MEASURING GENDER & EDUCATIONAL INEQUALITY - ADDRESSING THE MARGINALIZED

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17 Sustainable Development Goals are a set of all-encompassing goals promising to strive for a world that is equitable and inclusive, thereby to benefit ALL children and future generations without the discrimination to age, sex, disability, culture, race, ethnicity, origin, migratory status, religion, economic or other status. The confluence of SDG Goals and framework is indeed ambitious, carrying a sector wide approach and underscoring the importance of Right to Education, Equity, Inclusion, Quality and Lifelong education leading to sustainable lives. The terms "lifelong education and sustainable learning" create synergies with other SDGs and indicators linked to education such as poverty, health, nutrition, gender, social justice, climate change, and infrastructure.

Over the past fifteen years, governments have been seen only taking the responsibility of formulating and implementing strategies aimed at ensuring that all children are enrolled in schools. Despite significant progress in getting more girls and boys into school, the most pertinent question is whether children who are able to access schools are also acquiring the skills that will equip them to lead productive and meaningful lives. Many of those in school are not learning, with little improvement visible in the past few years (Andrabi et al, 2007; ASER, 2010, 2016; PEC, 2014-15; SAT 2014; Rose and Alcott, 2015). In Pakistan, large disparities in learning achievement exist and are heavily influenced by the type of school students attend and their family backgrounds (Economic Survey of Pakistan, 2014). Pakistani society has become largely fragmented and segregated on various socio-economic lines since the last couple of years. The inequality in income and wealth not only continues to grow with every passing year but also has triggered disparities in education[1].

While the global community is getting together to achieve sustainable development goals, it is important that the unfinished agenda is not left behind and emerging disparities in learning outcomes with respect to wealth are measured, addressed and emphasized. Although most developing countries have introduced national examinations and/or assessments to measure children's progress in learning and some also participate in regional or international assessments, these assessments have not generated the same level of accountability for learning and inclusion as there has been for enrolment.

ASER Pakistan and its counterparts in 13 countries are helping to fill existing gaps in accountability for learning outcomes since 2010. The countries are now headed by a common secretariat, People Action for Learning Network (Pal Network[2]). The PAL Network was formally declared in July 2015 and offers a platform from which citizen-led assessments can continue to influence global accountability systems.

In highlighting the severity of learning crisis in children's foundational skills, ASER Pakistan have helped to ensure that the Post-2015 Sustainable Development Goals (SDGs) did not repeat the mistake of the MDGs and assume that access and completion of primary and lower secondary would lead to learning. (Results for Development, 2015). As the data is collected at the household-level, they have made an important contribution to better measuring and understanding gaps in equitable learning that otherwise would go unnoticed and also have reached out to most marginalized segments of the society.
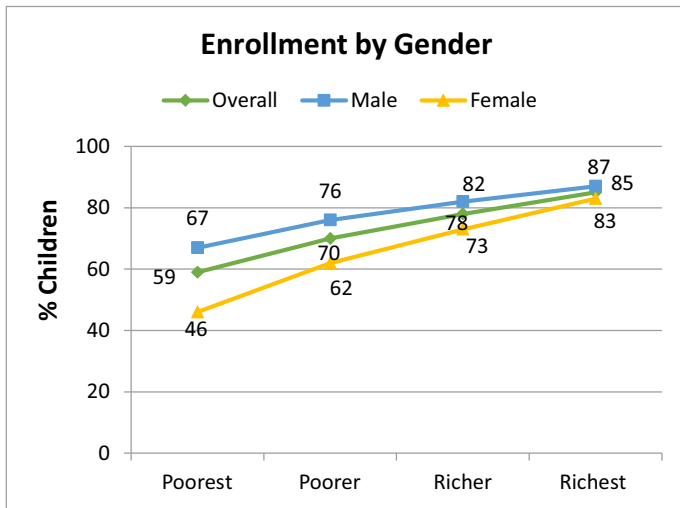
ASER WEALTH INDEX: FINDINGS

In order to determine differences in learning levels arising from inequalities, an ASER composite wealth index has been constructed by integrating the significant household indicators[3] mentioned in the survey form. These indicators measure the economic potential and achieved levels of income and wealth of a household. ASER wealth index has been developed by using principle component factor analysis procedure in the STATA software[4]. Using this methodology, ASER 2016 national data (144 rural districts of Pakistan) has been divided into 4 categories/quartiles (i.e. poorest, poorer, richer, and richest) thereby representing the entire population of Pakistan in a socio-economic context.

