# Determinants of Parental Choice for Public – Private Schooling of Children:A Study of Rawalpindi-Islamabad

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# *Determinants of Parental Choice for Public – Private Schooling of Children: A Study of Rawalpindi-Islamabad*


## *Abstract*

*This study aimed at analysing the factor of parental choice for public-private schools in the area of Rawalpindi-Islamabad, Pakistan. For this purpose 150 parents, having at least one child attending school, were approached. Dependent variables in the present study are number of child in private school, number of child in public school, number of girls in private school and number of boys in private school. Independent variables are parent's income, parent's education, private school fee, quality of education, confidence building, infrastructure and values. Negative Binomial Regression was used and it was found that quality of education and mother's education are significant factors in sending girls to private school. Parent's income and private school fee are positive significant factors in sending children to private schools and negative significant factor in sending children to public schools. The constructs like quality of education, confidence building, infrastructure and values are found to be insignificant.*



**Key Words:** Private School, Public School, Quality of Education, Mother's Education


## 1- Introduction

In the development of a country's socio-economic structure, education always play a critical role. All human capabilities are improved by education as not being by birth given in any human being. Always humans need better education to prosper and facilitate their lives. Economic growth is also achieved by the help of education through the development of skills and knowledge. People are more aware, active and confident through education. On the basis of all importance of being educated, we must consider education as an economic good. It also helps for social and economic development to develop human resources.

Best possible good environment for education is the most preferred priority by most of the parents. Most of the time they invest in the form of education on their children that also depends upon their social, cultural and economic issues. In developing countries like

Pakistan, most of the parents consider their children as their whole life and do best of the best for them. Our educational sector is divided into the private- public sector. Cost of free Education is provided in public sector. Private sector is charging huge amount in the form of fee as well as some other hidden charges. From the last three decades, our private education sectors flourish a lot and really capture the parental psychology that their children must attend the private schools. Most of the times, private schools higher well educated faculty as well as staff and give better facilities to their students. On the other hand, public sector schools don't want to even change their curriculum to meet the present scenario of day-to-day life.

In present study, we just need to check the causes determining the choice of public-private school for their children in Rawalpindi-Islamabad. We also want to analyse how parents decide about the schooling of their children (girls and boys) keeping in mind the following criteria: educational environment, personality development, creative writing, moral values and extra-curricular activities. The most important factors determining the choice is parent's monthly income, educational environment, parent's education, parent's schooling, private school fee as the main determining factors affecting the choice between both sectors education.

Main objective of this paper is analysing the issues that determine the parent's choice towards private school system for the better future of their children. Secondary-level schools are the main focus of this study in the area of Rawalpindi-Islamabad. We also try to analyse those factors convincing parents to prefer private schooling over the public sector schools. Also explore the both weaknesses and strengths of both sectors. Our study will not only be beneficial for parents in deciding schools for their children but equally beneficial for investors either to invest in educational sector or not. Present study will give suggestions for both private-public sector schools for the improvement of quality education in Pakistan.

## 2- Literature Review

Arabsheibani (1988) find out the determinants in Egypt for determining educational choice at secondary level. Results focused that fathers with high level of education choose general schools beside the religious or technical one. They also prefer private schools over the public. He also found the high attendance and socially strong background of students attending private schools.

Wilson *et al;* (1992) use USA data for the study of school choice. They found that initially black parents prefer public sector schools over the private one. But their dissatisfaction of public schools were initially found in 1960's leading to further dissatisfaction in 1980's.main conclusion of this study is that black parents do not believe that good standard of education is being provided by the public sector schools to their children.

Arum (1996) mainly focuses on the student-teacher ratio in his study based on USA comparing private-public school system. Main outcome of the study is student's results based on the huge difference of the curriculum of both sector schools.

Saporito and Annette (1999) find another factor affecting the choice of selecting schools among private-public sector in USA is race. Black parents prefer public but white parent's private schools for their children.

Hoxby (2002) find out that teacher's quality of education is also increased by the parent's choice among the decision of private-public sector schools. He find out the factors like education of teachers, quality of institute, effort as well as command of the teacher over the subject are the main factors in decision making of school.

Bast and Walberg (2004) focused on the parent's decision as best school for their children. Parents keep in mind the inducement as well as right information in the best choice of schools for their children. Also it was concluded that high achievement in the top academics are the main concern in decision making of long-term future of their children.

