

## **Empirical Assessment of the Determinants of Child Enrollment in Pakistan: Evidence from the two Rounds of Pakistan Rural House-Hold Survey (2004 and 2010)**

### *Abstract*

*Pakistan has made considerable progress in raising adult literacy over time; however, the Millennium Development Goal (MDG) to achieve universal primary education remains elusive due to poor enrollment and high dropout rates. Despite the two rounds of the much proliferated Social Action Plan in the nineties and Poverty Reduction Strategy Paper (PRSP) in 2010 and onward, a sound base for sustained enrollment rates and retention of students at different levels could not be achieved to reach the targets set by the MDGs. The high level of drop-outs at various levels of schooling has remained the hallmark of school enrollment in Pakistan. The various incentive schemes by the government have not yielded the desired results because either they are not integrated within the system or due to the household's vulnerable socio-economic condition. Household socio-economic factors, including family background and poverty movements have a strong bearing on the decision to send children to school and the quality of the selected school. Addressing issues relevant to the determinants of child enrollment in Pakistan, data has been taken from PRHS and logistic regression model has been used for the purpose. The results show that parent education, household income and age have a positive and significant impact on child enrolment and poverty, gender and low parent education have a negative impact on child education.*

**Keywords:** *Poverty, enrollment, child schooling, household panel data-sets*

### **INTRODUCTION**

Unemployment, low per capita income, vicious circle of poverty, high population

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growth rate and low literacy ratios of the masses are some of the challenges that are faced by the developing world in the twenty-first century. On the other hand, these challenges are also the main factors that impede the enrollment of children in schools all over the world. The economy of Pakistan is dualistic in nature; people in rural areas depend on agriculture having meager income, fewer facilities and low standard of living as compared to people living in the urban areas. Usually this gives benefit to urban people and provides a lavish standard of living for big landlords. Being a part of the third world, Pakistan has a huge pool of human resources (high birth-rate) in which the capital investment ratio needs to be accelerated the economic growth and development (Ministry of finance, 2014-15).

Like other factors which negatively affect human resource development, poverty is one of those which affect the socio-economic wellbeing of the households. The effects of this poverty dynamics are extensive in terms of choices made by the families, life standard, health and children's education. Thus, the issues related to children's schooling, in Pakistan, have become the subject of core concern of extensive empirical research in the last few decades. Wide-spread poverty, vulnerability among the children due to non-schooling and chronic poverty of a household in developing countries provide a strong motivation to find appropriate response to encounter this persistent problem. In the 1980s, the majority of the nations of the world recognized education as an important tool for capital development. Various international agencies are coordinating with developing countries to invest in human capital, as it has become evident that the role of education is significant and positively related to the economic growth and development of a country. Talik (1989) and (1999) found that education is an important tool for the eradication of poverty as well as the social, demographic and political development of the societies. Under Article 25-A of the 18<sup>th</sup> amendment of the constitution of Pakistan, education was made the fundamental right of every child in Pakistan, but glancing at the current situation of primary education this right remains a difficult challenge to meet.

Pakistan's gross enrollment in primary education is 85 percent and thus the lowest among South Asian countries. Moreover, the overall expenditure of government decreased from 2.2 percent in 2005-06 to 2 percent in 2009-10 but in the period from 2017-2018 it increases to 2.5 percent of the total Gross Domestic Product (GDP), which is not enough to achieve the target of 100 percent net enrolment in 2025. Along with that, most education policies in Pakistan did not achieve their targets due to lack of proper implementation. The Social Action Program (largest donor funded) focused in rural areas, specifically female schooling, failed to achieve its objectives due to corruption, miss-management, and poor records of disbursement and policy implementation (CRPRID, 2012). The purpose of this study is to investigate the

determinants of child enrolment in rural areas of Pakistan by analyzing the two rounds of Pakistan rural house-hold survey (PRHS) 2004 and 2010. Another important aspect of the study was to link the drop-out rate with the economic condition of the household, which was not the focus of other studies on the same topic.

