

Trends in Absolute Poverty and Governance in Pakistan: 1998-99 and 2004-05

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1. INTRODUCTION

Poverty reduction has been at the centre stage of the policy agenda in Pakistan since the beginning of economic reform in the 1990s. Conversely, poverty indices show that the level of poverty has shown no sign of significant poverty reduction despite numerous policy and institutional initiatives undertaken by the government. The debate on trends in poverty during the 1990s has been wide-ranging in Pakistan. Although there has been a consensus that poverty rose during the 1990s, some controversies emerged on the analysis of poverty based on PSLM 2004-05. The official poverty estimates suggest that poverty declined substantially by 10 percentage points from 34.5 percent in 2001-02 to 23.9 percent in 2004-05. In contrast to this, World Bank (2006) has shown that decline in poverty was by 5 percentage point during the above period.

While monitoring of poverty trends is fundamental to evaluate the efficacy of policies adopted by the government under the poverty reduction strategy, it is important to measure changes in poverty over time in its true spirit of the concept of absolute poverty using consistent methods of measurement. The concept of absolute poverty is linked with the purchasing power of minimum bundles of goods deemed to assure that basic food and non-food needs for physical functioning are met in a society in real term. For measuring changes in poverty over time, the rate of price inflation is, therefore, important as the poverty line is kept constant in real term to buy minimum calorie intake of 2350 for a person per day. Thus, inflation matters in measurement of poverty trends. Any underestimation of rate of inflation will understate the level of poverty in the subsequent period.

It is this context that guided the author to determine the rate of inflation for attainment of minimum cost of calorie intake of 2350 and measure the level of poverty by deriving the poverty line from PSLM, 2004-05 using a consistent method based on the official methodology. The consistent approach adopted in this paper for updating the poverty line is based on the prevailing consumption pattern of the sampled households of PSLM 2004-05. While the theme of the conference is governance which together with acceleration of economic growth has been recognised as one of the important pillars of country's poverty reduction strategy, the paper also examines the trends in governance indicators constructed by independent institutions for the period covered in this study.

The paper is organised as follows: The next section gives a critical review of the most recent work on the trends in poverty in Pakistan. The data sets used in this study are

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Author's Note: The views expressed here are those of the author and do not necessarily reflect those of the CRPRID, UNDP/UNOPS, or the Planning Commission.

discussed in Section 3, whereas official methods of measurement of poverty are discussed in Section 4. Section 5 estimates the poverty line for 2004-05 based on official methodology. Section 6 presents detailed results for the three years of 1998-99, 2001-02 and 2004-05. Section 7 discusses the link between poverty and governance and analyses the underlying trends in governance indicators during the period covered by the study. Conclusions and policy implications are discussed in the final section.

2. A REVIEW OF ABSOLUTE POVERTY IN PAKISTAN

A review of poverty studies shows that a number of authors/institutions have made attempts¹ to examine poverty in Pakistan during the last four decade. Recent work on poverty comprised of FBS (2001), World Bank (1995, 2002), Anwar and Qureshi (2003), Anwar, Qureshi, and Ali (2004), Planning Commission (2003) and Planning Commission and CRPRID (2006).

These studies define individuals as poor when their consumption is not sufficient to obtain the minimum food and non-food requirement required for physical activity. Most of these studies derived absolute poverty lines in terms of cost of food requirements consistent with 2550 calorie per day per adult recommended by Planning Commission (1985) for daily activities plus an allowance for non-food need.

However, Planning Commission in 2002 made a case that the reference threshold in drawing national poverty line should be the average calorie intake required for all individuals weighted by population rather than the male adult aged 20-39. Consequently, minimum average calorie norm reduced from 2550 to 2150 calories per person per day. This change reduced the poverty line as well as the poverty level in the country² by 4 percentage points, from 32.2 percent to 28.0 percent in 1998-99 which was not acknowledged by academia and media.

Planning Commission, however, revised its notification in July 2002 that the official poverty line should be estimated at the average calorie intake required for all individuals at 2350 calorie per adult equivalent per day. This new intake requirement of 2350 calories translated into the poverty line of Rs 673.54 per capita per month in 1998-99 prices. This definition resulted in upward adjustment of poverty level³ by 2 percentage points, from 28.0 percent to 30.6 percent in 1998-99. Nevertheless, the net reduction in poverty as a statistical artifact in the whole process of adjustment was by 2 percentage points from 32.2 percent to 30.6 percent in 1998-99.

However, Planning Commission estimated official poverty line at Rs 748 per capita per month in 2001-02 prices using PIHS, 2001-02. Using this poverty line, Planning Commission estimated that 32.1 percent of total population in Pakistan were poor in 2001-02. It is important to note that rate of inflation between 1998-99 and 2001-02 implied by official poverty line of Rs 748 per capita per month in 2001-02 was significantly higher than both the Tornqvist price index derived from the household survey as well as the consumer price index. It is noteworthy that Anwar and Qureshi (2003) using lower poverty line of consumption expenditure of Rs 735 per adult per month in 2001-02 prices estimated a headcount at 35.6 percent for the country as a

¹For a detailed review on poverty since 1963 see Anwar and Qureshi (2003) and Anwar, *et al.* (2005).

²See FBS (2001), Appendix D and Pakistan (2002) *Economic Survey*, Finance Division.