1. UNESCO, EFA Global Monitoring Report. 2012.
2. www.palnetwork.org
3. Household indicators used: Type of house (Type of house is a categorical variable with kutcha given the value 1, semi-pucca equals 2, and pucca equals 3), house owned (Dummy equaling 1 if the house is owned, 0 otherwise), electricity connection (Dummy equaling 1 if the house had electricity, visible wires and fittings, 0 otherwise), mobile (Dummy equaling 1 if anyone in the house has a mobile, 0 otherwise) and television (Dummy equaling 1 if the household has a television, 0 otherwise)

Enrollment by Gender

The results depicted by ASER Wealth Index (2012, 2013, 2014, 2015) are no different. The results reveal that the richest quartile has the highest percentage of children enrolled (85%) whereas the poorest quartile has the lowest enrollment rate (59%). A strong correlation between wealth and enrollment is established as we move along the wealth index. Moreover, socio-economic background is also found to be influencing gender inequity. The males and females belonging to the poorest quartile are particularly disadvantaged as depicted by the lowest enrollment rates. The highest enrollment of males and females is again in the richest quartile (87% and 83% respectively). The most alarming trend is that of female's enrollment which not only decreases across all quartiles but also is lower than the enrollment rate of male population

Results of ASER 2016 also reveal that the poorest quartile has the highest level of children enrolled in government schools (77%) whereas the remaining 19% of the children are enrolled in private schools. On the other hand, the

Enrollment by Type of School
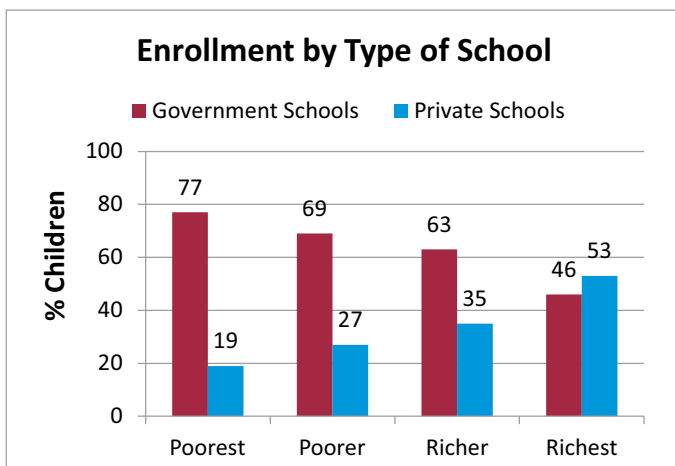
richest quartile has the highest number of children enrolled in private schools (53%) and the lowest percentage of children in government schools (46%). It is evident from the figures that enrolment in government schools falls and that for private schools increases as we move along the wealth index towards the richest. Wealth status is thus found to be influencing the type of school chosen by households.

Given the disparities in enrollment and out-of-school children, ASER 2016 results further strengthens the stance that socio-economic factors are adversely affecting the
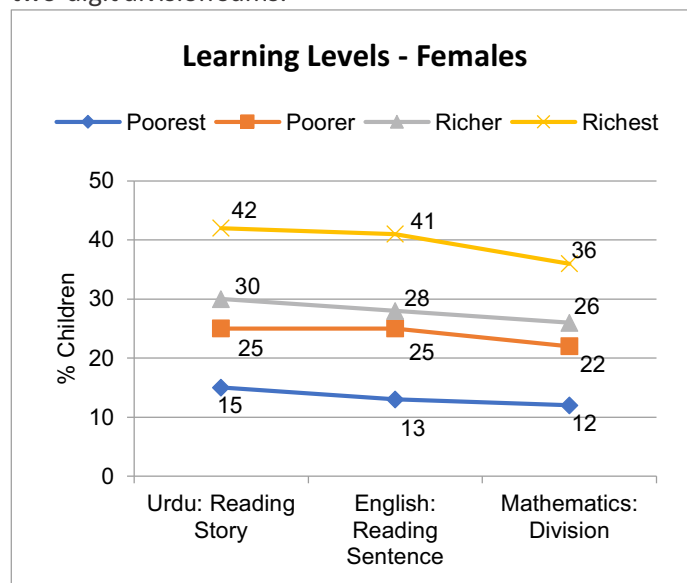
Learning Levels (Highest Competency)
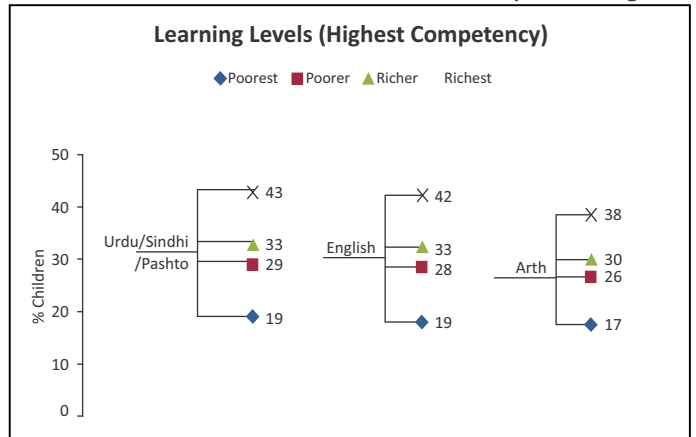
learning levels of children in Pakistan. The graph clearly indicates that the learning levels of children are directly related to their wealth status. Children falling in the 'richest' quartile have the highest learning levels in Urdu/Sindhi/Pashto, English, and Arithmetic whereas the

