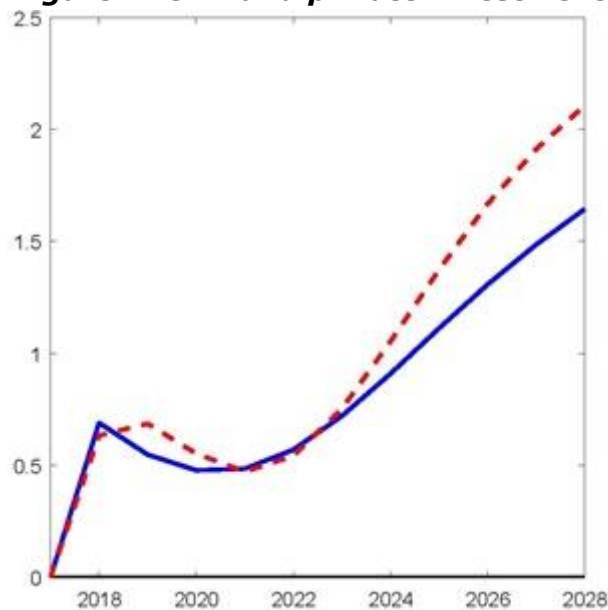


The economic impact of budget-neutral measures

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This study shows that budget-neutral measures – i.e. changes in the composition of fiscal revenue and spending that leave the ex-ante total government budget unchanged – can boost economic growth. However, not all households are equally affected by these measures. In addition, measures implemented when monetary policy is accommodative have larger macro effects.

Figure 1: GDP and private investment ¹



¹Responses of GDP (solid blue line) and private investment (dashed red line) to **an increase in public investment compensated by labour and consumption taxation** equivalent to 1% of GDP. Real variables in percentage deviation from the steady state. Figure taken from [Bussière et al \(2017\)](#).

Since the onset of the Great Recession, fiscal policy issues have been at the core of policy and academic debate. Indeed, disappointing growth performance since 2010, coupled with large fiscal debt in many countries, shifted the discussion on fiscal measures to compositional aspects (see [Auerbach and Gorodnichenko, 2017](#), intervention at the Jackson Hole 2017 Economic Policy Symposium and Chapter 4 of the last [IMF WEO, 2017](#)). In particular, budget-neutral measures – i.e. changes in the composition of fiscal revenue and spending leaving the ex-ante government budget balance unchanged – have been proposed and discussed intensively in recent policy meetings of the IMF, the OECD and the G20.

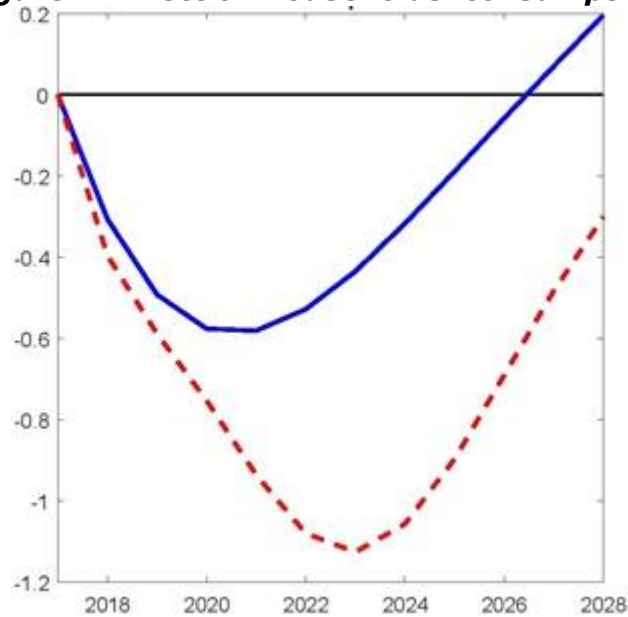
This column shows that budget-neutral fiscal interventions can indeed be growth enhancing but benefits and costs are not equally distributed across the population. Also the timing matters: if changes are done in periods of accommodative monetary policy, the inequality costs are reduced and positive macroeconomic effects are amplified.