³See CRPRID/UNDP (2002) Human Conditions Reports, 2002.

whole. Thus, official poverty estimates at 32 percent of population using a higher poverty line of Rs 748 per capita per month in 2001-02 were significantly lower than estimated⁴ by others. It was mainly due to the fact that estimated poverty line of Rs 748 per capita per month and poverty estimates based on this poverty line was derived by dropping 738 households from the total sample of 14705 households which is about 5 percent of the sample. Thus, dropping of 5 percent household led to higher poverty line and lower poverty estimates of 32.1 percent in 2001-02. The official poverty estimates were never corroborated from independent sources by any author/institution.

Thus, official poverty lines as well as the estimates were revised⁵ from 32.1 percent to 34.5 percent in 2001-02 using lower poverty line of Rs 723 which seems to be in line with the findings of Anwar and Qureshi (2003), Anwar, *et al.* (2004), and World Bank (2005). Poverty estimates implied by recent studies are reported in Table 1. There appears to be a general consensus that absolute poverty increased during the 1990s. However, increase was more rapid in rural areas compared to the urban areas. According to World Bank (2002), urban poverty rose from 20.8 percent in 1992-93 to 24.2 percent in 1998-99, whereas the rural poverty increased from 27.2 percent to 35.4 percent during

Table 1

Headcount Measure (% below Poverty Line) for Pakistan—1992-93 to 2004-05

Poverty Lines	FBS (2001)	World Bank (2002)	Planning Commission (2003)	Anwar and Qureshi (2003)	Planning Commission/ CRPRID (2006)
	Rs 682 in 1998-99 Prices	Urban Rs 767 Rural Rs 680 in 1998-99 Prices	Rs 748 in 2001-02 Prices	Rs 735 in 2001-02 Prices	Rs 723 in 2001-02 Prices
Overall					
1992-93	26.6	25.7	—	—	—
1993-94	29.3	28.6	—	—	—
1998-99	32.2	32.6	30.6	30.4	—
2001-02	—	—	32.1	35.6	34.5
2004-05	—	—	—	—	23.9*
Rural					
1992-93	29.9	27.7	—	—	—
1993-94	34.7	33.4	—	—	—
1998-99	36.3	35.4	34.6	32.1	—
2001-02	—	—	38.9	41.0	39.3
2004-05	—	—	—	—	22.7*
Urban					
1992-93	20.7	20.8	—	—	—
1993-94	16.3	17.2	—	—	—
1998-99	22.4	24.2	20.9	26.39	—
2001-02	—	—	22.6	26.47	22.7
2004-05	—	—	—	—	14.9*

Source: Various studies cited above.

* Planning Commission/CRPRID (2006), based on inflation (CPI) adjusted official poverty line of Rs 878.64 in 2004-05.

⁴In another study, Anwar, Qureshi, and Ali (2004) used the official poverty line of Rs 748 per capita and estimated a headcount of 38 percent in 2001-02. Similarly, World Bank (2005) using official poverty line of Rs 748 per capita estimated reported 37 percent in 2001-02.

⁵See *Economic Survey*, 2006. Also see Cheema (2005), Revisiting Official Poverty Line, CRPRID Discussion Paper.

the same period. In the subsequent period, rural poverty deteriorated⁶ sharply, while urban poverty increased marginally. The rise in absolute poverty in the 1990s was mainly attributable to the low economic growth, which declined to 4 percent in the 1990s from a growth trajectory of 6 percent per annum in the 1980s.

More recently poverty as measured by the official methodology declined considerably by 10.56 percent from 34.5 percent to 23.9 percent between 2001-02 and 2004-05 (see Table 1). The decline was more noticeable in rural poverty, which declined from 39.3 percent to 22.7 percent between 2001-02 and 2004-05. However, a controversy in poverty assessment rose when World Bank (2006) contradicted the official poverty estimates for 2004-05 during the validation exercise. According to the World Bank (2006), official poverty estimates are based on inflation adjusted poverty line of Rs 878 per capita per month in 2004-05 that seems to have been underestimated due to lower changes in prices indicated by Consumer Price Index compared to the price index derived from the household survey prices. CPI suggest an inflation rate of 21.46 percent, the household survey based price index—Tornqvist price index (TPI) yield a much higher inflation rate of 29.6 percent. World Bank (2006) thus strongly recommended the use of TPI for adjustment in poverty line for inflation and arrived at poverty headcount of 29.2 percent in 2004-05.

In this context, this paper is an attempt to examine the level of absolute poverty. The paper argues that inflation matters in the measurement of poverty and thus derives price changes to get reliable estimates of poverty based on the actual consumption pattern of households using PSLM survey data.

3. HOUSEHOLD DATA SETS

To examine the changes in poverty, Pakistan Integrated Household Survey 1998-99, 2001-02 and Pakistan Social and Living Standards Measurement Survey (PSLMS) 2004-05 conducted by the Federal Bureau of Statistics, Islamabad are used. These surveys are designed to collect information on consumption expenditure at household level, which can be used to analyse the poverty during 1998-99, 2001-02 and 2004-05. While income of a household clearly reflects its social and economic status, income components are often under reported to the enumerators. In most poverty assessment in developing countries like Pakistan household current consumption expenditure is, therefore, preferred to income as an indicator of living standards. Therefore, current consumption expenditure on all non-durable is used as a proxy for the measurement of poverty in this paper.

4. OFFICIAL METHODOLOGY OF MEASURING POVERTY

Prior to the official recognition of measurement of poverty, a number of authors used different methods for the measurement of poverty in Pakistan. In 2002, the government recognised the task of monitoring trends and adopted the methodology used by DFID study [FBS (2001)] in collaboration with Federal Bureau of Statistics. However, before outlining the methodology adopted officially, it is appropriate to explain concept of poverty.

