Bulletin of Business and Economics
ISSN - 2409 - 9368
http://rfh.org.pk/jur/magazine-category/bbe

POVERTY TERRORISM NEXUS: A CASE STUDY OF PAKISTAN

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ABSTRACT
This study has provided the main effect of factors on poverty World Bank data and Global Terrorism database of 35 years. Technique was used to check out the more significant behavior on the poverty. The data analyzed in the EViews9. The unit root ADF, ARDL and Cointegration long and short run test was used to check the effect. Inflation and FDI has a significant effect but terrorism has insignificant effect on poverty.

Keywords: poverty, FDI, inflation, terrorism, ARDL
JEL Codes: I32, P24

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I. INTRODUCTION

The poverty is the sense of dependent and humiliation on them and forced for being to accept insult and rudeness when they helped (Latvia, 1998). The line of poverty is separating from non-poor to the poor. There are different levels to be distinguished a poverty and its different levels. There are two main poverty types that are absolute and relative poverty and it can be also being termed as non-financial and financial. The relative poverty is the distribution of overall income in the country. We can also set the line 50% as the mean income of the country. The absolute line of poverty is basic needs of household that meets the count the absolute standard. The economic condition the prices of the services increased with gradually against the standard level of power purchasing. Due to the devaluation of money the supply of goods and services declined. When the country economy faced inflation then bad news for people the supply goods decreased. The rate of inflation was decreased when the goods production with decreased in the money supply in market. "The terrorism includes the political ends for used of violence for to create among the public" (Act 1989). The use of violence against person and property and gave threats to intimate and pressurized the government. The sections of the public or public to promoted their objective for social and political purposes. Foreign Direct Investment is investment made to acquire a lasting interest in or effective, and that is operating, industry and investors outside of the home country. The nonresident investors are making buildings outside of the home country and reporting it to the economy. The net outflows that economy is considered as outward growth.

II. LITERATURE REVIEW

Thirtle & Piesse (2003) investigated in Asia and Latin America and Africa the impact led on the poverty reduction and agricultural productivity growth. In the world's population 20 % or 1.2 billion people live on $1 per day or less than it. And 70 percentages of these are rural and 90 percentages are in Asia and Latin America and Africa. Poverty was reduced up to 27 million on the per annum while the industry growth and the productivity have not impact on poverty. The data was collected by the World Bank survey. Researcher used simple regressions that showed on the poverty reduction the agricultural productivity has significant impact productivity growth and on industry it does not have any impact. The GDP per capita was reduced and in the inequality, poverty was increased. Christiaensen et al., (2011) examined the perspective on poverty as conflicting to the growth alone. The poverty reduction was showed their own growth performance. On the other sectors impact on growth was indirect. It showed agriculture was more effective than the non-agriculture among the poor in reduced poverty. In reduced $1-day headcount poverty was 3.2 times better in resource rich and low-income counties. The results showed that the much larger poorer participation and growth in agriculture household and lowered the poverty effect in non-agricultural in the presence of industries.

Christiaensen & Wang (2010) analyzed the pathways of rural households followed out of poverty in two lagging provinces of the Gansu, China and Inner Mongolia and used the panel data of 2000 to 2004. In agriculture has the key and raised the labour productivity in Gansu Labour mobility was the most important. For much to be reduced the poverty reduction rural diversification in this found reducing poverty in agriculture that lagging in rural region and overall derived agriculture. In china two rural areas were lagging provinces to out of poverty in 2000 first half. Both provinces Gasu and Mongolia poverty was declined and Living standard was increased. Agriculture was main thing for livelihood in both provinces. Fosu (2009) studied the impact of income growth and inequality effects in Sub Saharan Africa and non-sub Saharan on the poverty rate changes. A global sample of 1977 to 2004 was unbalanced panel data. Both regions measured the headcount gap, squared gap that relation on the GDP growth found on lessening of poverty as a decreased the initial inequality. Arthur explored the influenced of inequality and the growth impact on the reduction of the poverty. The headcount gap and squared gap that impact of GDP growth found on the poverty ratio as a dependent variable. The independent variables were PPP-Adjusted incomes and growth of Gini was the explanatory variables the GDP growth on the poverty was decreased in inequality. The more increased in inequality that lead to the make worse in poverty. Iyer & Topalova (2014) examined the impressive reduction import tariffs of 1990 and variations in the rainfall. Found that shocks on the trade earlier showed to raised relative poverty was also increased the incidence of the property crimes and violent. They observed relationship between rainfall shocks and crime. Researcher provided evidenced strong support for the income channel. During the low rainfall the property crimes and violent crimes were raised. The Result was narrative in provided that evidenced for income mechanism observed rainfall and crime relationship.

