SCHOOL EXPENDITURES, SCHOOL ENROLLMENT AND QUALITY EDUCATION: A CASE STUDY OF GILGIT BALTISTAN, PAKISTAN.

Muhammad Asif, Saleem Shah and Muhammad Shabir
Management Sciences Department, COMSATS Institute of Information Technology, Abbottabad Pakistan.
Email: m_asif@citl.net.pk

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Abstract
Education plays a vital role in the economic development of a nation. The only way to develop the rural areas is facilitating these areas with quality education. In this study we have taken Ghizer Gilgit Baltistan as a sample and checked the impact of school expenses on quality education and enrollment rate. The data has been collected from different sources and simple random sampling technique has been used. The regression and correlation analysis is used to estimate the results. The results show many variations in quality education and enrollment rate. Enrollment rate is high in federal government schools (F.G) where as quality of education is high in Diamond jubilee schools (D.J).

Keywords: School expenditures, Quality education, Enrollment rate, Federal Government (FG) School, Diamond Jubilee (DJ) School.

INTRODUCTION

As far as school expenses are concerned they play a critical role in providing quality education and high enrollment rate in high schools. Every school tries its level best to provide quality education to maximum students but unfortunately they are unable to provide it due to some obstacles. These obstacles vary from school to school and district to district.

In rural areas people have to face financial problems as well. They cannot afford a high, school expense that is why they cannot send their children’s to high schools. There is also shortage of high schools in the rural areas of Gilgit Baltistan (GB). Federal government schools and diamond jubilee (DJ) schools under the supervision of Aga Khan Education Service, Pakistan (AKES) are the only two organizations that provide high school education. Due to this shortage of high schools students have to walk miles a day. Government schools charges very low tuition fee while DJ schools charges high tuition fee as compared to government schools. This difference in fee structure causes high enrollment rate in government schools than in DJ schools. Our study will explore the relationship between school expenditures, quality education and enrollment rate in Ghizer District of Gilgit Baltistan, Pakistan.

REVIEW OF LITERATURE
The relationship between school expenses, quality of public education and public/private school enrollment has been investigated by different people at different times. Glick and Sahn (2006) studied the impact of quality of education on both public and private school enrollment. They find that public school quality indicators (such as distance to school, lack of teachers, multigrade classes, and facilities condition) have negative effects on public school enrollment. In the case of private schools, none of the schools characteristics have significant effects on demand.

Alderman et al. (2001) collected data on Pakistan’s household and schools. They first explicitly considered the opinion of attending schools and subsequently analyzed the choice between public and private school. In their model, the decision to enroll or not depends on household characteristics such as income, sex and parents education. The choice of school relies exclusively on the school characteristics such as school distance, instructional expenditure, and pupil-teacher ratio.
Couch et al. (1993) studied the relationship using country level data from North Carolina. His regressions suggests that in order to avoid black classmates and poor family students parents choose private schools whose expenditures are not afford by poor families. Finally, he argued that there is a significant competition effect since increments in private school enrollment improve the performance of public students in test scores. Hoxby (1994) also find evidence for United States that private school competition increases the attainment of public school students.

Souza and Silva (1996) analyzed the household’s characteristics that determine enrollment in a private school. They use data from the 1982 Brazilian household survey. They find that the probability that a child is in a private school rises with the education of household head. Family income also explains private school enrollment, though to a lower extent. Also, the larger the family, the lower the chance that the children will be enrolled in a private institution.

From the mid-1990s, a number of studies have investigated the effectiveness of public spending in education such as enrolment rates and other outcome indicators (Anand and Ravallion, 1993; Appleton et al. 1996; Filmer and Pritchett, 1997; Mingat and Tan, 1998; Gupta et al., 2002; Baldacci et al., 2004). McMahon (1999) finds a negative and significant relationship between per pupil Expenditures and the primary gross enrolment rate, and a positive and significant impact of total education expenditure as a proportion of GNP. The results of the McMahon study suggest that increasing primary education expenditure while holding per pupil expenditures constant, has a positive and significant impact on the primary gross enrolment rate.

In case studies of Botswana, Malawi and Uganda, by Al-Samarrai (2003), finds that the link between public spending and primary school access is weak. As a result per pupil expenditures declined at the same time that access was increasing. The negative relationship between access and spending apparent in Malawi and Uganda is partly due to the fact that the education service offered changed greatly over that period. Therefore, increasing access to the same type of schools and intensity of use cannot be achieved through reductions in per pupil spending. However, this contrasts the results of Deolalikar (1997) who used household data for Kenya and found positive and significant relationship between school spending and primary school enrolment.

