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RELATIONSHIP BETWEEN POVERTY AND ENVIORNMNETAL DEGRADATION IN PAKISTAN

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ABSTRACT- The objective of this research paper is to investigate determinants of poverty and its relationship with environmental degradation in Pakistan. A time series data is taken for the period of 1974 to 2016. Data was collected from the database of World Bank, IMF, State Bank of Pakistan and Economic Survey of Pakistan. CO^2 is taken as dependent variable while agriculture growth rate, education and health expenditure as percentage of GDP, household consumption expenditure and inflation rate are taken as independent variables. Auto Regressive Distributed Lag (ARDL) model was used to draw the results. The result shows that Agriculture growth, education expenditure and inflation rate have positive significant relationship with environment while health expenditure and household consumption expenditure have negative significant association. We suggest that government must takes steps to create awareness about environmental issues through media campaign, seminars, etc. and also take policy initiative to reduce poverty level in country.

Keyword: Poverty, Environmental degradation, CO^2, ADF, ARDL.

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Vol 4 (1) Jan-March, 2018 pp.133-155
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1. INTRODUCTION

Poverty in general is shortage, hunger, or a state that lacks a certain wealth or money. This is a multi-faceted concept, containing social, economic and political dimension. Poverty can be defined as absolute or relative. Absolute poverty refers to the scarcity of resources needed to meet basic needs, such as clothing, food and protection. Relative poverty studies individual, social and economic status in comparison with the rest of society. Since the Industrial Revolution, the products were less luxurious and more necessities, mass production of the most important production plants, for example, to provide enough crops to feed growing population. Poverty reduction is a major task for many international organizations, such as the World Bank and the United Nations. According to the World Bank (2015), About 702.1 million people are in severe poverty state. Out of these, 347 million people lived in sub-Saharan Africa (35.2%) and 231.3 million I 1.75 million people in South Asia. Between 1990 and 2015, the proportion of the world's population the level of extreme poverty was scaled down to 9.6 per cent from 37.1 per cent, first time poverty fell below 10 per cent. Extreme poverty is observed in all parts of the world and is a global problem. UNICEF estimates that half of the world's children live in poverty (or 1.1 billion).

1.1 Definition of Poverty

World Bank defines poverty in following words:

"Poverty is pronounced deprivation in well-being, and comprises many dimensions. It includes low incomes and the inability to acquire the basic goods and services necessary for survival with dignity. Poverty also encompasses low levels of health and education, poor access to clean water and sanitation, inadequate physical security, lack of voice, and insufficient capacity and opportunity to better one's life."

Vol 4 (1) Jan-March, 2018 pp.133-155
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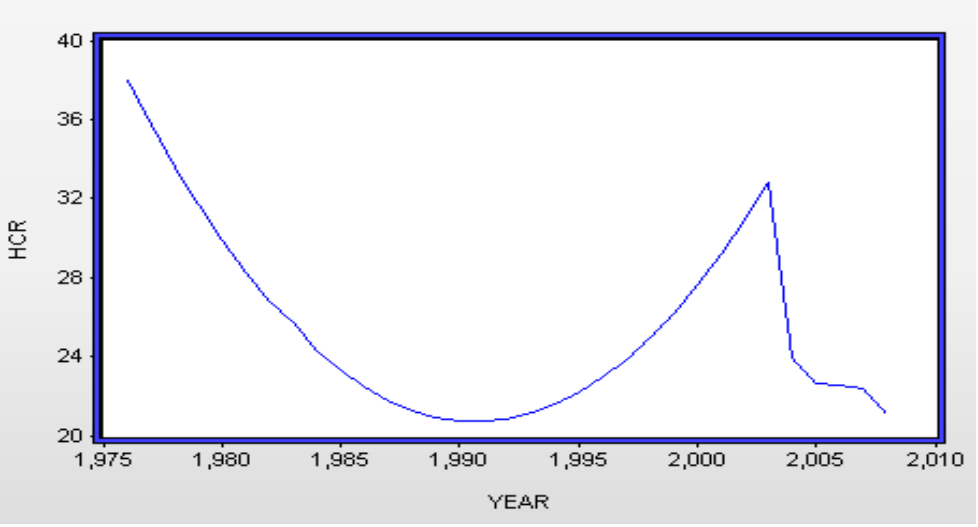
www.gjmsweb.com.editor@gjmsweb.com

1.2 Poverty in Pakistan

Poverty in Pakistan is a serious issue and every government claims to frame pro-poor policies in order to reduce poverty. But its severity has so far not been reduced to natural level.