Farrow et al., (2005) examined the consumption of food in Ecuador and under which have infant highest rates of nutrition. Researcher used spatial distribution and statistics of consumption of food and poverty to generate the food

poverty and estimated at the level of district. Results showed that the concentrated of food poor were in the certain locations with a significant cluster in the central Andean region. The weighted regression showed that underlying food poverty was also spatially variable in Ecuador. The results supported for nationwide land residence reforms in the central Andes. The transport infrastructure was improved and country food poverty was decreased in the province of the Esmeraldas. Investment in the development of the rural enterprises was encouraged in all regions. Ravallion (1997) conducted a Household survey for developing countries and suggested that primary distribution matter that poor shared was raised on average income higher initial inequality reduced the impact of growth on the absolute poverty. Inequality was diminished the unpleasant impact on the poor of overall reduction. At any positive rate of growth, the higher the initial inequality and lower the rate at which Income-poverty falls. Inequality was sufficiently high to result in raised poverty even though good at low inequality.

Krueger & Maleckova (2002) investigated the causal link between poverty or low education and participation in politically provoked violence and terrorist actions. The poverty line in secondary school or higher education was positively associated with the contribution in Hezbollah. In the early 1980s Israeli Jewish attacked Palestinians in the west Bank from high paying occupation. The evidenced have assembled and suggested that was direct connection between education poverty and terrorism contribution and politically motivated violence. In late 1980s and early 1990s were at least likely to move toward from economically advantaged families and have a comparatively high level of the education. Alene & Coulibaly (2009) found the impact on poverty reduction and productivity growth. Polynomial distributed lag structure. The agricultural research was contributed significantly to growth of productivity. The study was conducted in Sub-Saharan Africa. Productivity growth was raised and income per capita with income increased and has significant effects and that reduced the poverty. Agricultural research currently reduced 2.3 million or 0.8 percent annually poor. The actual impact was large but not enough to be more than offset the poverty increased the environmental deprivation effects of the population growth and the potential impacts of agricultural. The results showed that doubled the investments in Sub-Saharan Africa reduced poverty 9 percent on annual.

Afzal et al., (2012) mentioned that a nation cannot be developed without investing in education. It reduced the poverty by increased the productivity. The poverty has strong link with the economic growth and the education. This study used time series data of the education, economic growth, poverty and physical capital and for the span from 1971to 1972 and 2009 to 2010. The study was conducted in case of Pakistan. There was significant and positive effect on the economic growth for the long and short run. According to long run the economic growth and poverty were affected significantly and inversely related in the long run. The results indicated that in economic growth and education the causality was bi directional. The economic growth process was accelerated country. Ravallion (2001) studied the raised aggregated affluence of the poor developing countries and lost in the aggregated contraction. The results showed that large difference between the people shared in growth poor people. The given country and the poor found diverse the impact. The correlation cross-country hide, the impacts of welfare. There was deeper need of micro empirical work on growth and distributional change. They needed for complement growth that was on firm basis and programs. The regression technique was used. Ravallion (2005) highlighted the idea that developing countries faced the tradeoff between Inequality and poverty has significant influence on view regarding development policy. In 1990s the experienced of the developing countries was not reveal any sign of systematic tradeoff between relative inequality and measures of absolute poverty. The declining of inequality tends to come with falling poverty incidence and rose that inequality was more likely putted a brake on poverty reduction. There was evidence absolute inequality of a trade-off and suggested that want a lowered the poor and rich gap must be in general be willing-lower the poor people for living in the absolute levels.

