

Parental education as a determinant of school choice: A comparative study of school types in Pakistan

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Abstract

In Pakistan school education is not compulsory for children and, therefore, sending a child to school is a matter of choice for parents. For those parents who choose school education for their children the options are government schools, private fees paid schools and Islamic education schools (Madrassahs). This research uses a large scale survey data collected in Pakistan for the years 2013 and 2014 in order to analyse association patterns between parental education and school choice for their children. The available information on 192,789 parents has been used to measure the effect size of parental education on the type of school they choose for their children. The results show that parents having attended a formal school does not strongly relate with children's school enrolment. However, parents' higher number of years in formal education has a positive relation with children's enrolment in private schools and parents' having lesser number of years spent in formal education is positively related with children's enrolment in Madrassahs. The differences among parental school choice are noticeable between private schools and Madrassahs but less obvious between government schools and private schools. These findings are important to demonstrate the role of different school types in a society, and how parental education is related with overall stratification at school level. The research evidence presented here calls for a national policy where school education should be made compulsory for children and all schools should function under same regulations of children's access to school education. Disadvantaged parents should not have to rely on Madrassah education for their children and it should rather be parents' choice against state-maintained or private schools.

Introduction

Schools are generally responsible for providing a social service of educating young children. When an important decision of children's school is made then parents have expectations that the school will be a safe place and all efforts will be made to provide a good learning environment for their children. These expectations are universal and irrespective of parents' social class or income status. However, schools provide different services from each other which make education a competitive market. Not all parents will have means, aspiration or knowledge to enter this market of schools. This emphasises the role of a national and free of cost school system where parents who have no means to enter in the market of school education should not make a choice against their child's right to school education.

In Pakistan the official age for children to attend primary school is 5-10 years (Government of Pakistan 2009, p.36). According to the National Education Census more than 31% of children drop-out of education during their primary level. A majority of these children are reported to join low-paid income activities to support their families and parents in meeting the demands of basic survival. Such children very rarely resume formal education. In this respect, the state has failed to provide children their basic right to education, as stated in the Article 25 A, Constitution of Pakistan. The reasons of this failure are not chiefly lack of enough schools or places, ghost schools, or lack of children's access to schools. No legal sanctions are implemented against child labour, and in some areas there are cultural taboos against girls' education. The country is currently facing numerous challenges at political and social levels and the core of all these challenges is a neglected education policy.

A major expenditure of the national budget is reserved for the military sector and national security measures. Education receives less than 3% of the annual budget allocation which is not even efficiently managed or fairly distributed at provincial or federal levels. The state has consistently failed in making school education compulsory and providing effective support to the most disadvantaged groups. Poverty and terrorism are rooted in this neglect of state to reform the existing education system which is not only poorly financially supported but at the same time resistant towards modern changes and technological advancement in science.

The existing state of national curriculum does not correspond with emerging modern knowledge and the sentiment of Islamic ideology adopted throughout the education system does not have any scope for secular values (Hoodbhoy 2004). Therefore, a wide gap of demand for a modern education has developed where parallel education systems have made their niche. The state authorities so far have been unable to set the priorities to meet the nationwide demand of providing modern education.

The national school system runs in parallel with private fee paid school systems and the standards of two systems are markedly different in terms of school management and infrastructure (Andrabi et al. 2008). According to Pakistan education statistics there are 143, 347 functional government schools and 66, 089 registered private schools in Pakistan (NEMIS 2015). Religious schools called Madrassah is the third category of schools in Pakistan and there are 13, 405 registered Madrassahs (NEMIS 2015). These major school types dominate the landscape of school education for children aged 5 to 16 years. There are no strict standards or legal threshold measures for these schools to maintain and function. This subsequently leads to further sub-varieties of the schools types. In the private sector the sub-varieties are in the form of differences in fee structures, sponsor governed or franchise maintained, student in-take measures and urban or rural school location (Siddiqui 2015, Rahman 2005).

