EFFECTIVENESS OF MONETARY AND FISCAL POLICIES:

The Case of Qatar*

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ABSTRACT

The controversy surrounding the effectiveness of monetary and fiscal policies is a long way from being settled. During the last three decades, oil revenues have contributed significantly to economic growth and development in Qatar, where the public sector has a substantial share in aggregate output. Judging the effectiveness of monetary and fiscal policies using a reduced form equation reveals a more effective role for fiscal policy in determining the behavior of gross national product. We would expect this role to diminish in the coming few years as financial markets develop and more financial and money market instruments are introduced.

I- Theoretical Review

Governments design macroeconomic policies to promote growth, economic stability, high employment, low inflation rates, stability in the financial markets, and favorable conditions in the external balance. On the one hand, fiscal policy may stimulate economic activity through fiscal policy tools: expenditures and taxes; while on the other, the central bank may influence the level of economic activity by controlling money supply through instruments of monetary policy such as reserve requirements, discount rate and open market operations. The debate surrounding the effectiveness of monetary policy and fiscal policy, is rooted in the traditional views of monetarists (Friedman and Schwartz, 1963; Friedman and Meiselman, 1963) and Keynesians (Ando and Modigliani, 1965). Monetarists believe money supply plays a major role in defining the condition of the economy thus favoring monetary policy; while Keynesians argue that fiscal policy is more essential, and government expenditures have the upper hand in gearing the economy.

Friedman and Meiselman (1963) conducted a comprehensive empirical study to test the validity of the Keynesian and monetarist theories using, in each case, simplified single equation models. The results support the stability of the monetary model compared to the Keynesian multiplier model. However, their results have been challenged and criticized by many economists on the ground of modeling oversimplification and misinterpretation of econometric results. Jordan and Anderson (1968) tested the relative effectiveness of monetary and fiscal policies using a dynamic econometric model and concluded that monetary policy was more effective and faster in influencing the economy than fiscal policy. Unfortunately, other studies involving econometric models found different conclusions. One such model was constructed jointly by the Federal Reserve System and MIT that identified multiple channels through which monetary policy works. The results of the model simulation enhanced the Keynesian analysis, indicating a relatively more effective fiscal policy than monetary policy. Waud (1974) used an econometric model similar to the one used in the Anderson and Jordan (1968), and found both fiscal and monetary policies to be important in influencing the level of economic activity. Along

the same line, Bernanke and Blinder (1989) stressed the issue of time lag in assessing the effectiveness of economic policy. They indicated that although policy change may affect money supply immediately, it takes several months to transmit the effects to the real output.

A study conducted by Kretzmer (1992) using causality test, variance decompositions, and impulse response functions, to assess the monetarists and Keynesians views, found the efficacy of monetary policy tends to deteriorate over time. Bernanke and Mihov (1998) have stressed the ambiguity surrounding the impact of central bank monetary policy actions on the economy, since there is no general consensus on how to measure the size or direction of changes in monetary policy. Using VAR technique, they concluded "... there is no simple measure of policy is appropriate for the entire 1965-1996 period...". Therefore, it is no longer acceptable to interpret changes in money aggregates as caused solely by changes in money stock. Serletis and Koustas (1998) used King and Watson's bivariate vector-autoregressive approach of regressing the first-difference of output on money variable and past output values, found supporting evidence for the neutrality of money in the long for major industrial countries.

Basically, the strength and pace of monetary policy impact on the economy is influenced by the structure of the financial system and the link between financial conditions and spending decisions of households and firms. In addition, the extent of leveraging, margin, composition of currency denomination of assets and liabilities, and the degree of dependence on bank financing affect the size of monetary impact. Moreover, government intervention in financial markets can influence the monetary transmission process via policy actions such as imposing interest rate controls or other limits on financial market prices, imposing direct limits on bank lending, and/or providing government-financed credit to selected areas. Kahn (1991) concluded that the removal of interest rate ceilings on bank deposits in the US in the 1980's has contributed to the decline in the real effects of monetary policy.

One may argue that monetary policy has been weaken further by the growth of non-bank sources of financing investment. Moreover, as globalization broadens, choice of financing widens as flows of capital effect

domestic interest rate limiting the effectiveness of monetary policy on this rate. Finally, competitiveness, depth and diversity of financial markets, and access to alternative financing sources are all important in determining the strength of a country monetary policy. This adjustment or lack of it, is affected by domestic borrowers' accessibility to alternative domestic funding sources. Consequently, one would argue that the presence of domestic capital market would accelerate the transmission of monetary policy. With respect to external finance, capital flows and access to offshore borrowing are important since a tightening of monetary policy would have limited effect if firms have greater accessibility to external finance.