Nishimora and Yamano (2008) found that elimination of school fees at primary level increased the school enrolment by 22% in public sector in Rural Kenya in 2003. Also found that ratio of 4.8 to 12% children in 2004 to 2007 of attending private schools of rich families are examined. There is a high probability of transferring from public to private schools are show in relatively high families as compared to the poor ones. For Kenyan government vital policy agenda is retaining the quality of education among public primary schools following the FPE Policy. To enhance the equity of the whole education system government must implement free primary education policies.

Ikoya and Ikoya (2009) try to find out the disparities of Nigerian educational system considering urban vs rural disparities of both private-public sector. Results showed that urban areas are biased towards the private sector but rural area towards public sector. The main focus of the study is to enhance the quality education of private sector must be provided at primary level.

Khatti, Munshi and Mirza (2010) focused on the input resources including human, physical and other facilities as well as output resources like the result of secondary school certificate by taking the data of private schools in Badin. They try to focus that how much private schools are helping in promoting education in district Badin. They use 49 different schools including both private as well as public sector randomly by examining the quality of education as well as other activities through questionnaire method. Results conclude that private sector is much better in providing good facilities relating education but public sector were better in physical and human resources. Better grades of students are more of the private sector in District Badin are the main outcome of this study.

Almani, Soomro and Abro (2012) focused on the promotion ofSindh's private schools by considering parent's role, teachers, officers and students role. Main focus of study was the role of assessment of private schools in the betterment of Sindh's education sector. Main aim

of private schools is the provision of enhanced education, understanding, discipline, cooperation and better future. Sample consists of parents (220), teachers (220), students (360), and officers (80) from different 90 schools were randomly selected. They are the main four pillars of private schooling. Study concludes that stake holder's object the supervision of officers, building of school, fee, admission and some extracurricular activities provision. But at the same time always remained satisfied with the teacher's qualification of private schools, performance of students, parents cooperation and the medium of instruction i.e., English.

Khan and Raza (2012) focused the importance of private sector in Bahawalpur by taking 627 household data with minimum requirement that at the time of survey at least one children must attend the school. Households income, parents education, medium of exchange i.e., English and distance between individuals house and public school are the main factors towards the biasedness of private sector schools are the main conclusion of this study. Medium of instruction includes English as well as least distance between schools of public sector will definitely help to increase the importance of public schools in the society.

Pandolfini (2013) focused that sovereignty of schools, choice of education, quality as well as equity are the main factors in the determination of choice between private-public sectors in Italian system of education for parents. In Italy factors like prestige, religion, ideology and status are the main factors affecting education over there. Socioeconomic sectors are also one of the factors affecting education in Italy. All these are the findings of nationwide Italian PRIN study.

## 3- Scaling, Validity and Methodology

For any primary research, first we have to make the questionnaire and also apply some scaling on it to make it confirm that the questionnaire is standard and scientific. Then also test its validity through different methods and then apply methodology to get results. All these are given below in detail:

### 3.1 Likert Scale

Rensis Likert (1976) designed this famous rating scale used in in social science research especially for measuring ordinal data. Likert scale items that are simple theoretical statements to which respondents can show their level of agreement or disagreement. It consists of five or seven-point scale ranging from "strongly disagree" to "strongly agree" included in the scale. Following this scale, we use five-point scaling series from strongly disagree, disagree, neutral, agree and strongly agree in our questionnaire.

After making the scale, we find validity of scaling through correlation and factor analysis.

### 3.2 Validity through Correlation

Validity is often described as construct validity. It denotes the degree to which a measure sufficiently represents the basic construct (that is supposed to measure). Convergent validity refers to the closeness with which a measure relates to (or converges on) the construct that it is purported to measure, and discriminant validity refers to the degree to which a measure does not measure (or discriminates from) other constructs that it is not supposed to measure. Usually, both these validities for a set of related constructs are assessed together. We can establish the convergent validity by comparing the experimental values of one indicator of one construct with the other indicators of the same construct .Also convergent validity can be established by demonstrating similarity (or high correlation) values of these indicators. Discriminant validity is determined by validating that indicators of one construct are contradictory from (i.e., have low correlation with) other constructs. In our analysis, we compute bivariate correlations between all scales named; quality of education, confidence building, infrastructure and values. If the high correlations are found between the items of these four scales in the correlation matrix but low correlations within the items of these constructs, we have instantaneously established convergent and discriminant validity

### 3.3 Validity through Factor Analysis

The exploratory factor analysis is the most common and altenate method used to determine the convergent and discriminant validity. By using this method, we check the uniqueness of the scaling. The uniqueness is measured between 0 and 1, the more the value close to 1 shows that our scaling is unique and better.