Most studies assess poverty trends and poverty levels in Pakistan using a measure of poverty line arbitrarily. The very poverty line is based on the concept of poverty consumption, where the recommended minimum daily number of calories determines the poverty line. The level of poverty in rural areas is very high as compared to urban areas because urban areas have industries which generate employment opportunities while rural population solely depends on crop cultivation and its production. They have no off-season and part-time job or business opportunities. The Figure 1 shows how headcount ratio fluctuated during a period from 1975 to 2010.

Figure 1 Headcount ratio in Pakistan, 1975-2010



The Figure 1 shows that poverty level fluctuates between 22 percent to 38 percent in different period. The poverty level was 38 percent in 1975 and it sharply fell to

Vol 4 (1) Jan-March, 2018 pp.133-155
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www.gjmsweb.com.editor@gjmsweb.com

22 percent in 1990. Again it role to 32 percent in 2003 and after that it was declined to 22 percent in 2010. Since 2003 development expenditures were increased and pro-poor policies were opted. Many big infrastructure projects were launched. But severe power shortage after 2010 had a negative effect on industry and wide spread unemployment. Many industries were shifted to Bangladesh, Sri Lanka, United Arab Emirates and other countries due to tough and high cost of doing business in Pakistan. It reduced employment opportunities and causes capital flight, which further worsens the level of poverty.

1.3 Environmental degradation

When human being uses excessive natural resources to meet its needs and create surplus goods for export to enhance their income it causes environmental degradation. In underdeveloped countries the people try to maximize their income by manipulating environmental resources and they deem it necessary for their survival. Similarly, the advanced countries are also exploiting excessive resources to maintain their high level of living standard. In this way, environmental degradation is going throughout world and there is no pause in it.

Environmental change is measured by the different kinds of gasses into the air. These gasses gather in the atmosphere, which result an unnatural climate change. The movements in overall air related parameters, for instance, temperature, precipitation, soil dampness and sea level. Oceanic cyclone in advanced countries and natural disasters in developing countries are the result of climatic change. Similarly, agriculture soil is deteriorating due to salinity and contamination of chemicals. Methane (CH4) is the most important greenhouse gas used in the agricultural sector. Maximum exposure of methane is less than rice (4%) and cattle (7%) and less than (2%) of agricultural waste. The quantity of rice costs has proved to be difficult, because the costs depend on the amount of land in the process of increasing, using fertilizer, management of water resources, rice crop density and other agricultural

Vol 4 (1) Jan-March, 2018 pp.133-155
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www.gjmsweb.com.editor@gjmsweb.com

methods. In many Asian countries, China CH4 is a huge source of expenses. Livestock and associated fertilizer CH4 is 16% of the total annual production. These feelings have direct result of buffer and livestock ability to use a large number of loads that cannot be used as food for humans or food for pig and greasy. Buffalo and cattle receive approximately 80% of the annual CH4 expenditure from animals worldwide.

Carbon dioxide is also released in the process of agricultural waste, for example, grain, straw hungry and rice as soon as possible. In many countries, it is common to burn the waste of a large amount of plant, which causes the destruction of insects and other parasites, as well as the legitimate agents and the soil's neutrality. For lesser, carbon dioxide is released from fossil fuels used in agricultural and animal production. In our time, high-speed livestock in higher agriculture has become the largest consumer of energy.

