The Impact of Foreign Economic Assistance on Government Expenditures: A Case Study of Pakistan

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CERTIFICATE

This is to certify that this thesis entitled: **"The Impact of Foreign Economic Assistance on Government Expenditures: A Case Study of Pakistan"** submitted by Syeda Tawakal Fatima Zaidi is accepted in its present form by the Department of Economics, Pakistan Institute of Development Economics (PIDE), Islamabad as satisfying the requirements for partial fulfillment of the degree of **Master of Economics.**

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DECLARATION

I *Syeda Tawakal Fatima Zaidi*, solemnly declare that this is an original piece of my work. I am the author of this thesis and that during the period of registered study this work has not been submitted for an award of a degree in any other university.

Dedicated to my parents,
whose prayers for me are what have sustained me this far

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ABSTRACT

The aim of the study is to see the short-run as well as long-run association between foreign assistance and government spending in the case of Pakistan and to examine the direction of association between foreign assistance and government spending in Pakistan. The study is based on secondary data, which is taken from Pakistan economic surveys over the time span of more than 30 years. the study uses ARDL bound testing method and finds that there is a significant association between foreign economic assistance and government spending and it is concluded that private investment increase government spending because of provided opportunities due to

private investors.

Keywords: Foreign economic assistance, current expenditure, development expenditure

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LIST OF ABBREVIATIONS

CUREXP	Current Expenditure
DEVEXP	Development Expenditure
FEA	Foreign Economic Assistance
INVPUB	Public Investment
INVPVT	Private Investment
GREV	Government Revenues
GDP	Gross Domestic Product
LF	Labor Force
BoP	Balance of Payment
IMF	International Monetary Fund

CHAPTER 1

INTRODUCTION

1.1 Background

Foreign economic assistance has a significant impact on government expenditures, but this impact can be both positive as well as negative on current and development expenditures depending upon the economic condition of the country. The purpose of such aids and grants is to increase development expenditure, however, due to unfavorable socio-political and economic situation, it may largely cause an increase in current expenditures. Quality administration of foreign economic assistance can raise the required funds to achieve cost and risk objectives for maintaining an efficient debt market. This is an art of policy for debt portfolio and sensible management of external debt. It can provide good level of assistance to countries, for the reduction of borrowing cost, mitigation of refinancing risks and stability of exchange rates. Lack of farsightedness has enforced many countries to give importance to debt servicing as a replacement for social and development objectives. Continuous foreign assistances have never been a good option for developing nations. Given Pakistan's developing status, the prerequisite for inclusive and streamlined debt policy is of great significance to ensure the right choice among a number of options, to address financial restraints and ensure intergenerational welfare impact.

The statistics show that external debt liability of Pakistan is expected to touch USD 102.00 billion by the end of next 3 months. Trading Economics' global macro-models

and analysts speculated the external debt in Pakistan to stand at USD 115billion within the next 12 months. The latest status of external debts in Pakistan indicated that "Pakistan's external debt and liabilities soared to a record $96.7 billion (at the end of September 2018) (SBP 2018)

Increasing certain level of debt can hurt the economic growth of country in many ways. Repayment of these debts is the question which is still detached and unanswered by the policy makers practically. However, certain policies have been suggested by the Planning Commission and researchers over time. Understating the relation of foreign economic assistance, which includes grants and loans, with government spending is an important issue for sustainable growth and development. The current study attempts to examine the relation between foreign economic assistance and government expenditures — current and development — in short-run and long-run to better understand how foreign economic assistance has been used in Pakistan since 1970s.

1.1.1 Theoretical background

Developing countries need foreign economic assistance to bridge the saving-investment gap. However, foreign economic assistance, in the shape of grants and loans, must be used judiciously. There is a positive association between foreign economic assistance and development expenditure for some countries. For instance, the Marshall Plan. At the end of World War II, the United States, in order to help in reconstruction of Western Europe, gave over $12 billion as economic assistance. However, most of the developing countries do not spend foreign aid wisely and waste the opportunity for growth, it happens when

they increase current expenditures instead of spending the aid on development projects. Corruption and mismanagement are the main causes of not being able to use foreign economic assistance to the full potential. Evidence suggests that foreign economic assistance is used mostly for current and wasteful expenditures and not for development expenditures. This means that expected economic growth cannot be achieved.

1.1.2. Foreign Economic Assistance

It must be noted that in this thesis, we have used foreign economic assistance, which only includes long term aid and does not include short term borrowing. It also does not include Balance of Payments support. We have used this variable instead of external debt or overall external borrowing because some types of aids, such as IMF loans, cannot be used for development purposes. Short term borrowings also cannot be used for development projects.

1.2 Problem statement

Since foreign economic assistance also includes loans, which adds to external debt of a country, it poses an economic threat to the growth of country in the long-run. Whether an increased amount of foreign economic assistance has led to increase in development spending or current spending is the main question being investigated in this study. The case of Pakistan fits ideal to understand the puzzle of foreign economic assistance and government spending.

1.3 Objectives

The study aims of the study are as following:

- To see the short-run as well as long-run association between foreign assistance and government spending in the case of Pakistan
- To examine the direction of association between foreign assistance and government spending in Pakistan.

