



Demand Management Policies and Macroeconomic Performance in Pakistan

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ARTICLE DETAILS	ABSTRACT
History Revised format: Aug, 2020 Available Online: Sep, 2020 Keywords Macroeconomic Performance Index, Fiscal Policy, Monetary Policy, ARDL.	Though there is enough literature available about the impact of monetary and fiscal policies on economic growth. But according to my best knowledge no study has to investigate the impact of demand management policies on macroeconomic performance. Economic performance usually assessed in terms of achievement of economic objective. That's why in this study we see the impact of demand management policies on macroeconomic performance in Pakistan that covers all the short term and long-term objectives of these policies using time series data from 1980 to 2017. By applying ARDL technique two models regarding these policies are discussed. One is concerned to monetary policy and economic performance and second is related to fiscal policy and economic performance. The long run results of this study show that all fiscal variables positively affect growth and performance of a country but monetary policy variables like exchange rate, lending interest rate and money market rate negatively effect on economic performance whereas broad money and inflation positively affect the economic performance of a country.

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1. Introduction

The main objective of macroeconomic policy is to achieve high and sustainable economic growth combine with price stability (low inflation). The first objective (economic growth) of macroeconomic policy can be achieved with the help of fiscal policy whereas the second objective of this policy (low inflation) can be achieved more favorably with monetary policy because in the long run inflation is a monetary phenomenon. But in the short run and medium run, the issue of inflation can be solved by the changes in the relative elasticity's of interest rate, prices and wages (Memon et al. 2014). The effectiveness of both policies (monetary and fiscal) has been a serious debate between the two major schools of thought (Keynesian and Monetarist). According to Monetarist 'Fiscal Policy' is less effective as compare to monetary Policy for Macroeconomic stabilization, monetary policy works under the supervision of central bank that controls money supply with

the help of its tools to achieve the objectives of 'monetary policy' like higher economic growth and price stability. It means that monetary policy has the ability to control the circulation of money and cost of borrowing (interest rate). However, one of the main objectives of monetary policy is to achieve the rapid economic growth with lower inflation (Noman and Khudri, 2015). The Keynesian school of thoughts pointed out many drawbacks of monetary policy especially 'Liquidity Trap' and 'Reverse causation', monetary policy is not more effective because reverse causation is attached with monetary policy. Further the shortcoming of monetary policy is due to its ineffectiveness in case of liquidity trap; in this situation the suitable stabilizing policy is fiscal policy. Lot of economist are of the view that liquidity trap rose during 1930s great depression. But some studies do not agree with Keynesian views like Buiter (1976) claimed that "fiscal policy is considered as less effective because of crowding out effect". In Pakistan, during the period 1972-1990 financial sectors efficiency severely affected due to Govt. control on lending and deposit rate, credit ceiling, subsidies and direct credit, unhealthy competition among the banking sector, banking sector's working under the control of bureaucratic machinery, role of non-banking sector, etc. In late 1980s, the restructuring process starts in Pakistan by the direction of International Monetary Fund (IMF) and World Bank. This restructuring process includes the two types of actions. One is related to stronger the financial institutions and other is concerned to improve the efficiency of financial market (Hanif, 2003). Due to these reforms, some positive changes occur in the money and foreign exchange markets. But it has not been successful for improving the macroeconomic environment of the country (Hanif, 2003). In Pakistan, this restructuring process was introduced in an environment of macroeconomic instability such as, budget deficit and unstable inflation means price instability. Fiscal policy refers to all those arrangements which are adopted by the Govt. to collect revenue and make the expenditure. So that economic stability could be attained without inflation and deflation (Samuelson, 1993). Due to changes in Govt. expenditure and taxes, Govt. may have to face the problem of budget deficit i.e. $G > T$. Fiscal deficit is the characteristic of Pakistan economy that can be financed by either printing new notes or issue debt. In Pakistan financial market is under developed. That's why it has to finance its expenditure through printing of new notes that badly affect the role of monetary policy for achieving its objective because the main objective of monetary policy is to control inflation. It means that monetary policy is heavily dependent on government's fiscal decisions. Sargent and Wallace (1981) discussing the relation between monetary and fiscal policies. They argued that without the support of fiscal policy, monetary authorities are not always in a position to control inflation. All these findings represent that Pakistan is a fiscal dominance country where monetary policy has to face some problems to achieve its objectives, especially in case of low and stable price level. Historically Pakistan has to face macroeconomic imbalances such as very low international reserves, current account and budget deficit, high domestic and foreign debt, high nominal interest rate, high inflation and low economic growth. The current fiscal deficit is 4.3% of GDP and average economic growth is 4.7% Jul-Mar 2017-2018. These macroeconomic imbalances are also responsible for high inflation and unemployment in Pakistan. The main strand of the study has to do with demand management policies that are critical for stability and sustainability of Pakistan economy. Good management of these policies is helpful for the country to come out of recession. The key to success of the economy depend on how well our demand management policies work. The effective management of these policies positively affects the economy by increasing the employment opportunities (reducing unemployment), by controlling budget deficit, inflation and

improving growth rate of gross domestic product. But if these policies are not well managed then entire financial system and the economy are affected negatively. The rest of the paper is organized as follows: Section 2 discusses the empirical literature about monetary and fiscal policy and economic growth and at the end it also discusses the conclusion of this section and research gap. Section 3 provides Model, Data description and Methodology. Section 4 presents the econometric results and finally section 5 presents the conclusion of this study and policy recommendations.

