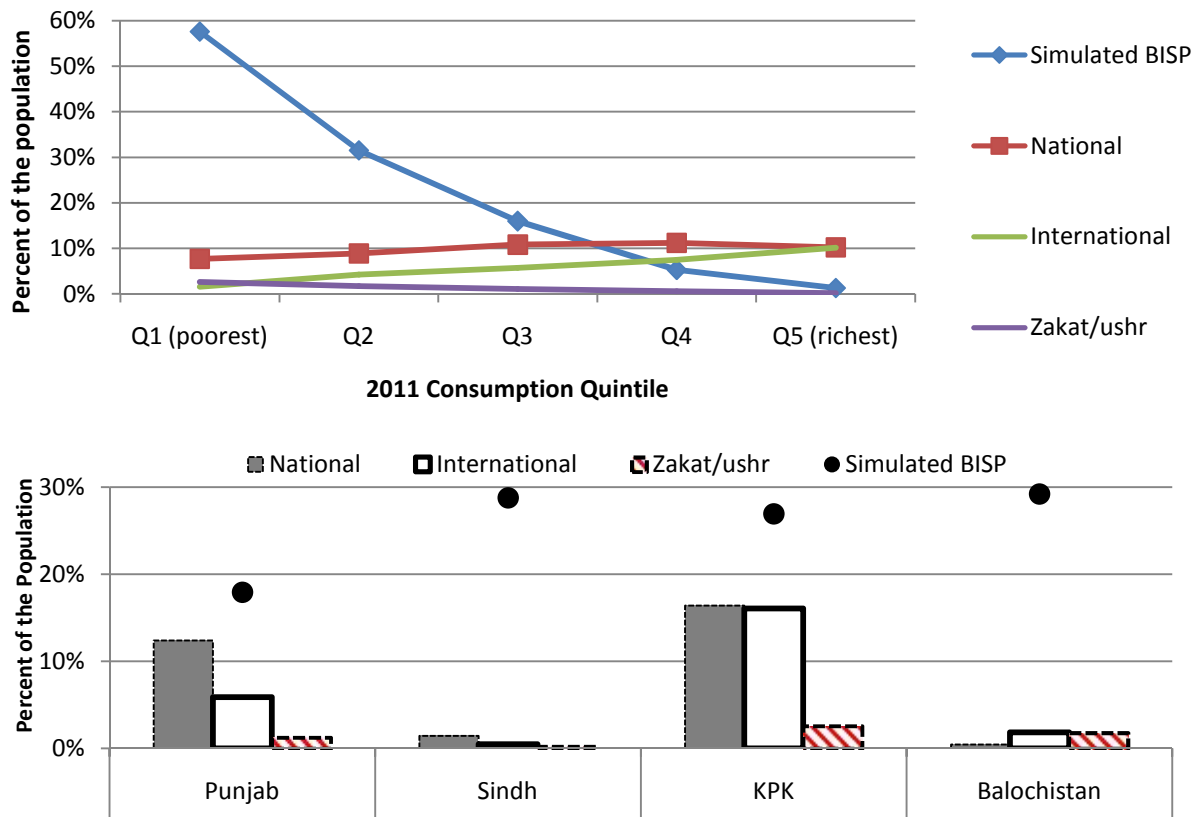
Table 3 Impact of Reported Cash Transfers: Remittances, National and Zakat/Usher in Pakistan, 2010

	Percentage of Consumption	2011 Poverty level	Poverty without Cash Transfer	Poverty increase in percentage points
Q1	28%			
Q2	34%			
Q3	38%			
Q4	41%			
Q5	48%			
Punjab	39%	13.7%	22.7%	9.0 pp
Sindh	30%	12.0%	13.0%	1.0 pp
KPK	42%	14.0%	33.0%	19.0 pp
Balochistan	28%	17.7%	19.2%	1.5 pp
National	39%	13.6%	21.8%	8.2 pp

Source: World Bank staff estimates based on 2008 and 2011 PSLM household survey

31. The BISP program, like Zakat/Usher, is public social assistance and intended to be well-targeted to poor people. In 2011, for example, people in the poorest quintile received one third of total benefits from Zakat/Usher and those in the bottom 40 percent received 50 percent. Meanwhile, the BISP simulations suggest that over half of the benefits go to the bottom 20 percent, while 78 percent go to the bottom two quintiles.