⁶Planning Commission (2003) and Anwar and Qureshi (2003) have also arrived more or less at the same conclusion.

4.1. Concept of Absolute Poverty

The human body requires energy for performing both internal functions and external work in an environment. The energy requirement standard can be defined in terms of the levels of body weight and activity that are consistent with various functional capabilities, e.g. the ability to avoid diseases and to perform physical activities. Thus, under nourishment is a state in which the physical functioning of a person is impaired to the point where he cannot either maintain an adequate level of performance at physical work or resist against various diseases.

Thus, the concept of absolute poverty is based on defining minimum calorie intake for food need and a minimum non-food allowance for human need required for physical functioning and daily activities of life. This approach requires an assessment of a minimum amount necessary to meet each of these needs. These amounts are added up to arrive at a poverty line in terms of income or expenditure. Welfare of the population defined in term of poverty line is measured in real term over time. Changes in prices of commodities used by the household play an important role in determination of poverty line. Any change in prices will require an adjustment in poverty line in the same proportion so as to keep the welfare of the population constant.

4.2. Official Poverty Norm

Previously, a number of authors/institutions chose 2550 calorie per day for an adult as nutritional requirement recommended by the Planning Commission⁷ as a reference threshold to estimate the absolute poverty line for poverty analysis. However, Planning Commission notified on August 16, 2002 that the reference threshold for official poverty line should be estimated at the average calorie intake required for all individuals at 2350 calorie per person per day. Thus, 2350 calories per adult equivalent per day has been used as a reference threshold to estimate the poverty line in this paper.

4.3. Official Method of Estimation of Poverty Line

To estimate the poverty, the focus is on computing a nutritionally satisfactory level of consumption expenditure called poverty line, which meets the poverty norm in term of calorie intake. This poverty threshold can be employed to assess whether individuals are poor or not. To consider food and non-food needs, an overall poverty line is derived by regressing calorie intake on total consumption expenditure. The following steps are involved in estimation of poverty line.

- (i) The first step is to derive calorie requirements of individuals with different demographic characteristics among household members. These can be expressed in absolute terms or as a multiple of the requirements of a reference individual. The latter can be viewed as a calorie adult equivalent (CAE), so for each household member, the number of CAEs can be computed.
- (ii) The second step is to work out the calorie intake of each household from the actual quantity consumed of food items given in the consumption module of PSLM, 2004-05.

⁷Government of Pakistan, Planning Commission (1985) Food Composition Table for Pakistan, Peshawar, University of Agriculture.

- (iii) The third step is to work out the consumption expenditure of all households on all food and non-food items.

The official methodology used for the estimation of poverty line is a variant version of methodology suggested by Greer and Thorebecks (1986). The methodology is conceptually strong and simple in computation. Ercelawn (1990) and Anwar (1996) used this methodology for estimation of poverty line for Pakistan, respectively from HIES primary data for 1984-85 and 1990-91. DFID in collaboration with Federal Bureau of Statistics also used this methodology in FBS (2001) which was adopted officially by the government in 2002.

According to this approach, one needs information about the two variables of each individual: Calorie intake, C_i and total consumption expenditure X_i constitutes both purchased food and the imputed value of food consumption out of own production. Both of these variables are adjusted for household size using adult equivalent. This method assumes that those households that reach the minimum requirement of calories also consume also necessary non-food items, otherwise they would have increased their calorie attainment. The information on adult equivalent calorie intake and adult equivalent expenditure, enable the estimation of the consumption expenditure for acquiring a calorie norm by using the calorie expenditure function which is expressed as follows:

$$\ln X_i = \alpha + \beta C_i + u_i \quad \dots \quad \dots \quad \dots \quad \dots \quad \dots \quad \dots \quad (1)$$

where α is the intercept, β the slope or coefficient of calorie expenditure function and u are the error terms. Equation (1) determines a relationship between total expenditure and calorie intake. This equation can be solved to get monthly expenditure required for a person corresponding to the official caloric threshold of 2350 notified by the Government of Pakistan in August 2002. The merit of this methodology is that for a given poverty norm (say 2350 calorie), any rise (decline) in consumption expenditure for any reason would result in higher (lower) poverty line, controlling for over-reporting (under-reporting) of consumption expenditure data for any reason.

4.4. Poverty Measures

Given the information on per person consumption expenditure and poverty line, the next step is to examine how much poverty exists across regions and provinces. The most commonly used measure of poverty, the Foster, Greer and Thorbecke (1984) class of poverty measures P_α have been used in this paper. These measures do not only reflect the severity of poverty but also satisfy the axiom of decomposability and additivity. These measures capture the distribution of living standards among the poor.

$$P_\alpha = \frac{1}{n} \sum_{i=1}^q [(Z - y_i)/Z]^\alpha \quad \dots \quad \dots \quad \dots \quad \dots \quad \dots \quad \dots \quad (2)$$

These measures have clear advantages for evaluating policies which aim to reach the poorest. Note that if $\alpha=0$, the FGT index, $P_\alpha =$ Headcount measure, if $\alpha=1$, $P_\alpha =$ Poverty gap index or quotient and if $\alpha=2$, P_α is the mean of squared proportionate

poverty gaps and indicates greater severity of poverty among the poorest. The higher the value of α the more sensitive the measure is to the well being of the poorest. As α approaches infinity the measure collapses to one, which reflects the poverty of the poorest person.