Fan et al., (2000) estimated the direct and indirect effects in India, poverty and productivity growth. That showed the government of India gave priority to the additional investment to reduce the rural poverty and in agricultural and rural roads research. The investment was not as much larger that impacts poverty as spent per rupee that on any other government spent but also produce high rate of productivity growth. That was separately spent on education by the government. The rural poverty and productivity growth were the largest marginal impact and rest of the investments has the modest impact on poverty per additional rupee spent on growth. Hanjra et al., (2009) examined the linkages between agricultural water, rural poverty, education and markets. Agricultural Linkage, water education and market interventions were implemented separately to produce hunger suppression programs and the valuable poverty reduction. Investment rural infrastructure and agriculture water management and related policies the

pathways to break poverty in smallholder Africa agriculture. Expanding irrigation was essential to increase agriculture production in Sub-Saharan Africa which was need to achieved food security and economic development. An agriculture and water resource were not developed to their full potential. The shortage of human and financial resources for irrigated and related with the infrastructure of the rural and acquired technology of agricultural. That progresses in reduction of poverty.

Loayza & Raddatz (2010) explained heterogeneity in poverty response to change the economic growth in the cross countries. A model of the two sector, was clarified the mechanism which sectored masterpiece of growth and linked with labour intensity and affected the poverty alleviation and workers income. The empirical evidence of cross country was analyzed the poverty reduction at sectored growth of different levels of disaggregation and unskilled role of labour intensity in according to impact of differential. They found that for decline of poverty not only matters the composition but also matters the economic growth with larger contribution of labour intensive sectors that was agricultural and services. The results indicated that that poverty lessening indeed depends on the size of growth. Evans & Kim (2007) examined the relationship and found the inversed association between the low socioeconomic status or poverty and health. The longitudinal relationship between the duration of poverty exposure and chronic stress were assessed by basal blood overnight cortical pressure and regulation of reactivity of cardiovascular to the recovery and stressor after this stressor to exposure. The exposure risk cumulative was measured by risk social factors and multiple physical factors. The number of years in poverty was greater and cortical over the night and deregulated the response of cardiovascular. The exposure of poverty was not affected by Cardiovascular. The childhood poverty was effect on the stress and deregulation were largel cumulative risk exposure and accompanying childhood poverty. The ordinary least square regression was used. Holzer et al (2007) conducted the review a range of rigorous research studied that estimated average relationship among in poverty children grown up and their earnings tendency to commit crime worth in the of health. Cost of crime on the economy was estimated and imposed on the poor health per person. The costs of average as per poor child the children and overall poverty grown up and the U.S. to estimated aggregated costs of the child poverty to the U.S. economy. The results indicated that the costs the U.S. total about $500 billion per year was linked with poverty of childhood.

Schneider & Gugerty (2011) highlighted the linkage between the increased in agricultural productivity and poverty reduction. The data suggested there was multiple pathways through that increased in the agricultural productivity can reduced the poverty with changed employment generation real income food prices and non-rural multiplier effects. Agricultural productivity was included the total output per hectare or general output on farm give up crop on per Hectare and per worker output. This measured the empirical studies that agriculture productivity improvements for poverty reduction. Brooks & Duncan (1997) studied association between the health of children and poverty of family and their behavior was measured the effects of timing strength and duration of the poverty on the children. Researcher focused on recent set studied that explored the relationship between the child outcome and poverty in depth. Research supported conclusion that the income of family has selective however in some-times it is quite substantial affected on the child. Adolescent well-being Children those lived in the extreme poverty or lived below the poverty line and to suffer for the worst outcomes. The poverty timing was seemed to be important for certain outcome in the child. Children who experienced poverty during their preschool have lower rates of the school completion than that of the children and adolescents experienced poverty. Kakwani (1993) explored the relationship between poverty and economic growth that developed the methodology to be measured individually the impact changed in the income inequality and average income on the poverty. The policy was discussed in the poverty adjustment and the macroeconomic and context in the experienced in the Cote d'I voire. The targeted alleviation of poverty showed that poverty decomposition was proposed. The data was taken from 1985.

Ellis & Freeman (2004) compared and contrasts rural livelihoods in the Kenya, Malawi, Uganda and Tanzania informed the poverty reduction in rural and policy in the rural reduction and Plans Strategy. The accumulation was typically involved the dissimilar livestock ownership engagement and better household were better of distinguished in household and in the income sources diversity on non-form and on form sources and Strategy plans for poverty reduction. Centre on the formation was facilitated relatively than the blocking public sector for environment the multiplication of nonfarm enterprises seeker creative solutions. The impact on the tax revenue was collected by the district councils on enterprises and rural incomes. Korenman (1995) described in early childhood developmental deficits that were associated with poverty. Estimated and compared the effects of long-term poverty and that was based income average of 13 years effects of the poverty. They discovered substantial developmental deficits

between the children that were poor. They had taken the average of relative years versus those who were not. The single years was measured and were not explained by differences in maternal education and maternal behaviors during the pregnancy and the family structure, infant health, nutritional status, or age of mother at first birth.

