MONETARY AND FISCAL POLICY COORDINATION IN THE SACU AREA

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29 June 2021

OVERVIEW

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- Objective
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- Methodology
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INTRODUCTION

- Monetary- and fiscal policy both influence important macroeconomic variables (Nyamongo, Sichei and Mutai, 2008).
- Monetary- and fiscal policymakers use different policy instruments to achieve their respective policy objectives.
- Fiscal policy may affect the efficiency of monetary policy through its impact on aggregate demand, while monetary policy may affect fiscal policy through its effects on the interest rates the government pays on its debt (Semmler and Zhang, 2004).

INTRODUCTION

- Region of focus: Southern African Customs Union (SACU) area
  - South Africa and BLNS – Botswana, Lesotho, Namibia and Swaziland).
- An asymmetric monetary union:
  - South Africa dominates by, effectively, setting monetary policy dominant central bank conducts monetary policy to stabilise inflation
  - member countries are responsible for their fiscal policies (growth and employment).
  - a high degree of economic interdependence, where policy actions in one member country can have an impact on other member countries via various direct and indirect spillovers.

AIM

- Evaluate how the monetary and fiscal policies interact within the individual SACU countries as well as between South Africa and the other SACU countries (Botswana, Lesotho, Namibia and Swaziland - BLNS)
  - horizontal interaction: FP coordination?
  - vertical interaction: MFP coordination?

LITERATURE

- Coordination - Joint setting of policies by monetary and fiscal policymakers, taking into account each other's objectives and policy decisions (Di Bartolomeo, Engwerda, Plasmans, Van Aarle and Michalak, 2005).
  - Kappel and Janku (2014) - both policies move in the same direction, i.e. fiscal and monetary policies both pursue either expansionary or contractionary policies.
- Non coordination - no joint setting of policies by policymakers setting their policies (Saulo *et al.,* 2013).
  - Conflict
  - Norm - where the objective function of a central bank is different from that of the government (Kappel and Janku, 2014).
  - Kappel and Janku (2014) - policies may move in opposite directions, i.e. when the monetary policy is expansionary (contractionary), the fiscal policy is contractionary (expansionary).

LITERATURE

Is fiscal policy coordination PC desirable or not?

- Desirable
  - [e.g. Sly and Weber (2013), Alcidi, Maattane and Thirion, 2015; Thirion, 2017 Landmann (2018), and Hettig and Muller (2018)]
- Undesirable
  - [e.g. Cabral and Diaz (2015), and Kirsanova, Machado and Ribeiro (2018)]

MONETARY AND FISCAL POLICY INTERACTION - EMPIRICAL ANALYSIS

- Optimal monetary and fiscal policy mix,
- Extent of coordination between MFPs ranging from non-cooperation to cooperation,
- Position of policy authority in the policymaking process, i.e. simultaneous, leader or follower, as well as
- Channels through which these policies affect one another (Javid, Arif and Sattar, 2008).
- Single countries (e.g. Mallick and Sethi, 2016; Shahid, Qayyum and Shahid, 2017; Xu and Serletis, 2016; Rezabek and Doucek, 2018; Yuan and Nuryakin, 2018)
- Group of countries (e.g. Jawadi, Mallick and Sousa, 2016; Kliem, Krowoluzky and Sarferaz, 2016; Houngbedji, 2017; Blagrave, Ho, Koloskova and Vesperoni, 2018; Afonso, Alves and Balhote, 2019).
- Modelling approaches and frameworks: DSGE model [e.g. Kliem *et al.* (2016), Bhattarai and Mallick (2016), and Shahid *et al.* (2017] and New Keynesian models, cointegration and vector autoregressive (VAR) models (e.g. Bhattarai and Mallick (2016), Houngbedji (2017), and Rezabek and Doucek (2018)].

METHODOLOGY

- The monetary and fiscal policy reaction function estimated (Janku and Kappel, 2014; Davig and Leeper, 2009; Melitz, 2000; Wyplosz, 1999):

$$i_t^j = \gamma_0 + \gamma_1 \pi_t^j + \gamma_2 y_{t-1}^j + \gamma_3 g_t^j + \gamma_4 \pi_t^{SA} + \gamma_5 y_{t-1}^{SA} + \gamma_6 g_t^{SA} + \gamma_7 Z + \varepsilon_t$$

$$g_t^j = \rho_0 + \rho_1 g_{t-1}^j + \rho_2 d_{t-1}^j + \rho_3 y_{t-1}^j + \rho_4 i_t^j + \rho_5 g_{t-1}^{SA} + \rho_6 d_{t-1}^{SA} + \rho_7 y_{t-1}^{SA} + \rho_8 i_t^{SA} + \varepsilon_t$$

METHODOLOGY

Variable	Expected sign
Fiscal policy	
Government expenditure lag	+
Output	-
Debt lag	-
Monetary policy instrument	- coordination/ + conflict
Inflation	+/-
Monetary policy	
Monetary policy lag	+
Output	+
Fiscal policy instrument	- coordination/ + conflict
Inflation	+
Exchange rate	-

METHODOLOGY

- Annual data (1960 to 2017)
- OLS and general-to-specific (GETS) modelling (Hendry and Krolzig, 2005)
- *Variables*:
  - Real GDP gap, inflation, discount rate, debt, government expenditure, rand-pula rate, and the rand-dollar rate.
- Stationarity tests – KPSS

RESULTS - MRF

Independent variable	B	L	S	SA
i_{t-1}^{j}	0.881 0.000	0.694 0.000	-	-
i_{t-1}^{SA}	0.110 0.014	0.332 0.000	0.894 0.000	0.723 0.000
π_{t}^{j}	-	-	0.132 0.008	-
π_{t-1}^{SA}	-	-	-	0.267 0.001
$\hat{y}_{t-1}^{SA}$	-	-	-	0.678 0.001
g_{t}^{j}	-	-	0.101 0.000	-
g_{t}^{SA}	-	-	-	-

RESULTS - FRF

Independent variable	B	L	S	SA
g_{t-1}^{j}	0.825 0.000	-	0.788 0.000	0.942 0.000
g_{t}^{SA}	-	0.751 0.000	-	-
$\hat{y}_{t-1}^{SA}$	0.299 0.009	-	-	-
d_{t-1}^{j}	-	-	-0.0897 0.007	-0.032 0.007
π_{t-1}^{SA}	0.371 0.000	-	-	-
i_{t}^{j}	-0.186 0.009	-	-	-
i_{t}^{SA}	-0.205 0.007	-0.528 0.000	-	-

CONCLUDING REMARKS

- Interaction
  - Botswana fiscal policy adjusts to own and South African monetary policies,
  - Lesotho only coordinates with South African monetary policy
  - Swaziland fiscal policy conflicts with its own monetary policy.
- No interaction
  - B, L & SA MP $\rightarrow$ do not adjust to domestic or SA fiscal policies,
  - SA and S $\rightarrow$ fiscal policies do not coordinate or conflict with domestic and South African monetary policies, but they adjust to their own debt levels.
- Need for fiscal and monetary authorities to strengthen policy coordination.

FURTHER RESEARCH

- Extend these simplified reaction functions to a system setup (VAR, DSGE model) – data permitting
- Open model to foreign variables besides SA

THANK YOU