Most of the N_2O emissions in agriculture are due to the use of nitrogen fertilizers, the cultivation of legumes and livestock wastes. Some N_2O emissions are released when the biomass is burnt. Many farmers use nitrogen fertilizers in their fields to increase the height of crops. The crop mostly absorbs nitrogen, but some of them rotate in its surrounding surface and groundwater, and some enter into the atmosphere. Nitrogen flow is due to microbial activity in the soil. For example, wheat rice absorbs only one civilization of nitrogen in fertilizers and highlands - almost half. The remaining nitrogen is scattered and different in the environment, which takes part in global warming. However, the quantity of released N_2O is less than the amount of CH_4. Improved land use can help reduce greenhouse gas emissions. For example, through the better management of rice fields, a major reduction in CH_4 expenses can be obtained in agriculture. In addition, it was found that vegetable rice fields produce more than deep water. Reduction of remote soil drying and soil consumption, such as zero treatment and mulching, will also help reduce the erosion of these agricultural

Vol 4 (1) Jan-March, 2018 pp.133-155
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www.gjmsweb.com.editor@gjmsweb.com

lands. Changes in plant methods, such as seed directly from transplant and change in proper water management, can also help reduce CH_4 expenses. Reduce the use of organic materials, mineral fertilizers will help reduce emissions and introduce suitable fertilizers. Changes in agricultural productivity can be useful, and also reduce the need for soil eradication, such as conventional traditionally transferring from high-quality types or rice to other field crops. However, rice in Asia is an important agricultural crop. There are many types of the environment degradation such as

- Water degradation
- Soil degradation due to excessive use of chemicals
- Chronical diseases causing human health deterioration
- Climate change and precipitation
- Low crop yields

1.2. Main Research Problem

The main research problem is to investigate the "Relationship between Poverty and Environmental degradation in Pakistan."

1.3. Objective of the Study

The objectives of study are stated in the followings: -

1. To assess the effect of poverty on environment degradation in Pakistan.
2. To examine causes of poverty and its effects.
3. To determine relationship between poverty and environment.
4. To make recommendations how to reduce poverty and environmental degradation.

2. LITERATURE REVIEW

Abbas et al. (2014), examined the impact of poverty on environment in Pakistan. The objectives of the study were to focus on the poverty and how it causes environmental degradation, and find the linkages between poverty and environment.

Vol 4 (1) Jan-March, 2018 pp.133-155
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Another objective was to focus on the utilization of resources in suitable way. Secondary data was used from 1975 to 2009. The relationship between poverty, population and agriculture growth was explored. Human activities were caused the deprivation of the environment. Due to this the ratio of poverty was increased in country. It was founded that fertility and morality rate were showing the balance. It was suggested that there is need to use the techniques from which we shield our environment and utilize our resources in a way that makes minimum harm to our environment.

Amanullah et al. (2012) examined relationship between poverty and environment. The study was conducted in District Ghotki Sindh and focus of study was growing forestation in Pakistan. The study further explored the impact of atmosphere on the life of deprived people. The data was collected for the period of 1992 to 2010. It was founded that deforestation of the environment was due to the rich people of the society. It was suggested that by focusing on the small districts like Ghotki and others poverty environment issues can be addressed effectively.

Awan (2015) emphasized that sustainable economic development cannot be attained without resolving environmental issues. He said that poverty and environmental issues have close association. He suggested that maximum funds may be allocated for poverty alleviation and increasing the income of the poor segments of society so that people have resources to uplift their living standard and keep environment safe.

Awan (2016) stated that anti-globalization move would badly affect the efforts and initiative take to clean environment and allocate resources to solve environmental issues. He said that anti-environment policy of US president, Donald Trump, will worsen the environment even in advanced countries, which were previously introduced rigorous environmental laws to prevent the establishment of

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dirty industries. This policy will also encourage Bric countries to use excessive resources, which ultimately generate environmental hazards.

Ding Yifan, attempted to find out the effect of the poverty and inability to manage the environment. The aim of the study was to explore the elements of poverty and its impact on the environment. In this study the focus was on the question that poverty lead to environmental degradation. Issue of poverty is the major cause of environment pollution within the country. System works to solve the issue of environment but traditional work was more harmful because the development was in the way to peak. This study was based on the theoretical analysis. It was found that poverty was the leading factor for environment degradation and traditional methods to solve the environment issues were also harmful for the society. It was suggested that the causes of poverty should be erased according the agenda of United Nation and proper policy measures should be taken to save the environment from degradation.

