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Poverty, Capital Formation, and Education: A Way towards Economic Growth Acceleration in Pakistan

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Abstract

Poverty has been recognized as one of the major hindrances in the path of economic development and growth. On the other side, the stimulating role of education in this regard has also been enlightened by the researchers. Therefore, this paper tries to integrate the impact of poverty, capital formation, and education on economic growth acceleration in the case of Pakistan. Besides, the role of human capital accumulation, financial instability, and remittance has also been integrated. This research occupies time series data from the period 1987 to 2021. Data set for all examined variables have been collected from an online portal World development indicator. For statistical examination, the gross domestic product has been utilized as the explained variable, while the Gini coefficient, education, remittance, financial instability, human capital accumulation, and capital formation has been integrated as the independent variables of this study. Here, the Autoregressive-distributed-lagged modeling approach has been finalized, after unit root test examination. Results disclosed that increased education significantly provokes high economic growth. On the other side, an increased poverty level may incur a static decline in the economic growth rate of Pakistan. A rise in population growth will statically slow down the economic growth in Pakistan. Based on the above estimation, the researcher suggested promoting financial stability along with quality education is needed which in turn accelerates human capital accumulation and stimulates high economic growth in Pakistan and also asserts to combat policies for poverty removal.

Keywords: *Poverty, Education, Capital formation, Remittance, Pakistan, inflation, and population growth.*

Introduction

Poverty means when people do not have enough money to satisfy their basic needs such as food, water, and shelter. Poverty is important because by studying poverty we plan the steps to be taken to improve human resources. Poverty is a socio-economic phenomenon that needs great attention as a socioeconomic disaster in the current era. Socio-economic issues are the factors that affect individuals' economic and social activities like education, population, employment and economic stability, etc. By analyzing poverty, we may also find out what are the reasons for people becoming poor. Poverty is one of the greatest problems which very severely disturbs the growth rate of Pakistan. Poverty means illiteracy, hunger, inadequate education, substandard health facilities, and lack of food, facilities and unemployment. Poverty has created a serious distrait among people. Due to poverty not only, poor people may tend to suffer but rich people may also tend to suffer. According to World Bank statistics of 2023, the poverty rate has expected to cross 37.2% ($3.65 per day). This rate is slightly low from recent years, as in 2018, the rate was 39.8%. Although, when we consider population growth in this regard, it raised 3 million more poor inhabitants than in 2018, which is an alarming situation. (Arif *et al.,* 2000).

In such societies, crime ratios increase like robbery, murder, corruption, gambling, money hoarding, etc. tend to increase much faster over time. And it also leads towards social de-collaboration among the masses. Due to the increased ratio of poverty social harmony tend to decline and conflicts and war may tend to rise (Anwar and Qureshi, 2002). So, all this conversion ends with the point that poverty is not only a social but also an economic monster or disaster that influences the whole society masses. The need for Time is to overcome this disaster via direct or indirect sources.

Poor people can't afford to get treatment from hospitals run for the general public. They are injustices in the time since the power is in the hand of rich people. The main causes of poverty are lack of education, high divorce rate, overpopulation, unequal access to resources, gender discrimination, poor governance, and many others. To improve poverty, there should be a high economic growth rate, increased investment level, employment, better

education, health facility, equality, freedom to choose and access economic resources and, many others (Page and Adams, 2003, Ali et al., 2021).
This research shows the affiliation between economic growth and poverty in the case of Pakistan. How much is the influence of poverty on economic growth over the examined time series? In this regard, indirect linkages have also been integrated such as low literacy or school enrollment, inflation, and population growth examined as an independent variable in this research. Moreover, the role of remittances and capital formation has been taken into consideration. Economic growth is the heftiest tool for reducing poverty and improving the quality of life in developing countries. Growth and employment opportunities give incentives for parents to invest in education (Tahir *et al.*, 2014; Adams and Page, 2005). Yet, it also creates inequality among the masses and creates class biases (rich and poor classes).

Research Hypotheses

- **Null hypothesis-1:** Human capital formation increases poverty in Pakistan.
- **Alternative hypothesis-1:** Human capital formation assist in combating poverty.
- **Null hypothesis-2:** Quality education have no role in combating poverty.
- **Alternative hypothesis-2:** Quality education not only combat poverty but also accelerates economic growth.