5. DERIVATION OF POVERTY LINE FOR PAKISTAN

Having information on adult equivalent consumption expenditure and adult equivalent calorie intake for each household, adult equivalent consumption expenditure (X_i) is regressed on adult equivalent calorie intake (C_i). To establish a consistency with official methods previously applied in estimation of poverty line,⁸ regression is run using consumption expenditure of the first three quintiles of population so as to avoid the effects of consumption pattern of rich income groups in the determination of poverty line. The following estimated regression equation has been estimated for overall Pakistan:

$$\ln X_i = 6.8088 + 0.0002562 C_i \quad (3)$$

(1770.9)* (11.1)*

Figures in parentheses are *t*-ratios, which are significant at 1.0 percent level of significance. This equation can be solved for total expenditure required for the officially recommended daily calorie norm of 2350 per adult equivalent. Solving this equation gives a preliminary estimated poverty line for Pakistan at Rs 933 per person per month in 2004-05 prices. Accordingly to PSLM, 2004-05, average household size of Pakistan is 6.73, the poverty line for an average household comes at Rs 6279 per month in 2004-05. Any household of average size spending monthly less than Rs 6279 is considered as poor in 2004-05. This poverty line represents average consumption behaviour in 2004-05 prices across the country. The poverty line derived in this way reflects the monthly amount in rupee necessary to buy minimum calorie intake of 2350 per person per day in 2004-05 prices notified by the government as official poverty norm plus a non-food allowance in subsistence term.

5.1. Price Adjustment between Rural and Urban Areas

Since prices of various commodities included in poverty line are different between rural and urban areas, differences in prices are required an adjustment in poverty line. This is mainly due to the fact that cost of living is higher in urban than in rural areas due to higher food prices in urban areas. For example, if two households have exactly the consumption expenditure but reside in different regions, then consistency requires that poverty line be adjusted accordingly to the price differences. Regional price differences have been taken into account using Pasches regional price index. Thus, an adjustment in household consumption expenditure has been made by these price indices to compute the poverty estimates across the country.

5.2. Price Inflation between 1998-99, 2001-02, and 2004-05

The nominal consumption expenditure grew by 42 percent between 2001-02 and 2004-05 implying that for a given quantity consumption particularly for food prices

⁸Previously, official poverty line of Rs 673 in 1998-99 prices was derived in this way with out dropping any observation from these quintiles but regression equation has not been reported by FBS (2001).

household paid much higher prices in 2004-05 than in 2001-02. Thus, it is important to measure the household welfare in real term. Changes in prices (or rate of inflation) play a fundamental role in determining the changes in poverty level over time. This is turned out to be highly controversial as adjustment in poverty line by different price indices may lead to divergent conclusions about the changes in poverty over time. It is, therefore, important to adopt appropriate methods to take an adequate account of price changes that reflects true changes in prices over time.

This paper derives the poverty line from the most recent household data—PSLM, 2004-05, it does not, therefore, require an arbitrary adjustment in the poverty line by a price index from different source of data such as Consumer price index which is limited to urban region. Changes in prices implied by the new poverty line may be different due to changes in consumption pattern of household not captured by CPI. Secondly, share of consumption of various commodities used by households may be different from the weights given in CPI.

The approach adopted here is consistent with the prevailing consumption pattern of households over time. To estimate the poverty in 2004-05, poverty line of Rs 933 per person per month in 2004-05 prices derived in this paper using official methodology will be used. The government revised CPI adjusted official poverty line is at Rs 723 per person per month from PIHS, 2001-02. Taking percentage changes of derived poverty lines (Rs 933 in 2004-05 and Rs 723 in 2001-02) gives 28.9 percent inflation between 2001-02 and 2004-05. The price inflation derived from these poverty lines can also be validated from the other independent sources. World Bank (2006) estimated a household survey (PSLM, 2004-05) based price index—Tornqvist Price Index which yields inflation rate of 29.6 percent between 2001-02 and 2004-05. Similarly, Sensitive Price Indicator from official sources which is reflective of consumption pattern of low income poor households indicates an inflation rate of 26.0 percent. On the contrary, CPI gives inflation rate of 21.46 percent during 2001-02 and 2004-05. Thus, changes in CPI lacks empirical supports of household survey data, PSLM 2004-05 which is used to analyse poverty in 2004-05. The use of CPI for adjustment in official poverty line will underestimate the official poverty line and thus poverty level in 2004-05 leading to an overstatement of change in poverty between 2001-02 and 2004-05.

It is noteworthy that the coverage of CPI is limited to 16 urban centres. Thus, changes in prices as measured by CPI may not truly reflect changes in prices of the commodities used by households particularly in rural areas. While price changes based on TPI are very close to the changes observed from changes in estimated poverty lines between 2001-02 and 2004-05, TPI can only estimate price changes in food and fuel items. Thus, changes in non-food need cannot be addressed by TPI. On the other hand, the approach adopted in this study takes an account of price inflation of both food and non-food needs using the prevailing consumption pattern of representative households in rural and urban areas across provinces. Thus, there is merit in using estimated poverty line derived from PSLM, 2004-05 to measure the welfare in constant prices.

The advantage of the approach adopted in this paper is that it does not require an arbitrary adjustment in poverty line due to changes in price level since it is based on the prevailing consumption pattern of representative households of the population. It is therefore, recommended to use estimated poverty line of Rs 933 per person per month

derived in 2004-05 prices to arrive at genuine poverty estimates for 2004-05. For 2001-02, the revisited official poverty line of Rs 725 per person per month will be used. For 1998-99, the official poverty line of Rs 673.54 per person per month will be used. The approach adopted here is quite consistent as it uses poverty lines that are derived from the actual consumption pattern of households reflected in the last three household surveys.

