IMPACT OF IMF LOANS ON FISCAL POLICY STRUCTURE: EMPERICAL EVIDENCE FROM PAKISTAN

A thesis submitted to Pakistan Institute of Development Economics in partial fulfillment of the requirements for the degree of Masters of Philosophy in Public Policy

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PIDE2016FMPHILLPP03

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2018

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CERTIFICATE

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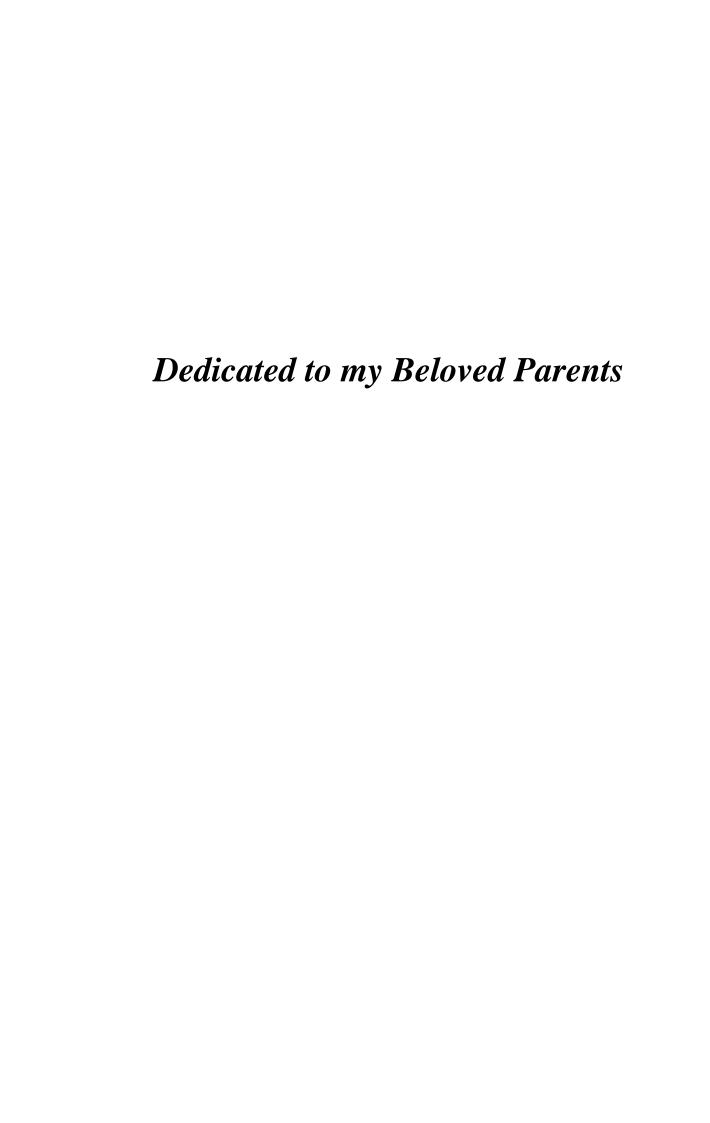
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December 28, 2018

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Dedicated to my Beloved Parents

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List of Abbreviations

IMF	International Monetary Fund
Tax	Tax Revenues
TEXP	Total Expenditures
BD	Budget Deficit
SBA	Standby Arrangement
ECF	Extended Credit Facility
EFF	Extended Fund Facility
PRGF	Poverty Reduction and Growth Facility
EFF	Extended Fund Facility
GST	General Sales Tax
VAT	Value Added Tax

ABSTRACT

Like other developing countries, Pakistan is also facing financial constraints due to its huge trade and fiscal deficit. Hence, in order to fill these gaps and proceeds its growth and development process, Pakistan is taking loans from external sources including International Monetary Fund (IMF). In this association the key objective of this study is to empirically examine the impact of IMF loans on fiscal policy structures of Pakistan. To meet the objective of the study, three different empirical models have been estimated with three different fiscal policy tools. Revenues, Total Expenditures and Budget Deficit are the dependent variables. The variable of interest is IMF loans which have been treated as dummy variable. The empirical models are estimated through Autoregressive Distributed Lag (ARDL) for the time period 1988-2016. The findings of this study reveal that IMF loans increase the tax revenues. On the other hand, loans from IMF decrease expenditures. So as a whole IMF loans are having no impact on budget deficit as the change in budget deficit has been cancel out as one part is increasing and other is showing a decrease. Policy implications are effective utilization of the loan and devising policies that will help the economy to come out from the vicious circle of loans. Specifying particular amount of loans for revenues generation, expenditures and to bring down budget deficit.

CHAPTER 01

INTRODUCTION

1.1   Background of the Study

Fiscal policy has two components Revenues and Expenditures. Whenever countries making its budget, they put focus on the earnings from various sources. Along with this, government plans its expenditures accordingly. Whenever there is a gap between its income (Revenues) and spending captured through budget deficit. Many developing countries has revenue collection problems. The expenditures are greater than the revenues. That hampers the economy in a negative way. To finance budget deficit, governments of developing countries moves towards different financial institutions along with other options like borrowings from commercial banks etc. One of the focuses of IMF conditions is on the fiscal policy of the developing countries. The tools of fiscal policy are revenues and expenditures.[1] To have a prudent fiscal policy, the management of the fiscal policy tools is of great importance. There should be a balance between revenues and expenditures. Many countries are trapped in budget deficit like Pakistan, which hampers the economic growth (Iqbal, 2017). IMF focuses on bringing down the budget deficit and suggests to implement measures and make changings in the existing policy.

International Monetary Fund (IMF) is a financial institution that provides financial resources to developing countries. Being a financial institution IMF has different programs. Those are Standby Arrangement (SBA's), Extended Credit Facility (ECF), Extended Fund Facility (EFF) and Standby Credit Facility (SCF). The countries having strong financial conditions can also approach to IMF through Flexible Credit

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[1] Pakistan Economic Survey 2017-18

Line (FCL) and Precautionary and Liquidity Line (PLL). The objectives and policies of programs depend on county's circumstances ("IMF Lending", 2018). However most of the programs of IMF adhere with some conditioannlities. Mostly the conditioannlities imposed on developing countries includes adjustments in its economic and structural policies which a recipient country is bound to follow. The conditions are strict and bound on the recipient country, for example Thailand, Malaysia and Indonesia were forced to have tight fiscal and monetary policies. Similar is the case of Argentina (Pereira, 2008). Zambia's Government forced to privatize the copper mining industry. Privatization of cotton industry of Mali is again the condition imposed from IMF (Pereira, 2008).

The relationship of Pakistan and IMF dated back in 1958. Pakistan entered in 21 different agreements with IMF. Among these three agreements are of double duration so total agreements are 12 (Hussain, 2002). The first agreement was Standby arrangement. Some of the agreements were not fully implemented except the last standby arrangement. On the other hand, half of the agreements remained undrawn as well (Hussain, 2002). The conditions for Pakistan by the IMF are improvement in fiscal situations and detoriating exchange rates (Iqbal, 1999) Along with this inflation targeting policies, trade liberalization and privatization of many Public Sector Enterprises are also conditions of IMF imposed on Pakistan (Umer et al.2015).

Pakistan received IMF loans in different regimes. In 1988, Pakistan under a democratic regime took loans from IMF under Structural Adjustment Program (SAP). However, the government could not achieve macroeconomic stability. As a result, IMF suspended the loan on not fulfilling the conditions (Norman et al. 1988). During 1990's the expanded arrangement was resumed. IMF again extended loan to Pakistan during 1997-1999 under Extended Fund Facility (EFF) and Enhanced Structural

Adjustment Facility (ESAF) but the programs soon terminated due to non-fulfillment of conditions. As a result the situation between IMF and Pakistan worsened (Cheema, 2004). After the military coup in Pakistan in 1999, the government requested to International Monetary Fund to resume the same funds under Extended Fund Facility (EFF) and Extended Structural Adjustment Facility (Hussain, 2002).

Whenever Pakistan moves towards IMF, the focus of IMF has been on bringing down budget deficit. Fiscal situation of Pakistan has been fluctuating. One of the ways for fiscal consolidation is taxation. In Pakistan, one of the key issues is imposition of taxes and extension of tax net. Due to the weak structure of taxation, Government of Pakistan badly failed to accumulate the desired revenues and in order to carry out different development projects. To fill the resource gap, country move to IMF to meet the revenue and the development expenditure needs (Munir, 2010). Pakistan's budget deficit was 4 % of GDP in fiscal year 2003-04. This further reduced to 3.2% in fiscal year 2005-06 ("Public Finance", 2005-06). Recently, the overall fiscal situation of Pakistan improved because of decline in budget deficit during fiscal year 2013 and fiscal year 2017[2]. However, fiscal deficit once again increased to 5.8 percent.

