

## **PRIVATE INVESTMENT IN EDUCATION SECTOR AND ITS IMPACT ON LITERACY RATE: EVIDENCE FROM PAKISTAN**

**Prof.Dr.Abdul Ghafoor Awan<sup>1</sup>,Muhammad Waqar<sup>2</sup>**

***ABSTRACT-** The objective of this research paper is to analyze the rapid growth of private education sector in Pakistan. For this purpose, we used secondary data collected from various issues of the Economic Survey of Pakistan for the period 2000-2015. The dependent variable was Literacy rate while independent variables include: allocation of fund, enrolment rate of students, no. of institutions and number of teachers. Ordinary Least square (OLS) method was used to draw the results. Our findings show that private sector has played a vital role in promotion of literacy rate at lower and upper level of education. We suggest that private sector may be encouraged to make more investment to improve literacy rate and human capital formation.*

***Key words:** Private Education institutions, Enrolment rate, Teachers' behavior, Educational Policy, Literacy rate, Economy growth.*

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1. Dean, Faculty of Management and Social Sciences, Institute of Southern Punjab.ghafoor70@yahoo.com. Cell #+923136015051.
2. M.Phil Economic scholar, Department of economics, Institute of southern Punjab, Pakistan.waqar5533@gmail.com. Cell# +923007253839

## **1. INTRODUCTION:**

Private investment in education sector has opened new doors for those students who have financial resources but could not continue their education due to weakness in learning and poor academic background. Private educational institutions were expanded exponentially all over Pakistan and provided educational facilities to thousands of students. These institutions perform better as compared to public sector educational institutions of whom performance was poor due to inefficiency and corrupt practices. A mushroom growth of private Universities and colleges were seen in every city of Pakistan since 2000 and has also enhanced enrollment rate as well as literacy rate in Pakistan. Private educational institutions has also played a vital role in introducing new disciplines and technology which enhances capability and competency of students. It expedited the human capital formation in Pakistan and meet the requirement of high tech industries and business. The availability of human capital paved the way for opting latest information technology and communication. Federal and Provincial Government allocated about Rs.122.016 billion and Rs. 533.530 billion respectively as compared to private sector which made investment to the tune of Rs.533.310 billion in 2014-2015. The share of both public and private sectors in education was 55% and 45% respectively. The allocation of funds as percentage of GDP was increased from 1.7% to 2.2% during (2008-2015) which shows the increasing ratio of expenditures in education sector as percentage of the GDP. The expansion of private institutions was 69 percent as compared to public sector which recorded an increase of only 8 percent since 2000. But the expansion of private sector was stalled since 2015 due to restrictive policies of regulators and now this sector is facing problems because some programs launched by private educational institutions were banned by Higher Commission of Pakistan.

### **1.1. Research Problem**

The problem of our study is to analyze “The private investment in education sector and its impact on literacy rate in Pakistan”

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## **1.2 Objectives of study**

1. To study the role of private investment in education sector
2. To analyze the level of enrolment of students in private educational institutions.
3. To study the role of private educational institutions in boosting literacy rate.
4. To make suggestions how to further improve the working of private educational institutions.

## **1.3 Scope of study:**

The scope of this research work is very wide because private sector is rapidly expanding and this study will be helpful for regulators to regulate private educational institutions in effective way and also beneficial for the management of private institutions to further improve their performance in the light of recommendations of this study. Private sector has emerged as a big player in education sector in Pakistan as compared to the public sector. The share of private educational institutions in education is, 45% vis-à-vis 55 percent of public sector educational institutions. The number of students at private educational institutions was just six million in 2000 which was jumped to 12 million in 2008. The enrolment ratio was exponentially increased from only 8 percent in 2000 to 34 percent in the same period.

## **2. LITERATURE REVIEW**

Psacharopoulous (1994) studied private sector investment in education to yield a high earnings in Pakistan and to enhance the literacy rate.

