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The Nexus between Foreign Aid and Economic Growth of Pakistan: A Cointegration Analysis

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ABSTRACT

There is extensive literature available that dissects the linkage between foreign aid and the growth of the economy. The key focus of the current study is to explore how aid received from foreign countries are linked with growth rate of Pakistan's economy. The present study considers time series data from 1985 to 2019 and corelates the nexus of foreign aid and Pakistan's GDP growth rate in the long as well as short run. The study examined one dependent variable which is GDP, and seven independent variables including official development assistance as foreign aid, population growth, inflation, trade, domestic saving, unemployment, and foreign direct investment by using ARDL method. Broad canvas of the foreign aid and growth rate nexus is the main limitation of the paper and other factors impacting economic growth could not be taken into consideration due to the non- availability of complete data. The results of the study conclude that foreign aid hurts the economic growth of Pakistan throughout the thirty-four years not only in the short run but in long run as well.

INTRODUCTION

The core aspect of foreign aid in the growth process of developing economies such as Pakistan has been under strong discussion. Aid from the foreign countries is a form of capital transfer to underdeveloped countries for their growth (Durbarry et al., 1998). Aid from foreign countries can be termed as the assistance given by developed countries to underdeveloped countries for their economic activities (Hossain 2014). Aid is provided in different forms such as infrastructure projects, commodities, food, emergency aid (given in natural disasters), military aid, multilateral, and bilateral aid. It can be granted directly to the recipient country by the donor country or indirectly to the recipient country through international organization without any direct contact with the donor (Hossain 2014 and Afzal 2021).

External transfer of capital, products, and services in between countries for the betterment of the people can be termed as foreign aid. It has worked to minimize poverty in the country (Afzal, 2021). Foreign Aid helps in productivity enhancement, brings modern technology, and reduces poverty, moreover, it brings gender equality, and improves education, and the health system; but in Pakistan, foreign aid has not been utilized effectively in the social factors (Morrissey, 2001; Sultana, 2019). The research found that foreign aid makes developing countries more dependent on recipient countries and a major part of the aid is spent on consumption rather than production. Foreign Aid can be provided based on the political, economic, and geographical

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aspects of the country (Sultana, 2019).

The studies in the literature observed that the developing countries used foreign aid as an engine of growth to boost their national income and strengthen their economic development, such the examples South Korea, China, and India while on the other hand, Pakistan and other developing countries depend on aid inflows (Sultana, 2019). Foreign Aid plays a key role as a source of income. It aids in mitigating the discrepancies between saving and investment and potentially raises productivity. Pakistan gets unilateral as well as bilateral form of aid, but the outcomes are not productive in terms of economic growth (Sultana, 2019). According to the Economic Survey of Pakistan, the country has received 10,499 billion dollars within the 25-year time from 1991 to 2015 and remained on the top list of Foreign Aid receivers. Over the years, USA, China, UK, Russia and Japan has provided with aid. Furthermore, Pakistan also got assistance for Afghan refugees and earth quick affected people (Pooja et al., 2015).

Developing economies face difficulty in performing their advancement goals, so Foreign Aid helps countries to accomplish their development goals. Moreover, good governance and policies with no corruption could make it more effective. Additionally, giving the right training to the skilled labor force is also an efficient tool for cutting the cost of export. In the presence of good governance with the right tax system and effective use of money, the fiscal policies are considered a helping hand for government to run the economic cycle of a country. Likewise, increasing investment also positively impacted the standard of living which eventually leads the country on the path to prosperity and enables it to become a strong and competent state (Adebayo et al., 2020).

The author also highlights that use of Foreign Aid brings modern technology, ideas, and infrastructure to a country that positively affects economic growth. A good policy environment can accelerate the country's economic growth rather than a change in the factor of production. Furthermore, a good policy environment changes the aid into investment (Javid et al., 2011). Foreign Aid is utilized to further the agendas of political elites (Sarwar et al., 2015). Pakistan is a country where programs related to aid (especially foreign) and government assistance may improve economic growth but are degenerative when it comes to health, education, gender equality, political stability, and corruption indicators (Easterly, 2001).

