

### Review of Poverty Methodology

Pakistan has determined its poverty line and poverty estimation methodology in 2001 based on the consumption data of 1998-99. Headcount poverty in Pakistan is estimated using Pakistan Household Integrated Economic Survey data on the basis of food energy intake (FEI) method as is the case with many developing countries. Planning Commission estimated official poverty line at Rs. 637.54 per person per month at 1998-99 prices on the basis of a threshold level of consuming minimum 2350 kcal/day. The poverty lines thereafter, updated for each successive survey period to incorporate the inflation impact between two survey periods. This methodology uses 1998-99 consumption basket and regress overall expenditure of the lowest 60 percent of population on minimum calories (2350 kcal/day).

The normative procedure of calculating poverty continued till 2007-08. However, the government demonstrated the difficulty in presenting lower official poverty estimates of around 17 per cent in the wake of global financial crisis and domestic economic meltdown. The figure of 12.4 per cent for the year 2010-11 furthered scepticism. The data and the mainstream narrative on poverty reduction was extensively contested. It highlights the fact that data on poverty are inherently political as well as technical, so any proof of progress presented as 'official' needs to be defensible and verifiable, and be accepted widely by stakeholders.

The government formed a Technical Committee to review the official methodology in 2012 and its deliberations tried to seek the necessary buy-in from key stakeholders, in particular from those outside government. The Committee after several

rounds of discussion and deliberations pointed out following short-comings in the official methodology;

- i. The Poverty line and basket estimated in 2001 on the basis of 1999 data became outdated and no more fully reflect changes in income and consumption patterns of society.
- ii. The official methodology does not fully comprehend the variation in consumption patterns especially in non-food segment.
- iii. The updation of poverty line by using CPI is likely to create an urban bias which is distorting the poverty situation.

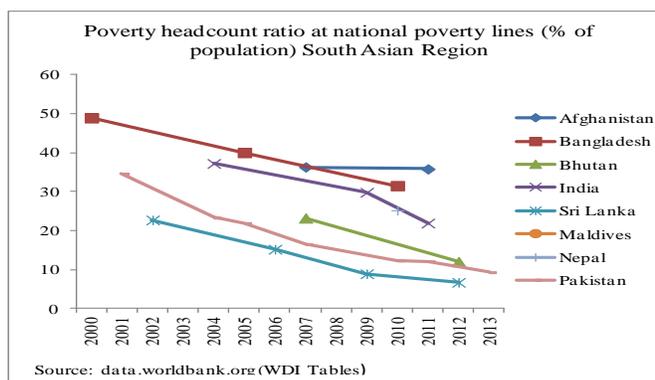
The above observations converged to the opportunity of resetting the poverty line and make certain choices so that new poverty line may reflect the consumption patterns and capture the socioeconomic changes that took place over the last two decades. These decisions were about:

1. Choice of reference group
2. Choice of calorie threshold
3. Choice of methodology

The revised reference group covers households that lie in the 10<sup>th</sup> to 40<sup>th</sup> percentile of the distribution of per adult equivalent consumption expenditure which means it excludes the bottom and the top of the distribution-in line with best practice. This does not mean that lowest 10 percent are excluded from the poverty estimation. The reference group selection is primarily done to set a higher welfare standard for poverty estimation. This sets a more representative benchmark for poverty estimation. The caloric standard is kept constant at 2,350 calories per adult equivalent per day to maintain consistency of the normative standard.

**Box-1: Decline in Poverty in South Asia**

Pakistan’s decline in poverty incidence is consistent with South Asian region. In Pakistan, the 25 percentage point decline (using old methodology) in poverty between 2001-02 and 2013-14 was associated with a 10 percentage point reduction in the share of expenditure devoted to food. Increases in income are also associated with households moving towards more balanced and diverse dietary patterns. Like most of South Asia, the reduction in poverty led to an increase in dietary diversity for every quintile. The reduction in poverty is evident in different forms of datasets like dollar a day criterion poverty estimation using independent database of PIDE from its own household survey:



Planning Commission while taking these arguments of the expert group and best international practices into considerations adopted a new poverty line based on Cost of Basic Needs (CBN) approach which focuses on the consumption patterns of households in the reference group. It first obtains a food poverty line by taking the average spending on food of households in the reference group. This food expenditure can be translated into a certain level of caloric intake, which may or may not be different from the minimum caloric threshold chosen by a country. If the two are different, then calories and expenditure are scaled to the chosen nutritional standard to arrive at the final Food Poverty Line (FPL).

