# The Relationship between Financial Development and Foreign Direct Investment and its Impact on Economic Growth of Pakistan

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## ARTICLE INFO

## ABSTRACT

This research investigates the interaction between foreign direct investment (FDI) and financial development (FD) to promote economic growth in Pakistan for the period 1980 - 2017. Using Autoregressive distributed lag (ARDL) bound estimation techniques, the study showed that FDI, trade openness and government expenditures has a significant impact on economic development in Pakistan. More interestingly, it is evident that the interaction effect of FDI and FD has a significant positive impact on economic growth of Pakistan. This research can play an important role in policymaking to boost FDI and FD for the economic prosperity of Pakistan.

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## 1.      Introduction

Now a day's FDI is the control of the business of the foreign investors across the borders.  The involved companies in FDI are called multinational corporations or companies MNCs. These MNCs or MNEs (enterprises) play a significant role in international trade because these enterprises are now accounted for nearly one-third of the foreign trade in the form of intra industry trade among these firms. Foreign investors bring new ideas of production techniques and enhance the production capability of the host country. It is also one of the best sources of transforming technology among the trading nations. Differentiation in products, work efficiency, and competitive marketing is closely linked with the degree of multi-nationality (Caves, 1974). FID is considered based on the knowledge base firm's assets, and these assets can be easily transferred among the nations.

Developing countries like Pakistan can make better exploitation of the MNEs features. Empirical evidence has proved that FDI promotes per capita, the living standard of the massive, employment, and technical efficiencies; hence, FDI is considered an accelerating economic growth factor (Blomström & Kokko, 1996).

Developing countries cannot utilize domestic resources without involving FDI due to the shortage of local capital resources. It is a better choice for third-world countries to involve FDI in the development process rather than on foreign loans (Lizondo, 1991). On can take the example of China, during 1997 FDI contribution in domestic investment, exports, industrial productivity, and revenue generated from taxes were 15%,41%, 19%, and 13 percent respectively. During the era, 18 million people were employed. FDI uses different channels to promote growth in the host country and shifts the capital to the recipient state that is used to enhance the production ability of the host country. The second step is transfer technology, know-how management skills that the host nation can utilize in sales gaining networking of foreign investors (Sokang, 2018).

The positive connection of Foreign direct investment with economic growth depends entirely on the host country's domestic situation and fascination capability, as having developed financial sector. The developed financial sector is one of the endogenous sources behind the success of FDI in promoting economic growth. The profits of FDI (foreign direct investment) are simply possible for the recipient nation when it has a developed financial sector (Lee & Chang, 2009; Uddin, Sjö, & Shahbaz, 2013). Financial development in the recipient country theatre is an essential part for FDI to influence E.G positively. The developed financial sector makes it possible to allocate resources efficiently, so the absorption capacity also increases with inward follows of FDI. In particular, a more advanced monetary sector pays more to the technological spillover related to FDI (Omran & Bolbol, 2003).

In this study, an attempt will be made to study the relation between FDI, monetary development, and economics in Pakistan empirically. This study will contribute to the existing literature because it focuses on the role of the developed financial position of the country in enhancing the GDP growth rate. In the study, we will answer the two fundamental questions about how financial development affects E.G (economic growth) and whether monetary development can cause fluctuation in economic growth. This study will also look at the role of technological diffusion and FDI in encouraging growth.

## 2. Review of the Literature

Theoretically, enormous literature is available on the nexus between FDI (foreign direct investment) and economic growth. The theory says that the connection between FDI and economic growth is positive. Foreign direct investment increases economic growth by enhancing the accumulation of capital in the host country. The foreign direct investment provides the best opportunity for the host country to exploit innovative technology, product newness, managerial skills, production techniques, and different types of capital goods of the foreign investors. FDI is also a source of transforming knowledge-based assets (Grossman & Helpman, 1991). Underdeveloped nations may adopt new technologies and can implement them in their economies provided by the developed nations. FDI makes it possible for developing countries to adopt and implement this technological diffusion. A high chance of transforming new ideas from multinational firms to domestic firms and developing nations can boost their knowledge-based assets (Findlay, 1978). Labour and capital productivity improvement can also occur through the use of new technologies by the recipient country. Technological diffusion may occur through demonstrations, competition,

training, as the skills of the domestic labor upgraded to a level at which they can bitterly operate with new technologies (Kinoshita, 1997).