32. Compared to Zakat/Usher, however, the BISP is designed to cover a much larger share of the poor. Figure 25 gives the simulated coverage rates for the BISP, compared to the coverage rates of the other three cash transfers. The simulations suggest that BISP, if fully implemented, would have reached 58 and 32 percent of people in the poorest and second poorest quintile in 2010. In comparison, only 3 and 2 percent of households in the poorest and second poorest quintiles reported receiving Zakat/Usher. Because the figures for BISP are based on simulations rather than actual reported transfer amounts, however, they do not capture any issues with respect to implementation, which may reduce its coverage and targeting performance. Program targeting may suffer because of implementation challenges common to all large scale social programs, including measurement error in the targeting system, and the difficulty of reaching households lacking identity cards.

Figure 25 Coverage of Transfers in 2010, by per capita consumption quintile & province

Source: World Bank staff estimates based on 2008 and 2011 PSLM household survey

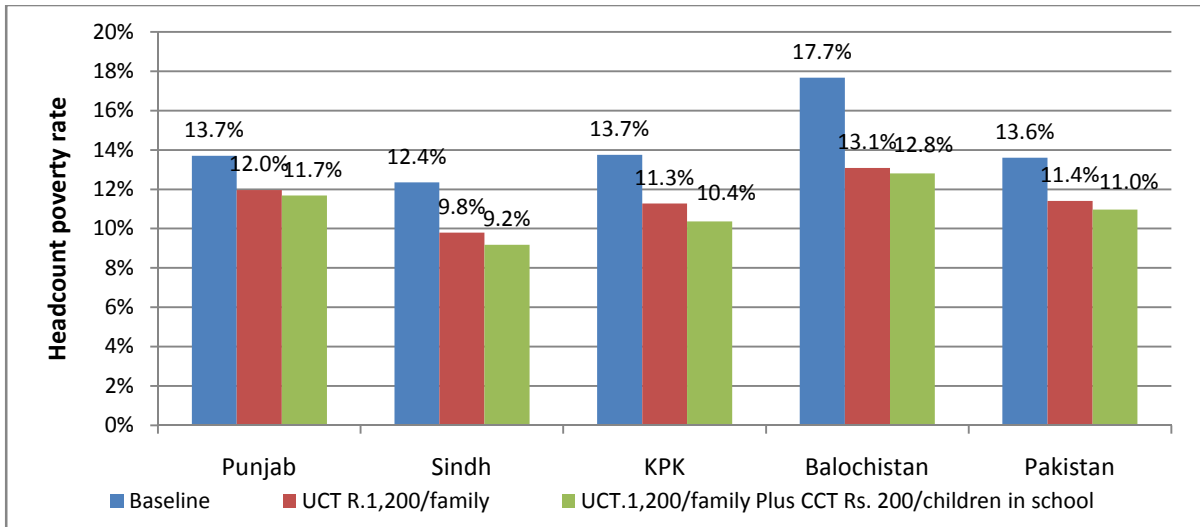
33. An initial evaluation of the BISP program shows that nearly two thirds of the Pakistan BISP benefits accrue to the poorest 40 percent of the population. Unlike the simulations reported above, these are based on reported receipts of the program by beneficiary households. The reported targeting performance is only moderately worse than the 78 percent that go to the bottom two quintiles in the BISP simulation reported above. Nevertheless, with 65 percent of its benefits reaching the poorest two quintiles, the Pakistan BISP targeting performance is better than many older programs. BISP's targeting performance is comparable to recognized successes such as the "Oportunidades" program in Mexico, where 73 percent of benefits go to the poorest 40 percent.

34. The BISP's benefits level remains low as a percent of the poverty line and as a percent of consumption. The benefit in 2012 was PKR 1, 200 per month for recipient households. After deflating to 2011 and adjusting for household size, this comes out to PKR 125 per adult-equivalent, which is only about 7 percent of the poverty line. On average, the benefit on average amounts to 6.2 percent of beneficiaries' consumption, ranging from 8.5 percent at the lowest decile to 2 percent for the highest decile.

35. Because benefits remain low, BISP has limited potential to reduce poverty. Given the low level of benefits, the estimated impact of the BISP program on headcount poverty is a small reduction of 2.2 percentage points. The impact on poverty only increases marginally

when the CCT (Conditional Cash Transfer) component is linked to children attending primary education is included (Figure 26)¹².

Figure 26 Simulated Effects of BISP on Headcount Poverty



Source: World Bank staff estimates based on 2011 PSLM household survey

¹² The simulation is performed with the 2010 micro-data and poverty estimates and the latest BISP design and transfer amount.

