GIRLS EDUCATION & GENDER EQUALITY

Evidence from ASER Pakistan

2012-2014
Over the past decade, the major focus of the global education community has been on increasing school enrollment. As a result of this global focus, 89% of primary-age children are now enrolled in school (UNESCO, 2012). Free, compulsory primary education is recognized as a fundamental human right (United Nations 1948), and primary education is compulsory in almost every country, according to the UNESCO Institute for Statistics (UIS 2012). Though it is clear that considerable progress has been made since the establishment of the EFA and Millennium Development Goals, the goals have yet to be achieved. More than 57 million children continue to be denied their right to primary education. Access to education falls woefully short of the need in many countries and especially amongst nomadic populations, geographically remote groups, and the socially and economically disadvantaged (EFA Global Monitoring Report, 2012).

Failure to address such 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. The UN’s 2013 Millennium Development Goal report highlights the gains made so far in achieving the MDGs as well as describing the major challenges that remain. As the report notes, the world is not on track to reach the goal of universal primary education by 2015. Despite a significant reduction in the number of out-of-school children – from 102 million in 2000 to 57 million in 2011 – progress has slowed in the last few years and inequalities remain high (Pauline Rose, World Education Blog).

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 (Annual Status of Education Report) data reflects such inequalities very clearly.

Shocking results from ASER Pakistan 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 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
Using this methodology, ASER 2014 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.

The results depicted by ASER Wealth Index (2012, 2013 and 2014) 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 the ASER 2014 data 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 sector schools. On the other hand, the 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 enrollment in government schools falls and for that of private school increases as we move along the wealth index towards the richest. Status wealth is thus found to be influencing the type of school chosen by households. Though a number of low fee private schools exist in the country, they are still more expensive than their public counterparts and thus are not affordable for all income quartiles.

Given the bleak picture portrayed by the disparities in enrollment according to types of schools, a similar image comes to light when the “learning levels” according to wealth status are taken into account. The graph clearly indicates that the learning levels of children are directly related to their wealth status. The learning level of children in all three subjects increases as we move along the wealth index towards the richest quartile. Poorest have the lowest learning levels (19% Urdu/Sindhi/Pashto, 34% English, 44% Mathematics) whereas the richest have the highest learning levels (39% Urdu/Sindhi/Pashto, 59% English, 78% Mathematics).
17% English, and 16% Math) and richest have the highest learning levels (44% Urdu/Sindhi/Pashto, 43% English, and 39% Math). 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 enrollment figures mentioned above.

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 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. 14% of the poorest females can read a story in Urdu/Sindhi/Pashto as compared to 22% poorest males. Similarly, 11% poorest females can do two-digit division sums and 12% can read sentences in English whereas 20% of the poorest males can read sentences in English and 19% can do two-digit division sums.

Similarly, 43% of the richest females can read a story in Urdu/Sindhi/Pashto, 42% can read sentences in English and 38% can do two-digit division sums whereas 44% richest males can read a story in Urdu/Sindhi/Pashto, 44% can read sentences in English and 40% can do two-digit division sums.

The current education status of Pakistan as demonstrated by ASER 2014 clearly sheds light on how disparities created by differences in wealth status are jeopardizing the future of millions of children. 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. Moreover, at a time when the international community begins to plan post-2015 education goals and framework, it is vital to ensure that equity based targets are included and measuring marginalization in education is given a high priority. The new goals should invest in citizenship and emphasize on human well-being. There is a dire need to include 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.
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 fueling 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 mentioned in the survey form. These

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.

\[ F_i = a_1X_1 + a_2X_2 + a_3X_3 + ... \]

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. 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.

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 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 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
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 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 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.
“I want to send my children to school. I want them to have a better life than mine. But I cannot afford to pay their fees, buy them books or get them pencils every month. Mostly people of this village don’t send their children to school and make them work instead as all of us are too poor. My children have been dropped out of primary school as I had no money”

The voice is that of Sakina Bibi; a mother and a resident of a remote village in Balochistan. One of the harsh realities behind the education crisis in Pakistan cannot be better summarized than the story presented above.

Today where due to rapid globalization, economic activity is becoming increasingly knowledge based and education has gained importance more than ever, the education system of Pakistan continues to stay ineffective and unproductive. The vital role and significance of education is largely mistreated and ignored in Pakistan. Moreover, the provision of educational opportunities is unfortunately determined and made available on the basis of regional disparities, rural-urban location, gender, types of schools, income and wealth of parents etc. 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. The propagation of private schooling system has further intensified the disparities resulting in polarization of education along socio-economic lines. People falling in lower-middle income group remain deprived of quality education provided by private schools due to exorbitant fees charged by them while the government schools fail to come up at par in terms of quality of education. ASER (The Annual Status of Education Report) data reflects such inequalities very clearly. ASER 2012 pointed out the dismal performance of government schools as compared to private ones in language and arithmetic assessments.

Such analysis on patterns of inequality in learning outcomes will bring the attention of the policy makers to formulate policies that empower children from poor backgrounds to beat the odds. The imbalances if not checked will push the inequities in the education sector further down the abyss. Providing equal opportunities in schooling along with strengthening quality of education can serve as a benchmark for bringing a change in social and economic outcomes. An equitable distribution of educational opportunities will allow the poor to gain from the benefits of economic growth and contribute towards higher growth rates. Whereas, depriving the poor from educational opportunities will result in lower economic growth and amplification of income inequality.