Simulations show that budget-neutral measures can stimulate growth

Using simulations from an international macro model calibrated to the US economy (the [Global Integrated Monetary and Fiscal Model](#)) in which the government budget is characterised by consumption, investment and transfers on the spending side and by consumption, labour and capital taxation on the revenue side, we test all possible budget-neutral fiscal changes. We first focus on the composition of the spending and revenue side separately and then we mix the two sides of the fiscal budget. Multiple compositional changes are expansionary. Among all the measures considered (fiscal devaluation or an increase in government investment financed by a decrease in government consumption, for example), it turns out that an increase in government investment fully compensated ex ante by an increase in both labour and consumption taxes is the most growth-enhancing measure, when considering both short and long-term horizons. Such change, normalised to a budget-neutral increase in government investment equivalent to 1 pp of GDP, increases the level of real GDP by 0.7 pp after one year and by 1.6 pp after ten years. The hump-shaped response in the first 4 years, shown in Figure 1, is due to the presence of real and nominal frictions in the model. Importantly, and differently from other budget-neutral measures, the immediate gain in growth could act as an incentive for policy-makers to implement this kind of strategy.

As can be seen in Figure 1, investment is the main transmission channel of this budget-neutral measure to the economy. The increase in government investment boosts private investment (up 2.1% after 10 years) through reasonable crowding-in effects (we calibrate the output elasticity to the public capital stock to be equal to 0.04). As a result, this additional capital spending leads to an increase in labour demand that puts upward pressure on wages and inflation. The monetary authority responds to this evolution of prices by tightening monetary policy, thus appreciating the nominal exchange rate on impact. As a result, the trade deficit initially increases but then slowly reverts. Additionally, in the medium run, the reform results in the consolidation of the budget balance as a consequence of the GDP and tax revenue increase.

Figure 2: Effect on households' consumption ¹



¹Responses of consumption of financially constrained (dashed red line) and financially unconstrained (solid blue line) households to an initial shock equivalent to 1% of GDP. Real variables in percentage deviation from the steady state. Figure taken from [Bussière et al \(2017\)](#).

Not all households are affected equally by these measures

A striking result that comes out of our analysis is that agents in the economy are affected in a heterogeneous way. On the one hand, as expected, consumption of all agents is initially negatively impacted by the increase in consumption taxation. On the other hand, instead, the increase in labour taxation affects specifically the wealth of those agents who are constrained to base their consumption entirely on their current wage income, without the ability to access financial markets (usually the low-income part of the population). This results in a larger contraction in consumption of constrained agents. In addition, the inability of these agents to smooth consumption over time hinders them from benefitting, on impact and in the following periods, from the increase in long-run wealth (due to the future higher profits). As a result, most of the burden of the measure is borne by constrained agents, resulting in a larger and long-lasting fall in consumption (see Figure 2).

A constrained monetary policy alters these results

However, the timing of the measure matters. When it is implemented in periods of accommodative monetary policy, there are some changes with respect to previous results. First, as expected, macroeconomic effects are amplified and second, interestingly, distributional consequences are overturned. Indeed, it turns out that consumption of constrained agents becomes positive on impact while unconstrained households still experience a contraction, though smaller. Both effects can be explained by the dynamics of real interest rates. The increase in prices, jointly with constant nominal rates in the absence of monetary tightening, generates a fall in real rates. This has two effects. First, a lower cost of capital incentivises firms to invest

and demand more capital and labour. Higher labour demand pushes real wages up, augmenting workers' wealth. This additional wealth is entirely consumed by constrained agents, making their consumption positive, despite the increase in taxation. Second, lower real interest rates reduce the benefits of saving, leading unconstrained agents to consume part of the increase in future wealth, dampening the effects of higher consumption taxation. In summary, when the budget-neutral measure is implemented in periods of accommodative monetary policy, as for example in a liquidity trap, most of the burden, on impact, is shifted from constrained to unconstrained agents.