Conclusion

36. Although Pakistan has made tangible progress in reducing poverty, addressing additional obstacles could accelerate the rise in living standards for the poor. Overall, Pakistan has made impressive strides in reducing poverty, particularly since 2002. Growth has been generally pro-poor, which has pulled a large number of people just above the poverty line. Provincial disparities in poverty have largely disappeared, thanks to strong poverty reduction in KPK, as well as Balochistan (if that province's data can be trusted). The reduction in poverty has largely been driven by a more productive non-agricultural sector, possibly linked to past investments in infrastructure, improvements in technology, and increased openness to trade.

37. On the other hand, Pakistan's labor market is struggling to broaden access to good jobs. Surprisingly, in a growing economy with substantial poverty reduction, the share of salaried and non-agricultural jobs is shrinking. Female labor force participation remains low, particularly by international standards. Because the labor market is struggling, rates of vulnerability to poverty remain very high, and private transfers and international remittances are playing a large role in reducing poverty. While these transfers are helping lift large numbers of poor households just above the line, they are not well targeted to the poor. The BISP, a public transfer program, is much better targeted to the poor, but because of its small size it has only a limited effect on poverty.

38. Pakistan has made solid progress against poverty in the last decade, thanks in part to past policies and investment that have boosted productivity in the non-agricultural sector. If Pakistan can continue to address the remaining constraints to more rapid growth, such as frequent load-shedding and low levels of investment in human capital, the labor market has the potential to greatly accelerate the improvement in living standards for the poor.

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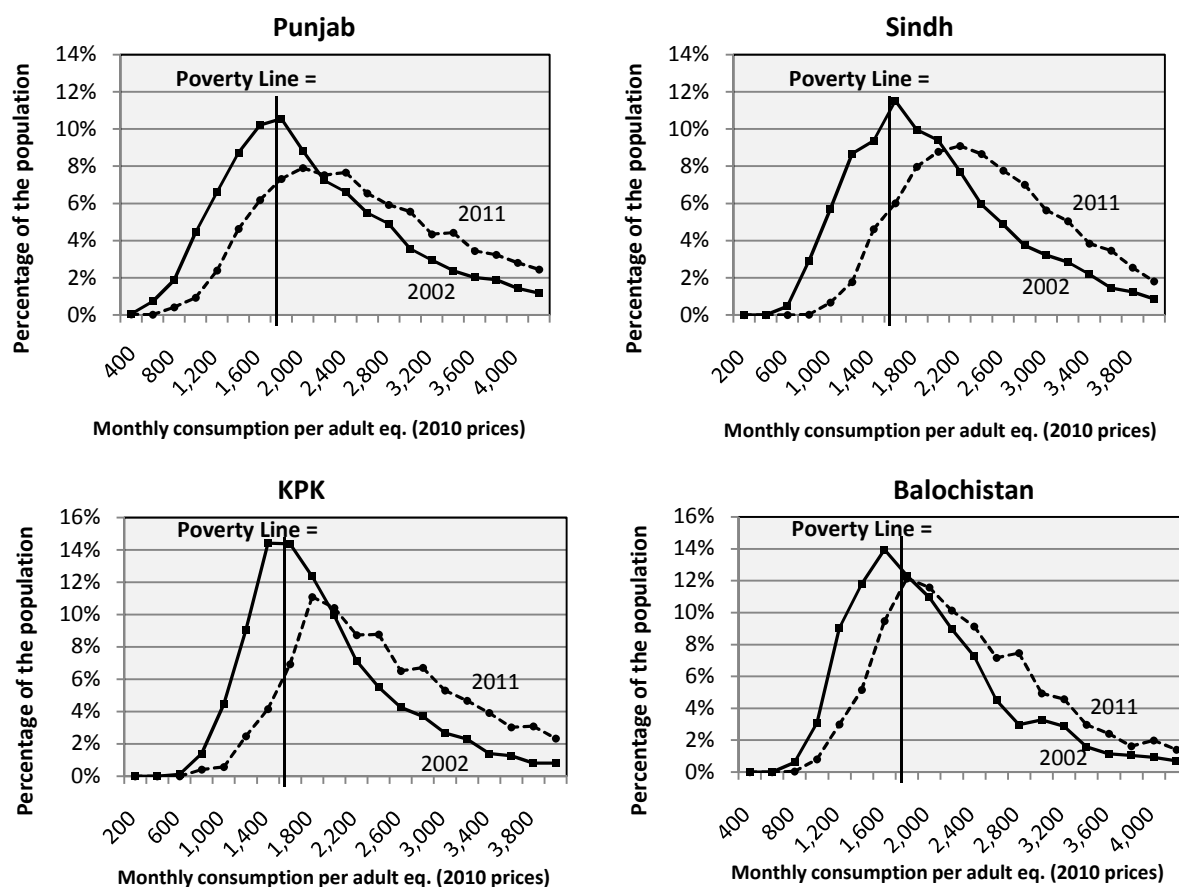
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Annexure 1 – Vulnerability by Province