### 3.4 Construction of Construct through Principal Component Analysis

Principal components analysis (PCA) is basically a data reduction technique. This technique aggregates a given set of objects to a smaller set of factors that are based on the bivariate correlation structure. In the present study all factors should be ideally corresponding to the subordinate theoretical concepts are going to be examined. Eigenvalue greater than 1.0 for the factor extraction is used. The extracted factors can then be rotated using orthogonal or oblique rotation techniques, depending on whether the underlying constructs are expected to be relatively uncorrelated or correlated, to generate factor weights that can be used to aggregate the individual items of each construct into a composite measure.

### 3.5 Negative Binomial Regression

Now, after checking validity through factor analysis, we are going to apply methodology. As our outcomes are discrete count, than Poisson regression or negative binomial regression is used presented by Hausman, Hall & Griliches,(1984), Winklemann (2003) and Greene (2008). For Poisson regression, mean and variance must be equal. Here, we are going to apply negative binomial regression (Cameron & Trivedi, 1986) to estimate the results because our data show extra variation that is greater than the mean. So the empirical form of the regression becomes:

$$E\left(\frac{Y_i}{X_i}, \varepsilon_i\right) = \exp\left(\alpha + \acute{X}_i\beta + \varepsilon_i\right) = h_i\lambda_i$$

where $hi$= exp (εi) is assumed to have a one parameter gamma distribution, G(θ,θ) with mean 1 and variance 1 / θ = κ;

$$f(h_i) = \theta^{\theta} \exp(-\theta h_i) h_i^{\theta-1} / \Gamma(\theta) h_i > 0, \theta > 0$$

After integrating *hi* out of the joint distribution, we obtain the marginal negative binomial (NB) distribution,

$$\text{Prob}(Y=\frac{y_i}{x_i}) = \Gamma(\theta_i + y_i)\, r_i^{\theta} (1-r_i)^{y_i} / \Gamma(1+y_i)\Gamma(\theta)$$

$$y_i = 0, 1, \ldots\ldots\ldots, \theta > 0, \quad r_i = \theta/(\theta + \lambda_i)$$

Following the above specification, the nature of the regression model is as follows:

Y = $\beta_0$ + $\beta_1$I + $\beta_2$ Fedu + $\beta_3$ Medu + $\beta_4$ Fschool + $\beta_5$ Mschool + $\beta_6$ (Fedu*Fschool) +$\beta_7$ (Medu*Mschool)+ $\beta_8$ PvtFee + $\beta_9$+QE + $\beta_{10}$ CB + $\beta_{11}$ INFS + $\beta_{12}$ Values + Ui

Where

I = Parent's income

Fedu = Education level of Father

Medu = Education level of Mother

Fschool = either Father attend private school during their education = 1, otherwise 0

Mschool= either Mother attend private school during their education = 1, otherwise 0

Pvtfee= Fee of private school per month

QE= Quality of education

CB= Confidence building

INFS= Infrastructure

Value= Moral values

Fs = Family Size

DPbS=Dissatisfaction with public sector schools

LTI = Lack of teacher's Interest

MI= Medium of Instruction

And Y our dependent variable includes

1) Child in private school
2) Child in public school and
3) No. of girls in private school
4) No. of boys in private school

## 4- Data and Variables

Firstly, we made a questionnaire based on standard format of primary / scientific research to analyse the parental choice between private and public school for their children. For this purpose, we conduct a survey considering only those parents whose children attending the school and living in Rawalpindi-Islamabad. Data includes parents randomly selected from Rawalpindi-Islamabad and have 150 observations.

Operational definition of all variables are given below:

The dependent variables definitions are as follows:

### 4.1 Number of Child in private school

For the construction of this variable, we ask parents about their total number of children and total number of children attending private school. We just pick the number children attending private school.

### 4.2 Number of Child in public school

For the construction of this variable, we ask parents about their total number of children and total number of children attending public school. We just pick the number children attending public school.

### 4.3 Number of girls in private school

For the construction of this variable, we ask parents about total number of girls and total of girls attending private school. We just pick the number of girls attending private school.

**4.4 Number of boys in private school**

For the construction of this variable, we ask parents about total number of boys and total of boys attending private school. We just pick the number of boys attending private school.