Dev (1988) analyzed interstate variations in the agricultural labour productivity sources of productivity growth in Labour. The incidence of interrelations rural poverty and between labour productivity and rural poverty over four preferred time points in related to the poverty. The Labour productivity growth was the major source of was analyzed and that was yielded. The result indicated that poverty reduction impact and relationship between labour productivity. Poverty was increased in the rural area and post new technology periods were compared with the pre new technology over the period. Ojo (2004) examined the technical efficiency and the Labour productivity in the crop food production in the area of four local governments in the Nigerian state that was Ekiti State. For 200 farms of yam and data was collected by multi stage sampling technique. Data was analyzed using stochastic frontier function and descriptive statistics. The yam production was used in small category and the results indicated that family labour was mostly used yam production. The farm maintenance and land preparation for the Labour the farm experienced showed that decreased with the negative function and reduced the yam output. Feldstein (1998) examined that income inequality was not a problem in need of remedy. Gini coefficient was measured of inequality and bad thing that violated the pareto principle was comparable that puts the weight income negative was increased as the welfare of social function as to the high individual income. The main problem was distributional and nut not the inequality but was the poverty. If anything was done then it might be asked for the poverty sources. The earning capacity level was low and the individual choices about them. Niyimbanira (2017) highlighted the impact of economic growth on poverty and income inequality used data from the Mpumalanga. There was negative relationship between economic growth and Gini coefficient. The economic growth and poverty reason was also the same case. The purpose was to establish that empirical evidence of such relationships. The result was showed that economic growth of the poverty reduced but not inequality in the income. The study concluded by socio economic measured that economic growth was improved and knowledge-based economy was improved.

Chen et al., (2014) investigated the relationship between poverty inequality and income mobility to be more discussed. Some researchers on distribution function suggest method and new perspective to analyze this issue. The poverty ratio' Gini coefficient and income mobility of five common distribution functions through math deduction this finding cannot be found in literatures. The result proved that in the period from 2005 to 2010 income distribution of urban fits Log-Logistic distribution. On the above empirical data and analyzed paper explored the relation of poverty, inequality and income mobility and draw some useful result. Fosu (2011) conducted studied on economic growth transformation and global evidence in reduction of poverty in the developing countries which was emphasized on income inequality. The early mid 1990's in these countries growth has been comparatively strong of the advanced economies. Data was analyzed the level of poverty for US $1.25 and US $2.50 level poverty headcount ratios. The result fond that on average income growth has been the major driven forces both the increase and decline in poverty. Guo & Harris (2000) studied the adverse consequences of poverty for children were documented widely and the mechanisms through which poverty was affected and the disadvantage young of children. Researcher investigated that that poverty was affected a children intellectual development. Used Data set of (NLSY) and taken five factors parenting style, physical environment, cognitive stimulation and children birth, ill or health. He found the mediation effect and first found that family poverty influence on intellectual development was mediated by interviewing mechanism measured by factors. Secondly our analysis points to cognitive stimulation in the home, and (to a lesser extent) to parenting style, and poor child health at birth physical environment of the home, as mediating factors that are affected by lack of income and that influence children's intellectual development. Warr (2002) highlighted the decades when absolute poverty incidence was declined in \Southeast Asia countries. The inequality was increased in those countries at the similar time. Found the outcome and the rate of economic growth its relationship. Examined the agricultural, industrial and services sectors. It developed a time series the headcount poverty incidence for Thailand, Indonesia, Malaysia and the Philippines. It then used pooled data to analyze the economic determinants incidence. While Asian countries of south Asia like Philippines, Indonesia, Malaysia have significant reduction in the recent decades in the poverty. The poverty reduction was strongly attributed to the aggregate rate growth and sect oral composition has little impact.

III. THE METHODOLOGY

Secondary data has been used and the data was analyzed and interpreted. This study sample consisted of 35 years data and dependent variable is poverty and independent variables were FDI and terrorism and inflation. The data has been collected from the World Bank and Global Terrorism database site. Following the previous methodologies, Ali (2011), Ali (2015), Ali (2018), Ali and Bibi (2017), Ali and Ahmad (2014), Ali and Audi (2016), Ali and Audi (2018), Ali and Rehman (2015), Ali and Naeem (2017), Ali and Zulfiqar (2018), Ali et al., (2016), Arshad and Ali (2016), Ashraf and Ali (2018) Haider and Ali (2015), Sajid and Ali (2018), Ali and Senturk (2019), Kassem et al, (2019) and Ali and Bibi (2020).