1.4 Research Gap

Numerous studies have been directed to investigate the effect of foreign economic assistance on government expenditures, however, no research has been carried out specifically in the case of Pakistan in order to investigate the relationship between government spending and foreign economic assistance. The same study has already been carried out in cases of Ethopia [Martins P.M.G. (2009)], Kenya [Njeru(2003)] and Nigeria Muse(2013) . The study was also carried out using panel data for Asian countries by Shabbir and Yasin (2015).

1.5 Significance of the Study

The present work provides empirical evidence of the specific variables: foreign economic assistance and government spending in Pakistan for the period 1979 to 2018. It will be beneficial for government in identifying the indicators of success and failure, on the basis of which it can take the necessary actions to improve the spending pattern and take the right decisions. Citizens are also concerned to have knowledge about the debt utilization. The results of the study could be of particular importance for policymakers who try to

look for the determinants of financial development. The results endow with the information necessary to devise policies regarding debt and grants spending. My study will help the researchers to do further studies on the topic, in future.

1.6 Research question

In this study we seek to investigate whether there exists short- and long-run relationship between foreign economic assistance and government spending in Pakistan. Further, we investigate is the major cause of the economic puzzle that whether the debts are restricting the government spending, or the disproportionate government spending is causing the external debt burden on Pakistan.

1.7 Hypotheses:

H0: No relationship exists between foreign assistance and government spending in long-run

H1: There exists a relationship between foreign economic assistance and government spending in the long-run

H0: The external debts are restricting the government spending in Pakistan.

H2: Government disproportionate spending is causing the external debt burden on Pakistan

1.8 Organization of the study

The study contains five chapters, where chapter 1 presents background, purpose and significance of the study along with the organization. Chapter two covers the review of the literature that organizes the theoretical framework. Chapter three highlights the

sample data, the sources from where the data is composed, methodology, and the models that are used for estimation. Chapter four covers the discussion on the estimation results and the findings. Chapter five consists of the conclusion of the paper. It also sheds light on the potentials for research in future.

Chapter 2

LITERATURE REVIEW

2.1 Introduction

Most of the developing nations rely on foreign economic assistance in the form of grants and loans. Foreign assistance expands their access to much needed foreign capital to finance imports for the development projects, however, in the short run borrowing might be useful, but in long run it has unfavorable consequences. Earnings from exports are used to service deferred payments. It is impossible for central banks to print foreign currency for the repayment of external debts and soothe practice of borrowing from other nations is often linked with susceptibility and debt crisis (Rais and Anwar, 2012)

Due to rise in prices of oil imports, huge sum of interest payments and critical circumstances in the global markets for their major exports, the government liabilities of developing countries have increased. As a result, the countries get entangled into the debt and trade deficit: the rising twin deficits lead to increased borrowing, while debt overhang over time causes the deficits to expand more. Over the time, current expenditure has also risen owing to the behavior of reckless spending and is driven by means of the accessibility of foreign assistance as well as the easy borrowing (Shonchoy, 2010). Pakistan's economy has been continuously relying on borrowings from external means in order to finance the development projects since the 1990's. The rising resource-gap depicts its economic issues. Apart from this, governance has also been an issue. High debt burden also had an adverse effect on GDP. Internal sources of the government are

the solo option available to finance the government expenditure on social sector spending and debt arrangement. [Mohey-uddin (2005)].

Pakistan, experiencing capital scarcity since 1947, used external means to finance the rising resource-gap Due to the mismanagement of borrowed funds, living standards could not be significantly improved thereby leading to wastage of borrowed funds and debt accumulation [Hasan (1998)]. At a certain point, the borrowed funds have to be reimbursed so the nations under debt need to generate resources from these loans in order to sustain and repay the debt which never happened in case of Pakistan. Despite getting benefit from foreign assistances, Pakistan has always been into complications of fulfilling its debt liabilities. In developing countries an essential aspect of economic growth is public expenditure which should be spent in an appropriate manner on the social sector, i.e., on education and health. For developing economies, repayment of loans unfavorably impacts productive revenue allocations and the main objective of encouraging developments is disabled. Debt servicing consumes a large portion of scarce resources that are produced by means of exports and external remittances. A very small portion of such resources is left to finance development projects. Public sector investment is not fruitful since the allocation for health care and education stay unmaintained in the fiscal process. This leads to an adverse impact on development of human capital, thereby causing hurdles to reach an optimal level of growth and the productivity of new investment in physical capital. Health and Education sector is deprived of resources due to debt servicing (Fosu, 2008), as it is impossible for the government to diminish other non-development or frequent expenses.

However, the International Monetary Fund (IMF) suggested structural adjustment programs to break down debt obligation and guarantee the repayment of debt, however, these could not be work in developing countries. According to World Bank and IMF reports, such programs have impacted social welfare spending severely. Poor and low - income consumer is affected by increase in prices of food items due to reduction of subsidies powered by high taxation creating massive income reduction. By the implementation of these programs, economics crises have enhanced to an unacceptable level rather than solving such issues of poverty.

