The impact of globalization, foreign direct investment and trade openness on poverty: a case study of Pakistan

**KEYWORDS**
- impact of globalization
- foreign direct investment
- trade openness
- poverty
- Pakistan

**ABSTRACT**

*Introduction.* The central purpose of this study is to estimate the impact of globalization on poverty in Pakistan. Poverty is a world-wide massive curse in the previous and present years. Different organizations and institutions of the world are struggling to eliminate it from the world. Globalization and poverty correspond in the world and similarly in Pakistan.

*Materials and methods.* We used time series data from 1970 to 2019 and assigned autoregressive distributed lag (ARDL) model approach to take out empirical results which indicate that Foreign Direct Investment, Trade Openness, and Gross Domestic Product. The ARDL model is one of the most common dynamic unrestricted model in econometric literature.

*Results.* We summarize that globalization has dominant positive influence on poverty and economic growth and considerably decreased level of poverty in Pakistan. Improving trade openness, FDI, and GDP are the central and dynamic for reducing poverty in Pakistan. It indicates that there is tight association between globalization and poverty in the context of Pakistan.

*Conclusions.* This study proposes that utilizing globalization as an instrument and putting together such policies that primarily for the poor’s will help government to eradicate poverty. Although liberalization has contributed to poverty reduction, most of the developed countries have not so much liberalized their economies by maintaining their immigration laws, which discourage the immigration of labor from developing countries including Pakistan. Therefore, we would like to present the following recommendations for policymakers. Pakistan trade is still limited to specific countries. Pakistan has needed to explore its trade to other countries markets. The government should grab measures to revise its immigration laws, structural reforms, policy regarding trade openness, import exports and poverty at macro level, because immigration laws play a very crucial role and the impact of trade openness on poverty is the most significant one. Pakistan should pay some considerable attention to employment creation. Pakistan should pay reasonable interest to improve law and order situation to captivate international business community to invest in Pakistan. Pakistan trade is still limited to specific countries. Pakistan has needed to explore its trade to other country markets.

INTRODUCTION

Globalization is the result of advancements in communication, transportation, and information technologies. It describes the growing economic, political, technological, and cultural linkages that connect individuals, communities, businesses, and governments around the world. In recent years the term globalization has been used enormously by media and academics however, it is not a new phenomenon. Human societies across the globe have progressively established closer contacts over many centuries, but recently the pace has dramatically increased. Jet airplanes, cheap telephone services, email, computers, huge ocean going vessels and instant capital flows have made the world more interdependent than ever. The concept of globalization has many definitions. It can be defined in political, social, and economic terms, for this study, globalization is defined in terms of economic.

It is defined as a power in international economics, growth in global economics, wider intelligence, and the increased scale and level of economy with relation to world boundaries [10]. Globalization is the broadening, political, economic, and cultural interaction among the countries of the world, or it is the process of global economic, cultural and political integration or globalization is the system of interaction among the countries of the world to develop the global economy. Also, we can say globalization refers to the integration of economies and societies all over the world. It involves technological, economic, political-cultural exchange made possible largely by advancement in communication, transportation, and infrastructure.

Globalization has made the world a global village. It is due to globalization which changes the development of many countries like China, Malaysia, Singapore, Indonesia, and so on. Globalization has a significant effect on culture, on poverty, on the environment, on prosperity and peace in the world, on economic development simply all over the world.

Although globalization term is new from the beginning of the world, people are cooperating in different shapes, of the trade like barter system in which they exchange goods with goods or goods with services, for the business purpose they traveled from one part of the world to another. The tendency towards globalization could be seen during the period of liberalization of the 19th century; much economic organizations like GATT, SAARC, and the European Union are working for free trade. Many governments have adopted trade liberalization to accelerate the economic pace. Many countries rapidly increase their production through worker’s skills, potential, and innovating new ways of opportunities of enhancing their capital market, and investment in the world learning from the developed countries [20].

After becoming the world globalized people are now investing in real estate enterprises and also trying to get benefits from third-world countries like Burma, Ethiopia, which are facing some serious issues of economy, lack of education, malnutrition. This current wave
of globalization has opened every country’s economy for the world internationally and domestically also. Many organizations like GATT, SAARC, IMF, European Union, and WTO are working on trade liberalization and negotiated a dramatic reduction in quotas tariff trade barriers and have settled agreement to enhance free trade of services, promote goods and investment. After world war world, people feel that there should be an autonomous body that should play a role in reducing conflicts between countries in the world. In this sense, united Nations organization came into being in 1945 for peacemaking and other necessities of life such as providing education to the whole world working for the rights of societies in the world and so many other factors that affecting the people, like poverty in many countries of the world [47].