IMF programs are aimed at increasing revenues, decreasing expenditures and budget deficit. The condition imposed by IMF is to cut expenditures and raise revenues. The government has to take measures to increase revenues. For that government take different measures. For instance, increase in indirect taxation, chalking out new rules to the taxation system and bringing changes in the tax administration system. Austerity in expenditures is also one of the IMF conditions. Pakistan has been having high budget deficits. One of the reasons to approach IMF is having budget deficit due to less earnings on the side of government and more spending. That hampers the

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[2] Public Finance, 2017-18

economy. IMF imposes a condition to reduce expenditures so that fiscal deficit could be curtailed. For this IMF imposes conditions to cut down subsidies. Along with this privatization of the State Owned enterprises (SOEs) Government is also aimed at decreasing spending. Government tries to bring austerity in their spending. Again it shows that IMF do affect the second tool of fiscal policy that is expenditures.

Pakistan is moving towards IMF again for a bailout package. Pakistan is taking this loan under Extended Fund Facility (EFF) for the duration of 3 years. This is the 22nd IMF program to Pakistan. IMF as always put great pressure on reducing budget deficit and balance of payment crisis. Pakistan is having both budget deficit and trade deficit. To curtail budget deficit, Pakistan is taking reforms/measures. For Example, creating fiscal space by focusing on revenue generation. Another measure undertaken by the government is separating tax administration from tax policy. Government is focusing to bring the potential tax evaders under the tax net. Furthermore, increase in the tax rate is also consideration. Other obstacle that hinders Pakistan growth and lead Pakistan's government to approach IMF is balance of payment crisis. Currently the foreign exchange reserves fell more than 40 % since January. To overcome this problem, IMF said government to undertake additional measures. Those measures include government would launch Sukuk and Eurobond to build foreign exchange reserves up that will help in reducing current account deficit. This will in turn reduce trade deficit. Some other reforms are also taken to correct this issue are mainly revival of domestic industry and export sector along with other structural reforms.

1.2   Literature Gap:

Previous studies examine the impact of IMF programs on taxation policy, economic growth, unemployment, inflation etc. Some of the studies discusses the impact of one IMF program namely Standby Arrangement on different macroeconomic variables. This study fills the gap to literature on the subject by empirically investigating the impact of IMF loans on fiscal policy structure in case of Pakistan. This study empirically examines that how different fiscal policy tools (revenues, expenditures and budget deficit) are affected by IMF program.

1.3   Research Question

Q1. Do loans have any effect on the fiscal policy structure of Pakistan?

1.4   Objective of the Study:

The study will aim to achieve the following objectives:

1   To analyze the impact of IMF loans on the fiscal policy structure in case of Pakistan.

2   To find out the short run relationship between IMF loans and fiscal policy structures.

1.5   Significance of the Study:

The relationship of International Monetary Fund and Pakistan dated back to 1958, when first Standby loan was disbursed to Pakistan. After that the series of loans have been taken from IMF mostly with harsh conditions. The main condition of IMF is to reduce the budget deficit through increase in the revenues and decrease in the expenditures. The significance of my study is that it comprehensively explains all the programs taken from

International Monetary Fund. Along with this, the study empirically investigates the impact of IMF loans on fiscal policy structures in case of Pakistan on tax revenues, expenditures and budget deficit. Whenever any developing country takes loan from IMF, it has to change its fiscal policy. As Pakistan has remained an active receiver of IMF loans and in pursuance of IMF conditioannlities it kept on changing its fiscal policy over the time, therefore it has become necessary to empirically investigate the relationship of fiscal policy tools (revenues, expenditures, budget deficit) and IMF loans. This study is devoted to empirically explore the effects of IMF loans on the fiscal policy of Pakistan for the period of 1988-2016.

2.6 Organization of the Study

The study comprises of 6 chapters. Chapter 1 presents introduction. Chapter 2 provides relevant literature review on the subject. Chapter 3 presents an overview of IMF loans on revenues, government expenditures and budget deficit. Chapter 4 discusses methodology, whereas results of estimated empirical models are discussed in chapter 5. Conclusion and policy implication are presented in chapter 6.

CHAPTER 02

LITERATURE REVIEW

2.1 Introduction

In this chapter, different literatures are reviewed. The purpose of this is to explore the previous studies that explains the impact of IMF loans on revenues, expenditures and budget deficit of developing countries. Along with this, the literature are reviewed to check that whether the fiscal policy of developing countries are devised on their own or there is any pressure from IMF.

The chapter is organized as follows: Reviews of studies conducted on developing countries discussed in section 2.2. Section 2.3 reviewed studies related to IMF loans and revenues. Whereas the impact of IMF loans on budget deficit is discussed in section 2.4.

2.2 Review of Studies on Developing Countries

Corsetti (1999) carried out a study for three East Asian countries namely Indonesia, Thailand nad Malaysia and argues that these countries have structured their fiscal policy (tight fiscal policy) under the umbrella of IMF and came with conclusion that debtor countries mostly designed their fiscal policy as dictated by IMF. Similarly, a study conducted by (Laurence et al. 2008) in Bolivia argues that Bolivian Government when entered in the programs with IMF designed its fiscal policy under the umbrella of IMF. The condition was related to the tax structure of Bolivia. To meet the condition Bolivian Government introduced tax reforms. The country introduces Value Added Tax (VAT)

that was highly regressive but the measure in turn reduces the taxes and ending up in creating issues for Bolivia.

Furthermore, a study conducted by (Laurence et al. 2008) in Mexico. The study shows the effects of IMF on the fiscal policy of Mexico. Mexico was dictated to increase the tax revenues and the country fulfilled the condition. Similarly Osei et al. (2005) carried out a study in Ghana. The study again showed the effects of IMF on the issues of the recipient country. IMF dictated to bring some policy reforms regarding the increase in tax revenues through broadening of tax base and carried out as it is by Ghana.

Pereira (2003) critically analyzes conditionality of IMF loan in case of Argentina. He argued that due to harsh IMF conditions loans from IMF have an adverse effect on the economy. Furthermore, a study conducted by (Gupta et al. 2004) in Kenya examined the impact of grants on revenues. Data was collected from 46 countries over the period of 1980-90. According to his findings, in general grants leads to reduction in tax rates.

Morrissey (2006) carried out a study again in Kenya regarding grants and loans. The data was investigated for 55 middle income countries for the time period of 1964-2002. According to the findings of study grants increases the revenues as it has no future repayment whereas loans decreases the revenues due to its repayment and interest attached to it.

2.3 IMF Loan and Revenues

Baloch (2014) carried out a study to find out the impact of IMF loans on taxation policy in case of Pakistan. The findings suggested that IMF programs leads to increase in budget deficit and an obstinate decrease in tax to GDP ratio.

Gupta et al. (2004) explains the impact of grants on the tax revenues. The study was conducted in Kenya. He stated that grants are negatively correlated with tax revenues. He used data from 46 countries over the period of 1980-90. His study explained its hypothesis that grants lead to lower the tax revenues and tax burden. The variables that are used for this study were agricultural and industrial value added as a percentage of GDP, trade and income.

Pereira (2003) explained in his study in case of Argentina in his paper Critique of IMF Conditionality. He described the case study of conditions that adhere to the IMF loans that it is damaging the economy. IMF forced the recipient countries to introduce tight fiscal policy. The main focus is on increasing the tax revenues through indirect taxation. That created serious problems for Argentina

Furthermore, a study conducted by Odedukon (2003) with the data for 72 low income countries fot the period of 1970-99. The study employs the cross country regression analysis to find out the impact of revenues of recipient countries to aid. The study proves that grants reduces tax efforts whereas loans and aid induces broadening of tax base.

Similarly, Osei et al. (2005) indicated in his study that was carried out in Ghana that whenever any country took loans, it is associated with the donor program that the recipient country has to bring some policy reforms regarding fiscal policy mainly increase in revenues through broadening of tax base.

Corsetti (1999) explained in his study that many countries namely Indonesia, Thailand and Malaysia when took loans from IMF had to make changes in its fiscal policy. They used to follow tight fiscal policies under IMF loans. In another study of Corsetti (1999) he explained the same situation that also faced by Argentina was the fiscal constraint that damaged the economy of Argentina.

In Bolivia the situation was worse related to tax structure. The Bolivian government has entered in an agreement with IMF in 1986. One of the conditions of IMF in all sorts of programs is to improve the tax revenues. So for that, the government of Bolivia introduces tax reforms. This benefitted Bolivia. The government introduces Value Added Tax (VAT) that was highly regressive. But its impact on the fiscal policy did not show any significant improvements in tax system. That will lead to reduction in tax revenues (Laurence et al. 2008).

In one of the study Laurence et al. (2008) that was conducted in Mexico proves that the introduction of tax reforms brings improvements in tax revenues. As Mexico has better administrative capacity before the IMF agreement. After the agreement Mexico has to follow a regressive tax system but this condition help the situation of Mexico.

2.4 IMF Loan and Budget Deficit

Killick et al. (1992) examined the effects of IMF programs on the performance of the countries before and after entering in the program. Independent variables included balance of payments, inflation, exchange rate, budget deficit and government spending as a proportion of GDP. According to the findings of the study IMF programs decreases budget deficit as it decreases government consumption.

Furthermore, a study carried out by (Schadler et al. 1993) concluded that IMF programs decreases budget deficit as a proportion of GDP in the countries taking loans from IMF. Similarly, a study carried out by (Conway, 1999) reflected the performance of countries before and after joining the program and also examined the conditions in different countries. The focus of the study was on budget deficit and government expenditures. The findings suggested that IMF programs bring reduction in budget deficit and government expenditures reduces also.