The World Bank programmes invested in educational projects for increasing children's enrolment rates and school retention. In Pakistan these initiatives have also adopted the strategy of public-private partnership in order to establish low-cost schools and provide other financial incentives to increase enrolment and improve pupil retention in schools (Amjad and Macleod 2014). These initiatives are highly dependent on the interest and participation of the private sector and government authorities and so far not a great success has been achieved through these initiatives. The initiatives are also not rooted in robust experimental evidence on the establishment of private schools in parallel with a state-funded school system. The programmes just rely on reviews and small scale survey studies and have not taken into account the existing state of education policies in Pakistan.

Despite having policies to control for private school establishment and practices and Madrassahs as religious schools, these two types and their further sub varieties are highly unregulated and unwatched (The Nation October 2015, Dawn 12 September 2015). There is very less known about parents' school choice in Pakistan and having the knowledge that 37% of children are enrolled in private schools (NEMIS 2015), it is important to investigate what determines parents' choice of school. This paper reports the findings based on the analysis of a large scale household and school survey data collected by Annual Survey of Education Statistics (ASER) in Pakistan for two consecutive years 2013 and 2014. The concerns discussed in this paper are the underlying determinants of parents' choice of school once we know of parental education.

School choice

The existing nature of evidence on school choice informs us that there are several complexities involved in parents' choice and decisions. In a general conception of school choice phenomenon schools are viewed as markets where parents are the consumers of school services. In any nationally governed school system the aims are to meet a universal demand of education for all where at the point of delivery children receive standard education independent of their background characteristics. Nationally governed schools also means that admissions are by national policies such as parents' preferred choice (Gorard, Taylor and Fitz 2003), area distance between school and home (Burgess et al. 2009), allocation by blind lottery (Renzulli and Evans 2005) school shift policy (Bartholo and Da Costa 2009), free school management policy (Morris 2015; Norwich and Black 2015). In some countries policy initiatives of fee voucher incentives have been tried so that the disadvantaged groups are encouraged to use diverse and effective schools (Patrinos 2002; Morgan et al. 2013). These policies have been implemented by several countries to make school admissions fairer and universally effective for all children but none of these initiatives have completely overcome the problems of socioeconomic or racial segregation in the national schools. In fact some have had negative impact on school mix and diversity of children in schools (Bartholo 2013, Bunar 2010, West and Allen 2008). The point here is that even a nationally governed school system cannot lead to a perfect mix of students in schools. National

policies can have a certain level of impact on school mix and largely state-maintained schools are reflective of neighbourhood population where they exist and provide services (Camina and Iannone 2013).

School choice is relevant with children's academic attainment and school performance levels (Hastings and Weinstein 2008). Parents generally point out school performance and near home location of the schools as the main indicators of their choice (Exley 2011). However, there is a social class variation among parents who exercise their right to choose school (Hastings, Kane and Staiger 2007; Allen, Burgess and McKenna 2014). Parents with low socioeconomic status are less likely to make a choice and are also less likely to choose school performance as an important criterion for the school selection (Leroux 2015). Parents with higher socioeconomic status and higher qualifications not only actively engage in making school choice for their children but also give preference to school academic performance in the selection process (Burgess et al. 2009). Parental socioeconomic status and active engagement with children's school education are positively associated with children's educational outcomes (Rokicka 2016, Gorard and See 2013). School selection is an important aspect of parental engagement with their children's education.

The evidence on large scale population data and cohort studies have also suggested that parental education and children's academic attainment have a strong positive relationship (Sullivan and Heath 2002, Chevalier 2004, Dustman 2004, Dostie and Jayaraman 2006, Mukherjee and Das 2008, Coleman, Hoffer and Kilgore 1982, Davis-Kean 2005). A survey study conducted in Punjab, the largest province of Pakistan, reported on children's performance at government and private schools (Carnerio, Das and Reis 2015, Andrabi et al. 2011). The reported results suggested that children in private schools academically perform better than children in government schools. However, children in private schools also come from wealthier families, having educated households, lesser number of siblings and fathers are employed. Government schools were reported to have more disadvantaged children in terms of parental education and parental occupation.