2. Review of Empirical Literature

This section is based on review of related literature at national and international level on impact of fiscal and monetary policy on macroeconomic performance. Many studies have been done to focus this issue at national and international level. Present section provided related studies regarding the impact of monetary and fiscal policies on economic growth of the country.

Table1: Summary of the Studies on Monetary and Fiscal Policies and Economic Growth

Reference(s)	Time Period	Country	Technique	Major Results
a. Studies on Monetary Policy and Economic Growth				
Lee and Werner (2018)	1951-2008	US, UK, Japan, Germany	Granger Causality test and GewekeMeese Dent (GMD)	Traditional monetary policy were faulty that ignore quantity variables and consider interest rate as a major determinants of policy.
Akalpler and Douhok (2018)	1985-2014	Malaysia	OLS regression estimates	Economic growth was positively correlated with MS, inflation and rate of interest.

Chen <i>et al.</i> (2015)	1999-2015	China	Qual VAR	Impact of monetary policy shocks in term of asset prices clarified the assets price reactions were different in case of easy and restrictive policy.
Wang <i>et al.</i> (2015)	Date from three period 1: pre-post-3 month 2:pre-post-6 month 3: pre-post-6 month	US and Japan	The conventional value at risk (VAR)	M.P was less effective due to geographical condition.
Rashid and Jehan (2014)	1980-2009	Pakistan	Co-integration technique and VECM	S.R interest rate was best measure to affect output

				growth and MS for inflation.
Hanif (2014)	1951-2010	Pakistan	Vector Autoregressive (VAR)	Monetary measures played an important role in generating inflation while real measures help to cure inflation.
Zakir and Malik (2013)	1977:Q2to 2011:Q2	Pakistan	Methodology given by cover (1992)	Level of output can be changed due to negative change in MS not due to positive change in MS.

Hassan and Shahzad (2011)	1976-2007	Pakistan	OLS and Granger test	L.R change in required reserve ratio was responsible to inflation.
Aleem and Lahiani (2011)	1992Q1 to 2008 Q1	Pakistan	GMM	Domestic M.P was determine by the help of Fed's M.P.
Saizar and Chalk (2008)	1996-2007	Pakistan, and Brazil China	Vector Autoregressive (VAR)	Significant association exists between rate of interest, output and inflation.
b. Studies on Fiscal Policy and Economic Growth				
Ogundana <i>et al.</i> (2017)	1994-2013	Nigeria	OLS	In Nigeria direct and indirect taxes positively affect its growth.
Ijirshar <i>et al.</i> (2016)	1981-2014	Nigeria	Unit root test	Effects of domestic debt (DD) stocks on economic growth (E.G) were positive but it's servicing
				adversely affect economic growth.

Sasmal and Sasmal (2016)	1990-2010	India	Panel regression technique	Increase 'Govt. spending' on infrastructure enhance its per capital income that increases the per-capita and economic growth.
Hassan (2015)	1991-2012	Pakistan	OLS Regression Technique	'Positive' impact of taxes on economic Growth.
Azeem <i>et al.</i> (2013)	1975-2009	Pakistan	Johenson co-integration	Negative impact of taxes on 'economic growth'.
Wang (2011)	1986-2007	China	Panel type VECM and Quantile regression	Panel VECM shows the 'positive association' among expenditure growth and 'economic growth'.
Ying WU <i>et al.</i> (2010)	1950-2014	Taiwan	Panel Granger causality test	Public spending (PS) 'positively' related to 'economic growth'.
Chaudhary and Munir (2010)	1973-2009	Pakistan	Auto regressive model	Contribution of tax revenue was small in this country.

Sheikh <i>et al.</i> (2010)	1972-2009	Pakistan	OLS	Domestic debt stocks 'positively' affect economic growth but debt servicing 'negatively' affect its growth.
Idrees and Saddiqui (2007)	1990-2006	Some developed and developing countries	Residual-based panel co- integration	Impact of public expenditure on growth is greater in developing countries as compared to developed countries.