6. CHANGES IN ABSOLUTE POVERTY: 1998-99, 2001-02 AND 2004-05

To examine changes in poverty, the level of poverty in 1998-99, 2001-02 and 2004-05 has been estimated using the poverty lines that are derived directly from the household survey data by applying consistent methods. This method has merits because price inflation for both food and non-food is based on the same source of data, which gives coverage to both rural and urban areas. In contrast, CPI changes are limited to urban areas that are not reflections of price changes in rural areas where majority of the poor reside. To take an account of economies of scale in household consumption, the paper uses 1 for adult and 0.8 for children aged 0-18.

The results indicate that incidence of poverty first increased in Pakistan from 31.1 percent in 1998-99 to 34.4 percent in 2001-02 and then declined to 29.3 percent in 2004-05 (see Table 2). Likewise, the number of poor increased from 42.5 million in 1998-99 to 49.1 million in 2001-02 and declined to 45.1 million in 2004-05. The intensity of poverty

Table 2

<i>Poverty Incidence, Intensity and Severity 1998-99, 2001-02, and 2004-05 in Pakistan</i>									
Regions	Headcount (Po)			FGT Poverty Gap Index (P1)			FGT Index (P2)		
	1998-99	2001-02	2004-05	1998-99	2001-02	2004-05	1998-99	2001-02	2004-05
Pakistan									
Overall	31.1	34.4	29.3	6.6	7.0	6.0	2.1	2.1	1.9
Rural	35.1	39.2	34.1	7.6	8.0	7.1	2.4	2.4	2.3
Urban	21.4	22.6	18.9	4.3	4.5	3.7	1.0	1.3	1.1
Rural									
Punjab	34.6	35.8	33.9	7.5	7.5	7.3	2.4	2.3	2.4
Sindh	34.0	45.0	28.4	7.3	10.0	5.7	2.3	3.2	1.8
NWFP	43.7	43.4	41.4	9.5	7.8	8.3	3.0	2.1	2.6
Balochistan	21.3	37.5	35.9	3.8	6.4	7.4	1.0	1.5	2.4
Urban									
Punjab	24.2	23.2	20.6	5.0	5.1	4.2	1.6	1.6	1.3
Sindh	15.6	20.1	14.3	2.8	3.3	2.6	0.7	0.8	0.7
NWFP	27.1	29.0	26.5	5.7	5.2	4.9	1.9	1.4	1.5
Balochistan	22.9	26.2	22.4	4.0	4.5	4.4	1.0	1.1	1.3
Overall									
Punjab	31.6	32.2	29.7	6.8	6.8	6.3	2.1	2.2	2.0
Sindh	26.0	35.3	22.4	5.3	7.4	4.4	2.3	1.6	1.4
NWFP	41.3	41.3	38.9	8.9	7.4	7.7	2.0	2.8	2.4
Balochistan	21.6	35.5	33.1	3.8	6.0	6.8	1.5	1.0	2.2
Number of Poor in									
Pakistan									
(Million)	42.5	49.1	45.1	-	-	-	-	-	-

Source: Calculations are based on primary data of PIHS 1998-99, 2001-02 and 2004-05, Federal Bureau of Statistics, Government of Pakistan, Islamabad.

Note: All Poverty indices are expressed as percentages.

reflected by poverty gap measure (P_1) increased from 6.6 percent in 1998-99 to 7 percent in 2001-02 and then decline to 6 percent in 2004-05. The severity of poverty, captured by FGT P_2 measure, remained stagnant at 2.1 percent during 1998-99 and 2001-02 and declined to 1.9 percent in 2004-05 among the poorest groups in the country.

The results relating to changes in absolute poverty at regional level indicates that while the rural poverty initially increased substantially from 35.1 percent to 39.2 percent between 1998-99 and 2001-02 and then declined to 34.1 percent in 2004-05, the urban poverty increased marginally to 22.6 in 2001-02 and then declined to 18.9 percent in 2004-05. While both rural poverty gap and severity of poverty increased initially in 2001-02 and then declined in 2004-05, the urban severity of poverty increased persistently during the period.

While poverty declined at national level in both rural and urban areas, it does not indicate about the changes in poverty at province level. It would therefore be interesting to examine how this decline in poverty is shared at province level. Changes in absolute poverty at province level shows that poverty increased first between 1998-99 and 2001-02 and then declined in all provinces in rural areas between 2001-02 and 2004-05. On the other hand, poverty also declined in all provinces urban areas and increased in all provinces across urban areas between 1998-99 and 2001-02.

All provinces shared in the decline in poverty in the second period, 2001-02 and 2004-05. Across rural areas, Sindh rural has shown a huge reduction in poverty as absolute poverty decreased by 16.6 percent from 45.0 percent in 2001-02 to 28.4 percent in 2004-05. This substantial decline in poverty in rural Sindh reversed the ranking across provinces. Sindh rural was the poorest region in 2001-02 which is turned out be the least poor region across the country. It is noteworthy that this huge decline over a short period of three years is unlikely and thus need more scrutiny of the data at province level in future. Similarly, poverty declined in Sindh urban from 20.1 percent to 14.3 percent in the second period. Both poverty gap and the severity of poverty also show a significant declining trend. Likewise, urban poverty also declined in other provinces but the rate of decline was lower than the Sindh during the second period.