RESEARCH METHODOLOGY
The basic purpose of this research is to highlight the impact of school expenditures on quality of education and high school enrollment rate in Federal Government (F.G) and Diamond Jubilee (D.J) schools of Ghizer district. The Data has been collected from different sources. Data on fee structure of D.J schools has been collected from Aga khan Education Services, Pakistan head office Gilgit. Fee structure varies from tehsil to tehsil. Enrollment and Quality of education data has been taken from annual board result, Gazette of Karakoram international university, Examination branch Gilgit. Fee structure data for F.G schools has been collected from Directorate office Gilgit. There is no tuition fee in some F.G schools but however some schools charges very nominal fee. Data for stationery and uniform expenses has been collected by asking the prices of major things like books, shoes, pent and shirt from main dealers of stationery and uniform in each tehsil headquarters. Last four years data has been included in this research and random sampling technique has been used.

The Econometric Model
The econometric model of our study is as under:

\[
\text{EXP} = \alpha + \beta_1 \text{QE} + \beta_2 \text{Enr} + \mu_1
\]

Where EXP = School Expense  \(\text{QE} = \) Quality education  \(\text{Enr} = \) Enrollment rate

As mentioned above that we have two types of schools namely D.J and F.G and their expenses are also different. Expenses include fee expenses, stationery expenses and uniform expenses. For our convenience we have summed, all expenses of both schools and then divide D.J school expenses by F.G School. This result represents School expenses (EXP).

QE represents Quality education. 10th class pass out ratio has been taken as a measure of quality education for both schools. The pass out ratio of D.J school has been divided by pass out ratio of F.G school to show the quality education (QE). Enr shows the enrollment rate in both schools. Here again the total number of enrolled students of 10th class has been taken as a measure of enrollment rate. Enrolled students of D.J school divided by enrolled students of F.G school represents enrollment rate (Enr). The \(\alpha, \beta_1\) and \(\beta_2\) are parameters and \(\mu_1\) is error term. The results of the regression analysis are shown in table 1.

<table>
<thead>
<tr>
<th>Table 1: The results of regression analysis</th>
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<tr>
<td>Variable</td>
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<tr>
<td>C</td>
</tr>
<tr>
<td>Q</td>
</tr>
<tr>
<td>ENR</td>
</tr>
<tr>
<td>R-squared</td>
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<tr>
<td>Adjusted R-squared</td>
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<tr>
<td>S.E. of regression</td>
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<td>Sum squared resid</td>
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<td>Log likelihood</td>
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<td>Durbin-Watson stat</td>
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The results show that by keeping Enrollment rate and quality education indicator constant, Expenditure is equal to 1.18 rupees. It means that school expenses also depend on other factors than Enrollment rate and quality education. In the same way if we keep Enrollment rate constant and increase QE by one unit it will give 0.46 units change in (EXP). It means that one unit increase in QE will result in 0.46 unit change in EXP. Similarly by keeping QE constant a one unit increase in Enrollment rate will result in 1.87 units change in school expenses (EXP).

The R-square shows the goodness of fit. It is 14% and is very small; this implies that the numbers of explanatory variables are less. It can be increased by increasing number of explanatory variables. Durbin-Watson statistic represents the autocorrelation between the explanatory variables. The bench mark for Durbin-Watson statistic lies between 1.5 and 2.5 and in our study it is 2.15 which means that there is no autocorrelation.
Table 2: Correlation Analysis

<table>
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<tr>
<th></th>
<th>EXP</th>
<th>ENR</th>
<th>Q</th>
</tr>
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<tbody>
<tr>
<td>EXP</td>
<td>1.000000</td>
<td>0.308484</td>
<td>0.181736</td>
</tr>
<tr>
<td>ENR</td>
<td>0.308484</td>
<td>1.000000</td>
<td>-0.109043</td>
</tr>
<tr>
<td>Q</td>
<td>0.181736</td>
<td>-0.109043</td>
<td>1.000000</td>
</tr>
</tbody>
</table>

The correlation between school expenses and enrollment is 30% and has a positive relationship. In the same way, the correlation between school expenses and quality education is 18% and it also shows a positive relationship. The correlation between quality education and enrollment rate is -10% and shows a negative relationship. The graphical analysis (see appendix) shows that the quality is high where the enrollment is comparatively low. The students get more attention of the teacher in a class of fewer students than a crowded class.

CONCLUSION

Education plays a vital role in the economic development of a nation. The only way to develop the rural areas is facilitating these areas with quality education. More than half of the population lives in rural areas and unfortunately the literacy rate is also very low in these areas. There are many reasons for low literacy rate. I.e. unawareness about education, shortage of schools, high school expenses etc. in this research paper, we have taken Ghizer district as a sample and checked the impact of school expenses on quality education and enrollment rate. Only two types of schools are providing high school education. The data has been collected from different sources and simple random sampling technique has been used. The results show many variations in quality education and enrollment rate. Enrollment rate is high in federal government schools (F.G) where as quality of education is high in Diamond jubilee schools (D.J). Due to comparatively high expenditures in DJ schools, the enrollment is low but in a class of fewer students, the students get maximum of their teacher’s concentration, that’s why quality of education is high in DJ schools.

References

7. Deolalikar, A. B (1997), The Determinants of Primary School Enrollment and Household Expenditure in Kenya: Do They Vary by Income?