The most common problem among developing nations especially the Asian economies is that the non-development expenditures have dominated the social sector spending to an extent that most of the governments are unable to provide basic facilities to the citizens and so this responsibility is also shifting towards the private sector. Njeru (2003) did a study for the case of Kenya. He examined whether foreign funding was a substitute of domestic resources. In his findings he concluded that foreign economic assistance increased the overall expenditures and boosted development spending**.** Ouattara and McGillivray (2005) established a relation between aid, fiscal variables and debt servicing for Côte d'Ivoire. They used the fiscal response model and concluded that the foreign assistance granted to highly indebted poor countries (HIPCs) in order to meet their needs of public spending in general and spending on the social sector in particular, have always been misemployed. They use a huge portion of these grants of debt servicing which has adverse effects on development spending. Another unexpected result shows that foreign assistances whether debt or grants do not bring reduction in public borrowing. This

finding refutes the preceding dispute that public debt and foreign assistance are substitutes for one another.

2.2 Empirical Evidence

Hyman (2007) did a research on the argument that debt burden had a negative impact on growth and development of the Caribbean states. His findings tell us that due to increase in oil prices and default on foreign debt, external debt raised more rapidly in these countries during the 1990s. He analyzed the data of debt-GDP ratio for the year 1997–2006 and concluded that the governments had to reduce their development expenditures in order to meet the needs of debt servicing.

Raju (2008) investigated the relation between government spending and revenues of India for the period 1950–2003. He found that the increase in rate of interest is due to the gap between expenditure and revenue which further increases the cost of debt-servicing. This leads to an increase in fiscal deficit. The results, though inconclusive, show an important one-way causality running from peak revenues to an increase in development expenditures, with a positive effect on management. Presbitero (2012) did a study using panel data for 92 countries belonging having underdeveloped and developing economies, using data from 1990 to 2007. The study found that up to a threshold of 90 percent, public debt had a gloomy effect on growth but beyond this limit the effects were irrelevant. This non-linear effect can be explained by country-specific factors, as in countries having sound macroeconomic policies and stable institutions have a growth constraint of debt overhang.

As opposed to the above studies, Wu, Tang, and Lin (2010) endeavored to consider the relationship between overall government spending and development spending by applying Granger causality tests. They used panel data for 182 nations (classified by their income levels) over 1950 to 2004. The study found that Wagner's law and the hypothesis that government spending helps raise social welfare and financial advancement is trailed by high-income nations. In any case, this isn't the situation for low-income nations where government spending has minor impact on development because of corruption, nepotism and immature institutions.

Kalonji, Mlachila, Loko, Nallari, (2003) examined the disagreement that debt overhang crowds out public sector spending. By considering 67 low-income nations for the period 1985–97, they reported that there is sharp decline in public sector expenditures on the grounds that this is more simple than making cuts in other sectors. In the same way, Mahdavi (2004) interpreted the effect of liabilities on various sectors of social spending. He examined the data for 47 developing nations for the period 1972–2001 and concluded that if salaries and wages are not taken into consideration the development as well as current expenditures both are influenced by foreign liabilities. Be that as it may, the public sector is by all means protected if salaries and wages are encompassed.

Moreover, Ouattara (2006) suggested that external debt could negatively affect government spending. Generally, the capital-intensive sectors' expenditure decreases more than proportionate as compared to other sectors. The public sectors and defense are relatively more protected whereas, the debt servicing adjustments put the burden on the infrastructure and productive sectors. Fosu (2007, 2008) used panel of 35 African

countries for the period 1975–94 and found that the debt constraint had an adverse effect on development expenditure.

Shabbir and Yasin (2015) studied the implications of foreign debt on social sector spending in the case of Asian countries, however they did not include other sectors in this study. They concluded that due to debt-constraint, the public expenditure had shifted away from social sector spending and public investment.

Fosu (2010) conducted a research for sub-Saharan Africa, using a reduced-form simultaneous equation model. His study concludes that debt servicing has a disruptive effect on social spending, especially on education. Fiscal and Trade deficit problems have increased, as by the study of Pakistan, it was found that she relied heavily from the beginning on foreign as well as on public borrowing to fill the gaps. Public sector spending is the most viable factor on which economics development depends. Although the governments in developing countries may have a desire to invest more in social sector however, their debt constraints do not permit them to do so.

2.3 Available Literature on Pakistan

No such study has been conducted in case of Pakistan however, some relevant studies, on relation between external debt liability and economic development, are reviewed below.

Ramzan, Chaudhry and Malik, (2009) find that investment in Pakistan is discouraged acutely by the foreign debt servicing thereby proving the slow economic development. They used annual data for 1973–2006 and concluded that external borrowing had an adverse impact on investment. Due to the issues like bad governance these funds are not utilized efficiently.

Chaudhry, Ayyoub, and Yaqub (2012) showed the effect of external-debt policy on the economy of Pakistan. In this study they took the data for the period 1989 to 2010. Study's results put Pakistan in a desolate position: foreign assistance does not show any direct link to productivity, employment, growth and development. That economic pace of a country is adversely and extremely affected by the foreign debt liabilities.

