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Fiscal and Monetary Reaction of External Debt: Evidence from Selected South Asian Countries

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ABSTRACT

The core purpose of this paper is the computation of potential fiscal and monetary shocks linked with the external debt's accumulation scenarios which may cause fluctuation of economic growth of selected South Asian economies through the business cycle analysis. South Asian economies have accrued a substantial amount of foreign debt which may decelerate the economic growth. To obtain the empirical evidence of these selected economies against the fiscal and monetary shocks, Structural Autoregressive SVAR is deployed. This econometric technique assists in measuring the fiscal and monetary shocks which further elucidates its impact on the economy. The Reduced-Form SVAR residuals were commuted for each selected economy to indicate the response of fiscal and monetary volatility. The results of the SVAR, Reduced-Form VAR residuals indicate that fiscal policy shocks are more responsive in designated economies South Asia as Pakistan, India, Bangladesh, and Sri Lanka, whereas monetary policy is less effective in all of these economies, both in the short and long run. As a result, greater prudence and foresight are required when developing and implementing fiscal policy. In Pakistan, India, and Sri Lanka, contractionary monetary policy is said to be sluggish and unfriendly to economic growth. Monetary policy in Bangladesh, remains lax, but an encouraging response to economic growth. However, tight monetary policy has been found to boost growth, and an interest rate puzzle has also been observed in case of Sri Lanka.
Keywords: External Debt, Economic growth, Fiscal shocks, Monetary shocks

INTRODUCTION

The external debt is one of the foremost channels to finance the deficit of the economies. The Classical school of thought believe that if external debt is properly deployed, it turns out to be a blessing for the nations but a curse otherwise. External debt is not a curse until used in lucrative projects and enable the economies to get self-reliance (Dey and Tareque, 2020). The exogenous growth theories stem from the fact that foreign aid acts as catalyst to accumulate the capital which further accelerates the economic growth of country as external debt offsets the domestic saving gaps and lapses in exploiting the resources in hands. The deficit is affected by internal as well as external indicators. Considering the opposite indicators and adaptation of appropriate models may enhance the immunity to absorb external shocks (Gavurova et al. 2017). Concerning to the internal elements, the major causes of opting for external debt are trade deficit, budget deficit and malfunctioning of governance (Ali *et.al* 2021). Mostly countries fail to maintain the balance between the imports and exports which further accrue the pressure on fiscal side to finance. Another important issue is mishandling the tax base. The informal sector constitutes a substantial share in the economic growth but does not come under the tax bracket. Besides the negative social consequences, it most likely increases real inequality (Mishchuk*et al.*, 2018). It reduces the government revenues and government has to approach the regional and international financial institutions.

Interbank interest rate in Euro geographical areas has been irresponsive against the inflation and output gap and left adverse impacts on economy (Sinicakova & Gavurova, 2017). Most of the developing nations are exposed to rent seeking behavior problem, which damages the government source of income and the ultimate way forward is external debt. From the external point of view, administered exchange rate causes curtail in the foreign exchange revenues that again jolt the economy through lack of finances. It means both internal and external factors play a significant role in determining the macroeconomic stability. The foremost argument by the Dependence Revolution Theory is that all the developing nations experience this deficit inherently. As they could not manage it well and it further produces huge burden of accumulated external debt. Debt servicing accelerates accumulation in external debt. After the Asian debt crisis, all the international and regional financial institutions started to lend money to recipient countries on the commercial basis rather than on humanitarian grounds. Secondly these financial institutions have also changed the structure of foreign aid for instance deviation from long term loans to short term maturity loans. Therefore, external debt servicing serves as potential impediment in fostering the economic growth of the developing nations. The history of the South Asian countries is not different from the other developing countries in the world. The large size economies including, India, Pakistan Sri Lanka and Bangladesh have accrued huge external debt since many last decades. Fiscal policy holds a foremost part in the EU (Delgado, 2021). Of course the main reason behind huge accumulation of external debt is deficits faced by these economies. All these selected economies have experienced profound percentage change in foreign debt which forces these economies to consider the serious repercussions caused by foreign debt. It is imperative that some of the debt sustainability measures of the South Asian economies posit under the high risk zone but it may pose a substantial burden on economies if the pace of external debt remains soared. Though, all economies have experienced huge percentage change in foreign debt. The repayment of external debt is transacted on the cost of lessoning the budget allocation to social sector. South Asian economies need to manage the foreign debt and particularly its application otherwise it may deteriorate the economy conditions as a whole.