Source: Authors' compilation In this section, we have examined the causality, nature and type of 'monetary' policy that effect 'growth' by considering panel or time series data. The most frequent technique that is used in this section is VAR, VECM and Regression analysis by studying the case of developed and developing countries. The effect of 'monetary' policy on "economic growth" is positive as well as negative. In some studies traditional monetary policy proves faulty because it ignores quantity variables and only focused on interest rate that is wrong. Empirical results show that impact of monetary policy variables on economic growth to be stronger in developed countries as compare to developing countries. It is due to the fact that financial market is well furnished in 'developed' nations. Above studies also indicate that less effectiveness of 'monetary' policy is the result of uncertainty in the economy. All above discussion present the conflicting results regarding the effectiveness of policy that is based on the different type political and economic system of the countries. Differences in results based on choice of variables, model specification, econometric technique and nature of data. Here we also discussing the role of 'fiscal policy' in the form of (1) Education expenditure and economic growth (2) Health expenditure and economic growth (3) Public expenditure and economic growth (4) In revenue side only taxes are taken into account. Here we see that by applying most frequent techniques like VAR and Regression analysis and by using time series data all types of expenditures (Govt. spending, health and education) affect 'positively' most of the times but sometimes it affect negatively to economic growth. The effect of Govt. expenditures on economic 'growth' is positive as well as negative. If such like expenditures are examined as share of GDP then these affect 'growth' negatively but if these are taken as percentage change per annum they affect positively. Such like results also concerned to education and health expenditures. Most of the times both affect growth 'positively' in developed and developing countries. In short, we say that researchers provide strong evidence about the stronger role of fiscal policy in developed and developing countries. But the role of taxes may be positive or negative. These results are controversial. Such like results are discussed in case of domestic and external debt. Again as we

discussed above this controversy depends on different political and economic system, techniques, models and differences in the nature of data. After examining the empirical studies, it can be inferred that no study has investigated the impact of demand management policies on macroeconomic performance by making macroeconomic performance (MEP) index. The study would construct an index of macroeconomic performance for the first time in Pakistan case and link it with the demand management policies.

3. Model Specification

Based on the literature review, the connection between demand management policies and macroeconomic performance could be examined using two models:

Model 1: Monetary Policy and Macroeconomic Performance

In this model we see the relation between monetary policy variables and macro economic performance with the help of general form equation and in an econometric form.

$$EPI = f(M, ER, INT, INF, MMR, \dots) \quad (1) \quad \text{The}$$

econometric form of the specified model is:

$$EPI = +\beta_0 + \beta_1 M_2 + \beta_2 ER + \beta_3 INT + \beta_4 INF + \beta_5 MMR + \epsilon \quad (2)$$

Model 2: Fiscal Policy and macroeconomic Performance

Here we see the relation among fiscal policy variables and macroeconomic performance in general form equation and in an econometric form.

$$EPI = f(DT, IDT, NDE, DE, DD, ED, \dots) \quad (3) \quad \text{The}$$

econometric form of the specified model is:

$$EPI = +\beta_0 + \beta_1 DT + \beta_2 IDT + \beta_3 NDE + \beta_4 DE + \beta_5 DD + \beta_6 ED + \epsilon \quad (4) \quad \text{Data:}$$

Sources and Description

For attaining consistent outcomes reliable and accurate data is necessary. In this study, annual time series data has been used from World Development Indicators (WDI), International Financial Statistics (IMF), International Debt Statistics (World Bank) and Pakistan Economic Survey published by Ministry of Finance. Econometric analysis consist the data from 1980-2017 in order to check the association among variables. The choice of this time period is due to the availability of accurate data of the concerned variables. In order to analyze the impact of demand management policies on macroeconomic performance, secondary type of time series data has been used in this study. Table 2 summarizes the description, data sources and expected signs of monetary and fiscal policy variables.

Table 2: Variables: Description, Sources and Expected Signs

Variables	Description	Data Source	Expected Signs
Dependent Variable			
EPI	Economic Performance Index	Khramov and Lee (2013)	
Independent Variables			
M2	Broad Money (% of GDP)	WDI (2018)	+

ER	Exchange rate	WDI (2018)	—
INT	Lending rate (interest rate) (% annual)	WDI (2018)	—
INF	Inflation rate (% annual)	WDI (2018)	+
MMR	Money Market rate (% annual)	IFS, IMF	—
DT	Direct Tax (% of GDP)	Pakistan Economic Survey (Various Issues)	+
IDT	Indirect Tax	Pakistan Economic Survey (Various Issues)	+
NDE	Non-Development Expenditure (% of GDP)	Pakistan Economic Survey (Various Issues)	+
DE	Development Expenditure (% of GDP)	Pakistan Economic Survey (Various Issues)	+
DD	Domestic Debt (% of GDP)	Pakistan Economic Survey (Various Issues)	+
ED	External Debt (% of GDP)	IDS, World Bank	+

Source: Authors' own elaborations

Methodology: ARDL

Here time series technique has been used because these techniques or approaches are especially suitable of an individual country. Furthermore, co-integration and Vector Error Correction model (VECM) that is based on autoregressive distributive lag (ARDL) model and Bounds Test are considered to estimate the previous models. For this empirical chapter co-integration and Vector Error model (VECM) approach is suitable because it provide an opportunity to examine the connection between demand management policies and macroeconomic performance in the short run and long run. Moreover, the estimated parameters are super consists that are using VEC model. Now in order to test the relation among variables following procedure has been adopted.

4. Results and Discussions

In this section we present the statistical and econometric analysis of the 'demand management policies and its impact on economic performance' in case of Pakistan.

4.1 Descriptive Statistics and Correlation Analysis

The starting point of any good empirical work is descriptive analysis because this analysis gives the summary of statistics correlation matrix and graphical representation of the data. Therefore the present study starts with prior empirical data analysis.

