**SYNTHESIS OF THE FISCAL AND MONETARY
POLICIES IN PRICE LEVEL DETERMINATION:
EVIDENCE FROM PAKISTAN**

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Price stability is one of the key objective of public policy. Ever increasing prices have negative implications for economic growth and poverty. The present study attempts to analyze; how prices in Pakistan are affected by monetary and fiscal policies. It analyzes the interaction of domestic debt, fiscal deficit, money supply and exchange rate with the price level, by applying the VAR decomposition, Granger causality and Impulse response models. The study uses data for the period 1973 to 2010. The results reveal that in Pakistan both Monetary and Fiscal policies play significant role in determination of prices. However, the role of fiscal policy is comparatively stronger than monetary policy as it has both direct and indirect impacts on prices. As the fiscal deficit and domestic debt also affects prices through money supply. Furthermore, the effects of inflationary expectations on prices are highest in magnitude. The study suggests that to cope with increasing prices the coordination between fiscal and monetary policies is necessary.

I. Introduction

Price stability is a key objective of public policy. Until 1990, it was assumed that only monetary policy instruments have significant impacts on variability of price level. Friedman (1981) views that inflation always and everywhere and is a monetary phenomenon. According to the monetarist views, monetary policy has a control over inflation. The Fiscal Theory of Price Level (FTPL) has denied this conventional view. [Sims (1994), Woodford (1994), (1995), and Leeper (1991)]. It suggests that for price stability fiscal policies play a vital role in price determination and unless appropriate steps are not taken by the fiscal authorities monetary policy strictness cannot work alone. In the words of Sargeant (1981), "if the government has a process for government expenditure and it wants to satisfy its budget constraint then taxation and money stock would work simultaneously". Over years, fiscal and monetary dominance remained an issue of great concern among the economists. Cochrane [(1999), (2000), (2005)], Canzoneri et al. (2001), Sims (1994), Woodford (1996), (1998), (2000)], Aiyagari (1985) and Schmitt (2000); argued that, consequences of fiscal and monetary policies depend on dominance of the respective

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policy. Theoretically, there are two regimes for price determination: (I) "monetary dominant regime" and (II) "fiscal dominant regime". In the monetary dominant regime, the classical quantity equation determines the price level and the monetary policy plays an effective role while, fiscal policy remains reactive. Thus, policy makers should take the rate of inflation as given (determined by the monetary policy), and they need to balance the inter-temporal budget so that future surplus must be sufficient to pay back the debt; whereas, "fiscal dominant regime" asserts that price level is determined by the government's inter-temporal budget constraint, hence, monetary policy will be reactive – the change in prices will force the money supply to react to balance the money demand equation. Consequently fiscal variables determine the price level.

However, in the recent years literature has shown that, even with an independent monetary policy, following a reactive interest rate rule rather than directly controlling quantity of money under certain conditions, the price level is still uniquely determined by the quantity of money. This has weakened interest in the FTPL, [(Bassetto (2008)]. In the case of developing countries, where the price level is uniquely determined by the monetary policy alone, the monetary policy may not be independently determined and be influenced excessively by fiscal policy. Therefore, the question of relative importance of the fiscal and monetary objectives in determination of the price level remains a valid issue. The present endeavour applying various model specifications and using time series methodologies (Variance decomposition and Impulse response functions), analyzes significance of the fiscal and monetary policies in determination of the prices in Pakistan. The organization of paper is as follows; in Section II, a brief review of literature is presented, Section III presents a brief scenario of the public debt, money supply and fiscal balance in Pakistan, whereas Section IV discusses the theoretical model. As empirical estimation of the FTPL is rather new, therefore, the empirical methodology applied in the paper along with data sources and main variables are discussed in detail in Section V. Results are presented in Sections VI, whereas, Section VII concludes the study and presents policy implications.