Amjad and Kemal (2002) studied macroeconomic policies and their impact on poverty reduction in Pakistan. Time series data were taken for the period of 1963 to 1993, based on data of HIES for city and village areas in Pakistan. They analyzed the impact of macro-economic policies and structural adjustment programs (SAPs) agreed upon by the Pakistani government and the World Bank and the IMF, covering the period 1988 after the poverty level. They investigated the impact of certain factors: economic growth, agricultural growth, TOT for agricultural sector, industrial sector and inflation rate, wages, employment, tax structure and transfers. They recommended that expansion of more than 5%, an increase in transfers and employment are the most important variables that can change the level of pverty overtime. The study showed that the IMF's SAP program increased the poverty level due to a decline in growth, a decline in employment, the abolition of subsidies for agriculture sector and consumption, an increase in indirect taxes and a reduction in

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government spending on social services. They proposed that, in addition to the safety net for the lower social segment, employment programs and the promotion of the informal sector were mandatory for decline in poverty.

Loko et el.(2003) studied the association between the level poverty and the level of external debt in the country. He used the first difference GMM estimators. To find the relationship of the level of external debt and poverty level (infant mortality, life expectancy and gross primary enrollment rates) per capita income and external debt data was used of the 67 low income countries. The result shows that high external debt is a major cause of poverty.

Gupta et al. (2005), attempted to explore the factors of the poverty and environment. He further explored the relationship between private assets, household incomes and national income. Data was collected from the 537 households in sixty different rural area community of the Jhabua district of the India. Study founds the more complex relationship among the factors. Firstly, it was found that the subsample of households to facilitate affirmative amounts of resources shows that the dependence follows a U-shaped association with the income. Secondly, it was founded that the chances of the occurrence in the subsample of common pool resource users follows an opposite U-shaped association with the income.

Scones et al. (1998), tried to explore the poverty and environment: priorities for research and policy analysis. The aim of the study was to find out address the interrelationships between level of poverty and environmental degradation. The second objective was to recognize the gaps in the impending conflicts and thoughtful approaches and priorities adopted by recognized research. Third objective was to highlight research priorities for the expectations of donors, policy makers and development agencies in general and politics. It was found that the area of the actual subject is too vast and we cannot conclude without complete research aspects.

Vol 4 (1) Jan-March, 2018 pp.133-155
ISSN 2520-7113 (Print), ISSN 2520-7121 (Online)
www.gjmsweb.com.editor@gjmsweb.com

3. RESEARCH METHODOLOGY

This study is based on the relationship between the level of poverty and environment in Pakistan for a period of 1974 to 2016. Gross domestic product (annual growth rate) is taken as dependent variable and the explanatory variables such as adult literacy rate of female, fertility rate, gross enrollment ratio of female at secondary level, gross enrollment ratio of female at tertiary level and labor force participation of female. All the economic variables are taken as annual growth in percentage.

Table 1 List of explanatory and explained variables

Variables Names	**Explanation of the variables**	**Measuring Unit**
Explained variable		
CO2	CO2 emission	Annual growth (%)
Explanatory variables		
AGG	Agriculture growth rate	Annual growth (%)
EE_GDP	Education expenditure % GDP	Annual growth (%)
HE	Health expenditure	Annual growth (%)
HHCE	Household consumption expenditure.	Annual growth (%)
INF	Inflation rate	Annual growth (%)

3.1 Stationary testing

Order of integration or stationary of data is checked by the Augmented Dickey Fuller test. The extra lag length of dependent variable is included in ADF test to check the problem of autocorrelation in model. Autoregressive distributed lag

Vol 4 (1) Jan-March, 2018 pp.133-155
ISSN 2520-7113 (Print), ISSN 2520-7121 (Online)
www.gjmsweb.com.editor@gjmsweb.com

model should be acceptable on the strength of the Augmented dickey fuller test as if all the selected determinants are integrated at dissimilar order like 1(0) and 1(1), is the basic requirement to use the autoregressive distributed lag model. Otherwise, if all selected variables are integrated at 1(0) order then a simple OLS method is used, while, if order of integration is at 1(1), then Johnson co-integration test is used.