The sample

ASER initiative has begun in Pakistan from 2009. It is a nationwide survey conducted by volunteering citizens of the local regions. The sampling technique involves 30 villages in each of the 144 districts of Pakistan. Each village is divided in to four parts from its centre location and from each part every 5th household is selected for the survey and pupil assessment. This includes 20 households from each village. Every year since 2009, 10 old villages are dropped and 10 new are selected so that the rotation of old and new villages gives estimate of changes over a period of year.

Data on parents include parents' age, education and number of children in each household. Children's data includes their gender, age, school enrolment status (enrolled, dropped-out or never enrolled) type of school enrolled (government, private, madrassah, non-formal education) and proficiency levels in basic literacy and numeracy tests. The types of school mentioned above can have varieties according to the urban-rural location. However, the most prominent and often discussed in research are the private school sub-types. Private schools charge regular tuition fee and several other costs for the enrolment and education of children. There is no legal capped limit of charging fees from parents and this makes private school a very heterogeneous category.

This study includes sample of 543, 417 children aged 3-16 years in the ASER survey years 2013 and 2014. The analysis has included 192, 789 individuals who are recorded as mother and/or father of each child in both the data sets. The information is linked on the basis of common identifiers assigned between household, parents and children. Parents' education is individually recorded in number of years they received any formal education. A new variable has been created by pooling the number of years in formal education for both parents. This allows using only one variable for parental education and reducing the effect of missing values if the information is missing for one parent and available for the other.

Analysis

The ASER data sets are based on bespoke information of the respondents along with surveyors judgement of the information provided to them and what they observe in the settings. The data sets are large but have all

the limitations that any other large scale surveys can have such as missing values and reported rather than verified information. Therefore, a large-scale population data like ASER cannot have any standard errors or by any means fit for any statistical measurement techniques that include standard errors such as tests of significance (Gorard 2015, Freedman 2004, Glass 2014).

The relevant variables are presented in terms of frequencies, and cross-tabulated with parents' education, school enrolment, and school-type. The correlations between variables are also presented. However, there is not a large variance between parents' education, school enrolment and school choice so Hedge's g effect size calculation is deemed appropriate for the analysis. The term 'effect size' could be misleading here because the intention of analysis is just to present associations in terms of magnitude rather than claiming any causal relationship between parental education and school choice. The effect size calculations are based on Hedges' g effect size formulae which is difference between the mean values divided by the pooled standard deviation of the groups. The effect size here presents the strength of the differences between groups of children on the basis of parental education. There are also other models to calculate the effect sizes of two comparable groups in a population but the differences between the results of various methods do not differ at a large scale (Xiao, Kasim and Higgins 2016).

The analysis is not based on any regression modelling technique because the purpose is just to report the magnitude of the effects of parental education on school choice. The effect sizes do not suggest any causal inference here because the data is only representative of the population and has a lot of missing values. Effect size calculation is a simple technique which is easier to understand and see the association patterns. However, less robust than regression modelling where the effect of the known independent variables can be controlled. The results presented here are based on limited information available on parents and school types and the analysis just take into account: Parental education, individual parent's education, enrolment in schools and school type.

Parental education and school enrolment

In case of Pakistan provision of compulsory free school education is a broken promise. There are no laws against child labour and this has deep consequences on children's right to education. Disadvantaged parents prefer their children to earn income for family rather than attending a school. This pattern of not choosing to send a child to school is most pervasive in poor and religiously conservative families where parents themselves have not gone to schools in their childhood. Parents' socio economic status and education are strong determinants of children's early life experiences, health, safety and well-being. Children are naturally born into circumstances where parents' lack of education becomes an attribute of disadvantage. This continues as a vicious cycle of poverty and illiteracy in which generations will remain trapped unless state laws for school education are rigorously implemented. National policies and effective interventions need to be geared towards achieving the goal of education for all.

