Economic Analysis of Employment Status Effect on Education Expenditure in Pakistan

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Abstract

This study assesses the cost of education for Pakistani families. It makes use of PSLM data for the year 2018–19. It looks into the components and factors that add up to the families' overall educational expenditures. The estimation results demonstrate how the age of the family head, employment status of the family head and degree levels of family children living in Pakistan's four provinces affect the amount that family's expenditure on schooling. All factors however are found to have a positive effect on the policy recommendations for the attainment of education in Pakistan. Additionally, every discovery could have an impact on a variety of issues related to educational system. Each of these factors influences how much the government spends on education in a different way. The OLS (ordinary Least Square) Method and the regression analysis technique were used to perform the regression. When there is a quantitative dependent variable in a model, this approach and methodology is applied for executing the regression. The strategy will be implemented using estimates and results, which will also offer ways to address any problems that can be accounted for by the factors regarding family education spending.

KEYWORDS: Education spending, household, age of the family head, employment status of the family head, PSLM, OLS, regression.

Introduction

Education has been considered as a critical element for supporting monetary development and improvement and easing neediness in non-industrial nations. As per human resources hypothesis, education permits people to acquire better abilities and information expected to get to occupations, consequently upgrades efficiency and monetary development; which thusly help in destroying outrageous destitution and craving (Bryant, 1990; Becker, 2009 Mincer, 1970 and Schultz, 1961). Subsequently, the issue of schooling expenditure by the two states and families has acquired a sizable consideration from specialists and worldwide improvement associations. Interests in schooling are among the elements that decide the improvement of education area. This is especially valid for agricultural nations. In particular, expenditures on schooling address human resources improvement as they can assist in having with bettering education results. Up until this point, the job of education in expanding human resources stock and improving monetary development has been broadly recognized in the hypothetical writing (See for instance Becker, 1964; Barro, 1991; Benhabib and Spiegel, 1994). However, the additions of schooling are not compelling in all nations. For sure, the exact writing of the schooling expenditure financial development nexus is blended. The outcomes range from a positive to a negative or inexistent impact of schooling expenditure on monetary development. Taking into account the particular instance of Côte d'Ivoire, albeit the country's monetary development is among the most elevated and the quickest of sub-Saharan Africa, the principal challenge that the nation should confront now is to track down means to have a comprehensive development. Many variables among which instruction, through the improvement of human resources, can permit to accomplish the comprehensive development. As per Tandi (2013), the nature of the presentation of schooling systems is a significant consider achieving comprehensive development, as instruction should have been visible as a cutthroat variable. Manafi and Marinescu (2013) illuminated the impact of interest in education on comprehensive development. Raheem et al. (2018) upheld that administration expenditure in schooling assumes a significant part in accomplishing comprehensive development. In Côte d'Ivoire, Schooling area has all the

earmarks of being one of the areas that got since quite a while less yet developing exertion contrasted with different areas like the Structure and Public Work area.

In Sudan, the school system has been impacted by numerous monetary changes that the nation gone through over the most recent thirty years. In particular, the reception of advancement and unrestricted economy strategies in mid 1990s have brought about decreasing public spending on schooling. From that point forward, the size of private interest in education has extended strikingly. Likewise, families' use on education has gone up albeit fundamental schooling, for example, essential and optional instruction, is yet conveyed through open area. Besides, the decrease of government use on schooling has contributed extraordinarily in reducing the nature of state funded training; subsequently an enormous section of populace is driven into private schooling. This prompts a critical expansion in family education expenditure, especially in metropolitan regions and among big league salary families. Concerning significance and strategy pertinence, the observational examination to be embraced by this study is helpful in light of multiple factors. In the first place, researching family education expenditure is vital to give proof, which can be utilized to form applicable strategies focusing on arranging and improving schooling system in Sudan. Second, understanding the elements that influencing instructive spending in Sudan might help policymakers and key partners (for example public and worldwide NGOs) to plan compelling systems that guarantee better admittance to education in order to make more positions and decrease destitution. At last, by distinguishing the variables influencing instruction expenditure among various regions (for example metropolitan and country) and pay quintiles, the review would areas of strength for put in planning successful education programs for impeded gatherings of populace.