II. Review of the Literature

The present section provides a brief overview of relevant studies regarding price level determination. Sim (1999) and Woodford (1998) are of the opinion that price level fluctuations with government budget constraint result in public finance benefits. Such variations in the price level, in response to the fiscal shocks, have impacts on taxing and subsidizing the holders of nominal government liabilities. Woodford [(1996), (1998), (2000)] emphasizes that the fiscal theory of price level provides a useful characterization of actual policies and, there was no use of the government budget constraint as it plays a little role in the economic policy analysis. These views are further supported by empirical analysis which conclude that fiscal deficits have influence on inflationary process, but monetary variables dominate to determine the inflation rate [Komulainen and Pirttila (2002), and Lcarlstrom and Fuerst, (2000)]. Similarly, Mandilaras and Levine (2001) concluded that level of

inflation is determined by the public debt on the basis of significant factors like maturity, currency denomination, the features of indexation and the structure of public sector liabilities; whereas, Loyo (1999) argued that, the Brazilian economy is based on Non-Ricardian assumption and the fiscal theory of price level explains the reason of inflation. Lawrence and Terry (2000) proved that, central banks can determine the average rate of inflation but it cannot perfectly control the variability of the price level, as the central banks are unable to eliminate the impact of fiscal shocks on the price level. In addition, Sala (2003) found that, the fiscal theory of price level characterizes at least one phase of the post-war US history, specifically the period 1960–79. Using a similar approach Creel et al. (2002), concluded that, FTPL does not hold support for France and the U.S. Afonso (2002) is unable to find support for the FTPL in case of fifteen European economies. Similarly, Baldini and Ribineiro (2008) found mixed results for Sub-Saharan African countries, because some countries are dominated by fiscal regime, whereas, others are dominated by monetary regime; but in some cases, the aggregate demand affects changes in nominal debt which affect price variability implying that fiscal outcome could be direct source of inflation variability, as predicted by the fiscal theory of price level.

Very limited research exists on relative effectiveness of fiscal and monetary policies in determination of prices for Pakistan. Montiel and Haque (1991) examined the determinants of deficit and inflation in Pakistan and concluded that, to keep inflation under control Pakistan have relied on internal borrowing; whereas, the rising stocks of debt have resulted on upward pressure on interest rates causing deficit with higher inflationary impacts. According to Javaid et. al. (2008) history of Pakistan is evident that over the years, Pakistan has faced fiscal dominant regime. This fiscal dominance along with mismanagement of debt caused the public debt crises. The study concluded that, during the post 9/11 period increased volatility in prices in Pakistan is an outcome of the fiscal dominance in the country. Arby and Hanif (2010) conclude that coordination between fiscal and monetary policies is lacking in Pakistan. They asserted that, liberalization of financial sector has further enhanced the importance of coordination between the fiscal and monetary policies to achieve price as well as macroeconomic stability.

It may be concluded that, interaction between monetary and fiscal policy is an area of well-explored research in the developed countries. However, in the developing countries only limited studies are available. Furthermore, the results of studies conducted on the developing countries reveals that fiscal dominance might be an issue for emerging economies more than for developed ones. In view of this, there is a dire need to test the significance of fiscal dominance in Pakistan, which is the main focus of the present study.

III.   Monetary and Fiscal Balance in Pakistan

The present section explore the graphical relationship between inflation, fiscal and monetary variables. Pakistan always remained resource shortages, due to which its fiscal deficit remained over 5 per cent of GDP. Such a situation created an alarming situation in FY 1999-2000, when its public debt (including external debt)

was over 100 per cent of the GDP and debt servicing accounted for over half of its current revenues. From this, one can imagine the seriousness of financial problem at the beginning of this decade. As far as the domestic debt is concerned, it has frequently resorted to printing currency and creating debt from domestic resources, without proper analysis of their consequences [(Akram et al., (2011)].