2.4 Conclusion

After reviewing the papers, it is found that there were mixed results; in some countries development expenditure had positive impact but for some the impact was negative. Same results were found in case of current expenditure, but a majority of the papers concluded that the increase in current expenditure was due to inefficiency.

Chapter 3

DATA AND METHODOLOGY

3.1 Introduction

This study is designed to construct a specific economic or econometric model to assess the relationship of current and development expenditures with foreign economic assistance along with other economic indicators of Pakistan used as independent variables of the study. This chapter discusses the methodology for estimation. Following the introduction, the next sections 3.2 explains the data. 3.3 defines the variables and their measurement. Following this, 3.4 presents the expected signs and relations of independent variables with dependent variables, which are completely based on theories. Section 3.5 will discuss empirical methodology while 3.6 explains the econometric methodology step by step.

3.2 Data

This study uses secondary data taken from various issues of Pakistan Economic Survey and from the Handbook of Statistics on Pakistan Economy (2015). The time period of analysis from 1979 to 2018, giving us 40 observations on each variable. The study has selected the variables on the basis of indication from previous studies, but the methods used in this study are different than previous literature and the nature of study is quantitative due to which time series analysis is used. The uniqueness of this study is in terms of data and methods used in it. The time series data has been used to conduct the study for Pakistan in order to see the long-term relationship between the variables

explained in the theoretical background chapter. All the variables have been taken in terms of PKR and not in dollars or any other currency

3.3 Definition and Measurement of Variables.

1) Government expenditure is taken as a percentage of GDP.
2) Government revenue as percentage of GDP
3) Foreign economic assistance as a percentage of GDP
4) Current expenditure as a percentage of GDP
5) Development expenditure as a percentage of GDP
6) Public investment as a percentage of GDP.
7) Private Investment as a percentage of GDP.
8) Labor Force in terms of growth rate.

For estimation, all variables are taken in log form.

3.4 Model selection

$$CUREXP = f(\beta_0 + \beta_1 FEA + \beta_2 REV + \beta_3 GDP + \beta_4 INVPUB + \beta_5 INVPUB + \beta_6 LF + ET)$$

where

CUREXP = Current expenditures

FEA = Foreign economic assistance in term of rupees

GREV = Government revenues as a percentage of GDP

INVPUB = public investment as a percentage of GDP

INVPVT = Private investment as a percentage of GDP

GDP = Real GDP growth rate

LF = Total labor force

Model 2

DEVEXP= f (β0+ β1 FEA+ β2 REV + β3 GDP + β4 INVPUB +β5 INVPT + β6 LF + ET)

Where DEVEXP= development expenditure as a percentage of GDP

3.5 Expected signs:

On the basis of theory, the expected relation of development expenditure with that of foreign economic assistance should be positive but it should be negative with current expenditure: since the purpose of FEA is to increase development expenditures and not to increase current expenditures. An increase in public investment should cause an increase in government expenditures that means an expected positive relationship with development expenditure. However, it depends whether crowding-in effect dominates, or crowding-out effect dominates. The increased revenues should also increase government expenditures as a whole but the relationship of GOVREV with development expenditure is expected to be positive and negative with that of CUREXP in an ideal case.

3.6 Empirical Methodology

The study is based on secondary and time series data for 40 years, where the models of the study are selected on the basis of the nature of macroeconomic data, which is rarely stationary at first difference and most of the variables are of different orders of integration, this study uses Autoregressive Distributed Lag (ARDL) testing method for estimation of long-run relationship among the variables of interest to achieve the stated objectives of the study. Prior to carrying out the estimation using ARDL technique,

stationary tests, that is unit root tests, such as augmented Dickey-Fuller (ADF) tests is carried out to ascertain the degree of integration. After checking heteroscedasticity, autocorrelation and multicollinearity, by applying formal tests, the study estimates the final results.

It is important to understand the association between government spending and foreign assistance. It is also significant to see the direction of causation — whether government spending Granger causes the foreign assistance of Pakistan to increase or the other way around. The study is meant to investigate the long-term relationship between government expenditure and foreign economic assistance so the most appropriate method is to use cointegration analysis. ARDL approach follows loose definition of cointegration which implies that the variables may have mixed levels of cointegration but they must be stationary: either at level or at first difference. If one of the variables becomes stationary at second difference, then ARDL approach is not viable. To find out the stationarity and level of integration amongst the variables we apply unit root test.

3.7 Unit-Root Test (ADF Test)

There are various tests available like Phillips and Perron (1988), Enders and Ng and Perronbut due to their complexities the current study employs Augmented Dickey Fuller test to test unit root. The second reason for choosing ADF test is that the data used for this study grows over the time so the annual variations might be constant. ADF test incorporates trend or intercept as an automatic correction unlike the DF test. It incorporates lagged values of the variables and constant trend term. The test is applied at level to see whether the variable is stationary at level, if the time series has a unit root, it

is said to be non-stationary at level, then it is rechecked whether the unit root is present at first difference, if it remains non-stationary then the process continues till the desired result of stationary series is obtained. In order to counter the issue of autocorrelation the ADF test includes lagged difference. The optimum number of lags are used by applying Schwartz Information Criterion (SIC).