Globalization is currently a popular and controversial issue, though often remaining a loose and poorly-defined concept, sometimes too comprehensively. The term is used to encompass increases in trade in liberalization policies as well as reductions in transportation cost, technology transfer. As for its impact is concerned, discussion of globalization tends to consider simultaneously its effects on economic growth, employment, and income distribution – often without distinguishing between countries and within-country inequalities and other social impacts such as opportunities for poverty alleviation, human and labor rights environmental consequences and so on [17].

Induced the concept of globalization raises many questions and controversial issues some argue that globalization is a positive development as it will give rise to new industries and more job in developing countries. Others say globalization is negative in that it will force poorer countries of the world whatever the big developed countries tell them to do.

So we can say that there are many arguments for and against globalization. Should we be asking ourselves why many items produced in developing countries are so much cheaper than goods produced and developed countries? Do you know how much they get paid for their labor?

Are we familiar with their lock are protection and benefits in the workplace? Are we aware of the environmental impacts of production in developing countries? These all questions arise due to globalization.

1. Poverty

Poverty can be defined as, a state or condition in which a person or a community lacks the financial resources and essentials for a minimum standard of living. Poverty has many faces, such as hunger, lack of shelter, being sick and not being able to see a doctor, not being able to go to school, not having a job, losing a child to illness, powerlessness, lack of representation, and freedom. Technically poverty is “the inability to retain a minimal standard of living,
measured in terms of basic consumption needs or some income required for satisfying them world bank [47]. Most often poverty is a situation from which people want to escape.

Poverty level in a country or society is an important measure of the standard of living of the citizens. Poverty is multidimensional and it is characterized by lack of income and no fulfillment of basic needs, like education, health, the standard of living, etc., and by lack of access to social infrastructure vulnerability. Although a great deal of research has estimated income or expenditure-based poverty lines, there has been little systematic research on who the poor are and how they relate to globalization. It is extremely difficult to arrive at a tight estimate of the extent of global poverty at any point in time. Major World Bank reports issued within a couple of years of each other have provided estimates of the dollar-a-day headcount that differ by tens of millions of people. This reflects the difficulty of the task. Another difficulty is determining the most appropriate cutoff income for extreme poverty. The $1 a day line was first set in 1987 dollars, and for years the standard was $1.08 in 1993 U.S purchasing power parity. In 2008 the equivalent line was reset at $1.25 at 2005 purchasing power parity. The systematic poverty estimates [available as of early 2014] show that in 2010 some 1.22 billion people lived below $1.25 per day and some 2.36 billion below $2 per day. The number of people living in $1.25 per day income poverty fell from about 1.94 billion in 1981 about a 37% reduction in the headcount. The drop in the number living on less than $2 per day was much smaller –under 8%- but this more modest decline was partly due to people whose incomes had crossed above the $1.25 per day, though remained below $2 per day.

According to a report submitted by the ministry of planning and development in the national assembly of Pakistan about 29.5% Pakistanis lived below the poverty line which translates into 55 million people. There may be differences in the precise measurement of poverty but it is widely believed that the incidence of poverty in Pakistan has increased during the decades of the 1990s. According to some studies based on the impact of liberalization on poverty in Pakistan, the caloric-based poverty has doubled from 17.4% in 19987-88 to 32.6% in1998-99. Similar results are obtained on approaches based on basic needs and poverty of opportunity trends. Social indicators such as literacy rate, infant mortality rate, population growth rate, access to water nutritional intake, etc. all corroborate the above finding that poverty and weak social and human development are not only an unacceptable level in the absolute terms but also have worsened over the last decades.

Poverty is being a major issue since the evolution of mankind. Today, it has become a big phenomenon. Poverty reduction has always been an important objective for any country or nation.

Since especially the 80s, the world economy has become increasingly connected and integrated on the one hand the decreasing transportation costs and the diffusion of information
and communication technology have implied a past downgrading of the concept of distance while on the other hand gross trade, foreign direct investment (FDI), capital flows and technology transfers have risen significantly. In most developed and developing countries, the current wave of “globalization” has been accompanied by increasing concern about its impact in terms of employment, poverty, and income distribution. So whatever definition and indicators are chosen, the current debate is characterized by an acrimonious dispute between advocates and critics of globalization. For instance, the optimists underline the link between increasing trade and economic growth, and then they conclude that trade is good for growth and growth is good for the poor (both in terms of job creation and poverty alleviation). In contrast, the pessimists show that globalization is quite uneven in its impact and gives rise to negative counter-effects on the previously protected sectors, the marginalization of entire regions of the world economy, and possible increases in within country income inequality (WCII). Another example of this kind of diversity of opinions is the debate about poverty indicators: supporters of globalization underline the fact that worldwide absolute poverty has decreased over the last few decades, an open trade regime increases welfare and income by allocating resources in production and consumption through reorienting resources to the areas of comparative advantage. Liberalization affects the growth through the level and efficiency of investment in a several ways;

While critics of globalization show that this results are almost entirely due to statistical artifacts and the fast growth of China, and few other countries. While absolute poverty has increased in many developed and less developed countries and also relative poverty has increased in the majority of countries [29].