## LITERATURE REVIEW

There are several studies related to child schooling and the determinants of child schooling in Pakistan and other countries but different studies use different data and methodology. Some focus their study on a particular city, some take only urban and others focus on rural areas. The current study is different from other studies in the sense that this study not only focuses on the determinants of child enrolment but links it with two rounds of poverty dynamics. Despite the difference in methodology and data, there are some common results. Shehnaz & Siddique (2009) analyzed data from 35 developing countries and found that the reasons of low enrollment in these countries are due to the lack of physical availability of school facilities. The result of the study suggested that in South Asian countries, the quality of schooling affected child enrolment more as compared with expenditure on education and access to schools. Arif *et al.*, (2009) investigated the effect of parent income and parent education on school enrollment; the main focus of this study was to examine persons born in Norway between 1967 and 1972. The study used ordinary least square estimator to find out the relationship between dependent variable i.e. education of an individual and independent variables family income, family education and working mothers. The study found that household and individual characteristics are important determinants of child schooling, particularly for girls. The study concluded that the chance of child enrolment particularly that of females depends on mothers' education more than the father's education in rural areas.

Psacharopoulos (2010) found a high failure rate and index of age grade with the help of univariate logistic model. The indicator measures the performance of the selected child in terms of schooling year related to their current age. Duncan *et al.*, (1988) investigated the effect of poverty on childhood by using the sibling model and found that parental socioeconomic status is correlated with the wellbeing of children and their schooling. The study used data from the panel study of income dynamics and found that child schooling is directly related to parental income not only in early age but also in adolescence. The results suggest that family income plays an important role in increasing child schooling. Cardos and Dorte (2014) investigated the drop out and push out factor that lead to school abandonment in an urban surrounding Shanty towns of Fortaleza Northern Brazil. The study set particular age for parenthood as instruments for their observation and used work as an instrument by using the

declared reservation wage (minimum amount of excepted salary). The results showed that early parenthood causes more damage to increasing drop-out of school and poverty as an important factor of driving teenagers out of school but did not find any relationship of working and drop-out rate and its impact on school attendance.

### Objective

Pakistan has approximately 200 million population; out of this, in the age group of 5-9 years cohort, 6 million were out of school. Only in Punjab, 50 percent children in the same age cohort were out of school; 54 percent girls and 46 percent boys. Similarly, of 20 million children in the cohort of 10-14 years, which covers middle and secondary levels of education, 120 million children were out of school in different regions of Pakistan's rural areas during the study period. In rural areas, people are totally dependent on the agriculture sector. Due to natural disasters, environmental changes, global warming, paucity/unusual rain-fall in different regions (flash-flooding), crop diseases, the agricultural production capacity decreases every year affecting their income. People remain chronically poor and cannot break out of the vicious circle of poverty. Thus, the focus of this study is to identify issues in the rural areas of Pakistan related to child schooling by linking it with the household income status.

**Table 1** *Net enrolment rate at school level*

Net Enrolment Rates at Primary and Secondary Level in Pakistan Net						Net Secondary Enrolment Rates (Percent)	
Primary Enrolment Rates (Percent)							
Male	Female	Overall	Male	Female	Overall		
Rural	53.6	36.4	45.2	34.9	15.8	25.0	
Urban	68.5	64.6	66.5	46.7	47.4	47.0	
Overall	57.2	43.6	50.5	38.3	25.1	31.9	

Source: *Pakistan Economic Survey 2009-10*

Poverty and low enrollment are interdependent variables. Most people living in the less developed countries (LDCs) are living under the subsistence level and are hardly able to fulfill the basic needs of life i.e. shelter, food and clothing and consider child schooling as a waste of time and money. With the passage of time the whole family comes under the extreme vulnerable situation and remains uneducated and poor forever. Lack of human resource development and low education threatens the development of the entire family. Non-enrollment of children in schools, makes them vulnerable to child-labor at a very early stage and affects their development and growth for the rest of their lives.

