

# Eradiation of Poverty through Existing Zakat System in Pakistan: An ARDL Modelling Approach to Co-integration

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## Abstract

Study explore the inter relationships between zakat and poverty in Islamic view point during the span of 1981 to 2014. In this paper an ARDL technique (Bound testing approach) recommended by Pesaran et al. (2001) is employed to examine the short-run dynamics and long-run impact of zakat, inflation, population and child labour force on poverty. Our study showed that there is negative relationship between poverty and Zakat. Poverty in the long run can be reduced by the proper implementation of Zakat system. Moreover, procedure of unit root test also ensures that there is long run relationship in our study. By Islamic point of view zakat bears the tendency to reduce the poverty. Recent study of economists' also believes, similar to our finding, that poverty can be reduced by proper Zakat system.

**Keywords:** Collection of Zakat, Poverty Eradication, Economic Growth, Inflation, Child Labour Force, Population

## Introduction:

Zakat means growth and purification it is calculated according to the nature of assets. It is basic tenets of Islam. Zakat has mentioned in Quran 22 times. In most of the Islamic countries like Pakistan Zakat is given to the needy persons without involving govt. functionaries. Basically Zakat is given to the poor needy person to fulfil their basic needs like clothing, shelter, fooding and marriages etc. By the economic point of view providing Zakat to needy person is the best way by which inequality gap between rich and poor can be lessen. In Pakistan official Zakat system were Introduce in 1980. But before introduction of official Zakat system in Pakistan people were paying Zakat to the needy person. Zakat and Ushr ordinance was introduced by the President of Pakistan in 20<sup>th</sup> June 1980. Zakat is one of five basic tenets of Islam. In Muslim economies poverty can be eradicated by zakat system but when zakat is paying to needy people in proper way by a proper system. Zakat is mentioned in Quran many times. The importance of Zakat in the light of Holy Qurani Ayyat as:

وَأَقِيمُوا الصَّلَاةَ وَآتُوا الزَّكَاةَ وَأَقْرِضُوا اللَّهَ قَرْضًا حَسَنًا وَمَا تُقَدِّمُوا لِأَنفُسِكُمْ مِنْ خَيْرٍ يَجِدُوهُ عِنْدَ اللَّهِ هُوَ خَيْرًا وَأَعْظَمَ أَجْرًا وَاسْتَغْفِرُوا اللَّهَ إِنَّ اللَّهَ غَفُورٌ رَحِيمٌ<sup>1</sup>

... And establish prayer and **give zakat** and loan Allah a goodly loan. And whatever good you put forward for yourselves - you will find it with Allah. It is better and greater in reward. And seek forgiveness of Allah. Indeed, Allah is Forgiving and Merciful.

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<sup>1</sup> Al-Quran, Al-Muzzammil:20

مَثَلُ الَّذِينَ يُنْفِقُونَ أَمْوَالَهُمْ فِي سَبِيلِ اللَّهِ كَمَثَلِ حَبَّةٍ أَتَتْ سَنَابِلَ فِي كُلِّ سُبُلَةٍ هَائِلَةٌ حَبَّةٌ وَاللَّهُ يُضَعِفُ لِمَنْ يَشَاءُ وَاللَّهُ وَاسِعٌ عَلِيمٌ<sup>2</sup>

The example of those who spend their wealth in the way of Allah is like a seed which grows seven spikes. In each spike there is hundred grains and Allah multiplies for whom He wills. and Allah is all-Encompassing and Knowing.

Allah also reminded us in this ayat.

أَلَسْبَطُنْ يَعِدُكُمُ الْفَقْرَ وَيَأْمُرُكُمْ بِالْفَحْشَاءِ وَاللَّهُ يَعِدُكُمْ مَغْفِرَةً مِّنْهُ وَفَضْلًا وَاللَّهُ وَاسِعٌ عَلِيمٌ<sup>3</sup>

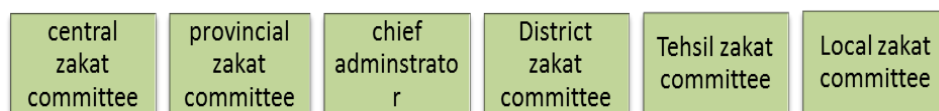
"Satan Threatens you with poverty and orders you to immorality, while Allah promises you forgiveness from Him and bounty. And Allah is all- Encompassing and Knowing".