	EPI	M2	ER	INT	INF	MMR	DT	IDT	<u>NDE</u>	<u>DE</u>	<u>DD</u>	<u>ED</u>
Mean	85.73	42.18	49.80	12.09	7.95	7.94	2.82	7.65	14.28	3.24	32.94	0.28
Median	87.20	41.43	47.27	12.78	7.74	8.26	2.79	7.35	14.97	3.46	22.57	0.27
Maximum	107.61	49.19	112.91	15.42	20.29	12.47	4.05	10.83	19.21	6.32	128.72	0.36
Minimum	67.17	36.14	9.90	6.99	-0.76	1.33	1.75	3.05	5.42	0.70	2.45	0.22
Std. Dev.	7.79	3.65	31.98	2.09	4.17	2.99	0.72	2.04	3.35	1.88	34.90	0.04
Skewness	0.10	0.22	0.47	-0.72	0.42	-0.43	0.07	-0.23	-0.57	0.03	1.50	0.38
Kurtosis	3.89	1.91	1.98	2.96	3.49	2.53	1.78	2.08	2.62	1.51	4.14	2.10
Jarque-Bera	1.31	2.20	3.01	3.31	1.48	1.51	2.40	1.69	2.29	3.50	16.34	2.18
Probability	0.52	0.33	0.22	0.19	0.48	0.47	0.30	0.43	0.32	0.17	0.00	0.34
Observations	38	38	38	38	38	38	38	38	38	38	38	38

To precede the exact idea of the distribution of variables several modest measures can be valued like average, median, minimum, maximum, standard deviation, skewness, kurtosis and the Jarque-Bera statistic. We develop two models to examine the impact of demand management policies and macroeconomic performance by incorporating the different proxies. Results of the model are reported in Table 3.

Table 3: Descriptive Statistics of Key Variables (1980-2017)

Source: Authors' calculations

The initial result represents the problem of multicollinearity due to high correlation among the explanatory variables. The problem of multicollinearity arises when in the regression two or more explanatory variables are

highly correlated. The problem multicollinearity can be checked by examining the pair wise correlation matrix or condition incidence variance decomposition proportion and variance inflation factor (VIF). The simplest technique of detecting the problem of multicollinearity is investigation of correlation matrix where high pair wise correlation or cross partial correlation represents the existence of multicollinearity problem. Correlation matrix is used to measure the degree of linear association between two variables. It also suggests a strong relationship among the explanatory variables in both models. results reported in the Table 4.

Table 4: Correlation Matrix of Key Variables (1980-2017)

Correlation	EPI	M2	ER	INT	INF	MMR	DT	IDT	NDE	DE	DD	ED
EPI	1.00											
M2	-0.18	1.00										
ER	0.14	-0.32	1.00									
INT	-0.44	-0.21	0.25	1.00								
INF	-0.60	0.19	-0.17	0.36	1.00							
MMR	-0.40	0.60	-0.34	-0.04	0.72	1.00						
DT	-0.50	0.27	0.44	0.45	0.36	0.23	1.00					
IDT	-0.12	0.11	-0.89	-0.10	0.29	0.31	-0.36	1.00				
NDE	-0.29	0.23	-0.55	0.06	0.07	0.12	-0.08	0.63	1.00			
DE	0.11	-0.03	-0.73	0.02	0.06	0.04	-0.41	0.85	0.59	1.00		
DD	0.37	-0.50	0.93	0.25	-0.31	-0.50	0.19	-0.78	-0.54	-0.51	1.00	
ED	0.22	-0.17	0.83	0.15	-0.23	-0.26	0.30	-0.75	-0.47	-0.56	0.83	1.00

Source: Authors' calculations

4.2 Econometric Analysis

Now we are discussing the econometric results.

4.2.1 Augmented Dickey Fuller Test for Unit Root

Before applying any approach of co-integration, it is necessary to examine the order of integration of the relevant variables. ADF test contains three equations intercept, with intercept and trend and none. At least two coefficients (intercept, intercept and trend) must lie in the range of probability.

Table 5: ADF Results **ADF Unit Root Test on Level**

Variables	Intercept	Lags	Intercept and Trend	Lags	None	Lags	Conclusion
EPI	-2.6919 (0.0850)	0	-2.5787 (0.2915)	0	0.4822 (0.8144)	1	I(1)
M2	-2.0321 (0.2724)	0	-2.1334 (0.5110)	0	-0.4880 (0.4977)	0	I(1)
ER	2.1640 (0.9999)	0	-1.6701 (0.7438)	1	6.3210 (1.0000)	0	I(1)
INT	-2.5186 (0.1196)	1	-2.5280 (0.3137)	1	-0.0762 (0.6507)	0	I(1)
INF	-4.2204 (0.0027)	9	-4.1144 (0.0211)	0	-1.4985 (0.1236)	0	I(0)
MMR	-1.0908 (0.7092)	0	-1.2160 (0.8924)	0	-0.9696 (0.2910)	0	I(1)
DT	-1.3094 (0.6149)	0	-0.6926 (0.9663)	0	-0.5079 (0.4896)	0	I(1)
IDT	-0.1894 (0.9311)	0	-1.9335 (0.6170)	0	-2.0226 (0.0427)	0	I(1)
NDE	-0.7837 (0.8120)	0	-3.2474 (0.0925)	3	-0.7576 (0.3813)	0	I(1)
DE	-1.7259 (0.4103)	0	-2.5088 (0.3223)	0	-1.7038 (0.0834)	0	I(1)
DD	3.7293 (1.0000)	7	2.1725 (1.0000)	7	4.3037 (1.0000)	7	I(1)
ED	-1.5293 (0.5079)	0	-3.6551 (0.0385)	0	0.6799 (0.8583)	0	I(1)