Cho et al. (2009) conducted a study in Hong Kong. The focus of the study was on the impact of IMF programs on government budget deficit, expenditures and on revenues. The data collected from 93 developing countries for the time period 1951-2000. According to the findings of the study IMF programs reduces expenditures and decreases revenue and IMF program does not influence budget deficit.

Hakkio (1996) conducted study for USA, Finland, Sweden and Germany. He collected data for the period of 1979-95. The focus of the study was to check relationship between budget deficit and exchange rate. After applying simple regression technique, he finds that data for Sweden and Finland shows a negative relationship between budget deficit and exchange rates.

Cebula (1988) carried out a study in USA to find out the relationship between budget deficit and interest rates. Data was collected for 1971-84. The empirical finding shows that there exists a significant and positive relationship between interest rates and budget deficit. Similarly a study conducted by Hakro et al. (2006) on IMF Stabilization Programs, Policy Conduct and Macroeconomic Outcomes: A case Study of Pakistan. The study employs generalized evaluation estimator technique to assess the impact of IMF programs. GDP growth, current account balance, fiscal balance etc were the independent variables. According to the findings of the study, budget balance improved with the IMF program and reduces budget deficit.

 Killick et al. (1990) and Schadler et al. (2000) evaluate the effects of IMF programs by looking at the performance of countries before entering the program and after the program ends. They test the effects of IMF programs on balance of payments, inflation and growth, and various policy variables such as exchange rates and debt service in addition to central government budget deficits and government expenditures as a

proportion of GDP. They find that IMF programs improve governments' budget balances and reduce government consumption. Schadler et al. (2000) conclude that IMF programs improve the budget balance as a proportion of GDP in participating countries.

Conway uses the generalized evaluation estimator to compare performances in program and non-program countries adjusting for difference in initial conditions among countries and controlling for exogenous observable influences. He finds that IMF programs improve the budget balance as a proportion of GDP and reduces government expenditure over GDP.

Alam and Fauziah (2013) enunciated that public debt may be defined as the sovereign borrowing from its own population, from foreign government or from international institutions. Public borrowings are usually made on a national scale by central government and at a lower tiers of the government by provincial/ state, regional, districts and municipal administrative authorities. Government takes loan to fill the gap in budget when there is deficit. Some researchers investigated the impact of budget deficit or certain economic variables recently. Agarwal (2014) investigated an existence of the long run equilibrium relationship between current account and fiscal deficit in India.

Qayyum et al. (2014) presented a theoretical model for foreign aid, external debt and governance. They showed that external debt and foreign aid do not affect growth rate of consumption but have level impact on consumption. They concluded that foreign aid encourages the economic growth but external debt creates burden on the economy. Foreign aid does not affect investment directly. External debt has a negative impact on economic growth as it burdens the economy. They recommended that developing countries should finance budget through foreign aid and do not depend on the external debt as it affects the economy adversely.

Osinubi and Olaleru (2006) conducted a study related to budget deficit in Nigeria. He confirmed with his findings that external debt affects growth. They also suggested that if debt financed budget deficits are operated in order to stabilize the debt ratio at the optimum sustainable level, debt overhang problem would be avoided and the benefits of external borrowing would be maximized.

Conclusion

The conclusion that can be drawn from review of literature is that IMF gives loans to developing countries to improve the situation of these countries mainly through a reduction in current account deficit and budget deficit. The main focus of these loans is on increasing the tax revenues or reduction in the expenditures and a balance in fiscal deficit. The developing countries receive no grants but loans from IMF and both have different impacts on their fiscal policy structures. The studies that are reviewed above suggest that grants leads to reduce the revenues and loans tends to increase the revenues. Specifically the studies elaborates that IMF has a role in designing the fiscal policy of the developing countries. Because the main aim of IMF conditioannlities is that recipient country bring austerity in the public spending by cutting the spending and increasing the taxes.

CHAPTER 03

An Overview of IMF Loans, Revenues, Total Expenditures and Budget deficit of Pakistan

This chapter presents an overview of different IMF Programs taken by Pakistan. In addition the chapter also covers the conditions on Pakistan and the structural changes in the fiscal policy of Pakistan in order to fulfill the conditions. This chapter also analyzes Revenues, Total Expenditures and budget deficit. The information about the programs and changings in revenues, expenditures and budget deficit when program was taken and after the completion of the program. The information is listed below in table 3.1.

Years	Duration	Program	Measures taken for Revenues	Measures taken for Expenditures
1988	**Duration**: 4 Years	Structural Adjustment Facility (SAF)	Government introduced Sales Tax Act 1990	Government decreased the subsidies on Wheat, Cotton etc
1988 (Duration: 3 years) **1993** (Duration 2 years) **1993** (Duration: 1 Year) **1995** (Duration: 2 Years) **2000** (Duration: 1 Year) **2008** (Duration: 2 Years)		**Standby Arrangement (SBA)**	Broadening of Tax base net Issuing of "National Tax Payers Number" (NTN) Measures were taken related to tax enforcement Value Added Tax (VAT) were implemented	To maintain the expenditures "Core Investment Program" was initiated Current expenditures were contained Electricity and Oil subsidies were reduced

1994 **1997**	**Duration**: 1 Year **Duration**: 3 Years	**Extended Fund Facility**	GST was restructured and most of the burden were shifted to poor Stratifies to broaden the tax base 300 new taxpayers were incorporated under tax net	Wages of Public Sector Employees were reduced Subsidies were eliminated on wheat, fertilizers etc To maintain defense budget, Expenditure control mechanism were started Current expenditures related to ministers nonwage were reduced
2013	**Duration**: 3 Years			
1994 1997	Duration : 1 Year Duration: 3 Year	**Extended Credit Facility (ECF)**	To avoid tax crimes, "Anti Money Laundering Act" was introduced Strengthening of tax administration	PSE's were restructured
2001	Poverty Reduction and Growth Facility (PRGF)	3 Years (Expired in 2004)	With the support of Provinces, subsidies were reduced under "National Energy Policy"	

Source: International Monetary Fund (IMF): www.imf.org

Pakistan has entered into nine different programs with IMF. Three of the programs were

double Hence the total programs of IMF with Pakistan are 12 (Hussain, 2002). Pakistan

faced problems related to economic and structural imbalances. To come out from the economic and structural problems, Pakistan takes loans from IMF but this in turn impact the fiscal policy structure of Pakistan.

3.1 1988-1993 Structural Adjustment Facility and Standby Arrangement (SAF and SBA)

Pakistan is one of those countries that approached to IMF for standby loans, economic stabilization package etc. Pakistan took its first loan in 1988 (Nasir, 2012). The first loan was of 3 year from 1988-1991. The amount of the loans was US$ 516 Million. This was the largest standby loan disbursed to any country. The conditions were very harsh. Before this program, in 1986 negotiations were there for Structural Adjustment Facility (SAF). When negotiations were there, due to the hard conditions government was not prepared (Nasir, 2012). Soon after an interim setup came and approved Structural adjustment facility but the targets of the program were not achieved. The program terminated in 1994.The conditions of Structural adjustment facility and Standby arrangement were same and those conditions are (Nasir, 2012). The conditions that were attached with these loan includes reducing budget deficit, cut public expenditures, increasing of foreign exchange reserves and increasing of Taxes.

All the above conditions were incorporated in the budget of fiscal 1989-90. As for the next imbursement from IMF, these conditions has to be followed. To raise revenues, different measures were taken includes fulfillment of the condition related to taxes, government of Pakistan introduced "Sales Tax Act 1990" that was a general sales tax (Nasir, 2012).

The government also took measures to reduce expenditures as per conditions of IMF program. The measure was that the government decreased the subsidies of different crops

mainly wheat, sugar cane, cotton. All of the crops are essential crops of Pakistan (Nasir, 2012)

3.2 1993-1994 Standby Arrangement Extended Fund Facility, Extended Credit Facility:

Another IMF program was taken in 1993.which doubled in 1994. In 1994, Pakistan received loan under two different programs, Extended Fund Facility and Extended credit facility (Hussain, 2002). The conditions of the three programs were same but harsher this time. Following are the conditions under which Pakistan have taken IMF program.the conditions attached to these programs were reducing budget deficit, increase GST(General Sales Tax), increase prices of electricity, gas and petroleum products, privatize the state owned enterprises (SOE's) and the main focus of the condition was on reducing fiscal deficit. On the other hand to fulfill these conditions government of Pakistan took different steps in the field of taxes, expenditures and budget deficit.

To raise revenues measures included were increase in revenues, government introduces GST. GST was first introduced in 1990 but some changings were done in 1993. The incidence of GST was more for low income people and low for highest income group (Kemal, 1992). The goods that were used by common people like ghee, gas cylinder, cooking oil, TV's, coolers etc were subject to GST whereas meat, vegetables, milk, juices etc were exempted from the tax net. GST happened to be progressive rather regressive in this time period (Saadia, 2003). To follow the conditions of IMF, this measure increases the amount of poor people in the country. With the measures Revenues increases from 16.8% to 17.4% as a percentage of GDP ("Pakistan Economic Survey", 1994-95).

