ECONOMIC POLICY RESEARCH DEPARTMENT

POLICY BRIEF

FISCAL DOMINANCE AND INFLATION IN MALAWI

1. Introduction

This policy brief examines the fiscal dominance hypothesis in Malawi. Specifically, the brief analyses the relationship between fiscal dominance and inflation in Malawi during the period 1980-2020. Fiscal dominance loosely refers to a situation where government maintains persistently high levels of fiscal budget deficits, and the central bank must act to ensure that the government's intertemporal budget is balanced (Walsh, 2017). Under such circumstances, the monetary authority is forced to generate enough seigniorage revenues to satisfy the intertemporal fiscal budget balance condition. Given that seigniorage (also referred to as money printing) and inflation are positively related, it may be inferred from the above that maintaining persistently high fiscal budget deficits creates inflation. Thus, fiscal dominance is associated with rising inflation.

The results of this policy brief support the above facts. The analysis was conducted using the Ordinary Least Squares (OLS) estimation technique. Prior to estimation, a review of the historical developments on indicators of fiscal dominance in Malawi was conducted, as well as their impact on inflation. These are presented in the following section.

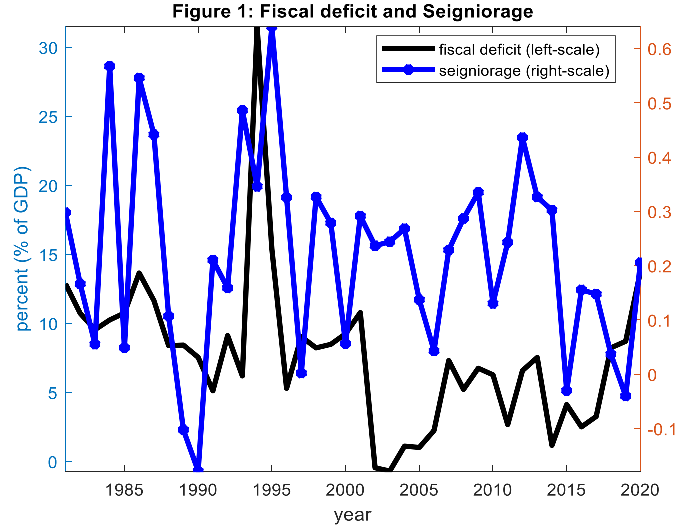
2. Historical Developments[1]

The following section analyses the historical developments on the indicators of fiscal dominance (fiscal deficit and seigniorage). The aim is to investigate existence of fiscal dominance in Malawi and evaluate its impact on inflation. The analysis includes examining the nature of the comovement between the fiscal deficit and seigniorage as well as their relationship with inflation.

2.1. Fiscal Deficit and Seigniorage

Figure 1 plots the fiscal budget deficit and seigniorage (measured as the annual change in the natural logarithm of reserve money) in Malawi, from 1980 to 2020. The trends suggest that the two variables have been moving in the same direction. For example, between 1980 and 1993, the fiscal budget deficit was generally declining before a reversal which peaked in 1994, following the impact of a nearly 62 percent depreciation experienced between February and December of this year which exerted pressures on imported public goods and services. Similarly, seigniorage has its peak around 1994-95.

Figure 1: Fiscal deficit and Seigniorage



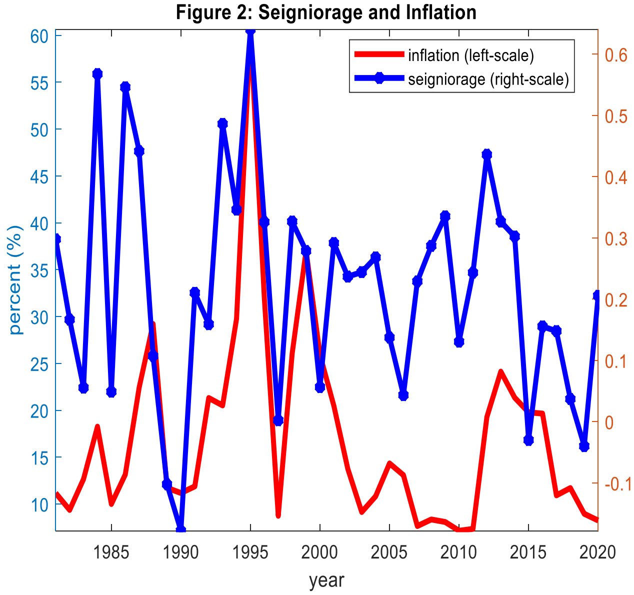
[1] Data used in this policy brief was sourced from RBM, Ministry of Finance and World Bank Development Indicators databases.