3.2 Model Specification:

For our study, we have specified the following econometric model.

$$CO2 = \beta 0 + \beta_1 AGG + \beta_2 EE\_GDP + \beta_3 HE + \beta_5 HHCE + \beta_6 INF + \varepsilon_i$$

Whereas,

ε_i = distributed term

$\beta 0$ = intercept term

$B1, \beta 2, \beta 3, \beta 4, \beta 5, \beta 6$ = slope coefficient

The Auto Regressive Distributed Lag Model is given in Equation 1:

$$\Delta(CO2)_t = \gamma_0 + \sum_{i=1}^{a} \gamma 1(CO2)_{t-i} + \sum_{i=0}^{b} \gamma 2(AGG)_{t-i} + \sum_{i=0}^{c} \gamma 3(EE\_GDP)_{t-i} + \sum_{i=0}^{d} \gamma 4(HE)_{t-i} + \sum_{i=0}^{e} \gamma 5(HHCE)_{t-i} + \sum_{i=0}^{e} \gamma 6(INF)_{t-I} + \gamma_7(CO2)_{t-1} + \gamma 8(AGG)_{t-1} + \gamma 9(EE\_GDP)_{t-1} + \gamma_{10}(HE)_{t-1} + \gamma_{11}(HHCE)_{t-1} + \gamma_{12}(INF)_{t-1} \ldots\ldots (1)$$

Equation 1 is the Auto regressive distributed lag model equation which shows the long run and short run relationship between explained and explanatory variable. γ_0 is the intercept term and short run coefficient of the determinants are as follows $\gamma 1, \gamma 2, \gamma 3, \gamma 4, \gamma 5, \gamma 6$ and the long run coefficients of the variables are as follows $\gamma 7, \gamma 8, \gamma 9, \gamma 10, \gamma 11, \gamma 12$ whereas, ε_I is the disturbance term.

3.2.1 Long Run Relationship Model

The relationship between the dependent and independent variable in the long run is presented in the equation 2.

$$(CO2)_t = \alpha_0 + \sum_{i=1}^{z1} \alpha 1i(CO2)_{t-i} + \sum_{i=0}^{z2} \alpha 2i(AGG)_{t-I} + \sum_{i=0}^{z3} \alpha 3(EE\_GDP)_{t-i} + \sum_{i=0}^{z4} \alpha 4(HE)_{t-i} + \sum_{i=0}^{z5} \alpha 5(HHCE)_{t-i} + \sum_{i=0}^{z6} \alpha 6(INF)_{t-i} + \varepsilon_i \ldots\ldots \quad (2)$$

Vol 4 (1) Jan-March, 2018 pp.133-155
ISSN 2520-7113 (Print), ISSN 2520-7121 (Online)
www.gjmsweb.com.editor@gjmsweb.com

In the above equation the lag term of CO^2 emission is integrated in order to regulate the dataset.

3.2.2. Short Run Relationship Model

The short run relationship between explained and explanatory variables is shown in equation 3. ECT lagged as (ECM) t-1 added in the equation to adjust the results.

$$\Delta(CO2)_t = \gamma_0 + \sum_{i=1}^{k1} \gamma 1i(CO2)_{t-i} + \sum_{i=0}^{k2} \gamma 2i(AGG)_{t-i} + \sum_{i=0}^{k3} \gamma 3i(EE\_GDP)_{t-i} + \sum_{i=0}^{k4} \gamma 4i(HE)_{t-i} + \sum_{i=0}^{k5} \gamma 5i(HHCE)_{t-i} + \sum_{i=0}^{k6} \gamma 6i(INF)_{t-i} + \lambda(ECM)_{t-i} + \varepsilon_I \ldots . \quad (3)$$

(ECMt-i) is the ECM that presents the longer run effect on X and Y variables, short-run impact on X and Y variable, and further its speed of adjustment.

$$\Delta P_t = \gamma + \delta\Delta_{t-1} + \lambda\,(ECM_{t-1}) + \varepsilon_I \ldots . \quad (4)$$

ECM_{t-i} error correction term is shown in equation 4, δ shows the shorter period effect and λ shows their speed of adjustment. Disequilibrium value is shown by the error correction term.

