Fiscal Policy and Growth Forecast Revisions

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Forecast errors and fiscal multipliers

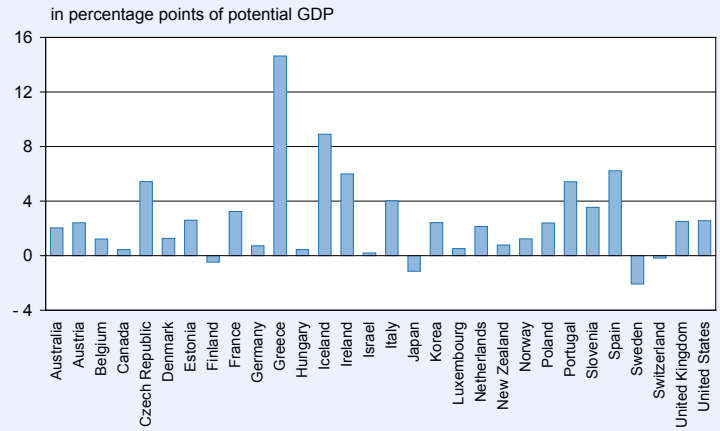
The size of the fiscal multiplier remains one of the most controversial and perhaps important questions in empirical macroeconomics. While one strand of literature suggests that fiscal policy is ineffective, particularly on the spending side (Alesina and Ardagna 2011), a broad strand of literature shows that fiscal policy is particularly effective when output operates below its potential (Auerbach and Gorodnichenko 2012), as, for example, in the post-crisis episode after 2009.[2] In this context, recent research suggests that professional forecasters underestimated the size of the fiscal multiplier at the beginning of the crisis period. Blanchard and Leigh (2013) show that the relation between expected fiscal consolidations ($\Delta F^{p}_{i,t:t+1}$) and GDP growth forecast errors ($\Delta FE^{y}_{i,t:t+1}$) is negative:

$$(1)\quad \Delta FE^{y}_{i,t:t+1} = \alpha + \beta\, \Delta F^{p}_{i,t:t+1} + \varepsilon_{i,t:t+1}$$

This relationship can be found for many forecasters in the post-crisis episode after 2009. A number of OECD countries, for example, decreased their cyclically-adjusted budget deficits during the period 2009–2012 (Figure 1).[3] In addition, Figure 2 illustrates the negative relationship between these fiscal consolidations and GDP growth over the same period, whereby the question of causality might be debatable. Following Blanchard and Leigh (2013), Table 1 shows the estimated coefficients of equation (1), and distinguishes between planned and unexpected fiscal consolidations during the period 2009 and 2012. According to this, the OECD forecast made in December 2010 underestimated GDP growth in the period 2009–2012 by 0.3–0.4 percent when the countries' governments planned to reduce cyclically-adjusted deficits by 1 percentage points. Furthermore, unexpected fiscal consolidations coincide with an unexpected decrease in GDP of approximately 0.6–0.7 percentage points.

Figure 1

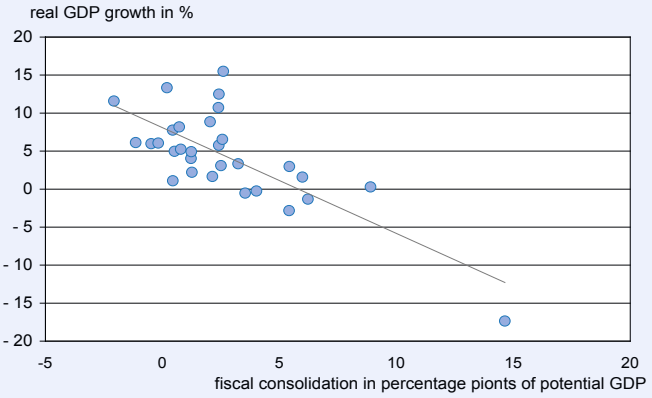
Fiscal consolidations 2009–2012



Source: OECD; own calculations.

Figure 2

Changes in fiscal policy and GDP growth 2009–2012



Source: OECD; own calculations.

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[2] See Hristov (2012) for a survey of the effects of fiscal policy under different economic conditions.

[3] The data shows the difference between underlying primary balances as a ratio of potential GDP in 2012 and the same variable in 2009 for 26 OECD countries as a proxy for fiscal consolidation.