Over the years, Pakistan being a developing country is facing the problem of fiscal deficit. The situation of fiscal deficit is summarized in Figure 1. It suggests that since 1972 there is a consistent problem of deficit. There are different ways to face the financial fiscal deficit e.g., imposing additional taxes, creating debt and through printing money. With small tax base in Pakistan every increase in tax rate have serious distortionary effect on investment creating opportunity; printing of money in excess cause inflation; and increase in the burden of debt along with increase in burden of debt servicing limits the fiscal space required for achieving multiple developmental and social objectives.
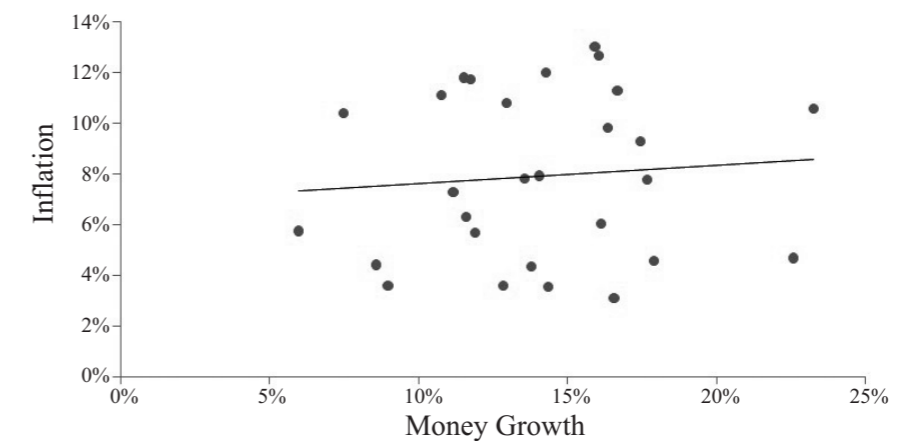
Figure 1
Fiscal Deficit in Pakistan
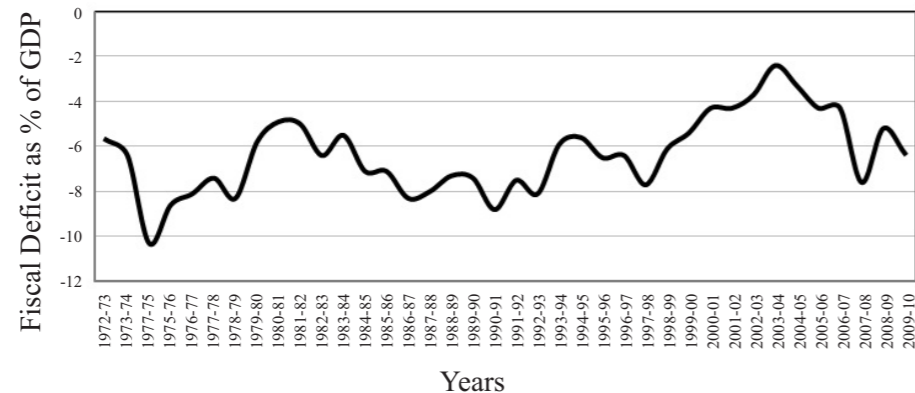
Source: Economic Survey of Pakistan (different issues)

In Pakistan, deficit is mainly financed through domestic debt, such financing creates inflation due to more availability of money to purchase goods. There is a common perception that debt should be created for development expenditures and not for current expenditures. However, Pakistan's experience in this respect is different. On one hand, it faces difficulty to fulfill non-development expenditures and financing such expenditures which puts demand pressures on low productive economy, which further increases the inflation. On the other hand, higher demand of government borrowing crowds out the private investment through raising interest rate. Such a behavior of the government exerts double pressure on prices to increase, because private productive investment is crowded out by public non-productive expenditures, as well as, with higher level of money supply. Such a rise in prices can be restrained through controlling non-development expenditures and keeping the borrowing activity focused on development. Moreover, the revenue should be generated by eliminating the loopholes in the tax system [Padda and Akram, (2009)].

The relationship between growth rate of money supply (M2) and inflation is presented in figure 2, while the relationship between inflation and debt financing (growth rate of domestic debt) for the same period is summarized in Figure 3. The Figure 2 shows the intuition on quantity theory of money and reveals that money supply fuels inflation in Pakistan. Figure 3 further depicts that budget deficit financed through public debt has also positive relationship with inflation, while comparing trend lines in both figures it is evident that growth rate in domestic debt contribute more than the growth rate of money supply. This graphical analysis lays a base for a detailed empirical analysis of determinants of inflation in Pakistan.