The research question of this study is to integrate the role of education, human capital formation, and financial stability in combating poverty in Pakistan.

There are following objectives are followed during this research:

- How strong is the affiliation amid poverty and economic growth?
- Estimate the impact of socioeconomic factors that are influencing poverty and economic growth affiliation like population, and secondary school enrollment.
- How human capital accumulation disturbs economic growth and provokes a high poverty rate.
- The role of remittance in the determination of poverty and economic growth must also be considered.

- Integrate the role of capital formation in determining economic growth in Pakistan.

This research has been systematized in a specific manner. Initially, after examining the problem statement, significance, and objectives of this paper, an ephemeral literature review section has been documented. In the third section, data collection and model specification are detailed, and, in the end, a static conclusion based on long-run statistics has been displayed. For further details, examine the following sections.

Literature Review

Arif *et al.* (2000) detailed the determinants of the poverty line by examining the basic need and calorie intake approach. Regression analysis was examined for the determination of the Poverty line. This study also examined the trend of poverty both in urban and rural areas for the period of 1984-1999. Their findings concluded the significant role of education and migration in poverty line determination. The study stressed the need for quality education in Pakistan. Arif *et al.* (2000) examined what are the reasons for the rise in poverty in Pakistan and their impact on primary school, health status and housing conditions. He examined the poverty trend in rural and urban areas. This study examined the trend of poverty in the 1990s. This article explained that there is a high gap between rural and urban areas in terms of health, education, water supplies and sanitation services. Because of this gap, people migrate to urban areas and suffer from poverty. To combat poverty there's a need to fill this gap.

Anwar and Qureshi (2002) studied trends in absolute poverty in Pakistan. The article estimates the poverty rate for different years in Pakistan. This article discussed absolute poverty. Absolute poverty means when the person does not have a minimum amount of money to meet basic needs. Different trends of poverty are estimated in the article between the year 1990-91 and 2001. According to them, there's a need to address absolute poverty rather than relative poverty. Page and Adams (2003) examined international migration, poverty, and remittance association in developing countries. The researcher examined cross country data in this study for 74 low, and middle-income countries. The findings of this study showed that there is no evidence for the statement that high poverty leads to high migration yet estimates for remittance affirmed that there is a negative relationship between remittance and poverty (Ali et al., 2021).

Tahir *et al.* (2014) studied the impact of the gross domestic product (GDP) growth rate on poverty in Pakistan. Data is collected from Economic surveys of Pakistan, the Ministry of Finance, the Federal Bureau of Statistics and the planning commission of Pakistan from 1980 to 2002. High unemployment rate and failure of govt. policies create a dangerous situation in the country. Poor become poorer with time because it's not necessary to increase GDP to reduce poverty. This study is based on data from 1980-2012. There are many criteria to measure poverty but, in this study, only Head Count Index is used to measure poverty. Hence, there's a need to integrate modern poverty measures like multidimensional poverty index, to know the exact depth of the problem (poverty).

Adams and Page (2005) examined the association of poverty and economic growth with remittance. Variables of the study are remittance, poverty, GDP growth, and some other factors. Their findings highlighted that remittance significantly helps a nation to cut down the level of poverty. An increase in the level of per-capita remittance may cause a reduction in the level of masses living below the poverty level. The nature of the analysis examined by them is cross-sectional.

Berrebi (2007) analyzed the relationship between poverty, education, and terrorism among Palestinians. In this study time series data for the period 1980-2002 examined Palestinians from Hamas and Palestinian Islamic Jihad (PIJ). Co-integration among the variables (poverty, education, terrorism) examined in this analysis. Results showed that positive association between education and standard of living while a negative association for poverty in the Palestinian economy. Afzal *et al.* (2012) explored the association between, economic growth, poverty, and education in the case of Pakistan's economy. The findings of the study affirmed the positive role of education and GDP growth in Poverty alleviation. They examined time series data for the case of Pakistan's economy from 1971-2010. Auto-Regressive Distributed Lagged model (ARDL), Augmented Dickey-Fuller (ADF), and Phillips Perron (PP) were the main techniques of this analysis.

Chaudhry and Rehman (2009); Moaz and Neeman (2008) also provoked that education has had a positive affiliation with poverty in Pakistan's case.