Learning Levels - Males
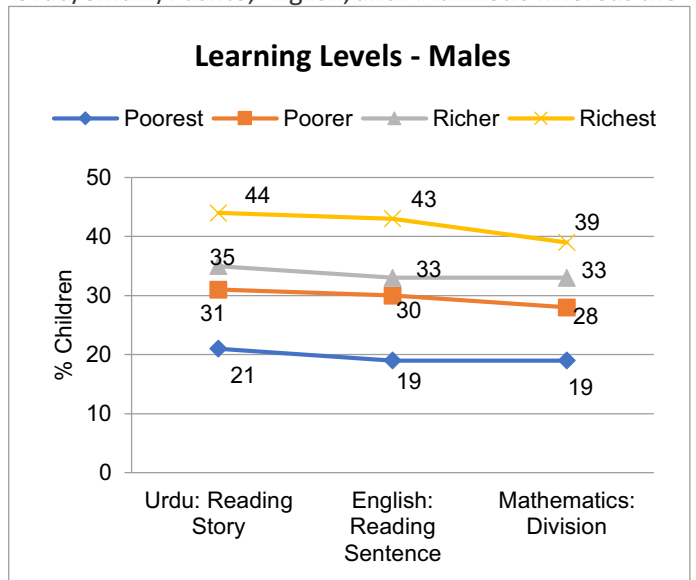
children in the poorest quartile have the lowest learning levels. Following the overall national trends, a gender-wise analysis was also conducted in order to determine the differences in learning levels of males and females.

4. It factorizes variables by creating a weighted combination of the input variables in the following manner e.g. $F_1 = a_{11}X_1 + a_{12}X_2 + ...$ In order to select factors, eigen values from a principal component analysis are used and the factor coefficient scores are created. Further, the indicator values are multiplied by the coefficient scores and added to come up with the wealth index. The index is then divided into groups/quartiles to categorize the population according to their wealth status.

Males and females falling in the richest income group are better able to perform the language and numeracy tasks than children falling in low income groups. However, the learning levels of the females are lower when compared to the learning levels of males across all quartiles in both language and arithmetic competencies. Fifteen percent of the poorest females can read a story in Urdu/Sindhi/Pashto as compared to 21% poorest males. Similarly, 12% poorest females can do two-digit division sums and 13% can read sentences in English whereas 19% of the poorest males can read sentences in English and do two-digit division sums.

The SDGs represent a critical opportunity to move our collective focus toward learning, which is the cornerstone of meaningful education. It is thereby imperative to measure learning for children early in their schooling career through a meaningful, child-friendly, participatory approach, as depicted by the model of citizen led assessments. There is a dire need to work on the use of metrics that go beyond standard income measures so that all countries converge not only in living standards but also in their global responsibilities to sustainable development.

Learning Levels - Females

Legend: Poorest, Poorer, Richer, Richest

% Children	Urdu: Reading Story	English: Reading Sentence	Mathematics: Division
Poorest	15	13	12
Poorer	25	25	22
Richer	30	28	26
Richest	42	41	36

Similarly, 42% of the richest females can read a story in Urdu/Sindhi/Pashto, 41% can read sentences in English and 36% can do two-digit division sums whereas 44% richest males can read a story in Urdu/Sindhi/Pashto, 43% can read sentences in English and 39% can do two-digit division sums.

The current education status of Pakistan as demonstrated by ASER 2016 clearly sheds light on how disparities created by differences in wealth status are jeopardizing the future of millions of children. Education is at risk, requiring targeted action and a focus on access to equitable quality education and learning for all. If our objective is to educate all children, we need to challenge the existing differences and divisions in order to provide equal set of opportunities to all children of the society. Failure to address such structural disparities linked to wealth, gender, ethnicity, language, disability and other markers of disadvantage will hold back our progress towards SDG's and fuelling wider processes of social exclusion.