Fiscal policy and forecast revisions

To test whether this relationship appears to be statistically significant for forecast revisions in the recent past, I analyse real-time data based on the December issues of the OECD Economic Outlook, starting in 2009 and extend the analysis for forecasts made in December 2012 for the year 2013. While Blanchard and Leigh (2013) present expected fiscal adjustments in relation to the forecast error, I use the difference between forecasts for year t made in December of year t-1 and the forecast for year t made in December of year t as the forecast revision during that year ($\Delta FR^{y}_{i,t:t+1}$).

Table 1

GDP forecast errors and fiscal consolidations, 2009–2012

	I	II	III
Constant	– 1.98***	– 2.76***	– 1.75***
	(0.60)	(0.46)	(0.52)
Forecast of fiscal consolidation	– 0.29**		– 0.37***
	(0.14)		(0.12)
Unexpected fiscal consolidation		– 0.61**	– 0.75***
		(0.26)	(0.23)
R-squared	0.15	0.18	0.42
observations	26	26	26

Note: *, **, and *** denote significance at the 10 percent, 5 percent, and 1 percent levels, respectively. Standard errors in parentheses. Dependent variable is GDP growth forecast error of the OECD Economic Outlook No. 88 forecast for the period 2009–2012. GDP growth forecast error is GDP growth forecast minus GDP growth during 2009–2012. Unexpected fiscal consolidation is actual fiscal consolidation minus forecasts of fiscal consolidation in the same period.

Source: Own calculations.

Table 2

GDP forecast revisions and forecasts of fiscal consolidations

	(1)	(2)	(3)	(4)
β	– 0.561***	– 0.498**		
	(0.178)	(0.234)		
$\beta_{2009-2010}$			– 1.161***	– 0.947**
			(0.223)	(0.371)
$\beta_{2010-2011}$			– 0.056	– 0.251
			(0.152)	(0.157)
$\beta_{2011-2012}$			– 0.281*	– 0.339
			(0.162)	(0.297)
$\beta_{2012-2013}$			0.262	0.375
			(0.220)	(0.344)
Observations	104	48	104	48
Number of countries	26	12	26	12
R-squared within	0.643	0.707	0.701	0.720

Note: *, **, and *** denote significance at the 10 percent, 5 percent, and 1 percent levels, respectively. Robust standard errors in parentheses. Dependent variable is real GDP growth forecast of the OECD Economic Outlook December forecast for the current year t, minus the forecast made in December t-1 for the same period.

Secondly, I distinguish between forecast revisions for particular years to analyse whether the relation between expected fiscal consolidations and GDP forecast errors remains apparent for recent forecasts for the year 2013:

$$(2)\ \Delta FR^{y}_{i,t:t+1} = \alpha + \lambda_t + \sum_{t=2009}^{2012} \beta_t \Delta F^{p}_{i,t:t+1} + \varepsilon_{i,t:t+1}$$

Table 2 shows the results of equation (2), where on average a planned fiscal consolidation of one percentage point is associated with 0.5 percent lower than expected GDP growth in that year. Column (1) shows the results for the full sample of 26 OECD countries over the period 2010-2013. In column (2) I reduce the sample to 12 EMU countries to test whether this relationship is also robust for EMU countries.[4] The relation between planned fiscal consolidation and GDP growth appears to be quite similar in both samples.

According to equation (2) in column (3) and (4) in Table 2, I distinguish between forecast revisions for different years. It seems that the negative relation between GDP forecast revisions and planned fiscal consolidation is particularly pronounced for forecasts made in December 2009 for the year 2010. The relationship is still negative and statistically significant in some specifications for forecasts made in December 2011 for the year 2012; however, this does not seem to be the case for forecasts made in December 2012. For the year 2013, the results do not show a negative relation between expected fiscal consolidations and GDP forecast errors.

Concluding remarks

The finding shown in Blanchard and Leigh (2013) that forecasters

[4] The countries in the reduced sample are Austria, Belgium, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, the Netherlands, Portugal and Spain.

underestimated the size of the fiscal multiplier has been extensively debated in the recent past. While this relationship seems to be particularly pronounced for the first year following the economic crisis in 2009, new data for the year 2013 suggest that expected fiscal consolidations do not influence the quality of recent forecasts made by the OECD. A number of potential factors might explain why recent forecasts appear to be more efficient, as compared to forecasts for the year 2010. It is conceivable that forecasts made in 2009 hardly anticipated the macroeconomic effects of the so-called euro crisis after 2009, even although the new debate on the size of the fiscal multiplier may also have helped to improve forecasting efficiency.

References

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