The people entitled to Zakaat are those places we can direct our Zakaat to. Allaah took charge of explaining for He what these places are, saying:

إِنَّمَا الصَّدَقَتُ لِلْفُقَرَاءِ وَالْمَسْكِينِ وَالْعَمِلِينَ عَلَيْهَا وَالْمَوْلَقَةِ قُلُوبِهِمْ وَفِي الرِّقَابِ وَالْغَرَمِينَ وَفِي سَبِيلِ اللَّهِ وَابْنِ السَّبِيلِ فَرِيضَةً مِّنَ اللَّهِ وَاللَّهُ عَلِيمٌ حَكِيمٌ<sup>4</sup>

"The charity (Zakaat) is only for the poor, the needy, those employed to collect (the Zakaat), those whose hearts will be inclined (towards Islam, by giving them Zakaat), for slaves, for those in debt, for (Jihād in) the Cause of Allah, and for the wayfarer (i.e. destitute traveler). It is an obligation imposed by Allah, and Allah is the All-Knower, the All-Wise."

Zakat paying to needy people is one of the five pillars of Islam. By the Muslim economists it is believed that poverty can be reduced by the proper system of zakat. In Pakistan 39000 local zakat committees are working. After zakat ordinance the people were paying zakat to the needy persons for this zakat system five tier organization were established that are:



The main objective of this paper is also to identify whether zakat system is really effective to eradicate poverty and inequality. Zakat has played a vital role in reducing poverty .The study show that is zakat will be distributed in a proper manner then it has a great impact on poverty means zakat not only purpose to fulfil basic needs(clothing, shelter, fooding) but in a way that employment opportunities will increase the education of poor people will increase. To enhance the level of living of poor needy person in the long run means zakat is given for businesses purposes and for the education of the children then definitely the percentage of poverty will decrease and country will move to the way of economic development. In Islamic point of view there is no difference between rich and poor so this difference can only be reduced by zakat and

<sup>2</sup> Al-Quran, Al-Baqarah:261

<sup>3</sup> Al-Quran, Al-Baqarah:268

<sup>4</sup> Al-Quran, At-Tawbah:60

inequality from rich to poor will be lessen. Giving Zakaat cleanses one's character from stinginess and miserliness, as Allaah says:

خُذْ مِنْ أَمْوَالِهِمْ صَدَقَةً تُطَهِّرُهُمْ وَتُزَكِّيهِمْ بِهَا وَصَلَّ عَلَيْهِمْ إِنَّ رَبَّكَ سَكَنٌ لَّهُمْ وَاللَّهُ سَمِيعٌ عَلِيمٌ<sup>5</sup>

“Take the charity (Zakaat) from their wealth in order to purify and cleanse them by way of it.”

Allah Says

وَأَقِيمُوا الصَّلَاةَ وَآتُوا الزَّكَاةَ وَمَا تُقَدِّمُوا لِأَنْفُسِكُمْ مِنْ خَيْرٍ يَجِدُوهُ عِنْدَ اللَّهِ إِنَّ اللَّهَ بِمَا

تَعْمَلُونَ بَصِيرٌ<sup>6</sup>

“And be steadfast in Salah (Prayer), and give Zaka. Whatever good you send for yourselves, you will find it with Allah. Certainly Allah is watchful of what you do”.

