

## Are private schools better at imparting learning than government schools?

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**T**he debate on whether private schools provide better education than publically owned schools is highly crucial for policy development in Pakistan's education sector today. Whether the highly resource constrained government should aim to provide quality education itself or encourage the private sector as an even more prominent player in the education sector is a highly contentious issue that is debated at various levels and on many forums.

Various efforts by the government have led to an increase in primary enrolment levels in recent years. For instance, overall net enrolment levels in the country have increased from 42% in 1999 (PIHS 1998-99) to 56% in 2011 (PSLM 2010-11); a steady though some would argue a still insubstantial increase over a 10 year period. Coupled with these trends, the education sector in Pakistan has also witnessed an extraordinary increase in the share of private school enrolments during the same period. The striking increase of private schooling was once assumed to be only an urban phenomenon, however more recent research and rigorous analyses show that low-cost private schooling prevails across the country and is as much a rural phenomenon as it is urban. According to the Annual Status of Education Report (ASER) Pakistan 2010 and 2011, around 27% and 26% of the children enrolled respectively in the rural areas of the country are in private institutes, while the National Education Census (NEC) 2005 confirms the trend by quoting the figure of 33%. Given the importance of the private sector in Pakistani education, it cannot be ignored.

There is however significant disparity across regions in terms of the share of private sector involvement in education. According to ASER 2011, at one end of the spectrum lie the regions like Gilgit and AJK with 40% and 33% private sector involvement respectively, while on the other hand there are regions such as Sindh with 9% and Balochistan with 7% private schools enrolment. Punjab and Khyber Pakhtunkhwa lie between the two extremes with 31% and 28% private sector role respectively. However, it needs to be noted that whether the role of the private sector is low or high in each region, the overall trend is on the increase.

Within the context, the question arises as to what is causing an increase in the demand for private schools in rural areas? It is often argued that the relatively superior quality of education provided in private schools is the reason which puts them apart from the government schools. This perception in rural parents is borrowed from their urban counterparts, where not only the elite class but also middle and lower income classes strive to send their children to private schools, in their pursuit for better economic prospects in the future.

The ASER 2011 and 2010 raw data gives some credence to this belief. The percentage of children in grade 5 who could read at least a class 2 level Urdu language story was 45% children in 2011 and 42% children in 2010 in government schools, while 57% children in 2011 and 56% children in 2010 were able to read the same level text in private schools. The data shows an obvious (and significant) advantage for children going to private schools as compared to children going to government schools. However, it is not possible to infer that the quality of education that is available in private schools is better than the quality of education in public schools on the basis of raw differences in learning alone. This is because many factors including family background, level of motivation etc. may be driving these raw differences. If however, even after controlling for socio-economic status and other observed factors a difference remains, it could potentially be attributed to real differences in learning by school type. Whether these potential 'real' differences are due to differences in actual resources in schools or due to differences in teaching styles, pedagogy or in differences in management style (or due to any other reason including differences in ability or motivation) cannot be said unless more detailed data are available. However, by controlling for as many of the 'observed' characteristics on which data are available, we can come close to understanding whether there are differences in learning achievement across the two school types in the first place and try and understand potential reasons for why these differences may arise.

The following analysis undertakes regression analysis with the view to estimate 'achievement production functions'. These are estimated using linear probability models with 'reading story' as the dependent variable and controlling for a variety of independent variables. This estimation is done on all enrolled children aged 6-16 from ASER 2010. The affect of 'school type' on learning achievement is measured using a 'Private' school dummy variable with the view that the coefficient on this variable will help capture any possible differences in learning across private and government schools.

Considering various controls for such an analysis is important because there may be numerous reasons why a difference in educational outcomes (when measured through learning levels) is due to factors such as family background rather than differences in the types of schools that may stem from differences in school inputs such as the quality of instruction or even material factors. For instance, parents' education, especially mothers' education has a positive affect on learning levels of children, regardless of the fact that the child goes to a private or a public school. Similarly, there may be numerous

<sup>1</sup> Source: Government of Pakistan, Pakistan Education Statistics 2008-09.

other factors effecting learning outcomes other than the type of school, thus deriving inference from simple correlations may not be the most accurate thing to do. In order to control for these factors a simple econometric model is estimated using the following variables<sup>1</sup>.