Considering provinces as a whole, changes in headcount shows the highest decline in poverty in Sindh from 32.2 to 29.7 percent in the second period, 2001-02 and 2004-05. In overall term, poverty declined in NWFP from 41.3 percent to 38.9 percent whereas in Balochistan it declined from 35.5 percent to 33.1 percent over the period. Similarly, overall Punjab observed a decline in poverty from 32.2 percent to 29.7 percent during the period.

It may be argued that comparison of poverty in 2001-02 with 2004-05 may not be fair because the year 2001-02 is not the normal year as growth declined rapidly due to the drought which seems to have increased poverty more rapidly in 2001-02. It is, therefore, important to examine changes in absolute poverty during the period as whole from 1998-99 to 2001-02. Poverty comparison suggests that absolute poverty declined in Pakistan by 1.8 percentage points from 31.1 percent in 1998-99 to 29.3 percent in 2004-05. However, number of poor increased by 2.6 million from 42.5 million in 1998-99 to 45.1 million in 2004-05. While rural poverty declined marginally by 1.0 percentage points from 35.1 percent to 34.1 percent, the urban poverty decreased by 2.5 percentage points from 21.4 percent to 18.9 percent during the above period. Across rural areas, the highest decline by

5.6 percentage points in poverty was found in Sindh followed by NWFP and Punjab. In contrast rural poverty rose rapidly by 14.6 percentage points in Balochistan during the period as a whole. Across urban areas, the highest decline in urban poverty by 3.6 percentage points was found in Punjab followed by 1.3 percentage points in Sindh. However, urban poverty declined marginally at best and remained stagnant at worst both in Balochistan and NWFP between 1998-99 and 2004-05.

6.1. Comparison of Poverty Estimates with Other Sources

For 2001-02, poverty estimates of this study are similar to the official poverty estimates of 34.5 percent. For 1998-99, poverty estimates of this paper at 31.1 percent are little bit higher than the officially reported poverty estimates of 30.6 percent. Official poverty estimates for Pakistan at 30.6 percent in 1998-99 is endorsed by this paper by using the poverty line of Rs 670 rather than Rs 673 per capita per month notified officially. For 2004-05, poverty estimate of this study is 5.2 percentage points higher than the official poverty estimates for Pakistan. However, our poverty estimates are very close to World Bank (2006). It is mainly due to the fact that official poverty line of Rs 878 for 2004-05 has been adjusted using Consumer price index which rose by 21.5 percent between 2001-02 and 2004-05. On the other hand, inflation derived in this paper by estimating a new poverty line of Rs 933 per capita per month in 2004-05 is at 29.0 percent between 2001-02 and 2004-05. It is noteworthy that inflation derived in this study is consistent with the Tornqvist Price Index derived by the World Bank (2006) from the PSLM, 2004-05.

7. GOVERNANCE AND POVERTY

Poverty and governance are closely linked. If power is abused, or exercised in a weak manner, those with the least power particularly the poor are most likely to suffer. Weak governance compromises the delivery of services and benefits to those who need them most particularly the poor. Influence of powerful interest groups biases policies, programmes and spending away from the poor. Lack of property rights, police protection, and legal services disadvantage the poor and inhibit them from securing their homes and other assets and operating businesses. Due to its significance for poverty reduction, governance has been recognised as one of the important pillars of poverty reduction strategy outlined in Interim and Full-Poverty Reduction Strategy Paper adopted by the Government of Pakistan since 2001. The PRSP was aimed at taking a number of policy measures to improve governance in key areas of governance—devolution, access to justice, police reforms, civil service reforms and capacity building, anti-corruption strategy, procurement reforms, freedom of information and statistics. An evaluation of the reforms programme is beyond the scope of the paper as it needs a separate study that can examine the status and progress of governance reform in Pakistan. In addition, there are difficulties in measuring the changes in governance profile due to absence of data and information in household survey. Alternatively, governance indicators constructed by international institution like World Bank (2005) can be used to examine the trends in governance indicators over time.

Governance is broadly defined⁹ as the traditions and institutions by which authority in a country is exercised for the common good. This includes: (a) the process by which those in authority are selected, monitored, and replaced (the political dimension); (b) the government's capacity to effectively manage its resources and implement sound policies (the economic dimension); and (c) the respect of citizens and the state for the country's institutions (the institutional respect dimension).

To define and measure governance, World Bank (2005) constructed aggregate Governance Indicators, which cover more than 200 countries, based on more than 350 variables, obtained from dozens of institutions worldwide, including the Survey. The Governance Indicators capture the following six key dimensions of governance:

- (1) *Voice and Accountability*; measuring political, civil and human rights.
- (2) *Political instability and violence*; measuring the likelihood of violent threats to, or changes in, government, including terrorism.
- (3) *Government effectiveness*; measuring the competence of the bureaucracy and the quality of public service delivery.
- (4) *Regulatory burden*; measuring the incidence of market-unfriendly policies.
- (5) *Rule of law*; measuring the quality of contract enforcement, the police, and the courts, as well as the likelihood of crime and violence.
- (6) *Control of corruption*; measuring the exercise of public power for private gain, including both petty and grand corruption, and state capture.