Fiscal policy on the other hand, involves deliberate changes in government expenditures and taxes as means of controlling economic activity. Government budget is the key instrument through which fiscal policy is transmitted. Government expenditures on goods and services directly affect the level of economic activity because such expenditures are a component of aggregate demand function; transfer payments and taxes, on the other hand, affect disposable income and thus indirectly influence the other two major components of aggregate demand, consumption and investment spending. Fiscal policy therefore works through changes in government budget; inducing changes in aggregate demand taking into account possible crowding out effect.

To sum up, economists are by no means in agreement with respect to either the effectiveness or the desirability of macroeconomic policies. From the end of World War II to the mid-1960s, a clear majority of economists held the view that fiscal policy was the most powerful, the most effective instrument for the overall control of the economic activity. This is no longer the case, the counter monetarist revolution has shifted economic thinking in favor of monetary policy. However, modern macroeconomic theory views both fiscal and monetary policies as having important roles in any stabilization program; they should not be regarded as rivals, but, rather, complementary approaches to the issue of economic stabilization. In addition, modern economists tend to believe that there exist limits to the ability of both policies in affecting the complicated structure of modern linked economies. Neither monetary nor fiscal instruments alone can

effectively control inflation. This analysis shows clearly the difficulty and ambiguity of assessing the relative efficiency of monetary and fiscal policies on theoretical bases alone. It also shows the need for a complementary empirical analysis that takes into account the specific economic and policy conditions prevailing in a particular country. However it is generally accepted that monetary and fiscal policies do affect the economy.

In the case of Qatar, a small open economy, monetary policy has evolved slowly over time, whereas fiscal policy has been on the lead. It is interesting to examine the influence of monetary policy on output, and compare it relative to the influence of fiscal policy on output. Confronted with greater fluctuations in oil revenues, the government has been gearing up both policies to affect production. Government expenditures, fees and indirect taxes, pricing of public services, pricing of generally subsidized goods and services, have undergone a revision and mostly have risen. Furthermore, interest rate ceilings and flooring have been removed. These policies, amongst others, are viewed to have an influence on output in the country, however, limited empirical analysis has investigated this matter. It is the purpose of this study to examine the possible effect of fiscal and monetary policies on output. The rest of the paper is divided accordingly. Part II generalizes some features of the economy of Qatar. Part III presents the methodology and the results of estimations. Part IV concludes the paper.

II- Some features of monetary and fiscal variables in Qatar

The Qatari economy has been dominated by the oil sector. Throughout the last thirty years, it has undergone major changes that have transformed the country to be one of the highest per capita countries in the world. However as the country has become oil dependent, economic activities have become heavily affected by fluctuation in oil prices and revenues. The figures for 1997 put nominal gross domestic product at about 34 billion riyal, where the share of the oil sector dominated GDP with about 38%. Moreover, as government expenditures depend on oil revenues, total consumption has fluctuated likewise since the share of government consumption in gross domestic product in 1997 was 33% whereas private consumption approached 27%, while the share of gross fixed capital

formation was 35%. The substantial increase in capital formation is explained by the rise in government investment in developing the North Field gas reservoir. This investment resulted in a hike in national external debt that has tripled over the period from 1995 to 1998.

Over the last few years, except for 1996, inflation rate (using consumer price index, CPI) is considered to be modest averaging about 2.8% some of it was attributed to merchandise imports that were valued at four billion dollars more than merchandise exports for 1996 which were valued at about 3.8 billion dollars. It could be postulated that fiscal policy constitutes a force influencing the economy. In addition, financing the public deficit through borrowing from domestic banks has its consequences on the financial market as banks become selective and interest rates rise. Lately, the government has been exploring the possibility of securitizing its domestic debt, as a decree was issued in 1999 allowing the government to raise funds through sales of government bonds. If demand for credit rises, commercial banks may favor lending domestic investors as liquidity increases as a result of securitization. Nevertheless, it is worth reviewing certain features of monetary and fiscal policy in Qatar to be familiar with their development and limitations.

II. 1. Monetary Policy

To pursue the objectives of price stability, exchange rate stability, and economic growth; the monetary authorities suffer from lack of data or sluggishness in its flow. For example, data about inflation rate is usually published with a lag of one to two years and data on GDP suffer the same deficiency. It is therefore difficult to judge the direction of the economy so as to gear up fiscal or monetary policies in certain direction at the right time.