The primary goal of this paper is to quantify, using business cycle analysis, the possible macroeconomic shocks related to accretion of external debt scenarios that may affect these economies' economic growth. This research signifies the exclusive idea to sightsee the impact on the external debt thorough fiscal and monetary shocks and further explore the magnitude of the responsiveness of the policy variables in line with external debt of selected South Asian economies. This research does not consider the bifurcation of the components of the external debt of South Asian economies as nature of components are different for each economy and it may lead to spurious findings.

LITERATURE REVIEW

For many years, all developing countries have borrowed debt from external sources in order to obtain a stable trajectory for macroeconomic sustainability. These countries have approached regional and global financial institutions, and bilateral aid agreements with a variety of countries. Despite a few successful stories, developing countries were badly surrounded in external funding. It is necessary to investigate whether external debt is a sustaining factor or a considerable threat to economic growth. Despite the fact that developing countries have been forced to seek various foreign financial channels and some financial institutions and bilateral aid agreements tend to advance loans on a commercial rather than humanitarian basis. This can shift circumstances not only for current economic development but also for social development, influencing private consumption and overall well-being in long run (Al-Naser & Hamdan, 2021; Kusairi*et al.*, 2019; Tung, 2020). Numerous studies have already been conducted on the debt sustainability's parameters for different regions in this world.

Ali *et. a*l (2021) explains that the debt crises stem from basic transfer equation which establishes the tie of net capital flows with foreign debt of a country. The developing countries, apposite monetary and fiscal policies interments play profound role dealing with this phenomenon.

Sheng and Shukaj (2021) came up with the findings that during the expansionary policies regime in lower developing nation debt to GDP ratio witnessed a significant downward trend perhaps also due to other sources available. Monetary policymakers make unpopular decisions when faced with hostile global financial issues and challenges as it put the economies to be more dependent on foreign debt (Aizenman 2019; Bhattarai, Chatterjee, and Park 2020; Cavallino and Sandri 2020; Béresné Mártha, 2018).

Ali and Shahab (2018) examined the connectivity of foreign aid and its repercussion on the development of the country. They found that the payment of external debt servicing lowers down the scope of components of the HDI which further deteriorate the economic growth.

Spilioti & Vamvoukas (2015) attempted to study the connections of external debt with economic growth and unfolded the reality of substantial and adverse backlash of foreign financing on growth of Greek economy. Another interesting finding reveals unrestricted causal effect amongst the export/GDP ratio and GDP/Public debt (Dritsaki, 2013). In addition, findings also indicate no association among these variables in the short run.

Doan and Bilgilib (2014) used Markov-switching to examine the connection of external borrowing with GDP growth rate in Turkey. They discovered a adverse nonlinear correlation between the variables. Mitzeq and Matz (2015) investigated the long and short span connectivity between debt and GDP from 1970 to 2010 for German economy. Using error correction models, they discovered a substantial adverse connection amongst the variables.

Abdel Hadi (2013) established a linkage of external debt and economic growth in Jordan from 1990 to 2011. On time series data, he applied econometric techniques. He came to the conclusion that external debt has a positive relationship with economic growth. However, he also stated that debt service payments have a significantly negative relationship with the rate of GDP growth.

Berben and Brosens (2007) established that the extent of a country's debt has a negative and significant effect on private consumption, particularly in high-debt countries. It also entails that expansionary fiscal plan would be somewhat ceased by non-public spending, while total government debt has no relationship with private consumption in low-indebted economies. As a result, they concluded that fiscal policy in high-debt countries may be less effective in mitigating business cycle fluctuations. Pozzi et al. (2004) claimed that the rising level of government debt to GDP ratios may have an impact on consumers who question the value of future taxes. On the other hand, it may cause financial institutions such as banks to reduce the amount of money they lend, thereby

Hasko (2007) investigated using the VAR Model and discovered that the dynamics of OECD economies' external debt, as well as monetary and fiscal policies, have had a significant sway on the expansion of aggregate national debt from the mid of 1970s. Continuous flows of rampant inflation were confounded by high real interest rates in the 1980s. It resulted in a push of total external debt interest payments. As a result, the new monetary epoch of the early 1980s provided "some awful fiscal calculation" worsening and prolonging the external debt problem. However, monetary authorities have no choice but to manage inflationary chaos.