Schooling, one of the principal human and youngster's freedoms is fundamental for practical turn of events and for finishing destitution. Financial analysts play perceived the part played by instruction on monetary development and prosperity. Hence, the human resources hypothesis (Becker, 1985) has featured the significance of schooling in individual efficiency. Following Becker, the endogenous development hypothesis (Romer, 1990; Lucas, 1988) distinguished schooling as the driving force of monetary development.

1.1 Objectives of the study

2. To calculate the elements influencing family education spending.

3. To calculate how much a Pakistani family spends on education

4. To put such numbers and practical conclusions into effect for strategy implications pertaining to Pakistan's higher education.

1.1 Background and Significance of the Study

The current study focuses on the variables that affect household spending on education. Numerous researchers have conducted studies on education in the past, but no one has made a clear attempt to divide the costs of education according to degree. Nonetheless, the researcher has made an effort to identify the variables that affect household spending on education from graduation to a PhD. Researchers will undoubtedly find it useful to quantify household spending on educational attainment.

Review Literature

Yousaf et al. (2021) utilized the three round of Pakistan Family Spending plan Study information likes, 2013-14, 2015-16 and 2018-19, to analyze the family mean instructive expenditures at region level in Pakistan. They came to at the resolution, with the progression of time, the mean instructive uses were expanding in all region yet this increment was higher in Sindh and KP. Then again, the investigation of Idrees and Khan (2020) attempted observationally research the interest for education for various level. They utilized Pakistan Social and Expectation for everyday comforts Estimation Overview, 2014-15 to accomplish the goal and they reasoned that head schooling, procuring's informed people and proportion of male in each designated bunch tracked down the critical effect on interest for education at each level. The current review, consequently, concerning Pakistan is an endeavor to exactly examine the effect of family's attributes on OOP (From cash on hand) instructive expenditures choice of family's head. We/scientists doesn't limit the OOP instructive expenditures at a particular degree of education rather we utilized the term instructive uses from essential to Ph.D. Regulation, Clinical,

Designing and so on in Pakistan. Our next commitment in writing and particularly to education writing is, we have utilized two most significant factors, which was not utilized by some other's specialists before like, distance from home to instructive foundation and numbers the family individual whose were at present signed up for instructive organization. The discoveries of our review will empower the educationist strategy creators to foster such kinds of polices to diminish the instructive weight from family's side in Pakistan.

Jenkins, Amala Anyabolu, & Bahramian, (2019) inspected the determinants of instructive expenditures of Nigerian families. The creator used board information of Nigerian General Family Overview 2012-2013 and twofold obstacle model was utilized for examination. The creators assessed that family pay, age, schooling, orientation of the family heads, and home altogether influence the spending on instruction. The creators further assessed that these expenditures were pay versatile and contrasted for low pay to higher pay families.

Abbam (2018) directed a review to investigate the job of socio-segment variables of families in the event of education expenditure in Ghana. The outcomes show that destitution of families huge however, the adverse consequences on instructive expenditures of the family heads while the area (metropolitan/country) and families having female heads were the positive critical determinants in such manner. The specialists additionally came to at the resolution comparative with male family heads, the female-headed families were bound to put on their relatives in Ghana.

Sarkar (2017) investigates the factors that influence how much money Indian households spending on higher education. Gender bias in household spending on educationis found in the study. Along with community background, the primary determinants of household educational expenditure are parent education and household income. Backward caste households have lower spending habits than the general category households do.

Sunde (2017) assessed for Mauritius the connection between schooling expenditure and monetary development from 1976 to 2016. Basing on an ARDL limits testing approach and Granger causality test. His paper featured a unidirectional momentary causality running from schooling expenditure to monetary development for the previously mentioned period. Besides, a

long run relationship was tracked down between the two factors, prompting the end that an expansion in both of the factors could prompt an expansion in the other variable.

Material and Methods

Data Range and Data Source

The foundation of this study is an analysis of Pakistani households to determine the average amount spent on schooling. The information used in this study came from the Pakistan Social and Living Standard Measurement (PSLM) Assessment Round VII 2018–2019. The four regions of Pakistan that make up the informational collection are KPK, Punjab, Sindh, and Baluchistan. This review is cross-sectional in nature, with a random sample size of twenty-six individuals from across Pakistan. The survey's statistics offer household-level information on a number of socioeconomic factors, including age of family head and employment status of household or family heads. Education-related expenditure includes tuition costs, fixed scholastic charges, lodging costs, and transportation costs.