In implementing monetary policy, Qatar Central Bank, QCB, adjusts interest rates, adopts a reserve requirements rule, intervenes in the determination of credit facilities offered by commercial banks, and sets the discount rate, in addition to its action regarding the exchange rate which has effect on banks liquidity. The liberalization of interest rates which began in 1995, has given banks greater degree of independence where banks in Qatar

rely heavily on deposits as a major source of funds since private banks' securities are non-existing, and on credit facilities as an essential source of income. In September 1998, the 14 banks operating in the country recorded total assets of about 41.3 billion riyal, about 30 billion riyal were in terms of overdrafts and loans and advances, which constitutes about 73% of total assets.

In 1979, the Qatar Monetary Agency, QMA, as the central bank was known, ordered banks to halt the interest rates agreement that was in force amongst them, and it begun to set the rates. For example, interest rate on saving deposits in riyal was sat at about 4%, whereas it was 6% on time deposits. On the other hand, borrowers were charged about 8%. One may argue that this period, which lasted until 1985, was characterized with a limited presence of monetary policy.

In 1986, the monetary instrument of reserve requirements was introduced and sat at 3% on demand deposits denominated in riyal, 1.5% on saving and time deposits in riyal, and 4% and 3.5% on demand deposits and savings and time deposits denominated in foreign currencies. In 1989, the rates were revised upward on demand deposits in riyal and foreign currencies to be 4.5% and 5% respectively. The rates were revised and stood in 1994 at 10% against demand deposits in riyal, 1.5% on demand deposits in foreign currencies and saving, and time deposits both in riyal and foreign currencies. Currently the reserve requirement is 19% on demand deposits denominated in riyal, whereas all saving and time deposits and foreign currency deposits are exempted from meeting a reserve requirement.

Furthermore, Qatar Monetary Agency introduced the instrument of discounting and rediscounting of commercial papers for commercial banks. The rate was 7.5%, allowing a favorable rate of 6.5% on papers issued by sectors of the economy which the central bank views to be vital for economic development; however, this tool is not active because of the lack of acceptable financial papers by the authorities. One may argue that the introduction of government bonds may activate this instrument. In 1986, moral suasion was enhanced further, as Qatar Monetary Agency informed banks to abide by the 60% and 95% as the minimum and maximum ratios of credit to deposits in riyal extended to economic sectors. In 1988, these ratios

were revised to be 50% and 95% of total deposits. This was revised again in 1990, where the Agency allowed banks to exclude foreign currencies deposits from total deposits when determining these ratios, and the ratio of credit to deposits in riyal was not to be less than 60%. Other regulations and instructions applied by QCB included: regulating the ratio of investment to total financial assets (not to exceed 20% of its capital and reserves), diversification of deposits (deposits in a single bank or its subsidiaries not to exceed 25% or 200 million riyals of its capital and reserves), and diversification of loans amongst borrowers and across countries (not to exceed 25% or 50 million riyal of its capital and reserves).

In December 1991, QCB revised the structure of interest rate and sat the rates at a base rate (for loans and deposits) varying from 4.5% on overnight to 5% on one year with a margin of 0.75% on deposits and 3% as a maximum on loans. Interest rate paid on foreign currency deposits was left to banks to decide. In the same month, the discount window was shut. In 1994, various interest rates were changed. For example, the rate on credit extended for a year was sat at 4.2%, and banks were allowed to charge a maximum of 4% above this rate on credit facilities. On the other hand, commercial banks would offer a 3.5% interest rate on deposits in riyal (this was called the QCB rate) with a margin of plus or minus 0.75%.

In June 1995, interest rate on saving and time deposits in riyal was sat by QCB at 6% plus or minus half a percent. However in August of the same year, interest rates on credit facilities were liberalized as QCB re-deployed the discount rate and sat it at 6% and called upon banks to use it as a "guideline" for setting the rates on credit facilities which may fluctuate within 5% within the 6%. In 1996, QCB issued about 42 directives to commercial bank directing them to adopt new procedures, provide information, and other banking issues. This demonstrates the close supervision banks are exposed to in Qatar. In 1997 and 1998, QCB adopted further policies to liberalize the banking industry as it issued directive number (39/97) which cancelled directive number (12/81) which prohibited banks from charging any fees or commissions for services rendered on its customers' accounts.