Figure 2
Relationship between Money Growth and Inflation

Source: Annual reports of State Bank of Pakistan (different issues)

Figure 3
Relationship between Growth of Domestic Debt and Inflation
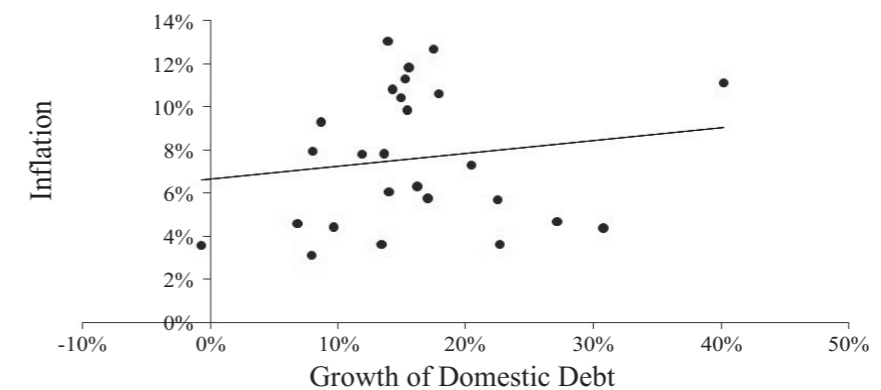
Source: Economic Survey of Pakistan (different issues)

IV. The Theoretical Model

Over the years, various theoretical models have been developed to analyze the determinants of prices. According to the model proposed by Sargent and Wallace (1981), fiscal deficit has an inflationary impact. Woodroff (1994), Sims (1994) Canzoneri et al. (2001) have further strengthened the role of fiscal policy in price determination.[1]
Cochrane (2000) suggests that quantity theory of money and fiscal theory of prices cannot be exclusive. The equilibrium conditions that are crucial in this regard are as under:

$$M_t V = P_t Y \qquad \ldots (1)$$

$$\frac{L_t}{P_t} = E_t \sum_{i=t}^{\infty} \alpha^{i-t} (s_i + k_i) \qquad \ldots (2)$$

Equation (1) is the quantity theory equation, which, under certain specification of money demand can be interpreted as the money supply = money demand condition, and the second equation is government budget constraint (Government valuation equation). The M_t is money supply in period t, V is velocity of the money, P_t is prices in period t and Y represent the income. It is noteworthy that we are assuming here V and Y remain unchanged in the study period. Similarly, L_t represent government liabilities in period t, it includes public debt (D_t), α is the discount factor and the ($s_i + k_i$) is estimated value of government primary surplus. Whereas, s_i is the primary surplus and k_i is central bank transfers.

Debt, money and surplus (D, M and S), represent governments constraint, which a country would like to follow. If government decides fiscal policy and debt and surplus/deficit independently then equation (2) will determine the price level. On the other hand, if the government regulate money supply, then equation (1) will determine the price level and authorities have to adjust surplus/deficits to this price level. The first case is known as the "Fiscal dominant regime" and the second one as "Monetary dominant regime".

Recent developments in monetary theory suggest that when an interest rule for monetary policy is followed, then price level may or may not be exclusively determined by the path of the money supply. For example, in case, of a Taylor rule, where interest rate is reacting to an output gap and inflation, the condition is that nominal interest rates react strongly to increase the inflation rate (more than one-to-one), so that real interest rates rise, hence price level is to be determined by money alone. In the other range where the nominal interest rate reacts less than one to one, we can have sunset equilibria with self-fulfilling expectations and price level is indeterminate. Generally in developed economies it is assumed (based on empirical evidence) that this stability condition for an interest rate rule is satisfied and also that the monetary authorities are independent of the fiscal authorities, in such case the FTPL is not a very relevant case, and this has weakened interest in the FTPL recently. However, in many developing countries not only the stability conditions are not

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[1] For detailed theoretical discussion regarding issues in determination of inflation see Agénor and Montiel (1999) and Turnovsky (2000)

satisfied, but also even if money supply uniquely determines the price level, the setting of money supply itself may be influenced by fiscal authorities desire to monetize the deficit [Bassetto, (2008)]. Thus, in the present study, not only for the direct relative importance of fiscal and monetary variables in the determination of the price level is analyzed, but indirect role of fiscal variables in determining the quantity of money is also examined.

V. Empirical Specification and Data

To analyze the relative importance of fiscal and monetary variables in explaining inflation variability, most of the empirical studies have used Vector Autoregressive Model (VAR). In the present study Granger causality test will also be used to test robustness of the results. Because of the relatively short time series, the shortest possible lag structure which is based on the Schwarz Basian Criteria (SBC) is chosen.