The independent variables definitions are as follows:

**4.5 Parent's Income**

For the measurement of Parent's Income, we simply categories the options like below 25,000, 25,000-40,000, 40,000-65,000, 65,000-100,000 and 100,000 and above. After this, we specify it as 1, 2, 3, 4 and 5.

**4.6 Father and Mother Education**

For both parent's education, we simply categorize like Intermediate, Graduation, Masters, M.Phil./M.S., Ph.D. and Other (specify). After this, we specify it as 1, 2, 3, 4, 5 & 6.

**4.7 Father and Mother Schooling**

For both parents, we ask either to attend private school during their education. If they ask Yes than we mark it as 1, otherwise 0 (it means they don't attend private school).

**4.8 Private School Fee**

For this, we simply ask parents that how much they pay the fee to private school per month.

**4.9 Quality of Education**

For measuring Quality of Education, we use scaling as strongly disagree, disagree, neutral, agree and strongly agree. We ask seven different questions to the parents to construct this variable including, way of teaching in private schools, teacher's qualification, activities, exposure for the students, curriculum, and education burden and class strength. Than take average to construct single variable.

### 4.10 Confidence Building

For measuring Confidence Building, we use scaling as strongly disagree, disagree, neutral, agree and strongly agree. We inquire five different questions to the parents to construct this variable including, behaviour of teachers, personal attention, and either teacher understand every individual learning problem, care for students and punishment. Then take average to construct single variable.

### 4.11 Infrastructure

For measuring Infrastructure, we use scaling as strongly disagree, disagree, neutral, agree and strongly agree. We inquire four different questions to the parents to construct this variable including, play grounds, classrooms are clean and tidy with comfortable sitting, cleanliness of washroom and big auditorium halls. Than take average to construct single variable.

### 4.12 Values

For measuring Quality of Education, we use scaling as strongly disagree, disagree, neutral, agree and strongly agree. Three different questions are asked from the parents to construct this variable including, students are taught to help each other, proper emphasis given on teaching Islamic values and students passing out from these schools to be better contributing citizens. Than take average to construct single variable.

## 5 Empirical Results:

The findings of the study are given as:

### 5.1 Correlation Validity:

From the table 5.1, it is obvious that the correlation within the category of Quality of Education ($QE_i$), Confidence Building($CB_i$), Infrastructure ($Infs_i$) and Value ($Val_i$) are highest with 0.705, 0.708, 0.541 and 0.638 respectively while the within category the lowest correlation observed are: 0.243. 0.290, 0.156 and 0.488 respectively.

**Table 5.1: Correlation Matrix**

| | qe1 | qe2 | qe3 | qe4 | qe5 | qe6 | qe7 | cb1 | cb2 | cb3 | cb4 | cb5 | infs1 | infs2 | insf3 | infs4 | val1 | val2 | val3 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **qe1** | 1.000 | | | | | | | | | | | | | | | | | | |
| **qe2** | 0.561 | 1.000 | | | | | | | | | | | | | | | | | |
| **qe3** | 0.644 | 0.549 | 1.000 | | | | | | | | | | | | | | | | |
| **qe4** | 0.705 | 0.464 | 0.700 | 1.000 | | | | | | | | | | | | | | | |
| **qe5** | 0.587 | 0.476 | 0.519 | 0.586 | 1.000 | | | | | | | | | | | | | | |
| **qe6** | 0.259 | 0.252 | 0.358 | 0.243 | 0.415 | 1.000 | | | | | | | | | | | | | |
| **qe7** | 0.499 | 0.336 | 0.456 | 0.492 | 0.467 | 0.368 | 1.000 | | | | | | | | | | | | |
| **cb1** | 0.657 | 0.470 | 0.383 | 0.567 | 0.465 | 0.223 | 0.585 | 1.000 | | | | | | | | | | | |
| **cb2** | 0.529 | 0.457 | 0.470 | 0.524 | 0.564 | 0.306 | 0.494 | 0.708 | 1.000 | | | | | | | | | | |
| **cb3** | 0.495 | 0.316 | 0.461 | 0.472 | 0.651 | 0.418 | 0.520 | 0.483 | 0.661 | 1.000 | | | | | | | | | |
| **cb4** | 0.443 | 0.328 | 0.411 | 0.466 | 0.538 | 0.251 | 0.465 | 0.526 | 0.505 | 0.588 | 1.000 | | | | | | | | |
| **cb5** | 0.289 | 0.212 | 0.337 | 0.369 | 0.440 | 0.280 | 0.425 | 0.302 | 0.331 | 0.290 | 0.495 | 1.000 | | | | | | | |
| **infs1** | -0.116 | 0.066 | -0.002 | -0.114 | -0.114 | 0.085 | 0.009 | -0.179 | -0.091 | 0.043 | -0.081 | 0.088 | 1.000 | | | | | | |
| **infs2** | 0.352 | 0.437 | 0.228 | 0.329 | 0.304 | 0.049 | 0.371 | 0.447 | 0.530 | 0.337 | 0.477 | 0.377 | 0.215 | 1.000 | | | | | |
| **insf3** | 0.424 | 0.319 | 0.364 | 0.394 | 0.324 | 0.204 | 0.339 | 0.465 | 0.481 | 0.450 | 0.473 | 0.385 | 0.156 | 0.541 | 1.000 | | | | |
| **infs4** | 0.142 | 0.261 | 0.194 | 0.224 | 0.224 | 0.151 | 0.308 | 0.098 | 0.191 | 0.195 | 0.121 | 0.239 | 0.312 | 0.256 | 0.326 | 1.000 | | | |
| **val1** | 0.245 | 0.237 | 0.222 | 0.235 | 0.248 | 0.013 | 0.068 | 0.198 | 0.274 | 0.079 | 0.084 | 0.224 | 0.038 | 0.231 | 0.198 | 0.103 | 1.000 | | |
| **val2** | 0.206 | 0.194 | 0.344 | 0.282 | 0.238 | 0.205 | 0.121 | 0.141 | 0.203 | 0.139 | 0.067 | 0.276 | 0.028 | 0.070 | 0.225 | 0.177 | 0.636 | 1.000 | |
| **val3** | 0.332 | 0.437 | 0.347 | 0.269 | 0.310 | 0.106 | 0.174 | 0.277 | 0.386 | 0.179 | 0.145 | 0.105 | 0.102 | 0.251 | 0.282 | 0.301 | 0.532 | 0.488 | 1.000 |