Stationarity test is conducted in three steps, which are:

(i) Only the intercept term and no trend component.

(ii) No intercept term or the trend component.

(iii) Both intercept term and the trend component.

The null hypothesis states that if there is no unit root then series is stationary, but, if the unit root is present in the series then it is said to be non-stationary and the null hypothesis of stationary series is not rejected. For this study the ADF test was used to check the stationarity for both models, at level and at first difference. Since all the variables were stationary either at level or at first difference so there was no need to move to second difference.

3.8 ARDL

After performing the stationarity test; it was found that some variables were stationary at level and some at first difference so Auto Regressive Distributive Lags methodology was used which was proposed by Pesaran (2001). The ARDL methodology to cointegration gives the results for both, long term as well as the short-term impact of the variables, at a

time. Due to its efficiency in controlling the dynamic causes of bias and small samples, it is preferred over all other approaches. This study didn't use OLS or other approach since.

The problem of the endogeneity may be controlled or avoided by the ARDL approach to cointegration [(Pesaran, Shin & M. H, 1998

This approach is a more useful one since it can be applied regardless of the order of integration while the other methods need unique order of integration.

3.9 Long-run form and bound Test

After ARDL we apply bound test which is used to check cointegration between/among series integrated of orders less than I(2). In order to see if long-run relationship exists or not we employ bound test. The significance of the lagged variables can be checked by considering the F-stats. There are two critical bounds to check an upper and a lower bound. When the value of lower bound is greater than the value of F-stats we don't reject null hypothesis of no cointegration. If F-stats is greater than upper bound we conclude that the series is stationary.

After applying the cointegration and bound tests we check for significance of the variables and their relationship with the dependent variable. These results may vary depending upon the number of lags and criterion used for applying bound test, however, in case of annual data we include one or two lags and use Schwartz Criteria which is considered as the most appropriate one.

3.10 Test of normality: Serial Correlation LM Test:

Once we are done with ARDL we check for normality test by applying serial LM test and check for the value of F-stat. Again, the significance may be checked by including different lag values.

3.11Stability Test

To check stability of our estimates, we apply two tests on the ARDL model:

(i) a cumulative sum (CUSUM) test

(ii) a CUSUM-of-squares test.

Both are applied to verify the stability of our estimates.

The CUSUM test is based on the cumulative sum of the recursive residuals and measures parameter instability within a 5 percent range. A value beyond this range indicates that the estimation is not stable.

The CUSUM-of-squares test is performed on the squares of the residuals. Similar to the CUSUM test, this test measures parameter instability within the given range, and indicates whether or not the variance of the residuals is stable.

Chapter 4

EMPIRICS: RESULTS AND DISCUSSION

4.1 Introduction:

Present research utilizes Auto Regressive Distributive Lag (ARDL) as an econometric technique to examine the relationship between government expenditure and (current and development) with foreign economic assistance in Pakistan. This chapter includes summary statistics, important diagnostic tests results, major results of both the dependent variables current and development expenditure, each in a separate regression analysis. The following are the results of study

Table 4.1 ADF unit root test

ADF Test for Unit Root			
Variable	At Level	At First difference	Decision
FEA	No	Yes	Stationary
CUREXP	No	Yes	Stationary
LF	No	Yes	Stationary
RGDP	Yes	-	Stationary
INVPVT	No	Yes	Stationary
INVPUB	No	Yes	Stationary
REV	No	Yes	Stationary

The results of statistical test show that some of the variables are stationary at level and some of these are stationary on first difference, which doesn't allow researcher to use

direct OLS for further estimation to draw conclusion. However, it is quite clear now that ARDL can be used as estimation technique to deal with such type of data sets.

4.2 ARDL Model on Current Expenditure

Based on mixed results of ADF test, ARDL was applied in order to investigate relation between foreign assistance and current expenditure. Following is the table for short-run and long-run results, where the Conditional Error Correction show short-run results and the table below it shows long-run association

Table 4.2.1 ARDL Short Run

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-7.668521	1.698218	-4.515629	0.0001
LCUREXPG(-1)*	-1.116764	0.151550	-7.368929	0.0000
LFEAG**	0.109031	0.029581	3.685827	0.0011
LINVPVTG(-1)	-0.279357	0.107905	-2.588921	0.0156
LLF**	-1.015038	0.250608	-4.050295	0.0004
LRGDP(-1)	0.626573	0.134988	4.641678	0.0001
LTREVG**	0.267300	0.108485	2.463926	0.0207
D(LCUREXPG(-1))	0.318197	0.127245	2.500664	0.0190
D(LINVPVTG)	-0.099572	0.110514	-0.900993	0.3759
D(LRGDP)	-0.569735	0.490373	-1.161841	0.2559
D(LRGDP(-1))	-2.031519	0.575036	-3.532853	0.0016
LINVPUBG	-0.041974	0.042295	-0.992413	0.3301