Nindi and Odhiambo (2015) examined the relationship between economic growth and poverty reduction in Swaziland during 1980-2011 using time series data. Financial development was used in this study as the third

variable. ARDL bounds testing approach to co-integration was used in this study. This study also explained that a high level of income inequality also leads to poverty. The first view postulates that higher economic growth trickles down to the poor. The second view, however, asserts that economic growth does not inevitably lead to poverty diminution. The latter view indicates that the salutary effects of economic growth 'trickle up' to the middle class and the super-rich.

Islam *et al.* (2017) analyzed the relationship between poverty income inequality and economic growth in Malaysia. This study used primary data by covering the period 1970-2014 applying regression analysis. The main objective of the study was to reduce poverty and income inequality with the help of government strategies in the concerned countries. The result of the study suggested that government should apply different policies like education policy, and financial assistance through the government or N.G.O. to improve the living standard and quality of life in developing countries.

Yasmeen *et al.* (2021) integrated the long run association between poverty, education, and economic growth. Furthermore, the role of these forces in obtaining sustainable economic growth has also been considered. Generalized method of movement (GMM) estimation disclosed that education significantly smoothens the path of sustainable economic growth. And poverty incurs a negative effect on sustainable economic growth. Nasir *et al.* (2022) scrutinized the interrelationship between education, industrial growth, unemployment, and the rate of poverty in the case of Pakistan. Results revealed that except for poverty and unemployment, all variables significantly contribute economic growth rate of Pakistan.

Data Collection and Model Specification

This research mainly aims to assimilate the role of poverty, capital formation, education, financial instability, human capital accumulation, and remittance in determining the economic growth of Pakistan. For measuring poverty level; the Gini-coefficient (GINI), for capital formation; gross fixed capital formation (GFCF), for education; secondary school enrollment (SEC), for financial instability; inflation (INF), for human capital accumulation; population growth (POP), and for remittance; remittance inflows (REM) are employed. Here, the selected explained

variable is economic growth measured using the gross domestic product (GDP). In the following examined econometric model of this study has been demonstrated:

$GDP_t = \beta_0 + \beta_1 GINI_t - \beta_2 INF_t + \beta_3 REM_t - \beta_4 POP_t + \beta_5 GFCF_t - \beta_6 SEC_t + \varepsilon_t$ (3.1)

Terms in the above model equation are explained below.

GDP = Gross domestic product growth

GINI = GINI Coefficient

SEC= secondary school enrolment

REM= Remittance

INF= inflation

POP= Population

GFCF = gross fixed capital formation

ε= error term

t= Time period from 1987-2021

While the β_0 shows a constant term. Furthermore, β_1, β_2, β_3, β_4, β_5, and β_6 represent coefficients or the degree of change explained by examined repressors of this research.

Data Collection

The central focus of this study is on the affiliation between economic growth, poverty, and education. Besides, remittance, inflation, population growth, and gross fixed capital formation are also examined in this study. Time series data for all variables of this study has been gathered from the "World Bank" online portal, from 1987 to 2021.

Table 1

Examined Variables of the Research

Variables	Data source's	Relationship
Explained Variable:		
Economic Growth	World Bank	Positive
Explanatory Variables		
GINI Coefficient	World Bank	Negative
Secondary School Enrolment	World Bank	Positive
Remittance	World Bank	Positive
Inflation Rate	World Bank	Negative
Population	World Bank	Negative
Gross Fixed Capital Formation	World Bank	Positive

Source: Author's calculation

This table provides a brief description of the examined variables and data of this research. As the table highlights that dependent variable of this study is economic growth (GDP) and data for GDP has been gathered from the world development indicator (WDI). Moreover, the independent variables of this study are the Gini coefficient (GINI), secondary school enrollment (SEC), Remittance (REM), inflation rate (INF), population (POP), and Gross fixed capital formation (GFCF). The data for independent variables have also been gathered from WDI.

Statistical Estimation

This section mainly deals with the statistical estimation occupied in this research.

Descriptive Statistics

Descriptive statistics are applied for exhibiting prominent features and characteristics of the data series under consideration. Descriptive analysis transpires gross displayed data into an organized, precise, and understanding manner (Fisher, & Marshall, 2009)[14].