The Augmented Dickey Fuller test is an extension of Dickey Fuller test. This test used to detects the existence of unit root in a variable by estimated equation.

$$Y_t = \beta_0 + \Upsilon Y_{t-1} + \sum_{i=1}^{p} \rho_i \, \Delta Y_{t-1} + \in_t$$

H_0 ; $\Upsilon = 0$ (series contain unit root)
H_1 ; $\Upsilon < 0$ (no unit root)

The τ is used for checking the significance and Mac values will be compared the critical value of 5%.
The ARDL used for testing Cointegration when the sample size small. This allows lags of sufficient number for capturing the data generating process for the molding framework of specific in general and gave efficient information and veiled detail about the breaks of structural data.

IV. RESULTS AND DISCUSSION

The results are discussed according to the analysis and in the given literature and drawn conclusion on the basis of results.

Table 1

	LPOV	INFGDP	LFDI	LTERR
Mean	1.440165	10.18215	8.250356	1.632969
Median	1.441066	9.034884	8.389632	2.071882
Maximum	1.660391	25.43683	9.747412	3.147985
Minimum	1.316180	2.463093	6.602060	0.000000
Std. Dev.	0.098598	5.724257	0.769104	1.007339
Skewness	0.450371	1.371363	-0.337107	-0.479936
Kurtosis	2.242690	4.392687	2.773936	1.878015
Jarque-Bera	2.019579	3.079893	0.737435	3.179466
Probability	0.364296	0.201008	0.691621	0.203980
Sum	50.40579	356.3754	288.7624	57.15391
Sum Sq. Dev.	0.330533	1114.082	20.11170	34.50090
Observations	35	35	35	35

The result indicated that poverty and inflation has positively skewed and foreign direct investment and terrorism has negatively skewed. The result showed that all variables have positively kurtosis.

The result of ADF tests showed that Poverty is stationary at first difference. The estimated result of ADF tests indicated that Inflation (GDP) has stationary at level. But foreign direct investment and Terrorism have stationary at first difference. There is appropriate to apply the Cointegration of ARDL approach. Cointegration between poverty, foreign direct investment, inflation (GDP) and terrorism ARDL Bounds testing approach was used.

The log of poverty is used as the dependent**.** In bound test we compared F-stats value is 7.9493 was bigger than the upper bound value that 5.61. Therefore, we reject our Ho of no long run Cointegration was rejected which confirmed

that Cointegration between the variables of the model. So, the long run relationship between poverty, foreign direct investment, inflation and terrorism can be estimated.

Table 2: **ADF Unit Root Test: At level**

Variables	**P-value**
Lpov	0.2697
LFDI	0.6173
Inf(GDP)	0.0028
LTERR	0.6059
At First Difference	
Lpov	0.0373
LFDI	0.0001
Inf(GDP)	0.0000
LTERR	0.0000

Table 3: ARDL Bounds testing Approach

Ho: No long run relationships exist		
Test statistic	value	K
F- statistic	7.949316	3
Critical Value Bounds		
Significance	I0 Bound	I1 Bound
10%	2.72	3.77
5%	3.23	4.35
2.5%	3.69	4.89
1%	4.29	5.61

Table 4

Long Run Coefficients				
Variables	Coefficient	Std. Error	t-Statistic	Prob.
INFGDP	0.035182	0.013565	2.593537	0.0174
LFDI	0.284200	0.113940	2.494294	0.0215
LTERR	-0.067591	0.073994	-0.913459	0.3719
C	-1.178097	0.978647	-1.203802	0.2427

The coefficient of Inflation (GDP) showed there was positive and significant relationship among inflation GDP and poverty. The results showed that 1% increase in inflation (GDP) on average, 0.0345182 % increased in poverty in Pakistan in long run relationship holding other variable are constant. There is a significant relationship at 5 %. The foreign direct investment showed that there was positive and relationship among foreign direct investment and poverty is significant in Pakistan. This indicated result showed 1 % increased in foreign direct investment on average, 0.284200 % increased in poverty in Pakistan in long run relationship holding other variable are constant. There is a significant relationship at 5 %. The estimated result showed that there is insignificant effect and the relationship is negative between terrorism and poverty. The result showed 1% increase in terrorism on average, -0.067591% decreased in poverty in Pakistan in long run relationship holding other variable are constant. Long run result showed foreign direct investment and inflation (GDP) has significant and positive effect on poverty. But terrorism has negative and insignificant effect on poverty in Pakistan.