### Trend of Variables:

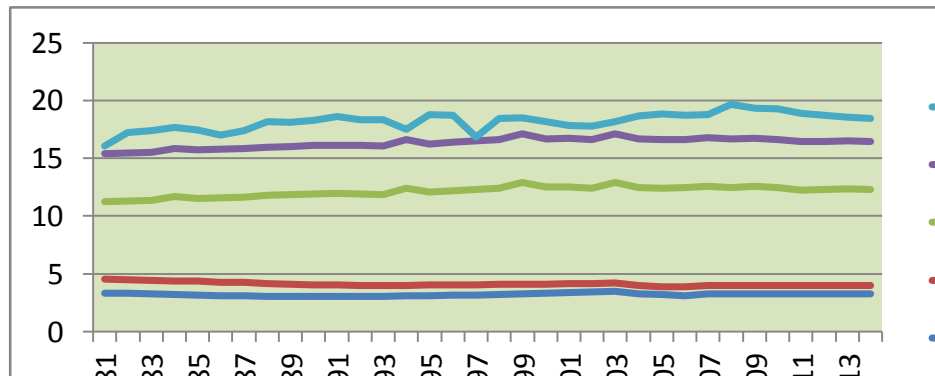
POV=poverty

POP= population

CLF= child labour force

ZAKAT= collection of zakat

INF=inflation



In the above graph we have trend lines of some variables that are Inf, pov, POP, CHL, ZAKAT. The blue line describes the data of Inf from the period 1981 to 2014. We can see that red line shows the POP level percentage over a year the population level is in starting of 1981 after 1987 the population level will slightly down after that till 2012 the level of population is almost stable slightly ups and downs. While purple line shows the poverty of economy due to zakat the poverty level is also on decreasing trend it,s mean after introduction of zakat the economy,s poverty level has been decreased till 2014 it,s mean zakat has negative impact on poverty. Light green colour shows the gini coefficient due to zakat the gap between rich and poor has been decline the gap has been lessen. Dark blue colour shows the CHL (child labour force) of Pakistan economy CHL is fluctuated from 1981 to 2014.

<sup>5</sup> Al-Quran, At-Tawbah:103

<sup>6</sup> Al-Quran, Al-Baqarah:110

**Literature Review:**

examined that Poverty Eradication through Existing System of Zakat in Pakistan Islamic.<sup>7</sup> This study used time series data. This study adopted annual estimation technique from the year 1981-1988. The variables which used in this article were Zakat, Poverty, Economic growth, Ushr, and GDP. The study of poverty reduction in Pakistan showed that how the contribution of Zakat remove or lessen the poverty in Pakistan and how economic stability can be achieved and how zakat can be provided to the Mustahqueen.<sup>8</sup> analysed that Targeting, Coverage and Contribution of Zakat to Household 'Income in 1996 The Case Study of Pakistan. This study used time series data. This study adopted percentage method. The duration of this study was (1980 to 1994). This article took the variables Zakat, Poverty, Saving Deposits Certificate, Ushr and capital. The final result of this study showed that ti identify the effect whether the contribution of Zakat and Ushr are giving to the poor household or not for this smooth step should be taken.

Analyzed the Contribution of Zakat as an Income Creating Asset in Selangor and Wilayah Persekutuan, Malaysia.<sup>9</sup> This study used time series data and adopted direct interview survey technique and binomial logistic regression model to be estimated. This study took the variables Zakat, real GDP per capita(RGDP), Poverty and Landownership. The final result showed that rich people should pay Zakat to the poor brother in this way the business sector will boom and stability can be achieved. Masud, Nadia, and Boriana Yontcheva<sup>10</sup> investigated Does Foreign Aid Reduces Poverty? Empirical evidence From Nongovernmental and Bilateral Aid. This study used the panel data analysis. The variables that are used in this study are Poverty, Aid, Economic growth, GDP, and NGO. This study used two stage least square regression techniques. The result of this study showed the effectiveness of foreign aid on the poverty the impact of foreign aid is negative on poverty, poverty will decline and economic development can be achieved.

Analysed in 2007 Poverty Trape,<sup>11</sup> Aid and Growth .This study used the graphical method to explained poverty trape. The study used time series data. The study took the variables Poverty, Growth, Aid, Capital, Economic growth. The study showed the result that poverty trape rise due to low level of saving low technology at low development if we want to overcome poverty then the level of saving must rise and aid can help to overcome poverty.

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<sup>7</sup>Mohammad, Faiz, and Muhammad Anwar. "Prospects of Poverty Eradication Through the Existing" Zakat" System in Pakistan [with Comments]." *The Pakistan Development Review* 30, no. 4 (1991): pp.1119-1129

<sup>8</sup> Shirazi, Nasim Shah. "Targeting, coverage and contribution of zakat to household's income: the case of Pakistan." *Journal of economic cooperation among Islamic countries* 17, no. 3/4 (1996): pp.165-186

<sup>9</sup>Md Nor, Nor Ghani, Abd Razak Dan, and Mohd Ali Mohd Noor. "The Contribution of Zakat as an Income Creating Asset in Selangor and Wilayah Persekutuan, Malaysia." *Jurnal Ekonomi Malaysia* 36 (2002).