Some research studies argue that the better use of new technologies and managerial skills needs a more efficient and educated labor force as the labor force is the best input from the home countryside. There must be a certain amount of labor force that can make proper use of high-level capital goods; therefore, the home country can only take advantage of the technological spillover when it has a certain amount of human capital (Borensztein, De Gregorio, & Lee, 1998). A group of researchers suggested that technological diffusion is the result of well-functioned markets. A good function market provides an environment for FDI to play its role in bringing competition, avoids market faller, and promotes the knowledge exchange between firms (Bhagwati, 1978) and (Ozawa, 1992).

Many researchers confirmed the favorable outcome of FDI on the economic growth in the case of Pakistan. In some cases, its impact is viewed as negative or narrow. Concerning Foreign direct investment, several factors are affected, like human capital, developed financial sector, foreign and domestic entrepreneurs' complementarily, and globalizing economies (Almfraji & Almsafir, 2014). The contribution of foreign direct investment to growth is well documented by suggesting that one country can exploit the advantage of FDI if it has a developed financial market. Financial development is crucial for FDI.

On the other hand, insignificant while the negative link has been found between FDI and GDP growth in Pakistan by (Saqib, Masnoon, & Rafique, 2013) both of these studies stated that, though FDI is considered an accelerating factor for growth in developing countries in Pakistan's case the scenario is different. He used endogenous growth theory to estimate the production function. (Kakar & Khilji, 2011), the empirical investigation confirmed little relation between FDI and GDP growth, Granger's causality was tested between foreign direct investment and growth and found that foreign direct investment does not Granger cause economic growth. Unknown results were carried out in another empirical investigation among FDI and economic growth. According to the researcher, although FDI causes affect economic growth in third world countries in the case of Pakistan the results were not confirmed the scenario.

Iqbal *et al. (*2010) found causal relationships between the economic variables are FDI, GDP, and exports. VAR model for integration and VECM for causality was used with observations from 1998-2009. The results of the study indicated bidirectional causality among FDI, exports, and growth in Pakistan. Bi-directional causality was also found by (Ghazali, 2010) in Pakistan between FDI and growth. FDI plays a vital role in the development of growth and development in developing countries like Pakistan. Pakistan must make sound policies to attract foreign investors to invest in the country and provide a politically and economically stable platform for foreign investors because FDI is the only and immediate source for boosting the economy(Shahbaz & Rahman, 2012; Zeb, Qiang, & Rauf, 2013).

All the theoretical models suggested a significant relationship between the developed monetary system and economic growth. From the 1950s onwards, policymakers argued that governments must intervene in financial markets in developing countries to boost development. But in the early 1970s, this approach of financial repression faced criticisms. McKinnan (1973) and Shaw (1973) were strongly in support of financial liberalization. Although, during the last two decades, the experience of such reforms was disappointing. Financial deepening would lead to disequilibrium, preventing the market from clearing and optimal allocation. (Kakar & Khilji, 2011) raised a point that over-hasty financial

liberalization is the consequence of weak financial regulation, resulting in direct economic instability. Financial development remains a central component of policy reforms in underdeveloped countries. Among a few researchers, this mirrors general confidence in the excellence of free markets. More significantly, there is a boundless observation because of a genuinely extensive assortment of academic work that developed financial sector advances monetary improvement, and results in economic development.

Ciftci *et al.* (2017) studied the significance of financial development in the development process of different world countries both theoretically and empirically. They developed the Solow-Swan model to describe the model theoretically, and for empirical investigation, they have used the debit from credit market and equality from stock markets as the factors of GDP per capita. The study results displayed that both variables have a positive impact on the stable level of GDP per capita, but the impact of the credit market is greater. The role of monetary development in mobilizing savings into profitable investments cannot be ignored. By integrating monetary development, the re-examination of the nexus between financial development and economic growth by developing Cobb-Douglas production function. The connection between financial development and GDP growth was positive during the study period (Shaikh, 2010). The data of 37 countries covering the period 1970-2002 have been analyzed to show the interrelationship among actual output, financial development, and FDI. There is strong causality among variables in the long run but weak in the short run (Lee & Chang, 2009).