As several developing countries in East Asia and Latin America have benefited the most from the private capital flows and emerged as major participants in globalization, like many other developing countries, Pakistan has also attempted to open its economy for foreign investment and trade. The impulse for the liberalization comes from the need to adjust in the unsustainable current account deficit in the late 1980s that the country faced as a result of the declining demand for its export due to the recession in the individual countries. To reduce the current account deficit, external assistance was sought from IMF/world bank, which they provided by formulating structural adjustment programs and placing policy conditional ties in these programs.

As it is clear that globalization plays a vital role in every field of life and affects every aspect of our daily life activities. Nowadays world is global village. Developed and developing countries depend on each other. Globalization increased international trade and also make it possible that everything is available to everyone. While poverty is the world’s biggest curse in the past and present. Especially all over the world developing countries face the problem
of poverty. Pakistan is also a less developed country and the main problem which is facing nowadays Pakistani is poverty. Different organizations and institutions of the world are trying to eradicate it from the world. Globalization and poverty are related to each other all over the world. So it is very important and essential to study the impact of globalization on poverty.

2. Significance of the study

The existing literature estimated the empirical relationship of globalization impact on poverty with some other social and economic variables using secondary data and primary data. While trade openness, foreign direct investment, and inflation are the key variable that directly affect the poverty in Pakistan with the context of globalization. So following study will estimate the dynamic relationship of trade openness, inflation, foreign direct investment and poverty with the context of globalization in a case of Pakistan. Study will also use some other variables (population growth, and external debt ratio) to measure the impact of globalization on poverty in Pakistan. In this study, we will try to shed some new light on the matter by extending the work. There should be some changes made to the index as well as to the data and the approach we take to relate poverty to globalization.

3. Objectives of the Study

As the current study, focuses on the impact of globalization on poverty in Pakistan. The main objectives of this study are stated as under:

1. To find out the impact of globalization on poverty in Pakistan.
2. To trace out the relationship between poverty and globalization in Pakistan.
3. To study whether globalization helps in poverty alleviation in Pakistan.
4. To suggest measures how to reduce poverty

LITERATURE REVIEW

The primary and foremost aim of this study is to focus on the impact of globalization on poverty in Pakistan. Various authors and researchers in the past and present from different parts of the world have conducted studies on this topic and derived their conclusions. Keeping eye on the existing gaps and previous research an overview of their work is presented in the following paragraphs.

Zaidi apt a new measure of rural and urban poverty trends between 1884 and 1987. Zaidi observed that poverty is showing an upward trend in Pakistan and is associated with many factors. The paper improves on previous estimates of poverty in the 1980s and constructs the
poverty line which takes cognizance of differences in the cost of living between rural and urban areas and between towns and large cities.

Hameed and Nazir [11] studied to examine the effects of economic globalization on poverty and equality. They used secondary data of the Pakistan Economic survey from 1970-2004 and applied vector error correction model (VECM) and granger causality point estimation to find the results of the study. They took poverty, unemployment rate, trade liberalization, gross domestic product, and per capita income as variables of the study. They observed that globalization is much helpful in resource utilization, change the living standard and also has a positive impact on the economic development of the economy but increases the level of poverty. They recommended that policies should be made for the improvement of poor people and also invest in such sectors that increase the opportunities for jobs.

Mainkhail [29] stated poverty is a state where people are unable to satisfy their basic needs which are mandatory for their survival. It breeds crimes, frustration, moral degradation, and bribery which dismantle civilization and produce malnutrition followed by infectious diseases and so on. Sociologists, philosophers, and economists had different views over poverty. They believe it cannot be described rather felt.

Awan emphasized that globalization has benefited developing countries in many ways. It provided the opportunity to avail the new technology and new invention produced by the developed countries. It enables the business organization of developing countries to be competitive. The Capital moved from developed to developing countries while labor moved from developing countries to developed countries. It is commonly asserted that integration into global markets offers the potential for more rapid growth in poverty reduction for poor developing countries.