Related to reduction in budget deficit the measures were to reduce budget deficit, government reduces the wages of the public sector employees through government wage

policy, Furthermore, government suspended the employment under public sector. Employment cost also came down from 35.5% to 32.3%. This intervention from the side of government has put negative impact on the poor over the adjustment period, subsidies on wheat, fertilizers etc were reduced.[3] Thirdly, the measure that hurt the poor was the elimination of subsidy to cut the expenditures. With these measures, there was a slight decrease in expenditures from 24.5% to 24.4% as a percentage of GDP.[4]

3.31995 Standby Arrangement (SBA)

IMF to support economic program of 1995-96 approved loan of US$596 Million under Standby Arrangement. The duration of this program was 15 month. Under this program, the conditions were to cut down budget deficit by looking at revenues and expenditures as the program contains component to improve budgetary situation. Related to decrease the expenditures the reform was taken. That was that Pakistan to cut expenditures did only one thing that was maintaining of expenditures under the "Core Investment Program"[5]

3.4 1997 Extended Structural Adjustment Facility and Extended Fund Facility (ESAF, EFF)

IMF on 20 October, 1997 approved two programs. One was Extended Credit Facility and second was Extended Fund Facility. The duration of the program was three year. Under ESAF amount approved by IMF was about US$1,558 Million. While under Extended Fund Facility the amount was about US$623Million. The total amount that was approved by IMF was $1,373.3 Million[6]. The program terminated in 2000.

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[3] Pakistan Economic Survey 1993-1994
[4] Pakistan Economic Survey 1994-1995
[5] www.imf.org
[6] www.imf.org

Pakistan moved towards IMF as it was facing very deep rooted structural problems. The reason was poor policy implementation. That hampers the growth process as well as balance of payment problem. The strict conditions adhere to this loan includes take policy actions to reduce budget deficit and to increase taxes through broadening of tax base.

The measures taken to increase revenues were to make strategies to broaden the tax base specifically in the public sector of Pakistan, measures were taken to strengthening of tax administration, government ensure the effectiveness of tax collection machinery. Along with this, GST net was increased and agricultural income tax was also expanded[7]. To reduce the expenditures, government has taken again many measures. Those includes to cut the expenditures, government shifted the expenditures from current to human capital development and social services development. Along with this measure, the public sector enterprises were also restructured, privatization was also done of some of the industrial units and public assets, measures also taken for to increase the effectiveness of public expenditures and tax collection[8] and further government also tightened the expenditures mainly current expenditures[9].

3.5 2000 Standby Arrangement (SBA)

After the termination of 1997 program in 2000, Pakistan again moves towards IMF. IMF approved another loan under Standby Arrangement of worth about US$ 596 Million. The

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[7] www.imf.org
[8] www.imf.org
[9] www.imf.org

program terminated in September 2001. This loan was taken to support the program of Pakistan of 2000-01. Pakistan draws US$192 million immediate[10].

Pakistan started economic reform and adjustment program for that IMF approved the amount to provide financial resource to Pakistan. The conditioannlities of IMF related to this program were reduction in the budget deficit till 2001, increase the tax collection, broaden the tax base, improve the tax administration and to control the expenditures.

To follow the conditions that were imposed, different reforms were taken. The reforms were that a tax registration drive was started to increase the documentation of the economy and to improve tax collection, a tax survey was conducted. Along with this, a campaign was on the way that was about issuing of "National Taxpayer Number" (NTN). Audits were started to keep a check and balance on tax payers, with the tax drive, the tax collection increased substantially in the medium[11]. Another measure related to income taxation was taken by reform committee promulgated a new law under the budget of 2001-02. This involves a simple legislation related to self-assessment and with minimal exemptions. Meanwhile the direct tax base also expanded by making reforms in agricultural income and wealth tax[12] . Further, a land based tax was enhanced to all landholdings[13], GST also has been extended and the services that were not under GST tax net, those were added as well, exemptions provided in the area of GST and agricultural income was reduced and measures related to enhancing the tax administration were also taken.[14]

For the curtailment of the expenditures the measures that were taken were to reduce the burden on expenditures and to have more revenue potential, restructuring and privatizing

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[10] www.imf.org
[11] www.imf.org
[12] www.imf.org
[13] www.imf.org
[14] www.imf.org

of public sector enterprises were undertaken[15],subsidies were reduced, current expenditures were also reduced by the government, development spending were increased in the budget of 2000-01[16]. The budget of 2000-01 also incorporated spending in the social sector to help the poor. With this under the Public Sector Development Program poverty reduction programs were added and to maintain the defense budget under limits, expenditure control mechanism was also put in place.

3.6 2001 Poverty Reduction and Growth Facility (PRGF)

IMF approved PRGF program of worth US$I.322 Million. The duration of this program was three year. The program terminated in 2004. Conditions of the program were privatization of public enterprises, reduction of government's role in agricultural marketing, administering gas and electricity prices and increase in the revenues. To raise the revenue side, the government took some initiatives mainly the new income tax law will be promulgated in early September 2001. The new law clarify income tax rules, generalized self-record keeping rules will be streamlined, remove the ambiguities of current regulations, include the taxation of non-monetary incorporates all the substantive reform elements that under the current budget law. The law will apply to income earned from July 1, 2002. At that time a further reduction into exemptions will be carried out[17]. Secondly, Ban on introduction of new GST exemptions and fixed-tax scheme under the GST. General Sales Tax (GST) has extended to all agricultural inputs like on fertilizers, urea etc., exemptions will be reduces further[18], related to poverty reduction strategy, a system of improved monitoring of pro-poor and social spending, specifying coverage, frequency of reports, along with monitoring of intermediate outputs.

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[15] www.imf.org
[16] www.imf.org
[17] www.imf.org
[18] www.imf.org

3.7 2008 Standby Arrangement (SBA)

IMF approved Standby Arrangement to Pakistan in 2008. This is the 11th program of Pakistan with IMF. The duration of the program was 23 month. The amount given to Pakistan was about US$7.6 Billion. This was a stabilization program that includes tightening of fiscal and monetary policies. The conditions were same under this program as well. One additional condition of this program was to implement Value Added Tax (VAT). For the fulfillment of the conditions, measures that were taken incorporated that Government introduces measures to strengthen revenues through better tax policy and tax administration measures, measures related to tax enforcement was also taken to strengthen the tax structure, Government established a tax administration organization to strengthen the tax system in order to increase the revenues. The organization was established under FBR. Under this, audits were reintroduced[19], Government reduces tax exemption on GST and Income tax. To this effort, government also submitted a legislative amendment to parliament by June 2009[20].In the budget of 2009-10, the excise tax on tobacco was increased, and Government also started work to implement full Value Added Tax (VAT). With low exemptions and this were to be administered by FBR.The reformed GST was also presented in the parliament[21]. FBR (2009) also introduces the system of tax audits and set up an "Expeditious Refund System" in all Regioanl Tax Payers Offices (Hyder, S, 2012). For the reduction in expenditures measures that were taken incorporates a decrease in fiscal deficit or to reduce expenditures, the subsidies that were given to the sector were phased out. The subsidies related to the energy sector. This reduction in spending helped the government to increase spending on social safety net[22]. In this regard, Pakistan also worked with World Bank. The government also reduces

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[19] www.imf.org
[20] www.imf.org
[21] Pakistan Economic Survey 2010-11
[22] www.imf.org

current expenditures. Further, the electricity and oil subsidies were reduced by June 2009, the projects that were running on the domestic finances were also reduced by the government. Subsidies on textile industry were also eliminated[23], to increase public sector services, restructuring was done of PSE's namely PIA, PEPCO, USC, Pakistan Railway etc[24]. For reducing fiscal gap Government focused on strong tax efforts, Government allowed spending on infrastructure and social sector, to increase revenues, measures was undertaken such as broadening of tax base, reducing exemptions on income tax and improving tax collection and tax enforcement[25].

3.8. 2013 Extended Fund Facility (EFF)

Pakistan entered into another program that was Extended Fund Facility on September 4, 2013. The duration of this program was 36 month and this program ends in 2016. The amount approved by IMF was US$ 6.64Billion. First tranche under this program was available to Pakistan after 3 days of the program[26]. Conditions that were attached to Extended Fund Facility says to reduce budget deficit to minimum level, energy sector reforms, restructure the public sector and privatize them, strengthen the tax system to increase revenues, take some initiatives to improve tax administration for sales tax, income tax and excise tax and take measures to increase fiscal savings.

Related to increase in revenues, measures were that the situation of tax to GDP ratio was somewhat better, but still government increase the Gas Infrastructure Development Cess (GIDC) in order to raise revenues on annual basis. An initiative was taken to incorporate 300 taxpayers in tax net, to enhance revenue administration, various steps were taken for

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[23] www.imf.org
[24] Pakistan Economic Survey 2010-11
[25] www.imf.org
[26] www.finance.org.pk

sales, excise and custom tax, and tax audits were started and strictly monitored by FBR. Government also seek technical support from international partners, to avoid tax crimes, in 2010 "Anti Money Laundering Act" (AMLA) was introduced in the schedule of offences[27], to broaden the tax base net, government eliminated tax exemptions and other loopholes through "Statutory Regulatory Order" (SRO). The objective is to increase the tax revenues[28].

