Effect of Education on Poverty and Wellbeing of Rural Households in District Hangu, Khyber Pakhtunkhwa

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Abstract

Education plays a significant role in alleviating poverty and increase well-being of the people. This study was aimed to highlight the role of education on decreasing poverty and increasing the well-beings of rural households in district Hangu. A Sample of 375 households was selected. In this study multinomial logit model was used to know the effect of each educational variable on different form of poverty and independent sample t-test was employed to determine differences in well-beings between less educated and more educated households. Results of the study reveal that each educational variable has a negative relationship with poverty. Statistical analysis of the data shows that as the level of education increase the marginal effect to overcome extreme poverty and moderate poverty also increases. Moreover, the study found that each educational variable has a positive association with the probability of not being poor. Besides, the results have statistically significant difference in overall well-being between less educated and more educated households. More educated households are more social, less emotional, and more mentally strong than less educated households. For policy, the study suggests higher education to eradicate poverty and enhance well-beings.

Keyword: *education, poverty and well-beings*

Introduction

Poverty is a complex phenomenon. Social equality is the corner stone of eradicating poverty. To control poverty, we must first increase the literacy rate and to shrink poverty rate, we must first back brainpower. As a major factor of socioeconomic progress, education has played a significant role in enhancing economic development. A viable and good education will always bring economic development and prosperous society (Liu, 2019). Eradicating poverty though education requires public will and to divert further resources to attain it (Zhang, 2020).

In the dynamic's scenario, when the desires of the people change and the existing social institution fail to meet the need of the people, it is the education that provides an instrument to assimilate with the changing circumstance (Patil, 2012), therefore, education is globally recognized agent of socio-economic development of a nation and also develop society morally and culturally. Thus, it helps improve human capital which guarantees the productivity of a country (GoP,

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2019). Furthermore, it is a driving force for national integration and social cohesion and reducing inequality (GoP, 2010). Serious endeavour and focus to the education sector and surety to its wide access not only reduce gaps within countries but also reduce inequality between and within countries by creating job opportunities and increase the productive capacity of the people, irrespective of race and gender (Checchi, 2006). The people are being paid for their marginal contributions which are different based on how much he/she is literate (Checchi, 2012). The education system progressed by human society and vice versa. Therefore, both human and economic development is the ultimate result of proper investment in the education sector. It has an important bearing on customs, traditions, beliefs, and the faith of society. However, it depends on the society to determine its values and pattern according to their need (GoP, 2009). Both monetary and non-monetary factors of human society are considered whenever an activity taking place. Education is one such activity that both the way affects society and also gets affected.

It has a multidimensional impact on society and the economy. Education brings political stability which induces foreign investors to invest. Thus, it helps create employment opportunities for the people which on the one hand reduce poverty while on the other hand increase economic growth and development. On the whole, it makes the labor force more productive and socially well-mannered (Afzal et al, 2010). Along with physical capital, human capital is a driving force for the economic growth of a country. Well-developed human capitals utilize resources efficiently and increase the pace of economic growth. It is both helpful for economic growth and political stability as well as a conducive social environment (Javed et al, 2008).

Education ensures human capital formation, increases the productivity of individuals and puts the country on the path of economic growth. It ensures sustainable development (Memon, 2007). It is commonly reflected as an instrument that helps reducing poverty; snowballing economic growth; empowering people; raising individuals' earning; promising a friendly environment and hence paving the way for more competitiveness in the economy. Furthermore, it provides deep insight into the new generation to cope with the complexities of the economies in the future (Afzal *et al*. 2010). Education improves the skill, enhances the knowledge, and increases the capabilities of an individual which is the key objective of every institution at all levels such as schools, colleges, and universities (Fasasi, 2011). Education provides skills that help utilize resources efficiently which boost economic growth. The main problem of poor countries is the lack of skill due to high illiteracy which made their resources untapped (Berg, 2010). Besides, the economic benefit,

education has social benefits as well. It includes a lower fertility rate, improve the condition of sanitation, saving lives and educate the women and thus enrich the workforce (Jimenez & Patrinos, 2008). Furthermore, it brings social cohesion due to the interaction of educated people. Besides, education also brings awareness among people across the globe to tackle dangerous diseases such as HIV/AIDS. This ensures a sound and healthy society. Education, on the one hand reducing poverty while on the other hand it brings improvement in the political atmosphere of the country and improves the law and order situation. In addition, it also has a significant positive impact on the continuity of democracy and the reduction of the crime rate (Berg, 2010). Patil (2012), while explaining the education in static and dynamic societies argued that education is just a mean in static society to transmit it customs and traditions of the society to its predecessor while in dynamic societies along with the transmission of customs and tradition, it also prepares the future generation to adapt to the changing circumstances.

Looking at the past, the literacy rates for the world population have increased in the last couple of centuries significantly. In 1820, the literacy level for the world population was just 12 percent, and in 2016, the trend has reversed: we have only 14 percent illiterate population. From the past seven decades, the world literacy rate increased by 4 percent every five years.

In the light of the above-mentioned studies, it has been found that education has a greater impact on the living standard and well-being of an individual as well as on the whole society. It plays a vital role in increasing income of the people. It can be concluded that education has a significant impact on income of the individuals, reducing poverty, increasing employment opportunities, reducing income inequality, enhancing the country's economic growth by increasing the productivity of the workforce, and generating human capital as well increasing the country export. On the social front, education brings political stability, reduces the crime rate, narrows the gender gap, improves the living standard of the people, brings social and political awareness among the mass and improves the health care system. Besides, those who have access to education are less likely to place a high demand on the public health care system and public welfare programs. Moreover, education plays an important role for women which not only increases employment opportunities for them and makes them economically independent but also helps to get rid of dowry which they are liable to pay at the time of marriage. Because in the past study it is has been found that man prefers educated woman rather than taking dowry.

In previous studies, the effect of education on a different form of poverty (extreme poverty, moderate poverty and rich), quality of life, and well-being of rural households were not found. The present study focused on determining the effect of education on poverty, quality of life, and well-being of the people residing in the rural area. In this study, poverty was measured based on income. Moreover, this study also conducted to know the differences in income among the different educated groups. Besides, the role of education on quality of life and well-being were also included in this study where no previous study was conducted to investigate these variables and its effect on poverty and well-being. New variables such as remittances, skill, family size and skill were also included to know its effect on poverty.

