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THE TRANSMISSION OF MONETARY POLICY SHOCKS TO MAJOR ECONOMIC SECTORS IN THE GAMBIA: EVIDENCE FROM AN SVAR

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Abstract

While the transmission of monetary policy shocks to the aggregate economy has been one of the most researched topics in macroeconomics, little is known when it comes to how monetary policy shocks affect different sectors of economy. This gap in the literature constrains policymakers in pinpointing the impact of monetary policy actions on sector specific activities. Therefore, the need to understand the transmission of exogenous monetary shocks to major economic sectors cannot be overemphasized especially in the wake of using monetary policy to address structural bottlenecks in LICs such as The Gambia. Against this backdrop, this paper investigated the transmission of monetary policy shocks to five major economic sectors in The Gambia using an SVAR framework. The results show that a positive unanticipated monetary policy shock is associated with a decline in banks' credit supply to major economic sectors albeit differently. Furthermore, the impact occurs almost immediately for all sectors except for consumer credit which only started to decline after one year. Importantly, the impact has a lasting effect on the sectors averaging around 16-20 quarters after impact. Thus, among other things, policymakers should account for these facts when deciding on the use of monetary policy for stabilisation programmes in The Gambia.

Keywords: Monetary Policy Transmission, Bank Credit Supply, Major economic sectors, Impulse Response, SVAR

Note: This paper represents an edited version of a section contained in the author's original PhD dissertation, entitled Essays on monetary policy, submitted to Ankara Yildirim Beyazit University. Original copyright belongs to the said University.

INTRODUCTION

Several studies have shown that monetary policy actions have real effect on the economy. This comes after the novel publication of Friedman and Schwartz (1963) on the monetary history of the United States of America – the actions of the federal reserve in changing its short term interest rates alters both output and employment. What remains of the debate is which transmission channel is the most effective taking into account the state, level of development and country/region under study. Theoretically, monetary policy actions may be transmitted to the economy through the interest rate channel, exchange rate channel, asset prices/wealth channel and the credit channel. This theoretical position has been supported by a body of empirical research since then.

However, while a large body of literature exists on the effectiveness of these channels across a range of caveats, the results vary across time, country and methodology. This is more apparent in emerging and least developed countries where the financial system is very shallow in addition to a weak legal environment see (Mishra et al, 2011, 2014).

The inconsistencies in results have necessitated a number of studies to be focused on country specific cases to remedy the heterogeneity problem that comes with pooled cross sectional studies. While this has helped is so many ways – testing and confirming the existence of the main channels of monetary transmission in different countries and times, few studies have extended to cover the impact of monetary policy shocks on sector specific credit supply. Moreover, the few studies that accounted for sector specific credit supply were based on advanced economies while no known work exist for least developing countries. This paper will fill this gap by looking at the effect of monetary policy shocks on major economic sectors in The Gambia.

Until now, the credit channel has focused on the effect of monetary policy on the supply of bank loans and the demand for bank credit by households and firms using bank credits, bank characteristics, firm-level data and household balance sheet (Kashyap and Stein, 1993; Kashyap et al, 1996; Oliner and Rudebusch, 1995; Bougheas et al, 2006). Thus, extending this approach to include the impact of monetary policy on credit to major economic sectors is important in many ways. First, accounting for the potential effect of monetary policy on major economic sectors will reveal the distributional effect of monetary policy on specific economic sectors. This will measure the actions of monetary policy on the sectors of the economy which is crucial in the wake of central banks getting more involved in developmental initiatives of their respective countries. Second, in low-income countries where structural bottlenecks continue to

persist, the ability to use monetary policy as stabilization policy cannot be overemphasized. Thus, understanding how monetary policy affects major sectors such as agriculture, manufacturing and distributive trade will be helpful in tailoring government policies during stabilization programmes. Finally, this extension will also shed light on the lags of monetary policy transmission to the economy at a more disaggregated micro-level in addition to the more conventional macro-level. This is crucial for policymakers as it relates to the timing of monetary policy response.

Using a structural vector autoregressive (SVAR) framework, we showed that monetary policy shocks are transmitted to major economic sectors in The Gambia. In other words, a positive unanticipated exogenous monetary policy shock is associated with a decline in bank credit supply to all major economic sectors albeit differently. The decline in bank credit supply has a lasting effect in these sectors. Thus, policy makers must account for these factors when making decisions to use monetary policy for stabilisation programmes.

The rest of the paper is organized as follows: section 2 presents a summary of relevant literature on the topic, section 3 talks about the methodology employed as well as the data used for the analysis, section 4 presents the results while the conclusion is laid out in section 5.

LITERATURE REVIEW

As noted earlier, monetary transmission has attracted a lot of research attention from both academia and policymakers. While there has been empirical support to the effectiveness of conventional monetary policy transmission channels in advanced economies albeit differently, there is huge inconsistencies when it comes to least developed countries. Even with the case of bank lending channel which is expected to be effective in least developed economies due to the importance of banks in the financial intermediation process in these countries, the results suggest otherwise (Mishra et al, 2011, 2014).