Table 4.2.2 ARDL Long Run

Variable	Coefficient	Std. Error	t-Statistic	Prob.
LFEAG	0.097631	0.024845	3.929612	0.0006
LINVPVTG	-0.250149	0.086087	-2.905748	0.0074
LLF	-0.908910	0.165272	-5.499467	0.0000
LRGDP	0.561061	0.075015	7.479343	0.0000
LTREVG	0.239353	0.104975	2.280089	0.0310
C	-6.866735	0.947871	-7.244379	0.0000

4.3 Interpretation

The results show that current expenditure and foreign economic assistance are associated positively, both statistically and significantly. The result shows that there is a positive association between foreign assistance and current expenditure in case of Pakistan. Increase in economic assistance will lead to increase in current government expenditures and vice versa. t-value or p values can be seen for decision, which provides the evidence of statistical significance. Private investment as a percentage of GDP is negative connected to current expenditure over the time in case of Pakistan. Statistical significance of this association indicates that increasing the private investment as percentage of GDP will lead to reduction in current expenditure from government side. It is quite obvious that cutting off the expenditure will provide an option to invest capital but, in this case, due to allocation for private investment reduces the current expenditure over the time.

The results of study direct us to understand the relation between the size of the labor force and government's current expenditures, which indicates that there is negative relation between the size of the labor force and current expenditures over the time in the case of Pakistan and it is statistically significant with the p-value less than 0.05. Gross domestic

product and current expenditure are positively linked, which is significant. This means that increase in GDP of country will lead to increasing current expenditure over the time. Government revenue and current expenditure move in the same direction over the time in long run. Increase in revenue allow to send more and thus it goes hand by hand over the time in Pakistan.

Table 4.3 ARDL Bound Test

F-statistic	Value	K
F-statistic	10.79385	5
Critical Value Bond		
Significance	I(0) Bond	I(1) Bond
10%	2.08	3
5%	2.39	3.38
2.5%	2.7	3.73
1%	3.06	4.15

4.4 Results

The lower critical bounds value is 3.657 and upper critical bounds value is 5.256 obtained from Pesaran (2001). This indicates that there exist longrun relation between the variables of interest. Because f test statistics value is greater than upper and lower bound values. If this value lie in between these values of upper and lower bound than it indicates that results are

inconclusive but it is not the case here. It is quite clear that longrun association exists in this case.

4.5 Serial correlation:

The table shows the results of normality, for which Breusch-Godfrey LM test was applied.

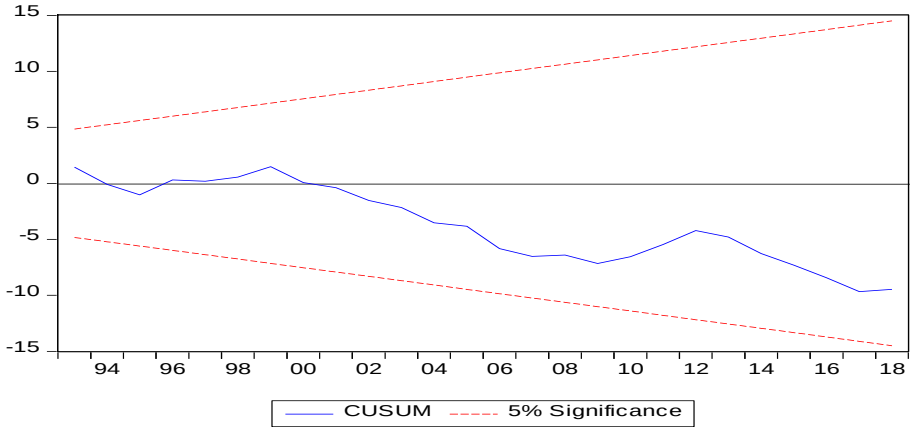
Table 4.4 Serial Correlation LM Test

Variable	Coefficient	Std. Error	t-Statistic	Prob.
LCUREXPG(-1)	-0.031012	0.208361	-0.148837	0.8829
LCUREXPG(-2)	0.013132	0.144378	0.090955	0.9283
LFEAG	0.000306	0.030178	0.010147	0.9920
LINVPUBG	0.000409	0.043141	0.009482	0.9925
LINVPVTG	-0.007012	0.117604	-0.059625	0.9529
LINVPVTG(-1)	-0.001852	0.099424	-0.018623	0.9853
LLF	-0.016421	0.267422	-0.061406	0.9515
LRGDP	-0.019334	0.508334	-0.038034	0.9700
LRGDP(-1)	0.009855	0.796081	0.012379	0.9902
LRGDP(-2)	0.021528	0.595105	0.036176	0.9714
LTREVG	0.012063	0.124995	0.096509	0.9239
C	-0.150971	1.878153	-0.080383	0.9366
RESID(-1)	0.062278	0.301245	0.206736	0.8379

The test verifies the normality of estimation results.

