Measuring Gender & Educational Inequality-Addressing the Marginalized

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Education in itself is a fundamental human right, a bedrock of development that contributes to all social, economic and environmental dimensions, leading to gains for generations to come. The dividends that result from investments in education are immeasurable. However, for these benefits to accrue, all girls and boys must have education opportunities both in and outside of school and should be acquiring meaningful learning that leads to mastery of skills.

Since 2000, the efforts to achieve the MDGs have yielded unprecedented progress in both the developed and the underdeveloped countries. While growth is noticeable, the sad reality is that the achievements have been uneven; constrained by trends in demography, urbanization, health, economic and shifting global realities. Gender inequalities and socioeconomic disparities persist especially amongst nomadic populations, geographically remote groups, and the socially and economically disadvantaged (EFA Agenda for South Asia, 2013). More than 57 million children continue to be denied their right to primary education due to the failure to reach the marginalized (EFA Global Monitoring Report, 2012). Failure to address the structural disparities linked to wealth, gender, ethnicity, language, disability and other markers of disadvantage is holding back progress towards Education for All and fuelling wider processes of social exclusion. Children and adolescents from the poorest households are at least three times more likely to be out of school than children from the richest households (MDG Report, 2013).

According to the analysis of household survey data carried out by The Global Initiative on Out-of-School Children, 23.8 million primary and 15.6 million secondary-age children are out of school in Bangladesh, India, Pakistan and Sri Lanka (UIS and UNICEF, 2010). The total number of out-of-school children in these countries is 39.4 million, out of which 53% are girls (UNESCO, 2010). Even in sub-Saharan Africa, over half of all out-of-school children, girls are more likely to be out of school than boys. Poor rural girls in particular face multiple disadvantages through gender discrimination and poverty which bar them from enrolling and lead to dropouts at greater rates than boys (The Global Compact on Learning: Policy Guide).

Where economic and gender disparities are preventing millions of girls and boys from even attending school, those who are attending often leave both primary and secondary levels without acquiring the basic knowledge, skills, and competencies. According to estimates in the 2012 EFA Global Monitoring Report: At least 250 million primary-school-age children around the world are not able to read, write or count well enough to meet minimum learning standards, including girls and boys who have spent at least four years in school. In Pakistan, large disparities in learning achievement exist and are heavily influenced by the type of school students attend and their family backgrounds. ASER (The Annual Status of Education Report) data reflects such inequalities very clearly. Shocking results from ASER Pakistan (2012,2013) have shown that the vast majority of pupils between 5-16 years old have not even achieved what is expected of a grade 2 student in language and mathematics. This is coupled with widespread social and gender disparities in educational outcomes reflected by creating an ASER wealth index with the help of household indicators tapped during the survey. Learning levels of children juxtaposed against the wealth status of households will provide a snapshot of the current status of learning inequalities and demonstrate how these have narrowed/widened in comparison to last year.

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[1] mentioned in the survey form. These
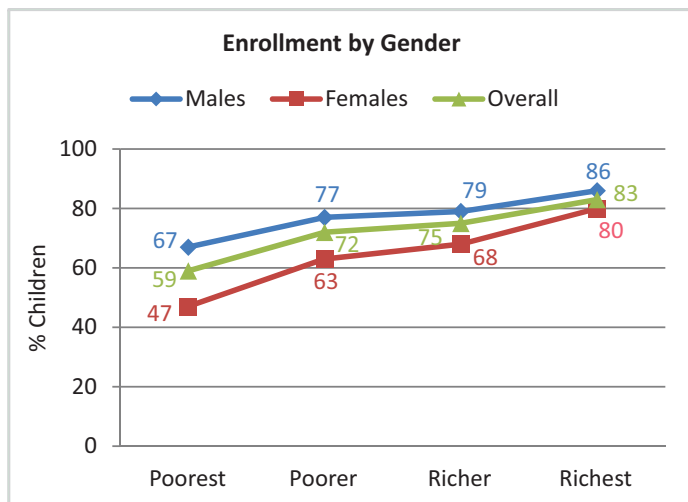
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[1] Household indicators used: Type of house (Type of house is a categorical variable with kutcha given the value 1, semi-pucca equals 2, and pucca equals 3), house owned (Dummy equaling 1 if the house is owned, 0 otherwise), electricity connection (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)

