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**Research Report**

## What determines the costs of fiscal consolidations?

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## DIW Roundup

Politik im Fokus

Deutsches Institut für Wirtschaftsforschung

2018

# What Determines the Costs of Fiscal Consolidations?

Mathias Klein

# What determines the Costs of Fiscal Consolidations?

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Recent studies have proposed several factors that determine how fiscal consolidations affect the economy. This Roundup focuses on several of these determinants. Namely, it discusses how the composition of the consolidation measure, the state of the business cycle, the level of private indebtedness and the amount of fiscal stress during which the measure is implemented influences the consequences of austerity. It seems reasonable to consider these factors more carefully when deciding about the type and timing of fiscal consolidation plans.

## The Greek Experience

Since January 2018, Mário Centeno is the new president of the Eurogroup. During his term of office a suitable reaction to the elevated public debt burdens in Southern European countries will once again be a major challenge. Consequently, at the first meeting of finance ministers headed by the Portuguese on January 22, the Eurogroup came to a political agreement on Greece's third program review (Eurogroup 2018).

In the near future, the group will also come up with a detailed analysis of the measures that have already been implemented. For this purpose, a closer look at the recent literature on the effects of fiscal consolidations may help understanding past developments and provide guidance for future policy decisions.

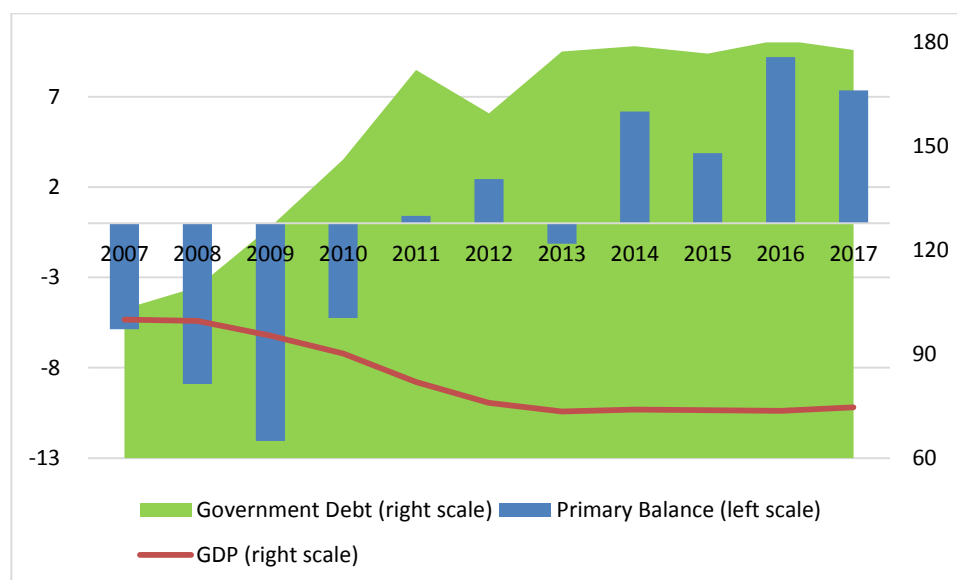
There is some disagreement among experts and politicians how the Greek crisis should be treated in the future. While representative of northern European countries typically argue in favor of continuing the austerity route, politicians of Southern European countries call for a relaxation of fiscal consolidation plans (Deutsche Welle 2018). The International Monetary Fund also proposes a substantial debt relief (BBC 2018). Even within the (possible) future German government, there is no consensus about the proper answer to the Greek issue (Deutsche Wirtschaftsnachrichten 2018).

Figure 1 shows the evolution of fiscal austerity measures, GDP and the public debt burden for Greece. In 2008-2009, the global financial crisis led to a deep economic recession. In the wake of dwindling tax revenues and higher government spending in the form of aid packages or more social transfers, the public deficit rose and with it sovereign debt. In order to counter this imbalance in government finances, large-scale fiscal consolidation measures were implemented. These measures turned a deficit of 12 percent into a slight surplus within two years. Between 2010 and 2013, the period of greatest austerity, the economy took another downturn. GDP is still well below its pre-crisis level and the unemployment rate exceeds 20 percent. In 2017, the government debt level relative to GDP reached almost 180 percent.

The stagnating Greece economy calls into question whether important economic circumstances prevented larger success of the undertaken austerity measures. The recent literature has detected important factors which significantly affect the costs of fiscal consolidations. In the following, this Roundup focuses on four of these factors. More precisely, it discusses how the composition of the fiscal consolidation, the state

of the business cycle, the level of private indebtedness and the amount of fiscal stress during which the measure is implemented influences the impact of austerity.