It is important to note that there are likely to be unobserved factors that we are clearly unable to control for when undertaking this regression analysis. For example, more motivated parents may choose to send their children to private schools or more able children may be more likely to attend private schools. As we are unable to control for innate ability and motivation, the coefficient on the 'private school' variable will clearly yield a biased estimate of the true private school effect. However, our data does not allow us to control for 'unobservables'. The results of the estimation model are not shown due to space constraints but the main findings are discussed below.

(by about 2 significant percentage points). The household assets taken together also positively affect the learning outcomes (by 1 percentage point), and the affect is significant, however, taken separately only having electricity and cellular phones in the house had significant affects (by about 7 and 2 percentage points). The type of house also had significant affect on the learning of a child. All this highlights the fact that household income and wealth can largely affect the learning results of the children, regardless of which school they go to.

Amongst other controls, paid private tuition had a positive and significant affect on a child's reading compatibility, while pre-schooling and absenteeism had small and insignificant affects. It is also interesting to note that children whose mothers report watching television and listen to the radio are also significantly more likely to be readers as compared to children whose mothers are not exposed to media in such a way.

Dependent Variable	Description for all enrolled children (aged 6-16)	Mean
Reading Story	Whether or not the child is able to read a class 2 level story (a dummy variable, equals 1 if child is able to independently read, 0 otherwise).	0.33
Independent Variables	Description for all enrolled children (aged 6-16)	Mean
Age	Age of the child (in years)	10.22
Private	Whether or not the child goes to a private school (equals 1 if attends private school, 0 if goes to government schools).	0.27
Female	Gender of the child is female (1), and male (0)	0.38
Absent	Dummy equalling 1 if the child was absent from school for 4 or more consecutive days in the last 6 months, equals 0 otherwise.	0.20
Preschool	Dummy equals 1 if child has ever attended a preschool, 0 otherwise.	0.34
Tuition	Dummy equalling 1 if the child reports taking paid private supplementary tuition, 0 otherwise.	0.16
Father Schooling	-----	0.56
Mother Schooling	Dummy equalling 1 if child's mother ever attended school, 0 otherwise	0.29
Mother-TV-yes	Dummy equalling 1 if the mother of the child watches television, 0 otherwise	0.63
Mother-radio-yes	Dummy equalling 1 if the mother of the child listens to the radio, 0 otherwise	0.30
Kutcha/Semi-pucca	Dummy equalling 1 if the child lives in a kutcha/semi -pucca house, 0 otherwise (Pucca house is the excluded variable in the regression analysis)	0.35/0.37
Electricity	Dummy equalling 1 if the household that the child lived in had electricity, 0 otherwise	0.85
Toilet	Dummy equalling 1 if the household that the child lived in had toilets, 0 otherwise	0.75
Cellular Phone	Total number of cellular phones owned within the child's household	1.16
Cycle/Motorcycle	Total number of cycles and motorcycles owned within the child's household	0.37/0.31
Car/Tractor	Total number of cars and tractors owned within the child's household	0.07/0.05
Miscellaneous Assets	Total number of valuable vehicle owned within the child's household, such as rickshaw, qinqi or horse/donkey cart	0.03
Province	Dummy variables were created for each of the regions; Punjab, Sindh, Balochistan, Khyber Pakhtunkhwa, Azad Jammu & Kashmir, Gilgit – Baltistan or ICT to determine the regional differential. Punjab is the excluded variable in the regression analysis.	-

Controlling for several observed factors that may be important determinants of learning the estimation suggests that a child with educated parents has a higher probability of being a reader, as compared to a child without an educated parent. Girls have a higher probability of being readers as compared to boys

Differences in learning are also observed across the regions in the country. These differences are captured through the provincial fixed effects. The data show that children belonging to the provinces of Sindh and Balochistan have lower probabilities of being readers as compared to children from

<sup>1</sup> The estimated model is a linear probability model with the form  $A = \alpha + \beta_1X + \mu$

Punjab (around 5 and 9 percentage points respectively), while children from KP, AJK, GB or ICT have higher probabilities of being readers as compared to children from Punjab. All these difference were found to be significant except the difference between a child from GB and ICT.