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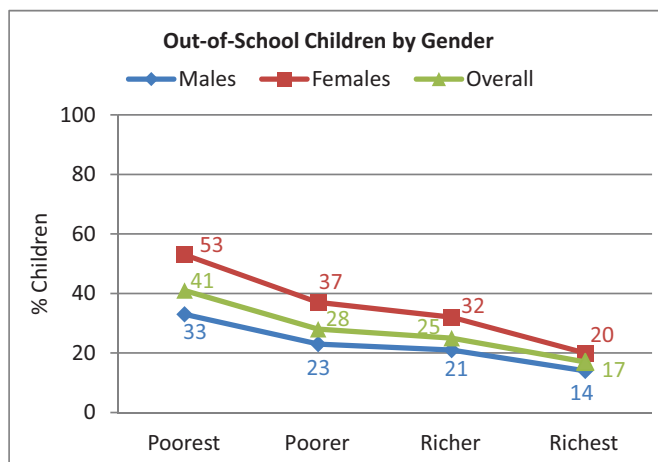$$F_1 = a_{11}X_1 + a_{12}X_2 + ...$$
In order to select factors, eigen values from a principal component analysis are used and the factor coefficient scores are created. Further, the indicator values are multiplied by the coefficient scores and added to come up with the wealth index. The index is then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

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[2]. Using this methodology, ASER 2013 national data (**138 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.

Enrollment by Gender

The results depicted by ASER Wealth Index (2012 and 2013) are no different. The results reveal that the richest quartile has the highest percentage of children enrolled (83%) 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 (86% and 80% 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.
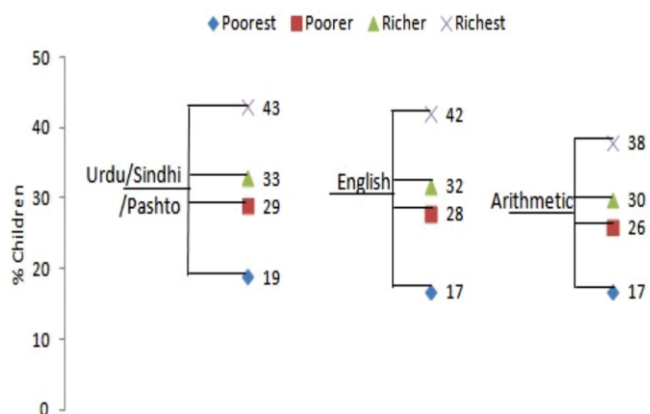
The findings also illustrate that children, particularly girls, from poor households face a much greater risk of being out of school. The percentage of out of school females is higher than the overall national rural results and is highest in the poorest quartile. Fifty-three percent females are out of school in the poorest quartile as compared to 20% females in the richest quartile. A lower percentage of males are out of school when compared to females but they also follow the same pattern i.e. the highest

Out-of-School Children by Gender

percentage of out of school males are in the poorest quartile (33%) and the lowest percentage of out of school males are in the richest quartile (14%).
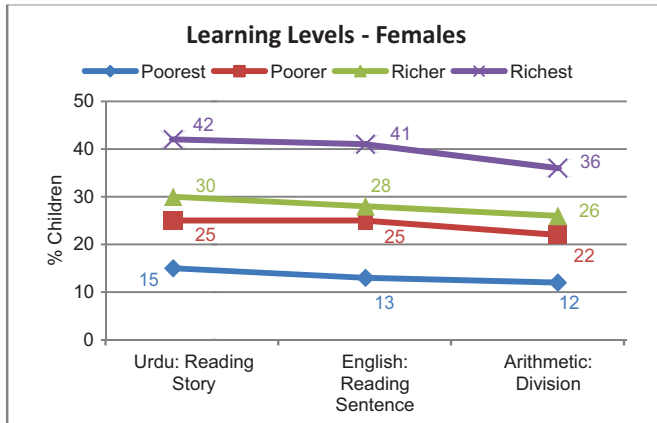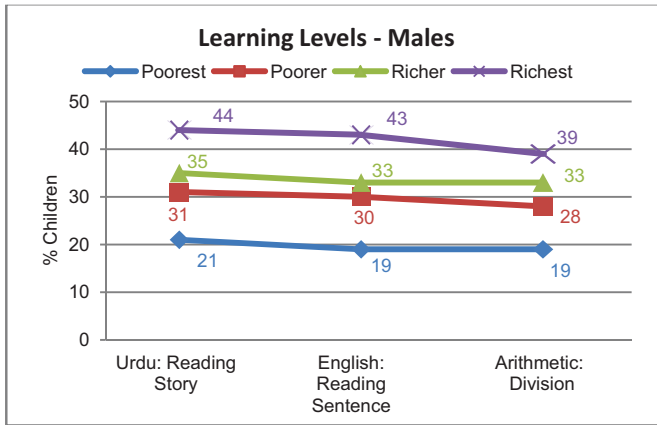
Given the disparities in enrollment and out-of-school children, ASER 2013 results further strengthens the stance that socio-economic factors are adversely affecting