Figure 27 Share of households clustered near the poverty line, Pakistan 2002-11 by province



Source: World Bank staff estimates based on PSLM household surveys

Annexure 2 - Measuring Poverty in Pakistan: General Characteristics and Limitations

Currently, the Pakistan Bureau of Statistics (PBS) collects consumption data every three years to estimate poverty rates at the national level as well as for four major provinces. To improve comparability of the data over time, PBS has minimized changes in the consumption module since 1998-99 when the first integrated household survey was implemented. Since then, consumption data was collected in 2001-02, 2004-05, 2005-06, 2007-08, and 2010-11. To avoid seasonality of consumption, PBS collects consumption data over the entire year. The survey is known as the “Pakistan Social and Living Standards Measurement (PSLM)” and is similar in spirit to the Living Standards Measurement Surveys conducted by the World Bank.

The PBS created an official poverty line using a simple food energy intake approach, with the 1998-99 data, and then slightly modified it using the 2001-02 data. The official poverty lines are currently updated using the 2001-02 official poverty line and inflation rates from the Consumer Price Index (CPI). For each round, only the national poverty line is updated and spatial price adjustments are done using food unit values from the PSLM, following the recommendation of Deaton and Zahidi (1998). Household expenditures are deflated according to spatial price differences and adjusted using a simple adult equivalence scale. An individual is deemed to be poor if his or her household expenditure per adult equivalence scale, following spatial price adjustments, lies below the national poverty line. Further details and some robustness tests are described in Cheema (2005).

Although the PBS carries out the data collection, poverty estimation has been carried out by the Planning Commission in collaboration with the United Nations Development Programme (UNDP). Before official poverty estimates are announced, a technical committee meeting is usually convened to discuss reliability of the poverty estimates. The technical committee meeting is often chaired by representatives from the Planning Commission and tends to include invited experts from the World Bank. Indeed, experts from the World Bank were invited to discuss revisions of the 2001-02 poverty estimates and poverty estimates for 2004-05, 2005-06, and 2007-08. The World Bank experts reviewed the poverty estimates prepared by the Planning Commission in 2007-08 but the estimates were not published officially.

Limitations of Official Methodology

Inflation over time may not be measured accurately. As mentioned above, PBS collects price data for CPI only from big cities. As a result, inflation estimates based on CPI are likely subject to urban biases. Also, since food price inflation can be very different from non-food price inflation, inflation adjustments might need to take into account changes in food shares between areas and over time.

Spatial price adjustments for expenditure are carried out using unit prices for food available in the PSLM. Since PBS only collects CPI price data for large cities, there is no information on rural non food prices. As a result, spatial price adjustments are based entirely on food prices and its reliability declines when food and non-food prices change at a different rate over time.

PBS has not collected a population census data since 1998. The lack of more recent population census reduces reliability of the sampling frame used to select the PSLM households and determine population weights. Even for the 1998-99 survey, the sampling of Balochistan was in question due to a large share of nomad population in the province. It is likely that large fluctuation of poverty incidence in Balochistan can be attributed to the weak sampling frame. In the case of Balochistan, this problem is aggravated by the fact that it is a vast territory with a highly dispersed population, which makes it very difficult to collect data. Similarly, as pointed out by Newman (2013), migration and conflict may have also aggravated the sampling problem in Khyber Pakhtunkhwa (KPK) in the last few years.

The current format of the questionnaire does not include enough information to estimate a flow of services from consumer durables. As a result, the official methodology does not include any information of spending for consumer durables except for costs of repairs. As the share of non-food consumption increases in Pakistan, consumption estimates without durable goods become more unreliable. It is important to include more information in the questionnaire on consumer durables so that analysts can estimate the flow of services from consumer durables.