Table 2

Descriptive Statistics

Stat.	GDP	GINI	SEC	REM	INF	POP	GFCF
Mean	4.4204	31.4574	27.2580	4.3720	8.3458	2.3404	2.9681
Median	4.6747	31.6200	28.0000	4.1386	7.9210	2.1329	4.1029
Maximum	7.7058	33.5000	47.3000	7.2244	20.2861	3.1951	19.9011
Minimum	1.0143	28.4000	6.8000	1.4536	2.5395	1.8456	-7.7055
Std. Dev.	1.8745	1.2424	14.8621	1.7526	4.0431	0.3663	6.3274
Skewness	0.0778	-0.4948	0.0824	0.0417	0.6510	0.9287	0.4339
Kurtosis	2.2641	3.0782	1.3717	1.9361	3.6084	2.7506	3.3551

Source: Author's calculation

The above-displayed table of descriptive statistics demonstrated the essential notes or summary points about data. Following table replicates mean and median values which show the average tendency of the examined data set. Besides, with minimum and maximum values one can understand the range of examined data set. Here, standard deviation displays the degree how much estimates may deviate from their actual mean value. For exhibiting normal distribution skewness and kurtosis values are utilized. As we see except GINI all examined variables (GDP SEC, REM, INF, POP, and GFCF) are positively skewed. Here, GINI and SEC are

negatively skewed. In addition, GINI, INF, and GFCF are plety-kurtic while the GDP, SEC, REM, and POP are leptokurtic.

Correlation

The correlation matrix represents the degree & nature of the relationship amid any two forces or factors. Principally, it exhibits the influence degree for example to which extent the 'x-factor' may influence the 'y-factor'. Moreover, with the help of correlation plotting one can transpire the occurrence of high-collinearity or multi-collinearity. Researchers assimilated variant techniques and methods for scrutinizing the correlation between examined factors. Nonetheless, most of them usually prefer Pearson's correlation test for revealing correlation. Hence, in this paper, the Pearson correlation has been applied (Steiger, 1980).

Table 3

Correlation Matrix

Variables	GDP	GINI	SEC	REM	INF	POP	GFCF
GDP	**1**						
GINI	0.39	**1**					
SEC	-0.09	0.01	**1**				
REM	0.21	0.23	0.52	**1**			
INF	-0.30	-0.43	-0.06	-0.13	**1**		
POP	0.19	0.12	-0.90	-0.21	0.08	**1**	
GFCF	0.46	0.25	0.07	0.09	0.24	-0.01	**1**

Source: Author's calculation

Following the above statistics, all variables have shown perfect correlation with themselves as diagonal digit highlights. GDP shows a positive relationship with all except inflation rate (INF) and secondary education enrollment (SEC). The Gini-coefficient (GINI) shows negative with the inflation rate (INF) and positive with remaining all other variables. Secondary education enrollment (SEC) demonstrates negative with the gross domestic product (GDP), inflation rate (INF), and population growth (POP) and positive with all others. Remittance (REM) shows positive with all but negative with inflation rate (INF) and population growth (POP). Furthermore, Inflation shows negative with all except population growth (POP). Here, gross fixed capital formation (GFCF) is positive with all except inflation rate (INF) and population growth (POP). In the end, POP is negatively correlated with all except INF, GDP, and GINI.

Unit Root Test

The unit root approach is grounded on a particular hypothesis that states whether that considered data series is time variant or not. In other words, the data-series is said to be stationary or not? Mainly, it's a stochastic procedure, whose joint probability (un-conditional) doesn't change over time. Simply, a data series is referred to as stationary if its "mean, covariance, and variance" value remains unchanged over the timeframe. Conversely, if any of the above conditions violates, then there is a chance that the series possesses a unit root, series possessing a unit root are called spurious series (Leybourne, & McCabe, 1994)[16]. Different techniques have been introduced for inspecting unit root existence in time series. The augmented dickey fuller (ADF) method is one of the familiar approaches among researchers, which we examined in this paper.