<sup>10</sup> Masud, Nadia, and Boriana Yontcheva. "Does foreign aid reduce poverty?: empirical evidence from nongovernmental and bilateral aid." (2005).

<sup>11</sup> Ravallion, Martin. *Why don't we see poverty convergence?*. The World Bank, 2009.

Examined The Challenge of Poverty and Mapping out Solution: <sup>12</sup> Requisite Paradigm Shift from a Problem-Solving and Islamic Perspective. The study used time series data. The variables took in this study are poverty , population, economic growth and Zakat system. This study used library method and this study showed the result that change in the monetary sector will prove for economic development and it will also helpful to remove or eradicate poverty.

Investigated in 2010 that Prospect of Poverty Elimination through Potential Zakat Collection in OIC-member Countries: Reappraised. <sup>13</sup> This study used the panel data and in this study estimation technique is adopted. The period of this study was (1995 to 2005). This study took the variables total population, poverty line, GDP, Poverty and Zakat. This study showed the result that it was the result that if the system of Zakat will improve in OIC countries then big proportion of poverty will be eliminated required serious effort on OCI countries

Analysed The Effects of Poverty on Academic Achievements. <sup>14</sup> The study used time series data from 1959 to 1993. The variables which are used in this study are Poverty, Family income, Children, Academic gap and education. In this study graphical method was adopted. The final result of this study showed that poverty affects the resources available to the student and directly effects the academic resources to overcome this problem some policies should be taken.

Investigated that Assessing the role of Zakat asa a social safety Net and problems faced by Zakat Recipients in receiving Zakat assistance in Pakistan in 2014. <sup>15</sup> This study applied questionnaires method. The study used time series data. They used the variables GDP, Poverty, Zakat, Ushr, Economic growth, and Education. The study showed the result there exists so many problems of receiving Zakat assistance Zakat is not working effectively to improve economic condition. Ali et al. <sup>16</sup> examined The Effectiveness of Zakat in Reducing Poverty Incident: An Analysis in Kelantan, Malaysia in 2015. This study used primary data related to zakat collection. The study used Sen Index ratio and poverty gap. The variables that are used in this study are poverty, GDP, economic growth and Zakat. The study showed the result that perfect amount of zakat to the poor can reduce the level of poverty and is the best way of reducing income inequality.

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<sup>12</sup> Farooq, Mohammad Omar. "The challenge of poverty and mapping out solutions: requisite paradigm shift from a problem-solving and Islamic perspective." (2009).

<sup>13</sup> Shirazi, Nasim Shah, and F. M. Amin. "Prospects of Poverty Elimination through Potential Zakat Collection in OIC-Member Countries: Reappraised." *Journal of Islamic Economic, Banking and Finance* 6, no. 3 (2010).

<sup>14</sup> Lacour, Misty, and Laura D. Tissington. "The effects of poverty on academic achievement." *Educational Research and Reviews* 6, no. 7 (2011): pp.522-527

<sup>15</sup> Zeb, Arooj, and Gohar Zaman. "Assessing the Role of Zakat as a Social Safety Net and problems faced by Zakat Recipients in receiving Zakat Assistance in Pakistan." *Abasyn University Journal of Social Sciences* 7, no. 1 (2014).

<sup>16</sup> Ali, Ahmad Fahme Mohd, Zakariah Abd Rashid, Fuadah Johari, and Muhammad Ridhwan Ab Aziz. "The effectiveness of Zakat in reducing poverty incident: An analysis in Kelantan, Malaysia." *Asian Social Science* 11, no. 21 (2015): p.355

**Data and Methodology:****Nature and Source of Data:**

In this study the time series data of 32 from years has been choose .In this paper the secondary data has been selected and period from the period 1981 to 2014. The “Autoregressive distributed lag” (ARDL) econometric technique is applied.