Poverty

Poverty is a situation in which a person or community has a dearth of the monetary resources for a minimum standard of living. Poverty means that person's earnings are so low to cover the end meet. Poverty-ridden areas often face a lack of proper housing and sanitation; healthy food; medical attention, etc. Every country has its thresholds to determine how many people are living below the poverty line (James, 2020). Poverty can also be defined as the deprivation of a socially acceptable amount of money or material ownership. Poverty is said to exist when people don't have sufficient resources to satisfy their basic needs. In this scenario, it is necessary to determine what the basic need is? The basic need may be those essential for survival or maintaining social status in the community. The first benchmark includes those people who could hardly get out of starvation or live hand to mouth, the second benchmark includes those people who have adequate housing, nutrition, and clothing but are not up to the mark of the whole community. Explaining poverty is further compounded when the noneconomic strings attached to it i.e., poor health, low levels of education or skill, incapacity or reluctance to work, high rate of unruly or confused behaviour, and profligacy. While these factors have often been found to exist with poverty their inclusion in the definition of poverty tends to unclear the relation between them and the inability to provide one's basic requirements. Whatever definition one uses, experts and amateurs alike commonly assume that the effects of poverty are detrimental to both individuals and society (Adam, 2020). People who earn less than $1.9 a day are extreme poor, those who earn $1.9-$5 a day are moderate poor and those who earn above $5 a day are non-poor (World Bank, 2018). A condition in which a person or household does not have sufficient resources to consume a certain basket of commodities. The basket consists either of nutrition,

clothing, housing, and other necessary items (moderate poverty) or of nutrition alone (extreme poverty) (Asra, 2016)

Well-being

There is no consensus on a single definition of well-being, but there is general agreement that well-being includes the existence of positive feelings and temper and the nonexistence of hostile feelings, satisfaction with life. In simple terms, well-being can also be defined as thinking positively and judging life better. For general health purposes, physical well-being is important to overall well-being (CDC, 2018). Experts belonging to a different field of study have observed different features of well-being that include the following.

Physical well-being

- Economic well-being.
- Social well-being.
- Development and activity.
- Emotional well-being.
- Psychological well-being.
- Life satisfaction.
- Domain specific satisfaction.
- Engaging activities and work

However, the scale developed by Gupta and Singh in 2001 to measure well-being consists of five sub-scale namely physical well-being, mental well-being, social well-being, emotional well-being, and spiritual well-being.

Education in the World

The high world literacy rate is the cornerstone of development, yet most countries in the world face an all-time neglected issue of high illiteracy. Nowadays more than 20 % of school-aged children are deprived of attaining fourth-grade education. Another 20% are failed to read and write a single sentence. High dropout is the other issue the developing world face in the field of education. This issue is further exacerbated by poverty, gender inequality, social taboos, conflict, and disability. Quality education is the sure path to get rid of poverty yet many universities across the globe are unable to train the student to meet the 21st-century challenges (Global Education Report, 2020). Today, millions of children are deprived of their basic right – education.

The situation presents a grim picture when it comes to primary education and as we approach the hierarchy of education the problem is further complicated. The world over, more than 72 million children of primary school age are unable to attain school and another 759 million children don't have basic literacy skills to improve their lives. The major reasons for mass illiteracy at the global level are poverty and a low level of government spending on education. In most parts of the world, children are unable to attain basic school due to gender inequality, social taboos, and cultural identity.

These children feel marginalized and often subjected to discrimination which crippled their intellectual development. Poverty, unemployment, and illness of parents are the major factors that compound the illiteracy of their children. Children in poverty-stricken areas are forced to leave education and support their families financially. Many developing countries do not allocate the funds required to the proper infrastructure of schools and materials as well as train or recruit the teachers. Even funds pledged by the international community are not sufficient to educate the children in the world over who are deprived of schooling. As a result of poverty, and marginalization, millions of children around the world are unable to attain school.

Sub- Saharan Africa presents a bleak picture all over the world in terms of illiteracy. It is one of the world's most affected regions where more than 32 million children aged 5-10 have no schooling. Besides, the situation in central and eastern Asia is also not very different from sub-Saharan Africa. More than 27 million primary-aged children remained uneducated.

Sub-Saharan Africa has a doom day scenario when it comes to the number of year's education its children receive. The region has more than half of its children receive less than 4 years of education. In some African countries, such as Somalia and Burkina Faso, over half of its children receive education below 2 years.

The lack of infrastructure and poor schooling system has an adverse effect on its population. The children are unable to continue

their education without learning basic skills and knowledge, which is a big impediment in the way of development of these countries (Humanium report, 2019).

Education in South Asia

Education is one of the basic human rights and paved the way to understand other rights. It plays a constructive role in the development of individuals and the whole society. The problem of illiteracy is severe in the south Asian region, where according to some estimates 11.3 million children at the primary level are unable to attain

school. The situation at the secondary level further deteriorates. At the secondary level, 20.6 million children are not attending school. In South Asia, the quality of education at the primary and secondary levels is severely been compromised. Millions of children aged 5-15 are unable to read and write.

Classrooms in sub-continents are overcrowded and based on rote learning. Children in South Asia often face corporal punishment and discrimination based on gender, colour, creed, and religion. The movement of girls is restricted due to societal culture and norms. Quality education shrinks the dropout rates and safeguards healthier transitions at the primary and secondary levels (UNICEF, 2017).

South Asia is prone to natural calamities, political instability, terrorism, radicalism, and a rising civil conflict which badly affect the learning environment of children residing in these countries. The increased natural and artificial crises hamper the quality of education to be delivered to children. Moreover, the fiscal deficit is also one of the major factors in delivering quality education to children (UNICEF, 2017). The current education system in South Asia is mired with multiple problems such as lack of access to school, low government and private spending, social and cultural problems, gender inequalities, and low quality. The region faced a vicious circle of low enrolment, low literacy, dearth of skilled workforce, low level of GDP growth and compromised standard of living" (Tilak 2011, p.233). The low quality and illiteracy in south Asia is the big impediment in the way of human resource development and hamper its growth and economic development (Haq and Haq 1998, p. 34). Some countries in the region have taken some steps to improve the quality of education but not up to the mark as required for human development and the economic progress of a country. The major reasons are the lackadaisical approach on a part of government and lack of social will to exert pressure on those responsible to deliver.

Governments of south Asian countries seem less interested though the people are now vigilant and, in a position, to force the political elite toward quality education and a better schooling system.

Table: 1.1

Country Wise Literacy Rate of South Asia

Country	Literacy rate	Population
Maldives	99.30%	540,544
India	71.20%	1,380,004,385
Nepal	63.90%	29,136,808
Bangladesh	61.50%	164,689,383
Pakistan	57.90%	220,892,340
Afghanistan	38.20%	38,928,346

Sri Lanka	92.60%	21,413,249
Bhutan	64.90%	771,608

World population review: 2020

Education in Pakistan

Pakistan is confronted with grave challenges to make sure all children, especially the destitute, to attend, stay, and learn. While the government made a hectic effort to increase enrolment and retention rate yet it is far behind to improve its educational indicators.