Table 4

Augmented Dickey-Fuller Statistics (ADF)

Variable	At Level		1st Difference		Remarks
	Intercept	Intercept & Trend	Intercept	Intercept & Trend	
GDP	-3.36*	-3.19	-6.54*	-6.54*	(I_0 , I_1)
	(0.02)	(0.10)	(0.00)	(0.00)	
GINI	-3.35*	-3.35*	-4.41*	-4.40*	(I_0 , I_1)
	(0.02)	(0.08)	(0.00)	(0.00)	
SEC	-0.38	-1.52	-4.48*	-4.40*	(I_1)
	(0.89)	(0.79)	(0.00)	(0.00)	
INF	-2.43	-2.46	-6.90*	-6.84*	(I_1)
	(0.14)	(0.34)	(0.00)	(0.00)	
REM	-1.07*	-2.72	-5.28*	-5.56*	(I_1)
	(0.71)	(0.23)	(0.00)	(0.00)	
POP	0.61*	-3.29*	-1.35	1.16	(I_0)
	(0.98)	(0.08)	(0.59)	(0.99)	
GFCF	-3.9263*	-3.85*	-7.23*	-7.10*	(I_0 , I_1)
	(0.00)	(0.02)	(0.00)	(0.00)	

Source: Author's calculation

*Note: " *" shows a 1 % level of significance for the variable.*

Subsequent Table 4 highlighted that all variables of this study are statistically significant and stationery. Moreover, some are stationary at a level while some are at 1st difference. Such as gross domestic product

(GDP) stationery at the level and first difference (Io, I_1). Besides poverty (GINI) is also stationary at the level and first difference (Io, I_1). Although, education (SEC), financial instability (INF), and remittance (REM) are stationary at the first difference (I_1). Here, human capital accumulation (POP) is stationary at level (Io). While the gross fixed capital formation (GFCF) is stationary at the level and first difference (Io, I_1). As we contain series with mixed cointegration (Io, I_1), therefore researcher applied Auto-regressive-distributed lagged modeling (ARDL) bound testing approach for scrutinizing long run cointegration. The table also shows that the data is free from any circular trend.

Auto-Regressive distributed Lagged Model (ARDL)

Auto-regressive-distributed lagged modeling (ARDL) method is one of the popular classical evaluation techniques which is in trend between researchers and scholars for the past three decades. The plus point of this approach is that it employs the lag value of both the independent and the dependent variables. Besides, it securitizes both short and long-run cointegration between factors under consideration. (Nkoro & Uko, 2016).

Table 5

ARDL Short Run

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(GDP(-1))	0.6235	0.2244	2.7774	0.0195
D(GINI)	0.8896	0.2880	3.0885	0.0115
D(GINI(-1))	-1.5631	0.3415	-4.5759	0.0010
D(SEC)	0.0169	0.1780	0.0954	0.9259
D(REM)	0.2732	0.3918	0.6972	0.5015
D(REM(-1))	-0.9195	0.2846	-3.2310	0.0090
D(INF)	0.0150	0.0785	0.1917	0.8518
D(INF(-1))	0.0987	0.0678	1.4547	0.1764
D(POP)	20.5259	9.9714	2.0584	0.0666
D(POP(-1))	38.7733	18.4678	2.0995	0.0621
D(GFCF)	0.1891	0.0443	4.2646	0.0017
CointEq(-1)	-2.3272	0.3696	-6.2950	0.0001

Source: Author's calculation

With the help of Table 5, short-run cointegration between examined variables of this research has been displayed. In the short run as the period under consideration is quite short, hence mostly factors fail to confirm their

statistical significance. Therefore, we largely depend on long-run statistics. In the short run, the essential condition for short-run co-integration is that the value of CoinEq needs to be less than one. In the above table, the co-integration equation value follows the same declaration and displays that there is co-integration among variables in the short run of the study. Variables observed in this examination display co-integration in the short run significantly. Most of the variables of this study also affirm significant correlation in the short run.

Table 6

ARDL Long Run

Variable	Coefficient	Std. Error	t-Statistic	Prob.
GINI	-0.5830	0.1919	4.5992	0.0010
SEC	0.2115	0.0579	-3.6475	0.0045
REM	0.7274	0.1581	4.5986	0.0010
INF	-0.0667	0.0406	-1.6436	0.1313
POP	-0.3658	1.8462	-2.6896	0.0227
GFCF	0.1581	0.0212	7.4455	0.0000
C	-8.0215	4.3080	-1.8619	0.0922

Source: Author's calculation

With the help of Table 6, long-run cointegration between examined variables of this research has been displayed. In the long run, the period under consideration is large, hence all factors (except inflation) significantly confirm their statistical significance. As the table shows that all variables, in the long run, are statistically significant except the inflation rate. Here, Poverty (GINI) shows a positive association with economic growth. A rise in GINI will cause a -a 0.58% change in economic growth. It is because when inequality increases in an economy, money available for localities to spend on required needs also decreases which in turn decreases the economic growth rate such as happened in the case of the Pakistan economy. Arif *et al.* (2000); and Anwar & Qureshi, (2002) and Islam *et al.* (2017) studies examined in the literature review also signified obtained estimates of this research.