Given that this paper is focused on the transmission of monetary policy shocks to major economic sectors, it presents those studies that are relevant to the bank lending channel. This is premised on the fact that shocks on monetary policy (tight monetary policy) could constraint bank credit supply to major economic sectors in The Gambia thus stifling activity in these sectors. For this reason and for the sake of space, selected key studies are summarized in Table 1 below.

Table 1: A Survey of Key Literature on Monetary Transmission

	Author(s)	Title of Paper	Country	MP Indicator	Main Results
1	Aleem, A. (2010)	Transmission mechanism of monetary policy in India	India	Overnight Repo Rate	MP affects Output, confirms bank lending channel and exchange rate channel
2	Bernanke, B. S., & Blinder, A. S. (1992)	The federal funds rate and the channels of monetary transmission	USA	Federal Funds Rate	Monetary policy is transmitted through the credit and money channels
3	Bernanke, B. S., & Gertler, M. (1995)	Inside the black box: the credit channel of monetary policy transmission	USA	Federal Funds Rate	Existence of Credit Channel
4	Cheng, K. C. (2006)	A VAR analysis of Kenya's monetary policy transmission mechanism: How does the central bank's REPO rate affect the economy	Kenya	Overnight Repo Rate	MP shock has no effect on Output. MP impacts prices and exchange rate
5	Chileshe, P. M. (2017)	Banking structure and the bank lending channel of monetary policy transmission: Evidence from panel data methods	Zambia	CB policy rate	Confirms bank lending channel
6	Mishra, P., Montiel, P. J., & Spilimbergo, A. (2011)	How Effective Is Monetary Transmission in Developing Countries? A Survey of the Empirical Evidence	Panel of countries		Weak Bank lending channel
7	Mishra, P., Montiel, P., Pedroni, P., & Spilimbergo, A. (2014)	Monetary policy and bank lending rates in low-income countries: Heterogeneous panel estimates	Panel of countries		Bank lending channel is more effective in advanced economies than low-income countries
8	Lungu, M. (2007).	Is there a bank lending channel in Southern African banking systems?	SADC	Bank Rate	Existence of the Bank lending channel
9	Matousek, R., & Solomon, H. (2018)	Bank lending channel and monetary policy in Nigeria	Nigeria	CB policy rate	Existence of the Bank lending channel
10	Matousek, R., & Sarantis, N. (2009)	The bank lending channel and monetary transmission in Central and Eastern European countries	Panel of countries	Nominal short-term interest rate	Existence of the Bank lending channel in all countries studied
11	Ashcraft, A. B. (2006)	New evidence on the lending channel	USA	Federal Funds Rate	Existence of lending channel. However, affiliated banks' lending is less sensitive to the federal funds rate than non-affiliated banks

12	Ackim, M. E. (2016)	The Impact of Monetary Policy on Bank Balance Sheet Variables in Sub-Saharan Africa: Evidence for a Bank Lending Channel	SSA	Real Interest Rate	Strong existence of the Bank lending channel in some economic groupings in SSA
13	Nyumuah, F. S. (2018)	An Empirical Analysis of the Monetary Transmission Mechanism of Developing Economies: Evidence from Ghana	Ghana	CB policy rate	The exchange rate and money supply channels are the strongest in transmitting MP impulse. While the interest rate and lending channels appear very weak.
14	Opolot, J., & Nampewo, D. (2014)	Bank Lending Channel of the Monetary Policy Transmission Mechanism in Uganda: Evidence from Disaggregated Bank-level Data	Uganda	91-day T-bill rate	Existence of the Bank lending channel
15	Simpasa, A. M., Nandwa, B., & Nabassaga, T. (2014)	Bank Lending channel of monetary policy transmission in Zambia: Evidence from bank-level data	Zambia	weighted average 91-day T-bill rate. Bank rate. Net OMO.	Existence of Bank lending channel

* CB abbreviates Central Bank, * MP means Monetary Policy, * SADC stands for Southern African Development Community, * SSA stands for Sub-Sahara Africa

RESEARCH METHODOLOGY

Following similar studies on monetary transmission, this paper adopted the Structural Vector Autoregressive or SVAR approach to model the transmission of monetary shocks to major sectors of the Gambian economy. The SVAR approach is suitable and easier to implement than other structural macroeconomic models such as DSGE model and its variants used in most central banks. For example, unlike in large macro models, the SVAR require less structural restrictions because if well modelled, the reduced form residuals could capture all the exogenous shocks within the data.