The book of the International Forum of Globalization with the title "Does globalization help the poor?" answers this question with a confident "no". The back cover of Bhalla's book, "Imagine there’s no country: poverty, inequality and growth in the era of globalization", asks: "Who has gained from globalization?" and answers with equal confidence: "the poor". Yet readers of neither book will come away from any wiser about the answer to these questions than when they started Ravaillon [35].

Watkins [46] reached a similar conclusion that increased trade is not associated with a systematic tendency to increased inequality. Another more serious problem, Watkins states, is the problem concerning what is being measured. The implicit assumption Dollar and Kraay [2] make that trade liberalization is responsible for successful integration, with success defined as faster growth and poverty reduction, is little more than a speculative leap of faith.

Countries such as China, Thailand, and Vietnam may be premier globalizers. They also have a strong record of economic growth and poverty reduction. Yet they have liberalized
imports very slowly and still have relatively restrictive trade barriers. Conversely, countries such as Brazil, Haiti, Mexico, Peru, and Zambia have been world-beaters when it comes to importing liberalization, but have a weak record on growth and poverty reduction. In short, many first-rate globalizers have fifth-rate records on poverty reduction [46].

Wade uses the same arguments as Watkins [46] and also doubts the fact that globalization is a positive force for poverty reduction. He doubts that the rising quantity of trade and the developmental benefits thereof are the consequences of trade liberalization. Finally, he questions the assumption that fast trade growth is the major cause of good economic performance.

We should not be too optimistic that globalization will catalyze the development of smallholder agriculture, although non-green revolution developing countries, smallholder agriculture potentially has a massive strategic contribution to make to poverty reduction. A successful green revolution provides a strong platform from poor countries that can engage with globalization. The globalization group of developing countries in which poverty is now falling quite sharply is largely those in which a green revolution has occurred [20].

The impact of economic reforms and trade liberalization on the agriculture exports performance of Pakistan suggested that agriculture export performance is more sensitive to domestic factors. In compliance with the requirement of the WTO agreement Pakistan has fulfilled almost all aspects of the agreement.

After the phase-out of multi-fiber agreement in 2005, and subsequent quotas and restrictions applied to China’s exports EU and the US, competitor countries such as Bangladesh, Vietnam, and Turkey were benefited. The exports from these countries grew as exports from China were limited. High import duties reduced advantages this advantage for India. However, China to date is a major power in the garments industry with the maximum exports worldwide. It can provide a decent quality garments at a lower price, in comparison to India, the buyers of garments currently prefer to source from China than India. This is due to various positive factors for China., such as better infrastructure, shorter lead time, better-trained labor, favorable labor law, high labor productivity abundant raw materials and mass production which lead to economies of scale.

Globalization is responsible for the collapse of most garments industries in Nigeria in general and Kano state in particular. This is because the phenomenon of globalization has resulted in industrial closures, under capacity production, unemployment, stagnation, and backwardness in the industrial sector as well as over-dependence on imported garments products from already industrialized counties of the world. Thus it can be concluded that globalization has serious negative consequences on the garments industry in Kano state.

Globalization reviews and measures the effect of economic globalization and its real impact on sovereignty, international range of wealth, and global trade. Also, it can be anarchic
national economies; it adjusts the sovereignty and possession of rights in open trade. Finally, it combines economic policy with business relations and political displeasure [45].

Moreover, another important consequence of globalization is financial liberalization, which declares a financial system for government economic development in the case of improving economic opportunities, reducing capital costs; Governments allow globalization by reducing and liberalizing restrictions on the domestic market and financial [32].

Both liberalization and globalization have a financial impact on sovereignty. Internal liberalization limits the national economy and took the event and accountable the mark power. External liberalization reduces control over foreign trade and finance used abroad and is a known alternative to globalization policies. The role of the state will be decreased because of the limited power on its economy. The state can have both active and reactive reduced capacity to control society. "Active" is the policy term in the business sector and practices the construction of globalization.

One of the authors is Agénor [1]. In his paper, he examines the extent to which globalization affects the poor in developing countries. He defines globalization in terms of trade openness and financial openness, respectively measured as a tariff revenue imports ratio and foreign direct investments. He argued that the exports and imports relative to GDP measure should be excluded from the trade openness component because of its excessive sensitivity to short-run fluctuations. He then tested the presence of a non-linear relationship between openness and poverty. To assess the relationship, he used a cross-country regression framework, using unbalanced panel data for 30 developing countries. His results show that there appears to be a reasonably robust inverted U-shape relationship between poverty and globalization. At low degrees of globalization, globalization does hurt the poor. However, at higher levels, globalization leads to a decline in poverty.