Friedman (2006) investigated the impact of fiscal shocks on the twin deficits and United States' indebtedness from 1960 to 2004, using a VAR model with four variables: GDP growth, inflation rate, public spending, and debt to GDP ratio. He calculated the amount and rate of increase of fiscal shocks to the growth of total debt and deficits ratios and discovered a high persistence in the response.

Lane (2000) emphasized that the least developed economies are vulnerable to challenges due to limited access to international credit. The findings of the results, in particular, implied a positive relationship between a country's aggregate output and its level of external debt. Furthermore, the leading impetus of trade openness related to foreign debt is strong and supports the traditional view that more open economies are not risky. The credit rationing would limit international borrowing covenants and accurately handling of lending when experiencing business cycle fluctuations (Kehoe and Perri, 1997).

Qureshi and Liaqat (2020) unfolded the fact that shock in external debt results shock in other variables of monetary and fiscal policy. Most of the time delay in capturing the shock is unavoidable.

Lane (1999) discovered that the aftermath of a monetary shock causes a surge in national output and consumption. Reduced world interest rate and currency depreciation divert attention away from trade terms. Lane's argument was acknowledged by Muscatelli, Spinelli, and Trecroci (2007), who concluded that monetary shocks jolt the terms of trade in a flexible exchange rate regime. As a result, depreciation in the exchange rate benefits the economy by increasing foreign exchange earnings, which helps a country amortize its debt more quickly. It is important to note here that the incidence of depreciation is affected by amount of stickiness linked with nominal wage and setting the price level.

This research is an exclusive attempt to investigate the sways of the external debt through the fiscal and monetary shocks which further assist exploring the extent of the responsiveness of the policy variables in proportion to foreign borrowing in selected South Asian economies.

RESEARCH METHODOLOGY

The primary goal of the study is to assess sustainability of external debt using a reaction breakdown of monetary and fiscal. It has been a contentious issue for South Asian economies parallel to economic growth. The issue of external debt must be addressed appropriately, and South Asian States require alternative avenues to avoid excessive reliance on external supporting. This study focuses on the components of terms of trade being a viable alternative to external borrowing for these economies. To attain the primary goal of this study, the Vector Autoregressive Model (VAR) is applied to get empirical findings.

Dealing with monetary and fiscal reaction response, Vector Autoregressive (VAR) models are widely used for empirical analysis. This study estimates for yearly ranging from 1972 to 2019 in order to estimate shocks related to monetary and fiscal policy by applying reduced form VAR Model. Estimating fiscal and monetary policy reactions, VAR necessitates to eliminate identification problem. VAR methodology is not applicable unless the model’s variables are explicitly separated in the category of policy and non-policy group. It entails that endogenous variables must be distinguished from exogenous variables in order to achieve actual results. From last several years, in fiscal and economic analysis, the VAR model has become a standard reference methodology. The VAR model is expressed as follows:

$$A\begin{pmatrix} N_t \\ P_t \end{pmatrix} = C(L)\begin{pmatrix} N_{t-1} \\ P_{t-1} \end{pmatrix} + B\begin{pmatrix} v_t^N \\ v_t^p \end{pmatrix} \text{ .... } \mathbf{(1)}$$

In Eq (1) N denotes non-policy variables such as exports, imported capital goods and output. P in Eq (1) implies the representation of macroeconomic policy variables, external debt, foreign interest rate and domestic interest rate. Matrix A shows the contemporaneous association In this model, Matrix A depicts the contemporaneous relationship between macroeconomic variables, and C(L) is a lag polynomial matrix of infinite order. where B allows for the generation of shocks that straightly disturb other endogenous variables in model. By estimating the reduced form of the main equation, the VAR analysis is empirically tested as per equation (2):

$$\begin{pmatrix} N_t \\ P_t \end{pmatrix} = A^{-1}\, C(L)\begin{pmatrix} N_{t-1} \\ P_{t-1} \end{pmatrix} + \begin{pmatrix} u_t^N \\ u_t^p \end{pmatrix} \text{ .... } \mathbf{(2)}$$