The cross correlations of: $QE_i$ and $CB_i$ are 0.657 as maximum and 0.212 as minimum, $QE_i$ and $Infs_i$ are 0.437 and -0.116, and $QE_i$ and $Val_i$ are 0.437 and 0.013 as maximum and minimum, respectively. It implies that the questions of the construct showing internal validity as the between correlation is more that the cross correlations for the construct of QE. The cross correlations of $CB_i$ with $Infs_i$ and $Val_i$ are 0.530 and 0.386, and -0.179 and 0.067 for the maximum and minimum, respectively. These are also proving the internal validity of the questions of the construct as the cross correaltions are lesser than the internal correaltions, via supporting minimum as well as maximum of their values. The cross correlation of $Infs_i$ and $Val_i$ is 0.301 and 0.028 for the maximum as well as minimum of their respective values.

### 5.2 Uniqueness:

The uniqueness of the questions is found through the factor analysis, using the STATA. The findings of uniqueness are being reported in Table 5.2. The values of uniqueness are in positive fraction. For the construct of $QE_i$, the uniqueness, based on collected data is observed in the range of 30.25% to 68.87%. Whereas, the uniqueness for $CB_i$ varies over the range of 28.33% to 68.07%. In the case of $Infs_i$ and $Val_i$, this range covers from 55.52% to 80.34% and 41.59% to 59.42% respectively. Through these findings, it is clear that the observations of the targeted sample have been lesser communality (common) effect through variance.

**Table 5.2: Uniqueness Through Factor Analysis:**

| Variable | Uniqueness | Variable | Uniqueness | Variable | Uniqueness | Variable | Uniqueness |
|---|---|---|---|---|---|---|---|
| **qe1** | 0.3185 | **cb1** | 0.4048 | **infs1** | 0.8034 | **value1** | 0.4159 |
| **qe2** | 0.5598 | **cb2** | 0.2833 | **infs2** | 0.5799 | **value2** | 0.4609 |
| **qe3** | 0.3753 | **cb3** | 0.4281 | **insf3** | 0.5552 | **value3** | 0.5942 |
| **qe4** | 0.3025 | **cb4** | 0.4005 | **infs4** | 0.7276 | | |
| **qe5** | 0.4464 | **cb5** | 0.6807 | | | | |
| **qe6** | 0.6887 | | | | | | |
| **qe7** | 0.5982 | | | | | | |
| Communality + Uniqueness =1 | | | | | | | |

### 5.3 Negative Binomial Regression:

In the Table 5.3, the marginal effects of the negative binomial regression are being presented, by only considering the above discussed constructs (i.e. QE, CB, Infra and Val) with the different dependent variables that are number of children in private school, number of children in public school, number of girls in private schools and number of boys in private schools. From the results, it is obvious that only quality of education is significant in determining the choice of selection of private school as a whole as well as for girls to be sent in private schools. If the quality of education is increased by 1 unit, then the chance of sending child in a private school and girls in private school increase by 0.48246 and 0.32541 respectively. All the other constructs are being insignificance in the absence of other factor, and if the constructs are alone entertained.