Research Design

The Ordinary Least Squares (OLS) and Linear Regression techniques are used to evaluate the equation. The estimating approach is depending on the type of dependent variables. Because this dependent variable is quantitative, both the OLS method and the regression analysis method are applied. Without a doubt, the model was estimated using the regression analysis method. The estimated model will provide the quantifiable statistics and reliability for each of the explanatory variables. When a variable's probability or P value is less than 5% (0.05), 10% (0.10), or 10% (0.05), it is considered statistically significant; when it is larger than 5% or 10%, it is considered statistically insignificant. Furthermore, we use the F statistic to assess the overall performance of the Model. If the probability value of the F test is less than 5%, then the explanatory variable's power is adequate to support the model. The T test can also be used to evaluate the relevance of each individual variable. The P value remains unchanged when the variable results are included. Estimated coefficients will be used to quantify the effect that the explanatory variables have on the dependent variable, which is the amount of money spent on education by a household. The degree of the effect on the dependent variable will be explained by the model's coefficient.

Econometric Model

Dependent variable $= \mathbf{C} +$ $^{\text{B1X1 + B2X2 + B3X3 } + \text{e}}$

Dependent variable   (Y)   =   Education Expenditure

Constant   =   C

X_1 =   Education Level (Degrees)

X_2 =   Age of the Family Head

X_3 =   Employment Status of the Family Head

e   =   Error Term

Result and Discussions

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.516	0.266	0.255	84675.6886

Table 4.1 (Researcher's own contribution, PSLM 2018-19)

The value of R square and Adjusted R square, which show how all explanatory variables explain variation in the dependent variable, are shown in table 4.1. It shows the variation in educational

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	5550248752327.473	32	173445273510.234	24.191	0.000
	Residual	15293550803414.492	2133	7169972247.264		
	Total	20843799555741.965	2165			
Dependent Variable: Total Education Expenditure						

Table 4.2 (Researcher's own contribution, PSLM 2018-19)

spending that is responsible for the regression mode's independent variables. It follows that the independent factors account for 26.6% of the variation in educational costs.

Table 4.2's summary displays the F test statistic, which comprehensively illustrates the potency and strength of each independent variable and their impact on the dependent variable. The statistical significance of the F statistic's probability value of 0.000 suggests that the regression model as a whole is quite significant.

The Model Summary and ANOVA table, which covers the model's performance and believability in detail, were covered in the previous section. It is time to talk about and analyze how each variable affects the total amount spent on schooling. It will also make clearer how each element affects the amount spent on education. In order to comprehend the main ideas of this thesis, which was created in order to comprehend the component of household education spending.

The significance level for the model estimation was taken as (5 & 10 %.)

Dependent Variable = Log (Expenditure on Education)

Log on Independent Variables as well that are quantitative in nature.

R Square   =   0.266   Adjusted R square   = 0.255

F Statistic   =   24.391   Probability   = 0.000

e   =   Random Error Term

Total Expenditures			
Education Degrees	Mean	N	Std. Deviation
BA/B.SC/B.Com	34653.975	726	39661.0743
B.Ed./M.Ed.	48541.127	71	69035.9159
B.A/B.SC/BS/BE	69960.991	454	57551.1260
MA/MSC	54251.555	299	54671.3398
Degree in Medicine(MBBS/BDS/Pharm-D)	242270.561	107	280201.8506
Degree in Agriculture	98307.692	13	127890.3401
Degree in Law	83215.152	33	49761.3751
Degree in Engineering	129034.545	99	94143.7682
Degree in Accountancy	110503.846	26	64332.9432
MPhil	123361.765	34	84433.6067
PHD	202600.000	7	142580.6906
MS	250222.222	9	302608.2566
Other	23196.094	288	48854.2060
Total	63124.772	2166	98120.4415

Table 4.3 (Researcher's own contribution, PSLM 2018-19)

The mean amount that a family or household spends on education for each degree-bearer is shown in Table 4.3 and is presented in a clear, exclusive table. Given the nature of the degree and the conduct of the leader of the family, this expenditure makes perfect sense.

By understanding the population distributions, we will be able to discuss in depth the expenditure of each degree together with its frequency and precise number of observations. Let us look at Table No. 4.4, which shows the average amount of money that households in four Pakistani provinces have spent on higher education.