Source: Author's calculations

From Table 5, we can say that ADF unit root test results shows that all the variables in the model (EPI, M2, ER, INT, MMR, DT, IDT, NDE, DE, DD and ED) are stationary at I (1) that is at first difference because all three Pvalues of the coefficient indicate that data is stationary except INF that is stationary at I (0) that is at level, as indicated by its P-value. All the variables represent the rejection of null hypothesis in the presence of unit root. Consequently to estimate the model ARDL approach can be applied and test for long run Cointegration hypothesis among the variables. The justification of ARDL approach is that when some variables are stationary at level i.e. I (0) and some at first difference i.e. I (1) then we would apply ARDL approach.

4.2.2 Bounds Test Analysis

Bounds test analysis is used to estimate the long run relationship between the variables. It is conditional that the long run coefficients of variables will be equal to zero. **Table 6: Bounds Test Results**

Model	F-Statistic	5% Critical Value		10% Critical Value	
		I(0)	I(1)	I(0)	I(1)
EPI/ M2, ER, INT, INF, MMR,	7.83	2.62	3.79	2.26	3.36

EPI/ DT, IDT, NDE,DE, DD, ED,	7.04	2.45	4.61	2.12	4.26
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Source: Authors' calculations

For model 1, the computed value of F-statistics is 7.83 while the critical value at 5% is 3.79 and at 10% are 3.36. Computed value is greater than the upper bound or critical value i.e. $F\text{-stat} > I(1) 7.83 > 3.79$.

In model 2, the computed value of F-statistics is 7.04 while the critical value is 4.61. This represents the computed value is greater than the upper bound or critical value i.e. $F\text{-stat} > I(1) 7.04 > 4.61$

So we will reject the null hypothesis that highlights the absence of co-integration in the model and accept alternative hypothesis. This shows that the long run relationship exist between the variables and co-integration also exist in the model.

4.2.3 Long Run Analysis of Model 1

In this section, we are discussing the long run relationship among variables, give reasoning about their significance and then interpreting them according to the economic theory. This is the second step of ARDL approach. The results that are obtained by applying ARDL techniques are given in Table 7.

Table 7: Long Run Results of Monetary Policy and Macroeconomic Performance

Dependent Variable: EPI				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
M2	1.1640	0.5900	1.9727	0.0768
ER	-0.1735	0.0871	-1.9911	0.0745
INT	-1.0518	0.1772	-5.9343	0.0001
INF	0.8122	0.3015	2.6934	0.0226
MMR	-3.9017	1.2675	-3.0783	0.0117
C	0.3233	0.1669	1.9369	0.0815

Source: Author's calculations

In Table 7 economic performance index (EPI) is used as dependent variable and the rest of the variables are used as independent variables. Table 5.5 shows that the coefficient of M2 is positive and its value is 1.1640. It is statistically significant as shown by its value of probability i.e. 0.0768. The coefficient value of M2 indicate that