To this end, this paper models the Gambian economy as having the following structural form.

$$\Lambda Y_t = B(L)X_t + \varepsilon_t \quad (1)$$

Where Λ and B(L) are (m x m) matrix polynomials in lag operators, Y_t is (m x 1) vector of domestic endogenous variables, X_t is (m x 1) vector of exogenous variables and ε_t is an

(m x 1) vector of structural shocks with $Var(\mathcal{E}_t) = \Sigma_e$ which is assumed to be a diagonal matrix. The reduced form representation of (1) is given below in (2).

$$Y_t = A(L)Y_t + C(L)X_t + u_t \quad (2)$$

Where A(L) and C(L) are matrix polynomials in lag operators and u_t is a vector of reduced form innovations with $Var(u_t) = \Sigma_u$. The errors from the structural and reduced form equations can be related in the following:

$$\Sigma_u = \Lambda^{-1}\Sigma_e\Lambda^{-1'} \quad (3)$$

We know from (3) above that there are *m x (m + 1)* estimated parameters in Σ_e but *m x (m + 1)/2* in Σ_u. Therefore, normalisation of the diagonal elements of matrix Λ will require *m x (m - 1)/2* more restrictions to identify the model based on economic theory. This paper adopted the Cholesky Decomposition (recursive) and the Blanchard-Perotti (non-recursive) methods of identifications. A summary of the two approaches is presented below.

In this study, we included a vector X_t to contain exogenous variables which contains World Commodity Price Index (WCPI), US real GDP (USrgdp), US Federal Funds rate (USFedrate). These variables are included to capture the global economic conditions which as in many small open economies influences domestic policies in The Gambia. Since it is assumed domestic policies cannot exert any influence on the global economy, these variables are treated as exogenous in the SVAR model.

Domestic variables include real GDP (rgdp), prices measured here by the consumer price index (CPI), a vector Z_t containing sectoral bank credit supply: bank credit to agricultural sector, bank credit to building & construction sector, bank credit for distributive trade, bank credit to tourism sector and bank credit to individuals (consumer/personal loans). Other domestic endogenous variables are the central bank monetary policy rate (MPR) included to account for the stance of monetary policy and the Nominal Effective Exchange Rate (NEER). In short, the vectors of exogenous and endogenous variables are given as follows:

$$X'_t = [wcpi_t, USrgdp_t, USFedrate_t] \quad (4)$$

$$Y'_t = [rgdp_t, cpi_t, z_t, mpr_t, neer_t] \quad (5)$$

Cholesky Identification Scheme (Recursive):

The Cholesky decomposition imposes a recursive restriction with the ordering as in (5). This assumes that output, prices and bank credit to major sectors does not response contemporaneously (within the same period let say month, quarter etc) to exogenous monetary policy shocks. However, the nominal effective exchange rate responds contemporaneously to monetary policy innovations. This kind of argument is widely used by researchers in monetary policy transmission (Bernanke and Blinder, 1992; Bernanke and Mihov, 1998; Gertler and Gilchrist, 1993; Bernanke and Gertler, 1995; Christiano et al,1999; Cheng, 2007). Thus, the ordering of the variables is very important for this identification strategy. As a result, the Cholesky identification requires the estimation of the reduced form and computing the Cholesky factorisation relating the reduced form innovations and structural shocks of the model as shown below.

$$\begin{bmatrix} \varepsilon_t^{GDP} \\ \varepsilon_t^{CPI} \\ \varepsilon_t^{Z} \\ \varepsilon_t^{MPR} \\ \varepsilon_t^{NEER} \end{bmatrix} = \begin{bmatrix} 1 & 0 & 0 & 0 & 0 \\ \gamma_{21} & 1 & 0 & 0 & 0 \\ \gamma_{31} & \gamma_{32} & 1 & 0 & 0 \\ \gamma_{41} & \gamma_{42} & \gamma_{43} & 1 & 0 \\ \gamma_{51} & \gamma_{52} & \gamma_{53} & \gamma_{54} & 1 \end{bmatrix} \begin{bmatrix} u_t^{GDP} \\ u_t^{CPI} \\ u_t^{Z} \\ u_t^{MPR} \\ u_t^{NEER} \end{bmatrix} \quad (6)$$

Blanchard-Perotti Approach (Non-recursive):

Unlike the recursive approach, the non-recursive identification imposes restrictions to allow the contemporaneous response between the endogenous variables based on economic theory. In this paper, the following restrictions are imposed.

$$\begin{bmatrix} \varepsilon_t^{GDP} \\ \varepsilon_t^{CPI} \\ \varepsilon_t^{Z} \\ \varepsilon_t^{MPR} \\ \varepsilon_t^{NEER} \end{bmatrix} = \begin{bmatrix} 1 & 0 & 0 & 0 & 0 \\ \gamma_{21} & 1 & 0 & 0 & 0 \\ \gamma_{31} & \gamma_{32} & 1 & \gamma_{34} & 0 \\ 0 & 0 & \gamma_{43} & 1 & \gamma_{45} \\ \gamma_{51} & \gamma_{52} & \gamma_{53} & \gamma_{54} & 1 \end{bmatrix} \begin{bmatrix} u_t^{GDP} \\ u_t^{CPI} \\ u_t^{Z} \\ u_t^{MPR} \\ u_t^{NEER} \end{bmatrix} \quad (7)$$

The restrictions in 7 above suggest that output and prices does not respond contemporaneously to monetary policy shocks within the same period. These restrictions are in line what obtain in The Gambia as authorities don't observe GDP and inflation figures the same time they make monetary policy decisions. On the other hand, bank credit to major economic

sectors responds contemporaneously to exogenous monetary shocks while reacting to exchange rate shocks only with a lag. The nominal exchange rate here acts as the shock absorber of the economy responding contemporaneously to all shocks in the economy. Even though there are noticeable presence of central bank in the forex market mainly to smoothen and avoid large fluctuation of the dalasi rate, the exchange rate is seen as market determined adjusting to equilibrate demand and supply imbalances. Thus, imposing such a restriction is plausible for case of The Gambia.