Presently, Pakistan is the worst country in terms of educational attainment and out-of-school children in the world after Nigeria with an estimated more than 22 million school-aged children being deprived of schooling which makes 44 percent of the total population in this age bracket. More than 5 million primary-aged children are not attending school while the issue is exacerbated when it includes after primary-aged children. Income inequalities, gender discrimination, social taboo, conservative mindset, and cultural norm are the major factors that restricted children, especially girls to attain school. The most vulnerable provinces are Baluchistan and Sindh where 52 percent and 78 percent of destitute children are out of school. Nearly 10.7 million boys and 8.6 million girls are enrolled at the primary level and it reduces to 3.6 million boys and 2.8 million girls at the lower secondary level (UNICEF, 2018).

Despite the low indicator of education, Pakistan's education system is also not based on uniform principles (Iqbal, 1981). Pakistan has a different education system working simultaneously in the country. Each education system has its own curriculum which leads to creating different schools of thought. For example, students who graduated from a public university, elite schools, and Deeni Madaris have different and contrasting opinions that cannot be converged on a single issue. All this is happening due to the divisive education system of the country (Zaki, 1989). The prevailing system of education poses a great threat to national integration. This creates a deep fissure among the nation. The rising terrorism, extremism, sectarianism, and hatred are the consequences of this divisive education system. Moreover, the prevailing education system made it difficult to bring to the table the different schools of thought to solve national issues whether it may be economic, political, or social. It divided the nation on the ideological ground and devastated social cohesion. Furthermore, the government seems reluctant to invest in education. It spends only a meagre amount of just 2 percent of its GDP. Till 2018-19 the expenditure on education saw an upward trend but the expenditure has decreased from Rs. 868 billion to Rs 611 billion in 2019-20 (GoP, 2020).

Table: 1.2

Province Wise Literacy Rate

Province	Literacy rate					
	1972	1981	1998	2018	2019	2020
Punjab	20.7%	27.4%	46.56%	61.9%	64.7%	64%
Sindh	30.2%	31.5%	45.29%	63.0%	62.2%	58%
Baluchistan	10.1%	10.3%	26.6%	54.3%	55.5%	46%
KP	15.5%	16.7%	35.41%	54.1%	55.3%	55%

Pakistan Economic Survey 2020

Statement of the Problem

Education is the main driving force that separates the developed and developing countries as well as the least developed area and more developed area. A society where the literacy rate is low, often face multiple social and economic challenges such as poverty, income inequality, low per capita income and less well-being.

This study aims to know the effects of education on poverty and well-being on rural households in district Hangu. Most specifically, does education help reduce poverty? And does it help in achieving the well-being of the people? These were the questions that were answered through detail empirical evidence.

Objectives

The objectives of the study include:

1. To study the effect of education on poverty of rural households in district Hangu.
2. To determine the difference between less educated and more educated rural households on physical well-being, social well-being, emotional well-being, mental well-being and spiritual well-being in district Hangu.

Hypotheses

H_1: Education has no effect on the poverty of rural households in the study area.

H_2: There is no difference between less educated and more educated rural households on physical well-being, social well-being, emotional well-being, mental well-being and spiritual well-being in the study area.

Scope and Limitation of the Study

This research work was done in the rural area of district Hangu in 2020-21. The urban area was not included because a similar study was already conducted in the urban area of the same district. In the rural area, five major villages were randomly selected which represent a quarter of households in the entire rural setup of district Hangu. The research study was based on primary data by using a questionnaire. The sample of the study included male respondents only while the data were not taken from the female respondents due to cultural constraints. Besides, the data were taken from those respondents who must be married, must have children, and must have some level of literacy in order to achieve the desired objectives. The primary objectives of the study include the effects of education on poverty and well-being and identify the difference in mean income among different educated groups in rural households. The variables included in the study are education, skill, age, family size, family income, and remittance.

The study may have potential limitations. The effects estimate in the model are for those households who have male heads, children, some level of literacy, and married. They are therefore subject to biases and confounding that may have influenced our model estimates. It will give a much better result if the number of villages increases in the sampling and collect the data through stratified random sampling from each education strata. Besides, the study will be improved if female respondents were included.

Contribution of the Study

In addition to practical implications, the present study also contributed to existing literature. This study contributed to the current understanding of how education reduces poverty and increases the well-being of the people. The holistic analysis of this study added to existing research by identifying a group of households with different educational backgrounds and concludes that education helps reduce poverty and increase well-being.

The present study develops a new methodology for an existing model. In the previous studies, the dependent variable was taken in a discrete form with a single category and created a dummy for each independent educational variable. However, the current study came up with a new approach by using multinomial logit. The dependent variable poverty was taken into three categories and also developed a category for each educational variable as independent instead of a dummy. Moreover, the present study was conducted in a new area with a rural setup while the previous studies were executed in an urban setup in South America. Moreover, this study also included some new

variables in the model like the effects of remittance and skill on poverty and excluded the variable literacy which was taken as a dummy in the previous study.

Review of literature

In this section, the previous research work done on a similar topic by the research scholars was discussed. Wide-range of works of literature on the effects of education on poverty and well-being were found. Moreover, the impact of education on living standards, income inequality, and social and economic development were also highlighted. The results and conclusions of the past studies were presented in the following paragraphs briefly.

Jimenez & Patrinos (2008) in their study found that return to education in under developed countries is higher than in advanced countries and this higher return is attributed to the lack of human capital in these countries. Moreover, investment in human capital provides room for the government to invest in this sector that gives a higher return. They further noted that in poor countries, investment in the primary level of education is higher than secondary and tertiary levels. Education has a vital role in the socio-economic progress of a society. Each year of education increases the economic growth of a country by 0.58% in both developed and developing countries (World Bank, 2007) and there exists a strong relationship between the level of education and export competitiveness (World Bank, 2009). In addition, education guaranteed other non-economic benefits, such as national cohesion and socialization (World Bank, 2012).

Kevin et al. (2014) in their research work "The Effect of Education on Political Participation in Electoral Authoritarian regimes: Evidence from Zimbabwe" found that education decrease individual political participation. The study found that as the level of education increase from the education reform brought by the government, a person will less likely to vote in the general election, contact local councillors or attend a community meeting. With higher education, a person needs more economic reform, more likely to be critical of the government and support opposition parties.

Pervez (2014) in his paper "Impact of Education on Poverty Reduction: A Cointegration Analysis of Pakistan" used time-series data from 1972 to 2006 from the Economic Survey of Pakistan, World Development indicator, Food, and Agriculture Organization, and Handbook of Statistics State Bank of Pakistan. Augmented Dickey-Fuller (ADF), causality, and Johansen cointegration methodology were used to test the existence of a long-run relationship between variables. The study concluded that more education and high

enrolment rate have an inverse and substantial impact on poverty in the long run but life expectancy has a positive correlation with poverty. More spending on quality of education was recommended to policy maker by the research scholar.

Breen and Inkwan (2015) in their study focus on income inequality and education. they worked on the general perception of the people that those who have high education will earn more and become the reason for growing income inequality in the US and elsewhere. They investigate the extent to which increasing the educational attainment of the US population might ameliorate inequality. They collected the data and measured inequality within-person, between-person, and between education parts. The study found that the between education contribution to inequality is small and any realistic educational strategy does not have any significant impact on income inequality.