1% rise in M2 will increase the EPI by 1.1640 units. It points out that when central bank increases the money supply in the country, rate of interest falls and as a result lending increases that increases the level of investment, aggregate demand and output of an economy. It stimulates economic growth and improves economic performance of a country. So M2 has positively related to EPI. The results are matched with the findings of Zakir and Malik (2013) and Akalpler and Duhok (2017). The coefficient of ER is negative and its value is 0.1735. It is statistically significant as shown by its probability value which is 0.0745. The value of coefficient of exchange rate shows that 1% rise in ER would results in a reduction in EPI by 0.1735 unit. Theoretically, it is proved that ER is negatively related to economic growth or economic performance i-e when ER fall domestic currency becomes cheaper as compare to foreign currency or it lowers the value of domestic currency relative to foreign currency. As a result domestic goods become cheaper than foreign goods. That's why export of a country increases, imports of goods and services fall that increases net exports of goods and services and output of an economy that improves economic performance of an economy. The results matched with the findings of Varlik and Berumend (2017). They concluded that exchange rate has negative relationship with economic performance. The coefficient of lending interest rate (INT) is negative and its value is 1.0518. It is statistically significant as indicated by its probability value that is 0.0001. That value of coefficient of INT shows that if INT rises by 1% then accordingly there would be 1.0518 unit reductions in economic performance. Theoretically, it can be explained by Keynesian view where they explained that real long term interest rate has a major impact on spending rather than short term interest rate. It can be interpreted as when rate of interest fall due to easy monetary policy it lowers the cost of lending. That's why lending increases that increases the investment, aggregate demand and output of an economy. It also improves economic performance of a country. These results are supported by Lee and Verner (2018) and Varlik and Berument (2017). The coefficient of INF is positive and its value is 0.8122. It is statistically significant as indicated by its probability value that is 0.0226. The value of coefficient of inflation rate shows that if INF increases by 1% than accordingly there would be 0.0226 unit increase in economic performance. Theoretically, Mundell's model shows that when inflation rises it reduces people's wealth. This is due to the fact that rate of return on individual real money balance falls. People save more in order to accumulate the desired wealth. People will save more by converting their assets, increasing the asset prices. Simply in Mundell's view, more saving equals greater amount of capital accumulation that faster economic growth and economic performance of a country will improve. Tobin (1965) also certified Mundell approach with some improvement. He explained that when people prefer future consumption over current consumption (saving) by either holding money or acquiring capital. Tobin explained this in other words that inflation is responsible to substitute money for interest earning assets that increases capital accumulation and foster economic growth and improve economic performance. The results are matched with Akalpler and Duhok (2017). The coefficient of money market interest rate (MMR) is negative and its value is 3.9017. It is statistically significant as indicated by its probability value that is 0.0117. The value of coefficient of MMR shows that if MMR increases by 1% than accordingly there would be 3.9017 units fall in EPI. Theoretically, when MMR increases it increases the cost of capital that reduces lending and then as a result level of investment, aggregate demand and output of an economy falls down. It adversely affect on economic growth and economic performance. The results are matched with Wang et al. (2015).

4.2.4 Error Correction Analysis of Model 1

In order to investigate the dynamic behavior of the variables both in short run and in long run, the vector error correction model (VECM) including the error correction term will be calculated, since the variables under consideration are co integrated. The VECM discuss that how much time is required for examined variables to

move toward its long run equilibrium state. Now we examined the short run results of coefficient with ECM or cointeq. The representation of ECM of model is presented in Table 8.

Table 8: Error Correction Results of Monetary Policy and Macroeconomic Performance

Dependent Variable: EPI				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(EPI(-1))	-1.4127	0.2862	-4.9359	0.0006
D(M2)	0.8122	0.3015	2.6934	0.0226
D(M2(-1))	-0.6628	0.5720	-1.1587	0.2735
D(M2(-2))	0.8561	0.3828	2.2363	0.0493
D(ER)	0.4789	0.4037	1.1864	0.2629
D(ER(-1))	-1.1610	0.4572	-2.5395	0.0294
D(ER(-2))	0.7235	0.4029	1.7958	0.1028
D(ER(-3))	-0.3848	0.2903	-1.3254	0.2145
D(INT)	-2.1397	1.3267	-1.6128	0.1379
D(INT(-1))	-1.1572	1.1374	-1.0174	0.3330
D(INT(-2))	-0.9591	1.3071	-0.7337	0.4800
D(INT(-3))	-1.1200	0.8961	-1.2498	0.2398
D(INF)	-0.4913	0.3551	-1.3836	0.1966
D(MMR)	1.1530	0.6106	1.8882	0.0883
D(MMR(-1))	-0.9634	0.5594	-1.7220	0.1158
D(MMR(-2))	0.5557	0.6453	0.8611	0.4094
D(MMR(-3))	-1.7659	0.5876	-3.0053	0.0132
CointEq(-1)	-0.7360	0.2872	-2.5627	0.0282

Source: Author's calculations

4.2.5 Model 2: Fiscal Policy and Macro Economic Performance

The long run results of fiscal policy macroeconomic performance which are obtained by applying ARDL technique are given in Table 9.

Table 9: Long Run Results of Fiscal Policy and Macroeconomic Performance

Dependent Variable: EPI				
Variable	Coefficient	Std. Error	t-Statistic	Prob.

DT	0.1755	0.0356	4.9283	0.0000
IDT	5.8866	2.5937	2.2696	0.0297
NDE	4.7311	1.8267	2.5899	0.0139
DE	0.1755	0.0356	4.9283	0.0000
DD	4.8169	1.6550	2.9104	0.0065
ED	0.2241	0.0425	5.2694	0.0000
C	0.9771	0.4991	1.9577	0.0588