Beyond 1995, the positive relationship between the two variables still remains until 2018 when it becomes negative, with seigniorage declining when the fiscal deficit was growing. The reversal in the relationship since 2018 could be reflective of the impact of the enactment of the Reserve Bank of Malawi, 2018, which stipulates that outstanding Reserve Bank of Malawi (RBM) advances to Government should not exceed 10 percent of the average inflation-adjusted annual domestic revenue of the Government for the past three years and close the fiscal year with a balance of zero (0). However, the need to intervene in the fight against the COVID-19 pandemic shock, at the time when the economy had not fully recovered from the effects of the general election shock, made it inevitable that the Fiscal Authorities would seek recourse to central bank financing. Thus, the relationship between the fiscal budget deficit and seigniorage was positive in 2020.

2.2. Seigniorage and Inflation

In order to assess the impact of fiscal dominance in Malawi, figure 2 plots seigniorage, an indicator of the presence of fiscal dominance, and inflation.

Figure 2: Seigniorage and Inflation

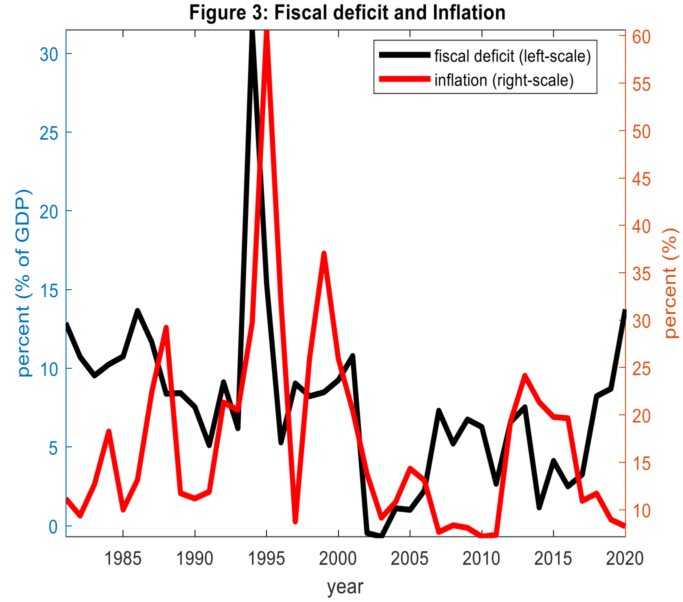


It is observed from this figure that during periods of growth in seigniorage, inflation has been rising and conversely, episodes of lower seigniorage revenues have been associated with declining inflation. This indicates that the relationship of the two variables has been positive. Since, as discussed earlier, seigniorage is a result of fiscal dominance, based on the pattern depicted by figure 2, it may be inferred that fiscal dominance was contributing to inflation in Malawi during the period under review except for 2020 when other factors seem to have suppressed the pressures from seigniorage financing. Hence, the negative relationship of the two variables in 2020 as reflected in figure 2.

2.3. Fiscal Deficit and Inflation

Supporting the argument that Malawi has been fiscally dominant during most of the years of the sampled period, which, in turn, has contributed to inflation, figure 3 shows that the relationship between the fiscal budget deficit and inflation has also been generally positive.