From the data obtained it is clear that a large number of children in the age to be attending schools are never enrolled or dropped out of school before completion. As portrayed in Table 1 children not receiving any form of education also seem to have higher percentage of parents without any background in formal education. A large majority of children enrolled in school have both parents with some formal education experience and this indicates the importance of parental education as a determinant of children's access to school education.

Table1: Percentage of children's school enrolment and parental education

Parents' education	Children in school	Children NOT in school
Both parents' educated	71	13
Not educated	29	87
Total No. of children	380, 369	152, 226

In the complete sample the total percentage of both parents having some formal education experience is the lowest while the percentage of fathers reported as gone to school or has some experience of formal educated is more than mother (see Table 2). Formal education experience varies in the sample. Although a large

number of parents have never gone to schools (74%), those who have school experience some have completed school education (11%), higher secondary and college level education (7%) and some have even gone to professional qualification or higher education level (3%).

Table 2: Percentage of parents with school education experience

Parents	N	Went to school
Mother	98, 027	30%
Father	94, 762	52%
Both parents went to school	128, 628	24%

Fathers on average have achieved formal education for 10 years and mothers on average are three years less than fathers in achieving formal education for at least 7 years. These differences are based on reported number of years in education. Information on both parents' education is also 15% missing and probably majority in the missing data have not attended any formal education.

School type and parental education

Parental education has positive association with children's access to school. However, in context of Pakistan it is not clear if parental education is also a determinant of choice for school types or not. If parental education has any impact on school choice or not is an important research question. It is specifically relevant to ask the role of parental choice with regards to the claim that children in private schools perform better than those in any other school types and private schools are giving more opportunities to children from disadvantaged backgrounds. The distribution of children in the sample is not even across different schools (see Table 3). However, this is nearly a close portrayal of children's distribution at national level where government schools have the highest percentage of those who go to school and nearly less than half of these children go to private schools. Although, Madrassah and non-formal education have the least share of children in education, the percentage of children with not educated parents is the highest.

Table 3: Percentage of children with educated parents cross tabulated with school types

School type	Children having parents with NO education	Children having parents with education	Total percentage of children
Government	74	22	48
Private	55	45	22
Madrassah	87	11	2
Non-formal education	74	21	1
Not in education	85	13	29
Total No.	271, 541	128, 628	543, 417

School-type seems to have a clear and uneven pattern with parental education which could be indicative of positive association between parental socio-economic status and school choice. The above table indicates that Government schools, Madrassahs, Non-formal education and children Not-in-Education have higher percentages of parents not educated. Private schools have nearly equal distribution of students whose parents are educated and students whose parents received no education. This seems related with parental socioeconomic status where parents with education also have income to support the expenses of private school education. Private schools also have sub varieties where low cost schools attract parents from labour class and parents who are low-income or daily wage earners. The other variety of private schools charge high fees and other costs for educational activities which are only affordable by high income earning groups. Private schools for the high income groups are concentrated in urban areas while the low cost private schools are located across all regions of the country where economic poverty and deprivation persists. Regular cost of tuition fee and other educational expenses make private schools a single category where parents have chosen to spend on a child's education and they also have means to do so. The reasons for this choice could vary according to parental socioeconomic status, location of school, distance and terrain to the nearest government school, school performance or perceived image about a school. Parents with educational

experience are aware of making appropriate choice and are willing to spend on children's education. Therefore, private schools possibly exceed other school types with regards to parental education.

The above pattern of children's distribution in different school types is according to parental education which has underlying positive association with parental socio-economic status. Educated parents are more likely to have higher income earnings and be able to afford their children's expenditure on education compared with parents who are not educated. There is a close and positive association between parental education and socio-economic status to an extent that parental education can be a proxy for parental income and social status. However, in terms of school choice parents' education, experience and access to information about schools can possibly influence their decision of school type. Perceived effects of differences between schools and school- types are important for the upper and middle-class parents. Apparent reasons for school choice are the best of attainment outcomes for their children but the underlying reasons for many richer and social class-conscious parents could be to keep children in the company of peers with similar social class, language spoken at home, resources available to children and family life style and values.