Data

This study employs quarterly data on real GDP (RGDP), consumer price index (CPI), monetary policy rate (MPR) and nominal effective exchange rate (NEER) from 1998Q1 to 2020Q4. The sample choice is based on the availability of data and also it covers the period of increased financial intermediation. Furthermore, in order to explore the transmission of monetary policy shocks to major economic sectors in The Gambia, commercial bank's credit to major economic sectors (loans to agriculture, building and construction, distributive trade, tourism and personal loans) were included in the SVAR estimations. Real GDP which is obtained from the World Bank Economic Indicators was only available in annual series therefore the paper employs the Denton method to interpolate the annual series into quarterly series. CPI, MPR and NEER are obtained from the International Financial Statistics (IFS) of the IMF while commercial banks sectoral loans were obtained from the CBG data warehouse. Apart from real GDP, the quarterly series of all the variables are the averages of the three months within the quarter.

Also included in the paper are exogenous variables as a way of accounting for external economic and financial developments that could weigh on the Gambian economy. Toward this end, external demand is proxied by US real GDP while the US Federal Funds rate is employed to capture global financial conditions. Data on all the variables was obtained from the Federal Reserve Economic data of St Louis Federal Reserve. The world commodity price index which is a closely watch index by CBG was included to account for global commodity price shocks and it was obtained from the World Indicators of the World Bank. A full description of the data and its source is presented in Table 1 in Appendix B. All the variables used were transformed into their natural logarithm except for the interest rates (MPR and federal funds rate) which were already in percentages. Since the quarterly series were generated using monthly averages, all variables were seasonally adjusted using the census X-12 inbuilt in EViews 12.

The graphical representations of the research variables are shown in the Figure 1 and Figure 2:

Figure 1: Domestic Endogenous Variables Employed

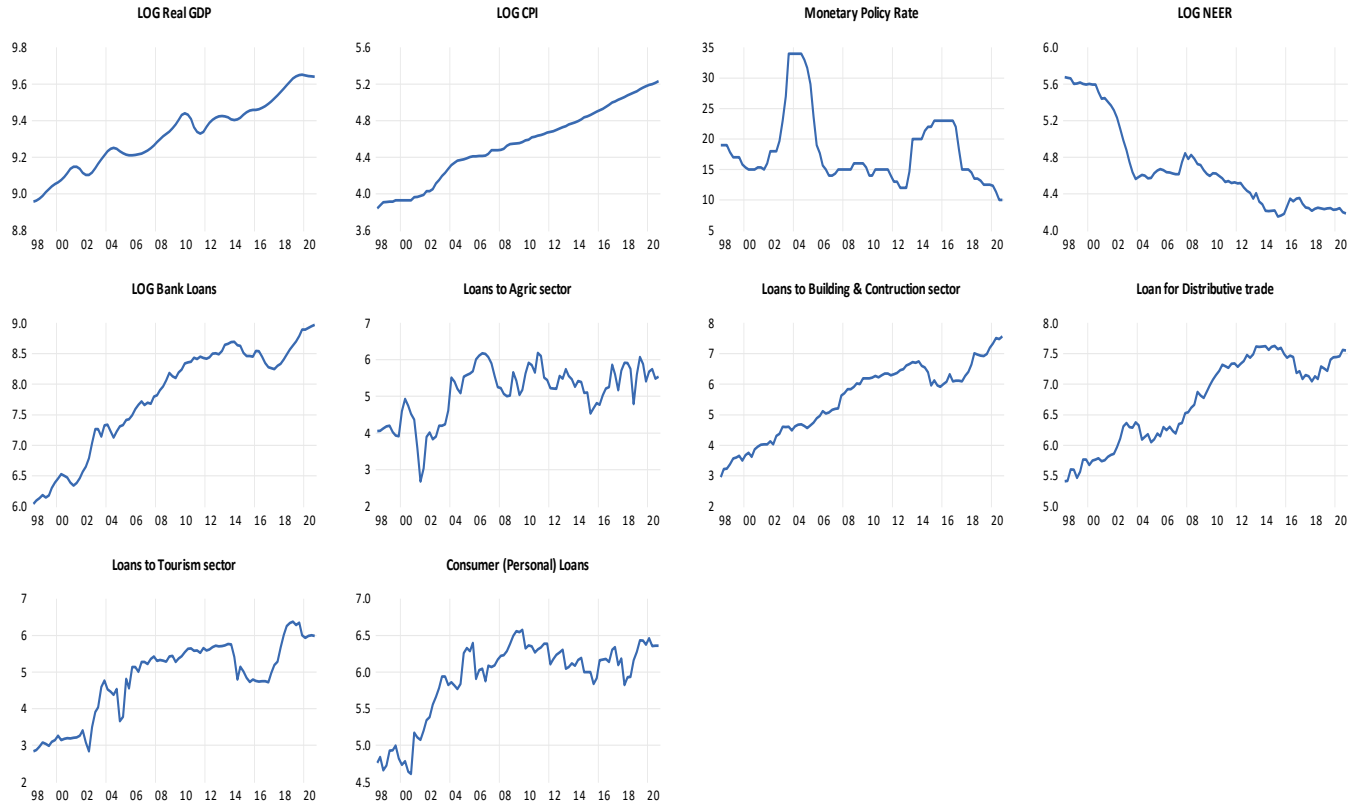
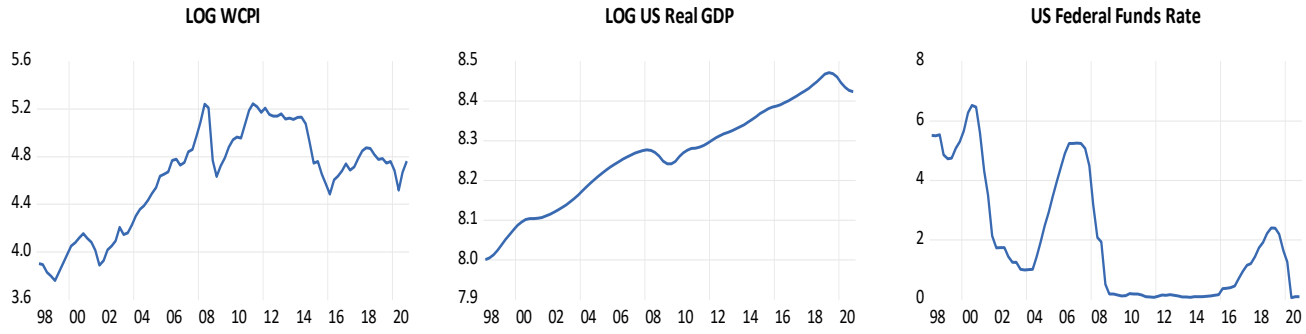