Rehman and Deen (2015) found the relationship between income inequality and education inequality by using household-level information for Bangladesh. They study concluded that education inequality contributes positively to income inequality. However, inequality in income could be reduced by increasing the average year of schooling.

Sara *et al.* (2016) analysed the impact of education on the quality of life and well-being of 100 educated and 100 uneducated Muslim women by using a snowball sampling technique in District Aligarh, India. It has been found that due to education men seems more interested to be marrying with educated women rather than taking wedding gift. Moreover, girls enjoy more job opportunities and economic independence due to education.

Kayani *et al.* (2017) in their research work titled "Analysis of Socio-Economic Benefits of Education in Developing Countries: An Example of Pakistan" analyse the social and economic advantage of education for the under developed countries in general and for Pakistan, particular. Their study was based on secondary data. The study found that education has numerous social and economic benefits. On the economic front, it provides employment opportunities, raises earning, alleviates poverty, and increase export while on the social front, it creates social responsibilities, health care and creates political awareness. The study also concluded that the social benefit of education is much greater than the economic one and suggested that the administration and civil society should invest in education to obtain the benefit of it. It not only secures the society but also puts the country on the path of economic stability.

Bici and Cela (2017) concluded that the risk of being poor is influenced by education level. Education and poverty are factors that

influence each other. In this paper other important social factors were also analysed that influence poverty and as a result education. In this paper, education was taken as a dependent variable and income/consumption level, household composition, health status, and geographic division were taken as independent variables. It has been found a positive relationship of higher level of education and good health. Individual having good health are highly educated as compared to his/her counterpart having not good health. Moreover, the study also found that poverty level affect education directly or indirectly. Individual who are financially better are more educated.

Zhao, K., & Zhang, X. (2019) in their research titled "Overview of the poverty-Alleviation by supporting education in China" have found that education has a significant impact on alleviating poverty from china during 1988-2020. Based on the literature in the CNKI database, this study took "poverty alleviation by supporting education" as the subject, and conducted a bibliometric analysis of the publications in the field of China's poverty eradication by education during 1988-2020.

Moritz et al. (2020) investigated the Impact of Education on Sustainable Economic Development in Emerging Markets in Namibia. The study aims to analyse the importance of tertiary education and its effect on sustainable economic progress. The authors found that the multiculturalism in Namibia and its unequal distribution of resources created many hurdles for ethnicities in accessing educational institutions. Moreover, the problems of tertiary education in Namibia are lack of infrastructure, poor quality of curricula, and absence of international expertise. The author suggested that raising the Namibia tertiary educational quality and its access would lead to diversify its economy and accelerate its internationalization process. Furthermore, corruption, unemployment, and multidimensional poverty are the other challenges that hampered the development of a country generated by tertiary education.

In previous studies, the effect of education on a different form of poverty and well-being of rural households were not found. The present study focused on determining the effects of education on poverty, quality of life, and well-being of the people residing in the rural area. In this study, poverty was measured based on income. Besides, the role of education on quality of life and well-being were also included in the present study where no previous study was conducted to investigate these variables and its effect on poverty and well-being.

Research Methodology

This section was allocated to research methodology. In this section the required techniques and models were employed that best fit for the objectives of the study. Following are the methods and procedures that were employed to get the results.

Universe of the Study

The study was conducted in rural area of district Hangu. A research study was carried to know the effect of education on poverty and well-being of rural households in district Hangu.

Sampling and Sample Size

The rural area of district Hangu consists of fifty-three villages (Pakistan Bureau of Statistics, 2017). Five villages were randomly selected out of it. A multi-stage sampling technique was opted for sampling. In the first stage district Hangu was randomly selected from the province Khyber Pakhtunkhwa. In the second stage, five villages were randomly taken among fifty-three villages in the rural setup of the same district. In the third stage, the sample size from each village was taken according to the number of households in each village by applying proportional allocation method. The total number of households in the above five selected villages is 1,1224. Based on Krejcie and Morgan's (1970) table for determining sample size, for given households with 95% confidence interval and 5% margin of error, a sample size of 375 would be needed.

Table 1

Table for Determining Sample size of a known Population

N	S	N	S	N	S	N	S	N	S
10	10	100	80	280	162	800	260	2800	338
15	14	110	86	290	165	850	265	3000	341
20	19	120	92	300	169	900	269	3500	346
25	24	130	97	320	175	950	274	4000	351
30	28	140	103	340	181	1000	278	4500	354
35	32	150	108	360	186	1100	285	5000	357
40	36	160	113	380	191	1200	291	6000	361
45	40	170	118	400	196	1300	297	7000	364
50	44	180	123	420	201	1400	302	8000	367
55	48	190	127	440	205	1500	306	9000	368
60	52	200	132	460	210	1600	310	10000	370
65	56	210	136	480	214	1700	313	15000	375
70	59	220	140	500	217	1800	317	20000	377
75	63	230	144	550	226	1900	320	30000	379
80	66	240	148	600	234	2000	322	40000	380
85	70	250	152	650	242	2200	327	50000	381
90	73	260	155	700	248	2400	331	75000	382
95	76	270	159	750	254	2600	335	1000000	384

Note: N is Population Size; S is Sample Size *Source: Krejcie & Morgan, 1970*

The formula for determining sample size by Krejcie and Morgan is shown in the equation 1.

$s = \chi^2 NP(1-P) \div d^2(N-1) + \chi^2 P(1-P)$ …… 1

s = Required sample size.

χ^2 = The table value of chi-square for 1 degree of freedom at the desired confidence level (3.841)
N = The population size
P = The population proportion (assumed to be .50 since this would provide the maximum sample size).
d= The degree of accuracy expressed as a proportion (.05).

Research Approach

The present research study is based on both qualitative and quantitative approach. The data regarding income and education were taken in quantitative term while the variables related to living standard and well-being were taken in qualitative term. The mix approach was selected in a sense to achieve a desirable result because we cannot use single approach due to the nature of the data.

Data Collection

The study to be analysed depends on primary data. For that purpose, broad questionnaire schedule was constructed which contains sets of questions that cover the objectives of the present research study. Primary data were randomly collected from sample respondents by using questionnaires.

Theoretical Framework

Education is an investment for both government and people. For the government, investment in education leads to economic growth due to increased productivity of individuals, bringing social and political stability and healthier lifestyles (Becker, 1993; Mincer, 1974). On the other hand, for people, investing in education increase one's earnings, provide an opportunity for high salary jobs; increase the chances for an individual to get employment; and speedier transitions to enhanced career prospects (Wahrenbug and Weldi, 2007). However, there remain some inconsistencies in the HE markets and the chances of opportunity are different in terms of gender, degrees, subject studies, and level of education (Psacharopoulos ,1994). In addition, the level of education is negatively related to the incidence of poverty (Masood *et.al*, 2011). This study led to analyse the level of education on the severity of poverty. Poverty has measured based on income. Those people who earn less than $1.9 a day fall in the category of extreme poverty, and those who earn $2 -$5 a day come in the category of moderate poverty while those people who earn above $5 a day is considered non-poor (World Bank, 2018).