Rosenberg (1995) investigated the conditions under which schooling improves productivity to base on the literacy rate. Jimenez et al (1995) studied comparing public and private education sectors in Pakistan in the context of Student performance.

Awan and & Zia (2015) conducted study on private and public sector institutions and compared their performance. They conclude that the performance of private sector is better that public sector institutions in District Vehari.

Hsing (1996) examined the tuition fee in private tertiary institutions and their role in increasing enrollment rate.

Tafh e dokat (1998) described the positive effect of private investment in education sector to improve the literacy rate in Pakistan. Awan (2014) has disclosed that literacy rate has improved from three to six percent due to remarkable private investment in education sector.

Babayomi (1999) stated that the availability and adequacy of teaching and learning resources was more than public schools which is the main differences between public and private education sector.

Alderman et al (2001) concluded the household level and school level in developing countries basis on the persuasive study of private and public schools to see the impact of literacy rate in the economy.

Khawaja (2002) concluded the census of private educational institutions in Pakistan along with population census to increase the primary level to boost up the literacy rate.

Rose (2002) analyzed t government intervention in education in private education sector to achieve the objectives of higher education and enhance literacy rate.

Zajonc et al (2006) concluded that the comparing of adjusted and unadjusted knowledge score gaps by school type. Schuler (2007) concluded that in private education sector a well-educated person can achieve social and economic progress by himself which shows a better literacy rate growth in economy.

### **3. RESEARCH METHODOLOGY**

Time series data from (2005-2015) is used to investigate the relationship between the private investment in education institutions and its impact on literacy rate. The data is taken from different sources like Pakistan Education Statistics (2015-2016), Education System Reform in Pakistan and SAPS various economic survey of Pakistan. Following variables are selected for this research study.

### 3.1 Selected variables

The selected variables are stated as under: -

- Literacy Rate (LR)
- Institutions (INS)
- No of teachers (TEACH)
- Allocation of expenditure (AOE)
- Enrollment of students (Enrl)

### 3.2 Hypothesis of study

The hypothesis of our study are as follows: -

Ho = Private education have no effect on the economy of the nation and literacy rate.

H1 = Private education have a significant role on the economy of the nation and literacy rate.

### 3.3. Type of Data

We will use time series secondary data for the period 2000-2015.

### 3.4 Econometric model

We developed an analytical model with our dependent variable (literacy rate) and independent variables (institutions, No of teachers, allocation of expenditures, and enrollment of students). This model is developed to measure the relationship between dependent and independent variables. We will use the technique of OLS for analytical purpose. The model is engraved as follows: -

$$LR = \beta_0 + \beta_1 INS + \beta_2 NTCH + \beta_3 AE + \beta_4 ENR + e$$

LR = Literacy Rate

B1 = Autonomous factor > 0

B2 = institutions

B3= Allocation of expenditure

B4= Enrollment

B5= No of teachers

e = error term

#### 4. EMIRICAL ANALYSIS

##### 4.1 Regression Analysis

Table 1 Econometric results

Dependent Variable: Literacy

Method: Least Squares

Sample: (2005-2015)

Included observations: 11

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	56.82631	13.23093	4.294959	0.0036
ENRL	0.370979	0.089724	4.134665	0.0044
INST	-0.467741	0.171978	-2.719772	0.0298
TEACH	-0.771043	0.392371	-1.965086	0.0901

R-squared	0.889191	Mean dependent variable	55.38818
Adjusted R-squared	0.841701	S.D. dependent variable	2.381293
S.E. of regression	0.947441	Akaike info criterion	3.005183
Sum squared residue	6.283509	Schwarz criterion	3.149872
Log likelihood	-12.52851	Hannan-Quinn criter.	2.913977
F-statistic	18.72385	Durbin-Watson stat	1.252149
Prob (F-statistic)	0.001008		