The study examines two different empirical specifications of the VAR models:
a. In the first set-up, the endogenous variables include the price level (CPI), money Supply (M2 as percentage of GDP), Domestic Debt (as percentage of GDP), and the fiscal deficit (as percentage of GDP). This specification intend to capture the impact of a fiscal deficit, Money supply and Domestic Debt on the prices.
b. In the second set up, the exchange rate is also included, because it is the most sensitive variable with the monetary policy. It will be helpful in capturing the open-economy impact on prices and it can be referred as an "Open economy version of FTPL".

After estimating the VAR model the variance error decompositions for price level are computed. The Variance Decomposition is used to separate the variation in inflation into component shocks to the VAR. Hence, it provides information about the relative importance of each random innovation affecting inflation. Latter, this analysis is further extended to estimate the impulse response functions; it will help in analyzing how long the effect will persist and what is the sign of the impact. The annual time series data for the period 1973-2010 for the Pakistan is used. The data used in this study is from the Economic Survey of Pakistan (Statistical Supplements) and annual reports of the State bank of Pakistan.

VI. The Empirical Results

Most of the relevant studies have used the VAR models along with the impulse response functions. In the present study, the VAR modeling along with Granger causality have been used to test significance of public policies effects on the Price level in Pakistan. For VAR approach the Schwarz Basian Criteria (SBC) is used to determine the lag length, which appeared to be 2. It is noteworthy here that ordering the variables is extremely crucial in the VAR models.[2] For the present analysis, M2 has been placed first in the ordering, which in some sense stacks the deck against importance of the fiscal variables.

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[2] The ordering of variables can have significant impacts, at least for the short-run dynamics in the Variance Decomposition and the impulse response function.

1. *Variance Decomposition*

The detailed results of Variance Decomposition of Price Level regarding one ordering specification [M2, Exchange rate (only in model 2)], Fiscal deficit, Domestic debt and Inflation] have been provided in Table 1.[3]

TABLE 1
Variance Decomposition of Prices

Period	S.E.	M2	FD	DD	PR
1	1.294842	12.91136	2.420226	0.000000	84.66841
2	1.529802	8.950569	7.302526	10.98553	72.76138
3	1.693145	10.92046	8.220107	13.30912	67.55032
4	1.772346	12.42241	7.915003	13.84851	65.81408
5	1.815018	12.22789	8.355446	13.83480	65.58186
6	1.830301	13.04908	8.548906	13.72732	64.67469
7	1.838738	13.50386	8.490070	13.69761	64.30847
8	1.845030	13.48602	8.680270	13.66768	64.16603
9	1.849145	13.48166	8.921245	13.64181	63.95528
10	1.851497	13.48480	9.047172	13.64341	63.82461

DD, PR, M2, FD and ER represents Domestic debt, Prices, Money Supply Fiscal Deficit, and Exchange rate respectively.

Results of variance decomposition (without exchange rate) depicts that approximately 13.49 per cent variation in prices are due to the money supply i.e., monetary policy. Approximately 9.04 per cent and 13.64 per cent variation in prices is explained by the fiscal deficit and domestic debt, respectively. These results suggest that in Pakistan both monetary and fiscal policies affects the price level in almost equal weight. The most important factor for the price level determination is the price level itself, as 63.8 per cent variations are the results of price's own lags. It suggests that in Pakistan inflationary expectations are the most important factors in determination of price level.

As to how the money supply is interacting with the fiscal variables. It is of crucial interest. To analyze this the Variance Decomposition regarding M2 is presented in table 2.

[3] The other possible orderings have also been tested and the 10th period results regarding prices and money supply are summarized in Table A-1 and A-2 (see Annexure).