In August 1995, interest rates on loans were liberalized. In addition, in

April 1998, banks were also instructed to offer any interest rate on deposits with duration of more than 15 months. Lately, this duration was reduced to 12 months and there is tendency to eliminate the time constraint. Moreover, interest rate on foreign currency accounts was left to the discretion of banks so as to maintain competition in attracting deposits. If one examines the break down of deposits according to maturity and sectors, it is evident that as of May 1999, 18.33% of total deposits (domestic and foreign currencies) is owned by the government, while the share of the private sector is about 82%, and 12.6% of that is demand deposits. Of the total, only 2.8% is of a duration of more than one year, and 90% is owned by the private sector.

Exchange rate policy has been closely monitored by QCB aimed at defending the value of the riyal. The exchange rate of the domestic currency in term of the dollar is used as an indicator of the value of the domestic currency. Sine June 1980, this exchange rate was fixed at QR 3.64. It was achieved through gradual re-evaluation of the riyal since 1978 where the exchange rate was QR 3.9494 for a dollar. Accordingly the exchange rate tool has been idol for almost two decades despite the anticipated devaluation of the riyal during the periods of fiscal deficits. This is evident in the Second Gulf War (1990-1991) and 1998 and 1999 when oil prices declined sharply, sending rumors of devaluation as a means of increasing the riyal-value of oil revenues.

The monetary authorities closely monitor the behavior of money supply and the factors affecting it. Amongst these factors, credit facilities, government deposits, and foreign assets in commercial banks explain most of the fluctuations in domestic liquidity; however none has shown a steady behavior. Therefore, it is common to notice a dominant effect of one of these factors in a year while retreating in another.

Table (1): Changes in factors affecting M2 (million of riyals)

End of period	foreign assets (net)	Domestic credit	govt. deposits (increase -)	Others
1990	409.3	-647.7	-606.1	193.3
1991	-1218.7	3438.1	-1666.9	-232.6
1992	-34.8	4769.4	-2572.6	-1055
1993	-1530	611.4	800.1	996.7
1994	1164.1	-418.3	2433.1	-664.1
1995	477.7	841	-1,100.50	-15.4
1996	-37.7	2,121.20	-854	-193.7
1997	317.1	2,628.60	-806.5	-200.2
1998	-2,730.0	4,700.6	-663.5	429.9

Source: QCB Bulletin, December 1998.

One may assert from the table that there is a large degree of instability in the behavior of the factors affecting money supply. For example, the average of changes in net foreign assets is -303.67, while its standard deviation is 1223.12. Similarly, changes in government deposits averaged -559.66, while its standard deviation is 1438 million riyals. Stability around the mean is more evident in the value of changes in domestic credit where the standard deviation in 2048.5 million riyals and its average in 2004.9 million riyals.

II. 2. Fiscal Policy

Government budget appropriations are allocated to four chapters in the spending side of the budget. The first chapter is salaries and wages. The second chapter is current expenditures. The third chapter is semi-capital expenditures, while the fourth chapter is dedicated for capital expenditures. In line with government decision to reduce employment in the public sector and the share of the first chapter (wages and salaries) in the budget has declined since 1989/1990. It constituted about 30% in 1998/1999 budget compared to 43% in 1989/1990 budget. However, the funds allocated to the

fourth chapter have risen modestly since 1989/1990 budget, where its share of total budget appropriations stood at 11.8% in 1998/1999.
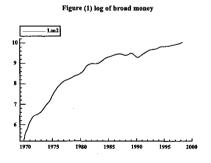
On the revenue side, oil revenues continue to play a dominant role in providing government budget with funds. For example, in the budget of 1990/1991 the relative importance of oil revenues in total government revenues was about 75%, while it reached 63% in 1997/1998 budget. Other sources of financing government expenditures are: borrowing from local and foreign sources (estimated in 1997/1998 budget to be about $783 million), investment income which approached 29% of budget revenues in 1997/1998 (includes dividends from government stakes in some local companies), drawing from reserves (about $200 million in 1997/1998) and fees and taxes (mostly import taxes) which have gained increasing importance lately (MEED, July 1999). However, these revenues fall short of keeping government budget balanced as public borrowing has been rising over the last few years. The pressure of funding the deficit has built into the financial system as public borrowing constitutes a major component of credit facilities extending by commercial banks. For example, the share of credit extended to the government in 1987 was 3.4% of total credit facilities by commercial banks compared to 51% in 1991, approaching 52% in 1996 and 48% in 1997 and 51.3% as of September 1998.
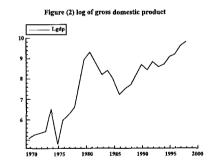
Until recently, the government of Qatar didn't issue bonds or treasury bills; therefore, the open market tool was absent. Faced with huge financial commitments toward developing the North Field gas reservoir, a decree was issued in 1998 allowing the government to sell bonds at a maximum of $2000 million. These 10-year bonds were sold to local banks at a 7.75% rate of return and a maturity of three years, while at the same time were sold in the international market at 9.5% with spreads at 395 basis points over US treasury bills and a maturity of ten years. It is argued by the central bank and the ministry of finance, economics and trade that this price was required to create a benchmark in the international market for future issues (MEED, July 1999). The revenues from this sale will be used to replace some of the existing loans from international institutions which are put in 1998 at about $9,796 million.
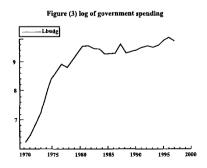
III. Empirical analysis