## METHODOLOGY

### Specification of the Model

The objective of this study is to examine the determinants of child enrolment in Pakistan; the study attempts to discover the effect of poverty, individual, household, and regional-level variables on the likelihood of a child being enrolled or not enrolled. This study estimates two models, one for 2010 and the other for 2004. The models are given below:

$$CE_{2004} = \alpha_i + \alpha_1 P_i + \alpha_2 Ch_i + \alpha_3 Hd_i + \alpha_5 Rg_i + \mu_{1i} \dots \dots \dots (I)$$

$$CE_{2010} = \alpha_i + \alpha_1 P_i + \alpha_2 Ch_i + \alpha_3 Hd_i + \alpha_5 Rg_i + \mu_{2i} \dots \dots \dots (II)$$

Where,

CE= Child Enrollment,  $P_i$ = Poverty,  $Ch_i$ = Child characteristics,  $Hd_i$ = Household characteristics and  $Rg_i$ = Regional characteristics

Model I is for 2004 and Model II for 2010, the dependent variable has two possible outcomes: enrolled and not enrolled. Because of the dichotomous nature of the dependent variable both the models can be estimated through the logistic regression models. Child enrollment is determined by different individual characteristics such as age, gender, household characteristics such as parent's education, household size, dependency ratio, land ownership and regional characteristics such as a province he or she belongs to. In order to capture the effect of age, children of ages 5- 15 years have been selected. The educational effect and the effects of land owning status are gauged through dummies. The household size is also a continuous variable controlling the total number of individuals living in that household.

## RESULTS & ANALYSIS

### Characteristics of Child Enrollment (A Bivariate Analysis)

#### Enrollment Trend across Provinces in 2010

Pakistan Rural household survey 2010 consists of 2772 households which include 6230 children of ages 5 to 15 in the four provinces of Pakistan. Table 3.3.1 for 2010 shows child enrollment across provinces: with 68.25 percent of children enrolled in 2010 from KPK, 58.42 percent from Punjab, 44.76 percent from Sindh, and enrollment in Baluchistan being at a low i.e. 32.39 percent.

**Table 2** *Enrollment Trend across Provinces (2010)*

Enrolment	All Provinces				Total
	Punjab	Sindh	KPK	Baluchistan	
<b>Not Enrolled</b>	<b>840</b>	<b>1,035</b>	<b>442</b>	<b>656</b>	<b>2,973</b>
	(28.25)	(34.81)	(14.87)	(22.070)	(100)
	[41.69]	[55.35]	[31.87]	[68.48]	[47.72]
<b>Enrolled</b>	<b>1,175</b>	<b>835</b>	<b>945</b>	<b>302</b>	<b>3,257</b>
	(36.08)	(25.64)	(29.01)	(9.270)	(100)
	[58.31]	[44.65]	[68.13]	[31.52]	[52.28]
<b>Total</b>	<b>2,015</b>	<b>1,870</b>	<b>1,387</b>	<b>958</b>	<b>6,230</b>
	(32.34)	(30.02)	(22.26)	(15.38)	(100)
	[100]	[100]	[100]	[100]	[100]

Source: *Pakistan Rural Household Survey 2010*

**Table 3** *Enrollment Status in Punjab and Sindh 2004*

Enrolment	Northern Punjab	Southern Punjab	Sindh	Total
<b>Not Enrolled</b>	<b>77</b>	<b>301</b>	<b>569</b>	<b>947</b>
	(8.13)	(31.78)	(60.08)	(100)
	[17.58]	[60.69]	[53.83]	[47.56]
<b>Enrolled</b>	<b>361</b>	<b>195</b>	<b>488</b>	<b>1,044</b>
	(34.58)	(18.68)	(46.74)	(100)
	[82.42]	[39.31]	[46.17]	[52.44]
<b>Total</b>	<b>438</b>	<b>496</b>	<b>1,057</b>	<b>1,991</b>
	(22)	(24.91)	(53.09)	(100)
	[100]	[100]	[100]	[100]

Source: *Pakistan Rural Household Survey 2004*

Table 3 is constructed for 2004; PRHS 2004 comprises of 1614 households only for Punjab and Sindh. Due to terrorist activities, data could not be collected from Baluchistan and KPK. Punjab is further categorized into northern Punjab and southern Punjab with data collected for 1991 of children from age 5 to 15 years. The table shows that in 2004, child enrollment in northern Punjab was 82.42 percent, 39.31 in southern Punjab and 46.17 percent in Sindh.

