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Fiscal Policy and Adjustment in a Foreign Exchange Constrained Economy: Evidence from Malawi

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Most of the recent literature analysing the adjustments of macroeconomic variables to fiscal policy shocks rely on the inclusion of non-Ricardian households to generate a positive response of consumption to an increase in government spending. This paper examines the dynamic effects of government financing behaviour in a foreign exchange constrained low income economy on key macroeconomic aggregates such as output, consumption, wages and labour supply. Using a dynamic stochastic general equilibrium (DSGE) model with Ricardian households calibrated to Malawian data, we find that consumption, wages and labour supply increase with increased government expenditure. This is contrary to popular arguments that government expenditure is inversely associated with the private consumption of intertemporal optimizing households in DSGE models. We argue that the positive response of consumption to increased government expenditure arises from the inclusion of aid in the government budget since government expenditure in low income economies may rise with increases in aid inflows for a given level of taxes. We also show that a positive shock to aid relaxes the foreign exchange constraint and improves the economy although it induces an appreciation of the real exchange rate.

In this article, we contribute to the literature in two ways: First, we study fiscal policy and adjustment in a low-income economy using a calibrated structural model of a small economy with a foreign exchange constraint and aid. The interaction of these key features of low income economies are seldom studied. Second, we assess the effects of an increase in government expenditure on consumption and other key macroeconomic variables. We assumed that the economy is populated with rational Ricardian households who are formally credit constrained but can use informal financial institutions to maximise their intertemporal utility, a feature present in most LIEs.

Among several findings, a key result we obtain is that an increase in government expenditure results in successive increases in both output and consumption. The increase in government expenditure does not lead to a fall in consumption. In this aid dependent foreign exchange constrained economy, the effect of rising expected tax burden does not dampen that of private consumption. This result differs from findings by Fatas et. al., (2001).

In this paper, we also find that a positive inflow of aid in a foreign exchange constrained economy eases the foreign exchange pressure caused by excess demand for foreign exchange by importers. This improves the macroeconomic conditions of the domestic economy by increasing government expenditure and reducing taxes. The model demonstrates that an increase in aid inflow induces an appreciation of the real exchange rate on impact. Despite the worsening terms of trade of the domestic economy, imported inputs increase and therefore labour, wages, and output all increase.

These results shed some light on how certain characteristics common in LIEs can impact fiscal policy. In Malawi, aid surges are associated with real appreciation. The appreciation does not worsen the economy, but rather increases the provision of factors of production, and therefore increases growth. Since the monetary authorities react to aid inflows, this also has implications for the conduct of monetary policy. We conclude that the availability and cost of foreign exchange in our model affects the cost of production for firms operating in countries facing foreign exchange constraints. Foreign exchange constraints increase the magnitude of most of the exogenous shocks to the economy. Since intermediate inputs and exports are very important to low income small open economies, any shock that affects the exchange rate has serious implications for the economy.