In Equation, u represents the VAR residual vector. The general structural model is detailed in Eq (1), and the reduced form of VAR is held in Eq (3), with five macroeconomic variables. Output (y) and the exchange rate (er) are examples of non-policy macroeconomic variables. Domestic interest rate (dir), external debt (ed), and government expenditures (ge) are macroeconomic policy variables. The combination of all these variables is written below as Eq 3:

$$\begin{bmatrix} 1 & 0 & 0 & 0 & 0 \\ 0 & 1 & 0 & 0 & 0 \\ 0 & 0 & 1 & 0 & 0 \\ 0 & 0 & 0 & 1 & 0 \\ 0 & 0 & 0 & 0 & 0 \end{bmatrix} \begin{bmatrix} e_t^{y} \\ e_t^{er} \\ e_t^{dir} \\ e_t^{ed} \\ e_t^{ge} \end{bmatrix} \text{ .... } \mathbf{(3)}$$

The recursive approach is used because it prevents B from becoming a k-dimensional identity matrix, but A 0 becomes a lesser side of a triangular matrix with a unit diagonal, implying that the variance - covariance matrix is rotten as $\sum u = A_0^{-1} \sum u\,(A_0^{-1})'$. It is obtained through Cholesky decomposition $\sum u = PP'$ by a diagonal matrix D that holds the similar foremost diagonal as P and by designating $A_0^{-1} = PD'$ and $\sum e = DD'$, i.e. The components on the basic diagonals of D and P are equated with the respective structural shock's standard deviation. The recursive approach implies that the model variables are ordered in a causal manner. This study employs the "Recursive Approach," which necessitates the causative arrangement of the variables of model. The variables in the Structural VAR methodology are ordered in the following order: output level, exchange rate, domestic interest rate, external debt, and government expenditures.

It means that the following is the relationship between reduced-form disturbances u_t and structural disturbances e_t:

$$\begin{bmatrix} 1 & 0 & 0 & 0 & 0 \\ \alpha_{21} & 1 & 0 & 0 & 0 \\ \alpha_{31} & \alpha_{32} & 1 & 0 & 0 \\ \alpha_{41} & \alpha_{42} & \alpha_{43} & 1 & 0 \\ \alpha_{51} & \alpha_{52} & \alpha_{53} & \alpha_{54} & 1 \end{bmatrix} \begin{bmatrix} u_t^{y} \\ u_t^{er} \\ u_t^{dir} \\ u_t^{ed} \\ u_t^{ge} \end{bmatrix} = \begin{bmatrix} 1 & 0 & 0 & 0 & 0 \\ 0 & 1 & 0 & 0 & 0 \\ 0 & 0 & 1 & 0 & 0 \\ 0 & 0 & 0 & 1 & 0 \\ 0 & 0 & 0 & 0 & 1 \end{bmatrix} \begin{bmatrix} e_t^{y} \\ e_t^{er} \\ e_t^{dir} \\ e_t^{ed} \\ e_t^{ge} \end{bmatrix}$$

u_t Signifies standard residuals of VAR that needs to be untangled from the e_t .To permit some shocks to impact more endogenous variables in model, e_t is multiplied by an off-diagonal matrix that is not zero. This study limits the matrix of structural residuals by constraining fiscal and monetary indicators in such a way that the model indicates the operational procedures. Having been underscored the fiscal and monetary policy, the VAR technique allow the deviation from the rule, which benefits the analysts to perceive the responses of non-policy variables to policy whims that are not supposed to happen. Notwithstanding the above discussion, the SVAR deems applicable for current research. It moves around five variables which have been considered in log form.