Hence, equitable access and learning is a key to “sustained development”. This research appraises education inequalities in Pakistan with the help of ASER data (2012) covering 136 rural districts of Pakistan and investigates if the children from the lower income groups are worse off.

In order to highlight the above mentioned aspect of our education system, an ASER composite wealth index has been constructed by integrating all the household indicators mentioned in the survey form. These indicators measure the economic potential and achieved levels of income and wealth of a household. The table representing the variables used to create the wealth index is described below.

<table>
<thead>
<tr>
<th>Variables</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type of house</td>
<td>Type of house is a categorical variable with kutcha given the value 1, semi-pucca equals 2, and pucca equals 3.</td>
</tr>
<tr>
<td>House owned</td>
<td>Dummy equaling 1 if the house is owned, 0 otherwise.</td>
</tr>
<tr>
<td>Electricity</td>
<td>Dummy equaling 1 if the house had electricity (visible wires and fittings), 0 otherwise.</td>
</tr>
<tr>
<td>connection</td>
<td></td>
</tr>
<tr>
<td>Toilet</td>
<td>Dummy equaling 1 if the household had a toilet, 0 otherwise.</td>
</tr>
<tr>
<td>Mobile</td>
<td>Dummy equaling 1 if anyone in the house has a mobile, 0 otherwise.</td>
</tr>
<tr>
<td>Television</td>
<td>Dummy equaling 1 if the household has a television, 0 otherwise.</td>
</tr>
</tbody>
</table>

ASER data can further be used to identify the relationship between students’ performance and the disadvantages they face because of their home background. The household indicators tapped during the survey can be used as a baseline to determine the wealth status of households. A comparison of wealth status of households with the learning levels of children can provide a snapshot of the extent of inequality in learning levels across wealth distribution.

---

Construction of ASER wealth index:

ASER wealth index has been developed by using principle component factor analysis procedure in the STATA software.\(^5\) Using the above mentioned method of creating quintiles, **ASER 2012 data has been divided into four categories/quintiles** (i.e. poorest, poorer, richer, and richest) which represent the entire population of Pakistan in a socio-economic context.

Results of the ASER 2012 data reveal that the poorest quintile has the highest level of children enrolled in government schools (91%) whereas the remaining 9% of the children are enrolled in the private sector schools. The second quintile, which is poorer, has 82% children enrolled in government schools and 18% children enrolled in private schools. The third quintile, richer, has 75% children enrolled in government schools and 25% in private schools. The richest quintile has the highest number of children enrolled in private schools (40%) and the lowest percentage of children in government schools (60%). It is evident from the figures that enrollment in government schools falls and for that of private school increases as we move along the wealth index towards the richest. A strong correlation between wealth and enrollment in private schools is established. Though a number of low fee private schools exist in the country, they are still more expensive than their public counterparts and thus are not affordable for all income quintiles.\(^6\)

A large proportion of households are not able to send their children to schools at all because of poverty. Result of ASER 2012 displays the percentage of out-of-school children to be highest in the poorest quintile (46%) as compared to other quintiles.

Given the bleak picture portrayed by the disparities in enrollment according to types of schools, a similar image comes to light when the “learning levels” according to wealth status are taken into account. The graph clearly indicates that the learning levels of children are directly related to their wealth status. The learning level of children in all three subjects increases as we move along the wealth index towards the richest. The status of wealth was also found to be influencing gender inequity. The males and females of the lowest quintiles are particularly disadvantaged as only a limited set of educational opportunities is available to them. The percentage of males and females enrolled in schools goes up as we move along the wealth index towards the richest. Inadequate public expenditure in rural areas, limited number of schools, obsolete teaching methodology etc. might be the reasons leading towards restricted access to basic education which further transforms into learning gaps across different income groups.

---

\(^5\) It factorizes variables in a way such that it creates weighted combination of the input variables in the following manner e.g. 
\[ F = a_1 X_1 + a_2 X_2 + \dots \]
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 differences in learning levels for both males and females across different quintiles present an alarming picture. Learning levels of males and females improve as we move from the poorest quintile to the richest quintile. Highest learning levels of females are seen in the richest quintile across the three competency levels (41% Urdu/Sindhi/Pashto, 40% English, and 36% Mathematics). Similarly males falling in the richest income group are better able to perform the language and numeracy tasks than children falling in low income groups. This also confirms with the findings of PISA survey 2009 that established: “the higher the quartile of the socio economic index to which a student belonged, the better the performance, with a similar pattern for boys and girls.” (EFA Global Monitoring Report 2012)

The current state as demonstrated by ASER 2012 clearly illustrates the appalling access and gender disparity created by differences in wealth status. This also corroborates with the results of World Inequality Database on Education (WIDE) produced by EFA Global Monitoring Report Team at UNESCO. The WIDE Database has provided figures for over 50 countries to allow for comparison in disparities across countries and to identify which groups are most disadvantaged within these countries on the basis of gender, wealth and location.

Article 25A embedded in the 1973 constitution of Pakistan that promises free and compulsory education for all children aged five to sixteen appears to be meaningless in a country where the education system is fragmented and inequality persists to such an extent. 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. Moreover, at a time when the international community begins to plan post-2015 education goals and framework, it is vital to ensure that equity based targets are included and measuring marginalization in education is given a high priority.

Amongst learning assessments, PISA has done the most comprehensive coverage and surveyed 74 countries: all the OECD countries and forty other countries. The survey assessed the performance of 15 year olds and in addition collected data on parental occupation and education, selected home characteristics such as availability of books.