While secondary school enrolment shows a positive association with economic growth. A rise in education (SEC) will cause a 0.21% increase in economic growth. As with increased education attainment, individuals can get better employment opportunities which will raise their income and

accelerate the economic growth rate. On the other hand, when an economy's GDP grows it leads to increased inequality that creates low secondary school enrollment Berrebi (2007); Yasmeen *et al.* (2021); and Nasir *et al.* (2022) also provoked poverty, education, and economic growth affiliation. Hence, we accept our alternative hypothesis-2 and reject the null stating that there's a need for quality education not only for high economic growth but also for combating poverty in Pakistan.

Remittance (REM) shows a positive relationship with the economic growth rate. An increase in remittance received leads to a 0.72% change in the economic growth rate. A high inflow of remittance received from abroad improves the quality of life in the economy, raises per-capita income, and also facilitates broad opportunities available (Adams and Page, 2005). Statistical result for financial instability or inflation rate (INF) shows insignificant association with the economic growth rate that might because of the financial crisis that occurred in 2008, greatly disturbs overall economic performance. After that incident, inflation rose significantly which severely influence Pakistan.

Besides, in 2012 inflation rate tends to decline. In sum, increased inflation leaves a static effect on economic growth (Nindi and Odhiambo, 2015). Moreover, population growth (POP) demonstrates a negative relationship in the long run with GDP growth. An increase in population growth leads to a -0.36% change in economic growth rate. Hence, we accept the alternative hypothesis-1 and reject the null which states that human capital formation accelerates high economic growth. On the other hand, gross fixed capital formation (GFCF) shows a positive association with gross domestic product (GDP) growth in the case of Pakistan. An increase in GFCF will lead to a 0.15% change in the economic growth ra

Bound Test

In ARDL bound test modeling approach, the bound test statistics signify the existence of long run cointegration between examined variables of the study. Here, statistical significance is verified at four significance levels that are 10%, 5%, 2.5%, and 1%. The requirement for long-run cointegration is that the obtained F-statistics value must be larger than the upper (I_1) and the lower (I_0) bound value.

Table 7

Bound Test Cointegration

Critical Value Bounds		
F-Statistic	17.71701	
Significance	I0 Bound	I1 Bound
10%	2.12	3.23
5%	2.45	3.61
2.5%	2.75	3.99
1%	3.15	4.43

Source: Author's calculation

At all four significance levels, the F-statistic value is greater than the lower bound (Io) and upper bound (I_1) values. This means that there exists long-term co-integration among variables of this study.

Conclusion

Literature disclosed variant factors determining economic growth rate. Some do accelerate economic growth while some create hindrances in the path of high economic growth. Hence, with the help of this study, the researcher tries to assimilate the accelerating role of education (SEC), remittance (REM), and capital formation (GFCF). Besides, factors blocking high economic growth such as the Gini-coefficient (GINI), financial instability (INF), and human capital are also considered. For empirical examination, Pakistan's economy has been selected over the time frame 1987 to 2021. Stationary results reveal cointegration of both level and 1st difference. Hence, for statistical examination, the Autoregressive-distributed-lagged bound testing (ARDL) approach has been decided to implement. Long run statistics revealed that increased education significantly provokes a high economic growth rate in Pakistan. On the other side, an increased poverty level may incur a static decline in the economic growth rate of Pakistan. A rise in population growth will statically slow down the economic growth in Pakistan. Furthermore, financial instability also hinders the path of economic growth. Additionally, capital formation and remittance stimulate a high economic growth rate. Bound test and CUSUM statistics displayed that there exists long run cointegration between the variables of this study. Results disclosed that Based on the above estimation, the researcher suggested

promoting education to stimulate high economic growth in Pakistan and asserts to combat policies for poverty alleviation.