**Figure 1: Greece has implemented large-scale fiscal consolidations**



Notes: Government Debt: Gross public debt, Maastricht criterion, as a percentage of GDP; Primary Balance: Cyclically adjusted government primary balance, as a percentage of potential GDP; GDP: Gross Domestic Product (2007=100). Source: OECD.

## Composition

Several papers find that the composition of the fiscal consolidation matters for its impact on the economy (e.g., Alesina et al. 2017; Alesina et al. 2015; Guajardo et al. 2014). These studies show that tax-based consolidations lead to more severe contractions in economic activity than spending-based consolidations. There are two explanations for this finding. First, Guajardo et al. (2014) argue that the smaller contraction following spending-based adjustments reflects the fact that central banks typically cut policy rates more in such cases, implying that monetary policy partly offset the negative effects of fiscal consolidations. Second, based on a New Keynesian DSGE model, Alesina et al. (2017) demonstrate that the high persistence of fiscal consolidation plans is important to understand differences between spending and tax-based measures.

## State of the Business Cycle

Jordà and Taylor (2016) investigate whether the impact of austerity measures varies across states of the business cycle. Indeed, they find strong asymmetric effects between economic expansions and contractions. While consolidations implemented during periods of low economic slack induce a mild decline in economic activity, the negative consequences are amplified during periods of high economic slack. Rendahl (2016) and Michaillat (2014) propose different theoretical models that reproduce these empirical findings. The main bottom line in both models is that in periods of high unemployment there exists a high amount of unused resources in the economy. A reduction in aggregate demand induced by lower government spending or higher taxes further amplifies this labor market slackness. Thereby, consolidations implemented during periods of high economic slack depress private demand more strongly compared to a situation in which labor markets are tight.

### Private Indebtedness

In addition to the state of the business cycle, Klein (2017) finds that the costs of austerity crucially depend on the level of private indebtedness. In particular, fiscal consolidations lead to severe contractions when implemented in high private debt states. Contrary, fiscal consolidations have no significant effect on economic activity when private debt is low. What may explain this private debt-dependent effects of fiscal consolidations? There is evidence that the degree of financial frictions in the private sector is mainly determined by the level of private debt overhang (e.g. Eggertsson and Krugman 2012; Guerrieri and Iacoviello 2017). When private indebtedness is low, collateral constraints often turn slack while constraints become binding when household and firm have a lot of debt. Typically, the impact of demand shocks is amplified when collateral constraints bind. Thus, given that a periods of high private indebtedness coincides with bindings collateral constraints, a reduction in government demand leads to a stronger decline in economic activity compared to a situation in which constraints are slack which usually happens during episodes of low private indebtedness. Engler and Klein (2017) discuss the interrelation between, private indebtedness, fiscal consolidations and low economic growth for the southern European countries.

In a related study, Klein and Winkler (2017) find that also the distributional consequences of fiscal consolidations are amplified when private indebtedness is high. Austerity leads to a strong and persistent increase in income inequality during periods of private debt overhang. In contrast, there are no discernible distributional effects when private debt is low. This finding can be explained by the so-called earnings heterogeneity channel. This channel implies that as employment losses fall disproportionately upon low income groups, labor earnings at the bottom of the distribution may be disproportionately affected. Indeed, Klein and Winkler (2017) show that fiscal consolidations lead to a significant decline in aggregate employment in high private debt states, while it reacts only marginally when private debt is low.

### Sovereign Default Risk

A final determinant which has been shown to be important for the effects of fiscal consolidations is the degree of sovereign default risk. Born et al. (2015) find that consolidations implemented during periods of high sovereign default risk induce a strong fall in GDP, at least in the short-run. In addition, they show that the default premium itself rises when austerity measures are undertaken in periods of high fiscal stress. Both effects are much more muted when fiscal stress is low. The authors explain this finding by a rational behavior of financial investors. If fiscal stress is already high and a fiscal consolidation which has negative effects on output makes default even more likely, investors request an even higher default premium. Thus, the implemented austerity measure can induce a vicious cycle between high fiscal stress, low economic growth and rising government debt burdens.

### Conclusion

The literature on fiscal consolidations which has grown steadily over the last years has found several factors that crucially affect the impact of austerity measures. In particular, the consequences of fiscal consolidations depend strongly on the composition of the measure, the state of the business and private debt cycle during which the policy is implemented and the risk of sovereign default. These determinants should be considered by policy makers when deciding about future consolidation plans.

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