3.3 Wald test (F- statistics): The Wald test is used to set up the long run association between explained and explanatory variables.

3.4 Null Hypothesis

$\mathbf{H_0} = \gamma 7, \gamma 8, \gamma 9, \gamma 10, \gamma 11, \gamma 12 = 0$ (Non-existence of the long run relationship)

3.5 Alternative Hypothesis

$\mathbf{H_1} = \gamma 7, \gamma 8, \gamma 9, \gamma 10, \gamma 11, \gamma 12 \neq 0$ (Existence of the long run relationship)

If the tabulated value is less than the F-statistics value or F-statistics value is greater than the tabulated value of bound testing (Pearson 1999) then the alternative hypothesis is accepted and null hypothesis is rejected, whereas if the tabulated value is greater than the F-statistics value than the alternative hypothesis is rejected and null is accepted.

Vol 4 (1) Jan-March, 2018 pp.133-155
ISSN 2520-7113 (Print), ISSN 2520-7121 (Online)
www.gjmsweb.com.editor@gjmsweb.com

Table 2 Results of Augmented Dickey Fuller Test

Dependent Variable: CO2				
Method: Least Squares				
Sample: 1974 2016				
Included observations: 41				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.154888	0.049180	-3.149395	0.0033
AGG	-0.000810	0.002299	-0.352319	0.0267
EE	-0.047054	0.024576	-1.914631	0.0635
HE	0.387001	0.015977	24.22275	0.0000
HHCE	0.002020	0.001390	1.452984	0.0549
INF	-0.000378	0.001454	-0.259894	0.0964

4. FINDINGS AND RESULTS

4.1. Bound test for co- integration

Table 3 Results of Bound Test

Equation	**F-Statistics Calculated**	**Lower Bound Critical Value**	**Conclusion**
Equation (1) CO2 / AGG, EE, HE, HHCE, INF	2.39 [0.0118]	2.26 (90%)	Co-integration exist

Vol 4 (1) Jan-March, 2018 pp.133-155
ISSN 2520-7113 (Print), ISSN 2520-7121 (Online)
www.gjmsweb.com.editor@gjmsweb.com

Table 3 shows the result of the bound test to check the long run relationship or existence of co-integration among the variables. F-statistics calculated value is 2.39 (significance at 1% marginal values) and the critical values at k = 6-1= 5 is cited from Pearson et al (2001) is 2.26. F statistics calculated value is greater than lower bound critical value which has been selected from the table 3 case v: unrestricted intercept and trend. The numbers in parenthesis is shows the probabilities of F-statistics. Bound test shows that co integration exists among variables.

4.3 Long run Results

The results of long-run model is shown in Table 4

Table 4 Long run results

Variables	At level		At 1st Difference		
	Intercept	**Intr. & trend**	**Intercept**	**Intr& trend**	**Integration**
CO2			-6.05954	-	I(1)
AGG	- 8.63989	-	-	-	I(0)
EE	- 2.96151	-	-	-	I(0)
HE	-	-	-5.28365	-	I(1)
HHCE	- 7.84414	-		-	I(0)
INF	-	-	- 6.25262	-	I(1)

An autoregressive distributed lag model was used to determine the relationship between poverty and the environment in Pakistan. In the long term, the relationship between variables as the value of the coefficient shows one-unit increase in the growth rate of agricultural sector, will reduce the environmental degradation by 0.0008 percent, which is statistically significant. At the same time, one-unit increase

Vol 4 (1) Jan-March, 2018 pp.133-155
ISSN 2520-7113 (Print), ISSN 2520-7121 (Online)
www.gjmsweb.com.editor@gjmsweb.com

in education expenditure as percentage of GDP in Pakistan will reduce to -0,047 percent environmental degradation, and it is statistically significant at 10%. The coefficient value shows one-unit increase in healthcare expenditure will increase 0.38 percent environmental degradation and is statistically significant. The value of the coefficient shows a one-unit increase in household consumption expenditure will increase in environmental degradation by 0.0020 units, which is statistically significant. The coefficient value indicates that a unit increases in inflation rate will reduce 0.000378 percent environmental degradation and it is statistically significant. The behavior of the variables shows that there is a long-term relationship between poverty determinants and environmental degradation in Pakistan. Some variables first cause environmental degradation and then reduce it as is stated in Kuznets' hypothesis.