Once we control for all the above factors, children going to private schools still have a statistically significant learning advantage over the children going to government schools. The advantage at the national level for the children in the private schools as compared to the children going to government schools was 16 percentage points before controlling for factors other than the type of school. Once we control for observables, the difference decreases to 4 percentage points. In other words, the coefficient on the private school variable is 0.038 suggesting that children studying in private schools are roughly 4 percentage points more likely to be 'readers' as compared to children studying in government schools. This means that more than 75% of the differential between the levels of learning outcomes is ascribed to factors other than the type of school the child goes to.

Provincial level analysis was also conducted to account for the diversity across the regions. The following are the differentials in the learning levels before and after controlling for factors other than the type of school across different regions of Pakistan. For example, even after controlling for other factors the learning differential between government and private schools was the highest in case of Balochistan. It fell from 23.3 percentage points to 5.5 percentage points.

Regions	Uncontrolled Difference	Controlled Difference
Azad Jammu Kashmir (AJK)	2.0*	3.8
Balochistan	23.3	5.5
Gilgit-Baltistan (GB)	8.4	5.3
Islamabad Capital Territory (ICT)	-4.5	-0.2*
Khyber Pakhtunkhwa (KP)	4.9	3.7
Punjab	4.3	3.5
Sindh	9.2	4.4

Note: The coefficients with \* are insignificant at the 95% level

In answer to our primary question as to whether private schools actually bring about better learning outcomes, this analysis provides results which points towards an affirmation. At first sight, this is not a huge difference. In fact, Bari and Muzaffar<sup>3</sup> (2010) in their paper are also of the opinion that the difference in the quality of education between private and public schools is marginal. However, it must be noted that these findings are based on a relatively simplistic model and that the dependent variable is 'reading' while in reality differences in learning achievement may be more prominent across the school types in other subjects, for instance mathematics. Having said that, even this simplistic model points to *some* learning advantage of private schools than their government

counterparts. Whether this advantage prevails in mathematics or if the data are analysed with more complicated models is another research topic. The fact remains that students in both types of schools have incredibly poor learning outcomes. The focus needs to be on improving the quality for both and not any specific sector.

Furthermore, it is interesting to note that a correlation may exist between the state of private and government schools' facilities in all regions of the country. The ASER Pakistan results showed private schools facilities to be better off than the government schools on a majority of variables. For instance if Balochistan had the worst condition of physical facilities in government schools then the state of facilities in the private schools in Balochistan was also the worst off all. Similarly, Punjab's government facilities were better off than all other provinces, therefore the state of private schools was also better as compared to KP, Balochistan and Sindh. This shows that there may be a relationship amongst the state of private and public schools' facilities.

The government schools become a benchmark for the private schools. The private schools' aim to offer facilities just a notch superior to this benchmark and they are able to acquire a reasonable demand for their education provision. There remains no incentive for the private schools to improve their facilities or quality of education more than the government schools offer in their particular vicinity or any further than the bare minimum that is required for them to attract demand.

If the above mentioned relationship actually exists between the public and private schools, then there may be a better option for the policy makers if the resources available to the government are used to improve quality of education whilst at the same time increasing the number of schools, with the support of the private sector. If the quality of government schools is improved the benchmark for the private schools will also increase, thus indirectly improving the quality of private schools as well.

The ASER Pakistan data is a snap shot of the state of education in Pakistan. The countrywide data is robust, accurate and detailed. However it still covered a relatively selective portion of Pakistan's population in the year 2010. The above analysis and comparisons between the two types of school is aimed at clearing out the gaps in the public versus private debate on quality of education. The analysis might be even more accurate and is expected to provide even more nuanced findings in the following years of ASER in Pakistan.

<sup>3</sup> Bari, F., & Muzaffar, I. (2010). *Education Debate in Pakistan: Barking up the Wrong Tree?*