Grounded on the above statistics and empirical estimation researcher request to consider subsequent suggestions for formulating policies concerning high economic growth rate or poverty alleviation:

- Principally for developing countries like Pakistan, the role of education is remarkable. Therefore, policymakers need to integrate advancement in available educational facilities for promoting high economic growth.
- Financial stability is mandatory for boosting economic growth. Therefore, there's a need to control the inflation rate which in turn causes a high poverty rate in Pakistan.
- An increase in remittance inflow will raise the available money for basic needs which in turn alleviates poverty in Pakistan.
- Policymakers must introduce sound and effective policies for controlling increased population growth. Because a rise in population growth may confront a burden on an economy.
- Capital formation accelerates economic growth. Hence, its advancement must be provoked.

References

Ali, H., Ali, M. Z., Nasir, N., & Ali, H. (2021). An Assessment of Sustainable Economic Growth: The Role of Poverty and Education Revisited. *Review of Applied Management and Social Sciences, 4*(1), 215-222.

Ali, H., Awan, I., Nosheen, F., Masood, J., & Nasir, N. (2021). Narratives of Human Capital for Sustainable Economic Growth: Empirical Evidence from Pakistan. PSYCHOLOGY AND EDUCATION, 58(1), 6681-6692.

Arif, G. M., Nazli, H., Haq, R., & Qureshi, S. K. (2000). Rural Non-agriculture employment and poverty in Pakistan. The Pakistan Development Review, 1089-1110.

Anwar, T., & Qureshi, S. K. (2002). Trends in absolute poverty in Pakistan: 1990-91 and 2001. The Pakistan Development Review, 859-878.

Page, J., & Adams Jr, R. H. (2003). International migration, remittances, and poverty in developing countries.

Tahir, S. H., Perveen, N., Ismail, A., & Sabir, H. M. (2014). Impact of GDP growth rate on poverty of Pakistan: A quantitative approach. *Euro-Asian Journal of Economics and Finance*, *2*(2), 119-126.

Adams, R., & Page, J. (2005). Do international migration and remittances reduce poverty in developing countries? World Development, 33(10), 1645–1669.

Berrebi, C. (2007). Evidence about the link between education, poverty and terrorism among Palestinians. *Peace Economics, Peace Science and Public Policy*, *13*(1).

Afzal, M., Yousaf, S., Reichenauer, T. G., & Sessitsch, A. (2012). The inoculation method affects colonization and performance of bacterial inoculant strains in the phytoremediation of soil contaminated with diesel oil. International journal of phytoremediation, 14(1), 35-47.

Chaudhry, I. S., & Rahman, S. (2009). The impact of gender inequality in education on rural poverty in Pakistan: an empirical analysis. European Journal of Economics, Finance and Administrative Sciences, 15(1), 174-188.

Moav, O., & Neeman, Z. (2008). Conspicuous consumption, human capital, and poverty. Human Capital, and Poverty (June 9, 2008).

Nindi, A. G., & Odhiambo, N. M. (2015). Poverty and Economic Growth in Swaziland: An Empirical Investigation. Managing Global Transitions: International Research Journal, 13(1).

Islam, R., Abdul Ghani, A. B., Zainal Abidin, I. S., & Rayaiappan, J. M. (2017). Impact on poverty and income inequality in Malaysia's economic growth. Problems and perspectives in management, 15(1), 55-62.

Yasmin, N., Safdar, N., Yasmin, F., & Khatoon, S. (2021). Education, poverty, and unemployment: A way forward to promote sustainable economic growth in Pakistan. Journal of Contemporary Issues in Business and Government Vol, 27(06).

Nasir, N., Aisha, Z., Ali, H., & Farooq, F. (2022). Nexus between Education, Industrialization, Unemployment, and Poverty: A Way Forward to Promote Sustainable Economic Growth in Pakistan. Competitive Education Research Journal, 3(1), 62-74.

Fisher, M. J., & Marshall, A. P. (2009). Understanding descriptive statistics. Australian critical care, 22(2), 93-97.

Steiger, J. H. (1980). Tests for comparing elements of a correlation matrix. Psychological bulletin, 87(2), 245.

Leybourne, S. J., & McCabe, B. P. (1994). A consistent test for a unit root. Journal of Business & Economic Statistics, 12(2), 157-166.

Nkoro, E., & Uko, A. K. (2016). Autoregressive Distributed Lag (ARDL) cointegration technique: application and interpretation. Journal of Statistical and Econometric methods, 5(4), 63-91.

Novick, R. J., & Stitt, L. W. (1999). The learning curve of an academic cardiac surgeon: use of the CUSUM method. Journal of cardiac surgery, 14(5), 312-320.