An Overview of Foreign Aid to Pakistan

Pakistan is depending on aid since 1947 and the amount of aid has been increased. As time passes Pakistan faces the problem of getting more aid. During the 1960s, 6.6 percent of Foreign Aid is the same amount of GDP as received, moreover, in the early 1970s, Pakistan received 4.2 percent of GNP From 1974 to 1975 aid remained US 1 billion dollars. During this time, the government started different development initiatives with the help of this assistance like a steel mill, Indus highways, roads, and electricity projects (Sarwar et al., 2015). From 1979 to 1997 the aid fund decreased due to nuclear policy (Malik et al., 1997). Aid increased the US $2 billion in the period during the 1980s when the American Soviet Union clash was with Afghanistan and Pakistanis worked at the frontline. After the nuclear test in 1998, aid declined from the period 1998 to 2001. As time passed the amount of aid increased several times after the 9/11 incident. The US also started the five-year economic assistance package for Pakistan in 2003 (Sarwar et al., 2015).

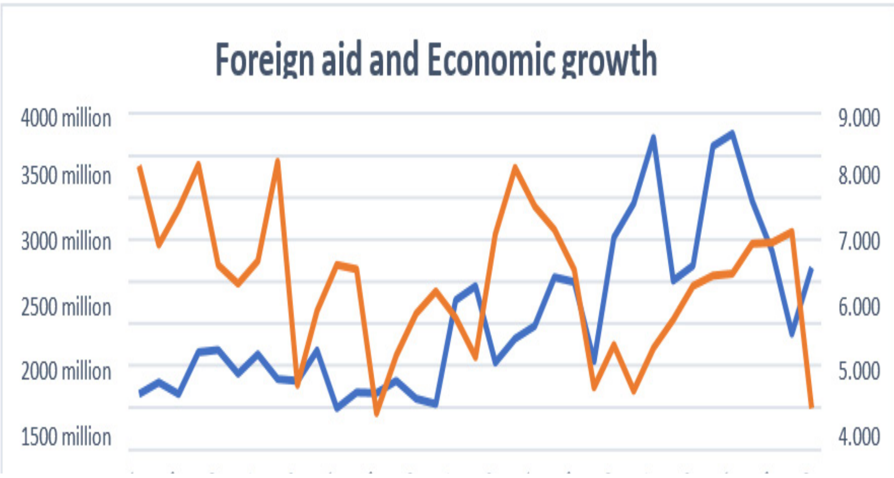


Fig. 1. Official Development Assistance versus GDP growth
Source: Author's illustration 2022

The line graph presents changes in the amount of ODA in million and GDP growth on the vertical axis, years are taken from 1985 to 2019 on the horizontal axis. Overall, ODA showed an increase and GDP growth decreasing trend in the last year compared to the previous years. The amount of ODA received in the first 9 years are slightly increasing but the years 1995 and 2000 shows significant fall in ODA. During the next year, 2001, ODA shows a sharp increase, which was thrice as much as the previous period. There is a decrease in the amount of ODA received in 2003 and 2008 is but greater than in the past. An increasing and decreasing trend in different periods. There is a dramatic rise in ODA in the year 2011 and 2015. A sharp decrease in ODA shows in the year 2019. Meanwhile, the figure for GDP growth in Pakistan shows decreasing trend throughout the period.

It begins with maximum GDP growth in the year 1985. There is significant GDP growth in the year 1992 that is greater in the whole graph, but there is a sharp decrease in the year 1993. There is an increase in GDP growth in the year 1996. There is a significant and similar decrease in GDP growth in the years 1997 and 2019. There is an increase in GDP growth in 2000 but a decrease in the 2002 year. There is a sharp increase in GDP growth in 2004 year after the year 1997 GDP growth. After four years GDP growth fell. There is an increasing trend from 2010 to 2018 but GDP growth fell sharply in 2019.