Figure 3: Fiscal deficit and Inflation

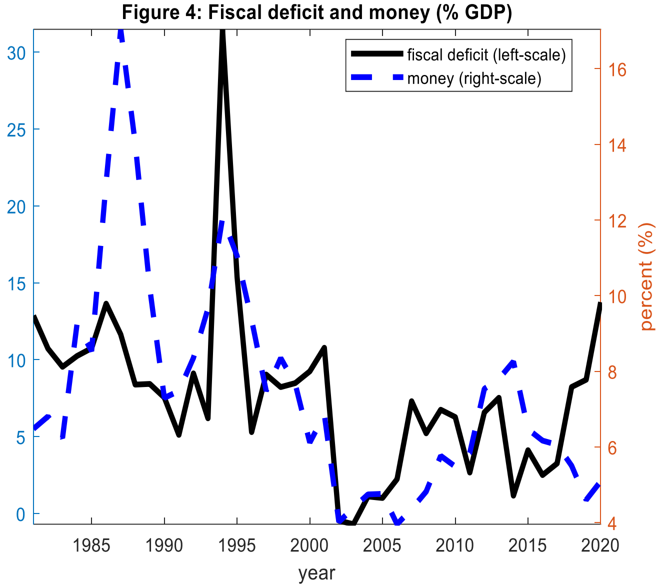


Since persistently high fiscal budget deficits symbolises the existence of fiscal dominance, it may also be argued, using figure 3, that the presence of fiscal dominance in Malawi has contributed to high inflation. From 2018, however, the fiscal budget deficit-inflation relationship has also become negative, with inflation declining when the fiscal deficit has been rising. This confirms the earlier result that fiscal pressures have not been the source of inflationary pressures in recent years.

2.4. Fiscal Deficit and Reserve Money

Furthermore, as shown in figure 4, the stock of reserve money has been positively correlated with the fiscal budget deficit, suggesting the monetization of debt over the sampled period except for 2018 and 2019.

Figure 4: Fiscal deficit and money (% GDP)



2.5. Summary

In summary, the historical movements depicted by figures 1 to 4 above, have revealed that, although the country has been fiscally dominant for several decades, the corrective measures which have been undertaken since 2018 by limiting central bank financing, are proving to be fruitful. This demonstrates Malawi's readiness for the adoption of the Inflation Targeting (IT) framework, which requires enhanced central bank operational independence.

3. Econometric Estimation

The analysis is extended to examine the above relationships using econometric tools, in which the Ordinary Least Squares (OLS) estimation technique is employed. Fiscal dominance is represented by the fiscal budget deficit and seigniorage. Fiscal deficit is derived as the difference between the natural logarithm of total government expenditures (G) and the natural logarithm total tax revenues (T), while seigniorage is proxied by the change in the natural logarithm of reserve money. Inflation is derived as the first difference of the natural logarithm of the consumer price index (CPI). All the three transformed variables were tested for stationarity and were found to be integrated of order zero [I (0)].

Results of the OLS regression of inflation on the fiscal budget deficit and seigniorage show that inflation is positively correlated with both variables. Specifically, a 1.0 percent increase in the fiscal budget deficit increases inflation by 0.13 percent. This result confirms the comovement of inflation and the fiscal budget deficit depicted by figure 3. Similarly, a 1.0 percent increase in seigniorage raises inflation by 0.23 percent and this also confirms the relationship exhibited by figure 2. The R-squared of 28 percent implies that the fiscal budget deficit and seigniorage jointly explain 28 percent of the variations in inflation.

$$Inflation = 0.07 + 0.13\,budget\ deficit + 0.23\,seigniorage$$

$$R - squared = 0.28$$
$$t - statistic\ on\ budget\ deficit = 1.86$$
$$t - statistic\ on\ seigniorage = 2.71$$

Conclusion and Policy Implications

This policy brief has investigated the relationship between fiscal dominance and inflation in Malawi. Historical developments show that, for several decades, the fiscal budget deficit has be persistently high, part of which has been financed by seigniorage (money printing), thereby creating inflation. This suggests that Malawi has been under a fiscally dominant regime until in recent years. The econometric analysis conducted using OLS estimation technique also supports the above historical facts. Nevertheless, the limit on central bank financing of the central government introduced in the RBM Act 2018 has helped to reduce the generation of seigniorage revenues.

From a policy perspective, curtailing fiscal dominance on a sustainable basis is key to achieving and maintaining long-term price stability in Malawi. This requires credible and sustained fiscal adjustment, supported by an appropriate monetary policy. As Malawi is transitioning to a more forward-looking monetary policy framework (that is, inflation targeting), it is important that the independence of the central bank be enhanced.