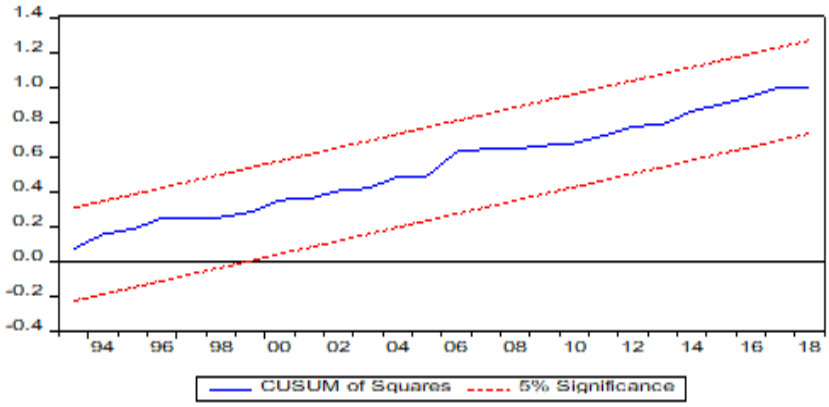
4.6 Stability Diagnostics

Figure 4.1 CUSUM Stability Test:



The CUSUM test result indicates that the estimation is stable within 5% significance range.

Figure 4.2 CUSUMSQ Stability Test



The CUSUM test is conducted to understand if the study results parameters are sable or not, which in this case indicates that the estimation parameters is stable within 5% significance range.CUSUMSQ shows that the parameters are stable within a given range and that the variance sum of residuals is also stable.

4.7 ARDL on Development Expenditure

ARDL was applied because of the mixed results of stationarity at level and first difference. After which long-run form and bound test was applied.

Table 4.5.1 ARDL Short Run

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	43.68048	16.51937	2.644197	0.0184
@TREND	0.072894	0.047979	1.519301	0.1495
LDEVEXPG(-1)*	-1.234706	0.124688	-9.902370	0.0000
LFEAG**	0.273177	0.066797	4.089664	0.0010
LINVPUBG(-1)	-0.875776	0.095206	-9.198714	0.0000
LINVPVTG(-1)	0.640112	0.341500	1.874410	0.0805
LLF(-1)	0.919611	0.435993	2.109232	0.0521
LRGDP(-1)	-3.064938	1.038944	-2.950050	0.0099
LTREVG(-1)	3.147220	0.536778	5.863174	0.0000
D(LINVPUBG)	-0.217072	0.084423	-2.571225	0.0213
D(LINVPUBG(-1))	0.613918	0.104299	5.886106	0.0000
D(LINVPUBG(-2))	0.413591	0.077450	5.340131	0.0001
D(LINVPVTG)	0.534209	0.191462	2.790151	0.0137
D(LINVPVTG(-1))	0.451481	0.217048	2.080095	0.0551
D(LINVPVTG(-2))	0.688561	0.154956	4.443577	0.0005
D(LLF)	0.310472	0.632853	0.490592	0.6308
D(LLF(-1))	0.850504	0.539206	1.577325	0.1356
D(LRGDP)	2.602708	0.930803	2.796197	0.0136
D(LRGDP(-1))	3.770892	0.897370	4.202160	0.0008
D(LTREVG)	1.748314	0.228678	7.645320	0.0000
D(LTREVG(-1))	-1.057592	0.235560	-4.489692	0.0004
D(LTREVG(-2))	-0.496167	0.236370	-2.099110	0.0531

Table 4.5.2 ARDL Long Run

Variable	Coefficient	Std. Error	t-Statistic	Prob.
LFEAG	0.221249	0.051284	4.314159	0.0006
LINVPUBG	-0.709299	0.061661	-11.50315	0.0000
LINVPVTG	0.518433	0.269053	1.926878	0.0732
LLF	0.744802	0.327793	2.272169	0.0382
LRGDP	-2.482322	0.801599	-3.096711	0.0074
LTREVG	2.548963	0.290388	8.777798	0.0000
@TREND	0.059037	0.038479	1.534258	0.1458

Results

The results of this study indicate that there is a significant relationship between foreign economic assistance and development expenditure over the time in Pakistan. t-value is greater than 2 which means relationship is statistically significant. Receiving foreign economic assistance increase the development expenditure in Pakistan. It is quite clear to understand that increasing public expenditure will lead decline in development expenditure in Pakistan. It doesn't allow government to increase both at single time as developing country. compromising public investment/expenditure will allow us to increase development expenditure in Pakistan and vice versa. Private investment is positive associated will government development expenditure. The association is statistically significant. Private investment lead to increase the development expenditure in Pakistan because of space created by private investors for government to allocate development budget. Labor force participation and development expenditure are positively associated and the relationship is statistically significant in case of Pakistan, which means that labor force participation increase the development expenditure over the time. Government revenue is also positive affecting the development expenditure.

Table 4.6 Bound Test F-stats

F-statistic	Value	K
F-statistic	18.37992	6
Critical Value Bond		
Significance	I(0) Bond	I(1) Bond
10%	2.33	3.25
5%	2.63	3.62
2.5%	2.9	3.94
1%	3.27	4.39

4.8 Bound Test Results:

The results of bound test indicate that the lower critical bounds value is 3.27 and upper critical bounds value is 4.39 obtained from Pesaran (2001). This means that F test value is greater than both the upper and lower bound, which indicates the significance long run statistical relationship. The results show that there exists long-run relationship of government expenditures with foreign economic assistance. It is evident from the long-run and bound test that both current and development expenditures have a positive significant relation with foreign economic assistance. The finding for development expenditure matches the expected result, whereas, the result for increase in current expenditure due to foreign assistance was unexpected. It means that not only development expenditures but current expenditures also increase which is not a good sign for a developing economy.