**Table 5.3: Negative Binomial Regression: Marginal Effects**

| Independent Variable | Dependent Variable | | | |
|---|---|---|---|---|
| | Pvtschchild | pubschchild | girlspvtschchild | Boyspvtschchild |
| Qe | 0.48246** | -0.23585 | 0.32541* | 0.18430 |
| | (0.02600) | (0.12900) | (0.07900) | (0.23600) |
| Cb | -0.02638 | -0.13421 | -0.07962 | -0.15487 |
| | (0.89000) | (0.46000) | (0.70400) | (0.31300) |
| Infs | -0.18298 | 0.04106 | -0.01483 | -0.09375 |
| | (0.21600) | (0.65800) | (0.91200) | (0.39900) |
| Value | -0.01755 | -0.01099 | -0.06391 | 0.02583 |
| | (0.86700) | (0.85400) | (0.45600) | (0.27000) |
| Diagnostics | | | | |
| McFadden's R2: | 0.02 | 0.08400 | 0.01800 | 0.00700 |
| BIC | 300.13 | 178.84700 | 253.29800 | 243.97700 |
| AIC | 287.361 | 163.52400 | 237.97400 | 231.20800 |

***, ** and * show significant at 1%, 5% and 10 level of significance respectively.
p-value are reported in parenthesis.

In table 5.4, the marginal effects of the negative binomial regression are being presented, by considering the above discussed constructs (i.e. QE, CB, Infra and Val) with different other factors as independent variables, including parents' income, parents schooling and education

and the private school fee to determine the choice of sending children in private school, children in public school, girls in private schools and boys in private schools. The parents' income, although found statistically insignificant, has positive impact (chance increases) on the decision of sending children as a whole by 0.02135 and sending boys in private school by 0.13207, while the decision based on income has negative impact (i.e. chance decreases) for sending children in public schools by -0.00375 and sending girls in private school -0.00504. The impact of private school fees has positive and significance impact on the decision of sending children in private school (0.00002) for girls (0.00001) as well as boys (0.00001).

**Table 5.4: Negative Binomial Regression: Marginal Effects**

| Independent Variable | Dependent Variable | | | |
|---|---|---|---|---|
| | **Pvtschchild** | **Pubschchild** | **girlspvtschchild** | **Boyspvtschchild** |
| **Income** | 0.02135 | -0.00375 | -0.00504 | 0.13207 |
| | (0.84800) | (0.88100) | (0.95900) | (0.13600) |
| **Fedu** | 0.04348 | -0.02456 | -0.02721 | 0.02943 |
| | (0.65300) | (0.39900) | (0.74100) | (0.68300) |
| **Medu** | -0.05889 | 0.02141 | -0.01043 | -0.03684 |
| | (0.44900) | (0.45500) | (0.87900) | (0.56700) |
| **Fsch** | -0.14468 | 0.02747 | -0.18852 | 0.04459 |
| | (0.50500) | (0.59400) | (0.31900) | (0.82000) |
| **Msch** | 0.13132 | -0.04526 | 0.05320 | 0.03868 |
| | (0.57300) | (0.47000) | (0.79500) | (0.83300) |
| **Pvtfee** | 0.00002*** | -0.00002*** | 0.00001*** | 0.00001*** |
| | (0.00100) | (0.00000) | (0.02200) | (0.21900) |
| **Qe** | 0.35649*** | -0.01170 | 0.23861 | 0.06814 |
| | (0.09000) | (0.86300) | (0.21400) | (0.70200) |
| **Cb** | -0.01679 | -0.06476 | -0.05172 | -0.10557 |
| | (0.93000) | (0.37600) | (0.80100) | (0.51400) |
| **Infs** | -0.20921 | 0.04651 | -0.01835 | -0.12907 |
| | (0.12700) | (0.20800) | (0.88900) | (0.28500) |
| **Value** | 0.02634 | -0.02827 | -0.06252 | 0.05576 |
| | (0.80900) | (0.14200) | (0.52100) | (0.55600) |
| **Diagnostics** | | | | |
| **McFadden's R2:** | 0.04300 | 0.25100 | 0.03700 | 0.03400 |
| **BIC** | 321.07200 | 178.52700 | 276.19000 | 265.14400 |
| **AIC** | 292.98000 | 147.88100 | 245.54300 | 237.05200 |