The CBN then takes into account non-food expenditures (on things like clothing, shelter and education) that are necessary for households. To do this, it focuses on households who are able to fully meet the FPL at their current level of food expenditures. The FPL is then scaled up to reflect the total expenditure of these households to obtain the CBN poverty line. Both the CBN and the FEI methods can be used to construct absolute poverty line, which can be regularly updated for inflation using the CPI, allowing governments to track poverty over time. The choice of CBN has advantages such as;

- ▶ It captures non-food needs better
- ▶ It is commonly used in most of the developing countries
- ▶ It is more transparent

**1. Poverty Headcount Review for 2013-14 using new Methodology**

Using CBN a new poverty line is estimated using patterns of consumption of reference group and it comes to Rs. 3030 per adult equivalent per month using the latest available HIES 2013-14 data. According to this methodology 29.5 percent of the population is estimated to live below poverty line. Using the population estimate of 186.2 million for 2013-14 implies that around 55 million people are living below the poverty line in Pakistan. Using the old FEI methodology only 9.3 percent people are found below poverty line in 2013-14 which means 17 million people were living below the old poverty line.

Back-casting this new poverty line to 2001-02, using the CPI, shows that the headcount rate using this new higher line would have been 64.3 percent in 2001-02—more than double the rate while using the old poverty line. However, the trends over time remained the same using both poverty lines. It should be noted that these two poverty lines represent two very different levels of deprivation. The new line sets a higher bar – a more inclusive view of who will be considered disadvantaged in Pakistan. Both lines can be tracked into the past and into the future to establish consistency and robustness of trend. However, they represent two different standards of wellbeing while the new poverty line sets a higher and inclusive standard. This method has an edge over FEI for designing pro-poor policies.

**Table-1: Poverty Rates back-casted (Using CBN Method)**

Year	National	Urban	Rural
1998-99	57.9	44.5	63.4
2001-02	64.3	50.0	70.2
2004-05	51.7	37.3	58.4
2005-06	50.4	36.6	57.4
2007-08	44.1	32.7	49.7
2010-11	36.8	26.2	42.1
2011-12	36.3	22.8	43.1
2013-14	29.5	18.2	35.6

Source: Planning Commission estimates using various rounds of HIES

Poverty estimates are highly sensitive to a variety of factors, such as the choice of poverty line employed, methodology, the specification of the threshold level of poverty in terms of caloric requirement, expenditure or income, the determination of the scale of the household in terms of number of individuals or adult equivalents, spatial and regional differences in prices or consumption patterns. Each methodology or choice has its own advantages as well as limitations.

Planning Commission also signed an MOU with Oxford Poverty & Human Development Initiative (OPHI) and UNDP for computation of Multidimensional Poverty Indices (MPI) for districts of Pakistan using PSLM data. While national poverty line and headcount continue to be estimated using outcome based consumption data, the MPI will be used as a deprivation index up to district level. This will be used for designing of development policy interventions at district level. MPI will also be used for tracking SDGs objective of inclusive growth.

### Multidimensional Poverty in Pakistan

The concept of Multidimensional Poverty (MP) recognizes poverty as being a multi-facet phenomenon that constitutes multiple aspects of deprivation. The MPI estimates for Pakistan were developed by a team of experts from Planning Commission, OPHI and UNDP. The MPI constitutes three dimensions; health, education and standard of living. Three dimensions are reflected through 15 indicators. Of which 3 indicators reflect deprivation in education, 4 in health and 8 pertaining to standard of living. Besides the availability of data, the selection of

indicators and their respective weightage were determined through a consultative and inclusive process with government representatives, development practitioners and academicians at the federal, provincial and regional level.