From the above results it is clear that all the variables are statistically significant at the level of 5% in the model. The value of t-statistic is greater than t-statistics so the null hypothesis is rejected. The coefficient signs are in accordance with the subject matter in the model. The value of the coefficient of allocation of investment C and ENRL shows that the variation in investment and enrollment by 1 unit causes 56 and 37 percent change in literacy rate which shows that increase in allocation of investment and enrollment rate lead to the higher level of literacy rate in the education sector. The coefficient of TECH shows the -0.771 in the model depicts the increase in the LR due to 1-unit increase in the Technology. The negative sign of the coefficient of TECH shows sometime negative relationship with LR. The R<sup>2</sup>, which is the coefficient of determination, is 0.88 and it explains 88% variation in dependent variable due to change in independent variable. The Durban Watson statistic is closer to 2 that is 1.25 , which shows non-existence of autocorrelation. The results show that there is long and short run relationship between literacy rate and private investment in education sector in Pakistan.

Table 2: ANOVA

Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	1.293	4	.323	5.640	.031 <sup>b</sup>
Residual	.344	6	.057		
Total	1.636	10			

Estimating the sum of squares in ANOVA model suggest that, if we choose a level of 0.1% we cannot reject the Null-Hypothesis, by choosing a level = 0:11% or bigger we have to reject H<sup>0</sup>! (Usually we choose a = 5%) H<sub>0</sub> will be rejected.

Table 3: Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	.750	.293		2.558	.043
distribution regarding no of institutes	-.047	.244	-.054	-.192	.854
distribution regarding enrollment of students	.094	.194	.150	.483	.646
distribution regarding teachers staff	.687	.189	1.336	3.633	.011
distribution regarding expenditures of education in private sectors.	-.313	.189	-.729	-1.651	.150

The standard error is an estimate of the standard deviation of the coefficient, so it varies in this case if a coefficient is large compared to its standard error so our data probably different from 0. So the Beta shows the different results in the model which debate that the variation of the independent variable related with the t values, which shows that there is a strong and significant relationship between independent and dependent variable in this study. The increase in the enrolment rate and teaching staff will have a significant effect on literacy rate.

## 5. CONCLUSIONS

From the above results. We can conclude that share of private educational instructions is 45% vis-à-vis public educational institutions. The exponential growth of private educational institutions was witnessed since 2000 due to open policy of government and lifting of restriction for establishing educational institutions for



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higher studies. This fast expansion was occurred due to heavy investment in education sector by private investors. The expansion of educational institutions was not only enhanced the level of enrollment of the students, but also enhanced literacy rate substantially. Thus, we can suggest that private investment in education sector may be encouraged and necessary facilities may be provided to these institutions by government. It will accelerate the process of human capital formation as well

### **7. POLICY IMPLICATIONS**

On the basis of our conclusions we would like to make the following suggestions: -

1. Private investment may be encouraged so that literacy rate particularly in higher studies be improved.
2. Coordination between private and public sector educational institutions be created so that both sectors can exchange their programs and learn from each other experience.
3. Restrictive policies that create hurdles in establishing quality educational institutions may be removed.
4. The curriculum of private and public sector educational institutions may be evaluated and necessary coordination may be developed between them.
5. Only quality institutions in private sector may be encouraged through providing financial assistance to enhance research and development.as well as literacy rate.

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## CONTRIBUTION OF AUTHORS AND CONFLICT OF INTEREST

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This research work was carried out in collaboration between two authors. **Author 1. Prof. Dr.Abdul Ghafoor Awan** has his first Ph.D in Economics from Islamia University of Bahawalpur and second in Business Administration from University of Sunderland, United Kingdom. He **designed** the study, carried out its editing and give final shape to the draft of manuscript. He guides the author 1 in collection of data, empirical analysis and drawing results.

**Author 2: Muhammad Waqar** is a student of M.Phil Economics. He contributed in this research study by way of preparing initial draft of manuscript. He also collected data and conducted its statistical analysis.

Both authors carefully read the manuscript and they have no conflict of interest with any institution or any person.

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