

Policy implications of empirically estimated fiscal multipliers for South Africa

by Harri Kemp and Hylton Hollander

Despite the frequent use of fiscal policy for stabilization purposes, there remains significant uncertainty regarding the impact of fiscal policy decisions on macroeconomic outcomes. This impact is quantified by calculating fiscal multipliers. A fiscal multiplier measures the impact of government's tax and spending decisions on economic output.

The size of fiscal multipliers is hotly debated in theoretical expositions and in empirical studies because the potential fiscal policy implications are enormous. Yet, in the empirical literature there is little agreement on their size and even their sign (whether positive or negative). These ambiguous results are mainly due to 1) the inherent difficulty in identifying fiscal policy shocks, and 2) the wide range of modelling approaches used. One key consistent finding is that fiscal policy is generally more effective during periods of economic contraction than during expansions.

Estimating fiscal multipliers for South Africa

We estimated fiscal multipliers for South Africa using a variety of identification approaches and model specifications and assessed a range of results. They show that government spending multipliers are positive, but generally smaller than one. When the government in South Africa spends one rand, less than one rand is added to GDP. We also find that tax multipliers are generally negative, greater than 1, and more persistent (but also subject to a greater degree of uncertainty). In other words, a one rand increase in taxes will generally reduce GDP by more than one rand. In a downswing, short-run spending multipliers are up to 150 per cent larger and tax multipliers are up to 30 per cent smaller, but tax changes still have a larger absolute impact on GDP than spending changes.

For all the results, however, the size of the fiscal multipliers is sensitive to the identification strategy and modelling approach used. This finding cautions policymakers to be circumspect when drawing policy conclusions from any single study.

FINDINGS

Estimated spending multipliers for real GDP (output) are typically positive, but less than one, whereas estimated tax multipliers are negative and can be much higher than one

The impact of tax multipliers on private consumption and private investment is significantly greater than the impact of spending multipliers

While spending multipliers remain positive over short horizons, they turn negative in the long term if the impacts of fiscal policy induce a monetary policy response

The size of multipliers is sensitive to the identification strategy and modelling approach used, and this sensitivity appears to be greater for estimated tax multipliers

When the economy is in a downswing, spending multipliers tend to be greater and tax multipliers tend to be lesser (absolute values)

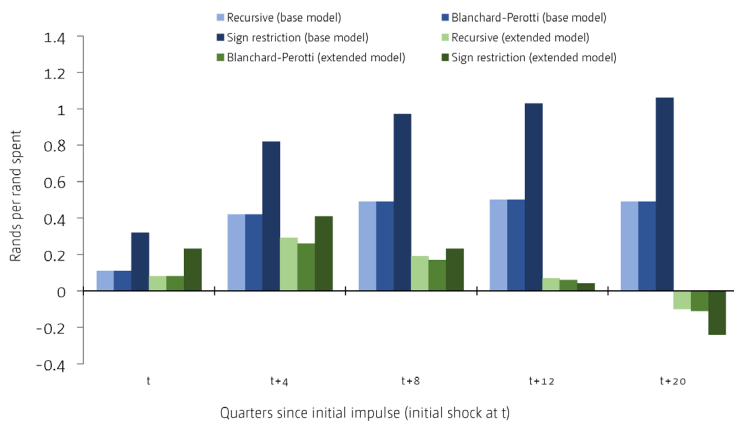
The macroeconomic impact of government spending decisions

Our results indicate that although government spending is not generally contractionary, the complementary or additive effects of government spending on economic growth are negative, perhaps due to a crowding-out effect whereby spending replaces either private consumption or private investment rather than stimulating it. In our results, spending multipliers for private consumption and investment are statistically zero – ranging from -0.33 to 0.31 for consumption and from -0.26 to 0.13 for investment. Across all model specifications, long-term present-value government spending multipliers for real GDP range from -0.24 to 1.06. In the short-term (one year), they ranged from 0.26 to 0.82. We interpret this to mean that cuts to current government spending are probably less contractionary than is perhaps commonly thought (see Figure 1).

