

**PAPER ON COMPARABILITY: METHODOLOGY & RESULTS—SOME KEY INDICATORS OF PSLM & ASER (2011-12, RURAL ONLY)**

The intention of this piece is to draw technical comparison of the indicators estimated by ASER (2011-2012) and PSLM (2011-12) for highlighting the scale, scope and sampling technique of both the household surveys.

**Pakistan Social & Living Standards Measurement Survey (PSLM):**

PSLM is conducted by Pakistan Bureau of Statistics: the official public sector institution. PSLM is a household survey that provides findings on a range of social sector issues in the alternate years at provincial and district levels. These are primarily focused on the sectors covered under Poverty Reduction Strategy Paper (PRSP) and monitor MDGs i.e. Education, Health, Population Welfare, Immunisation, Pre/Post Natal care, Family planning and Water supply and sanitation. The data generated through surveys is used to assist the government in formulating the poverty reduction strategy as well as development plans at district level and for the rapid assessment of program in the overall context of MDGs.

**Annual Status of Education Report (ASER):**

ASER - The Annual Status of Education Report (ASER) is a citizen led; household based initiative that aims to fill a gap in learning outcomes and provide reliable estimates on the schooling status of children aged 5-16 years residing across Pakistan. ASER seeks to improve the quality of education nationwide by providing a reliable set of data on an annual basis about what children learn, how they learn, where they learn, education status of their mothers etc. By using an innovative citizen driven approach, ASER intends to mobilize policy makers as well as ordinary citizens- parents, students, local communities and the public at large – to become aware of actual levels of children’s literacy and numeracy, and build on that awareness to stimulate practical community and policy change across Pakistan.

**SCALE & SCOPE:**

The tables below will illustrate the size and scope of the household surveys. Table 1 represents the size and scope for PSLM while table 2 represents the size and scope of ASER.

<b>TABLE: 1</b>		<b>URBAN PSLM</b>		
		TOTAL		TOTAL
OVERALL	BLOCKS	<b>604</b>	HOUSEHOLDS	<b>7248</b>
		<b>RURAL PSLM</b>		
PUNJAB	VILLAGES	252	HOUSEHOLDS	4032
SINDH	VILLAGES	128	HOUSEHOLDS	2048
KPK	VILLAGES	145	HOUSEHOLDS	2320
BALUCHISTAN	VILLAGES	88	HOUSEHOLDS	1408
	OVERALL	<b>613</b>	OVERALL	<b>9808</b>
URBAN + RURAL (PSU) <sup>1</sup>		<b>613+604=1217</b>	URBAN + RURAL (SSU)	<b>7248+9808=17056</b>

<sup>1</sup> **Primary Sampling Units (PSUs):**

Enumeration blocks in the urban domain and mouzas/dehs/villages in rural domain have been taken as primary sampling units (PSUs).

<b>TABLE: 2</b>		<b>URBAN ASER</b>		
		<b>TOTAL</b>		<b>TOTAL</b>
<b>OVERALL</b>	<b>BLOCKS</b>	<b>193</b>	<b>HOUSEHOLDS</b>	<b>2,312</b>
<b>RURAL ASER</b>				
<b>PUNJAB</b>	<b>VILLAGES</b>	<b>1,074</b>	<b>HOUSEHOLDS</b>	<b>21,478</b>
<b>SINDH</b>	<b>VILLAGES</b>	<b>645</b>	<b>HOUSEHOLDS</b>	<b>12,806</b>
<b>KPK</b>	<b>VILLAGES</b>	<b>688</b>	<b>HOUSEHOLDS</b>	<b>13,702</b>
<b>BALOCHISTAN</b>	<b>VILLAGES</b>	<b>825</b>	<b>HOUSEHOLDS</b>	<b>16,304</b>
	<b>OVERALL</b>	<b>3,232</b>	<b>OVERALL</b>	<b>64,290</b>
<b>URBAN + RURAL (PSU)</b>		<b>3,425</b>	<b>URBAN + RURAL (SSU)<sup>2</sup></b>	<b>2312+64,290= 66,602</b>

## **SAMPLE SIZE:**

To determine optimum sample size for PSLM survey, analytical studies based on the results of Pakistan Demographic Survey, Labour Force and Pakistan Integrated Households Sample Survey were undertaken. Keeping in view the variability that exists, a total of 17,056 households have been considered sufficient by PSLM to produce reliable estimates in respect of all provinces. Out of these, 1249 households were dropped and remaining 15,807 households were covered for generating analysis.