Earlier studies have aimed to examine aid effectiveness at the local and global levels. Based on previous literature, Foreign Aid played a role in the growth of developing countries even though the results of these studies were mixed as positive, negative, and non-existent. There have been studies by various authors (Sultana, 2019; Arshad 2007; Shaikh, 2011; and Javid, 2011) that investigate the linkage between the aid received from foreign countries and Pakistan's economic growth but the current study takes into account unemployment in youth between the age 15-24 and the most recent data to update the results and also provide an insight into the relationship between aid from foreign countries and GDP growth rate of Pakistan.

The present study aims to corelate the nexus of foreign aid and Pakistan's GDP growth rate in the long as well as short run. It also investigates the connection between Gross domestic saving, foreign direct investment, inflation, trade, unemployment, and population growth with the economic growth of Pakistan.

LITERATURE REVIEW

The linkage between foreign aid and growth of the country has been thoroughly reviewed in literature. Different studies have evolved to find this impact, but the results of their findings show mixed responses. Foreign Aid was helpful for countries to increase their economic growth and helped in upgrading their living standard, but some countries did not use it effectively. To support this Sothan (2018) reveals this point by mentioning the example of the super achievement of South Korea soon after the war that exemplifies the use of Foreign Aid. Foreign Aid significantly improved their economic growth and made the country economically advancing.

Mustafa et al, (2019) explores the linkage between aid from the foreign countries and economic growth in Sudan. The data was collected from the period 1980 to 2015. Real GDP was used as a dependent variable whereas labor force, human capital, gross domestic capital formation, ODA, and exports were used as the independent variables. ARDL method was applied to know the results. The outcome showed a long-run positive impact on economic growth. Data of variables were gathered through WDI, OECD, and UNCTAD Moreover, the author mentioned that the policymaker must invest in education and health care facilities that promote economic growth. Further, a study was conducted by (Hussain et al., 2018) showed a negative relation between Foreign Aid and economic growth of Pakistan due to political instability, corruption, and terrorism. Moreover, the results revealed that population growth and education enhanced growth in the country,

Balcioglu (2016) tried to explain the connection between Foreign Aid from turkey and the economic growth of Azerbaijan, Georgia, Kazakhstan, Turkmenistan, and Uzbekistan. The author took data from the period 1992 to 2014 and used a model panel system. Real GNP was used as a dependent variable whereas aiding as the independent variable. The results showed a positive relationship between economic growth and Foreign Aid to Azerbaijan, Georgia, Kazakhstan, Turkmenistan, and Uzbekistan countries. The author mentioned that aid inflows give a positive impact with an increase in gross domestic savings and the presence of perfect domestic resources. The data sources of the variables were International Financial Statistics and the Turkish Coordination and Cooperation Agency (TIKA).

Awan & Moeen-ud-Din (2015) observed that the impact of Foreign Aid on the economic growth of Pakistan. The author used time-series data from the period of 1980 to 2012 and applied the Ordinary Least Square (OLS) statistical techniques. The growth rate of real GDP was treated as a dependent variable, whereas investment in-country, Foreign Aid as ODA, a growth rate of capital stock as investment/GDP, and inflation were used as independent variables. According to the study, foreign aid did not affect growth in Pakistan. The author mentioned that domestic investment showed a positive relation with economic growth rather than foreign aid. Furthermore, the use of foreign aid in Pakistan was observed ineffective so the country should boost its domestic saving and investment rates. The data was collected from the World Bank, World Development Indicator, and Economic Survey of Pakistan sources.

Hossain (2014) studied the effect of Foreign Aid on the economic growth of Bangladesh. The author took data from the period of 1980 to 2012 in different government periods and used the panel least square method. Gross domestic product was used as a dependent variable whereas population growth rate, investment, Foreign Aid, and inflation were used as independent variables by applying. The economic growth was affected positively in Bangladesh. Furthermore, an appropriate employment of foreign aid under effective policy environment makes it conducive for growth. The data was collected through International Momentary Funds (IMF), and World Economic Outlook sources.