The responses of besieged macroeconomic indicators towards unforeseen jolts in the context of fiscal and monetary policy, several transmission conduits in transferring policy shocks take place. The SVAR method is applied to analyze the model's vibrant features by estimating impulse response functions (IRF). The study employs IRF in its analysis:

$$\begin{bmatrix} 1 & 0 & 0 & 0 & 0 \\ \alpha_{ery} & 1 & 0 & 0 & 0 \\ \alpha_{diry} & \alpha_{direr} & 1 & 0 & 0 \\ \alpha_{edy} & \alpha_{eder} & \alpha_{eddir} & 1 & 0 \\ \alpha_{gey} & \alpha_{geer} & \alpha_{gedir} & \alpha_{geed} & 1 \end{bmatrix} \begin{bmatrix} u_t^{y} \\ u_t^{er} \\ u_t^{dir} \\ u_t^{ed} \\ u_t^{ge} \end{bmatrix}$$

It is the reflection of contemporaneous restriction matrix, B0. The following assumptions are made in the variable ordering specification: output level is not affected coincident through shocks to variables of model; (ii) exchange rate is not affected contemporaneously by shocks to domestic interest rate, external debt, and government expenditures, but effected by output level; (iii) domestic interest rate is affected contemporaneously by shocks to output and exchange rate but not to shocks to other variables in the model; and (iv) by shocks to all variables impact external debt contemporaneously. Dungey and Fry (2008), Caldra and Kamps (2008), Zaidi (2011), and Sugiarto (2015) have also used the identical order of the variables. This research applies the similar order for each South Asian economy.

RESULTS AND DISCUSSION

The following structural decomposition was used in this study to estimate a 5x5 SVAR model. The results are presented below based on the model's estimated coefficients;

Reduced-Form VAR Residuals Pakistan

The results are presented below based on the model's estimated coefficients:

$$\begin{bmatrix} 1 & 0 & 0 & 0 & 0 \\ 0.0890 & 1 & 0 & 0 & 0 \\ 0.3784 & -0.5343 & 1 & 0 & 0 \\ 7.2945 & 3.0123 & -0.0470 & 1 & 0 \\ 0.8098 & 0.0786 & 0.1807 & 0.0285 & 1 \end{bmatrix} \begin{bmatrix} u_t^y \\ u_t^{er} \\ u_t^{dir} \\ u_t^{ed} \\ u_t^{ge} \end{bmatrix} = \begin{bmatrix} 15.31 \\ -0.39 \\ 0.69 \\ 15.97 \\ 13.00 \end{bmatrix}$$

To separate them, residuals of reduced-form VAR are commuted from the structural shocks, following Enders (2004, *ch. 5*).

$u_t^y = 15.31$

$0.0890\ u_t^y + u_t^{er} = -0.39$

$0.3784\ u_t^y - 0.5343\ u_t^{er} + u_t^{dir} = 0.69$

$7.2945\ u_t^y - 3.123\ u_t^{er} - 0.0470\ u_t^{dir} + u_t^{ed} = 15.97$

$0.8098\ u_t^y + 0.0786\ u_t^{er} + 0.1807\ u_t^{dir} + 0.0285\ u_t^{ed} + u_t^{ge} = 13.00$

$u_t^y = 15.31$ $\quad u_t^{er} = -1.726$ $\quad u_t^{dir} = -.6248$

$u_t^{ed} = 11.1992$ $\quad u_t^{ge} = 1.5070$

The findings demonstrate that fiscal policy has been responsive to $\alpha_{41}$and α_{42}. It signifies the responsiveness of fiscal policy in connection of output and exchange rate levels. Fiscal policy shocks must be deliberately unfolded from the calculated reduced-form shocks. The application of fiscal behavior restrictions reveals a significant difference in the structure of external debt e_t^{ed} and VAR residual u_t^{ed}, also structure break of government expenditures e_t^{ge} and VAR residual u_t^{ge} confirming the model's identification scheme's validity. Caldra and Kamps (2008), Zaidi (2011), and Sugiarto (2015), demonstrates that the impulses estimated through above technique are important in determining fiscal policy. The structural shocks are lower than all other VAR shocks. As a result, it is deduced that excluding one of the fiscal policy variable from an identified VAR can significantly alter the scale of the shock.