TABLE 2
Variance Decomposition of M2

Period	S.E.	M2	FD	DD	PR
1	1.813292	100.0000	0.000000	0.000000	0.000000
2	2.529730	92.94196	6.881731	0.017697	0.158612
3	2.910370	72.28701	27.15960	0.128683	0.424708
4	3.188703	61.92111	37.45304	0.114347	0.511498
5	3.285492	59.87301	39.34599	0.277502	0.503498
6	3.310104	58.99412	38.87204	1.233092	0.900748
7	3.362651	57.63023	37.89502	3.157199	1.317553
8	3.418902	56.31466	37.09453	5.121322	1.469487
9	3.458965	55.32467	36.65133	6.545096	1.478906
10	3.487188	54.62625	36.46537	7.446072	1.462317

DD, PR, M2, FD and ER represents Domestic debt, Prices, Money Supply Fiscal Deficit, and Exchange rate respectively.

Results of Variance Decomposition of the Money Supply suggest that approximately 36.46 per cent of variations are due for Fiscal Deficit, whereas, domestic debt contributes towards 7.4 per cent percent variations in money supply. Therefore, we can conclude that keeping in view the low revenue generation capacity of the government, the rising fiscal deficit requires financing; consequently, government increases the money supply to monetize the deficit. It highlights an interesting aspect that monetization of fiscal deficit results in raising the money supply causes inflation and it depicts influence of fiscal authorities on monetary policy in Pakistan. Hence, Fiscal policy not only increases the price level directly but also indirectly affects the money supply in Pakistan.

The results of the 2nd specification by including the exchange rate are summarized in Table 3. The results more or less portray similar picture, as if the exchange rate (sensitive to monetary policy) is also included in the analysis; then 15.2 per cent variations in prices are explained by the money supply. Thus, the share of exchange rate in the variation in prices is 14.62 per cent. On the other hand, fiscal deficit and domestic debt explain 14.3 per cent and 15.6 per cent variation, respectively. However, similar to earlier results inflationary expectation explain most part of variations in price level i.e. 40.2 per cent. Hence, inclusion of exchange rate in the model has not affected the pattern of the relationship, largely. These results support that in Pakistan both policies, monetary as well as fiscal, equally affect the prices and the role of inflationary expectations is higher in magnitude.

TABLE3
Variance Decomposition of Prices

Period	S.E.	M2	FD	DD	ER	PR
1	1.262800	11.69258	2.878402	2.237313	27.27814	55.91357
2	1.406034	8.529152	10.05664	13.01142	19.36571	49.03708
3	1.481025	10.50113	11.96975	15.41850	16.88927	45.22134
4	1.519997	11.55939	11.77486	16.83645	16.04401	43.78528
5	1.542357	11.76985	11.59465	16.99338	15.79302	43.84909
6	1.559064	14.09219	11.24047	16.62110	15.30443	42.74180
7	1.583829	15.10181	11.86278	16.24967	14.94569	41.84004
8	1.612109	14.86093	13.31687	15.97547	14.70852	41.13820
9	1.636560	14.96258	14.15596	15.76649	14.57453	40.54044
10	1.656780	15.27450	14.29109	15.63943	14.61475	40.18023

DD, PR, M2, FD and ER represents Domestic debt, Prices, Money Supply Fiscal Deficit, and Exchange rate respectively.

TABLE 4
Variance Decomposition of M2

Period	S.E.	M2	FD	DD	ER	PR
1	1.851677	100.0000	0.000000	0.000000	0.000000	0.000000
2	2.550713	93.98521	5.339095	0.005615	0.444013	0.226063
3	2.829163	77.58126	19.98047	0.245137	1.838622	0.354510
4	3.022145	72.26465	24.41656	0.336141	2.558914	0.423734
5	3.096460	72.68311	23.52777	0.723586	2.659131	0.406397
6	3.133080	71.07259	23.97257	1.512876	2.805647	0.636316
7	3.210993	68.90648	24.26621	2.705074	3.275939	0.846294
8	3.298809	67.67996	23.45602	3.682557	4.305525	0.875934
9	3.366991	66.86069	22.52094	4.282034	5.494234	0.842103
10	3.414199	66.14899	21.98372	4.586261	6.457808	0.823225

DD, PR, M2, FD and ER represents Domestic debt, Prices, Money Supply Fiscal Deficit, and Exchange rate respectively.

Results of Variance Decomposition of the Money Supply suggest that approximately 21.9 per cent of variations are due to Fiscal Deficit whereas domestic debt contributes to 4.6 per cent percent. The Exchange rate causes 6.5 per cent of variations in Money supply. Similar to earlier findings these results also depicts that fiscal policy do not only have a direct impact on price level but it also affects the prices through money supply.