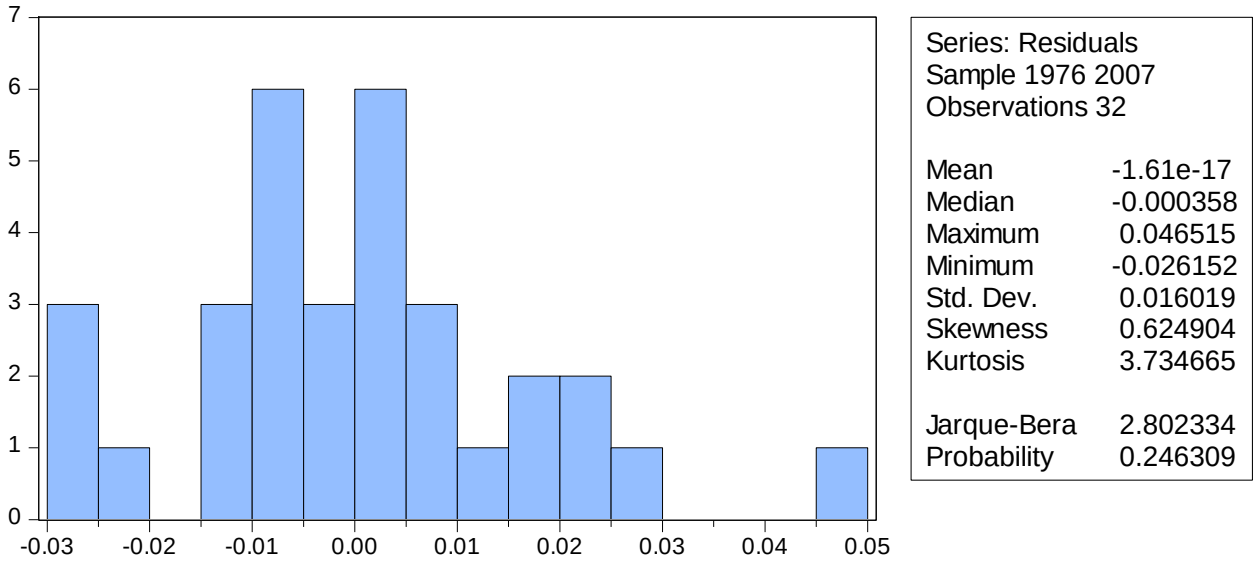
The short run dynamic between poverty foreign direct investment Inflation(GDP) and terrorism in Pakistan. It indicated that inflation has insignificant relationship among inflation and poverty. The result showed foreign direct investment has positive and insignificant effect with poverty. The cointEq(-1) is negative and its value is (-0.158982) also has the significant impact.

Table 5: ARDL Cointegration and Long Run Form

Cointegration form				
Variables	Coefficient	Std.Error	t-statistic	P-value
D(LPOV(-1))	-0.226816	0.185208	-1.224658	0.2349
D(INFGDP)	-0.000188	0.000990	-0.190336	0.8510
D(INFGDP(-1))	0.001438	0.001027	1.399646	0.1769
D(INFGDP(-2))	-0.002586	0.000874	-2.960217	0.0077
D(LFDI)	0.007235	0.022368	0.323456	0.7497
D(LFDI(-1))	-0.031808	0.017699	-1.797186	0.0874
D(LTERR)	0.006568	0.010018	0.655610	0.5195
CointEq(-1)	-0.158982	0.068856	-2.308904	0.0318

Table 6: Diagnostic test: Heteroskedasticity

Breusch Pagan Godfrey			
F-statistic	1.069874	Prob. F(11,20)	0.4296
Obs*R-squared	11.85433	Prob. Chi-Square(11)	0.3747
Scaled explained SS	6.33156	Prob. Chi-Square(11)	0.8504
Breusch Godfrey Serial Correlation LM Test:			
F-statistic	0.827074	Prob. F(2,18)	0.4533
Obs*R-squared	2.693211	Prob. Chi-Square(2)	0.2601



So, result showed that there was no problem of Heteroscedasticity. Because its p-value is greater than 10% we do not reject null hypothesis. So, result showed that there was no problem of Auto-correlation.

