

Role Of Educated Leadership In Poverty Alleviation In Pakistan: A Quantitative Approach

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Abstract

Poverty is one of the major obstacle in the way of national economic development of developing countries including Pakistan, and adversely affects the socio-economic condition of a country. Along with other factors, lack of education and leadership also is considered as one of the reasons for the high level of poverty in Pakistan. Therefore, the role of an educated leader cannot be ignored in bringing economic prosperity in a country. Therefore, the central objective of this study is to evaluate the effect of educated leaders measured by education on poverty in Pakistan. We used secondary data taken from the Economic Survey of Pakistan (2018-19), and World Development Indicators (2019), the World Bank and quantitative techniques for analysis. The regression results shows that education has significant effect on poverty alleviation, indicating that promoting education certainly helps to mitigate poverty. It is concluded that poverty can be reduced through encouraging educated leadership in Pakistan. These results suggest that the Government of Pakistan should focus on promoting education sector which also make good leaders in order to reduce poverty and consequently it will improve welfare of the people.

Keywords: Poverty; Educated Leadership; Pakistan

Introduction

This study is concerned with the impact of educated leadership on poverty alleviation of Pakistan, since decades poverty remains the core problem in developing countries including Pakistan. There has been a continuous argument on this issue that why a country is facing poverty and what are the solutions for the poverty reduction? People earning less than (1.9 US\$) per day are in extreme poverty, while people with 3.1 US\$ earning per day are in moderate poverty (World Bank, 2008). Those people who are facing extreme poverty are incapable to fulfill their basic needs that is education, health, food and the shelter, an increase in income leads to a good standard of

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living. Education plays a vital role in poverty reduction of a region, United Nation and UNESCO agreed with the literature that education can help in the reduction of poverty. The main reason for the economic development of the East Asian countries i.e. Korea, Hong Kong, Singapore and Taiwan in the late 1970s was their investment in human capital and education (World Bank, 1993). Poverty is negatively related to education, with the increase in education, there will be a decrease in poverty due to knowledge and skills which will increase the level of income. The education indirectly supports the basic necessities that is health, education, food and shelter. Azam and Ahmed (2010) suggested that education is most important for economic development of a country. Moreover, education also changes the behavior of females in fertility decisions.

The Economic Survey of Pakistan (2018) shows the literacy rate of female is less than male in Pakistan. Balochistan and KPK female literacy rate is comparatively low with Sindh and Punjab. Reason is unavailability of education intuition and gender discrimination in these two states. Poverty in Pakistan has somehow declined in past one decade, with reference to the final report of economic survey of Pakistan, poverty index has been decreased to 24.3 which was more than 50, 10 year ago. However there was an upward trend found in education of Pakistan. Many studies argued that human skill is one of the main causes in poverty reduction, it is also evident from WDI data statistics. According to the WDI, poverty has been reduce with the increase in education. In 2001 the poverty was recorded at 64% head count below the poverty line while the education was recorded 24% of total primary age population. In 2015 poverty has been reduced to 24 head count with the increase in education that was recorded 44 percent.

Table1: Poverty statistics of Pakistan countries

2005/06	50.40	36.60	57.40
2007/08	44.10	32.70	49.70
2010/11	36.80	26.20	42.10
2011/12	36.30	22.80	43.10
2013/14	29.50	18.20	35.60
2015/16	24.30	12.50	30.70

Source: Planning commission of Pakistan, Economic Survey of Pakistan (2018)