**Table 1:** Description of variables

<i>Variables</i>	<i>Descriptive Variables</i>	<i>Unit of Measurement</i>	<i>Source</i>	<i>Sign</i>
<i>Dependent Variable</i>				
<i>POV</i>	<i>Poverty</i>	<i>Percentage</i>	<i>PBS</i>	
<i>Independent Variable</i>				
<i>INF</i>	<i>Investment</i>	<i>Million Rupees</i>	<i>SBP</i>	<i>-ve</i>
<i>CLF</i>	<i>population</i>	<i>Percentage</i>	<i>WDI</i>	<i>+ve</i>
<i>POP</i>	<i>Inflation</i>	<i>Million Rupees</i>	<i>SBP</i>	<i>+ve</i>
<i>ZAKAT</i>	<i>Zakat reciepts</i>	<i>Million Rupees</i>	<i>SBP</i>	<i>-ve</i>

(Note: Data has been collected from FBS and SBP)

**Methodology:**

“Autoregressive distributed lag” (ARDL) is an econometric technique which represents the auto lag values and also have distributed lag component.

In the basic form ARDL Regression medel look like this:

$$y_t = \beta_0 + \beta_1 y_{t-1} + \dots + \beta_p y_{t-p} + \alpha_0 x_t + \alpha_1 x_{t-1} + \alpha_2 x_{t-2} + \dots + \alpha_q x_{t-q} + \varepsilon_t$$

where ,

$\varepsilon_t$ =random "disturbance" term.

$y_t$ =explained by lagged values

$x$ =explained variable

$x_t$ =excluded from distributed lag part of model

**Specification of Model:**

$$\ln POV = \beta_0 + \beta_1 \ln(ZAKAT) + \beta_2 \ln(INF) + \beta_3 \ln(POP) + \beta_4 \ln(CLF) + \varepsilon$$

Where sign represent

POV=poverty

POP= population

INF= inflation

CLF= child labour force

ZAKAT= collection of zakat

There are some of variables that effect (POV) such as Zakat, POP, inflation, child labour force.



### **Description of the Variables:**

#### **Poverty:**

Poverty tells us how much proportion of population living below the poverty line. HCR is head count ratio this will usually use to examine that how much percentage of population is living below the poverty line means how much percentage of population in a country is poor. If poverty line is fixed as 2\$ a day and most of the people are consuming 1.5\$ a day means they are poor. Poverty head count ratio usually calculated by household income and expenditure survey.

#### **Population:**

In this model POP is gross population. The total population of Pakistan that was estimated by economic survey that was around 189.9 million of people in 2015 it is the latest figure. If population of an economy is increasing then its mean poverty of Pakistan also increasing if population is not in the sense of effective labourer force. If percentage of effective labour force increasing then poverty ratio will be down.

#### **Child labour force:**

The children who are physically not active to do work but they are job the age of those children around 15 year or less. The age in which they should have to go school for education but due to financial weakness parents sent them to working places for earnings. The impact of child labour on poverty is positive as child labour increases the poverty ratio will increase.

#### **Inflation:**

Inflation means the increase in general price level. When money supply rises it will also cause the rise in general price level that is called inflation. There is effect of inflation on those people whose income is less than poverty line increase in price level leave great impact on poor people they become unable to purchase even basic needing zakat will help them in this situation.

#### **Zakat:**

Zakat and ushr is an amount which is given to the needy Muslims to fulfil their basic needs like fooding clothing etc but zakat can on lessen the inequality gap it can't reduce the poverty but in this paper the zakat is that type of zakat which is collected by committee and then it will use in productive way it will help out to reduce poverty in this way economic stability can be achieved.