Fasanya (2012) did research to find the impact of Foreign Aid on the economic growth of Nigeria. The time-series data from World Bank, World Development Indicator, and Penn World Data was collected from the year 1970 to 2010. The results revealed a conducive response on Nigeria's growth. Furthermore, the author mentioned good policy and management were more important for the country to ensure economic growth in the presence of Foreign Aid. Therefore, the donor country must be aware of the current political situation and ensure a stable policy environment for the recipient country.

Qayyum and Haider (2012) conducted research to find economic growth through foreign aid, governance, and external debt. The author used a sample of sixty developing countries from the period of 1982 to 2010 including which Pakistan was one of them. GDP as economic growth was used as dependent a variable whereas governance quality, labor force, inflation, financial debt, trade openness, investment, Foreign Aid, and external debt were used as the independent variables. The results revealed that external debt adversely impacted economic growth whereas foreign aid had a positive response as far as economic growth was concerned. Foreign Aid boosted economic activity in the form of growth for the country. So, the government must expand the development projects and lessen the debt that creates a burden on the economy and becomes the reason for a decrease in economic activity. Even more governments of developing countries must create revenue-generating projects and maintain good governance. The data was collected from WDI.

Furthermore, Javid (2011) concluded in his research that Foreign Aid does impact economic policies which ultimately impact economic growth. The author mentioned in his paper that Foreign Aid remained a helpful source among the least developing countries to bridge their saving-investment gap and import and export gap. Whenever an effective policy framework and good governance was implemented, economic growth responded positively towards foreign aid. The study also explained how foreign aid brought new technology, ideas, and infrastructure into a country which naturally affects economic growth. Another study completed by Shaikh (2011) highlights that Foreign Aid contributed to the domestic investment that led to economic growth, but the impact remained insignificant in the case of those countries that have poor governance, bad economic policies, and infrastructure. The results signified a healthy relationship between aid from foreign countries and Pakistan's growth.

Ellahi and Ahmed (2011) used Real GDP as a dependent variable whereas ODA, FDI, and labor force growth rate were used as the independent variable. ARDL method was applied, and the results showed positive relation to economic growth, but Foreign Aid magnitude showed less impact as compared to foreign direct investment. Chatrna et al. (2010) took a sample of eighty-five developing countries Pakistan was one of them used panel data from the period 1980 to 2007. Real GDP per capita was used dependent variable whereas Foreign Aid, population growth, capital stock, gross fixed capital formation, and inflation as independent variables. The panel least square estimation method was applied for this model. The results showed mixed effects, foreign aid give a positive impact in the case of African countries, but negative relation to economic growth in low middle-income countries.

On the other hand, different studies suggest that foreign aid hurts the economic growth of the country. To support this, A study conducted by growth (Hassen et al., 2000) revealed that the impact of Foreign Aid on economic growth depended on the quality of aid flows because the time aid inflows were not sufficient to complete the planned and started a project that carries time lag in the timely completion of the projects, gave negative impact to economic Moreover (Adebayo et al., 2020) mentioned in his writing developing economies faced difficulty to perform their annual advancement or development goals but with the support donations in the form of foreign aid, countries have accomplished those goals. In his paper the author applied ARDL techniques to calculate the findings. The results clearly showed a negative relation between Foreign Aid and economic growth based on their research methodology.

Albiman (2016) investigated the impact of Foreign Aid on the economic growth of Tanzania. The author took time-series data from 1976 to 2014 using the OLS method. GDP was used as a dependent variable Whereas, Foreign direct investment FDI, foreign aid, labor force, exports, and domestic investment were measured as independent variables. The results showed a negative impact on the economic growth of Tanzania. The argument was discussed that Tanzania remained the top recipient country of ODA with low economic growth because of poor technology and low income per capita. So, the author mentioned that country must have appropriate policies and environment to overcome poverty and development problems.