Econometric Model for estimating the Effect of Education on Poverty

The Multinomial Logistic regression model was used as we have a dependent variable with more than two categories. The Multinomial Logistic regression is a classification that generalizes the logistic regression method to multiple problems, for more than two possible discrete results. It is used to predict the likelihood of possible outcomes of a categorical dependent variable, given a set of independent variables. In this model, poverty is taken as a dependent variable while education level of the respondents with categorical form such as primary, middle, matric, intermediate, bachelor and master or professional; the age of the respondents; total family size; the employment status of the respondent; remittance; migration in the past five years and skill of the respondent are taken as an independent variable. The dependent variable poverty has more than two outcomes (extreme poor, moderate poor, and non-poor). When an earning of a person is below the international poverty line of $1.90 per day, he/she comes in the category of extreme poverty while moderate poverty refers to an income level between $1.9 and $5 a day (World Bank, 2018), and those who earn above $5 a day will be considered non-poor. In Pakistan, poverty can also refer to a situation where a household is unable to consume a basket of commodities consisting of essential items. Those households that afford a basket consisting of only foods are extreme poor while those households which barely meet the expense of food, clothing, housing, and other essentials are moderate poor (Asra, 2016).

Econometric Model

$$Pconp = \beta_0 + \beta_1 PE + \beta_2 ME + \beta_3 MTE + \beta_4 IE + \beta_5 BA/BSc + \beta_6 M + \beta_7 age + \beta_8 FS + \beta_9 R + \beta_{10} SKL + \varepsilon_i \quad \ldots\ldots 1$$

Dependent Variable

Pconp: It represents the condition of poverty where non-poor = 1, moderate poor = 2 and extreme poor = 3

Independent Variables

PE: Refers to primary education where Primary completed = 1; Not completed primary = 0

ME: Refers to the middle level where middle level completed= 1; Not completed =0

MTE: Refers to matric education where matric Education completed = 1; matric education not completed = 0

IE: Refers to intermediate education where intermediate education completed = 1, Not completed = 0

BA/BSc: Refers to fourteen years education where fourteen years education completed = 1, not completed =0

M: Refers to sixteen years education where sixteen years education completed = 1, not completed = 0

age: Variable to indicate the age of the respondent

FS: Refers to the number of inhabitants in the family

R: Whether the respondent receive remittance, Yes = 1 and No = 0

SKL: Refer to whether the respondents have some skill, Yes = 1, and No = 0

Well Being Scale

This scale was established by Singh and Gupta (2001). This scale is contained five sub-scale namely; physical wellbeing, mental well-being, social well-being, emotional well-being, and spiritual well-being. Each sub-scale has ten items and there are 50 items in total. Scores on all the sub-scale added up to get a composite score as total well-being. The minimum and maximum scores can be 50 and 250 respectively. It consists of 29 positive items and 21 negative items. This was used to determine differences in well-being between less educated (0-8th class) and more educated (class 9th to onward) (Javid, 2016). An independent sample t-test was used to measure the mean difference.

$$t = \frac{\overline{x}_1 - \overline{x}_2}{s_p \sqrt{\frac{1}{n_1} + \frac{1}{n_2}}}$$

$\bar{x}_1$= Mean of first sample

$\bar{x}_2$= Mean of second sample

n_1 = Sample size (i.e., number of observations) of first sample

n_2 = Sample size (i.e., number of observations) of second sample

s_1 = Standard deviation of first sample

s_2 = Standard deviation of second sample

S_p = Pooled standard deviation

Results and Discussion

Interpretation of Econometric Model for the Effect of Education on Poverty

Table 2 shows the result of the multinomial logit model. Here, non-poor are taken as a reference category. The result shows that the explanatory variables have a significant impact on the response variable as the p values of the predictors are less than the alpha value. The coefficients of the multinomial logit model for moderate poverty are given in part A of the table. It shows that among the moderate poor respondents, education, age, family size, remittance and skill have a significant impact on reducing moderate poverty. The multinomial logit for an individual having moderate poverty with middle education relative to primary education is 2.0777 units lower for being in moderate poverty relative to non-poor given all other predictor variables in the model remain the same. Similarly, the multinomial logits for an individual having moderate poverty with matric, intermediate, bachelor and master education relative to primary education are 1.9628, 1.7809, 1.7174 and 1.6270 units lower for being in moderate poverty relative to non-poor given all other independent variables in the model are held constant.

Likewise, if respondent age increase by one unit, the multinomial log-odds for an individual belongs to the moderate poor category relative to the non-poor category would be expected to decrease by 0.1154 units while holding all other variables in the model constant. Furthermore, a unit increase in remittances and skill, the multinomial log-odds for a respondent having moderate poverty relative to non-poor would be expected to decrease by 0.8847 and 1.3621 units keeping all other variables constant. However, a unit increase in the family size for an individual having moderate poverty relative to non-poor, the multinomial log-odds would be expected to increase by 0.3578 units.

The coefficients of the multinomial logit model for extreme poverty are given in part B of the table, where a unit increase in predictors gives us about its impact relative to the reference category 1 (non-poor). Here, the multinomial logit for an individual with middle education relative to primary education is 2.2796 units lower for being in extreme poverty relative to non-poor given that all other variables in the model are held constant. Similarly, the multinomial logits for a respondent belong to this category with matric, intermediate, bachelor

and master education relative to primary education are 2.1283, 2.1053, 1.7356 and 1.6619 units lower for being in extreme poverty relative to non-poor given all other independent variables in the model are held constant.

Likewise, if respondents' age, family size, remittances and skill increase by one unit, the multinomial log-odd for an individual belongs to extreme poor category relative to the non-poor category would be expected to decrease by 0.1094, 0.3896, 0.9112 and 1.5598 units, keeping all other variables are held constant.

The relative risk ratios (RRR) for the multinomial logit model is shown in the last column of the table. They can be obtained by exponentiating the multinomial logit coefficients, e^{coef} . The RRR values for the moderate poor category are shown in part A of the table. It indicates that individuals in moderate poor category-2 with middle level of education versus the primary level of education are 0.1252 less likely to be poor compared to base category-1, i.e., rich. Similarly, an individual in the moderate poor category-2 with matric, intermediate, bachelor and master level of education versus primary education are 0.1404, 0.1684, 0.1795 and 0.1965 less likely to be poor compared to the base category-1 (rich).

