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What did forecasters learn during the European sovereign debt crisis about the impact of fiscal policies on economic growth?

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Economists often try to forecast whether the economy as a whole will grow or contract. When measuring the effects of fiscal policy measures on economic activity, such forecasts are based on so-called multipliers. Using a new dataset compiled from economic forecasts and recommendations by the European Commission under the excessive deficit procedure of the Stability and Growth Pact, we derive the multipliers that were assumed by forecasters during the European sovereign debt crisis to project the effects of fiscal consolidation on economic growth. Our results confirm that forecasters adapted their assumptions on multipliers as the crisis progressed and accounted for larger effects of consolidation on growth later on in the crisis. Another finding is that the actual fiscal multipliers were not exceptionally large during the crisis.

As is well known, from 2008 the euro area was faced with a financial crisis, and national government debts increased to often unprecedented levels. In order to deal with this crisis-induced increase in debt, as of 2010 many euro area countries embarked on a process known as fiscal retrenchment, i.e. raising taxes and/or cutting public services. The crisis reignited a controversial debate on the impact of fiscal policies –the use of taxes and government spending to influence the overall economy – on economic growth. The fact that the impact of fiscal policies on growth is not directly observable but has to be estimated lies at the heart of this debate. Forecasters usually try to estimate the effects of fiscal measures on growth using the so-called fiscal multiplier. This measures the effect of a €1 change in government spending or a €1 change in taxes on economic activity as measured by GDP.

At the height of the sovereign debt crisis in 2011 and 2012, GDP growth was much lower than forecasters had expected – especially in the countries worst hit by the crisis. In an influential contribution to the policy debate at the time, two economists, Olivier Blanchard and Daniel Leigh, argued that the forecast errors came about largely because forecasters had underestimated the feedback effects of fiscal consolidation on economic growth – in other words, forecasters underestimated fiscal multipliers.[2] At the same time, Blanchard and Leigh (2013, 2014) found that the underestimation of these negative feedback effects declined in the later years of the crisis. They conjectured that this reflected at least in part the lessons learned by forecasters in the course of the crisis about the size of fiscal multipliers.

In a recent paper of our own, we test this hypothesis. We identify the fiscal multipliers used by forecasters at the European Commission during the sovereign debt crisis between 2009 and 2015 and investigate their role in explaining forecast errors during consolidation episodes. We find that the forecasters did indeed adjust their assumptions about the impact of fiscal retrenchment on growth to incorporate a larger negative impact as the crisis progressed.

A new dataset

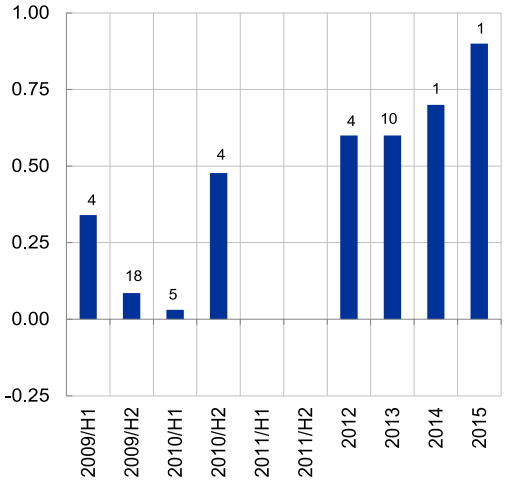
One of the strengths of our paper — and one of its advantages over the papers by Blanchard and Leigh —is its use of a new dataset. Our dataset is new in that it combines the two forecast scenarios published by the European Commission when conducting its surveillance of fiscal policies in the European Union (EU): the regular forecasts and the forecasts made under the excessive deficit procedure (EDP). In the regular Commission forecasts, the economic outlook is based on the assumption that no fiscal consolidation measures will be undertaken beyond those already legislated for. In the forecasts under the EDP, the Commission specifies the size of the additional fiscal consolidation that would be recommended to reduce an excessive deficit to below the 3% of GDP threshold by a certain year.[3] We then compare the two forecasts. With a limited number of assumptions, it is possible to calculate the fiscal multipliers for

individual countries and years as applied by the forecasters at the European Commission. It transpires that all EU Member States except Estonia, Luxembourg and Sweden were under the EDP at the height of the sovereign debt crisis. For this reason, we could derive the fiscal multipliers as actually applied by the European Commission for almost all EU Member States in the period 2009-15.