From these results one can conclude that, in Pakistan both monetary and fiscal policies significantly affect the price formation process. However, the role of fiscal policy is comparatively stronger than the monetary policy. Furthermore, the inflationary expectations are highest in magnitude as approximately 50 per cent of variations are due to results of inflationary expectations, in all cases.

2. Impulse response Functions

To further explore the relationships of fiscal and monetary variables with prices, an impulse response functions are estimated. The graphical representation of the impulse response is presented in Figure 4. It suggests that increase in money supply and exchange rate (depreciation) will result to increase prices. Increase in debt will also result in price hike. Similarly, rise in Fiscal deficit and domestic debt will result to increase the money supply. However, role of exchange rate is very limited in affecting the prices and money supply.

FIGURE 4
Impulse response functions regarding Inflation and Money Supply

Response to Cholesky One S.D. Innovations ± 2 S.E.
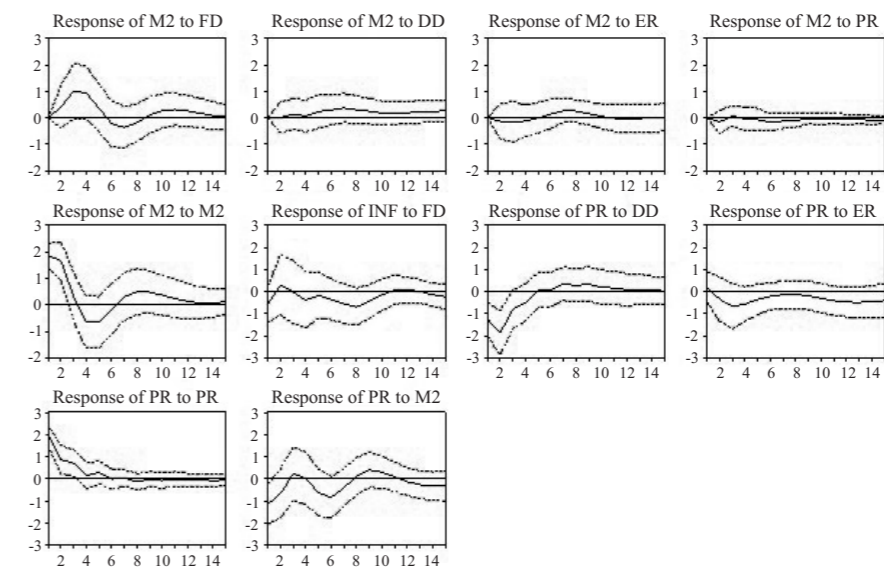
DD, PR, M2, FD and ER represent Domestic Debt, Prices, Money Supply Fiscal Deficit, and Exchange Rate respectively.

3.   Granger Causality

The granger causality test has been used as an additional step to check the robustness of the earlier findings. The results of the test are summarized in Table 5, which reveals that money supply and Fiscal deficit cause changes in the prices. The results further suggest that changes in Fiscal deficit also cause changes in the Money supply. Hence similar to earlier findings these results reveal that both monetary and fiscal policies affect the prices; and fiscal variables also have an impact on monetary variables. It suggest that in Pakistan, Fiscal authorities have a extended role in affecting the prices.

TABLE 5
Granger Causality

Null Hypothesis:	F-Statistics	P-Value
DD does not Granger Cause PR	0.22961	0.7962
PR does not Granger Cause DD	0.63207	0.5382
M2 does not Granger Cause PR	**1.85408**	**0.0435**
PR does not Granger Cause M2	1.27203	0.2945
FD does not Granger Cause PR	**3.55860**	**0.0306**
PR does not Granger Cause FD	0.40453	0.6708
ER does not Granger Cause PR	1.36774	0.2696
PR does not Granger Cause ER	0.13778	0.8718
M2 does not Granger Cause FD	0.72898	0.4905
FD does not Granger Cause M2	**2.71599**	**0.0395**
M2 does not Granger Cause DD	0.57435	0.5689
DD does not Granger Cause M2	0.85989	0.4331

DD, PR, M2, FD and ER represents Domestic debt, Prices, Money Supply Fiscal Deficit, and Exchange rate respectively.