#### **Econometric model:**

We identify the subsequent equation to examine the special effects of Zakat, Investment and Population on poverty:

$$\ln(POV_t) = \beta_0 + \beta_1 \ln(INF_t) + \beta_2 \ln(ZAKAT_t) + \beta_3 \ln(POP_t) + \beta_4 \ln(CLF_t) + U_t$$

Where  $POV_t$ ,  $INF_t$ ,  $ZAKAT_t$  and  $CLF_t$  and  $POP_t$  poverty, inflation, child labour force, zakat and population. (Ln) shows natural logarithmic type of the time series data. Parameters,  $\beta_1$ ,  $\beta_2$ ,  $\beta_3$  and  $\beta_4$  are the long-run elasticity's of poverty with respect to Zakat, POP, CL and inflation respectively. Autoregressive distributed lag (ARDL) approach to cointegration avoid limitations that data must be significant at I(1) or I(0). Pesaran, Shin et al. (1996) developed this advance whereas Pesaran et al. (2001) developed it further. Due to different econometric compensation over other methods of cointegration this approach has gained wide acceptance. This approach, contrary to other approaches, does not force all the variables to be integrated of the same order, i.e. I(1). This approach is evenly excellent if all variables in a model are I(0) or I(1).

Bearing in mind above recompense of ARDL approach to cointegration, we identify the subsequent model to identify the long run relationship in ARDL:

$$\begin{aligned} \Delta \ln(POV_t) = & \beta_0 + \sum_{i=1}^q \beta_1 \Delta \ln(POV_{t-i}) + \sum_{i=0}^q \beta_2 \Delta \ln(ZAK_{t-i}) + \sum_{i=0}^q \beta_3 \Delta \ln(CHL_{t-i}) \\ & + \sum_{i=0}^q \beta_4 \Delta \ln(POP_{t-i}) + \sum_{i=0}^q \beta_5 \Delta \ln(INF_{t-i}) + \beta_6 \ln(POV_{t-1}) + \beta_7 \ln(ZAK_{t-1}) \\ & + \beta_8 \ln(CHL_{t-1}) + \beta_9 \ln(POP_{t-1}) + \beta_{10} \ln(INF_{t-1}) + U_t \end{aligned}$$

In the above equation  $\Delta$  is difference and as we know  $q$  is lag difference  $\beta_1$ ,  $\beta_2$ ,  $\beta_3$ ,  $\beta_4$  and  $\beta_5$  shows the short run dynamics of the model while  $\beta_6$ ,  $\beta_7$ ,  $\beta_8$ ,  $\beta_9$  and  $\beta_{10}$  shows the long run elasticity of the model before applying the ARDL model we should test our variables are significant on I(1) and I(0) if any one of variable is significant on I(2) then ARDL is not valid so first we should apply unit root test. Then we should apply bound test the value of F-statistic should be greater than lower bound value if this is then we select optimal lag length of variables. The (error correction version) is given below:

$$\begin{aligned} \Delta \ln(POV_t) = & \beta_0 + \sum_{i=1}^{q_1} \beta_1 \Delta \ln(POV_{t-i}) + \sum_{i=0}^{q_2} \beta_2 \Delta \ln(ZAK_{t-i}) + \sum_{i=0}^{q_3} \beta_3 \Delta \ln(CHL_{t-i}) \\ & + \sum_{i=0}^{q_4} \beta_4 \Delta \ln(POP_{t-i}) + \sum_{i=0}^{q_5} \beta_5 \Delta \ln(INF_{t-i}) + \lambda EC_{t-1} + \varepsilon_t \end{aligned}$$

In the above equation we have  $q(1,2,3,4)$  that shows optimal lag length, speed of adjustment is given and EC is error correction in the above model.

### Empirical Findings:

Before applying the ARDL (autoregressive dickey fuller test) we should check our variables are significant according to condition of ARDL or not if any one variable is significant on I(2) then ARDL is not applicable so now we should test UNIT-ROOT-TEST. I use ADF, PP and DF-GLS to test variables in this model.