Almigrin (1995) reviewed monetary policy in the Gulf Cooperation Council, GCC, countries, and descriptively found limited effectiveness of most monetary instruments. Open market operations are not active although some governments issue bonds and treasury bills and notes that are mainly used to finance deficits in the budget. Discounting of financial papers is limited in the GCC due to the limitation of "quality" financial papers and the surplus of resources in the banking sector.

Figure (1) depicts the behavior of the log of GDP which shows a sharp decline in 1975 and in 1985 relative to 1974 and 1984, respectively. This is explained by the decline in oil prices. However, GDP exhibited a more stable behavior from 1985 which maybe attributed to the declining share of the oil sector in the total economic activity in the country. Meanwhile, figures (2) and (3) show that the log of the log of public spending and money aggregate (M2) exhibit an upward trend with less fluctuations. One may argue that the short lived declines in oil revenues (one to two years) have generated a perception by public policy makers and the public that these declines were temporary and thus would not alter medium term plans.

Figure (1) log of broad money

Figure (2) log of gross domestic product

Figure (3) log of government spending

Given the share of the public sector in gross domestic product over the last thirty years, one would expect government expenditure to have a significant impact to economic activities. Moreover, if oil revenues slow down in a specific year, it may conceivable to expect public spending to continue to exercise positive effect on the economy for sometime, generated by government spending dynamic multipliers. Based on the role of government spending, we would postulate that changes government spending and would have a significant impact on the economy. However, although the central bank in Qatar lacks the instrument of open market operation, credit extended by banks cannot be passed over as an influential factar affecting the economy through its effect on money supply. The evidence displayed by correlation coefficient shows a strong 0.87 relationship between gross domestic product and broad money aggregate, and a similar correlation between government budget situation and gross domestic product is found was (0.85). These correlation coefficients reveal instantaneous relationship; however, it is interesting to examine whether a cumulative long term effect monetary or fiscal policies had on the economy. To address the possible impact of fiscal and monetary policies on the economy, we would use a "St. Louis"- like equation similar to that proposed by Anderson and Jordan (1968). Historically, the model was used to demonstrate the monetarist policy views that changes in money supply, not government spending or taxes, affect GDP. The equation we estimate to determine possible impact of monetary and fiscal policies on gross domestic product maybe expressed in the following general form:

$$\Delta Y_t = \beta_0 + \sum_{i}^{n} \propto_i \Delta M_{t-i} + \sum_{i}^{k} \gamma \Delta G_{t-i} + \varepsilon_i$$

Where, Δ, indicates percentage change of the variable, n and k represent the lag length of the corresponding variables. The model variables are Y, G, and M, reflect output, fiscal and monetary policy variables, respectively. The term ε_τ represents the random error term. Output is measured by gross domestic product, GDP; M2 represents broad money supply, and public expenditure is measured by actual spending defined by G.

As a matter of concern, we first establish stationarity of the log form of economic variables involved, namely: broad money aggregate and actual public spending. Both Dickey-Fuller test and augmented Dickey-Fuller test

of the following forms (without a time trend) were ferformed :

$$Y_t = \beta_0 + \beta_1 t + \beta_2 Y_{t-i} + \varsigma_i$$

$$Y_t = \beta_0 + B_1 t + \beta_2 Y_{t-i} + \sum_{i}^{n} \alpha \Delta Y_{t-i} + \varepsilon_i$$

Testing the hypothesis that Yt has a unit root, i.e., $\beta_2 = 1$ (the variable is nonstationary) with the results reported in Table (2), which, overall, support the stationarity of the log of the independent variables.