The development of the monetary sector is very important to enhance the contribution of FDI in promoting economic growth. Monetary development plays a key role in the development procedure of developing countries. The developed monetary sector can play an inefficient role in allocation (Ahmad, Alam, Butt, & Haroon, 2003). The results of penal cointegration and penal GMM for Syrian countries also indicate bi-directional causality among two variables in the long run. The results revealed that African countries could improve their per capita GDP by providing domestic credit to the banking sector(Acaravci, Ozturk, & Acaravci, 2009). The data from 1980 to 2008 of 52 middle-income countries have been analyzed to explore the effect of monetary development on E.G(economic growth) by using pooled mean group estimates. The study concluded that monetary development has no significant influence on economic growth in the long run. In contrast, inverted U-shaped relation has been shown when considered a non-linear relationship, and the association was positive in the short run during a period of the study (Shahzad, Zakaria, Rehman, Ahmed, & Fida, 2016) (Samargandi, 2014). On the other hand, Waheed and Younus show that developed and effective financial sectors significantly affect economic growth in developing and developed countries.

## 3. Empirical Methodology

### 3.1. Data

This research data from 1980 to 2017 have been taken from WDI (World Bank Indicators) and IMS (international monetary Statistics). The data of variables transformed to a natural logarithm to attain stationarity in the variance. E.q (1) shows the influence of FDI (foreign direct investment) and financial development on E.G (economic growth).

$lnGDP = \beta_0 + \beta_1 lnFDI + \beta_2 lnFD + \beta_3 lnGCEXP + \beta_4 lnTO + \beta_5 lnFDI*CRED + \varepsilon$ \hspace{1cm} (1)

Where GDP (is constant 2010 US$, used as a substitution for economic growth), foreign FDI (net inflow as a % of GDP), FD (is national credit to the private sector by banks used as a substitution for monetary development), GCEXP (is general government final

consumption expenditure, constant 2010 US$), TO (is the summation of exports and imports to GDP ratio) and FDI*CRED is main concerned variable in our study.

## 3.2. Methodology
## 3.2.1.ARDL Model

For selecting a suitable time series model, it is necessary to find stationarity and co-integration tests. This research employs the ARDL model, established by Pesarun*et al*, (2001), as this technique can be helpful regardless of whether the concerned variables are integrated at a level I(0), the first difference I(1) or both combinations (Pesaran and Pesarun, 1997). In addition, the Autoregressive distributed lag model takes into enough quantity of intervals to capture the general process of data generating in a particular modeling framework(Laurenceson & Chai, 2003). Also, by a linear change, the ECM(error correction model) can be obtained from the autoregressive distributed lag model(Banerjee, Dolado, Galbraith, & Hendry, 1993). ECM combined short-run adjustments with long-run equilibrium without losing long-run relation (Pesaren and Shin, 1999). In addition, it is a more statistically significant technique than Johansen and Juselius's co-integration approach (Pesaran and Shin, 1999). To investigate the co-integration between the variables used in equation (1), we present the autoregressive distributed lag model as follows.

$$\Delta lnGDP = \beta_o + \Sigma^n_{i=1} \ddot{Y}_i \Delta lnGDP_{t-1} + \Sigma^n_{i=1} \ddot{Y}_i \Delta lnFDI_{t-1} + \Sigma^n_{i=1} \ddot{Y}_i \Delta lnFD_{t-1} + \Sigma^n_{i=1} \ddot{Y}_i \Delta lnGCEXP_{t-1} +$$
$$\Sigma^n_{i=1} \ddot{Y}_i \Delta lnTO_{t-1} + \Sigma^n_{i=1} \ddot{Y}_i \Delta lnFDI*CRED_{t-1} + \theta_1 GDP_{t-1} + \theta_2 FDI_{t-1} + \theta_3 FD_{t-1} + \theta_4 lnGCEXP_{t-1}$$
$$+ \theta_5 lnTO_{t-1} + \theta_6 lnFDI*CRED_{t-1} + \varepsilon \qquad (2)$$