Figure 4.9 Stability Tests

Figure 4.3.1 CUSUM Test

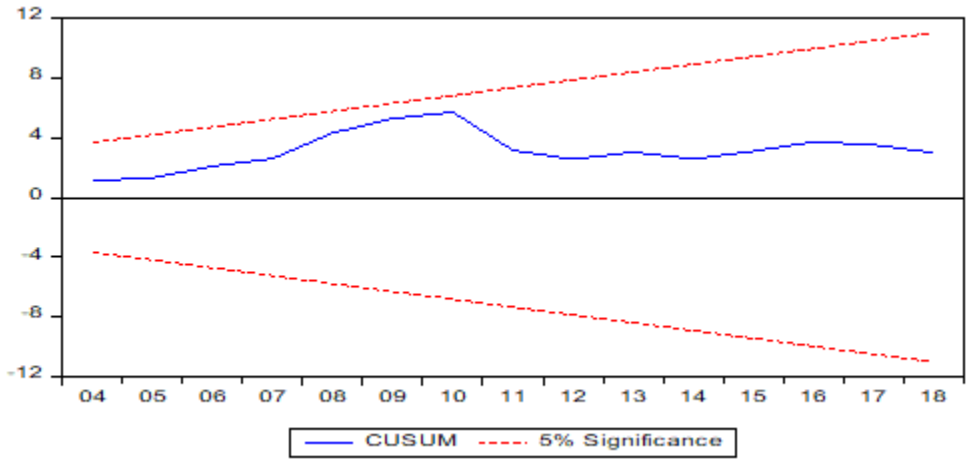
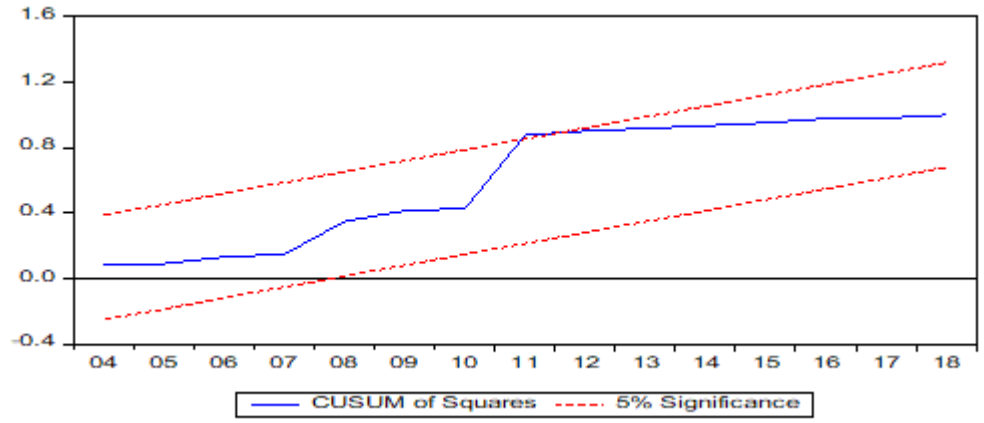


Figure:4.3.2 CUSUMSQ



4.9 Stability Diagnostic Results

The results indicate that parameters are stable and estimation techniques is correctly used with the given combination of variables selected for this research to investigate the association between foreign assistance inflow and expenditure from government.

4.10 Major findings

Government current expenditure and foreign economic assistance are significantly associated in long-run or over the longer period of time in case of Pakistan and it indicates that Foreign economic assistance encourages current expenditure over the time.

Private investment in Pakistan doesn't help to encourage the current expenditure rather it helps to decline it in longer terms of time which is statistically significant

Labor force participation declines the current expenditure but increases the development expenditure in Pakistan over the time.

Chapter 5

Conclusions and Discussion

5.1 Conclusion

The study is based on secondary and time series data, which is taken from Pakistan Economic Survey and other sources. The main objective of carrying out this study is to unearth the long run statistical associations, if any, between important economic indicators and government expenditure both current and development in case of Pakistan. This study uses time series data to determine the short term and long term association among government spending and foreign economic assistance for the period 1979 –2018 for Pakistan.

The present study finds foreign economic assistance has significant positive effect on CURXP and DEVEXP in the long-run. The study came to conclusion that labor force participation is not the reason of increasing current expenditure but it is one of the major indication for the growth of development expenditure over the long span of time in Pakistan. Private investment provide space to government to increase the development expenditure and public investment restrict the government expenditure over the time in Pakistan. Government revenue and GDP growth help to encourage the current expenditure as well as development expenditure in Pakistan. Effective management of expenditure policies and implementation can serve Pakistan through looking into economic indicators behavior in Pakistan.

5.2 Policy recommendations

Private investment should be encouraged to help government of Pakistan to increase the government expenditures, which can bring high economic consequence. Public expenditure growth can reallocate the labor force participation but in this case labor force management is important for the reallocation of development expenditure in Pakistan

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