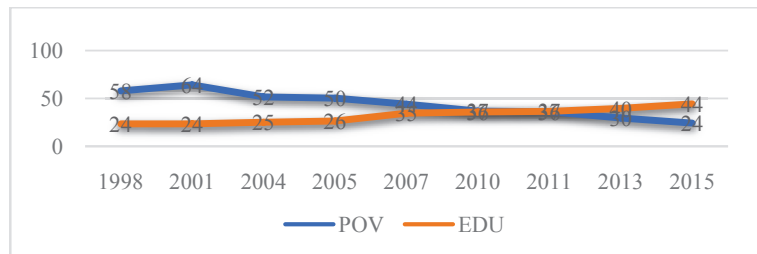


Figure-1: Comparison of education and poverty of Pakistan

Education and poverty are interrelated and these are the main concerns of government, international donors and united nation agencies in said region (Zamanet *et al.*, 2011). The reduction of poverty is on the top priority for any developmental process. Which can be reduced by economic development and by proper circulation of income (Kakwani *et al.*, 2003). Another solution for poverty reduction is spending of education and health properly (Fan, 2008). Reducing poverty with high growth is called pro-poor growth, some studies confirmed that economic growth is essential but it is not the sufficient condition. Similarly reduction of poverty with education is called pro-poor education. Spending on education can improve the human capital which has long run impact on income distribution. Children out of school is one the major problem faced by Pakistan. The reason for children not going to school is extreme poverty. 60 % of total people are earning \$ 2 per day. The main reason for poverty is illiteracy, similarly with poverty can't control education poverty (Tilak, 2007). Education affects poverty negatively but the question is that which level of income should be focused. Whether primary education will affect poverty or secondary and higher education. Tilak (2007) argued that the millennium development goals of the United Nations is mostly focused on primary and female education. Developing countries are focusing on the cheapest education which is primary in order to diminish poverty.

Good governance comes if society is managed properly by the leader and this is done in that case if the leader is educated. In the developing world there prevails a common threat to the existence of humanity world. The millennium development agenda set to reduce poverty by a half by the year 2015 expresses the global commitment to ensuring the living standards of mankind. Education is the main factor in achieving the economic development through savings in human capital. Education plays a vital role in stabilizing one's life and it also fosters self-understanding and enables people's quality of productivity and creativity thus promoting entrepreneurship. In

addition, it plays very crucial roles in securing economic and social progress thus improving income distribution which may consequently salvage the people from poverty (Omoniyi, 2013). Education is the key model which plays an important role in the poverty reduction, it reaches to the poor and contributes to poverty reduction in different empirical situations. Same is the case in educated leadership that leaders who are educated in a true sense they tried to eradicate all those hurdles that are coming in the way of a good life specifically poverty. Educated leaders provide foundation for eradication of poverty and foster economic development. It is the groundwork on which much of economic and social well-being of the citizens is built. Educated leaders played key role to increase economic efficiency and social consistency, by increasing the value and efficiency of the labor force and consequently raises the poor from poverty. Such leaders increases the overall productivity and intellectual flexibility of the labor force and ensures that a country is competitive in world market now characterized by changing technologies and production methods.

It is said that leader from the educated background tried enough to compensate and fulfil all the basic needs of society including water and sanitation, utilization of health facilities, housing, and it also affects the women's conduct in fertility decisions and family planning. And it is a fact that if these needs are fulfilled so the standard of living will rise automatically and so the daily wages. According to Ocampo, (2004) that poverty is a big hurdle in educational achievements, education and poverty broadly can be seen in two ways, investment in education increase the productivity and skills of poor household and also education enhance the earnings level as well as the overall living standard of human development.

Educational achievement has a large and significant impact on voter participation and favour for the freedom of speech. The study also observes that extra schooling upsurges the quality of civic alertness as measured by the regularity of reading newspapers (Dee, 2004). Besley et al. (2011) noted that intelligence is fundamental to the Platonic view of leadership, thus the idea that relatively educated citizens might be superior leaders. Husain (2005) expounds that the deprived people have very small voice. To address this problem, is the single most challenge for the political and economic leaders of Pakistan in future. Mkapa (2008:7) mentions that "Leadership is both a science and an art. One can also be born with what is called natural leadership traits. Yet the fact remains that even divinely bestowed qualities of leadership need preparation to make them relevant to the challenges of the day." changes. Besley et al. (2011) conducted a study on the link between educated politicians and poverty

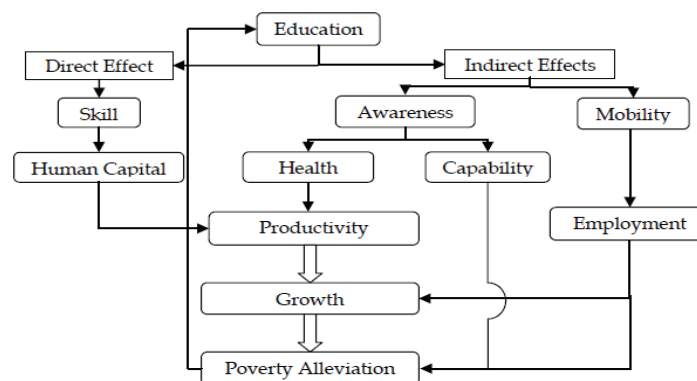
mitigation. They have observe that educated politicians can lead to improved economic growth of a country. Educated leaders are more likely to adopt effective and prudent policies as they have sound understanding of economics, society and development.