Reduced-Form VAR Residuals India

The results are mentioned below are followed by the estimated coefficients of the model:

$$\begin{bmatrix} 1 & 0 & 0 & 0 & 0 \\ 0.8986 & 1 & 0 & 0 & 0 \\ 0.1043 & 0.1297 & 1 & 0 & 0 \\ 2.5004 & -2.0865 & 0.1162 & 1 & 0 \\ 0.5766 & .0.1135 & 0.0727 & 0.1596 & 1 \end{bmatrix} \begin{bmatrix} u_t^{y} \\ u_t^{er} \\ u_t^{dir} \\ u_t^{ed} \\ u_t^{ge} \end{bmatrix} = \begin{bmatrix} 8.8023 \\ 0.7089 \\ 0.2016 \\ 19.9158 \\ 10.4544 \end{bmatrix}$$

The reduced-form VAR residuals are calculated as follows to separate them from the structural shocks:

$u_t^{y} = 8.8023$

$0.8986u_t^{y} + u_t^{er} = 0.7089$

$0.1043u_t^{y} - 0.1297\, u_t^{er} + u_t^{dir} = 0.2016$

$2.5004u_t^{y} - 2.0865u_t^{er} - 0.1162u_t^{dir} + u_t^{ed} = 19.9158$

$0.5766u_t^{y} + 0.1135u_t^{er} + 0.0727u_t^{dir} + 0.1596u_t^{ed} + u_t^{ge} = 10.4544$

$u_t^{y} = 8.8023$ $\quad u_t^{er} = -0.6616$ $\quad u_t^{dir} = -1.5804$

$u_t^{ed} = 11.2199$ $\quad u_t^{ge} = 2.9487$

The findings demonstrate that fiscal policy holds significant impact on α_{41} andα_{42}. It means that fiscal policy has had an impact on output and the exchange rate. Domestic rate of interest is negatively related as α_3 , but this relationship is insignificant. Fiscal policy shocks must be deliberately unfolded from the reduced-form shocks calculation. The application of fiscal behavior restrictions reveals significant variances in between structure break and VAR residual of external debt, as well as the structure break of government expenditures and VAR residual, assuring model's identification scheme's validity. The structural shocks are lower than all other VAR shocks. As a result, it can be concluded that excluding any of the fiscal policy variable from VAR can significantly alter a size of shock.

Reduced-Form VAR Residuals Bangladesh

The model's estimated coefficients are shown below:

$$\begin{bmatrix} 1 & 0 & 0 & 0 & 0 \\ 0.2690 & 1 & 0 & 0 & 0 \\ 0.0218 & 0.1259 & 1 & 0 & 0 \\ 2.0510 & 5.3381 & -0.1356 & 1 & 0 \\ 0.5395 & 0.3224 & 0.1409 & 0.0342 & 1 \end{bmatrix} \begin{bmatrix} u_t^{y} \\ u_t^{er} \\ u_t^{dir} \\ u_t^{ed} \\ u_t^{ge} \end{bmatrix} = \begin{bmatrix} 11.1160 \\ 0.5173 \\ 0.1962 \\ 15.6974 \\ 9.8308 \end{bmatrix}$$

The reduced-form VAR residuals are calculated in the following way to separate them from the structural shocks:

$$u_t^{y} = 11.1160$$
$$0.2690u_t^{y} + u_t^{er} = 0.5173$$
$$0.0218u_t^{y} + 0.1259u_t^{er} + u_t^{dir} = 0.1962$$
$$2.0510u_t^{y} + 5.3381u_t^{er} - 0.1356 + u_t^{ed} = 15.6974$$
$$0.5395u_t^{y} + 0.3224u_t^{er} + 0.1409u_t^{dir} + 0.0342u_t^{ed} + u_t^{ge} = 9.8308$$

$u_t^{y} = 11.1160$ $u_t^{er} = -2.8329$ $u_t^{dir} = 0.0819$

$u_t^{ed} = 7.8937$ $u_t^{ge} = 4.4657$

The SVAR findings indicate impact of fiscal policy tool. The coefficients' significance of α_{41} and α_{42} validates fiscal policy's effectiveness. It delineates that fiscal policy in terms of external debt has had an impact on output and the exchange rate. Domestic interest rate coefficient α_{43} is negligible and negative. Fiscal policy shocks must be deliberately unfolded from the reduced-form shocks calculation. The application of fiscal behavior restrictions reveals substantial differences in the structure break of external debt and VAR residual. The structure break of government expenditures and VAR residual confirms the model's identification scheme. The structural shocks are lower than all other VAR shocks. As a result, it is inferred that leaving even one fiscal policy variable from an identified VAR can drastically change the magnitude of the shock.