Figure 2: Exogenous Variables Employed



Source: Author's Calculations based on data from IFS, WDI and CBG

ANALYSIS AND RESULTS

In this section, we present the results of this study. Before presenting the main results in the form of impulse responses, it is important to show the integration of the variables even though the SVAR is estimated at level.

Table 2 below contains the Augmented Dickey Fuller test for stationarity. All variables are not stationary at level but stationary at first difference thus, the variables used in this study are integrated of order one.

Table 2: Augmented Dickey Fuller (ADF) Test Results

Variable	At Level		At First Difference	
	With Intercept	With Intercept and Trend	With Intercept	With Intercept and Trend
Log Real GDP	0.9556 (10)	0.5387 (10)	0.0010 (9)	0.0062 (9)
Log CPI	0.9577 (1)	0.0950 (5)	0.0000 (0)	0.0000 (0)
Log BL	0.3888 (6)	0.7156 (1)	0.0000 (0)	0.0011 (5)
MPR	0.1037 (1)	0.2224 (1)	0.0002 (0)	0.0016 (0)
Log NEER	0.2798 (1)	0.5075 (2)	0.0008 (1)	0.0000 (0)
LogAgric.Loans	0.2653 (2)	0.4202 (2)	0.0000 (1)	0.0000 (1)
Log B&C Loans	0.6187 (0)	0.5803 (2)	0.0000 (1)	0.0001 (1)
Log DT Loans	0.5227 (0)	0.8349 (0)	0.0003 (2)	0.0000 (0)
Log TZM Loans	0.4520 (3)	0.3971 (3)	0.0005 (2)	0.0032 (2)
Log PL Loans	0.2649 (4)	0.5616 (0)	0.0000 (0)	0.0000 (0)

EViews 12 software package

Impulse Response

In order to understand the effect of monetary policy shocks on the overall economy, the paper first examined the impact of exogenous monetary policy shock on output, prices and exchange rate and the impulse response graphs are presented in appendix A. The results show that an exogenous shock in monetary policy is associated with a decline in output and prices and an appreciation of the nominal exchange rate. However, the results are generally not very significant.