Although each dimension of MPI carries equal weight of  $1/3^{\text{rd}}$ , the weightage for indicators inside each dimension differs. Within education years of schooling is weighted at  $1/6^{\text{th}}$  (16.66 percent), child school attendance at  $1/8^{\text{th}}$  (12.5 percent), and educational quality at  $1/24^{\text{th}}$  (4.17 percent). The health indicators also hold different weights with access to health clinic weighted at  $1/6^{\text{th}}$  (16.67 percent), and immunization, ante-natal care, and assisted delivery each having weight of  $1/18^{\text{th}}$  (5.56 percent). Within the dimension of living standard, the indicators of water, sanitation, electricity, cooking fuel, assets, and land and livestock are each weighted at  $1/21$  (4.76 percent) while walls and overcrowding are weighted at  $1/42$  (2.38 percent) each.

Using PSLM data, the headcount of multidimensional poverty in 2014/15 was 38.8 percent while the intensity of deprivation is 51 percent. Since 2004/05, multidimensional poverty has continuously reduced in Pakistan. The headcount reduced from 55.2 percent to 38.8 percent between 2004-05 and 2014-15. However, the intensity of deprivation reduced only slightly over the same time period (from 52.9 percent to 51 percent). This means that majority of the multi-dimensionally poor people continue to experience deprivation in the same number of weighted indicators. Similar trends also followed across all provinces. Table-2 gives province-wise MPI headcount across the 6 waves of PSLM survey.

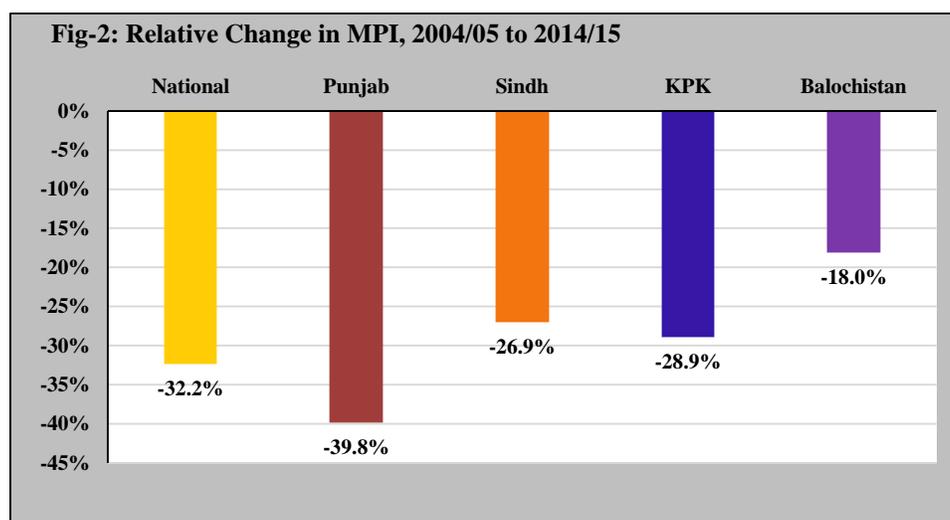
		2004-05	2006-07	2008-09	2010-11	2012-13	2014-15
<b>National</b>	Rural	70.3	69.5	65.2	62.3	56.0	54.6
	Urban	24.0	19.4	17.3	13.9	10.1	9.3
	Overall	55.2	52.5	49.3	46.5	40.8	38.8
<b>Punjab</b>	Rural	62.7	61.0	57.0	53.4	46.9	43.9
	Urban	19.7	16.1	13.2	11.0	8.4	6.3
	Overall	49.7	46.4	43.2	40.0	34.7	31.5
<b>Sindh</b>	Rural	88.1	87.4	81.0	79.9	75.5	75.7
	Urban	27.2	19.6	20.0	14.9	10.9	10.5
	Overall	57.3	53.7	51.2	49.5	44.6	43.2
<b>Khyber Pakhtunkhwa</b>	Rural	72.9	72.8	68.0	64.8	57.1	57.7
	Urban	30.5	32.9	23.2	19.2	10.0	10.2
	Overall	65.8	66.1	60.5	57.0	49.1	49.1
<b>Balochistan</b>	Rural	91.6	91.9	90.7	89.3	85.8	84.5
	Urban	49.4	42.6	40.1	37.2	29.0	37.4
	Overall	83.4	79.8	78.9	76.7	71.9	71.0

Source: UNDP, OPHI & Planning Commission

As the table shows, there are stark regional disparities in Pakistan. The poverty in rural areas is higher than urban areas. Similarly at province level, Punjab has the lowest multidimensional poverty while Balochistan has the highest incidence.