Table (2): Unit root tests

Variables	Dickey-Fuller	Augumented Dickey-Fuller
Log(M2)	-4.80**	-3.54*
Log(G)	-5.39**	-4.14**

Note: Annual data, 1970-1998. Tests include a constant

Calculations are based on PC-Give software, version 7.

"*", 5%; " **" , 1% indicate significance level.

As stressed in the theoretical analysis, the question of effectiveness of monetary versus fiscal policies can only be resolved empirically. The building of a fully estimable structural model is beyond the scope of this study. Even if one would pursue such a model, data for many variables are either lacking or non-existing. This has constrained the present estimation to annual data extending over the period 1970-1998. To capture the dynamic effects of both policies, an appropriate polynomial distributed lag model is utilized. This approach was first used by Anderson and Jordan (1968) and adopted by many researchers thereafter. Although reduced-form models allow for different policy variables and unlimited lag structures; long lag structure can be managed by using polynomial lag distribution. Compared to the simultaneous equation model, the reduced form model is simpler and less sensitive to misspecification and structural errors, it also requires fewer variables and hence less data. As a matter of fact, the availability of annual data for GDP and public spending only has constrained the possibility of

specifying a complete model.

Due to the limitation of GDP data prior to 1974, missing data for the period 1970 to 1973 were predicted using a simple time trend equation, however, these predicted values were used only to allow for lags of the dependent variables. The variables in the model are expressed in terms of percentage changes so as to capture the dynamic relation between output growth and development of fiscal and monetary variables. This is achieved through double log specification of the estimated model. Furthermore, sample limitations and long lag structure of the model necessitate the use of a polynomial distributed lag suggested by Almon (1965). This enables estimating the model parameters with limited loss of degrees of freedom and to avoid the expected high degree of multicollinearity in case of such long lag structure. Cross correlation analysis was used to provide initial values for the lag length of the fiscal and monetary variables. After that the degree of the distributed polynomials was chosen on the basis of maximizing the value of adjusted coefficient of multiple determination (details maybe found in Enders, 1995).

Applying this procedure has resulted in a model with an eight-lag structure for the fiscal policy variable, and only a four-lag structure for the monetary variable; further lags have failed to improve the statistical fit of the model. The model is appropriately approximated by a fourth degree polynomial without any constraints on both ends of the distribution. The results of applying ordinary least squares are shown in Table (3).

Table (3): Results of the estimation

Number of lags	Coefficient		t-statistic	
	log(G)	log(M2)	log(G)	Log(M2)
0	0.617	-0.101	5.90	-0.50
1	0.314	-0.407	5.52	-2.50
2	0.120	0.007	1.94	0.06
3	0.016	0.459	0.18	2.78
4	-0.040	0.261	-0.49	1.60
5	-0.057		-1.46	
6	-0.065		-1.56	
7	-0.090		-2.53	
8	-0.157		-2.20	
Sum of lags: log(G)	0.652			
Sum of lags: log (M2)	0.218			
R-square	0.906			
A. R-square	0.84			
DW	2.10			
F-statistic	14.61			

The overall statistical fit of the model turned out to be very satisfactory, as indicated by the coefficient of multiple determination and F-statistic; the model succeeded in explaining high percentage of the data variability (more than 90%). The Durbin-Watson statistic (2.10) indicates absence of serial correlation. Although the overall (cumulative) effects of both the monetary and fiscal polices are positive (as priori expected) and statistically significant, the effect of fiscal policy is much stronger than that of monetary policy. The overall elasticity of output with respect to fiscal policy is 0.65 compared to 0.21 for monetary policy. In fact the shorter run effect of monetary policy is negative. The largest effect of the fiscal policy occurs in the immediate period and three years after; then it diminishes and even becomes negative in some late lags.

IV. Conclusion

Fiscal changes as compared to monetary changes are more closely related to output growth over the study period. The econometric results indicate a more effective fiscal policy than a monetary policy over the long run. An increase of 10% in the growth of money supply would raise economic growth by about 2.1% over the long run. By contrast an increase of 10% in government spending would induce an output growth of about 6.5% over the long run. The results indicate that public spending has greater impact economic growth compared to changes in the money supply. A better management and synchronization of monetary instruments is essential if monetary policy is to gain greater influence. However, in light of emerging and developing capital markets in the domestic market, the effectiveness of monetary policy is expected to be strengthened and to gain greater momentum. Developed capital markets will strengthen the response of the economy to monetary policy variables. As the results reveal, a better management and planning of the government budget, can be useful toward a stable economic growth.

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