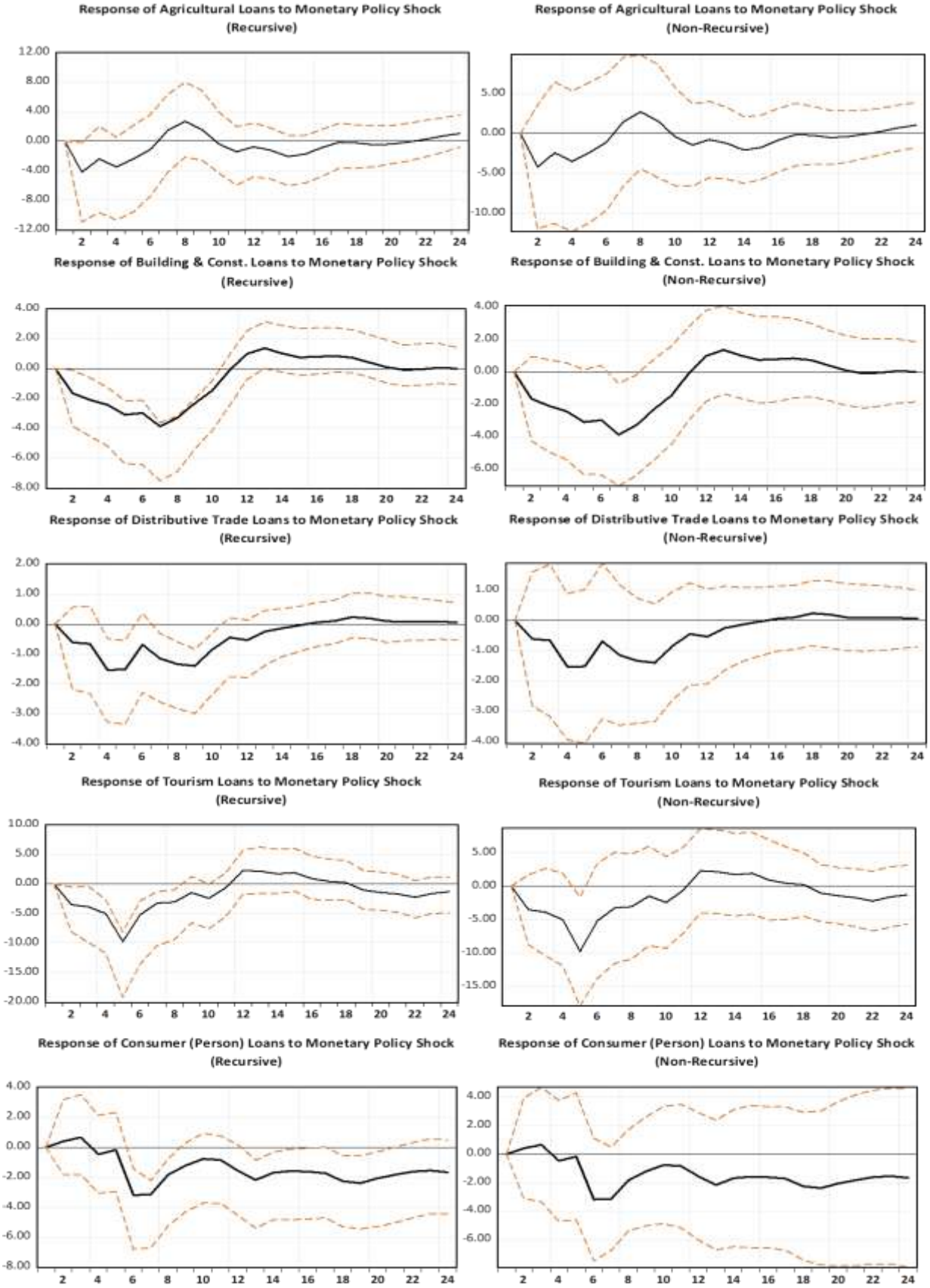
Thereafter, the main results on the transmission of monetary policy shocks to major economic sectors in The Gambia are presented in Figure 3 in the form of impulse response graphs. As expected, the results show that a positive unanticipated exogenous monetary policy shock leads to a decline in all sectoral credit albeit differently. This is true

under both the recursive and non-recursive approaches. For instance, an unanticipated exogenous monetary shock leads to an immediate decline in bank credit supply to the agricultural sector. The decline in bank credit to agriculture bottoms out at negative 4 percent after the second quarter before rising back to its long run equilibrium. The results are fairly significant at impact under the recursive SVAR but not under the non-recursive approach.

Similarly, a monetary tightening as in a positive exogenous monetary shock is associated with a decline in bank credits to the building and construction sector. The decline is more prolonged than in the case of agricultural loans bottoming out at negative 4 percent in quarter seven before return to its baseline level. The empirical results are statistically significant only under the recursive approach as the confidence interval does not contain the baseline at least in the periods corresponding to the decline in loans to the sector.

Furthermore, a similar outcome is observed for bank loans to the distributive trade sector. Though it appears the least impacted following a monetary contraction, a positive monetary shock is associated with a fall in bank credits for distributive trade occurring immediately after impact and bottoms out after one year (-1.7%). Moreover, it takes 15 quarters to return to its long run equilibrium making the distributive trade sector one of those sectors which endure a lasting effect following a monetary policy shock. The tourism sector which happens to be a very important sector for the Gambian economy as one of the major foreign currency earner has its fair share following a monetary tightening. In effect, an unanticipated exogenous monetary innovation is associated with a decline in bank loans to the tourism sector and the effect occurs immediately following the shock bottoming out at quarter five (-10%).

Figure 3: Response of sectoral credit to a positive structural monetary policy shock



EViews 12 software package output

In fact, the tourism sector is the most affected sector as evident in the sharpest decline in credit to the sector following a monetary policy shock and the effect last as long as three years before rebounding. This is true under both recursive and non-recursive approaches however only the results under the recursive approach are statistically significant.