**Table 4** *Economic condition and child enrolment status in 2010*

	<b>Non-Poor</b>	<b>Poor</b>	<b>Total</b>
Never Enrolled	<b>1,800</b> (60.54) [41.38]	<b>1,173</b> (39.46) [62.39]	<b>2,973</b> (100) [47.72]
Enrolled	<b>2,550</b> (78.29) [58.62]	<b>707</b> (21.71) [37.61]	<b>3,257</b> (100) [52.28]
<b>Total</b>	<b>4,350</b> (69.82) [100]	<b>1,880</b> (30.18) [100]	<b>6,230</b> (100) [100]

Source: *Pakistan Rural Household Survey 2010*

Table 4 highlights the economic conditions of households and categorizes them as poor and non-poor. The table also sheds light on the enrolment of children belonging to poor or non-poor households. The common perception is that children belonging to poor households get less schooling as compared to non-poor households and the given table presents the same figures. This table is taken from PRHS 2010 and shows that 41.38 percent children belonging to non-poor households have not attended school whereas 62.39 percent belonging to poor households did not attend any schooling in 2010.

**Table 5** *Economic condition and child enrolment status in 2004*

<b>Enrolment</b>	<b>Non-Poor</b>	<b>Poor</b>	<b>Total</b>
<b>Never Enrolled</b>	<b>702</b> (74.13) [45.06]	<b>245</b> (25.87) [56.58]	<b>947</b> (100) [47.56]
<b>Enrolled</b>	<b>856</b> (81.99) [54.94]	<b>188</b> (18.01) [43.42]	<b>1,044</b> (100) [52.44]
<b>Total</b>	<b>1,558</b> (78.25) [100]	<b>433</b> (21.75) [100]	<b>1,991</b> (100) [100]

Source: *Pakistan Rural Household Survey 2004*

Table 5 is constructed for 2004 to see the enrolment and non-enrolment of children belonging to poor and non-poor households. The Table also shows that 45.06 children belonging to non-poor households were not enrolled in 2004 and 56.58 percent children belonging to poor households did not attend school in rural areas of Punjab and Sindh.

**Table 6** *Dynamics in poverty and child enrolment in Punjab and Sindh*

School Dynamics	Northern Punjab	Southern Punjab	Sindh	Total
Never Enrolled	<b>83</b> (9.73) [15.75]	<b>285</b> (33.41) [40.71]	<b>485</b> (56.86) [40.38]	<b>853</b> (100) [35.13]
Drop out	<b>66</b> (15.38) [12.52]	<b>158</b> (36.83) [22.57]	<b>205</b> (47.79) [7.07]	<b>429</b> (100) [17.67]
Currently Enrolled	<b>44</b> (17.39) [8.35]	<b>58</b> (22.92) [8.29]	<b>151</b> (59.68) [12.57]	<b>253</b> (100) [10.42]
Always Enrolled	<b>334</b> (37.40) [63.38]	<b>199</b> (22.28) [28.43]	<b>360</b> (40.31) [29.98]	<b>893</b> (100) [36.78]
Total	<b>527</b> (21.71) [100.00]	<b>700</b> (28.83) [100.00]	<b>1,201</b> (49.46) [100.00]	<b>2,428</b> (100) [100.00]