The main objectives of this study are to find out the impact of educated leadership on poverty alleviation in Pakistan, to investigate the determinant of poverty other than educated leaders hipand to provide are mark able policy based on results of data to the policy maker to control poverty by improving the education level. Human capital have positive impact on economic growth evidence from previous literature, economic growth can be developed by investing in all three sectors of education that is primary, secondary and tertiary.

Literature Review

The study of Jung and Thorbecke(2003) examined the relationship between government spending on education and human capital, growth and poverty in Tanzania and Zambia. Multisector CGE model has been utilized for the analysis of supply of labor skill and its distributional costs. The result of this study indicated that spending on education can boost up growth. For this purpose to gain maximum benefit from the education spending there will be need of high level investment so the demand for labor will also increase the result, also explore that spending on education on a best way can reduce the poverty. Awan et al.(2011) investigated the effect of different level education on poverty in Pakistan. For this purpose poverty has been considered as dependent variable while diverse level of schooling, skills and sex as the factors of the poverty. Data has been obtained from domestic integrated economic survey with the time period of 1998-99 and 2001-02. LRM has been utilized for the analysis of the study. The result of the study revealed that education and skill is negatively related to the poverty which means with the increase of education and experience poverty will be decrease. The study further identified that the earning of the male persons can also decrease the level of poverty. They concluded that education is the main factor of poverty reduction. Arias et al.(2016) examined the impact of education on poverty in Costa Rica. Unsatisfied basic needs method and 2011 census data has been employed to identify poverty. The results determined that education helps in dropping poverty of people residing in non-urban and urban parts. According to the propensity score matching, secondary educated people reduced poor shelter around 8 percent to 33 percent. 26 to 44 % reduction in lack of knowledge and 12 to 30 percent reduction on low level of consumption. Rahman et al.(2018) explored that gender

discrimination in case of education can affect poverty in Multan. The results indicated that gender discrimination in education affect poverty inversely. According to the results household's size and the children under age 5 affect poverty positively, whereas qualification, age, skills and ownership of household head affect poverty negatively. They recommended that in order to empower women the gender inequality should be avoid. Furthermore they suggested that poverty can be reduce by providing employment opportunities in all sector.



Sources: Authors construction based on Janjua and Kamal (2011).

Conceptual framework in Figure 2 helps to show the impact of one variable on other variable through a cycle approach, according to the figure education will help to reduce poverty, which will in turn again increase education level due to better living standard. This conceptual framework was also previously presented by (Janjua & Kamal, 2011).

Data and Methodology

Variables and definition

Due to the lack of equivalent baselines, we cannot use relative poverty for the evaluation between countries. From the concept of absolute we can find out the purchasing power or command over commodities. Employing Consumer Price Index in 2005 poverty line has been constructed which indicates 1.25 US dollar/d per individual. According to this line of poverty a specific population can be identify which is poor in a selected time period. This technique is called headcount which is consist of individual spending or earning. In this study poverty variable will be denoted by P.

The objective of this paper is to identify the impact of educated leadership on poverty alleviation that's why education is most important variable to use for analysis, utilizing of gross enrolment rate will be beneficial because in gross enrolment, repeaters and replacements are also added to the actual number. Poverty has been taken as dependent variable while education has been set as explanatory variable, controlled variables also included in this study to avoid probability of specification biased by not omitting the important variables. Control variables are inflation and physical capital. Literacy rate can also be used as proxy for education.

$$P_{it} = \beta_0 + \beta_1 ED_{it} + \beta_2 INF_{it} + \beta_3 PC_{it} + \varepsilon \quad (1)$$

Where, P is the headcount living under poverty line, ED is net primary enrolment in all countries and ε is the error term. Similarly β_0 is the intercept and β_1 is the slope of the education variable. Poverty and education are used as dependent and independent variables respectively, in order to minimize the error term we also used inflation and physical capital as controlled variables, knowing that these variables also affect poverty. Similar model also used by (Hanif&Arshed,2016).