These governance indicators are used worldwide for monitoring performance, country assessment and research. Table 3 presents the governance indicators for Pakistan for 1998 and 2005. Higher values indicate better governance ratings. Percentile ranks have been adjusted to account for changes over time in the set of countries covered by the governance indicators. The results indicate that percentile rank of Pakistan's governance indicators were placed in the bottom range of percentile in 1998. However, the percentile ranks of Pakistan in all governance indicators worsened persistently further between 1998 and 2005 except the government effectiveness. The percentile ranking of government effectiveness improved significantly between 1998 and 2002 but remained almost stagnant afterward. On the whole, these trends suggest that Pakistan did not fare well in governance compared to the other countries as its performance in governance in most of

Table 3

Percentile Rank of Pakistan (0–100) Based on Governance Indicators

	1998	2002	2005
–Voice and Accountability	30.4	17.4	12.6
–Political Instability and Violence	11.8	11.3	5.7
–Government Effectiveness	22.0	33.0	34.0
–Regulatory Quality	37.4	21.2	27.7
–Rule of law	25	27.4	24.2
–Control of Corruption	18.6	23.5	15.8

Source: Kaufmann, Kraay, and Mastruzzi (2006) *Governance Matters V: Governance Indicators for 1996–2005*. World Bank.

⁹This definition is given by Kaufmann (2005).

the above areas declined resulting in lowering country's percentile ranking between 1998 and 2005.

It is important to note that corruption is often a cause as well as an effect of weak governance. It is, thus, important to discuss how poor governance and corruption hurt the poor through a multiple routes.

- A capital-intensive infrastructure project may offer more opportunities for kickbacks than spending on primary education thus diverting resources from pro-poor expenditure. Spending on operations and maintenance may be squeezed in favour of new projects leaving existing roads, schools and hospitals to decay. Similarly expenditure allocated may not reach the intended recipients.
- Corruption in health sector may divert funds away from patients of the poor families. Corruption can mean that death toll and loss of assets in earthquake may be far higher than necessary because procurement and inspections procedures may be subverted.

Corruption can be broadly categorised into two types: (a) state capture and; (b) administrative corruption. The state capture refers to actions that individuals, groups or firms in both public and private sectors take to influence the formation of laws, regulations, decrees and policies to their own advantage which occurs through illicit and non-transparent transfer or concentration of private benefits to public officials. The administrative corruption refers to the intentional imposition of distortions in prescribed implementation of existing laws, rules, and regulations to provide advantage to either state or non-state participants as result of the illegal transfer or concentration of private gains to public officials.

Keeping in view the importance of linkages between corruption and poverty, the extent of corruption and its underlying trends in Pakistan are further analysed. However, the absence of country's survey data on corruption precludes analysts for assessment of corruption. Nevertheless, an attempt has been made to examine extent of corruption using corruption index constructed by independent sources. One of the important and widely recognised indicators of corruption is the Corruption Perception Index (CPI) that is annually prepared by the Transparency International, Germany. Corruption Perception Index is based on a definition of corruption such as the misuse of public power for private benefit, for example bribing of public officials, kickbacks in public procurement, or embezzlement of public funds. It assesses the "extent" of corruption among public officials and politicians in the countries in question. The index is a composite index based on data compiled of surveys of business people and assessments by country analysts from 10 independent institutions.

Table 4 reports country's rank and score based on Corruption Perception Index (CPI) among Asian developing countries including Pakistan. The first two columns report the country rank whereas the last two columns report the score of corruption perception index for 1999 and 2005. CPI communicates the perception of the degree of corruption as seen by business people and country analysts, ranging from 10 (highly clean) to 0 (highly corrupt). CPI score results indicate that Pakistan's score of 2.2 in 1999 was in the lowest range of the index implying the high extent of corruption among public officials and politicians compared to other countries. Notably, the already low

Table 4

Country's Rank and Score Based on Corruption Perception Index (CPI)

	Country's Rank		Country's Rank as % Maximum Rank		CPI Score	
	1999	2005	1999	2005	1999	2005
Malaysia	32	39	32	25	5.1	5.1
South Korea	50	40	51	25	3.8	5.0
Saudi Arabia	–	70	–	44	–	3.4
Sri Lanka	–	78	–	49	–	3.2
India	72	88	73	56	2.9	2.9
Iran	–	88	–	56	–	2.9
Afghanistan	–	117	–	74	–	2.5
Nepal	–	117	–	74	–	2.5
Indonesia	96	137	97	87	1.7	2.2
Pakistan	87	144	88	91	2.2	2.1
Maximum Rank among Sampled Countries	99	158	100	100	–	–

Source: Transparency International, Germany; Perceptions Index 1999 and 2005.

score of CPI declined from 2.2 in 1999 to 2.1 in 2005 indicating a worsening of extent of corruption during this period. The extent of corruption in Pakistan in 2005 was even higher from south Asian countries like Sri Lanka, India and Nepal. The worsening of corruption is also validated by the decline of Pakistan's ranking among the sampled countries. Pakistan's ranking worsened from 87 in 1999 to 144 in 2005. Since numbers of countries ranked in both years are different, it is not possible to draw a clear-cut conclusion about the change of ranking between years. The next two columns present the country's rank as percent of number of countries included in the sample. The result indicates that Pakistan's ranking deteriorated from 87 in 1999 to 91 in 2005. Thus, Pakistan's ranking as having highly corrupt public officials and politicians worsened during this period. On the other hand, ranking of a number of countries (such as Malaysia, South Korea, India and Indonesia) improved considerably during this period.

It is noteworthy that corruption hurt the poor through more regressive taxes, lower and more ineffective social spending and disincentives to investment in the human capital of the poor. Corruption also increases income inequality and poverty by perpetuating unequal distribution of assets. Evidence shows that inequality worsened in Pakistan between 2001-02 and 2004-05. Gini coefficient increased during this period (see Table 5). The percentage share of consumption expenditure shows that while the lowest 60 percent lost their consumption share, the highest 40 percent gained in their consumption share implying that inequality in Pakistan increased at the expense of the poor and the middle income groups during this period. The ratio of the highest to the lowest quintile that determines the gap between rich and the poor also worsened. The rising trends in corruption are consistent with rising trends in inequality. Thus, there is a need to take measure to reduce corruption among public officials and politicians, which would result in availability of more resources for public sector development programme and poverty reduction.