Jagdish Bhagwati argues that globalization influences poverty through its influence on growth. He points out that some types of growth will help the poor more than others, depending on the presence of other factors including policy distortions that reinforce or reduce the effect of growth on the poor. It is also clear from his analysis of the link between trade and growth that the effect of globalization on growth could vary across countries and over time for similar reasons. Above all, he argues, since trade and other policies, as well as their outcomes in terms of growth and poverty, are endogenous, it is hard to draw valid inferences without a well-specified analytical and econometric framework.

Heshmati [14] is the first to relate poverty and inequality to a different definition of globalization, or more precisely, an extended definition. He used a globalization index proposed by AT Kearney / Foreign Policy Magazine [2002, 2003]. It is the first attempt to construct a database and to compute a composite globalization index. The index is composed
of four main indices: economic integration, personal contacts, technological connections, and political engagement, measured by 13 indicators.

Heshmati [15] has used this index to measure the relationship between income inequality, poverty, and globalization. By making use of panel data to compute globalization index and conducting cross-sectional regression analysis he shows that there is an indication that the relationship between globalization and income inequality, measured as the GINI coefficient, is negative, meaning that high globalization relates to low-income inequality. His findings are, however, statistically insignificant. The same applies when the relationship is tested for non-linearity, indicating the absence of a Kuznets U-shaped relationship.

Globalization and poverty are highly debated topic in the literature. Various studies prove that globalization increases poverty, whereas numerous other studies, claim that globalization reduced poverty. Those in favor of globalization claim that there have been significant steps in the fight against global poverty, as well as a decrease in inequality in the last twenty years and that liberalization of economic policies or globalization has been responsible for this achievement. In contrast, there are critics who claim that globalization has led directly to increase poverty. They claim that the rich are getting richer and the poor are getting poorer. Both sides have backed up their claims with facts, but instead of a clear debate and clear-cut studies and conclusions, there has been an increasingly complex numbers debate. These studies showing merely positive or negative relationship between poverty and globalization. These are also studies showing a more stable relationship which argues that in some cases globalization can favor poverty reduction and some situation will worsen poverty.

So far, the results are not very clear-cut. Studies trying to relate globalization, measured in terms of economic openness, financial integration, and trade policies, to poverty show various results. Some studies "prove" that globalization helps the poor whereas others claim that globalization is hurting the poor. When globalization is placed in a broader perspective, like Heshmati’s study, globalization seems not to or relate weakly to poverty. Does this mean that we should no longer try to understand how globalization relates to poverty and use our academic resources in other areas?

DATA AND METHODOLOGY

Since our study is concerned with the impact of globalization on poverty. Therefore, we have used time series data from 1970-2019 to answer the impact of globalization on poverty in Pakistan in the context of trade openness, FDI, inflation, GDP, and external debt to measure the impact of globalization on poverty in Pakistan. Main sources of data collection are, IMF, World
Bank, world development indicator WDI, Malik and different economic survey of Pakistan, and census of 2017 etc. Information has also collected from various studies conducted by various researchers in different parts of the country.

In this study, we assume that globalization has its impacts on poverty of Pakistan and determined it with trade openness and other variables. Where poverty headcount is the dependent variable and FDI, GDP, TO, EXD, INF, PG are the independent variables. We will use ARDL technique to check the impact of globalization on poverty in Pakistan. Since we have use time series data from 1970 to 2019 so it is prerequisite to check the unit root problem in time series data before estimating the relationship of variables. The augmented Dickey Fuller test [ADF] is used to test the stationary. The ADF test is based on the following equation.

\[ \Delta X_t = \alpha + \alpha X_{t-1} + \delta_t \sum_{i=1}^{p} \Delta X_{t-1} + \varepsilon_t \]  

(1)

where X shows the time series variables used in the study a shows constant parameter and optimum lag length dependent variable and \( \Delta \) shows difference. \( \varepsilon_t \) is error term determined to be white noise. The unit root test instructed to which estimation procedure we can use to estimate the relationship of the variables. If the all variables of the analysis stationary and do not have the unit root problem, then we can use multiple regression method to relationship of the variables. But if all variables have unit root problem and stationary after putting up with the difference mean integrated one then we can use Johnsen Co integration procedure to estimate the relationship of the variables. And if some variables of the study have unit root problem while several stationary at level mean mix order of integration than we can utilized Autoregressive distributed lag model to determine the relationship of the variables. Following are the general form of regression model:

\[
P_{ovt} = \beta_0 + \sum_{i=1}^{\rho} \delta_{si} \Delta Pov_{t-1} + \sum_{i=1}^{\rho} \delta_{1i} \Delta TO_{t-1} + \sum_{i=1}^{\rho} \delta_{2i} \Delta GDP_{t-1} + \sum_{i=1}^{\rho} \delta_{3i} \Delta FDI_{t-1} + \sum_{i=1}^{\rho} \delta_{4i} \Delta INF_{t-1} + \sum_{i=1}^{\rho} \delta_{5i} \Delta EXD_{t-1} + \sum_{i=1}^{\rho} \delta_{6i} \Delta PG_{t-1} + \beta_1 \Delta TO_{t-1} + \beta_2 \Delta GDP_{t-1} + \beta_3 \Delta FDI_{t-1} + \beta_4 \Delta INF_{t-1} + \beta_5 \Delta EXD_{t-1} + \beta_6 \Delta PG_{t-1} + \alpha_t
\]

(2)

where \( \beta_0 \) is the autonomous parameter, the long run coefficient is represented by \( \beta_1, \beta_2, \beta_3, \beta_4, \beta_5, \) and \( \beta_6 \), while the short-run coefficient is represented by \( b_1, b_2, b_3, b_4, b_5, b_6 \). We used ARDL bound testing co-integration approach which shows the co-integration relationship between the variables. If the error correction term is negative it shows the existence of long-run co-integration relationship among the variables.
RESULTS AND DISCUSSION

In this analysis, we used ARDL bound test model developed by Pesaran et al, to analyze the co-integration of variables. We then use the ECM error correction model to determine the rate of adjustment in short-term to return to the long-run equilibrium. Next we evaluate the short-term impact and estimate the long-term effect of globalization on poverty.

1. Unit Root Test

According to Pesaran et al, the ARDL bound test is based on the hypothesis that the variables are 1(0) or 1(1). So we initial test the stationarity of all variables. Variables in the model were tested for stationary with Augmented Dickey-Fuller (ADF) the results are expressed in table 1.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Figures at level</th>
<th>Result</th>
<th>Figure at difference</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>EXD</td>
<td>0.3570</td>
<td>Non Stationary</td>
<td>0.0006</td>
<td>Stationary</td>
</tr>
<tr>
<td>FDI</td>
<td>0.0396</td>
<td>Stationary</td>
<td>0.0003</td>
<td>Stationary</td>
</tr>
<tr>
<td>GDP</td>
<td>0.9996</td>
<td>Non Stationary</td>
<td>0.0035</td>
<td>Stationary</td>
</tr>
<tr>
<td>PG</td>
<td>0.8927</td>
<td>Non Stationary</td>
<td>0.0045</td>
<td>Stationary</td>
</tr>
<tr>
<td>TO</td>
<td>0.0000</td>
<td>Stationary</td>
<td>0.0000</td>
<td>Stationary</td>
</tr>
<tr>
<td>Poverty</td>
<td>0.4059</td>
<td>Non Stationary</td>
<td>0.0000</td>
<td>Stationary</td>
</tr>
<tr>
<td>INF</td>
<td>0.0000</td>
<td>Stationary</td>
<td>0.0000</td>
<td>Stationary</td>
</tr>
</tbody>
</table>

Source: author’s estimations using E-Views software.

The result of the stationarity test shows that FDI, TO (trade openness), and INF are stationary at level but the remaining variables are stationary at first difference. Thus, the research data are eligible to use the ARDL bound test model.