Likewise, if the respondent age increases by one unit, the relative risk for being in the moderate poor category to rich would be expected to decrease by 0.8909. similarly, if the respondent of moderate poor category receives remittances relative to those who do not, the relative risk ratio for being in moderate poor category relative to base category (rich) would be expected to decrease by a factor of 0.4128 given the other variables in the model are held constant. In the same way, if the respondents of the same category have skill relative to those who do not, the relative risk ratio for being in the moderate poor category relative to the base category (rich) would be expected to decrease by a factor of 0.256. However, a unit increase in the family size of the respondent belongs to a moderate poor category, the relative risk ratio for being in the moderate poor category relative to base category-1 (rich) would be expected to increase by a factor of 1.4306.

Table 2

Result of Multinomial Logit Model

Dependent variable (Poverty)	Coefficients	Z Value	P-value	RRR
1 (non-poor) Base outcome				
2 (Moderate poor)		(A)		
Primary		Base category		

Middle	-2.0777	-3.34	0.001*	0.1252
Matric	-1.9628	-3.58	0.000**	0.1404
Intermediate	-1.7809	-3.20	0.001*	0.1684
Bachelor	-1.7174	-3.20	0.001*	0.1795
Master	-1.6270	-2.77	0.006*	0.1965
Age	-0.1154	-2.51	0.012*	0.8909
Family size	0.3578	2.50	0.012*	1.4302
Remittance	-0.8847	-2.58	0.010*	0.4128
Skill	-1.3621	-4.12	0.000**	0.2561
Constant	3.7412	1.93	0.054	42.1491
3 (Extreme poor)		(B)		
Primary		Base category		
Middle	-2.2796	-3.52	0.000**	0.1023
Matric	-2.1283	-3.74	0.000**	0.1190
Intermediate	-2.1053	-3.64	0.000**	0.1218
Bachelor	-1.7356	-3.15	0.002*	0.1762
Master	-1.6619	-2.89	0.004*	0.1897
Age	-0.1094	-2.50	0.012*	0.8963
Family size	-0.3896	-2.56	0.010*	0.6772
Remittance	-0.9112	-2.56	0.010*	0.4020
Skill	-1.5598	-4.41	0.000**	0.2101
Constant	7.6861	3.90	0.000**	2177.875

Source: Field survey (2020)

The RRR values for the extreme poor category are shown in part B of the table. It indicates that individuals in extreme poor category-3 with middle level of education versus the primary level of education are 0.1023 times less likely to be poor compared to base category-1, i.e., rich. Similarly, individuals in the extreme poor category-3 with matric, intermediate, bachelor and master level of education versus primary education are 0.1190, 0.1218, 0.1762 and 0.1897 times less likely to be poor compared to the base category-1 (rich).

Likewise, if the respondent's age increases by one unit, the relative risk for being in the extreme poor category to rich would be expected to decrease by 0.8963. Similarly, if the respondent of extreme poor category receives remittances relative to those who do not, the relative risk ratio for being in moderate poor category relative to base category (rich) would be expected to decrease by a factor of 0.4020 given the other variables in the model are held constant. In the same way, if the respondents of the same category have skill relative to those who do not, the relative risk ratio for being in the extreme poor category relative to the base category (rich) would be expected to decrease by a factor of 0.2102. Moreover, a unit increase in the family

size of the respondent belongs to the extreme poor category, the relative risk ratio for being in the extreme poor category relative to base category-1 (rich) would be expected to decrease by a factor of 0.6772.

Marginal Effect for Extreme Poor, Moderate Poor and Non-poor

Table 3 depicts the marginal effect of variables on the respondents belong to the extreme poor category, Moderate poor category and Non-poor category. The marginal effect of the extreme poor category is shown in part "A" of the table. It shows that each level of education has a negative relationship with extreme poor condition. It indicates that primary level of education has a marginal effect of 11% to overcome extreme poverty while master or above level of education has a marginal effect of 26%. Therefore, there is a 15-percentage point difference between the primary level of education and master or above level of education. The results are in conformity with that of Horacio et.al (2016) study who found that marginal effect of primary education to overcome extreme poverty is 13% while graduation has a marginal effect of 23% to overcome extreme poverty. It is pertinent to note that a higher level of education has a major impact on the educational variables, which shows that respondents who belong to the extreme poor category with a higher level of education increase the probability to overcome extreme poverty. The fact that the magnitude of the variables decreased over time can be explained by the decrease in extreme poverty and the increase in the number of people at different educational levels (Olavarricia, 2005).

Table 3

Marginal Effect for Extreme poor, Moderate Poor and Non-Poor

Variables	(A)		(B)		(C)	
	Extreme poor		Moderate poor		Non-poor	
	dy/dx	P>|z|	dy/dx	P>|z|	dy/dx	P>|z|
Primary	-0.11	0.001*	-0.08	0.000**	0.29	0.000**
Middle	-0.12	0.004*	-0.10	0.011*	0.31	0.000**
Matric	-0.16	0.005*	-0.13	0.012*	0.33	0.000**
Intermediate	-0.17	0.005*	-0.15	0.027*	0.36	0.000**
Bachelor	-0.22	0.024*	-0.21	0.023*	0.37	0.000**
Master	-0.26	0.035*	-0.28	0.044*	0.39	0.000**
Age	-0.008	0.065	-0.01	0.047*	0.02	0.001*
Family size	-0.50	0.000**	0.05	0.000**	-0.001	0.954
Remittances	-0.07	0.050	-0.07	0.047*	0.14	0.001*

Skill	-0.12	0.000**	-0.11	0.001*	0.22	0.000**

Source: Field survey (2020)

The result also indicates that age and remittances have an insignificant impact to overcome extreme poverty. Here, the p-value for age is greater than 0.05 and for remittances is equal to 0.05. However, both the variables – age and remittance- are significant with alpha 0.10 for the respondents to overcome extreme poverty. It shows that an addition of remittances reduces the poverty of the individuals in the extreme poor category by 0.07, keeping all other variables at their mean values. Similarly, the family size and skill of the individuals also show a negative relationship with extreme poverty and have a significant impact to overcome extreme poverty. An addition of a skilled person and an increase in a member in the family reduce the poverty of the individuals in the extreme poverty category by 0.12 and 0.50.

Part B of the table shows the marginal effects for moderate poor conditions. Same as extreme poverty, education is also negatively related to moderate poverty. The result shows that as the level of education of the respondent increase, the probability to overcome moderate poverty also increases. Here, the marginal effect of the primary level of education to overcome moderate poverty is 8% while the marginal effect of master or above level of education is 28%. Similar to that of extreme poverty, a higher level of education increases the probability to overcome moderate poverty.

The result also shows that age, remittances, and skill of the individuals also have a significant impact to increase the probability to overcome moderate poverty. Age has a negative association with moderate poverty but its contribution is negligible. The marginal effect of age, remittances and skill of the individuals who belong to moderate poverty is 1%, 7% and 11% respectively. However, a positive association has been found between family size and moderate poor condition.