Where Δ indicates first difference, ln is the log of all variables, $\ddot{Y}_i$ shows long-run coefficients, and $\theta_1, \theta_2......\theta_6$ show short term coefficients, and ε is the white noise. ARDL model is the first step to test if there is a long-run association or not by using F-statistic. We were testing the null hypothesis of H$_0$: $\theta_1 = \theta_2 = \theta_3 = \theta_4 = \theta_5 = \theta_6 = 0$ which displays that there does not exist long-run association, and the alternative hypothesis H$_1$: $\theta_1 \neq \theta_2 \neq \theta_3 \neq \theta_4 \neq \theta_5 \neq \theta_6$, by estimation of F-test introduced by Pesarun*et al*, (2001) and improved by(Narayan, 2005).

The estimated value of the F-statistics is associated with the upper and lower critical values estimated by (Nyasha & Odhiambo, 2018) Pesaran*et al*, (2001). If the estimated value of F-statistics is more than the upper critical value, the null hypothesis of non-co-integration will be rejected irrespective of the variables considered I (1) or I(0). If it is less than lower critical values, the hypothesis of non-co-integration cannot be rejected. If the F-statistics value falls inside the critical value bands, the test is unsatisfying. Pesaran et al. (2001) indicated that we estimate the ECM once there is co-integration among the variables.

$$\Delta lnGDP = \beta_o + \sum_{i=1}^{n} \Delta lnFDI_{t-1} + \sum_{i=1}^{n} \Delta lnFD_{t-1} + \sum_{i=1}^{n} \Delta lnGCEXP_{t-1} + \sum_{i=1}^{n} \Delta lnTO_{t-1} +$$
$$\sum_{i=1}^{n} \Delta lnFDI*CRED_{t-1} + \beta ECM_{t-1} + \varepsilon. \qquad (3)$$

## 4. Results and Discussion
## 4.1. Descriptive statistics

Descriptive statistics reveal the essential characteristics of the dataset of empirical study. As indicated by Table 1, descriptive statistics of the concerned variables. The mean value of the GDP is 25.42, while the standard deviation shows the dispersion from the mean is 0.48. The average value of the FDI is 0.92. However, the value of the standard deviation

is 0.82. The mean value of the financial development (FD) is 23.11, while the standard deviation that shows the dispersion from the mean is 4.077. The average value of the FDI_CRED is 586.56, while the standard deviation that presents the dispersion from the mean is 99.48. The mean value of the GCEXP is 11.22, while the standard deviation that indicates the dispersion from the mean is 2.064. The average value of the TO is 23.19, while the standard deviation that shows the dispersion from the mean is 0.60.

**Table 1**
*Descriptive Statistics Of The Variables*

|  | GDP | FDI | FD | FDI_CRED | GCEXP | TO |
|---|---|---|---|---|---|---|
| Mean | 25.42194 | 0.927631 | 23.11289 | 586.5608 | 11.22715 | 23.19216 |
| Median | 25.43048 | 0.659288 | 24.08168 | 601.7806 | 10.98783 | 23.19356 |
| Maximum | 26.20747 | 3.668323 | 29.78608 | 739.3544 | 16.78491 | 23.92388 |
| Minimum | 24.49442 | 0.102667 | 15.30549 | 398.7387 | 7.780805 | 21.96917 |
| Std. Dev. | 0.484921 | 0.816157 | 4.077300 | 99.48817 | 2.064296 | 0.605938 |
| Skewness | -0.209340 | 2.077173 | -0.474369 | -0.350985 | 0.628589 | -0.505641 |
| Kurtosis | 1.990146 | 6.831549 | 2.315641 | 2.279600 | 3.317337 | 2.039658 |
| Jarque-Bera | 1.892239 | 50.57066 | 2.166712 | 1.601917 | 2.661899 | 3.079499 |
| Probability | 0.388245 | 0.000000 | 0.338458 | 0.448898 | 0.264226 | 0.214435 |
| Sum | 966.0338 | 35.24998 | 878.2896 | 22289.31 | 426.6318 | 881.3021 |
| Sum Sq. Dev. | 8.700476 | 24.64613 | 615.1020 | 366222.1 | 157.6688 | 13.58494 |
| Observations | 38 | 38 | 38 | 38 | 38 | 38 |

Source: Author's calculation

## 4.2. Correlation Matrix

Table 2 indicates the correlation matrixes of the variables. If the coefficients are 0.8, then it shows the multicollinearity problems. Since in the table1 no multicollinearity is found in the variables of our study.