In terms of overall patterns in percentage differences between school-types it is clear that parental education as a measure is not equally distributed in different school types. Government schools, Madrasahs and non-formal education are mainly the choice of parents who have not received any formal education but they want their children to receive any available form of school education. In terms of Madrasahs parents' choice could be largely influenced by the incentive of completely free and religious education along with free school meal and sometimes free accommodation. These are the most attractive aspects of education for parents who are at the bottom line of poverty and illiteracy.

Private schools are not a monolithic category of schools in Pakistan. Private schools are not free schools and not a majority of them are comprehensive in terms of admission to students from all backgrounds and performance abilities. There is a large variety of private schools that is distinguishable from each other just on the basis of tuition fee charges. School buildings, teacher-pupil ratio and other indicators of school quality are strongly associated with fee structures. A wide range of private schools invites parents from all income earning groups. This includes parents who are on the borderline of poverty but willing to spend on children's education and there are also those who can afford regular expenses of school education, provide extra to their children in the form of tuition and take deep interest with participation in their children's education. Paying for a child's education, no matter it is a minimum cost of £2 a month, is a threshold level for a majority of parents who are just on the border line of poverty to make an important decision of sending a child to school or not. If a child is engaged in earning income for the family then the chances would be even less that the parents would choose a fee paying school. Government schools or Madrasahs are the next possible choices for the parents who cannot afford regular expenditure on their children's education. There could be further decisions of school choice with regards to child's gender when parents have limited choice of expenditure on education.

Parental education and school choice

Parental education and school choice effects are reported here in Hedges' g effect size calculations. The effect size results explain the magnitude of difference between different groups of children and their school types on the basis of their parental education. The mean differences and standard deviations are for the number of years parents received formal education.

Table: 4: Effect size for parental education and children's school enrolment status

Parent's education	N	Mean	SD	ES
For children enrolled in school	388, 035	3.53	6.60	+0.14
For children NOT enrolled in school	155, 382	1.90	4.82	

The effect size for parental education for children's enrolment in school is positive but not very large (See Table 4). This suggests that parents with less or no education would not absolutely avoid children's enrolment in school. However, parents with more years in education are still more likely to enrol their child in school. Table 5 shows if individual parental education makes any difference to children's enrolment in school or not.

The effect sizes are comparatively low as compared to both parents' education but still suggest some important results.

Table 5: Effect size for mother's education and children's school enrolment status

<i>Mother's education</i>	Mean	SD	ES	Missing
For children enrolled in school	1.13	3.02	0.12	332, 418
For children NOT enrolled in school	0.51	2.06		144, 550
<i>Father's education</i>				Missing
For children enrolled in school	2.40	4.38	0.13	287, 623
For children NOT enrolled in school	1.39	3.40		129, 827

Mother's education seems to have weaker relationship with children's school enrolment status when compared with father's education (See table 5). However, mothers' education is also less reported in the sample as compared to fathers' education. The effect sizes are positive suggesting that individual parental education and school enrolment have positive relationship but if both parents are educated then more chances that their children are enrolled in schools.

Table 6: Effect size for parental education between private and government schools

Parent's education	N	Mean	SD	ES
For children in private school	116, 628	3.38	7.67	+0.13
For children in government school	259, 463	1.72	5.40	

The effect size is positive between higher number of years of parental education and private school when compared with Madrassahs (See Table 7). However, the effect of parental education difference between government schools and Madrassahs is almost negligible (see Table 8 below).