Reduced-Form VAR Residuals Sri Lanka

The findings depicting the model's estimated coefficients are given below:

$$\begin{bmatrix} 1 & 0 & 0 & 0 & 0 \\ 0.6275 & 1 & 0 & 0 & 0 \\ 0.0457 & 0.1437 & 1 & 0 & 0 \\ 4.2056 & -5.1814 & 0.0819 & 1 & 0 \\ 0.3421 & 0.1530 & 0.3101 & 0.0224 & 1 \end{bmatrix} \begin{bmatrix} u_t^{y} \\ u_t^{er} \\ u_t^{dir} \\ u_t^{ed} \\ u_t^{ge} \end{bmatrix} = \begin{bmatrix} 10.4041 \\ 0.3276 \\ 0.1589 \\ 14.4860 \\ 8.3004 \end{bmatrix}$$

The reduced-form VAR residuals are calculated as follows to separate them from structural shocks:

$$u_t^{y} = 10.4041$$
$$0.6275u_t^{y} + u_t^{er} = 0.3276$$
$$0.0457u_t^{y} + 0.1437u_t^{er} + u_t^{dir} = 0.1589$$
$$4.2056u_t^{y} + 5.1814u^{er} + 0.0891u_t^{dir} + u_t^{ed} = 14.4860$$
$$0.3421u_t^{y} + 0.1530u_t^{er} + 0.3101u_t^{dir} + 0.0224u_t^{ed} + u_t^{ge} = 8.3004$$

$u_t^{y} = 10.4041$ $u_t^{er} = -6.2009$ $u_t^{dir} = 0.5745$

$u_t^{ed} = 2.8088$ $u_t^{ge} = 5.3923$

The findings show that responsiveness of fiscal policy towards output and exchange rate coefficients α_{41} and α_{42} correspondingly. Therefore, fiscal policy holds profound response to output and exchange rate levels. The positive connection of domestic rate of interest, as shown in α_{43}, i.e., external debt shifts dependence on local loanable funds' demand, resulting in an increase in domestic interest rate. Government spending being a fiscal policy tool has also been responsive. Fiscal policy shocks must be deliberately unfolded from the reduced-form shocks calculation. The application of fiscal behavior restrictions reveals significant differences in the structure break of external debt and VAR residual. The structure break of government expenditures and VAR residual confirms the model's identification scheme. The structural shocks are lower than all other VAR shocks. Resultantly, excluding even one fiscal policy variable from an identified VAR can considerably change the size of the shock.

CONCLUSION AND FURTHER IMPLICATIONS

The SVAR result imply that fiscal policy shocks are more responsive in all selected South Asian economies, whereas monetary policy is less effective in these economies, in short as well as long term. In terms of Pakistan, India and Sri Lanka economic growth, contractionary monetary policy has been observed to be sluggish and unaccommodating. Sinicakova, M., & Gavurova, B. (2017) also concluded the similar proposition that tight monetary policy may pose serious consequences for the developing countries. In the case of Bangladesh, monetary policy remains lax while responding positively to economic growth. Nevertheless, for Sri Lanka, contractionary monetary policy has been found to boost growth and solve the interest rate puzzle, and this conclusion is consistent with Sheng and Shukaj's research (2021). As a result, when fiscal policy instruments exists, effectiveness of monetary policy is trivial, and monetary policy instruments used by monetary authorities are primarily accommodating. Which is matching with the findings of Ali *et.al (*2021). The findings also show that fluctuations in the exchange rate not only disrupt trade components, but also force South Asian economies to incur high external debt costs.

As a result, greater prudence and foresight are required when designing and implementing fiscal policy. The output level both local and export oriented may be supported by the planned government expenditures whereas monetary policy may not enable the economies to achieve this objective followed by its weary characteristic. Sinicakova & Gavurova, (2017) also emphasized the adverse impact of monetary policy, which may cause deterioration of other macroeconomic indicators. However, the dynamics of fiscal and monetary policies may be considered, keeping in view the immunity of economy to witness stable macroeconomic trajectory in the long run. Delgado (2021) also emphasized the importance of prudent fiscal policy for a stable economic growth.

Though, this study does not consider other foreign exchange indicators which are an ultimate segment of international reserves as some of the current accounts parameters for selected South Asian economies.

The research leaves some prolific aspects which may be carried out to explore the components of international trade as crucial part of current account which may further assist these economies to manage and gradually reduce their external debt for the sustainable economic development.

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