Source: *Pakistan Rural Household Survey 2004 and 2010*

Table 6 displays the number of enrolled, not enrolled, drop-out and never enrolled in Northern Punjab, Southern Punjab and Sindh in 2004. The table shows that 15.75 percent children belonging to northern Punjab have never attended any schooling in both rounds of PRHS 2010 and 2004 whereas 40.71 percent belonging to Southern Punjab and 40.38 percent belonging to Sindh never attended any school between these two rounds; 12.52 percent from Northern Punjab, 22.57 from Southern Punjab and 7.07 percent from Sindh dropped out of school; 8.35 percent children belonging to Northern Punjab, 8.29 percent from Southern Punjab and 12.57 percent belonging to Sindh were enrolled in 2010 and 2004 while 63.38 percent children belonging to Northern Punjab, 28.43 percent from Southern Punjab and 29.98 percent belonging to Sindh attended school in 2010 and 2004.

### **Determinants of Child Enrollment (A Multivariate Analysis)**

#### **Determinants of Child Enrollment**

The main objective of this study is to find out the determinants of child enrollment and to identify those variables that have a strong effect on child enrollment. This study takes 2772 households from all four provinces of Pakistan and estimates regression for 6230 children in 2010 and 1614 households from two provinces Punjab and Sindh only and estimate regression for 1991 children in 2004.

**Table 7** *Logistic Regression: Determinants of School Enrollment 2010*

<b>Regressors</b>	<b>Odds Ratio</b>	<b>Std. Err.</b>
<b>Child Characteristics</b>		
Gender of Child (Male=1)	3.489*	0.208
Age of Child (In Years)	2.334*	0.159
Age Square	0.964*	0.003
<b>Household Characteristics</b>		
Land in Acres	1.002***	0.001
House Hold Size	1.015*	0.005
Dependency Ratio Medium (Low is Base Category)	0.887	0.090
Dependency Ratio High (Low is Base Category)	0.859	0.084
Household Head's Education ( Years of Schooling)	1.173*	0.010
Poverty Status ( Poor =1)	0.576*	0.039
<b>Regional Characteristics (Punjab is The Base Category)</b>		
Sindh	0.542*	0.040
KPK	1.383*	0.118
Baluchistan	0.353*	0.033
Number of Observations	6230	
LR chi <sup>2</sup>	1610.68	
Pseudo R <sup>2</sup>	0.1868	
Log Likelihood	-3506.4937	

Note: \*Significant at 1%, \*\*Significant at 5 %, \*\*\*Significant at 10 %

The above table, showing results for 2010, shows that males are relatively inclined to go for schooling by 3.48 times more, when compared with females. Age variable also affects child enrollment in positive ways. Normal school age children acquire more education than overage children.<sup>5</sup> Landholding also affects child enrollment, increase in landholding will increase the probability of child enrollment by 1.002 times according to the estimate. Increase in the household size increases the chance of schooling with equal rates. Dependency ratio (both medium and high) can affect child schooling negatively. The results indicate that households with middle and high dependency ratio are unable to send their children for schooling as compared to low dependency families, which is a reference category. Odd ratios show that if a household has middle dependency ratio, child schooling will be 0.887 times less as compared to low dependency ratio and if household has high dependency ratio, child schooling will be 0.859 times less as compared to the reference category i.e. low dependency ratio.(as the value of the selected determinants of this study of first two variables in the above table i.e. male gender, age, land ownership, household size, households heads' education shows (enrollment) increasing trend in relation with selected variables of this study, as their numeric value is greater than the one shown in the second column of the table). As in the logistic model less than one value is considered negative; or decreasing enrollment in relation to its selected determinants

<sup>5</sup>See Butt, M. S. (1984) Education and Farm Productivity in Pakistan". Pakistan Journal of Applied Economics 3(1): 65–82

like poverty status, high dependency ratio and age squares. These determinants have a negative impact on the child enrollment ratio at school in Pakistan.