Table 5
*Gini-coefficient and Consumption Quintile by Region for Pakistan
 between 2001-02 and 2004-05*

	PIHS 2001-02			PSLM 2004-05		
	Urban	Rural	Pakistan	Urban	Rural	Pakistan
Gini-coefficient	32.27	23.67	27.52	33.88	25.19	29.76
Consumption Share by Quintile						
Quintile1	5.3	12.8	10.1	4.8	12.6	9.5
Quintile2	8.1	16.9	13.7	7.6	17.1	13.2
Quintile3	12.1	19.5	16.8	11.6	19.7	16.4
Quintile4	19.4	22.4	21.3	18.3	23.0	21.4
Quintile5	55.1	28.4	38.0	57.7	27.6	39.4
Ratio of Highest to Lowest	10.40	2.22	3.76	12.02	2.19	4.15

Source: Computed from PIHS 2001 and PSLM 2005.

8. CONCLUSIONS

The paper made an assessment of absolute poverty using primary data of three countrywide household income and expenditure surveys for 1998-98, 2001-02 and 2004-05. The paper draws attention to the fact that rate of inflation matters in poverty reduction over time. The preliminary findings suggest that price inflation as measured by percentage changes in nominal poverty lines is 7.4 percentage points higher than Consumer Price Index between 2001-02 and 2004-05 and close to the Tornqvist Price Index constructed by World Bank (2006) as well as the Sensitive Price Indicator from the official sources. Notably, Sensitive Price Indicator reflects the consumption pattern of low income poor households. Thus, use of CPI for adjustment in official poverty line is likely to result in lower poverty line for 2004-05 and thus overstates of decline in poverty between 2001-02 and 2004-05. While revisit of official poverty line by the Planning Commission from Rs 748 to Rs 725 per person per month for 2001-02 is logical and empirically valid, the CPI adjusted official poverty line of Rs 878 per person for 2004-05 lacks empirical support and raises questions for the relevance of poverty estimates based on CPI adjusted poverty line. It is, therefore, suggested to use the estimated poverty line of Rs 933 for 2004-05 so as to monitor poverty genuinely to evaluate the poverty reduction strategy adopted in 2001. World Bank (2006) strongly recommended the use of TPI adjusted poverty line of Rs 937 for estimation of poverty in 2004-05. The use of poverty lines derived by the consistent approach from the household surveys results indicate that absolute poverty increased significantly during the first period, 1999-98 to 2001-02. This period relates to a low growth period primarily due to drought in the country. On the other hand, poverty declined by 5 percentage points in the second period, 2001-02 to 2004-05 when the country witnessed high economic growth rate. This period is also characterised as high inflationary period. The high inflation seems to have eroded positive effects of rapid economic growth resulting in higher poverty line of Rs 933 and slower poverty reduction during this period. It is thus important to reduce high inflation, if government aimed at protecting the poor. At province level, the finding of a substantial reduction in poverty by 16.6 percentage points in rural Sindh over a short period of three years requires further scrutiny of the data at province level.

It may be argued that poverty comparison between 2001-02 and 2004-05 may not be fair since 2001-02 is not the normal year due to drought that resulted in low economic growth leading to a rapid rise in poverty in 2001-02. Poverty comparison considering the period as a whole suggests that while absolute poverty declined by 1.8 percentage points from 31.1 percent in 1998-99 to 29.3 percent in 2004-05, the number of poor increased by 2.6 million during the same period. Rural poverty declined marginally by 1.0 percentage points from 35.1 percent to 34.1 percent, whereas the urban poverty decreased by 2.5 percentage points from 21.4 percent to 18.9 percent during the above period. At province level, rural poverty declined in Sindh, Punjab and NWFP whereas increased in Balochistan between 1998-99 and 2004-05. Similarly, urban poverty declined only in Punjab and Sindh whereas it remained stagnant in NWFP and Balochistan during the period as a whole.

While good governance is closely linked with poverty reduction, Pakistan's governance indicators that were already placed in the bottom range of percentile ranking among countries in 1998 worsened continuously in 2005 except the government effectiveness. These trends suggest that Pakistan did not progress well in governance compared to the other countries as its performance in governance declined resulting in lowering country's percentile ranking in 2005 compared to 1998. Trends in corruption as measured by corruption perception index by an independent source indicate that the already low score of CPI declined between 1999 and 2005 indicating an increasing extent of corruption during this period. Pakistan's ranking as having highly corrupt public officials and politicians worsened during this period. The extent of corruption in Pakistan in 2005 was even higher than in the south Asian countries like Sri Lanka, India and Nepal. It is noteworthy that corruption increases inequality and poverty by perpetuating unequal distribution of assets. The evidence of rising trend in inequality supports the evidence of the rising extent of corruption in Pakistan during the period. Thus, good governance is crucial for reducing inequality and poverty.

The worsening of governance indicators accompanied by a decline in poverty suggests that poverty reducing effect has come from high economic growth whereas governance played little role in reducing poverty. Had the governance indicators improved, the reduction in poverty would have been much higher. Thus, there is a need to pursue governance reform process more rigorously along with its effective monitoring and evaluation to improve the governance indicators, which would enhance the rate of reduction of poverty.

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