PSLM analysis (2011-12) is limited to four provinces only i.e. Punjab, Sindh, KPK and Balochistan whereas ASER is undertaken across AJK, ICT, and FATA as well. Hence in order to generate a comparison, the number of households surveyed by ASER (**mentioned in Table 2**) has been computed for the above mentioned four provinces only. However, ASER this year surveyed 251,444 children (age 3-16), from 82,521 households in 4033 villages and 4,226 urban blocks in 142 districts (urban and rural).

## **SAMPLING METHODOLOGY:**

### **Urban Sampling:**

The sampling methodology followed for urban areas is the same for both PSLM and ASER. The blocks and the frame of the urban areas have been developed by Federal Bureau of Statistics (FBS) for both the surveys. All urban areas comprising cities/ towns have been divided into small compact areas known as enumeration blocks (E.Bs) by FBS. Each enumeration block comprises about 200-250 households and categorized into low, middle and high-income group, keeping in view the socio economic status of the majority of households. These blocks will be considered Primary

#### <sup>2</sup> **Secondary Sampling Units (SSUs):**

Households within each sample Primary Sampling Unit (PSU) have been considered as Secondary Sampling Units (SSUs).

Sampling Units (PSUs) for urban domain and are selected through probability proportional to size (PPS) method. Households have been treated as secondary sampling units (SSUs).

“Despite similarities in the sampling frame, the stratification, plan for both PSLM and ASER, is different. For the urban domain, PSLM considers all cities with a population of at least 5 lacs as individual stratum. All other remaining/cities within each district are grouped together to constitute an independent stratum. PSLM 2011-12 covers 7248 households from 604 enumeration blocks. ASER 2012 covers a total of 2312 households and 194 enumeration blocks for the urban domain from the six districts of Karachi, Hyderabad, Lahore, Multan, Quetta and Peshawar. Further, PSLM covers 12 households as SSUs per PSU.”

## **Rural Sampling:**

With regard to the rural areas, the lists of villages/mouzas/dehs according to Population Census, 1998 have been used as sampling frame for both the surveys. For both the PSLM and ASER, the PPS is used to sample villages (PSUs in the rural domain). The stratification plan for both the surveys, however, is different.

“In the rural domain, PSLM considers every district of KPK, Punjab and Sindh as individual stratum. In the case of Balochistan, defunct administrative division is treated as stratum. PSLM covers a total of 9808 households from 613 PSUs, selecting 16 SSUs from every PSU. In contrast, ASER 2012 covers a total of 136 rural districts and 30 villages from each district. 20 households or SSUs are selected at random from every village making a total of 600 households per district. Thus ASER 2012 has a sample size of 64290 households from 3232 villages.”

## **INDICATORS CALCULATED BY PSLM:**

1. School attendance.
2. Katchi Class (through GER<sup>3</sup> & NER)
3. Primary Enrollment Rate (through GER & NER<sup>4</sup> at different age levels)
  1. Middle and Matric Enrollment Rates (through GER & NER at different age levels)
  2. Gender Parity Index<sup>5</sup>.
  3. Enrollment in government schools.
  4. Expenditure on Education.
  5. Literacy<sup>6</sup>

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<sup>3</sup> The Gross Enrolment Rate (GER), sometimes referred to as the participation rate, is the number of children attending primary school divided by the number of children with the specific age group who ought to be attending. The GERs are presented in PSLM in two different ways: excluding and including the Katchi class and for different age groups.

<sup>4</sup> The Net Enrolment Rate (NER) at primary level refers to the number of students enrolled in primary school of required primary school age divided by the number of children in the same age group for that level of education.

<sup>5</sup> Gender parity index (GPI) usually designed to measure the relative access to education of males and females. The GPI at primary or secondary is defined as net enrolment rate of females at primary or secondary level divided by net enrolment rate of males in primary or secondary level.