Finally, consumer loans respond negatively to an unanticipated exogenous monetary policy shock but only after four quarters. This could be as a result of the contractual nature of personal loans which are given for a fixed period of time and mostly on fixed interest rates as against bank loans to other sectors[1]. Thus, banks could only respond to a tight monetary policy by not making new loans while allowing old loans to expire without renewal. This way consumer loans will eventually decline in respond to tight monetary policy after some time as could be seen above. Although the results under the recursive appears fairly significant, the decline in consumer loans following a monetary shock seem to never rebound.

CONCLUSION

This study investigated the transmission of monetary policy shocks to major economic sectors in The Gambia using an SVAR approach. Based on data availability and the importance of the sector, this paper focused only on five economic sectors – agricultural sector, building & construction sector, distributive trade sector and consumer credit – to perform the analysis.

The results show that monetary policy shocks affect bank credit supply to major economic sectors albeit in a varied way. Except for consumer loans, credits to all other sectors decline at impact after a monetary tightening and the decline has a lasting effect. In the case of loans to tourism sector, the decline bottoms around the fourth quarter reaching its trough at negative 10 percent – the sharpest decline among all credit categories.

Based on these findings, there is evidence of monetary policy shocks being transmitted to major economic sectors through banks' sectoral credit supply in The Gambia. Furthermore, even though monetary policy actions are accompanied with a decline in sectoral credit, the magnitude and timing differ across sectors. These heterogenous responses of economic sectors to monetary policy shocks signal to policymakers the danger of lumping all sectors together in evaluating the potential impact of monetary policy on the economy. Thus, policymakers should perform sectoral analysis of the potential impact of monetary policy actions

[1] For example, bank loan for distributive trade, tourism, building and construction and agriculture are mostly to finance working capital of businesses/firms and are based on a revolving overdraft (OD) which is renewable every thirty days, sixty days and/or ninety days depending on the agreement between the bank and the borrower. It is worth noting that in The Gambia, bank loans to agriculture are mostly for processing and marketing thus are not long term in nature.

especially during the formulation of stabilisation programmes. In addition, officers at the central bank should be aware of the timing of monetary policy actions on economic sectors. This is important in two ways: first, it reveals to policymakers that all sectors respond to monetary policy shocks almost immediately suggesting that there is not much delay in the transmission of monetary policy. Second, it underlines how policymakers must take note of the lasting effect of exogenous monetary policy shocks on major economic sectors. This is relevant for the central bank as it measures the degree of persistence of monetary policy shocks on economic sectors in The Gambia. Thus, it is recommended that the monetary authority should take this into account during policy formulation.

Further research could extend to include more relevant economic sectors such as fishing, manufacturing and services sectors as and when reliable data become available or by employing an alternative methodology that could allow the use of the available data on these sectors for similar analysis. This, if done, we believe will broaden the analysis and shed more light on the distributional effect of monetary policy shocks in the economy. Furthermore, as digitalisation of business activities increase, future research could explore the use of firm level data to study the transmission of monetary policy shocks to firm level activities. This is very important as it help authorities to not only understand how major sectors are affected by monetary policy decisions but also pinpoints the impact on firms within those sectors. This gives a clearer picture as it shows the distributional effect of monetary policy shocks to sectors and firms at a more micro level.

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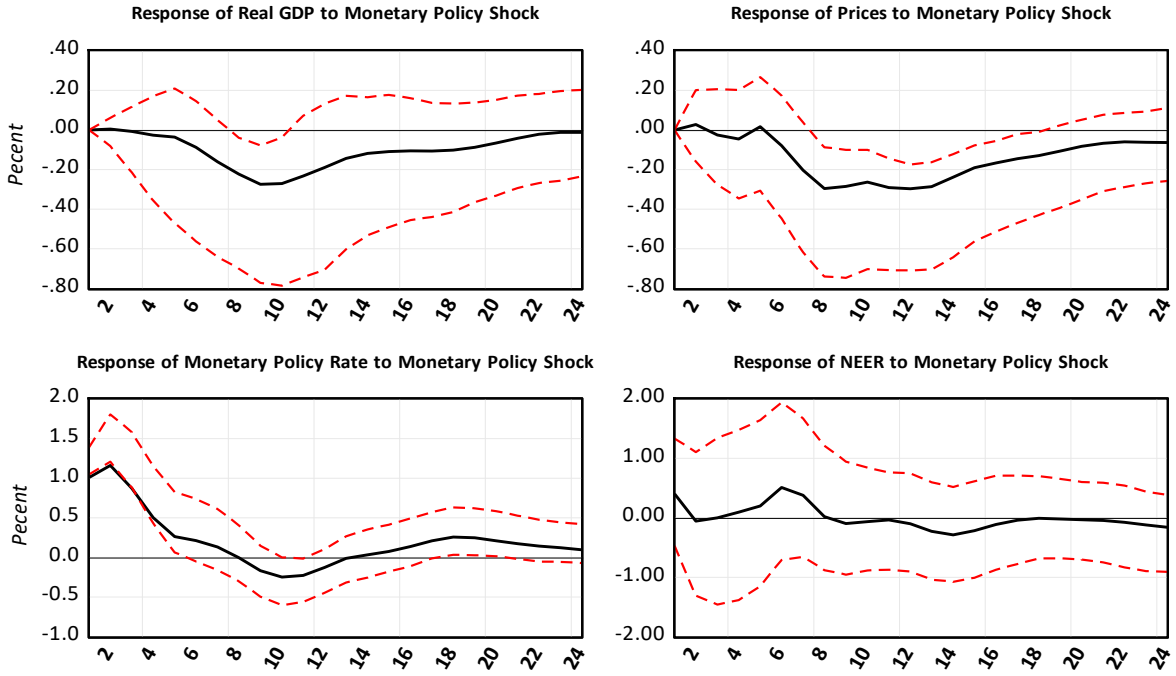
APPENDICES