**Table 2**
*Correlation matrixes of the variables in the model*

|  | GDP | FDI | FD | FDI_CRED | GCEXP | TO |
|---|---|---|---|---|---|---|
| GDP | 1.000000 |  |  |  |  |  |
| FDI | 0.461535 | 1.000000 |  |  |  |  |
| FD | -0.526523 | 0.224866 | 1.000000 |  |  |  |
| FDI_CRED | -0.442807 | 0.294300 | 0.495300 | 1.000000 |  |  |
| GCEXP | -0.382491 | -0.279125 | 0.087058 | 0.044818 | 1.000000 |  |
| TO | 0.470450 | 0.533725 | -0.415307 | -0.327272 | -0.394413 | 1.000000 |

Source: Author's own calculation

## 4.3. Results of Unit root test

In time series, the first step is to define the features of the variables calculated to verify that not any variable is integrated of I(2) or above. According to(Sezgin & Yildirim, 2002) suggested that inexistence of I (2), the result of the ARDL Bound test is invalid. Because ARDL bound test has the assumptions that the variables must be I(0) or I(1). The augmented Dicky Fuller test is helpful to test the stationarity properties of all the variables. The Augmented Dicky fuller test outcomes are shown in table 3, which depicts that part of the variables is stationarity at a level I(0), while half of the variables are stationary at the first difference I(1). So the command of co-integration is mix and gives suggestions to apply ARDL bound test.

**Table 3**
*Results of Unit Root Test*

| Variables | Level | 1st difference | Conclusion |
|---|---|---|---|
| LnGDP | -2.945842 | -2.948404** | I(1) |
| LnFDI | -2.945842* | -------- | I(0) |
| Ln FD | -3.542255** | -------- | I(0) |
| Ln FDI*CRED | -1.21109 | -4.4242** | I(1) |
| LnTO | -------- | -6.2200** | I(1) |
| LnGCEXP | -------- | -4.8631** | I(1) |

Note: *,**,*** significant at 10 percent, 5 percent, and 1 percent level respectively.

## 4.4. Results of Bound test

Table 5 indicates the estimated F-statistic value (7.537), which is above the upper critical value of 5%. This is indicating a long-run solid connection between the mentioned variables. In short, determinants of GDP move together in the long run, as shown in table 5.

**Table 5**
*Bound test results*

| F- Statistic | 7.537004 | |
|---|---|---|
| Critical values bounds | | |
| Significance | I0 bounds (lower bounds) | I1 bounds (upper bounds) |
| 10% | 2.08 | 3 |
| 5% | 2.39 | 3.38 |
| 1% | 3.06 | 4.15 |

Source: Auther's estimation

## 4.5. Results of long-run ARDL Model

Table 6 indicates the long-run relation between foreign direct investment, FD, and economic growth. The coefficients of all variables are consistent with the literature. The result from table 6 reveals that FDI has a negative and statistically insignificant effect on economic growth. The value of Foreign direct investment showing that one unit rises in Foreign direct investment will decrease economic growth by 0.33 units. This result is similar to the outcomes of (Saqib et al., 2013), who noted that FDI has an insignificantly and adverse connection with economic growth in the long term. This implies that Pakistan is a developing country and has more natural resources that can help form capital and domestic investment is beneficial. Hence dependency on FDI should remain limited. Therefore, economic policies limiting FDI in Pakistan because most of the profits of FDI get diluting because of the send back profits to the investor's nation. This is also suggesting that lacking further FDI requirements has not improved the economic growth of a country. General government capital expenditures (GCEXP) have a statistically significant effect on economic growth, which suggests that one unit rise in GCRED will lead to a 0.102 % increase in, E.G., This implies that the interaction of FDI with the effective financial sector, the government can now manage their spending more efficiently, to growing the marginal efficiency of public goods and services. According to theoretical literature, public expenditures increase economic growth if the spending raises the private investment's marginal productivity (Aschauer, 1989; Easterly, 1993). The result of trade openness also indicates a positive and statistically significant association with E.G .,