## INDICATORS CALCULATED BY ASER:

1. Enrollment in Government, private, madrassah schools.
2. Learning levels of children (5-16)
3. Learning Levels of children w.r.t gender and type of school i.e. Public and Private.
4. Parental Education.
5. Number of Out of school children.
6. Household indicators.
7. Teacher Attendance in Public & Private schools.
8. Children Attendance in Public & Private schools.
9. Multi grade teaching.
10. Teachers Qualification in Public & Private schools.
11. Percentage of children taking tuitions in Government and Private schools.
12. Data on school facilities such as availability of water, library, play ground etc.

*At this point, we will only be comparing some of the indicators that are similar in both PSLM and ASER to give us some evidence on validity and comparability of the two household surveys. The results somehow may differ due to a considerable difference in the sample size.*

## RESULTS:

Following tables below will illustrate comparison for similar indicator:

### 1. PRIMARY ENROLLMENT RATE

Table 2.9 (A) **Net Enrolment Rate At The Primary Level (Age 5-9)- By Region and Province (Excluding Katchi Class)**

Region & Province	Rural PSLM			Rural ASER		
	Male	Female	Total	Male	Female	Total
Pakistan	58	50	54	61	51	57
Punjab	63	59	61	74	70	72
Sindh	48	36	43	66	56	61
Khyber Pakhtunkhwa	58	46	52	70	57	65
Balochistan	46	22	35	41	26	35

<sup>6</sup> Literacy is taken as the ability to read a newspaper and to write a simple letter.

**Net enrolment rate:** [Number of children aged 5 - 9 years attending primary level (classes 1-5) divided by number of children aged 5 - 9 years] multiplied by 100.

**Table 2.9 (B) Net Enrolment Rate At The Primary Level (Age 6-10)- By Region and Province (Excluding Katchi Class)**

Region & Province	Rural PSLM			Rural ASER		
	Male	Female	Total	Male	Female	Total
Pakistan	70	59	64	70	58	65
Punjab	75	69	72	80	75	78
Sindh	58	41	50	70	59	65
Khyber Pakhtunkhwa	71	57	64	80	67	75
Balochistan	56	28	44	53	35	46

**Net enrolment rate:** [Number of children aged 6 - 10 years attending primary level (classes 1-5) divided by number of children aged 6 - 10 years] multiplied by 100.

*NER calculated at the national level for both PSLM and ASER differs by a negligible amount for the age band 6-10. NER at the primary level for age bracket 6-10 calculated by PSLM for the entire population is 64 while NER calculated by ASER for the same age bracket is 65 at the primary level.*

## 2. MIDDLE AND MATRIC ENROLLMENT RATES

**Table 2.32 (A) Net Enrolment Rate At The Middle Level (Age 10-12)- By Region & Province**

Region & Province	Rural PSLM			Rural ASER		
	Male	Female	Total	Male	Female	Total
Pakistan	22	15	19	25	21	24
Punjab	25	19	22	32	31	32
Sindh	17	7	13	22	14	19
Khyber Pakhtunkhwa	21	15	18	32	23	29
Balochistan	15	3	10	16	11	14

**Net enrolment rate:** [Number of children aged 10 - 12 years attending middle level (classes 6 - 8) divided by number of children aged 10 - 12 years] multiplied by 100.

*NER calculated for Middle Level (Age 10-12) at the national level for both PSLM and ASER also show a very close proximity. NER at the middle level for age bracket 10-12 calculated by PSLM for the entire population is 19 while NER calculated by ASER for the same age bracket is 24 at the middle level.*

**Table 2.32 (B) Net Enrolment Rate At The Middle Level (Age 11-13) – By Region & Province**

Region & Province	Rural PSLM			Rural ASER		
	Male	Female	Total	Male	Female	Total
<b>Pakistan</b>	<b>39</b>	<b>28</b>	<b>33</b>	<b>43</b>	<b>33</b>	<b>39</b>
Punjab	41	33	37	49	46	48
Sindh	32	16	24	35	24	30
Khyber Pakhtunkhwa	40	28	35	54	42	50
Balochistan	28	8	19	31	18	26

**Net enrolment rate:** [Number of children aged 11 - 13 years attending middle level (classes 6 - 8) divided by number of children aged 11 - 13 years] multiplied by 100.