Learning effects

What do our results show? They show that forecasters definitely learned from the crisis. This can be seen from the increases they made to the fiscal multipliers used in the European Commission's recommendations. By how much did their multipliers increase? In the early years of the crisis, between 2009 and 2011, the recommendations were based on assumptions of a fiscal multiplier of around 1/4 on average, that is, below what forecasters often consider to be the "standard" value of 1/2. By contrast, later on in the crisis, between 2012 and 2015, most forecasts under the EDP were based on fiscal multiplier assumptions that were much higher than this level at around 2/3. As shown in Chart 1, 18 EDP forecasts issued in the second half of 2009 are based on an ex ante implicit fiscal multiplier of around 0.1. The five EDP forecasts issued in the first half of 2010 are based, on average, on an even lower implicit fiscal multiplier of close to 0. These low implicit fiscal multipliers reflect the implicit assumption at the beginning of the crisis that fiscal retrenchment would have only very limited negative effects on growth – if any. In fact, given that the private sector was concerned about the state of public finances in the light of soaring deficit and debt levels, fiscal tightening was expected by some to raise confidence and ultimately growth.[4] As the crisis continued, however, it became obvious that fiscal adjustment had had a more negative impact on growth in the early years of the crisis than anticipated. Therefore, it is likely that the broad-based rise in implicit fiscal multipliers during the later years of the crisis reflects the fact that, as previously posited by Blanchard and Leigh, forecasters did indeed learn as the crisis progressed.

Chart 1: Ex ante fiscal multipliers in EDP recommendations issued by the ECOFIN Council between 2009 and 2015 (number of EDP recommendations indicated above columns)



Note: EDP recommendations issued by the ECOFIN Council. The y-axis reflects the average size of the fiscal multiplier across all the EDP recommendations issued. For the second half of 2010, the average multiplier excludes the outlier, Finland, for which the EDP is based on an implicit multiplier of close to 2. No new EDP recommendations were issued in 2011. The data is depicted on a half-yearly basis for the early years of the crisis (from the first half of 2009 to the second half of 2011) to reflect the fact that recommendations under the EDP were issued throughout the year, which was not always the case in the later years under consideration.
Source: European Commission, own calculations.

Implications for the estimation of "true" ex post fiscal multipliers

What can these findings tell us about the – unobservable – "true" ex post fiscal multipliers, that is, the actual impact that fiscal retrenchment had on growth during the sovereign debt crisis? To infer something

about the "true" ex post fiscal multipliers, Blanchard and Leigh start from two hypotheses: first, fiscal forecasters applied a "standard" fiscal multiplier of 0.5 in their projections; and, second, lower than initially projected growth indicates the extent to which this "standard" fiscal multiplier underestimated the actual impact of governments' fiscal consolidation plans on growth. They conclude for a country sample broadly comparable to ours and across forecasts by different international institutions that multipliers were markedly above 1, implying that each euro of fiscal consolidation reduced output by more than this amount.

Does our analysis of information contained in the EDP recommendations support these findings that the "true" ex post fiscal multipliers are higher than expected? Not quite. We find that the "true" ex post multiplier remained below 1 at the height of the crisis. As argued by Blanchard and Leigh, our analysis shows that the impact of fiscal retrenchment on growth was indeed larger than initially *assumed* by forecasters. But we show that their initial assumption at the time was not what experts consider "standard", but markedly below that. These very optimistic beliefs regarding the limited impact of consolidation on growth indeed imply that their "true" impact was larger, but not by as much as Blanchard and Leigh posit.

Our analysis benefited from the European Commission's increased transparency regarding the fiscal policy recommendations that are issued to EU Member States under the EDP. More transparency regarding the applied fiscal multipliers would generally enhance the impact of forecasting by international institutions and thus, ultimately, improve policy-making.

References

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[1] Disclaimer: This article was written by Lucyna Górnicka (Economist, International Monetary Fund), Christophe Kamps (Head of Division, Directorate General Economic Developments, European Central Bank), Gerrit Koester (Principal Economist, Directorate General Economic Developments, European Central Bank) and Nadine Leiner-Killinger (Principal Economist, Directorate General Economic Developments, European Central Bank). It is based on a paper entitled "Learning about fiscal multipliers during the European sovereign debt crisis – evidence from a quasi-natural experiment" by L. Górnicka, C. Kamps, G. Koester and N. Leiner-Killinger. The authors gratefully acknowledge the comments of Jacopo Cimadomo, Paul Dudenhefer, Geoff Kenny, Sander Tordoir and Leopold von Thadden. The views expressed here are those of the authors and do not necessarily represent the views of the European Central Bank and the Eurosystem.

[2] Blanchard and Leigh's findings first appeared in 2013 in a short paper in the *American Economic Review*, one of the top journals in the field of economics. An expanded version of the paper was published in the *IMF Economic Review* in 2014. In the short paper, Blanchard and Leigh conducted their analysis primarily for the IMF forecasts. They also reported results for other forecasters, including the European Commission.

[3] The EDP scenario does not prescribe to what extent the recommended consolidation effort is to be distributed across government expenditure and revenue measures.

[4] This was the conclusion of a study published in 2010 by Alberto Alesina and Silvia Ardagna.

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