For curtailment of expenditures measures were that Over the 3 year period of the program, government decided a plan to cut down the subsidies mainly electricity subsidies. For this with the support of the provinces under "National Energy Policy" eliminated the subsidy to all consumers except some for the three years of the extended fund facility[29]. The subsidies were reduced further on annual basis. The target was to reduce subsidy from 0.4 percent of GDP to 0.3 percent of GDP[30]. Current expenditures related to minister's nonwage also reduced during the program.

For fiscal consolidation, half of the success will come from revenue side through elimination of exemptions and widening the tax base net. Whereas on expenditure side, the reduction in the subsidies were undertaken in 2014-15[31]

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[27] www.finance.org.pk
[28] www.finance.org.pk
[29] www.finance.org.pk
[30] www.finance.org.pk
[31] www.finance.org.pk

CHAPTER 04

METHODOLOGY AND DATA

This chapter of the study presents methodology, data and data sources. The section wise sketch of the chapter is as follows: section 4.1 presents empirical model in order to estimate the impact of IMF loans on fiscal policy structures. Section 4.2 presents construction of variables and data sources. Section 4.3 presents theoretical justification of the variables. Estimation technique presented in section 4.4 is in order to achieve the objective of the study.

4.1 Empirical Model

The study conducted in Pakistan covers the period of 1988-2016. The key objective of the study is to examine the impact of IMF loans on revenues, expenditures and budget deficit of Pakistan. In order to meet the objective of the study, following empirical models have been structured and estimated.

Econometric Model

The main objective of the study is to analyze the effect of IMF loans on fiscal policy structures in Pakistan. Hence in order to achieve this objective following empirical model for the time period 1988-2016 is estimated. As we have three dependent variables, therefore three different empirical models.

$$TAX_T = \beta_0 + \beta_1 AGR_t + \beta_2 IND_t + \beta_3 TOP_t + \beta_4 INC_t + \beta_5 FER_t + \beta_6 DL + \varepsilon_t \ldots\ldots(1)$$

$$\ln(TEXP_t) = \beta_0 + \beta_1 lnGR_t + \beta_2 lnT_t + \beta_3 lnDD_t + \beta_4 INC_t + \beta_5 DL + \varepsilon_t \ldots(2)$$

$$\ln(BD_t) = \beta_0 + \beta_1 TEXP_t + \beta_2 T_t + \beta_3 FER_t + \beta_4 lnDS_t + \beta_5 lnGR_t + \beta_6 DL + \varepsilon_t \ldots\ldots(3)$$

where ;

ln=Natural log

T_t=Tax revenues

AGR_t = Agricultural Value Added

IND_t = Industrial Value Added

TOP_t = Trade openness

INC_t = Income (GDP per Capita)

FER_t= Foreign Exchange Reserves

DS_t= Debt Servicing

DD_t=Domestic Debt

GR_t= Growth

DL = Dummy for IMF Loans

t= 1,2,3,………………...28

$\boldsymbol{\mu_t}$ = Error term

Long Run Analysis of the Model:

The equation 1, 2 and 3 will be transformed into following ARDL equations. Here equation 4, 5 and 6 represents long run relationship.

$\text{TAX}_t = \varphi_0 + \varphi_1(AGR_{t-i}) + \varphi_2(IND_{t-i}) + \varphi_2(INC_{t-i}) + \varphi_3(FER_{t-i}) + \varphi_4(TR_{t-i}) +$

$+\varphi_5(DL_{t-i}) + \varepsilon_t$…………...4

$$\ln\text{TEXP}_t = \varphi_0 + \varphi_1(lnDS_{t-i}) + \varphi_2(DD_{t-i}) + \varphi_2(\ln\text{TAX}_{t-i}) + \varphi_3(\ln\text{GR}_{t-i}) +$$

$$+\varphi_{54}(INC_{t-i}) + \varphi_5(DL_{t-i}) + \varepsilon_t \ \text{.................5}$$

$$\ln\text{BD}_t = \varphi_0 + \varphi_1(TEXP_{t-i}) + \varphi_2(TAX_{t-i}) + \varphi_3(\ln\text{DS}_{t-i}) + \varphi_4(FER_{t-i}) + +\varphi_5(lnGR_{t-i}) +$$

$$\varphi_6(DL_{t-i}) + \varepsilon_t \text{...6}$$

Short Run Dynamics of the Model:

Equations 7, 8 and 9 is presenting short run dynamics of models 1, 2 and 3 respectively.

$$\Delta TAX_t = \delta_0 + \sum_{i=1}^{k} \delta_1 \Delta AGR_{t-i} + \sum_{i=1}^{k} \delta_i \Delta IND_{t-i} + \sum_{i=1}^{k} \delta_i \Delta INC_{t-i} + \sum_{i=1}^{k} \delta_i \Delta FER_{t-i} +$$

$$\sum_{i=1}^{k} \delta_i \Delta TR_{t-i} + \sum_{i=1}^{k} \delta_i \Delta DL_{t-i} + ECM_{t-1} + \varepsilon_t \text{............... 7}$$

$$\Delta\ln\text{TEXP}_t = \delta_0 + \sum_{i=1}^{k} \delta_i \Delta\ln\text{DS}_{t-i} + \sum_{i=1}^{k} \delta_i \Delta DD_{t-i} + \sum_{i=1}^{k} \delta_i \Delta\ln\text{TAX}_{t-i} +$$

$$\sum_{i=1}^{k} \delta_i \Delta\ln\text{GR}_{t-i} + \sum_{i=1}^{k} \delta_i \Delta\ln INC_{t-i} + \sum_{i=1}^{k} \delta_i \Delta DL_{t-i} + ECM_{t-1} + \varepsilon_t \text{................8}$$

$$\Delta\ln\text{BD}_t = \delta_0 + \sum_{i=1}^{k} \delta_1 \Delta TEXP_{t-i} + \sum_{i=1}^{k} \delta_i \Delta TAX_{t-i} + \sum_{i=1}^{k} \delta_i \Delta\ln DS_{t-i} +$$

$$\sum_{i=i}^{k} \delta_i \Delta FER_{t-i} + \sum_{i=1}^{k} \delta_i \Delta lnGR_{t-i} + \sum_{i=1}^{k} \delta_i \Delta DL_{t-i} + ECM_{t-1} +$$

$$\varepsilon_t \text{......................................9}$$

4.2 Definition and Construction of Variables

Data is collected for the period of 1988 to 2016. The definition and construction of variables is depicted in table 3.3.

Notation	Variables	Construction	Units	Source	Expected sign
Table 4.1. Data will be collected for the period of 1988-2016 for Pakistan.					
Tax	Tax revenues	Tax revenues as percentage of GDP	Percentage	Economic Survey of Pakistan various version	
AGR	Agricultural Value Added	Agriculture value added as percentage of GDP	Percenatge	WDI	Negative
IND	Industrial value added	Industrial value added as percentage of GDP	Percenatge	WDI	Positive
TR	Trade openness	Exports + imports/ GDP	Percentage	WDI	Positive
INC	Income	GDP per capita	Constant LCU	WDI	Positive
DL	Dummy for loans	D=1 If loans were given in resoective year D=0 No loans were given.		International Monetray Fund(IMF)	Positive

FER	Foreign Exchange Reserves	Net Foreign Assets	Current LCU	WDI	Positive
DD	Domestic Debt	Domestic Debt	RS Billion	Economic Survey of Pakistan various versions	Positive
DS	Debt Servicing	Debt Servicing as a percentage of GDP	Percentage	WDI	Positive
BD	Budget Deficit	Budget deficit as a percentage of GDP	percentage	Economic Survey of Pakistan various versions	Uncertain
TEXP	Total Expenditures	Total Expenditures as a percentage of GDP	percentage	Economic Survey of Pakistan various versions	Negative
GR	Growth	Growth as a percentage of GDP	Percentage	WDI	Negative

4.3 <u>Theoretical Justification:</u>

The theoretical justification of the variables included in the model is given below:

Tax to GDP ratio (TAX$_t$)

This is a dependent variable. We use this as a proxy for tax revenues follow Lotz et al, 1967.

Agricultural value added (AGR$_t$)

This is one of the independent variables. This is taken as percentage of GDP. If the agriculture sector is larger, then it will reduces the capacity of being taxed. Because agricultute in most of the low income or developing countries is a subsistence sector. That is why it is difficult to tax this sector directly. As in many coutries including Pakistan, agricultural sector is exempted from taxation (Gupta et al, 2004).

Industrial value added (IND$_t$)

It is taken as a percentage of GDP. As industrial sector creates more income, profits etc and its also mainly a large sector. So it is easily taxable. (Gupta et al, 2004). Industrial Sector is the second largest sector of Pakistan economy and its total contribution GDP is 1.05% (Pakistan, 2016)

Trade Openess (TR$_t$)

Its also taken as a percentage of GDP. Trade openness includes both the exports as well as the imports. The purpose of incorporating this variable is this that it is one of the major source of revenues in low income countries (Milner et al, 1991).In case of Pakistan contribution of custom   tax   in   total   tax   revenues   is   13%   (Pakistan,   2016)

Income (INC$_t$)

It is the fourth independent variable. Expected sign of this variable is Positive. The empirical evidence of the study conducted by Tanzi (1992) shows that the relationship that exists between the Tax to GDP ratio and Per capita GDP (that is used for controlling the economic structure) is inconclusive.The GDP Per Capita (INCOME) here is used to measure collection efficiency. It is used as a proxy for economic development. Here is is related with tax buoyancy. as income increases means economic develoment is there, but the increase in taxes increased more than proportioantely. So the contribution in revenues through this is inconclusive. (Tanzi, 1992).