4.4. Short Run Results

The long run results are shown in table 5

Table 5 Long run results

Dependent Variable: D(CO2)				
Method: Least Squares				
Sample (adjusted): 1972 2011				
Included observations: 39 after adjustments				
Variable	**Coefficient**	**Std. Error**	**t-Statistic**	**Prob.**
C	0.010713	0.003953	2.710049	0.0118
D(CO2(-2))	0.244354	0.161099	1.516787	0.1414
D(AGG)	-0.000228	0.000674	-0.338566	0.0377
D(AGG(-2))	0.001164	0.000630	1.848633	0.0759
D(EE)	-0.023337	0.016115	-1.448149	0.0595
D(EE(-2))	0.000687	0.016281	0.042174	0.9667

Vol 4 (1) Jan-March, 2018 pp.133-155
ISSN 2520-7113 (Print), ISSN 2520-7121 (Online)
www.gjmsweb.com.editor@gjmsweb.com

D(HE)	0.063558	0.028951	2.195361	0.0373
D(HE(-2))	-0.030368	0.039500	-0.768813	0.4489
D(HHCE)	0.001146	0.000546	2.099993	0.0456
D(HHCE(-2))	0.000986	0.000604	1.632373	0.1147
D(INF)	0.002303	0.001057	2.179133	0.0386
D(INF(-2))	0.000955	0.000786	1.215683	0.2350
ECT(-1)	-0.238412	0.102692	-2.321615	0.0284

In auto regressive distributed lag model vector error correction model used to measure short run association of the variables. VECM model relationship among dependent and independent variable is shown in above table 5, which shows that the agriculture growth rate, education and health expenditure are positively significant relation with the environment degradation, while inflation rate and household consumption expenditure are negatively significant relation with environment degradation. In long run inflation rate was positive significant correlated with environmental degradation but in short run it has negative significant relation.

4.5 Regression Analysis

The results of regression analysis are shown in Table 6.

Table 6 Regression analysis results

R-squared	0.581595	Mean dependent var	0.016220
Adjusted R-squared	0.242331	S.D. dependent var	0.023062
S.E. of regression	0.020074	Akaike info criterion	-4.717596
Sum squared resid	0.010477	Schwarz criterion	-4.163076
Log likelihood	104.9931	Hannan-Quinn criter.	-4.518639
F-statistic	2.012818	Durbin-Watson stat	2.107896
Prob (F-statistic)	0.025895		

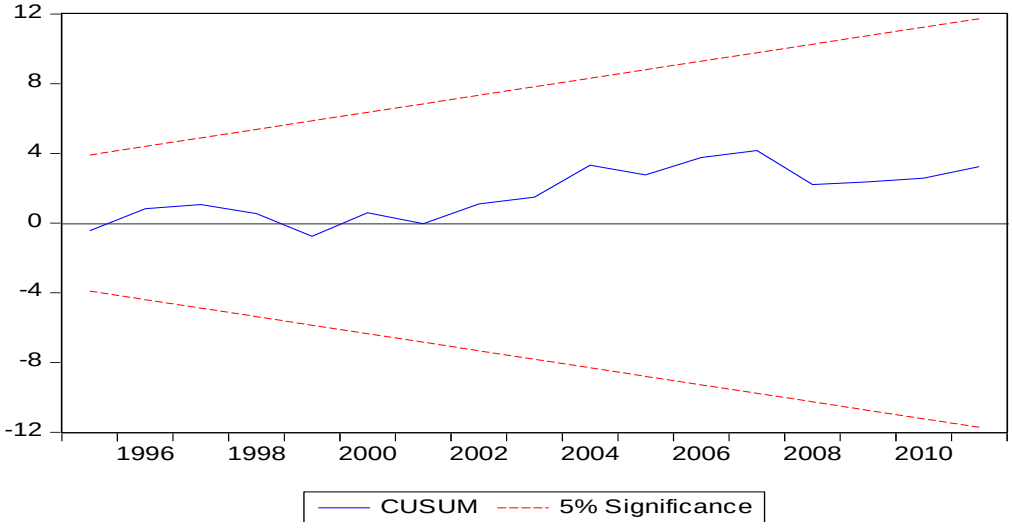
Vol 4 (1) Jan-March, 2018 pp.133-155
ISSN 2520-7113 (Print), ISSN 2520-7121 (Online)
www.gjmsweb.com.editor@gjmsweb.com