It is also important to study the progress made by

provinces in reducing poverty over the period under analysis. Figure 2 demonstrates the relative change in MPI at national and province level. Punjab accounts for the highest relative reduction in MPI (39.8 percent) while Balochistan showed the slowest progress in reducing multidimensional poverty with a relative change of only 18 percent.



Deprivation in education is the largest contributor to MPI in Pakistan. It is followed by deprivation in standard of living and health. In terms of indicators, years of schooling, followed by access to health facilities and child school attendance are the main drivers of MP. Under this study district-

wise profiles of deprivations are worked out using PSLM data and will give insight into required interventions from the government in different policy areas.

Pakistan’s national MPI – indicators, deprivations cut offs and weights.

Table-3: Pakistan's National MPI-Indicators, deprivations cut offs and weights			
Dimension	Indicators	Deprivation Cutoff	Weights
Education	Years of Schooling	Deprived if no man AND no woman in the household above 10 years of age has completed 5 years of schooling	1/6 = 16.66%
	Child attendance	Deprived if any school-aged child is not attending school (ages between 6-11)	1/8 = 12.5%
	Educational quality	Deprived if any child not going to school because of quality issues (not enough teachers, far away, too costly, no male/female, substandard school), or is attending but dissatisfied with service	1/24 = 4.17%
Health	Access to clinic / BHU	Deprived if not using health facility at all, or only once in awhile, because of access constrains (too far, too costly, does not suit, lack of tools / staff, not enough facility)	1/6 = 16.67%
	Immunization	Deprived if any child under 5 is not fully immunized according to vaccinations calendar (households with no children under 5 are considered non-deprived).	1/18 = 5.56%
	Ante-natal care	Deprived if any woman has given birth in the household in the last 3 years did not received ante-natal check-up (household with no woman that has given birth are considered non-deprived).	1/18 = 5.56%
	Assisted delivery	Deprived if any woman that has given birth in the household in the last 3 years with untrained personnel (family member, friend, etc.) or in inappropriate facility (home, other) – household with no woman that has given birth are considered non-deprived	1/18 = 5.56%
Standard of Living	Water	Deprived if household has no access to improved source of water according to MDGs standards considering distance (less than 30 minutes for return trip): tap water, hand pump, motor pump, protected well, mineral water	1/21 = 4.76%
	Sanitation	Deprived if household has no access to adequate sanitation according to MDGs standards: flush system (sewerage, septic tank, drain), privy seat.	1/21 = 4.76%
	Wall	Deprived if household has no unimproved walls (mud, uncooked/mud brick, wood/bamboo, other).	1/42 = 2.38%
	Overcrowding	Deprived if household is overcrowded (4 or more people per room).	1/42 = 2.38%
	Electricity	Deprived if household has no access to electricity	1/21 = 4.76%
	Cooking fuel	Deprived if household uses solid cooking fuels for cooking (wood, dung, cakes, crop residue, coal/charcoal, other	1/21 = 4.76%
	Assets	A household is categorized as deprived if it doesn't have more than two small assets (radio, TV, iron, fan, sewing machine, VCP, chair, watch, air cooler, bicycle), OR no large asset (refrigerator, air conditioner, tractor, computer, motorcycle), AND has no car.	1/21 = 4.76%
	Land and livestock (only for rural areas)	Deprived if hh is deprived in land AND deprived in livestock, meaning: a) Deprived in land: hh has less than 2.25 acres of non-irrigated land AND less than 1.125 acres of irrigated land b) Deprived in livestock: hh has 1 or no cattle, less than 3 sheep/goat, less than 5 chicken AND no animal for transportation. [Urban households assumed non-deprived]	1/21 = 4.76%

Source: Poverty Section, Planning Commission