IMF loan (DL)

IMF loans is the variable of interest. Pakistan like many other developing countries takes IMF loans to resolve many structural and balance of payment issues. In case of Pakistan, when IMF gives loan then IMF impose conditionalities to increase the taxes (Munir, 2004). The model is taken loans as a dummy variable. This is because the data on loans is not available yearwise. Tha data is available for the year the loan is disbursed. There was no continous series of data. That is why IMF loans are taken as a dummy varaible. For those year the data is available the value is 1 and for the rest value is 0. Expected sign of this variable is positive.

Growth Rate (GR$_t$)

Government's budget often depends on the state of the economy. On one hand, there could be a positive relationship between economic output and the expansion of the government

spending based on the assumption that pressure for social progress leads to the growth of the public sector; on the other hand, where economic growth is so modest that the government generates insufficient revenues to meet demands for additional public goods, those demands must be met through an expansion of government spending. The growth rate here taken as a proxy for the unemployment rate. For example, as the economy expands, unemployment falls and, as a result, government expenditure falls in welfare spending (cho,J 2009).

Debt Servicing (DS$_t$)

Debt servicing is the non development expenditure. Governements has accumulated so much debt both domestic and external as well. The repayment of that debt with the interest rates called debt servicing which takes huge amount of our budget. Most of the countries that developed debt servicing difficulties run excessively large public deficits.When the debt servicing increases, there will be less amount left for spending on development side. So the deficit wil increase. So there exists a positive relationship Munir, 2010 and Baqir (2002).

Foreign Exchange Reserves (FER$_t$)

There exists a negative relationship between foreign exchange reserves and budget deficit. As when foreign exchange reserves (FOREX) increases, then there will be more money in central bank to finance the deficit of the country. And to bring the budget in balance (cho,J 2009).

Domestic Debt (DD$_t$)

There exists a positive relation between budget deficit and domestic debt. It is because of the payment of interest as well as principle of debt in every year. So the polictmakers of Pakistan

must develop such a budget each year which should consider to avoid domestic debt and rely on more other important factors such as good governance and tax reforms (Saima et al. 2017).

1.4 Estimation Technique

4.4.1 Auto Regressive Distributed Lag (ARDL)

This study is based on annual time series data spanning from 1988-2016 period. All the variables under consideration are time series in nature, hence before the selection of any appropriate estimation technique it is important to check their stationarity. If all variables are non-stationary and integrated of order one I (1), then Johansen maximum likelihood procedure is the appropriate estimation technique of integration proposed by Johansen (1988) and Johansen and Juselius (1990). On the contrary, if some variables are stationary at level I (0) and some are integrated of order I (1) then Auto Regressive Distributed Lag (ARDL) is the proper estimation technique, which is also known as bound testing approach, introduced by Pesaran et al. (2001).[32] The ARDL approach has some advantages over other approaches. First, the ARDL provides reliable results even in the case of small sample size.[33] Secondly, the ARDL approach assumes all the variables to be endogenous; hence, this approach provides correct and precise estimates of long run parameters and valid inference even if the model suffers from endogenity issue. This approach also involves the short-run dynamics in the estimation of long run parameters.

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[32] In our case some of the variables are I (0), and some are I (1), hence the empirical estimations have been carried out with ARDL con-integration technique.
[33] Pesaran and Shin, 1999 argue that in case of small sample short run ARDL based estimators are super consistent.

CHAPTER 05

RESULTS AND DISCUSSION

Introduction

This chapter is organized as follows: section 5.1 presents the summary statistics; section 5.2 represents test of unit root, section 5.3 presents ARDL: Bound testinng Approach; Section 5.4 results of revenues; section 5.5 results of total expenditures wheraas results of budget deficit are presented in section 5.6.

5.1. Summary Statistics of Variables under Consideration

Variables	Mean	Median	Maximum	Minimum	Std.dev.
Tax	11.46	10.78	14.3	8.94	1.76
TEXP	21.52	21.4	26.7	16.7	3.06
BD	5.78	5.8	8.8	2.4	1.74
DS	0.102	0.100	0.16	0.05	0.03
GR	9.94	8.37	24.89	0.40	5.61
INC	916.5	855.4	1179.4	717.9	137.5
DD	332.5	1799	13627	290	3805.8
AGR	3.56	3.48	11.73	-5.28	3.54
IND	6.63	5.95	17.83	-5.20	4.36
FER	3.78	2.77	1.36	1.1	4.54

Empirical Findings

The empirical analysis has been carried out in three different steps. In the first step, we have checked the time series properties of variables under consideration. Based on these results we used ARDL bounds test for long run relationship. Whereas for short run analysis, we used an Error Correction approach.

5.2 Test of Unit Root

We begin our empirical analysis by checking stationarity of the variables under consideration. Even though pretesting stationarity of variables is not required in the ARDL approach, however, unit root testing is required to identify the order of integration of the underlying variables. In case if any variable is integrated of order two I (2), then ARDL results would be spurious. In order to check the order of integration of the underlying variables we used the Augmented Dickey Fuller (ADF) test. Table 5.2. presents the results of ADF unit root test.

Table 5.2.: Augmented Dickey Fuller (ADF) Test		
Variables	**t statistics**	**Order of Integration**
$lnTAX_t$	(6.62)	I(1)
$lnTEXP_t$	(-5.85)	I(1)
$lnBD_t$	(5.87)	I(1)
$lnFER_t$	(-3.92)	I(0)
$lnDD_t$	(-5.68)	I(1)
$lnDS_t$	(-5.46)	I(1)
$lnINC_t$	(-1.56)	I(1)
$lnGR_t$	(-4.66)	I(0)
$lnAGR_t$	(-5.95)	I(0)
$lnIND_t$	(-4.43)	I(0)
$lnTR_t$	(-6.40)	I(1)

Note: t values in parenthesis

The results reported in Table 5.2 indicates that all the variables are integrated of order one I (1) except foreign exchange reserves(FER_t), Income(INC_t), agricultural value added (AGR_t) and industrial value added (IND_t) which is stationary at level I (0). These findings allow us to use the ARDL bound testing approach, as this technique is the most appropriate technique in such case when among explanatory variables have no same order of integration.

5.3 Auto Regressive Distributed Lag (ARDL): The Bound Testing

   Approach

   i.   Lag Length Selection Criteria

The initial phase in ARDL Bound Testing approach is the selection of optimal lag length. We have chosen four lag as *appears on lag 4 based on Akaike information criterion (AIC), and Schwarz Information Criterion (SC). The results are presented in table 5.3.

Table 5.3: Selection of Lag Length

Lag	LR	AIC	SC	HQ
0	NA	67.32	67.6	67.4
1	86.90	65.37	67.4	65.9
2	35.52	65.29	69.0	66.3
3	60.41	58.10	63.6	59.6
4	0.00	-243.6*	-236.3*	-241.6

   * indicates lag order selected by the criterion.

   ii.   Bound Test for Co-Integration

After the selection of lag length, the next step is the Bound test for co-integration. To find co-integration in the Bounds Testing approach we used the Wald-test to compute the F-statistics of co-integration. Results presented in table 5.4 shows that for all three specifications the Bound test rejects the null hypothesis of no co-integration as the computed F-statistic through the Wald test is higher than the upper bounds critical values at both 1 and 5 percent.

Table 5.4: Bound Testing Approach of Co-Integration						
	Model 1		Model 2		Model 3	
F-Statistic	5.08		4.20		11.17	
Critical bound	Lower bound	Upper bound	Lower bound	Upper bound	Lower bound	Upper bound
Critical bound's value at 1 percent	2.08	3	3.06	4.15	3.06	4.15
Critical bound's value at 5 percent	2.39	3.38	2.39	3.38	2.39	3.38

Note: Computed, critical bound are obtained from Pesaran *et al.* (2001)

iii.   Causality Test

The purpose of causality test is to check whether there exists a long run relationship or not. The result of causality test indicates that in all specifications the null hypothesis (H_o) of no long run conintegration cannot be rejected, as the value of calculated F-statistics lies below the lower bound of tabulated F-statistic at 5% level of significance.

Results of ARDL Approach

Table 5.5 presents the ARDL results of our empirical model. The dynamics of long and short run are based on the SC.