Sultana (2019) researched to know the impact of Foreign Aid on the economic growth of Pakistan from 1974 to 2014 period. The ARDL method was applied to get results. The outcome of the empirical investigation revealed no link between aid provided by foreign countries and growth of Pakistan's economy. These findings showed that multilateral aid from Japan was spent on infrastructure that influenced the economic growth, but the aid from US and UK was spent on political and tactical goals. Conversely, certain studies showed no relation and argued that foreign aid should be used to improve recipient economies if certain requirements met such as a good policy environment, institutional quality, and governance. A study by Arshad (2021) contributes to the above findings and mentions that the sustainability of Foreign Aid has become an important concern but remains a mystery. The bulk of the Foreign Aid spent on non-development expenditure showed little growth in the economy.

Tang and Bundhoo (2017) examined the impact of Foreign Aid on the economic growth of sub-Saharan African countries. The author took data from ten countries from the period of 1990 to 2012 and used the OLS model. Real GDP was used as a dependent variable whereas capital stock, capital gross formation, labor force, aid as ODA, and institutional quality were the independent variables. The results showed that Aid alone give no impact but, the presence of a good policy environment makes aid effective for the economic growth of these ten countries. Moreover, the government of these countries and aid agencies must consider those factors that improve aid productivity. The author highlights that for better economic policies and a sound environment, countries must improve their inflation rate, trade, and government consumption with complete check and balance on these three variables.

Khan and Ahmed (2007) revealed foreign aid is not a blessing for Pakistan. Moreover, according to the author foreign direct investment, domestic investment, and export had a positive influence on Pakistan's growth. These results were supported by Hussain (1992). Additionally, Randhawa (2012) revealed that direct or indirect investment in the form of physical capital was positively responsive towards growth. Mohey-ud-din (2005) mentioned that developing countries like Pakistan facing difficulties in filling the saving-investment gap and import-export gap with debt burden so, foreign aid becomes helpful to overcome these gaps. So, the main reason for aid ineffectiveness was a major portion of the aid used in filling the gap rather than the development projects. Another reason is that aid was given to the recipient country on the pre-condition and will of the donor. The effect of aid was positive if the country used it according to their need.

It can be concluded that Foreign Aid showed mixed results in economic growth. Different studies showed that Foreign Aid boosts economic growth, but some studies showed the negative impact of aid on growth. The presence of good governance and a good policy environment that works for the betterment of people showed positive results. Foreign Aid brings modern technology and improves the living standard of the people but habits of too much relying on Foreign Aid affect the growth of the country.

METHODOLOGY

Table 3.1

Variables, Unit of Measurement/source

No.	Variable	Unit of measurement/ source
1.	Foreign Aid	Net official development assistance (ODA) at Current $US dollar. /World Development
2.	Economic growth	Indicator
3.	Population growth	Gross domestic product Annual (%). / World
4.	Inflation	Development Indicator
5.	Domestic saving	Population growth rate
6.	Trade	Annual (%). / World Development Indicator
7.	Unemployment, youth total	Consumer price index (CPI)
8.	Foreign direct investment	Annual (%). / World Development Indicator

Source: Authors illustration 2022

There has been an evolution in the theories that discuss the nexus of economic growth and aid from foreign countries. Economists used Harrod Domar's model to find the saving-investment gap. The argument laid down by the author iterates that a higher capital productivity causes greater GDP growth rate whereas, a rise in investment results in more domestic savings. These relationships when working simultaneously will enhance economic growth. Chenery and Strout (1966) extended the work of Domar. As investment increases, the import of capital goods also increases but if the country faced low export earnings, then aid fills the export-import gap (Shaikh, 2011). The extension of the Domar's work suggested that by mitigating the gap between the saving and investment and the discrepancies associated with import and export; aid from foreign countries enhances the growth of the economy of a country.

Numerous studies used unique models to further investigate the relationship. For example, Sothan (2018); Mustafa et al., 2019; Arshad (2021); Feeny, (2005); Adebayo et al., (2020); Asterious (2008), and Sultan, (2019) respectively showed positive, positive, no relation, positive, negative, positive, and mixed results respectively by using the ARDL model. Inspired by these studies, the author opted for the ARDL model to be applied in this paper to find the linkage between aid from foreign countries and growth of country's economy.