Source: Authors' calculations

Here we see the long run relationship between dependent variable EPI and independent variables like DT, IDT, NDE, DE, DD and ED. The table 9 shows that the coefficient of direct tax (DT) is positive and its value is 0.1755 statistically it is significant as shown by its value of probability i.e. 0.0000. The value of coefficient of DT indicates that 1% rise in DT will increase EPI by 0.1755 units. Theoretically, it can be explained as tax is a compulsory payment which is paid by the resident of the country to the Govt. Govt. can finance its expenditure by imposing taxes which includes public debt, sales of assets, printing of new notes and drawing down cash reserves with the central bank of a country. Tax is a cheaper and popular source for Govt. spending as compared to other sources. This system provides a conducive environment for the promotion of economic growth in a way of mobilizing nation's internal resources in an effective manner. Theoretically, the main objective of taxes was to raise Govt. revenue but now it affects production, consumption and distribution of income. Social welfare through taxation can be used as an important tool for encouraging investment and saving, optimal allocation of resources accelerating economic growth and price stability (Edame and Okoi, 2014). Further redistribution of income or wealth and readjustment of the economy can be achieved through taxes (Ojo, 2009). Therefore to stimulate and guide the country's economic and social development. This is the most effective levies of the Govt. (Abata, 2014) in promoting economic development of a country. It plays a prominent role, that includes regional development, reduction in income inequalities, inflation control, resource mobilization, foreign exchange and for resource mobilization (Nzontta, 2007). Simply we say that tax plays a vital role for economic growth and improves economic performance of a country (Ogundana, 2017). The coefficient of indirect tax (IDT) is positive and its value is 5.8866. Statistically it is significant as shown by its probability value which is 0.0297. The value of coefficient of IDT indicates that 1% rise in IDT would result in 5.8866 unit increase in EPI. There is a positive relationship between IDT and EPI. It is expressed as when indirect taxes (sales tax, excise duty, value-added tax, etc) increase it positively affects economic growth. We can explain it with the example of value-added tax (VAT). VAT is non-distortionary (Alan, 1990) It not only promotes objectivity and regularity of tax burden but also helps for increasing productivity and industrialization with some exceptions. VAT is a constant tax rate over time. It does not adversely or negatively affect the choice of household savings, business choices regarding financing instruments, organizational form or new investment (Brown and Gale, 2012). Through production chain, it ensures mobilization of revenue. If it is well designed and fully implemented it can generate revenue on a sustainable basis and it could also provide a stable source of revenue (Hassan, 2015). The coefficient of non-development expenditure (NDE) is positive and its value is 4.7311. It is statistically significant as shown by its probability value 0.0139. The value of NDE indicates that 1% rise in NDE would result in 4.7311 unit increase in

EPI. There is a positive relationship between NDE and EPI. Non-development expenditure includes Govt. expenditure on debt servicing, debt repayment, defense, subsidies, and expenditure on civil administration and on pension. Normally it is considered that NDE negatively affect economic growth. But Wagner's law holds that Govt. expenditure on development and non-development purpose both increases economic growth. According to Wagner's law when Govt. spend on defense side in order to set-up a strong defense network or it spend to maintain law and order in the country in this way such like increased Govt. expenditure not only positively affect on individual but also provide positive impact on economic growth and economic performance (EP) of the economy improves. The results are similar to those of (Dudzeviciute et al, 2017) and (Wu et al, 2010). The coefficient of development expenditure (DE) is positive and its value is 0.1755. Statistically it is highly significant as shown by its probability value which is 0.0000. The value of coefficient of DE indicate that 1% rise in DE would result 0.1755 unit increase in EPI. Development expenditure (DE) includes expenditure on health, education, infrastructure, agriculture, industry, trade, etc. When Govt. increases its expenditure on health care or education it actually increases the productive capacity of their workers. As a result, not only the personal income increases but it prominently affect economic growth and improves EP of a country. These results are similar to (Wu et al, 2010). Table 9 shows that the coefficient of domestic debt (DD) is positive and its value is 4.8169. It is statistically significant as shown by its value of probability that is 0.0065. The value of coefficient of DD indicate that 1% rise in DD will increase EPI by 4.8169 unit. Theoretically, the link between DD and EPI is negative but if resources that are generated through domestic borrowing are used to finance development projects or those expenditures of Govt. contribute economic growth. Such types of expenditures improve EP of a country. Another reason of this positive relationship is DD may be marketable and market-base DD increases economic growth and reduces external shocks (Sheikh et al, 2010). The deeper and highly developed capital market that increases efficiency and volume of private investment positively affects economic growth, inflation and savings. According to Greiner (2011) the effects of debt can be checked in the presences of rigidities and in the presence of elastic labor supply. Public debt negatively affects economic growth but in presence of wage rigidities and unemployment then it positively affect economic growth if it is useful in financing productive investment (Mousa and Shawawreh, 2017). Table 9 shows that coefficient of external debt (ED) is positive and its value is 0.2241. Statistically it is highly significant as indicated by its probability value that is 0.0000. The value of coefficient of ED indicate that 1% rise in ED will increase EPI by 0.2241 unit. It points out that external debt stock affect economic growth while the impact of debt service on economic performance and growth is negative. This result is according to Neoclassical and Endogenous growth model that favor this view where ED and economic growth are positively related to each other because according to them debt is the main source of financing capital formation. So if these type of financing affect investment positively, it could promote economic growth. ED can be productive if it is well managed in such a way the rate of return on ED should be greater than the cost of serving. It is generally expected that developing countries have to face a short of finance. If, for the purpose of increasing domestic saving and investment this short fall is finance through external debt at some borrowed rate. The borrowed rate depends on the relationship between domestic and foreign saving, investment and economic growth. In such a way borrowed country increase their capacity output with the help of foreign saving (Ijirshar et al, 2016).