Table No 5.5.	ARDL (1,0,0,0,0,0)				
Long run results			**Short run results**		
Dependent Variable: TAX$_t$			Dependent Variable: TAX$_t$		
Variable	Coefficients	Probability	Variable	Coefficients	Probability
AGR$_t$	-0.325***	0.011	ΔAGR	-0.151***	0.011
IND$_t$	0.463***	0.011	ΔIND	0.130***	0.011
INC$_t$	0.192***	0.011	ΔINC	0.408***	0.004
FER$_t$	0.266**	0.017	ΔFER	0.506***	0.003
TR$_t$	8.272***	0.000	ΔTR	0.593***	0.002
DL$_t$	1.007***	0.000	ΔDL	0.503***	0.000
C	14.73	0.03	ECM_{t-1}	-0.12	0.04
R Square	0.92				
Durbin Watson stat	2.4		Jarque Bera Normality test	0.49	
White Hetroscadasity test	0.40				

Note: ***denotes significance at 1% level of significance

*denotes significance at 10% level of significance

5.4 Results of Revenues:

The long run results shown in table 4.4 exhibits that there exist a negative relationship between revenues and agricultural value added (AGR_t). The result of this variable is statistically significant at 1 % level of significance. The results show that 1 percent increase in agricultural value added will bring 0.32 percent decrease in revenues. One possible justification is that with the expansion of agricultural sector, the taxable capacity reduces. Morrissey et al. (2006). The results are in compliance with the study conducted by Cho, H, J (2009) indicates that the agriculture sector in many countries is a subsistence sector in most low income countries. It is difficult to tax the agriculture sector. So with this reason, the relationship is negative.

The results indicate a positive relation between revenues and industrial value added (IND_t). with 1 percent increase in industrial value added the revenues will increase by 0.46 percent. It is statistically significant at 1%. The reason is also in accordance with the study conducted by Morrissey, O (2006). The industrial sector is easy to be taxed. This sector is easy to monitor also. It is easier to bring this sector or industrial value added under tax because it has the taxable capacity, so it will increase the revenue side of the country.

The result shows a positive relation between revenues and income (INCt). The result is significant at 1 %. As 1 percent increase in income will cause 0.19 percent increase in revenues. Here income is taken as a proxy for GDP per capita. As the income increases, the revenues will also increase Cho, H, and J (2009). Another study conducted by (Tanzi, 1992) explains a negative relation between revenues and income. The reason is that as income is

taken as proxy for economic development to capture the impact of tax buoyancy and collection efficiency. As the collection efficiency is not up to the mark in many low income countries, so they portray a negative relation.

There exists a positive and significant relationship between revenues and foreign exchange reserves (FER_t). The result shows that 1 percent increase in foreign exchange reserves will bring 0.26 percent increase in the revenues at 1 % level of significance. (Ghaura, 1998). As the reserves increasing, it will increase the revenues as the more the foreign reserves are, the country will have more money to spend. The country will use these assets in many ways. So it can used as defense against any emergency that can used against revenues as well.

The relationship between IMF loans and revenues is positive and significant at 1 % level. The result shows that 1 percent increase in IMF loans will bring 1.00 percent increase in revenues of a recipient country. As when a country takes loans from IMF, one of the main conditions is to increase the revenues. After taking loans from these institutions, the recipient country will make different policies and take different measures to increase the tax base to have more and more revenues. This will cause an increase in the revenues side. That is why, the relationship is positive and significant. Morrissey et.al (2006)

The relationship between revenues and trade openness (TR_t) is positive and also statistically significant at 1 %. With 1 percent increase in trade the revenues will increase by 8.27 percent. The reason is that trade taxes are easy to collect. That is why it cause an increase in revenues. Along with this, trade taxes are one of the major share of tax revenues in low income countries (Greenway and Milner, 1991; Ghaura, 1998).

Whereas the short run results shows the same result as shown in long run. Agricultural value added has negative impact on revenues. Industrial value added has positive and significant impact on revenues. With the increase in income, revenues will increase. Both foreign exchange reserves and trade openness has significant and positive impact on revenues.

The results of ECM shows that speed of adjustment due to any disturbance from its equilibrium level in the long run is 0.12 which is negative and significant. It means that revenues diverge from its equilibrium due to any shock, 12 percent of the disturbance will be corrected each year.

The estimation findings also reveal that overall the model is a good fit. Value of R^2 shows that 92% variation in dependent variable is due to independent variable. The diagnostic tests also representing that there is no problem of hetroscadasiticty and non-normality of residual

Table No. 5.5.		ARDL(1,1,1,1,0,1)			
Long run results			**Short run results**		
Dependent Variable: lnTEXP$_t$			Dependent variable:$\Delta lnTEXP_t$		
Variable	Coefficients	Probability	Variable	Coefficients	Probability
ln(DS$_t$)	0.573***	0.000	$\Delta lnDS$	0.406***	0.000
DD$_t$	0.00002***	0.09	ΔDD	0.118***	0.000
ln(TAX$_t$)	0.565***	0.01	$\Delta lnTAX$	0.536***	0.01
ln(GR$_t$)	-0.07***	0.01	$\Delta lnGR$	-0.316***	0.00
INC$_t$	0.165***	0.01	ΔINC	0.103***	0.01
DL$_t$	-0.60***	0.000	ΔDL	-0.298***	0.00
C	3.36		ECM_{t-1}	-0.64	0.000
R square	0.93				
White Hteroscadasity test	0.71		Durbin Watson stat	2.15	
Breush Godfrey LM test	0.53				

*Note: ***denotes significance at 1% level of significance*

**denotes significance at 5% level of significance

*denotes significance at 10% level of significance

5.5 Regression results of Total Expenditures

The result presented in table 5.5. Indicates that debt service (DS_t) affect negatively and significantly the total expenditure that is 1 % increase in debt service decreases spending by 0.57%. It is significant at 1 percent level of significance. The reason behind that is as the budget of Pakistan is divided into two parts i- e Development and non-development (Current) expenditures. Servicing of debt comes under non-development expenditures. When government is going to service the liabilities or can say servicing of debt, there will be fewer funds left to be spent on the development side that can pay in future. This negative relation is supported by Bqir (2010) and Fosu (2010).

Domestic debt has positive relation with total expenditures. Domestic debt (DD_t) is statistically significant and it is significant at 10 percent level of significance. The results show that 1 % increase in domestic debt will bring 2.62 % increase in total expenditures. The reason is as governments borrow externally for many reasons. For some of the reasons the Governments also borrows from their own banks. When they borrow, they spend it hence expenditures increases. The relationship is also found in the study conducted by Saima, U (2017) and Kamal, U (2017).

Growth (GR_t) is negatively and significantly related with total expenditures. The variable is significant at 5% level of significance. With 1 % increase in growth, total expenditures will decreased by 0.07%. Here, growth is taken as a proxy for unemployment. It can be that if economy grows, unemployment will decrease that will reduce the government expenditures.

For example, the expenditures on unemployment benefits, other benefits will reduce. Cho, H,J (2009)

The result indicates that income (INC_t) is positively associated with government expenditures. The relationship is statistically significant as well. With 1 % increase in income the total expenditures will increase by 0.16 %. The reason is that income in this model is taken as a proxy for economy. The bigger the economy, the larger will be the expenditures of the government. The spending from the side of the government for the betterment of the country will increase. Cho, H,J (2009)

There exists a positive relationship between revenues (TAX_t) and government expenditures. The result indicates that 1 percent increase in revenues will bring 0.56 percent increase in expenditures. The reason is that government needs revenues so that it can increase the spending on different areas. Pakistan is having a lower tax base. Collection of revenues is always a problem for the government. Cho, H, J (2009) in his study explains that when governments are running short of money, the governments will move towards different institutions and banks. Whenever there are plenty of revenues available in the hands of the government, government will easily increase its expenditures.

The results indicate of IMF loans and government expenditures are negatively related. With 1 percent increase in IMF loans the government spending decreases by 0.60 percent. IMF while disbursing loans or can say before entering in an agreement highlights many conditioannlities. That are different for different countries and every program of IMF has

different conditions. Two conditions are same in every program i-e cutting down current account deficits and cutting down budget deficit. For that, IMF said the recipient country to cut the expenditures and increase only revenue side. So when one side is decreasing or can say has to be curtailed, then impact on expenditures is decreasing and insignificant. IMF loans have no impact on the expenditure. (Cho, H, J, 2009).

The results of ECM showed in table 5.5.that speed of adjustment due to any disturbance in government total expenditures from its equilibrium level in the long run is 0.64 it is negative and significant. Which means that total expenditures diverge from its equilibrium due to any shock, 63 percent of the disturbance will be corrected each year.

The short run results are in line with the long run results. Debt servicing has a negative and significant impact on total expenditures. Similarly, domestic debt has a significant and positive impact on dependent variable whereas revenues and income also affects total expenditures significantly.

Value of F statistics shows that overall model is significant and value of R^2 explains 93 percent variation in total expenditures are due to explanatory variables. In addition, the model has no problem of serial correlation and non-normality of residuals.