We also find that when we control for the effects of monetary policy by adding the policy interest rate and

consumer price inflation, spending multipliers remain positive over short horizons but turn negative over the long-term (i.e. twenty-quarters). The theoretical assumption for this result is that fiscal expansion results in the standard increase in output, but this induces an endogenous monetary policy response (the policy rate increases to combat rising inflation) that suppresses output over the long-term.

Figure 1: Output multipliers - Government spending



The macroeconomic impact of tax policy

We find that the impact of revenue increases is larger (in absolute terms) than the impact of spending increases, but only after 8 quarters. Whereas spending increases improve the absolute value of GDP (multipliers are generally positive), tax increases cause it to decline (multipliers are generally negative). As is true of changes in spending, however, the inclusion of monetary policy variables reduces the overall impact of tax shocks.

In all, long-term present-value tax multipliers range from -0.15 to -4.28 while short-term multipliers range from 0.03 to -0.9 (see Figure 2). Tax multipliers for private consumption and investment are larger, ranging from -0.19 to -4.05 for consumption and from -0.47 to -10.99 for investment, but highly sensitive to model specification.

Interpreting the results

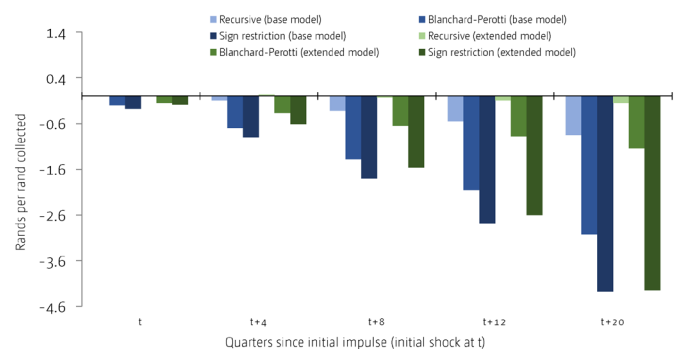
In the long term, tax shocks are significantly more distortionary than shocks to government spending.¹ For South Africa, there are three explanations for low spending multipliers. First, unsustainable

spending increases do not boost economic growth because relatively higher debt-service costs crowd out more effective economic and social expenditure. Second, the composition of government spending typically does not crowd-in private sector spending and capital formation has declined as municipalities and state-owned companies have reduced their capital spending. Third, structural constraints, such as the lack of affordable and reliable electricity – and emerging market characteristics (e.g trade openness and flexible exchange rates) – inhibit the ability of government spending to have more of an impact.

Considering the need for fiscal consolidation in South Africa, our estimates suggest that any consolidation drive should focus on reduced current spending (excluding direct transfers)² rather than tax increases. If stimulus is considered, the relatively large tax multipliers suggest that tax cuts will be more effective in raising economic output than spending increases. When stimulus works, the resulting growth can improve revenue flows and fiscal metrics, but this possibility can be constrained by relatively higher debt-financing costs and other factors.

It is therefore important to be diagnostic about the state of the economy when making policy decisions (both business cycle conditions and the degree of openness to international trade and finance). Under current conditions, fiscal authorities could consider cutting (unproductive) spending to improve the debt position and taxes to stimulate growth.

Figure 2: Output multipliers - Taxes



This brief is based on [WIDER Working Paper 91/2020: 'Empirical estimates of fiscal multipliers for South Africa'](#) by Johannes Hermanus Kemp

RECOMMENDATIONS

The multiplier estimates suggest that the main thrust of any fiscal consolidation drive should fall on spending cuts rather than increased taxes

Large and negative tax multipliers suggest that any increase in taxes will be more contractionary than any cuts to spending

Consider the state of the economy carefully, both contractionary and expansionary effects of fiscal policy decisions are context-dependent

¹In this brief, we do not distinguish between the different effects of current government expenditure versus public investment expenditure, and/or the effects of different tax instruments. We investigate the impacts of specific fiscal policy instruments in a forthcoming brief based on a detailed dynamic structural model. In general, results show that cuts to current spending have a smaller negative impact on output than cuts to public investment expenditure.

²Direct transfers, such as social grants, are excluded from government spending for calculating the spending multiplier.