Table 2

Descriptive statistics

<table>
<thead>
<tr>
<th></th>
<th>Poverty</th>
<th>LPG</th>
<th>LGDP</th>
<th>LEXD</th>
<th>INF</th>
<th>FDI</th>
<th>TO</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>3.458642</td>
<td>0.974673</td>
<td>24.75421</td>
<td>23.83325</td>
<td>9.537841</td>
<td>0.745358</td>
<td>8.92E-11</td>
</tr>
<tr>
<td>Median</td>
<td>3.410145</td>
<td>1.015060</td>
<td>24.75415</td>
<td>24.07648</td>
<td>8.479329</td>
<td>0.571448</td>
<td>4.94E-11</td>
</tr>
<tr>
<td>Maximum</td>
<td>4.163560</td>
<td>1.213113</td>
<td>26.47446</td>
<td>25.33659</td>
<td>38.51199</td>
<td>3.668323</td>
<td>4.32E-10</td>
</tr>
<tr>
<td>Minimum</td>
<td>2.856470</td>
<td>0.707649</td>
<td>22.57697</td>
<td>21.94902</td>
<td>0.400236</td>
<td>-0.062662</td>
<td>6.54E-12</td>
</tr>
<tr>
<td>Std. Dev.</td>
<td>0.369717</td>
<td>0.161371</td>
<td>1.089557</td>
<td>0.919703</td>
<td>6.555514</td>
<td>0.774362</td>
<td>9.81E-11</td>
</tr>
<tr>
<td>Skewness</td>
<td>0.104956</td>
<td>-0.226114</td>
<td>-0.110717</td>
<td>-0.379121</td>
<td>2.212217</td>
<td>2.286641</td>
<td>1.560166</td>
</tr>
</tbody>
</table>
Table 2 shows the descriptive statistics of all the variables included in the study. We can see the average value of GDP that is 24.7542 for the period 1970 to 2019. While the median value also explains the average value which is 24.75415. The maximum and minimum values of GDP during the studied years are 26.47446 and 22.57697 respectively. The standard deviation of GDP is 1.089557. The maximum and minimum value of FDI during the studied year’s i.e. (max. 3.668323 & min. -0.062662), and max and min value of EXD is (max. 25.33659 and min.21.94902) the standard deviation of FDI and EXD is (0.774362, and 0.919703) respectively, and other related descriptive statics that have been gathered by the estimation results.

2. ARDL Bound test results

We used in this study ARDL model to find out the globalization impact on poverty in Pakistan because the whole variables are not stationary on level intercept. After employing the techniques of ARDL model we found the short run result of ARDL of this model. For this purpose, we used to bound s. The results are shown in table 3.

<table>
<thead>
<tr>
<th>Bound test</th>
<th>3.414897</th>
</tr>
</thead>
<tbody>
<tr>
<td>Critical values</td>
<td>I(0)</td>
</tr>
<tr>
<td>Significance Level</td>
<td>1.99</td>
</tr>
<tr>
<td>10%</td>
<td>2.27</td>
</tr>
</tbody>
</table>

The result thus shows that statistical value F is greater than the boundary value at significant level of 5% and 10%. This shows that there is long term co-integration relationship of variables in the model. The results obtained in table 4 verified that co-integration exists, we then move to the second phase to determine the long run relationship. The ARDL co-integration test was conducted, and the results obtained and tabulated in table 4.
Table 4

ARDL long run and short run results

<table>
<thead>
<tr>
<th>Dependent variable</th>
<th>Regressors</th>
<th>Coefficient</th>
<th>T-statistics</th>
<th>Probability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Long-run result</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Poverty</td>
<td>PG</td>
<td>-7.646469</td>
<td>-2.268523</td>
<td>0.0294</td>
</tr>
<tr>
<td></td>
<td>GDP</td>
<td>-1.291869</td>
<td>-1.184168</td>
<td>0.2441</td>
</tr>
<tr>
<td></td>
<td>EXD</td>
<td>-0.982151</td>
<td>-1.236375</td>
<td>0.2243</td>
</tr>
<tr>
<td></td>
<td>INF</td>
<td>0.084078</td>
<td>1.981912</td>
<td>0.0552</td>
</tr>
<tr>
<td></td>
<td>FDI</td>
<td>-0.136293</td>
<td>-0.689731</td>
<td>0.4948</td>
</tr>
<tr>
<td></td>
<td>TO</td>
<td>-1.38E+10</td>
<td>-1.771080</td>
<td>0.0850</td>
</tr>
<tr>
<td>Short-run result</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>GDP</td>
<td>ΔPG</td>
<td>-7.024131</td>
<td>-3.422186</td>
<td>0.0016</td>
</tr>
<tr>
<td></td>
<td>ΔGDP</td>
<td>-1.302869</td>
<td>-1.254168</td>
<td>0.1341</td>
</tr>
<tr>
<td></td>
<td>ΔEXD</td>
<td>-3.982151</td>
<td>-1.10675</td>
<td>0.0443</td>
</tr>
<tr>
<td></td>
<td>ΔINF</td>
<td>0.008542</td>
<td>3.832463</td>
<td>0.0005</td>
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<tr>
<td></td>
<td>ΔFDI</td>
<td>-0.136293</td>
<td>-0.689731</td>
<td>0.0268</td>
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<tr>
<td></td>
<td>ΔTO</td>
<td>-1.4709</td>
<td>-0.00000</td>
<td>0.0000</td>
</tr>
<tr>
<td>Diagnostic Tests</td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>R-squared</td>
<td></td>
<td>0.925600</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Adjusted R-squared</td>
<td></td>
<td>0.902866</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Durbin-Watson stat</td>
<td></td>
<td>2.061173</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Heteroscedasticity</td>
<td></td>
<td>0.9216 (0.8866)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LM</td>
<td></td>
<td>0.966 (0.9530)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jarque-Bera</td>
<td></td>
<td>34.712 (0.000)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The result thus shows that statistical value F is greater than the boundary value at significant level of 5% and 10%. This shows that there is long term co-integration relationship of variables in the model. The results obtained in table 4 verified that co-integration exists, we then move to the second phase to determine the long run relationship. The ARDL co-integration test was conducted, and the results obtained and tabulated in table 5.