Table 7: Effect size for parental education between private and Madrassahs

Parent's education	N	Mean	SD	ES
For children in private school	116, 628	3.38	7.67	+0.22
For children in Madrassah school	8, 939	0.80	3.96	

Table 8: Effect size for parental education between government schools and Madrassahs

Parent's education	N	Mean	SD	ES
For children in government school	259, 463	1.72	5.40	+0.09
For children in Madrassah school	8, 939	0.80	3.96	

The effect size for parental education is the highest so far between private schools and Madrassahs comparison. As said earlier, parental education is linked with socioeconomic status and that plays an important role in accessing private schools. However, education experience in itself makes parents more aware and active in making school choice. Madrassahs are widely known for radicalisation of children, physical abuse of children and negligible emphasis on the national curriculum. Parents who have high aspirations for their children's success in life and also have means to afford the educational expenses would not likely choose Madrassahs for their children.

Individual parental education has positive effect size with private school selection. Mother's higher educational experience seems to have positive effect on private school choice as compared with government school (see Table 9). The opposite is true for school choice for Madrassahs where father's education seems

important as compared with mother's education (see Table 10). However, the missing data for individual parents can mislead interpretation of these effect sizes.

Table 9: Effect size for individual parents' education between private and government schools

<i>Mother's education</i>	N	Mean	SD	ES	Missing
For children in private school	23, 446	8.74	3.22	0.22	93, 182
For children in government school	31, 341	7.30	3.08		228, 122
<i>Father's education</i>	N	Mean	SD	ES	Missing
For children in private school	33, 755	9.95	3.15	0.16	82, 873
For children in government school	64, 617	8.92	3.24		194, 846

Table 10: Effect size for individual parents' education between private and Madrasah schools

<i>Mother's education</i>	N	Mean	SD	ES	Missing
For children in private school	23, 446	8.74	3.22	0.15	93, 182
For children in Madrassah school	490	7.76	3.38		8, 449
<i>Father's education</i>	N	Mean	SD	ES	Missing
For children in private school	33,755	9.95	3.15	0.22	82, 873
For children in Madrassah school	1, 333	8.48	3.42		7, 606

Conclusion

All of the above results are estimated effect sizes of parental education on children's school enrolment and admissions in different school types. There is some indication that parental education as a measure for children's better life chances is not fairly distributed between school types. Madrassahs seems to have highest proportion of children who have parents with the least experience of formal education which makes these schools a contrast with private schools. The parental choice of Madrassahs could be due to the reasons or incentives which other school types do not offer. Madrassahs offer free religious education, free learning and rote memorisation of Quran, free school meals and accommodation, no requirement of specific uniforms or other learning materials. All expenses of Madrassah education are covered by donors and charity organisations. School education, in general, has its cost such as travelling to school, expenditure on books or uniform, day meal and other regular needs which are presumably more in private schools rather than in government schools or in Madrasahs.

There is a negligible difference between parental educational levels between government schools and Madrasahs. This indicates that the basic cost of going to school is possibly the decisive factor between selecting a government or Madrasahs school. This decision on the cost is probably the most significant for those living on the threshold measures of disadvantage. It is not only that disadvantaged parents will have less choice for their children but as well as less information to exercise their right to choose. Lack of accessibility to government schools can also lead the most disadvantaged parents to choose Madrasahs.

The government has increasingly encouraged the growth of private school education providers in the last few decades. As school monitoring and regulation policies are not strictly practiced, private schools can host their existence on the need of communities which can pay the cost of education on regular basis. Private schools do not function on the agenda of education for all, even if they charge the lowest tuition fee cost. For the most disadvantage groups in the society, only a state maintained free and comprehensive school system can overcome the barriers of access to school.

The policy implications of this study are that a neglected national school system should be reformed and fully supported by the state. Parents who are disadvantaged due to receiving less education should have more access and incentives to state-maintained school system. Madrasahs should not be the destinations chosen

for the children by disadvantaged parents. It should rather be a choice against the state-maintained schools or private schools. The state should also press private schools to function under a national policy where all school-types should be monitored and regulated for a fair and equal access of disadvantaged children.

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