**Table 2:** Unit- Root- Test Results

<i>Variables</i>	<i>DF-GLS</i>	<i>TEST</i>	<i>PP</i>	<i>TEST</i>	<i>ADF</i>	<i>TEST</i>	<i>RESULTS</i>
	<i>Level</i>	<i>1st DIFF</i>	<i>Level</i>	<i>1st Diff</i>	<i>Level</i>	<i>1st Diff</i>	
<b>POV</b>							<b>I(1)</b>
<i>Intercept</i>	-3.8501	-7.0829	-4.2910	-10.781	-4.1798	-6.9625	
<i>T&amp;I</i>	-4.1537	-7.1364	-4.2405	-10.674	-4.1085	-6.8933	
<i>None</i>			0.1727	-10.945	0.2909	-7.0647	
<b>INF</b>							<b>I(0)</b>
<i>Intercept</i>	-1.0717	-0.5460	-4.5860	-9.3550	-4.4591	-7.2015	
<i>T&amp;I</i>	-4.2435	-7.9629	-4.6617	-8.6704	-4.4946	-7.0732	
<i>None</i>			-0.3809	-8.9633	-0.1096	-7.3182	
<b>POP</b>							<b>I(1)</b>
<i>Intercept</i>	0.7003	-5.2452	-0.3307	-5.6323	-0.3298	-5.5714	
<i>T&amp;I</i>	-2.7054	-5.5777	-2.6118	-5.5206	-2.6118	-5.4763	
<i>None</i>			10.162	-2.0514	9.1709	-0.8786	
<b>ZAKAT</b>							<b>I(1)</b>
<i>Intercept</i>	-0.8075	-8.5578	-4.0850	-8.4719	-2.9981	-8.4195	
<i>T&amp;I</i>	-1.1405	-5.4147	-1.5628	-22.407	0.5796	-6.0480	
<i>None</i>			1.4952	-7.8681	1.6736	-7.8952	
<b>CLF</b>							<b>I(1)</b>
<i>Intercept</i>	-0.2628	-7.0445	0.6399	-6.9957	0.4437	-6.9957	
<i>T&amp;I</i>	-2.4710	-7.0929	-2.4097	-7.1858	-2.4875	-7.0216	
<i>None</i>			21.023	-1.2395	16.381	-0.6184	

(NOTE: Calculation based on software 7.0 E. views)

In the above table I have used Augmented Dickey-Fuller (ADF) , Dickey Fuller-GLC (ERS) 1979 and Philips Perron 1988 test to check the results about variables of my model . These tests examine the non-stationary and stationary of data. According to the results all variables are stationary at first difference. (0) represents that variables are stationary at level while (1) explains that variables are significant at first , the variables like POP ,CHL are the variables which are significant at first difference .While INF inflation is significant at leve (0). The main variables like Zakat and POVERTY is also stationary at level (1).

**Table 3:** F-Statistic for Testing the Existence of Long-Run Relationship

<i>Order of lag</i>	<i>F-Statistic</i>
<i>1</i>	<i>2.9125</i>

The result shows that upper and lower bound values (2.68 and 3.05 at 95 percent) for F-statistic: And lag 1 is selected for our model as optimal lag length. So there exists long run relationship in our model. By using (AIC) Akaika info criterion and ret. Linear trend we have following results of long run coefficient of ARDLA

**Table 4: Diagnostic Tests**

Test-Statistic	
Serial correlation	0.9640
Heteroscedasticity	0.0689

The above results shows that our values are greater than 0.05 now we can say that in our model there is no autocorrelation and heteroscedasticity now we can apply ARDL test in our model.

**Table 5: Long-Run Coefficients of ARDL (1, 1, 0, 0) Model Dependent Variable Ln (POV)**

Variables	Coefficient	Std.error	T-Statistic
$Ln(INF)_t$	-0.17777	0.0926	-1.9174
$Ln(POP)_t$	0.25100	1.2795	0.1962
$Ln(CLF)_t$	4.6698	7.8470	0.5951
$Ln(ZAKAT)_t$	-0.16159	0.2730	-0.5919

(NOTE: Calculation based on software 9.0 E. views)

The coefficient (-0.1777) of INF shows that there is negative relationship between INF and POV one percent increase in INF leads to 0.177 decrease in poverty by keeping in mind the Philips curve negative relation between INF and UNEMPLOYMENT when INF increases means increase in employment opportunity then it will leads to decrease in poverty. The coefficient of POP (0.25100) shows there is positive relationship between population and poverty due to 1 percent increase in population leads to 0.25 increases in poverty. The coefficient of child labour force (4.6698) shows there exists positive relationship between child labour force and poverty 1 percent increase in CLF leads to 4.66 percent increase in poverty. The main variable ZAKAT the coefficient (-0.1615) shows there is negative relationship between zakat and poverty 1 percent increase in zakat leads to 0.1615 decrease in poverty.