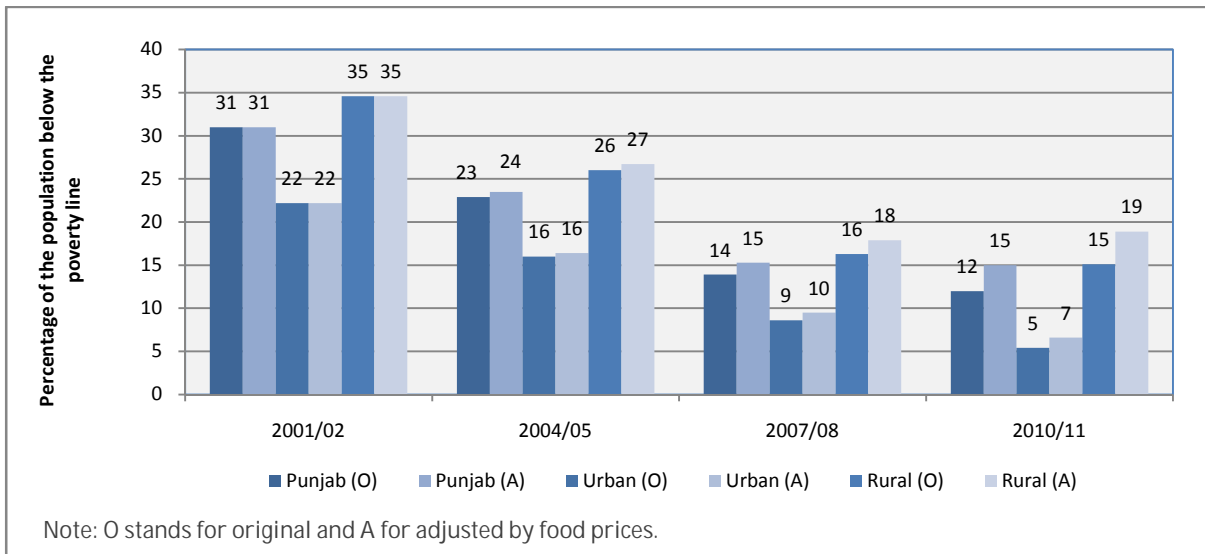
The poverty line has not been updated in several years. As mentioned above, the official poverty line of 2001-02 was estimated using the food energy intake approach. Since the cost-of-basic needs approach is currently dominant in the developing world and the current poverty line is already more than 10 years old, it is a good time to re-estimate a new official poverty line. In theory, as long as a unique poverty line is estimated, there should not be a huge difference in the level of the poverty line between the food energy intake approach and the cost-of-basic needs approach if the calorie threshold is set at the same level. But, a change in the food share is likely to increase the level of the poverty line, which reflects an increase in basic needs.

Potential Impact of Methodological Limitations

Food prices have been increasing more than non-food prices, which could lead to biases when calculating poverty line values and headcount poverty rates. Newman (2013) provides hard evidence of this problem for the province of Punjab. He adjusts the poverty measurement with different prices indexes for food and non-food (constructed from information on the general CPI, the food price index and the share of food in the general CPI).

Comparing the original and the adjusted poverty headcount estimates, shows almost no difference in 2004-06, increasing differences by 2007-08 and significant changes by 2010-11 (Figure 28). The gap between the headcount rates increases after 2007, when the food prices start to increase relative to the non-food component. For 2011, the difference in levels equals to 3 percentage points at Punjab and it is larger for rural than for urban Punjab (4 versus 2 percentage points). More importantly, the adjustment modifies the trends between 2008 and 2011 from decreasing poverty in Punjab (14 to 12 percent) no change (15 percent in both periods). The changes are even greater for rural households from an original decrease in headcount poverty (16 to 15 percent), while according to adjusted estimate poverty increases in rural households from 18 to 19 percent.

Figure 28 Poverty Rates for Original & Adjusted Food Prices, Punjab, Urban & Rural, Pakistan



Source: Newman (2013)

Annexure 3 - Detailed explanation of the Human Opportunity Index

The human opportunity index is a measure of the extent to which opportunities are available and distributed in an equitable manner. The human opportunity index, as noted above, is equal to the difference between the coverage rate of an opportunity or benefit, and an inequality penalty. The inequality penalty is expressed as a dissimilarity index, which measures how unequally a particular opportunity or benefit is distributed across consumption groups, for reasons external to the person. For this reason, the HOI is often estimated for children's access to health and education, which is largely outside their control. The index is calculated by taking the weighted average of the discrepancy between group averages and the aggregate average. Specifically, for J groups defined on the basis of household expenditure, the dissimilarity index for an opportunity such as school attendance can be calculated as:

$$\hat{D} = \frac{1}{2\bar{P}} \sum_{j=1}^J w_j |\bar{p}_j - \bar{P}|$$

Where

\bar{P} is the coverage rate of the opportunity, or the share of children with access.

w_j is the share of group J in the relevant population.

\bar{p}_j is the average estimated probability that a member of group J has access, based on characteristics that are outside the control of the person, such as ethnicity or parents' education.

In other words, the dissimilarity index is the sum of the magnitude of the difference between each group's level of access and the population's mean, normalized to lie between zero and 1.

Therefore, the human opportunity index is equal to $\bar{P} - \hat{D}$.