The equation to investigate the above-mentioned relationship is given below:

Economic growth= f (foreign aid, gross domestic saving, inflation, population growth, trade, foreign direct investment, unemployment). Here Ut= error term

$$GDPe = \beta\,0 + \beta\,1ODA + \beta\,2GDSt + \beta\,3INFt + \beta\,4\,POPt + \beta\,5TRADEt + \beta\,6UNEMPt + \beta\,7\,FDIt + u\ (1)$$

RESULTS

A thorough data analysis reveals that foreign aid, growth in population and trade are inversely linked with GDP growth. Whereas, it has a positive link with the rate of unemployment. On the contrary, there is an inverse correlation between inflation and economic growth (GDP growth) while Gross domestic saving depicted a positive relation with economic growth (GDP growth). The descriptive analysis showed that ODA fluctuated throughout the period of study with the highest amount received in 2001. The unemployment trends showed a rapid rise after 1999 with a slight fall in 2013 after which the rising trend was observed until 2019. The trend of FDI showed that Pakistan received a significant cash inflow in terms of FDI in 2008.

Autoregressive Distributive Lag (ARDL)

The current study uses ARDL method developed by Pesaran et al (2001) to investigate the relationship between foreign aid and Pakistan's economic growth. To check the stationarity of the variable, the study employs ADF Augmented Dickey-Fuller test before using the bound test for cointegration. The following tests of ARDL were run to check the accuracy.

Unit root test

In this study ADF test was used to check the stationarity of the dependent variable and that all the independent variables are at I (0) and 1(1), not at I (2). The criteria to check the stationarity is if the p-value is less than 0.05 Moreover if the t ratios of the coefficients are less than the critical value, it is said to be stationary Dicky-Fuller (1976). So, following table 3 shows that the time series of GDP is stationary at 1st difference with intercept and that is: I (1). The foreign aid as ODA is stationary at 1st difference with an intercept that is; I (1). GDS is stationary at 1st difference with trend i.e. I (1). However, the time series of inflation is stationary when integrated at 1st difference with the trend and intercept that is; I (1). Population growth is stationary when integrated at 1st difference with the trend and intercept i.e. I (1). Trade is stationary at 1st difference with the trend and intercept i.e. I (1). Unemployment is stationary at 1st difference with the trend and intercepts i.e. I (1).

According to the above discussion it is revealed that Foreign Direct Investment (FDI) has an integration at level. While GDP, ODA, GDS, INF, population growth, unemployment and trade have an integration at the first difference. This condition binds us to use the ARDL method for estimation.

Table 3.2

Unit Root Test

Variable	Unit rootest	Included in the test equation	Test statistics		Probability	Results
			ADF test	Critical at 5%		
GDP	1st difference	Intercept	-6.764405	-2.954021	0.0000	I (1)
ODA	1st difference	Intercept	-5.909822	-2.960411	0.0000	I (1)
INF	1st difference	Trend andintercept	-6.623088	-2.954021	0.0000	I (1)
GDS	1st difference	Trend	-6.751645	-2.954021	0.0000	I (1)
Pop growth	1st difference	Trend and intercept	-8.4699	-3.5577	0.0000	I (I)
Unemployment	1st difference	Trend	-6.461465	-2.976	0.0000	I (1)
FDI	Level	Intercept	-4.1325	-2.976	0.0035	I (0)
Trade	1st difference	Trend and intercept	-5.674448	-3.5529	0.0003	I (1)

Source: Authors illustration 2022

Table 3.2 indicates that F-statistics value (14.71128) is above the upper bound (3.21) at a 5% significance level. Hence, there is a long run relationship among aid from foreign countries and growth of Pakistan's economy.