Table-2: Variables definition

Variables	Explanation	Proxy	Symbol
Poverty	headcount living under poverty line	Percentage of population	P
Inflation	A general increase in prices and fall in the purchasing power of money	Percentage annual change in the CPI of Pakistan.	INF
Education	Secondary school enrolment net	Percentage to total	ED
Physical Capital	Total physical investment in one year	Percentage to GDP	PC

Data and data sources

In order to achieve said objectives the data will be obtained from World Bank Indicators (2019) and Pakistan Economic Surveys (various issues) for the selected years upon availability of data in order to achieve the objectives of this study.

Descriptive analysis

Descriptive analysis is an essential part of the analysis. Descriptive analysis of data indicates the variation and maximum and minimum values of all selected variable. With the help of descriptive analysis years with maximum and minimum values can be identified. Furthermore these statistics gives mean, median and std. Dev of the data.

Unit root analysis

Common mean and variance are necessary for the better results, data having trend can give a spurious result (Juseofetal. 2011). To identify the trend ADF test will be utilized.

$$\Delta y = \alpha_0 + \alpha_1 y_{t-1} + \sum_{i=1}^p \alpha_i \Delta y_{t-i} + \varepsilon_t \quad (2)$$

In case of the mix ADF result, ARDL will be more suitable for the regression, and the result will be more authentic. Similar model has already been used by (Faisalet al. 2018).

ARDL Model specification and econometric methodology

To investigate the effect of EDU, INF and PC on POV, an empirical model can be written as

$$POV_t = \alpha_0 + \alpha_1 EDU_t + \alpha_2 INF_t + \alpha_3 PC_t + \varepsilon_t \quad (3)$$

Long Run ARDL Model

$$POV_t = \alpha_0 + \sum_{i=1}^p \delta_1 POV_{t-i} + \sum_{i=0}^{q1} \delta_2 EDU_{t-i} + \sum_{i=0}^{q2} \delta_3 INF_{t-i} + \sum_{i=0}^{q3} \delta_4 PC_{t-i} + \varepsilon_t \quad (4)$$

Short Run Analysis

$$POV_t = \mu + \sum_{i=1}^p \phi_i POV_{t-i} + \sum_{j=0}^q \omega_j EDU_{t-j} + \sum_{l=0}^q \phi_l INF_{t-l} + \sum_{m=0}^q \gamma_m PC_t + \varepsilon_t \quad (5)$$

$\phi, \omega, \gamma, \Omega$ are the short term dynamic coefficients of the model's convergence to equilibrium.

Eq.(4) shows the empirical equation of the study, in this equation POV is the main dependent variable, whereas EDU, INF and PC are independent variables. α_0 is the intercept while $\alpha_1, \alpha_2, \alpha_3$ are the related coefficients. ε_t is the error term of the model.

Results and Discussion

This part consists of data analysis using quantitative technique, results and discussion on results. In order to achieve objectives of this study all data will be regressed and there will be a brief discussion about their results.

Table3: Descriptive statistics

Statistics	POV	EDU	INF	PC
Mean	43.92222	32.24922	7.722477	16.63811
Median	44.10000	34.62237	7.598684	16.57800
Maximum	64.30000	44.38661	13.88114	19.08100
Minimum	24.30000	23.51200	2.529328	14.12100
Std. Dev.	13.29932	7.646898	3.666371	1.680448
Skewness	0.032472	0.168491	0.190105	0.103304
Kurtosis	1.858705	1.621113	2.273593	1.898204
Jarque-Bera	0.490039	0.755583	0.252085	0.471241
Probability	0.782689	0.685374	0.881577	0.790081

Results of descriptive statistics given in Table 3 shows that highest level of poverty was recorded in 2001 which was 64 percent of total population headcount living under poverty line while the minimum poverty was recorded recently in 2015. Similarly highest inflation was recorded in 2010 which was 13.88, which reduced to 2.52 in 2015. According to the WDI maximum and minimum physical investment was recorded in 2005 and 2011 respectively. In 2005 secondary school enrolment was at minimum level of 23.51, there was an increasing trend in enrolment every year and rose to 44.38 in 2015. These statistics are only for the selected.