VII. Conclusions and the Policy Implications

The main objective of the present study is to analyze the role of monetary and fiscal policies in determination the level of prices in Pakistan. It briefly describe the scenario of the domestic debt, fiscal deficit and money supply, in Pakistan. In the study VAR models have been used to examine interactions between the monetary and fiscal policies in affecting the prices. The models are used to investigate whether the fiscal deficits along with the domestic debt have had any impact on prices, given the other variables in the VAR. It is also interpreted as an indirect test of the fiscal theory of price level.

Results of the variance decomposition reveal that both, monetary and fiscal policies, affect prices in Pakistan. Furthermore, fiscal deficit also have a relationship

with money supply. It suggests that increase in money supply due to the monetization of fiscal deficit, leads towards higher price level. The results of impulse response functions depict that increase in money supply; exchange rate, fiscal deficit and debt results in raising the price level. The granger causality results support the findings of variance decomposition.

The major implication that emerges from the present study is the enhancement of coordination between the monetary and fiscal authorities is necessary. It is important to mention here that during FY 2008-09 the State Bank of Pakistan has followed the contractionary monetary policy to control Inflation but raising the fiscal deficit with confined revenue generation options has caused increase in the government borrowing and resultantly the inflation reached to 22 per cent in the 2008-09. Although, Pakistan has put a restraint on debt generation and to safeguard the social sector expenditures,[4] but this policy has yet to be fully complied with. The State Bank independence and compliance with the FRDL Act 2005 can give major remedies to avoid hike in price level.

There is also a need to reinstate the National Credit Consultative Council (NCCC) or the mandate of the Private Sector Credit Advisory Council (PSCAC) and may be enhanced as advisory, as well as regulatory authority. It may be recalled that the NCCC was constituted in 1972, with the mandate to ensure optimal utilization of bank credit and to prepare annual Credit Plan. In this regard, at the beginning of each year, the NCCC may allocate a credit limit to various sector of the economy, including the Public Sector Entities. During a fiscal year, on the request, the Ministry of Finance would fix a credit ceiling, without which no public entity would be able to obtain loan from any bank. This mechanism allows, to some extent, coordination between the fiscal and monetary policies in Pakistan. However, in 2007, this system was abolished; NCCC was restructured – renamed as PSCAC and its role was changed from regulatory body, to consultative body with more focus on issues related to the private sector credit. This has allowed the Ministry of Finance to issue credit ceiling at its own will and which is one of the important factor in surging public debt, after the 2007.

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[4] In shape of "Fiscal Responsibility and Debt Limitation Act 2005" (FRDL).

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ANNEXURE

TABLE A-1
Variance Decomposition of Prices

Orderings	Period	S.E.	M2	FD	DD	PR
M2, DD, FD, PR	10	7.36	13.48	23.49	8.62	54.39
M2, DD, PR, FD	10	7.36	13.48	12.47	8.63	65.42
M2, FD, DD, PR	10	1.85	13.48	9.05	13.64	63.82
M2, FD, PR, DD	10	1.85	13.49	9.04	13.07	64.39
M2, PR, DD, FD	10	4.64	13.48	12.46	6.16	67.89
M2, PR, FD, DD	10	4.64	13.48	4.98	13.64	67.89

DD, PR, M2 and FD represents Domestic debt, Prices, Money Supply and Fiscal Deficit, respectively.

TABLE A-2
Variance Decomposition of M2

Orderings	Period	S.E.	M2	FD	DD	PR
M2, DD, FD, PR	10	3.48	54.62	27.88	16.02	1.46
M2, DD, PR, FD	10	3.48	54.63	26.75	16.03	2.59
M2, FD, DD, PR	10	3.49	54.63	36.47	7.45	1.46
M2, FD, PR, DD	10	3.49	54.63	36.47	6.21	2.69
M2, PR, DD, FD	10	3.49	54.63	26.75	15.93	2.69
M2, PR, FD, DD	10	3.49	54.63	36.46	6.21	2.69

DD, PR, M2 and FD represents Domestic debt, Prices, Money Supply and Fiscal Deficit, respectively.