One year's increase in a parent's education raises the chances of enrollment by 1.173 times. The odds of poverty reveal that the probability of child schooling is low among those who belong to poor families and high for those who belong to non-poor families. Thus, poverty affects education negatively decreasing the odds in favor of child schooling by 0.576 times as compared to non-poor families. The negative and significant coefficients of dichotomous variables for provinces indicate that children living in Sindh and Baluchistan are less likely to go for schooling as compared to those who live in Punjab, which is the reference category but the situation is different in the case of KPK where child schooling is 1.3 times higher than that of Punjab. Odd ratios show that if an individual has his current residence in Sindh, then the chance of child schooling will be 0.5 times less as compared to Punjab; for the residents of Baluchistan the odds in favor of child schooling are 0.35 times less and for the residents of KPK these are 1.3 times higher of what it is for Punjab.<sup>6</sup> The statistics summary of some key variables is given in Appendix A. This table shows the estimated values of the key variables mentioned.

**Table 8** *Logistic Regression: Determinants of School Enrollment 2004*

Regressors	Odds Ratio	Std.Error
<b>Child Characteristics</b>		
Gender of Child (Male =1)	2.598*	0.269
Age of Child (In Years)	2.718*	0.322
Age Square	0.950*	0.006
<b>House Hold Characteristics</b>		
Land In Acres	1.013**	0.005
Head of House Hold Education ( Years of Schooling)	1.088*	0.015
Dependency Ratio Medium (Low is Base Category)	0.802	0.128
Dependency Ratio High (Low is Base Category)	0.710**	0.110
House Hold Size	1.029**	0.013
Poverty Status 2004 ( Poor =1)	0.690*	0.085
Poverty Status 2010 ( Poor =1)	0.773**	0.088
<b>Regional Characteristics (Northern Punjab is Base Category)</b>		
Southern Punjab	0.115*	0.019
Sindh	0.176*	0.027
Number of Observations	1991	
LR chi <sup>2</sup>	469.41	
Pseudo R <sup>2</sup>	0.1704	
Log Likelihood	-1142.986	

\*Significant at 1%, \*\*Significant at 5 %, \*\*\*Significant at 10 %

<sup>6</sup>Joseph P.G Chimombo (2005). Issues of basic education in developing countries: An Exploration of policies options for improved delivery Centre for educational Research and training, university of Malawi.

Table 8 is for 2004, and shows that the gender variable has a significant positive impact on school enrollment. Enrollment ratio of male gender is two times greater than female; with age also affecting child enrollment in a positive way. Children of normal school age acquire more education than over age children.<sup>7</sup> A child belonging to the family who owns more land gets more education and the chance of drop out decreases. Same is the case of parent education; a child belonging to an educated family gets more schooling as compared to one belonging to an illiterate family. But the dependency ratio affects child enrollment negatively. Increase in dependency ratio, decreases child enrollment and vice versa. The results also show that a child who belongs to a poor household acquires less education as compared to a non-poor family; low enrollment in children is a result of previous poverty i.e. poverty of 2010, 2004 and 2010. Residence has a significant influence on child schooling. The odd ratios show that if an individual has his current residence in Southern Punjab, then the chances of child schooling will be 0.11 times less as compared to Northern Punjab, for the residents of Sindh the odds in favor of child schooling are 0.17 times less than what it is for Northern Punjab.<sup>8</sup> The summary statistics of some key variables is given in Appendix B. This table shows the estimated values of the key variables mentioned.

## CONCLUSION

The above study examined the determinants of child enrollment in Pakistan by using Pakistan Rural Household Survey of 2004 and 2010. Children of ages 5 to 15 were selected for this purpose. Using the bi-variate analysis, the study shows that in the rural areas of Pakistan, enrollment of male children is very high as compared to female. According to the 2010 survey, enrollment is very low in Southern Punjab because most people live below the poverty line and there are fewer schools for large populations. It is also evident that females get lesser schooling as compared to males in the rural areas of Pakistan, where parent's education, household size and other factors compel the child not to go to school. Female education is very low because there is great gender discrimination in these areas and many parents consider it against religion and custom to send their daughters for schooling. This study shows that the dependency ratio and household size affects child enrollment negatively. In rural areas the number of children and old people is large and the households are large: it is therefore difficult for the head of the household to focus and fulfill the requirement of the child for schooling. More empirical studies may be conducted to analyze other determinants of enrollment in schools and give recommendations for

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<sup>7</sup>See Psachropoulos, G. (1994). Returns to investment in education: A global update. *World Development*, Volume 22(9), pp. 1325-43.