Table 3.3

Bound test

Test statistics	Value	Critical value bounds		
		Significance	I (0)	I (1)
F-statistics	14.71128	5%	2.17	3.21

Source: Authors illustration 2022

Cointegration

The coefficient value in the cointegration error correction term explains how much time per year it will take to go back to its equilibrium state. Table 3.4states that economic growth will return to its equilibrium state at a speed of 1.13 per annum (the negative sign shows the backward movement).

Table 3.4

Cointegration

	Co-efficient	Probability
Co inteq (-1)	-1.131100	0.0000

Source: Authors illustration 2022

Table 3.5 indicates that the ODA has a negative and significant impact on GDP that is; a 1 percent increase in ODA decreases GDP by 1.15 used by keeping other variables constant. An inflation increase by 1 percent will decrease the GDP by 0.4642 while keeping other variables constant. Results signify that a 1 percent increase in trade increases the GDP by 0.255 while other variables are kept constant. GDS shows a negative and insignificant impact on GDP. GDP decreased by 1.3 if there is an increase in unemployment by just 1 percent, while other variables are constant in our model. Population growth shows that a 1 percent increase in it will increase GDP by 55.06 while keeping other variables constant. FDI shows a negative and insignificant impact on GDP. Constant in this model is found positive which shows that when all the explanatory variables would be zero GDP will be increased by 37.32. Although, this cannot be possible because Official development assistance, Gross Domestic Saving, Inflation, population growth, trade, and unemployment can never be zero.

Table 3.5
Long Run Coefficients

Variable	Co-efficient	T-statistics	Probability
ODA	-1.15E-09	-3.210447	0.0107
INF	-0.464208	-4.134049	0.0025
Trade	0.255072	2.734695	0.0230
GDS	-0.310754	-1.137995	0.2845
Unemployment	-1.341859	-3.040824	0.0140
Population growth	55.06066	3.027268	0.0143
FDI	-1.074678	-2.027372	0.0732
Constant	37.32899	4.641588	0.0012

Source: Authors illustration 2022

"Breach Pagan" test is the most common accurate test to check for the heteroscedasticity in the model. The condition is based upon the fact that the F-test probability value must be greater than 0.05, which indicated the absence of hetero. According to our results, it has been detected that the f test prob is exceeding 0.05, that is; 0.3987.

Table 3.6
Heteroscedasticity Test

Heteroscedasticity test "Breach Pagan Test"			
F-statistics	1.031790	Probability	0.5032
Observed R*squared	17.84416	Probability	0.3987

Source: Authors illustration 2022

When an explanatory variable in a regression model is correlated with the disturbance term, it leads to biased and inconsistent results. Therefore, Breusch-Godfrey (BG) test is an accurate way to detect autocorrelation in the auto- regressive distributed model. BG Test is based on the condition that the F test probability value must be greater than 0.05, which depicts the absence of autocorrelation. According to our results, it is concluded that the F-test probability is 0.26 greater than 0.05 so, there is no autocorrelation in our model. This shows that distinction in one variable will not disturb the performance of other variables.

Table 3.7
Presence of autocorrelation

"Breusch-Godfrey" Serial correlation LM test			
F-statistics	1.593786	Probability	0.2689
Observed R*-squared	8.447985	Probability	0.0146

Source: Authors illustration 2022

Stability Diagnostics

This step of the ARDL shows that the model was approved through a test called the stability diagnostics test. Two cumulative sums are required to test this. CUSUM and CUSUMSQ are applied to detect whether the coefficient in the model is stable or not. It is used to analyze the parameters in the short-run and long run.