***, ** and * show significant at 1%, 5% and 10 level of significance respectively.
p-value are reported in parenthesis.

The impact of private fees on the decision regarding sending children in public school is significantly negative (-0.00002). There is only one construct i.e. QE to be significant for sending children in the private school (0.35649).

In Table 5.5, the marginal effects of the negative binomial regression for determining the choice of parents regarding the selection of school, by considering the discussed constructs

| **Table 5.5: Negative Binomial Regression: Marginal Effects** | | | | |
|---|---|---|---|---|
| **Independent Variables** | **Dependent Variables** | | | |
| | **Pvtschchild** | **Pubschchild** | **girlspvtschchild** | **Boyspvtschchild** |
| **Income** | 0.06939 | -0.00395 | 0.04242 | 0.14736* |
| | (0.56700) | (0.87100) | (0.68000) | (0.08800) |
| **Fedu** | 0.04306 | -0.01906 | -0.06463 | 0.05440 |
| | (0.69900) | (0.36600) | (0.48800) | (0.46300) |
| **Medu** | 0.01403 | 0.01435 | 0.03984 | -0.00221 |
| | (0.87900) | (0.40400) | (0.60300) | (0.97500) |
| **fsch** | 0.34119 | 0.03689 | -0.40289 | 0.71894 |
| | (0.52500) | (0.73000) | (0.33500) | (0.31900) |
| **Fes** | -0.18263 | -0.00059 | 0.07213 | -0.20804 |
| | (0.23800) | (0.98700) | (0.63600) | (0.28000) |
| **Mes** | -0.30562** | 0.01938 | -0.22480* | -0.13350 |
| | (0.03000) | (0.47100) | (0.08300) | (0.30100) |
| **msch** | 1.25809* | -0.10003 | 0.94240 | 0.52862 |
| | (0.05800) | (0.38100) | (0.16500) | (0.35900) |
| **Pvtfee** | 0.00002*** | -0.00002*** | 0.00001** | 0.00001 |
| | (0.00100) | (0.00000) | (0.01800) | (0.14300) |
| **Qe** | 0.29398 | -0.00656 | 0.17800 | 0.04609 |
| | (0.13700) | (0.92500) | (0.32200) | (0.79000) |
| **Cb** | 0.06948 | -0.07113 | 0.01543 | -0.07466 |
| | (0.69300) | (0.31500) | (0.93400) | (0.63300) |
| **Infs** | -0.21157 | 0.04760 | -0.01425 | -0.12735 |
| | (0.12800) | (0.16600) | (0.91400) | (0.28200) |
| **Value** | 0.00177 | -0.02875 | -0.07699 | 0.04012 |
| | (0.98600) | (0.11700) | (0.43400) | (0.45000) |
| **Diagnostics** | | | | |
| **McFadden's R2:** | 0.05200 | 0.25300 | 0.04700 | 0.04400 |
| **BIC** | 327.52800 | 187.32400 | 282.97800 | 272.03700 |
| **AIC** | 294.32800 | 151.57000 | 247.22400 | 238.83700 |
| ***, ** and * show significant at 1%, 5% and 10 level of significance respectively. p-value are reported in parenthesis. | | | | |

(i.e. QE, CB, Infra and Val) with other factors like parents' income, parents schooling and education and the private school fee along with the interactive terms of father's schooling and father's level of education as well as the mother's schooling with the mother's level of education are utilized. The increase in parents' income by 1 unit would raise the chances of sending boys in private school increases by 0.14736, significantly. The interactive term of mother's schooling and mother's level of education decreases the chances of sending children in private school and girls in private school by 0.30526 and 0.22480, respectively. The private school fee has positive and significant impact on the decision of sending children in private school, overall and for the girls with the chances of 0.00002 and 0.00001. The chance of sending children in public school decreases with a unit increase in private school by 0.00002, significantly. In this specification of the model, the constructs of QE, CB, Infra and Val are found to be insignificant that there is no role of these in the selection of school between public and private and also for sending girls or boys in private school.