<sup>8</sup>Handa, S. (1999). Raising primary school enrollment in development countries: The relative importance of supply and demand. *FCND Discussion Paper No. 76, International Food Policy Research Institute*

the uplift of education by increasing enrollment and thereby enhance the literacy ratio in all regions of the country.<sup>9</sup> The cost of livelihood (cost of living index) increases day by day while unemployment and poverty reduces the ratio of investment in education. This emerging issue in third world countries should be a matter of core-concern for policy makers. In rural areas about 61 percent of people depend on agriculture to fulfill their needs and the results show that households that own more land can enroll their children in schools easier as compared to those who have neither land nor work. It is also concluded that a child belonging to highly educated parents will acquire more schooling and the chance of drop-out decreases as the parent's education increases every year. The twin problems i.e. high gender disparity and low school enrollment are widely addressed in literature. This paper investigated the determinants of child schooling in the light of household decisions by using econometric analysis. Empirical findings of the estimates on the models showed delay in enrollment of children (especially female). This existence of the wide gender-disparity, non-educated head-of-household, significantly decreases the probability of overall children's schooling. It has a high effect on male enrollment as compared to females. Family income has a lower impact on the overall children's enrollment, for males it is lower as compared to female enrollment which has a high ratio. Parental education increases significantly probability of child's enrollment in a good school. Mother's education exerts strong impact on increase in school's enrollment. Gender specific determinants' estimate found that maternal education enhances the likelihood of female enrollment in school. The family's higher per capita income size, composition and assets ownership raises the probability of attendance in school. This study also shows that dependency ratio and household size affect child enrollment negatively. In rural areas, dependency ratio is very high, so it is difficult for the head of the family to focus on education and fulfill school requirements for his children.

Bivariate and multivariate analysis show that low enrollment in rural areas is because of poverty. This needs the attention of Policy-Makers, Governmental Stake-Holders and NGOs. More empirical studies may be conducted to analyze other determinants of enrollment in schools across the country to give recommendations for the uplift of child-education, enhancing masses literacy-ratio and suggests effective measures. The cost of livelihood (cost of living index) increases day by day while persistent unemployment and poverty reduces investment-ratio in education per family and drop out at primary and high school levels. This emerging issue in the third world countries should be a matter of core-concern for policy makers who need to consider the following points.

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<sup>9</sup>Psacharopoulos, G. (1984). Contribution of Education to Economic Growth and International Comparisons of the Productivity and Causes of the slowdown. Cambridge, Ballinger, 335-60.

- 1) Introduce social awareness programs for female enrollment in rural areas of Pakistan because in rural areas female education is very low as compared to male especially in KPK and Baluchistan.
- 2) Provide incentives/micro-finance to those who own less cultivated land in this way they may be able to increase their income and enable themselves to enroll their children in schools.
- 3) Need/Talent based Scholarship should be linked with grades, marks and GPA scores and fully funded education expenses including conveyance, hostel lodging as incentive to parents to enroll their children.
- 4) Expenditure on education should be increased from 2.1 percent of GDP to 4 or 6 percent to establish more primary/secondary schools in far-flung areas of KPK and Baluchistan by special provision in the federal/provincial budgets, so that every person can get equal opportunity to enroll his child.<sup>10</sup>
- 5) Establish Technical/Vocational Training/Commerce Institutes in rural areas to ensure parents that their children enrolled in schools will be able to find jobs in cottage industries/workshops etc. and will earn a livelihood for their families after degree completion.

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