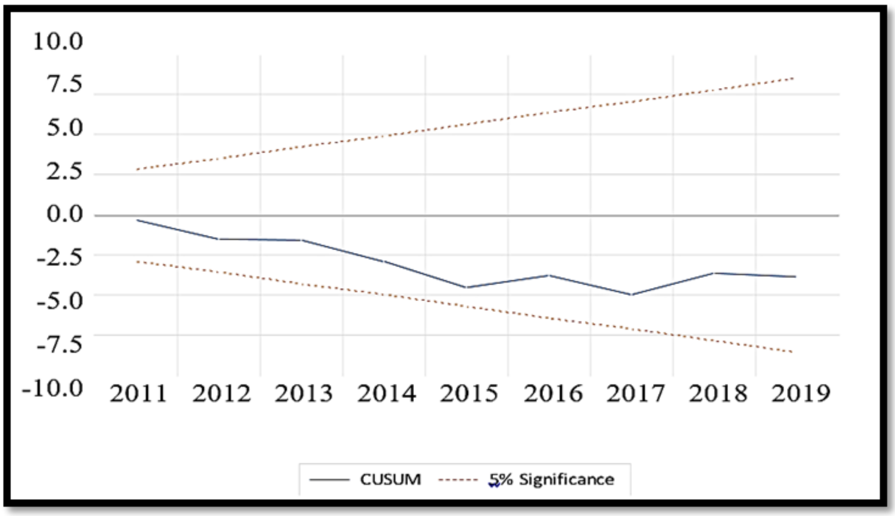
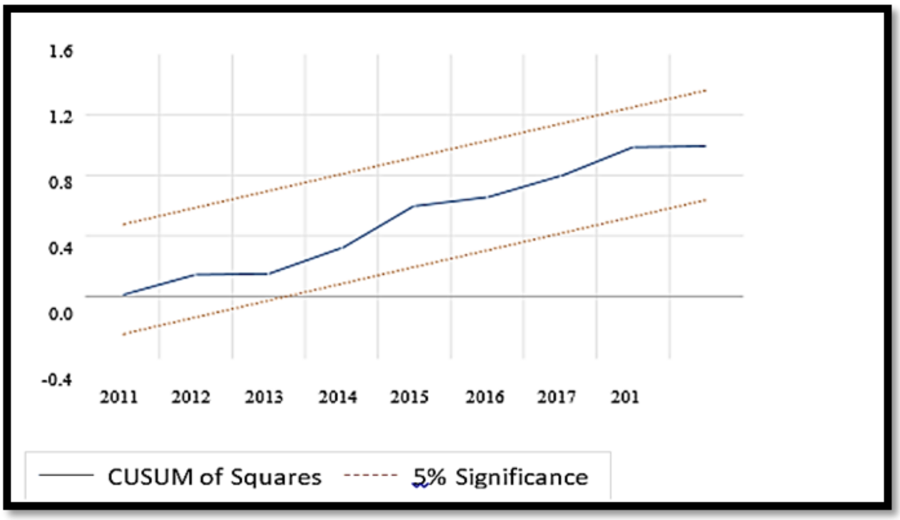


Fig.3.1. Cu sum Test
Source: Authors' illustration based ARDL model results



Source: Authors' illustration based ARDL model results

CONCLUSION

This paper analyzes the effects of Foreign Aid on the economic growth of Pakistan. The present study finds that foreign aid has a significant but negative impact on economic growth. The present paper used recent data from 35 years from 1985 to 2019 and included seven independent variables namely foreign aid, gross domestic saving, foreign direct investment, population growth, trade, inflation, and unemployment. Furthermore, this study examines the long-run relationship between foreign aid and the economic growth of Pakistan. Study results attained through the ARDL method and observed trade, as well as population growth positively impacted Pakistan's economic growth in the long run. As far as foreign aid is concerned, Pakistan's growth is negatively affected by it in the long run. The availability of aid to Pakistan is ineffective due to power structure and corruption.

To attain long-term economic growth for Pakistan, policymaker needs to provide a sound economic environment, desirable policies, and a regulatory framework that support domestic and foreign investment. The main reality of economic growth is gained by creating a high-quality anti-corruption country. Taking foreign aid for development purposes is good but depending on it for the long-term economic growth of Pakistan is not a reasonable solution. Hence instead of relying on charity, loans, and grants, the country must promote investment in industry and infrastructure like building roads and the exports sector.

Conflict of Interests

The authors has declared that no competing interests exist.

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