Model		Unstandardized Coefficients		Standardized Coefficients	T-Values	P-Values
		B	Std. Error	Beta		
1	(Constant)	38197.746	7383.474		5.173	0.000
	Age in Complete Year	86.169	94.839	0.017	0.909	0.364
	Employer, employing less than 10 person	-196850.383	65734.891	-0.061	-2.995	0.003
	Employer, employing 10 or more persons	-16994.396	42436.239	-0.007	-.400	0.689
	Self-employed non- Agriculture	1277.057	3106.162	0.008	0.411	0.681
	Contributing family worker	-1196.280	1510.836	-0.015	-0.792	0.429
	own cultivator	-828.572	1884.534	-0.008	-0.440	0.660
	share cropper	-5095.879	2737.243	-0.035	-1.862	0.063
	contract cultivator	1426.374	4343.771	0.006	.328	0.743
	livestock (only)	-843.040	2860.370	-0.005	-.295	0.768

Table 4.4 (Researcher's own contribution, PSLM 2018-19)

We will be able to analyze this table quite clearly if we view it methodically by looking at each variable and its strength. In the event that there are no independent variables in the model, the table displays the constant number, sometimes referred to as an intercept, which represents the average educational spending. This implies that there is a chance we could have overlooked a variable. Nonetheless, the value or amount of spending with the strongest probability value of 0.00 is unquestionably represented by this intercept.

Age of the Family Head

Variable age in the model signifies the age position of family head with two thousand one hundred and sixty six number of observations. It amends that age does not exercise any impact on family member or head for the accomplishing of education for their youngsters. Root of this statement is the probability value of this variable outstrips as greater than 5% or 0.005 by designating that the age of family head has no impression on education expenditure. The table 4.4 is noticeable for the corroboration of such results.

Employment Status of the Family Head

We apply some approaches and procedures using regression analysis before moving on to the statistical and empirical analysis being considered. We are aware that one subcategory must remain the base category. This viewpoint is partially motivated by the categorical character of variables and their need for statistical techniques. Because the paid employee category has the

greatest number of observations, we have chosen to use it as our base or benchmark. The remaining categories must be compared to the base category, which is paid employees.

We need to look at Table 4.4, which will allow researchers to look at how much a family or household spends on education based on employment status. The chart mentioned indicates that, in comparison to family heads who are paid employees, those who are employers and employ fewer than ten people spend 0.061 units or 6.1%, less on their children's education. Because the probability value for this group is less than five percent, or 0.05, the difference in expense is very substantial. Since the probability value for this coefficient is less than five percent, one of the categories from this variable, Sharecropper, also exhibits a significant result. The coefficient value of (-1.862) indicates that family heads in this group spend on average 18.62% less than paid employees, or 1.862 units. The next group consists of families whose heads are employers and who have ten or more employees working for them in their small businesses. This finding suggests that there is no discernible difference for schooling spent by paid employees and business owners that employ ten or more people.

Similarly, if we look at Table 4.4, we can see that the remaining categories mentioned in the previous paragraph do not differ in terms of their educational costs from those of paid employees. The likelihood value for each of these groups is more than five and ten percent, which is the main justification for this result.

Conclusion

The amount that a family spends on schooling is examined in this study. We have looked at family education expenditures using a range of demographic and socioeconomic characteristics in this analysis. It suggests that an increase in family head age makes no difference in the determination of household spending on education. It illustrates that increase in age does not stop family members or heads to affect the education for their children. They wish to continue it at any stage of their life. T. Upon closer examination of the employment status of the household, no significant disparities in expenditure patterns become apparent. It concludes that people connecting to such different employment positions, are highly interested for their children to attain education at any level. It coveys message to the state that it should allocate more resources to this sector as they do not push behind in the way of getting education for their kids. We can also examine that significant difference occurs among the people who are employer, employing less than 10 person and sharecropper with the paid employee. Both of such categories spend less amount of spending on education for their youngsters as compared to paid employees. It further indicates the Pakistan's existing uneven system of resources distribution among the different segment of employments. This difference in level of spending o education is a result of many factors, which also cause variations in the prevailing in the different organization of employment level. It makes clear that considerable work needs to be done to improve education in Pakistan by improving the outlying fields of employment sector. The state or government should prioritize putting more emphasis on this issue.

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