Table4: Augmented Dickey-Fuller (ADF) Test Results

Variables	Trend and intercept				Order of Integration
	Level		First Difference		Decision
	t-values	p-values	t-values	p-values	
POV	-9.610642	0.0005	-	-	I(0)
EDU	-1.284390	0.1662	-3.675652	0.0038	I(1)
INF	1.716977	0.9994	-2.254130	0.0325	I(1)
PC	-2.517335	0.3182	-3.023392	0.0098	I(1)

According to the ADF test in Table 4 all the variables i.e. EDU, INF and PC except POV are non-stationary at level while they become stationary after converting to the first difference. POV is stationary at level. The trend in the data suggests to utilize ARDL model for regression instead of OLS.

Boundstest

Bound test is used to explore cointegration between dependent and independent variables. Variables are said to be cointegrated if there is a co-movement in the long run.

Table5: ARDL Bounds test result

Test Statistic	Value	k
F-statistic	4.363839	3
Critical Value Bounds		
Significance	10 Bound	11 Bound
10%	2.72	3.77
5%	3.23	4.35
2.5%	3.69	4.89
1%	4.29	5.61

According to the Table 5 results variables are cointegrated in the long run. Which can be identified by the value of F-statistics. According to the results F-statistics value 4.36 which is greater than the upper bound at 5 percent level of significance.

Table6: ARDL short run test results

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(EDU)	-1.695891	0.649537	-5.610923	0.0396
D(INF)	0.384898	0.461916	-4.833264	0.0458
D(PC)	0.286157	1.253656	0.228258	0.8341
CointEq(-1)	-1.036219	0.425168	-3.437199	0.0427

Table 6 show the results of short run and speed of adjustment. According to the results speed of adjustment from disequilibrium to equilibrium is 103 %. According to the criteria value this value need to be negative and significant. Furthermore in short run education puts an inverse relation on poverty, which means that poverty will be reduce with the increase of enrolment in short run. Furthermore

inflation is positively related to the poverty in short run. PC was positively related but found insignificant.

Table7: ARDL long run test results

Variable	Coefficient	Std. Error	t-Statistic	Prob.
EDU	-1.636614	0.287048	-5.701530	0.0107
INF	0.371445	0.473929	-4.783756	0.0404
PC	0.276154	1.184943	0.233053	0.8307
C	95.171017	26.865858	3.542452	0.0383

Table8: Breusch-Godfrey Serial Correlation LM Test results

F-statistic	2048.585	Prob. F(2,1)	0.0156
Obs*R-squared	7.998048	Prob. Chi-Square(2)	0.0183

Long run results of ARDL explored the negative relationship between education and poverty similar to the short run results, this relation is according to the literature Abu et al. (2014), Muhammad and Emirullah(2014), Muhammad (2015), Azam and Ahmed (2015), Khan and Khan (2018), and Muhammad (2019) also found that human capital is most important tool to increase economic development which will in turn reduce poverty, human capital plays a vital role in promoting economic growth of a country. Uneducated leadership is also one the main reasons of poverty, with the increase of education there will be an increase of educated leadership, which will help in economic development and poverty alleviation. Similarly inflation was also positively related to the poverty. High inflation reduce purchasing power of the people, therefore a moderate inflation is critical for development. Azam and Rashid (2015) concluded that inflation is not only monetary phenomenon, productivity in agricultural sector should be considered. PC was insignificant on investment.

Over all empirical findings of this study on the positive relationship between education or educated leaders and economic prosperity/poverty reduction are consistent with the findings by Mkapu(20080, and Besley et al.,(2011)

Conclusion

In the light of previous literature human capital plays a vital role in economic growth of east Asian countries. In order to achieve objective of the study, we use gross secondary school enrolment as a proxy of human capital or education representing educated leader. Similarly headcount ratio at national poverty lines has been used as a proxy of poverty. Two important variables i.e. inflation and physical capital has also been added to the study as control variables to

minimize the error term, because these variables can also affect the poverty of Pakistan according to the pervious literature. Results of long run ARDL shows that there was a negative effect of education on poverty, which means that with the increase of education or enrolment there was a reduction seen in poverty. Government can achieve their poverty targets by investing in education in both primary and secondary sector, secondary sector will improve only if there will be improvement in primary sector. The crucial role of qualified leader also endorsed by many prior studies including Besley et al. (2011) which reveals that educated leaders matter for economic propensity. Thus, educated leaders are relatively more important mitigating poverty and thereby improving social welfare of the people.

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