Appendix A: *Response of Macroeconomic Variables to a Positive Exogenous Monetary Policy Shock*

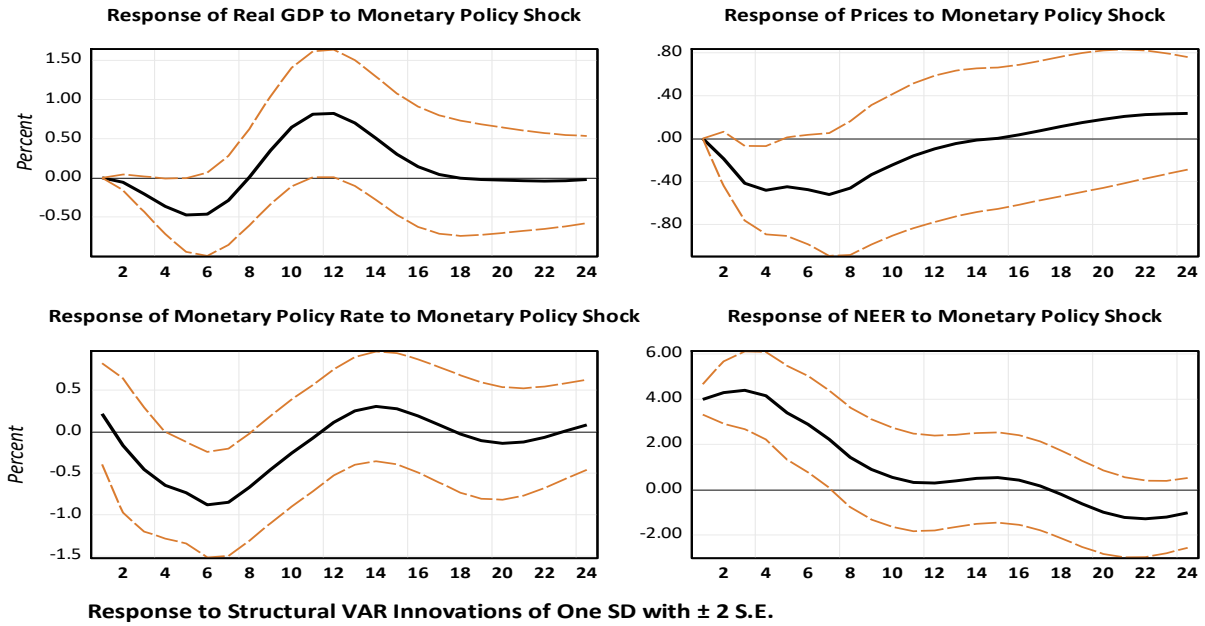
Recursive model: *Impulse Response to an unanticipated positive monetary policy shock*.



Note: The doted broken red lines show the 95% CI using Hall's percentile bootstrap with 1500 bootstrap reps

Source: Author's estimations using EViews 12 software package.

Non-recursive model: *Impulse Response to an unanticipated positive monetary policy shock.*



Source: Author's estimations using EViews 12 software package

Appendix B: Data

Table 1: Data Description and Source

	Real GDP	CPI	MPR	NEER	Bank Credit
Mean	9.322708	4.541848	18.04167	4.687629	7.785900
Median	9.338906	4.553610	15.75000	4.597528	8.153617
Maximum	9.650914	5.233670	34.00000	5.676288	8.971662
Minimum	8.958210	3.843853	10.00000	4.151712	6.041651
Std. Dev.	0.185618	0.403404	5.803962	0.466874	0.872011
Skewness	-0.024588	-0.114650	1.427810	0.961802	-0.619517
Kurtosis	2.177608	1.967846	4.514667	2.683500	2.036492
Jarque-Bera	2.601865	4.285359	40.05366	14.56829	9.443616
Probability	0.272278	0.117340	0.000000	0.000686	0.008899
Sum	857.6892	417.8500	1659.833	431.2619	716.3028
Sum Sq. Dev.	3.135316	14.80886	3065.424	19.83537	69.19667
Observations	92	92	92	92	92
Source	World Bank Indicator	IFS of IMF	IFS of IMF	IFS of IMF	CBG
Unit	Millions of GMD	Index	Percent	Index	Millions of GMD
Frequency	Annual	Monthly	Monthly	Monthly	Monthly
Transformed	Quarterly	Quarterly	Quarterly	Quarterly	Quarterly