*NER calculated for Middle Level (Age 11-13) at the national level for both PSLM and ASER differ by a very small amount and that may also have occurred due to a difference in sample size. NER at the middle level for age bracket 11-13 calculated by PSLM for the entire population is 33 while NER calculated by ASER for the same age bracket is 39 at the middle level.*

**Table 2.36(A) Net Enrolment Rate At The Matric Level (Age 13-14)- By Region & Province**

Region & Province	Rural PSLM			Rural ASER		
	Male	Female	Total	Male	Female	Total
<b>Pakistan</b>	<b>12</b>	<b>8</b>	<b>10</b>	<b>12</b>	<b>10</b>	<b>11</b>
Punjab	14	10	12	18	17	18
Sindh	9	4	6	13	7	10
Khyber Pakhtunkhwa	8	6	7	13	10	12
Balochistan	7	1	5	5	3	4

**Net enrolment rate:** [Number of children aged 13 - 14 years attending matric level (classes 9 - 10) divided by number of children aged 13 - 14 years] multiplied by 100.

*NER calculated at the national level for both PSLM and ASER differs by a negligible amount for the age band 13-14. NER at the matric level for age bracket 13-14 calculated by PSLM for the entire population is 10 while NER calculated by ASER for the same age bracket is 11 at the matric level.*

**Table 2.36 (B) Net Enrolment Rate At The Matric Level (Age 14-15)- By Region & Province**

Region & Province	Rural PSLM			Rural ASER		
	Male	Female	Total	Male	Female	Total
Pakistan	24	15	20	28	22	25
Punjab	27	20	23	34	31	33
Sindh	17	6	12	22	13	19
Khyber Pakhtunkhwa	26	12	19	35	26	32
Balochistan	15	3	10	16	9	14

**Net enrolment rate:** [Number of children aged 14 - 15 years attending matric level (classes 9 - 10) divided by number of children aged 14 - 15 years] multiplied by 100.

*NER calculated for Matric Level (Age 14-15) at the national level for both PSLM and ASER also show a very close proximity. NER at the matric level for age bracket 14-15 calculated by PSLM for the entire population is 20 while NER calculated by ASER for the same age bracket is 25 at the matric level.*

### 3. SCHOOL ATTENDANCE

**Table 2.2 POPULATION THAT HAS EVER ATTENDED SCHOOL – OVERALL RURAL AREAS (ALL PROVINCES)**

Region (NATIONAL)	Rural PSLM			Rural ASER		
	Male	Female	Total	Male	Female	Total
10-14 years	85	68	76	89	72	83

**Population** in the relevant category that has ever attended school expressed as a percentage of the total population in the age-category.

**The only comparable** age bracket (present in the PSLM) was 10-14 and the figures were not mentioned for each province.

**Attended school:** all those individuals who have ever attended school (either currently attending, or attended in the past) were taken to have attended school.

ASER further gathers information on the attendance rate of teachers and students in both the government and private schools. The figures are mentioned below:

Attendance (%) on the day of visit										
	Government schools					Private schools				
	Primary	Elementary	High	Others	Overall	Primary	Elementary	High	Others	Overall
<b>Children attendance</b>	79.1	84.3	85.5	79.0	82.4	85.5	86.2	86.8	82.5	86.2
<b>Teacher attendance</b>	87.3	86.2	88.0	84.4	87.0	85.9	88.3	87.7	86.0	87.6

Student attendance is recorded by taking a head count of all students present in schools on the day of visit.

- Overall student attendance in government schools stood at 82%.
- The overall attendance in private schools is 86% as per the headcount.

**Similarly,** Teacher attendance is recorded by referring to the appointed positions in each school and the total number of teachers actually present on the day of survey.

- Overall teacher attendance in government schools was 87%.
- The overall attendance in private schools is 88% as per the register.

#### Bibliography:

SAFED (2013) The Annual Status of Education Report (ASER) 2012 (Retrieved from: <http://www.safedafed.org> ; [www.aserPakistan.org](http://www.aserPakistan.org))

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