The marginal effects for non-poor are shown in part C of the table. It has been found that the educational variables have a positive association with the probability of being non-poor. As the level of education of the respondents belongs to this category increase, its contribution to become non-poor also increases. Primary education has 29% contribution of not being poor, middle 31%, matric 33%, intermediate 36%, bachelor 37%, and master or above level of education has 39% contribution of not being poor.

Among the variables, higher education got a high contribution to the probability of not being poor. The analysis of the relationship

between education and poverty levels suggests that people with high education levels can easily be non-poor.

The result also highlights that age has a positive association with the probability of not being poor but its contribution is negligible. It contributes only 2% to the probability of not being poor while family size has an insignificant effect. The remittances and skills of the individuals also have a positive association with an individual not being poor. It contributes 14% and 22% of the respondent not being poor. In other words, the addition of remittances and skilled persons increases the chances for a person not to become poor by 0.14 and 0.22, keeping all other variables at their mean value. Education has a negative relationship with poverty. . The results are in conformity with the results of Horacio et.al (2016) who also found the negative relationship with education and poverty. As the level of education increase the probability of being moderate poor and extreme poor decrease. The results are in line with that of Mirela (2012) findings who also reported that higher level of education reduces the risk of poverty.

Various Dimensions of Well-beings

Table 4 indicates a significant difference between less educated and more educated household heads on various dimensions of well-being. Significance differences were found in three domains of well-being: mental well-being, social well-being and emotional well-being. More educated household heads are more social (35.21), less emotional (32.10) and more mentally strong (33.75) as compare to less educated household heads at 0.05 alpha value. A highly significant difference was found in mental well-being and social well-being. Here, the P-value reaches 0.000 which is highly significant at 0.05. However, no difference was found on physical well-being and spiritual well-being. But there is a significant difference in the overall well-being between more educated households and less educated households. This means that the overall well-being of a more educated household is greater than less educated household. The results are in line with Javed *et al.* (2016) who also noticed a significant difference in social well-being, emotional well-being, and mental well-being between less educated and more educated Muslim females in India.

Table: 4

Well-being

Dimension		N	Mean	SD	T	*P* Value
Physical well-being	Less educated	165	34.10	3.58	-1.682	.093
	More educated	210	34.67	2.95		
	Less educated	165	29.58	1.64	-20.240	.000**

Mental well-being	More educated	210	33.75	2.21		
Social well-being	Less educated	165	30.36	2.19	-21.802	.000**
	More educated	210	35.21	2.08		
Emotional well-being	Less educated	165	32.76	3.50	-16.551	.027*
	More educated	210	32.10	2.15		
Spiritual well-being	Less educated	165	34.56	2.38	1.446	.149
	More educated	210	34.19	2.54		
Overall well-being	Less educated	165	161.38	7.05	-15.298	.000**
	More educated	210	169.94	8.14		
Cronbach's Alpha = .743						

Source: Field survey (2020)

The value of Cronbach's Alpha is 0.743 which indicates the test is reliable and suggests that the items have relatively high internal consistency. An instrument's internal consistency is based on the correlation between different items of the same test. This correlation indicates if several items supposed to measure the same construct produce similar scores. For Cronbach's Alpha, calculated with relationships between all pairs of items, internal consistency can fluctuate between zero and one, although there are occasionally unusual negative values, as well (this suggests a negative average covariance among items, which could mean that while the true population covariance among items are positive, sampling error has generated a negative average covariance in a given sample of cases or that the items do not really have positive covariance, and therefore may not form a single scale, they are not calculating the same thing). A generally recognized rule is that α of 0.6-0.7 specifies an acceptable level of consistency, and 0.8 or greater a very good level. However, values higher than 0.95 are not certainly good, since they might be a suggestion of redundancy (Hulin, Netemeyer, and Cudeck, 2001).

Conclusion

The research conducted in this paper highlights the association between different educational variables and their effect on the poverty of rural households. The study highlighted that education has a greater effect to overcome different forms of poverty. All the educational variables have significant effects for both extreme poverty and moderate poverty relative to non-poor.

Similarly, the marginal effect of all educational variables has increased as the level of education rise to overcome both moderate and extreme poverty where higher education has a higher effect to overcome poverty. In addition, the skill of the individual also plays a significant role in overcoming poverty. These findings are in line with the outcomes of Horacio et.al (2016) who determined that the marginal

effect of all educational variables has increased along with an increase in the level of education in Bolivia.

The outcomes show the probability that a household is considered rich, depending on educational variables. The probability of being non-poor shows an upward trajectory as the level of education increases. The higher the level of education, the higher the probability to become non-poor and vice versa.

The result also shows the effect of education on well-being. More educated families are better off on mental well-being, social well-being, and emotional well-being than less-educated families. However, spiritual well-being for more educated families is not significant.

References

Adam, A (2020) report on poverty. https://www.britannica.com/biography/Saint-Jean-Baptiste-de-La-Salle (accessed on 3 October 2020,)

Afzal, M., Farooq, M. S., Ahmad, H. K., Begum, I., & Quddus, M. A. (2010). Relationship Between School Education and Economic Growth in Pakistan: ARDL Bounds Testing Approach to Cointegration. *Pakistan Economic and Social Review*, *48*(1), 39-60

Afzal, M., Farooq, M. S., Ahmad, H. K., Begum, I., & Quddus, M. A. (2010). Relationship Between School Education and Economic Growth in Pakistan: ARDL Bounds Testing Approach to Cointegration. *Pakistan Economic and Social Review*, *48*(1), 39-60

Asra, H; (2016) Poverty condition in Pakistan. https://www.slideshare.net/drasra1/ poverty-in-Pakistan/ (accessed on 3 October 2020)

Asra, H; (2016) poverty condition in Pakistan. https://www.slideshare.net/drasra1/ poverty-in-Pakistan/ (accessed on 3 October 2020)

Becker G (1993) The economic way of looking at behaviour. J Polit Econ 101(3):385–409

Berg, S. V. D. (2010). Poverty and Education. Paris: The International Institute for Educational Planning, UNESCO

Bici, R., & Çela, M. (2017). Education as an Important Dimension of the Poverty. *ResearGate*.

Breen, R., & Inkwan, I. (2015). Income inequality and Education. *Sociological Science*.

CDC, 2018. Center for Disease Control and Prevention. https://www.cdc.gov/hrqol/ wellbeing.htm (accessed on 5 March, 2020)

Checchi, D. (2012). Education Inequality and Income Inequality. *JEL Classification: I20; J24; O15; N30*.