This suggests including investment in education facilities, developing institutions, and ensuring property rights. In other words, this study also suggests that the significant impact

of trade openness will only increase if institutions and other good policies promote investment, support human capital accumulations and allocate conflict resolution efficiently.

Lastly, and may result from this research, financial development and the collaborating term of monetary development and Foreign direct investment have a positive and significant association with economic growth. FD explains how well the monetary intermediaries can convey the inflow of FDI to creative sectors, and thereby inspiring economic growth in the long run. Therefore, positive coefficients of two variables in our study show that the higher revolution of the domestic financial sector improved the economic growth rate. This result is similar to the findings of (King and Levene, 1993a; and Levene, 1997); they suggest that economic policies that affect monetary intermediation could significantly affect the long run on E.G(economic growth). This result is also supported by the earlier results of(Choong, Yusop, & Soo, 2004; Durham, 2004), who have reported strong confirmation of positive association between FDI, E.G (Economic Growth), and FD. The diagnostic test results are given to the bottom of table 6, indicating that the value of the LM test supports the evidence that our model is free from serial correlation. The p-value of the Breush-Pagan-Godfrey test is insignificant at 5%, which shows evidence of no heteroskedasticity in the data. Cusum and Cusum of Square proved the stability of model parameters.

**Table 6**
*ARDL long run result*

| Dependent variable: ln GDP | | |
|---|---|---|
| **Independent Variables** | **Coefficients** | **t-values** |
| Ln FDI | -0.3374 | -0.1881 |
| Ln FD | 0.8032** | 2.2206 |
| Ln GCEXP | 0.1023* | 2.1585 |
| Ln FDI*CRED | 0.1643*** | 3.2162 |
| Ln TO | 1.0181** | 2.2484 |
| Intercept | 7.3923 | -0.0514 |
| **Diagnostic tests** | | |
| Test name | Test statistics | p-values |
| Serial correlation LM test | 0.7015 | 0.5624 |
| Hetero skedasticity: Breusch-Pagan-Godfrey | 0.4759 | 0.9050 |
| Cusum and Cusum of Square tests | Stability proved | |

Source: Author own estimation

## 4.6. ARDL short-run result

Table 7 present the short-run results of the ARDL model. SIC is used for lag selection. The regression coefficient of the error correction model is negative and statistically significant, which reveals the speed of adjustment of 40 % in a year. As by Granger *et al.* (2000), a significant ECM shows a long-run causal relationship. The current context goes from FDI, FD, FDI*CRED, too, and GCEXP to economic growth and confirms our previous long-run test results.In the short run, FDI, GCEXP, FDI*CRED, and TO positively impact economic growth in Pakistan. The value of the coefficient of foreign direct investment is 0.051. This result is within the line of(Ghazali, 2010) and suggests that FDI lets the developing country exchange with other countries. In addition, the quantity of financial development is positive and statistically significant, indicates that one unit rise in FD leads to 0.35% to increase economic growth. In addition, Trade openness has a positive and statistically significant effect on economic growth.

Interestingly, the sign of government expenditures (GCEXP) has changed from positive to harmful in the short run. This is similar to the growth theory if the marginal productivity of public goods and services does not increase through concentration on consumption expenditures. The quantity of TO is positive and highly statistically significant. This suggests that TO might hold the productivity result on economic growth indirectly. This outcome is the same as the results of (Jalil and Feridun, 2011). In the short term, the sign of FDI*CRED positively and statistically significantly affects economic growth. This illustrates that the development of the financial market is an essential condition for Foreign direct investment to have a positive result on economic growth. For checking the stability of parameters coefficient in the long run of the model, the cumulative sum (CUSUM) and Cusum of Square (CUSUMSQ) tests are applied as indicated by figures 1 and 2. If the lines of (CUSUM) and (CUSUMSQ) are lying in the critical bounds at 5% level, then the null hypothesis of all coefficients in the model will not be rejected. As shown in figures 1 and 2, all coefficients in the Autoregressive distributed lag model and Error correction term are stable. In addition, the magnitude of the F-statistic is highly significant, indicating that our model is a goodness of fit. Similarly, the value of the Durbin-Watson Statistic shows that there exists no serial correlation in the model. The p-value of the Histogram test (Normality) test is insignificant that shows the data is usually distributed.