The results received confirmed a positive relationship between inflation and poverty, and negative relationship between population growth, gross domestic product, external debt ratio, foreign direct investment, and trade openness with poverty. The coefficients of foreign direct investment (FDI) show that a 1% increase in FDI cause a 0.136% decrease in poverty at a 5 percent level of significance. Similarly, the coefficients of trade openness indicate that a 1% increase in TO cause 1.38% decrease in poverty at 5% level of significance. A one-unit decrease in overall population is predicated to increases in poverty 7.646%. The result of the study also conforms and supported by Agha Ahmad Nabi and Gray Becker view of "human capital theory" states that human capital increases economic development through education and training to support human and physical capital, thus reducing poverty. The coefficient
of inflation shows that a 1% increase in inflation causes to increase 0.084% poverty, at 5% level of significance. The coefficient of external debt indicates that a 1% decrease in external debt increases poverty 0.982%. After computing the long run coefficients, the next step is to estimate the short run model.

The results for the short run are demonstrated in table 5. It is shown that the ECM (-0.166155) is negative and significant which confirms the existence of the long run relationship between, inflation, trade openness, foreign direct investment, population growth, and poverty. The negative and significant error correction term indicates the long run relationship among the variables. Where R squared value shows the significance of study.

Next to determine the reliability of the model, we proceeded the diagnostic tests for the ECM including: Heteroscedasticity test (Breusch-Godfrey), Serial Correlation LM Test, GUSUM test, and GUSUM of square test. The results are shown in table 7, 8, and fig 1, and fig 2.

The results show that the residuals of the model are no autocorrelation, no Heteroscedasticity. In addition, the plot of the CUSUM, and CUSMSQ statics fall inside the critical bands of the 5% confidence interval of parameter stability. This proves that the model is reliable and stable.

![CUSUM TEST](Figure 1 CUSUM TEST)
In fig. 2 the graphs show that CUSUM test are lying with the critical bounds so our model is structurally stable. The data and variables of all models are stable because the plots of CUSUM (cumulative sum of recursive residuals) are not crossing critical boundary lines. The present CUSUM charts at 5% level of significance show that the blue line is not crossing the red lines on both sides. So, there is no problem of recursive residuals in mean terms. So there is no need to add a variable, which is sensitive to structural break.

**CONCLUSION AND POLICY RECOMMENDATIONS**

**1. Conclusion**

It is recognized that liberalization of trade will benefit the poor, since labor is the fundamental asset of the poor which is largely used in the production of traditional exports. Furthermore, globalization results in completion, consequently the goods will be available to the poor at lower prices which will increase their welfare, also increase migration of labor, results in a
greater flow of foreign remittances. The parents can spend more on the education of their children which will increase human capital formation.

With the liberalization, the percentage of the population below the poverty line has initially increased, but later on it has declined. Liberalization helps in poverty reduction through increase foreign remittances, increase in employment opportunities to the domestic labor force and increase in human capital formation.

We summarize that globalization has dominant positive influence on poverty and economic growth and considerably decreased level of poverty in Pakistan. Improving trade openness, FDI, and GDP are the central and dynamic for reducing poverty in Pakistan. It indicates that there is tight association between globalization and poverty in the context of Pakistan.

2. Policy Recommendations

Although liberalization has contributed to poverty reduction, most of the developed countries have not so much liberalized their economies by maintaining their immigration laws, which discourage the immigration of labor from developing countries including Pakistan. Therefore, we would like to present the following recommendations for policymakers:

Pakistan trade is still limited to specific countries; Pakistan has needed to explore its trade to other countries markets. The government should grab measures to revise its immigration laws, structural reforms, policy regarding trade openness, import exports and poverty at macro level, because immigration laws play a very crucial role and the impact of trade openness on poverty is the most significant one. Pakistan should pay some considerable attention to employment creation.

Pakistan should pay reasonable interest to improve law and order situation to captivate international business community to invest in Pakistan. Pakistan trade is still limited to specific countries; Pakistan has needed to explore its trade to other country markets.

REFERENCES


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