R-squared value .5815 shows that our independent variables have 58% impact on dependent variable while the other 42% is the residual value or not included in the model. In means one-unit increase in independent variables will bring 58 percent change in dependent variable. This effect is significant statistically. The probability value of F- statistics is below the 5% (0.025%) which shows the overall significance of the model. D- Statistics value 2.1078 which is near about 2 so we can conclude that there is no autocorrelation in our model.

4.6 Stability test

CUSUM stability test is used to check the stability of the data in auto regressive distributed lags method (ARDL). The results shown in Figure 1 that the data are stable because in cumulative sum of recursive residuals CUSUM graph blue line is between the two red line and it is within the limits of 5% significance level. Stability test graph is presented below: -

Figure 1 CUSUM Test Results



Vol 4 (1) Jan-March, 2018 pp.133-155
ISSN 2520-7113 (Print), ISSN 2520-7121 (Online)
www.gjmsweb.com.editor@gjmsweb.com

4.7 Diagnostic Testing

Table 7 Results of Diagnostic Test

Test Statistics	LM Version	F Version
Serial Correlation	.011611[.701]	F(1, 26)=.012022[.921]
Functional Form	1.01112[.281]	F(1, 26)= .79153[.372]
Normality	.1877[.805]	Not applicable
Heteroscedasticity	3.2205[.068]	F(1, 36)= 3.2085[.082]

Diagnosing test results shows that there is no serial correlation and heteroscedasticity.

5. CONCLUSIONS

Poverty is the extreme case for underdeveloped countries. Generally, the unequal distribution of income is considered as the main cause of increase in poverty in these countries. Our results show that both poverty and environment were found as the uni-directional effect because poverty causes environment degradation and environment degradation causes poverty. Poverty itself is like a disease for all the factors of the growth. Pakistan is also facing the similar situation of the poverty. Mismanagement, bad governance and unequal distribution of the income are the main factors for the poverty. Present situation is not satisfactory for poverty and environment degradation in Pakistan. Recent year climate change statistics shows their effect on the production of agriculture and industrial sectors are enormous. Heavy rains during 2010 and 2012 and devastating floods in Punjab and Sindh provinces of Pakistan substantially cause deaths of hundreds of people and infrastructure. The most effected people are the people living in rural areas. Our study concludes that poverty and environment has close relations because poverty causes environmental degradation while environmental degradation causes poverty and health hazards. Thus, the policy makers must focus on poverty alleviation.

Vol 4 (1) Jan-March, 2018 pp.133-155
ISSN 2520-7113 (Print), ISSN 2520-7121 (Online)
www.gjmsweb.com.editor@gjmsweb.com

In our study all variables of poverty are statistically significant. Some variables are positively significant while others are negatively significant. Agriculture growth, education expenditure and inflation rate are positively significant while health expenditure and household consumption expenditure are negatively significant. Result shows that environment degradation in Pakistan can be decreased by increasing agriculture output, education expenditure as percentage of GDP and controlling inflation rate. Consumption expenditures also have negative effect on environmental degradation.

6.Policy Recommendation:

On the basis of above discussion and conclusions we would like to make the following suggestions: -

1. Government of Pakistan should take measure to enhance the education level particularly in rural areas.
2. Pakistan is agriculture country and most of population belongs to this profession. Government must introduce new polices for agriculture products.
3. General Price level should be controlled. Government takes measure to enhance the quantity of goods and services to ensure their availability at affordable cost.

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