**Table 6:** Estimated Short Run Relationship

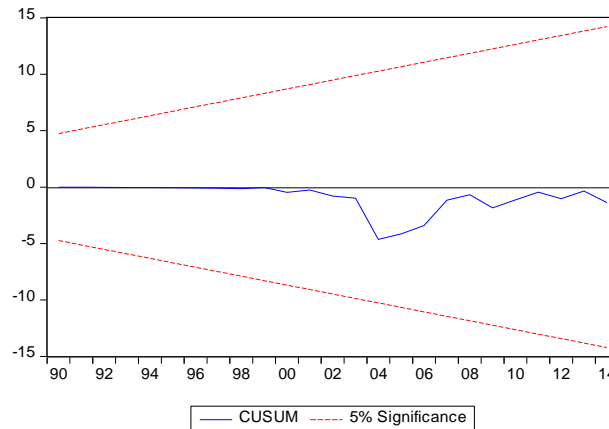
Variables	Coefficient	Std.error	t.Statistic
Constant	-3.9232	1.1058	0.0016
$\Delta \ln(ZAKAT)_t$	0.0053	0.0458	0.9079
$\Delta \ln(INF)_t$	-0.0329	0.0144	0.0313
$\Delta \ln(CLF)_t$	-2.811	0.3078	0.0414
$\Delta \ln(POP)_t$	0.1958	0.3790	0.6099
ECM	-0.2566	0.0726	0.0016

(NOTE: Calculation based on software 9.0 E. views)

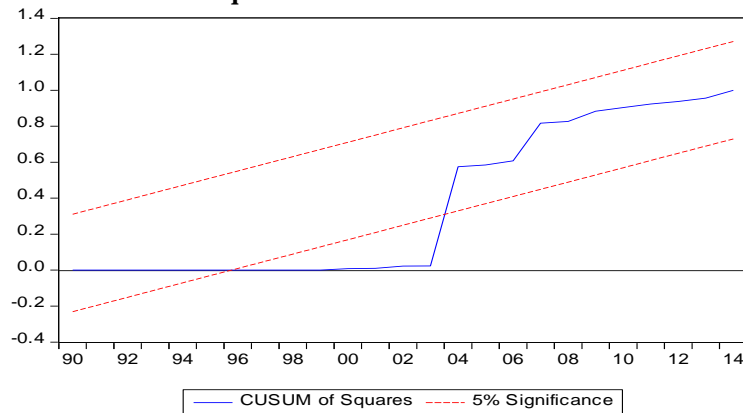
These are the result of short run of vector error correction model the value of ECM lies between 0 to -1 [show](#)es the short run elasticity in the model because we are examining the natural log model. The value of ECM is -0.2566 and it is significant (0.0016) it means poverty in equilibrium in the current period will 25% will be adjusted to the equilibrium to the very next period. In the short run the zakat is positively related to the poverty because in short run zakat has no significant result as in long run while in short run population is positively related to the poverty the result are same as in long run. In also has same result as in long run due to increase in in the poverty will increase.

#### Stability test:

Now we check our model is stable at 5% or not for this purpose the CUSUM and CUSUMSQ test are applied which is represented by Brown et. (1975)

**Plot of Cumulative Sum of Recursive Residua**

The blue line is between these two red line it shows that our model is significant at 5% and stable in long run.

**Plot of Cumulative Sum of Squares of Recursive Residuals**

The blue line between two red line in short run it is not stable but in long run it shows that our model is stable'

**Conclusion and Policy Implications:**

This paper shows that Zakat has negative impact on poverty on long run if Zakat is giving to the poor needy people in proper way then poverty can be reduced. But in the short run it has positive impact the reason is that if Zakat is giving to the needy people only to fulfill their basic need like clothing fooding and shelter etc then poverty cannot be reduced while in this way the poverty will increase so Zakat by proper way by coollection of zakat committee can be helpful. By Islamic point of view Zakat can reduce povert not only by Qurani Ayyat but also by the economic logic and variables it has been proved that Zakat is the one of the smooth way to reduce poverty. So, to do this zakat committee should be fromed and it is their duty to finance needy people by education or by small business laon in this way the child labour force will also decrease and education will increase poverty will be surely decrease.