Checchi, D. (2006). *The Economics of Education: Human Capital, Family Background and Inequality*. Cambridge: Cambridge University Press

Fasasi, Y. A. (2011). Planning and Development of Higher Education in Kwara State, Nigeria. Academic Research International, 1(3), 125-129

Global education, 2020. https://www.worldlearning.org/programarea/global-education (accessed on 5 September, 2020)

GoP (2020), "Pakistan Social and Living Standard Measurement (PSLSM)" https://www.dawn.com/news/1628652

Government of Pakistan. (2009). National Education Policy 2009. Islamabad: Ministry of Education

Government of Pakistan. (2010). *National Education Policy 1998-2010*. Islamabad: Ministry of Education Government of Pakistan. (2009). *National Education Policy 2009*. Islamabad: Ministry of Education

Government of Pakistan. (2019). Pakistan Economic Survey 2018-19, Chapter 10, Education. Finance Division

Government of Pakistan. (2020). National Education Policy 2020. Islamabad: Ministry of Education

Haq, Mahbub UL, and Haq, Khadija. (1998). Human Development in South Asia: The Education Challenge. Karachi, Pakistan: Oxford University Press.

Horacio., V. Vargas. J., Perez O.D., (2016) "Impact of Education on Poverty in Bolivia" Economía coyuntural, Revista de temas de coyuntura y perspectivas, vol.1, núm. 4., pp. 33- 60

Hulin, C., Netemeyer, R., and Cudeck, R. (2001). Can a Reliability Coefficient Be Too High? Journal of Consumer Psychology, Vol. 10, Nr. 1, 55-58

Hulin, C., Netemeyer, R., and Cudeck, R. (2001). Can a Reliability Coefficient Be Too High? Journal of Consumer Psychology, Vol. 10, Nr. 1, 55-58

Humanium 2019. Report on global education. https://www.humanium.org/en/right-to-education/ (accessed, 2 September, 2019)

Iqbal M. (1981) "Education in Pakistan", Aziz publishers, Lahore.

James, 2020. Explaining the poverty. https://www.investopedia.com/terms/p/ poverty.asp (accessed on 3 October 2020)

Javed, S., Javed, S., & Khan, A. (2016). Effect of Education on Quality of Life and Well Being. *Indian Psychology* volume 3, Issue 3, No. 58,

Javed, Z. H., Khilji, B. A., & Mujahid, M. (2008). Impact of Education on Socioeconomic Status of Villagers Life: A Case Study of Shrienwala Village of Faisalabad. *Pakistan Economic and Social Review*, *46*(2), 133-146.

Javid, Z., Khilji. B., & Mujahid.M. (2008) "Impact Of Education On Socio-Economic Status Of Villagers Life: A Case Study Of Shrien Wala Village Of Faisalabad District" Published in Pakistan Social and Economic Review pp. 133-146

Jimenez, E., & Patrinos, H. A. (2008). Can Cost-Benefit Analysis Guide Education Policy in Developing Counties? Nc: The World Bank

Jimenez, E., & Patrinos, H. A. (2008). Can Cost-Benefit Analysis Guide Education Policy in Developing Counties? Nc: The World Bank

Kayani, M. M., Akbar, R. A., Kayani, A., & Ghuman, M. A. (2017). Analysis of Socio-Economic Benefits of Education in Developing Countries: An Example of Pakistan. *Bulletin of Education and Research*, 75-92.

Kevin, C., Grossman, G., & Marshall, J. (2014). The effect of education on political participation in electoral authoritarian regimes: evidence from Zimbabwe ∗.

Liu, B. (2019). Analysis of the development history of China's poverty alleviation by education and its role in promoting poverty alleviation. Youth Times, 2019(7): 73-76. [Chinese]

Masood S., Malik, N., S Haroon., Waqas, M, (2011), Impact of Education on Poverty Reduction. MPRA Paper No. 31826

Memon, G. R. (2007). Education in Pakistan: The Key Issues, Problems and the New Challenges. *Journal of Management and Social Sciences*, *3*(1), 47-55

Mincer, Jacob (1974). Schooling, Experience, and Earnings. New York: National Bureau of Economic Research.

Mirela., A (2012) "Links Between Education, Employment and Quality of Life: The Case of Romania" Published in Management & Marketing Challenges for the Knowledge Society. P.P 717-730.

Moritz. J., Bobek. V., and Horvat. T., (2020), "Impact of Education on Sustainable Economic Development in Emerging Markets—The Case of Namibia's Tertiary Education System and its Economy", published in MDPI, Institute of International

Management, University of Applied Sciences FH Johanneum, 8020 Graz, Austria;

Olavarricia, Mauricio (2005). "Pobreza, Crecimiento Económico y Políticas Sociales". Universidad de Chile

Pakistan Bureau of Statistics (2017) "Final Result Census- 2017" https://www.pbs.gov.pk/content/final-results-census-2017 (accessed on June 27, 2021)

Patil, N. P. (2012) "Role of Education in Social Change" International Educational E Journal, 1(2), 205-210.

Patil, N. P. (2012). Role of Education in Social Change. International Educational
E Journal, 1(2), 205-210.

Pervez, S. (2014). Impact of Education on Poverty Reduction: A Co-integration Analysis for Pakistan. *Journal of Research in Economics and International Finance*, 83-89.

Psacharopoulos, G. 1994. "Returns to Investment in Education: A Global Update." World Development 22(9): 1325-43.

Rehman, T; Deen, T; (2015) "Relationship between Income Inequality and Education Inequality: Evidence from Bangladesh" Department of Economics, Carleton University, Ottawa, Canada.

Sara.J., Javid.S., & Khan, A. (2016). Effect of Education on Quality of Life and Well Being. *Indian Psychology* volume 3, Issue 3, No. 58,

The World Bank. (2009). Accelerating Catch-Up: Tertiary Education for Growth in Sub-Saharan Africa. Washington DC: Author

The World Bank. (2012). Putting Higher Education to Work: Skills and Research for Growth in East Asia. Washington DC: Author

UNICEF 2017. https://www.unicef.org/rosa/what-we-do/education (accessed on 5 September, 2020)

UNICEF 2018. https://www.unicef.org/rosa/what-we-do/education (accessed on 1 January,2022)

Wahrenburg, M., Weldi, M. (2007). Return on Investment on Higher Education – Evidence on various subjects, Degree and Gender in Germany. Discussion paper, Goethe University Frankfurt.

World Bank (2007), "Report on Development and the Next Generation"

World Bank (2018) "Report on Poverty" https://www.worldbank.org/en/topic/poverty (accessed on 27 June, 2021)

World Bank (2018) "Report on Poverty" https://www.worldbank.org/en/topic/poverty (accessed on 27 June, 2021)

Zaki W. M. (1989) "Evaluation of Education Plans and Projects", Islamabad, National Book Foundation.

Zhang, S. (2020). Poverty alleviation by education policy evolution, policy evaluation, and prospects in China. Light Industry Science and Technology, 36 (7): 160-162. [Chinese]

Zhao, K., & Zhang, X. (2019). Poverty alleviation by education policy changes and experience in my country in the 40 years of reform and opening up. Renmin University of China Education Journal, 2019(1): 16-30. [Chinese]