**Table 7**
***ARDL ECM result***

| Independent Variables | Dependent variable: lnGDP | |
|---|---|---|
| | Coefficients | t-values |
| Δln FDI | 0.0511** | 8.5668 |
| Δln FD | 0.3533** | -8.3616 |
| Δln GCEXP | -0.0064** | -4.1785 |
| Δln FDI*CRED | 0.0139** | 8.3304 |
| Δln TO | 0.0493** | 3.1725 |
| Intercept | 1.0876** | 4.0514 |
| ECM (-1) | -0.0402 | 10.2342 |
| **Diagnostic tests** | | |
| Test name | Test statistics | p-values |
| R-squared | 0.769 | |
| F-Statistic(Overall significance of model) | 2682.673 | 0.0000 |
| Durbin-Watson Stat | 2.3904 | |
| Histogram test ( Normality) | 4.3594 | 0.1130 |
| Cusum and Cusum of Square tests | Stability proved | |

Source: Author own estimation
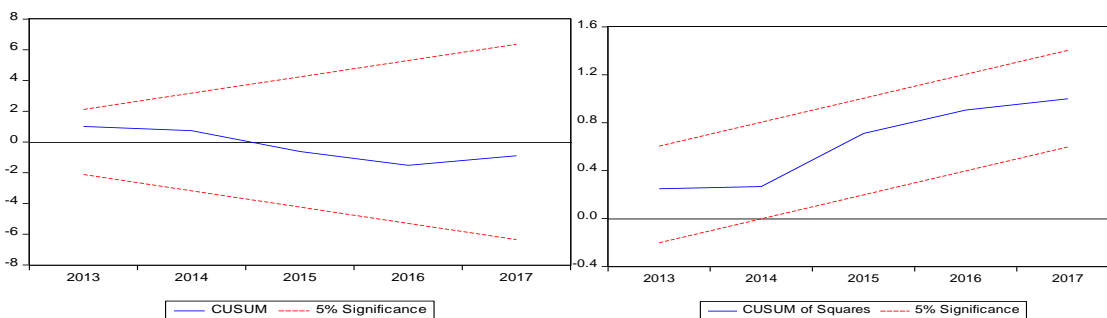


**Figure 1: Plot of the cumulative sum of recursive residual Figure 2: Plot of the cumulative sum of squares recursive residual**

## 5.     Conclusion and Policy Recommendations

This paper examines the effect of foreign direct investment and financial development on economic growth in Pakistan from 1980 to 2017. The research has contributed to literature through the introduction of financial development by using the interaction of financial development with FDI to measure their influence on E.G in the case of Pakistan. Our results investigate the null hypothesis of the existence of unit root in the majority of series in the model.  We employed the ARDL model to estimate the long and short-run association among the variables. Results indicate a significant relationship between FD, FDI*CRED, TO, and financial growth in the long run and short run. In the long run, foreign direct investment has an adverse influence on economic growth. In contrast, in the short run show a positive influence on (economic growth). General consumption expenditure has a positive effect on economic growth, while the long-run has a negative impact. The empirical results of this paper provide various policies. The findings are opposite to the expectation that an improvement of FDI is important to enhance the economic growth in a developing country such as Pakistan. This is true only by having developed their domestic financial system. An empirical analysis of this study may help to discuss economic liberalization in less developing countries. This research also implies that these countries first need to improve their domestic monetary systems before capital account liberalization to expand FDI inflow.

**Conflict of Interests/Disclosures**
The authors declared no potential conflicts of interest w.r.t the research, authorship and/or publication of this article.

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