4.2.6 Error Correction of Model 2

Now we represent the results of error correction model (ECM) of model 2 in Table 10.

Table 10: Error Correction Results of Fiscal Policy and Macroeconomic Performance

Dependent Variable: EPI

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(EPI(-1))	-1.0518	0.1772	-5.9343	0.0001
D(DT)	4.6691	3.4413	1.3568	0.1880
D(IDT)	4.4214	1.9830	2.2296	0.0358
D(NDE)	-0.3895	0.6405	-0.6081	0.5491
D(NDE(-1))	1.8265	0.7473	2.4442	0.0226
D(DE)	1.8795	1.1197	1.6785	0.1068
D(DD)	-2.0735	0.5119	-4.0505	0.0005
D(ED)	-79.5815	47.9841	-1.6585	0.1108
CointEq(-1)	-0.6862	0.2009	-3.4165	0.0024

Source: Authors' calculations

The error correction term in second model is negative and highly significant that confirms the existence of long run association between the selected variables. It also represents the speed of adjustment with which the model achieves the steady state equilibrium in short run by following an exogenous shock. The coefficient of ECM term indicates that the deviation from long run equilibrium will be corrected by a speed of half year.

5. Conclusions and Policy Recommendations

The present study clarifies the impact of these policies on economic performance. In recent years there has been a serious theoretical and empirical debate for the role of these policies that affect economic performance of any economy. But from different empirical studies we have to face conflicting results. These conflicting results are due to the differences at different levels specific country studies and country group, using different econometric techniques not help to reach any concrete conclusion. Indeed, empirical results are not clear and vary according to the measures of policies; functional form; estimation method and data frequency. In this study we have introduced two models. To check the stationarity of data Augmented Dickey Fuller (ADF) test has been applied of the variables in the observed period from 1980-2017. ARDL is the most appropriate technique for analysis in this study. Data have been collected from different sources such as World Development Indicators (WDI), International Financial Statistics (IFS) and Pakistan Economic Survey. The key objective of the study is to explore the association among 'demand management policies' and macroeconomic performance in case of Pakistan that is very important and attractive to policy makers. For this purpose different proxies were employed to investigate this relationship. This study reveals that the effect of all fiscal policy variables on economic performance in the long run is positive, means fiscal policy positively affect economic performance in the long run. In case of monetary policy broad money and inflation positively affect economic performance of a country while the effect of other indicators like exchange rate, lending interest rate and money market rate negatively affect 'economic performance'. Whatever our empirical results represent, the relative effectiveness of both policies still remains a puzzle in macroeconomic management. There are so many factors that are responsible for confusing results, such as country specific elements (institutional, developmental, political and so on), selection of variables, treatment, methodological approaches, etc. So, it is clear that all these issues can be settled if country specific works focusing very much in all these aspects.

The findings of this study clear that Pakistan is a fiscal dominant country where monetary policy has to face some constraints to achieve its objectives, especially low and stable price level. Govt. expenditure policy is helpful and effective to show crowding in effect of fiscal policy but at the cost of higher inflation. So, the coordination is required among the authorities of both policies and observance of monetary policy rules along with fiscal policy rules can bring sustainable growth with low and stable price level. Keeping in view the objectives of the present study, there are some suggestions that promote economic performance in Pakistan. Monetary authorities should focus their attention on controlling and operating the short term interest rate in form of prime lending interest rate (INT) as well as the treasury bill rate (MMR) as the major tool to promote economic growth and performance of the domestic country.

1. The study recommends that there is need for the Govt. to control exchange rate (ER) as their decrease will stimulate net exports which positively affect the economic performance of a country.
2. Monetary authorities should also concentrate their attention on increasing the impact of money supply growth on economic performance of the country. It's an important tool because of its flexibility and ease monetary authorities can operate it to fit the present economic situation.
3. There is need for the Govt. to promote inflation for economic growth and economic performance. Pakistan economy is not running at full capacity. There are unused resources and labor in our country. In such like situation there is also a theoretical justification to promote inflation to increase production. More dollar translate to more spending that increases aggregate demand and more demand stimulate more production to meet that demand.
4. This study recommends that fiscal policy is fully effective. So, with the help of Govt. expenditure (development and non-development) it can promote growth and economic performance in an effective manner.
5. As study pointed out that debt stocks (DD, ED) positively affect economic performance in Pakistan. The study recommends that (i) these debt stocks should be effectively managed. The Fed Govt. should personally provide guidelines about the purpose, duration, requirements, commitments and uses of external debt. (ii) There should be rearrangement for repayment of external debt within the agreed time period. (iii) These loans only use for productive purposes or investment of higher priorities. That would help us in yielding returns. Otherwise our economy will stick in serious and serious economic problems.
6. This study further recommends that Govt. should use direct and indirect taxes in an effective manner. If these internal resources are used in an effective manner, these promote economic growth and performance. If Govt. redistribute these resources it will helpful to provide conducive environment for encouraging investment, saving, optimal allocation of resources and promote economic growth and price stability.

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