P-value is equal to 0.246309 and greater than the level of significance 0.05. So, we conclude that we cannot reject the null hypothesis of normality and residual are normally distributed.

For regarding the Stability, the information of the estimated model of poverty has been shifted or not over time. According both figures in figure 1 and figure 2 Cumulative Sum and Sum of squares lie among two lines of the critical values which indicated model is stabled.

Figure 1

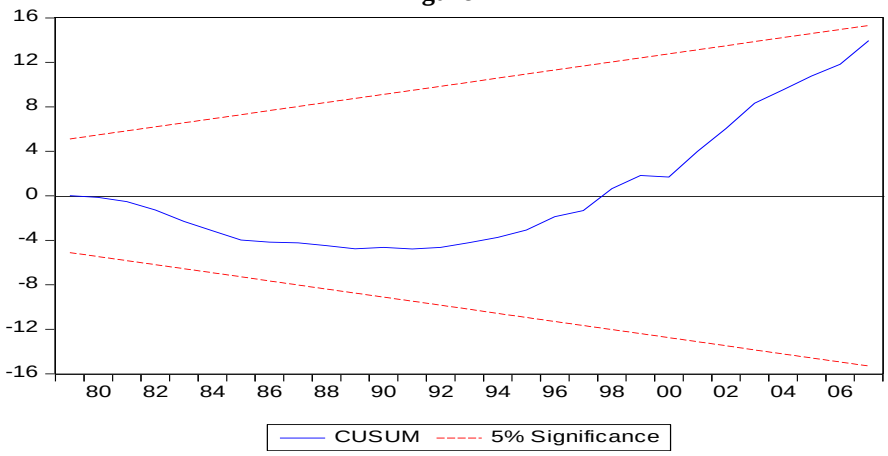
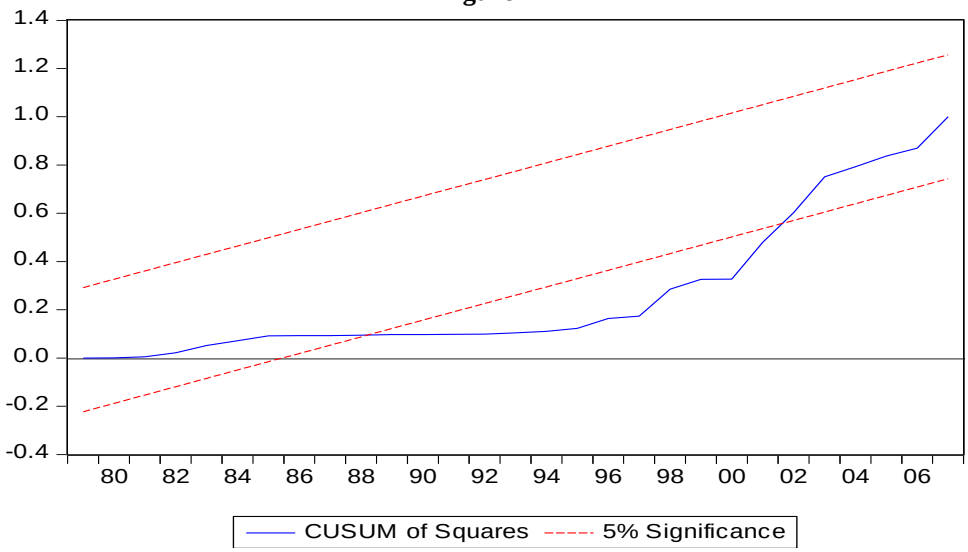


Figure 2



Due to some political instability in the country that's reasons the blue line below the average line. With the passage of time country become stable and become in between the bound.

V. CONCLUSIONS

Cointegration between variables show result of ARDL bound testing. Coefficient of inflation (GDP) showed there was positive and significant relationship among inflation (GDP) and poverty. The foreign direct investment showed positive and significant with the poverty. The terrorism showed insignificant impact and relationship is negative with poverty. In short run dynamics the estimated result showed that inflation has negative and insignificant relationship among inflation and poverty. The result showed foreign direct investment and poverty has insignificant relationship in Pakistan. The cointEq(-1) value has negative and significant.

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