Table 5.6.		ARDL(1,0,1,1,0,)			
Long run results			Short run results		
Dependent variable: lnBD$_t$			Dependent Variable: $\Delta lnBD_t$		
Variable	Coefficients	Probability	Variable	Coefficients	Probability
TEXP$_t$	0.162***	0.00	$\Delta TEXP$	0.142***	0.00
TAX$_t$	-0.202***	0.00	ΔTAX	-0.390***	0.00
lnDS$_t$	0.326***	0.005	$\Delta lnDS$	0.417***	0.00
FER$_t$	-3.267**	0.05	ΔFER	-0.163*	0.06
lnGR$_t$	-0.182***	0.01	$\Delta lnGR$	-0.475*	0.00
DL$_t$	0.037	0.43	ΔDL	0.900	0.00
C	-4.05		ECM_{t-1}	-0.81	0.00
R square	0.97				
White Hetroscadacity test	0.39		Jarque Bera Normality test	0.35	
Breuch Godfrey LM test	0.18s				

Note: ***denotes significance at 1% level of significance

**denotes significance at 5% level of significance

*denotes significance at 1% level of significance

5.6 Regression results of Budget Deficit

The results presented in table 5.6.explains long run relationship between dependent variable and independent variable. The relationship between IMF loans (DL_t) and budget deficit is statistically insignificant Cho, H, (2009). With 1 percent increase in IMF loans will bring 0.03 percent change in budget deficit as under IMF loans conditioannlities, the recipient country has to cut down its budget deficit. For that the country has to cut down the spending side and has to make measures to increase its revenues. When one side is increasing that is the revenue side as government of the recipient country will make some policies or implement some measures to increase the tax base or revenues. That is mostly done through indirect taxation. So with these measures revenues will increase. So when one side is increasing, and other side is controlled so the result impact will be indeterminate.

There exists a negative relation between budget deficit and foreign exchange reserves (FER_t).It is significant at 1 percent level of significance. With 1 percent increase in foreign exchange reserves the budget deficit will decrease by 3.26 percent. Ayyub, M, (2012) explains that many countries had their reserves as a defense against problems. So the case in Pakistan. Cho, H, J (2009) explains that one of the ways to finance budget deficit through foreign exchange reserves. No doubt that exhaustion of reserves will create balance of payment crisis along with the devaluation of currency. That may create an inflationary impact as well. But that effect can be controlled or minimized by the government when it finances its deficit through foreign reserves. That is a better way to finance as compared to

printing new money to finance the deficit. The use of foreign reserves to finance some of the parts of its deficit.

Debt Servicing (DS_t) and budget deficit has a positive relationship with each other. The results show that 1 percent increase in debt servicing will bring 0.32 percent increase in the budget deficit and it is significant at 1 % level of significance. The reason behind this positive relationship is that whenever a country goes to service the debt, it causes an increase in the non-development expenditures (Baqir, 2002). Pakistan liabilities touches the score of $89 billion. The revenues are not that much increasing. So one side is increasing due to financing the debt, and other side shows less improvement so this will definitely increase the budget deficit. Cho, H, J (2009) also explains the same positive relationship between debt servicing and budget deficit. That the countries that has debt servicing difficulties always run in high deficits.

There exists a negative relation between budget deficit and growth rate (GR_t). With 1 percent increase in growth the deficit will reduce by 0.18 percent. The result is significant at 1 % level of significance. Here growth is taken as a proxy for unemployment. If people are employed, or having full employment opportunities then the governments has to spend less on the benefits that they will give to the people if they were unemployed. So government will spend less. Hence budget deficit will also decreases Cho, H, J (2009).

Revenues (TAX$_t$) and budget deficit are negatively related with each other. The results are significant at 1 % level of significance. Further the results indicate that 1 percent increase in revenues will bring 0.10 percent decrease in budget deficit. With the revenue raising measures or can say any programs that is adopted by the government to raise the revenues. With the revenues increase the deficit will decreases definitely. This relationship is explained by Cho, H, J (2009) in his study.

There exists a positive relation between budget deficit and expenditures (TEXP$_t$). As 1 percent increase in expenditures will cause 0.13 percent increase in budget deficit. Any increase though it's from development side or non-development side, will cause an increase in deficit. It is significant at 1 percent level of significance.

The results of short run are consistent with the long run results.

The result of ECM shows that speed of adjustment due to any disturbance from its equilibrium level in the long run is 0.81 it is negative and significant implying that budget deficit diverges from its equilibrium due to any shock, 81 percent of the disturbance will be corrected each year.

.The value of F statistics reveals that overall model is a good fit. Value of R^2 shows that 97% variations in dependent variable are due to independent variable. The diagnostic tests also representing that there is no problem of hetroscadasiticty and non-normality of residual.

CHAPTER 06

Conclusion and Policy Implication

1.1 Conclusion

This study is an effort to determine the impact of IMF loans on the fiscal policy structure in case of Pakistan. In order to meet the objective of the study, three empirical models with three fiscal policy tools have been estimated using ARDL covering the time period from 1988-2016.

Dependent variables include revenues, expenditures and budget deficit. The explanatory variables are domestic debt, foreign exchange reserves, debt servicing, growth, income, agriculture value added, industrial value added and variable of interest that is IMF loans. The results indicate in first equation where revenues are taken as dependent variables shows that that revenues increases significantly when Pakistan takes IMF loans. This may be due to the fact that when loan is disbursed, one of the conditions is to raise revenues. To fulfill this condition, different measures are taken to increase the revenues. It can be done through indirect taxation, broadening of the tax base, devising other measures and bringing some desired reforms in the taxation system to increase revenues. Agriculture value added causes decrease in the revenues as agriculture sector is difficult to tax whereas industrial value added also causes an increase in revenues significantly. Foreign exchange reserves also cause an increase in revenues. The reason may be that when a country is having more reserves it will be used as an emergency fund and adds in the revenues section. Trade openness also

leads to increase in revenues. As trade taxes are easy to collect and brings an increase in revenues.

The second equation takes expenditures as a dependent variable. An increase in IMF loans causes a decrease in expenditures. This is again one of the conditions of IMF that brings austerity in spending. One more important thing is cut in subsidies. That also brings the expenditures down. Mostly part of the loan spends on paying back the previous loans with the interest on that. This is called debt servicing. That comes under non development expenditures and less is available to spend on development sector. That is why, loans creates a decrease in expenditures, whereas, debt servicing causes an increase in total expenditures. The reason may be that due to debt servicing, the non-development expenditures are increasing. That overall increase the expenditures of the government. Domestic debt also increases the expenditures of the government. The reason behind is that government takes loans domestically as well. So after taking loans, government spends it on different projects. Which in turn it brings an increase in the expenditures. The results show a positive relation between agriculture sector and expenditures. The reason behind is that the larger the sector, more will be the expenditures from the side of government. As agriculture sector is exempt from taxes, so all the subsidies provided by the government cause an increase in the expenditures of government.

In third equation, budget deficit is taken as dependent variable, whereas the explanatory variables are IMF loans, revenues, debt servicing, and growth rate. Either IMF loans have no impact or the impact of IMF loans on budget deficit is indeterminate. On the other hand, expenditures has a positive impact on budget deficit and revenues has negative impact on the

same variable as when government expenditure increases more than then the revenues, it increases the budget deficit. Whereas increase in revenues decreases the budget deficit. Debt servicing increases the budget deficit as it is a non-development spending and creates problems and lead towards hampering the budget deficit.

The study concludes that IMF loans do affect fiscal policy structure of Pakistan, in that whenever Pakistan takes program from IMF, different conditions are imposed. Some of them are to increase revenues, bring austerity in spending; remove subsidies and reducing the fiscal deficit etc. To incorporate such changes, fiscal policy of Pakistan do change. Different measures are taken to raise revenues, controlling the expenditures so that fiscal deficit could be reduced. This indicates that International Monetary Fund has influence on the fiscal policy of Pakistan.

1.2 POLICY IMPLICATIONS

1) The taxation system must be corrected. There must be some changes in the tax administration system. There should be one window operation for the taxpayers. Their trust is needed to be strengthened so that they contribute in the revenue generation of the country.

2) The ratio of direct and indirect taxation is high in terms of indirect taxation. The measures should be taken to reverse the ratio means more direct taxes and less of indirect taxes. As this will put little pressure on the poor section.

3) Agriculture tax should be imposed on the agriculture sector. As this is the sector that contributes more in the economy. Government should take measures to bring this important sector under the tax net.

4) Progressive income tax must be taken under consideration. This will help in revenue generation. The segment of the economy that is earning more, the percentage of tax from them has to be more as compared to those who are earning less. It's better to decrease indirect taxes and more focus should be given on direct taxation.

5) Proper utilization of loans is very important. As most of the part of it spends on servicing of debt and less spend on development side. The loans should be spent appropriately with proper check and balance.

6) Spending on the development side is very necessary. When government spends on development sector, it gives output and generate employment. As a result, revenues collection increases.

7) Import duties must be increased as such taxes can help in revenue generation.

8) It's better to decrease non development spending and more spending should be done on development sector. As development sector helps in the development of the economy and also leads to the welfare of the society.

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Appendices:

Table No 3.A. Augmented Dickey Fuller (ADF) Test

Variables	Level t-statistics	1st difference t-statistics	Order of Integration
lnTAX	-6.62*		I(1)
lnTEXP	-5.85*		I(1)
lnBD	-5.87*		I(1)
lnFER	-3.92*		I(0)
lnDD	-5.68*		I(1)
lnDS	-5.46*		I(1)
lnINC	-1.56*		I(1)
lnGR	-4.66*		I(0)
lnAGR	-5.95*		I(0)
lnIND	-4.43*		I(0)
lnTR	-6.40*		I(1)

Note denotes* significance at 1 %