Learning Levels (Highest Competency)

the 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 children in the poorest quartile have the lowest learning levels. It can also be seen that the gap between the 'richest' and the 'poorest' quartile appears to be increasing whereas the gap between the 'poorer' and the 'richer' quartile is decreasing (when compared to the last year's results); thereby, leading to be divide between the rich and the poor.

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. Males

Learning Levels - Males

Legend: Poorest, Poorer, Richer, Richest

	Urdu: Reading Story	English: Reading Sentence	Arithmetic: Division
Richest	44	43	39
Richer	35	33	33
Poorer	31	30	28
Poorest	21	19	19

(% Children)

Learning Levels - Females

Legend: Poorest, Poorer, Richer, Richest

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

(% Children)

taking tuition as compare to the children belonging to the poorest income group (43%). The households with better wealth status are able to spend significantly more on their children's education, improving their opportunities for better quality schooling as reflected by the variations in learning levels. The learning level of richest children taking paid tuition are far better (54%) when compared to 39% of the poorest children taking tuition (can read a story in Urdu/Sindhi/Pashto). Similar trends can be seen in the English and Arithmetic skills of children across all quartiles establishing that the children of the lowest quartiles are particularly disadvantaged as only a limited set of educational opportunities is available to them.

The current education status of Pakistan as demonstrated by ASER 2013 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 Pakistan has to achieve the goal of universal primary education by 2015, then the government must redouble its efforts for reaching the marginalized and improving the learning outcomes. In shaping education for the future, efforts to expand enrollment at all levels must be accompanied by policies emphasizing on inclusive approaches and overcoming inequality. Reforms such as an increasing access and improving affordability for excluded groups by lowering
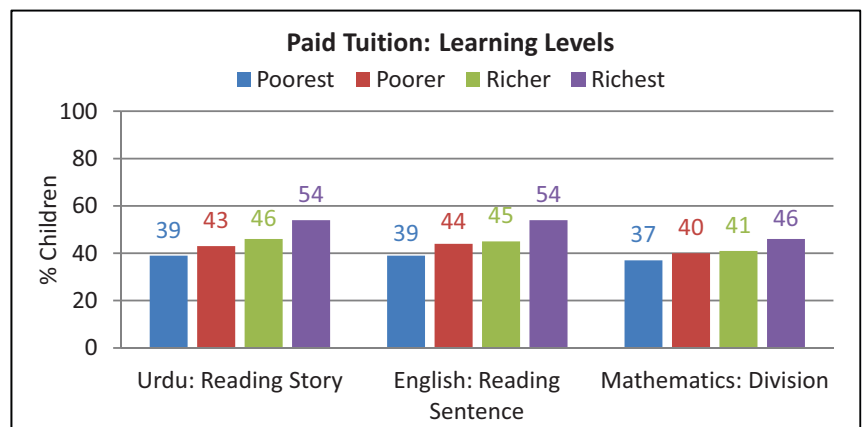
and females falling in the richest income group are better able to perform the language and numeracy tasks than children falling in low income groups. However, the learning levels of the females are lower when compared to the learning levels of males across all quartiles in both language and arithmetic 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.

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.

Incidence of paid tuition was another factor that was investigated to assess whether it is strongly associated with learning achievement and also positively affected by wealth status. The findings show that a higher percentage of children (94%) belonging to the richer income group are

Paid Tuition: Learning Levels

Legend: Poorest, Poorer, Richer, Richest

	Urdu: Reading Story	English: Reading Sentence	Mathematics: Division
Poorest	39	39	37
Poorer	43	44	40
Richer	46	45	41
Richest	54	54	46

(% Children)

cost barriers, changing attitudes to girls' and women's place in society, offering financial incentives for school participation, bringing schools closer to marginalized communities, targeting financial and learning support to disadvantaged schools, and providing intercultural and bilingual education etc. have the potential to not only remove the flaws present in our education system but may also turn Pakistan into a true democratic and liberal society in the coming years.