## 6 Conclusion and Limitations:

Our study inquires the factors determining the choice of parents regarding private-public school for their children in Rawalpindi-Islamabad. The factors included in the study are parent's monthly income, educational environment, values and infrastructure, parent's education, parents' schooling, private school fee as the main determining factors affecting the choice between both sectors education.

It is found that parents' income has a determining role in the selection of private school for the boys. Along with this, the background of mothers' level of education and mother's schooling either private or public has a determining role for sending children in private school and especially for girls. The fee of private school is found to be significant factor of decision making for selection of school. Moreover, the quality of education is one of the judicious factor of selecting private school rather than the public school. Limitations of the

study include categories of private schools are being kept aside, parents different level of income leads to bias the results and courses taught in both private and public sector are not included in this study. These shortcomings can be overcome by revising the questionnaire and adding more details. But still this study leads us to the point that private schools are giving better education as compared to the public schools. So government must take initiative to increase the quality of education in public sector schools. It will help to increase the level of education in Pakistan.

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**Appendix**

# Parental Questionnaire Relating Choice between Private and Public Schools

## Section A: Respondent Profile

### Part I: Parental Profile

1. **Income of Parents**
    - ○ Below to 25000
    - ○ 25000-40000
    - ○ 40000-65000
    - ○ 65000-100000
    - ○ 100000 and above.
2. **Education of parents**

**2.1 Father's education**

- ○ Intermediate
- ○ Graduation
- ○ Masters
- ○ M.Phil./M.S.
- ○ Ph.D.
- ○ Other: _____ (Please Specify)

**2.2 Mother's education**

- ○ Intermediate
- ○ Graduation
- ○ Masters
- ○ M.Phil./M.S.
- ○ Ph.D.
- ○ Other: _____ (Please Specify)

3. **Did any of parents go to attend private school during their education?**

| | Yes | No |
|---|---|---|
| **Father** | | |
| **Mother** | | |

## Part II: Children Profile

1. **How many no of children you have?**
2. **No. of Girls:**
3. **No. of Boys:**
4. **School Going Childrens:**
5. **Children in Private Schooling:**
6. **Children in Public Schooling**
7. **No. of Girls in Private School**
8. **No. of Boys in Private School**
9. **Fee paid in Public School (total monthly)**
10. **Fee paid in Private School (total monthly)**

11. **If pubic School available then what is distance between public school and your Home?**

12. **What is education level of your child that goes to private school?**
    - i. **Primary**
    - ii. **Middle**
    - iii. **Matric and O-Levels**

## Section B: Educational Preferences:

| 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|
| ▼ | ▼ | ▼ | ▼ | ▼ |
| **Strongly Disagree** | **Disagree** | **Neutral** | **Agree** | **Strongly Agree** |

## Quality of education

| | **Do you think in private schools** | **1** | **2** | **3** | **4** | **5** |
|---|---|---|---|---|---|---|
| **i.** | The way of teaching is better, informative and interesting. | | | | | |
| **ii.** | Qualification of teachers is better than public school teachers. | | | | | |
| **iii.** | There are activities based learning than Bone up system. | | | | | |
| **iv.** | There is more exposure for students to learn new things and knowledge. | | | | | |
| **v.** | Curriculum is far good in these schools than public sector. | | | | | |
| **vi.** | There is no too much burden of education on students and as well as on parents. | | | | | |
| **vii.** | Strength (number of students) in a class room are reasonable. | | | | | |

## Confidence Building:

| | Do you think in private schools | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|---|
| **i.** | The behavior of teachers is friendly | | | | | |
| **Ii** | Teacher give personal attention to each student | | | | | |
| **iii.** | Teachers understand every student got individual learning problems. | | | | | |
| **iv.** | There is more care for students | | | | | |
| **v.** | There is no or negligible punishment than public schools | | | | | |

## Infrastructure:

| | Do you think in private schools | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|---|
| **i.** | Play grounds are big enough as per children requirments | | | | | |
| **ii.** | Class rooms are clean and tidy with comfortable sitting furniture. | | | | | |
| **iii.** | Cleanliness especially washrooms are properly maintained. | | | | | |
| **iv.** | Audutorim or big halls for childen different contest, | | | | | |

## Values:

| | Do you think in private schools | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|---|
| **i.** | Students are taught to help and respect each other. | | | | | |
| **ii.** | Proper emphasis given on teaching Islamic values. | | | | | |
| **iii.** | Students passing out from these schools prove to be better contributing citizens. | | | | | |