Designing Successful Fiscal Stabilizations

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The book

▶ Presentation based upon the volume:

Alberto Alesina, Carlo Favero, Francesco Giavazzi: "**Austerity: When It Works and When It Doesn't**", *Princeton University Press, February 2019*

The austerity debate

▶ Lively debate about the *pros* and *cons* of austerity in Europe after the financial crisis and the Eurozone crisis

▶ Very **heated and ideological discussion** about the *pros* and *cons* of austerity tout-court

▶ There is a strong macro argument for countercyclical deficits, but no macro argument for trending debt. Trending debt is a disease caused by irresponsible governments. Austerity is the cure.

Questions we can answer

1. Are all austerity plans the same? Do they have the **same effects** on output, various components of aggregate demand, and the debt/GDP ratio?

2. Was the austerity round of 2010-2014 especially costly; that is, were the fiscal multipliers larger than "normal"?

3. What is the role of **accompanying policies** to fiscal adjustments? What about the zero lower bound?

4. What is the role of the **timing** of fiscal adjustments, namely relative to the phase of the business cycle?

Contributions: data and methodology

▶ Data

    ▶ We study austerity plans in **16 OECD economies** between 1978 and 2014, and use original documents (national authorities, OECD, IMF, EC) concerning about 3,500 individual fiscal measures

    ▶ Classification in 27 categories, then aggregated into 15: for example, transfers are separated from other government spending, direct taxes from indirect

▶ Methodology

    ▶ **Multi-year** fiscal plans, not isolated fiscal shocks

    ▶ Multi-year nature matters for **expectations**

    ▶ Decisions of how much to cut spending and how much to raise taxes are interconnected, and cannot be assumed to be independent of one another

Contributions: results

▶ Results of the analysis

  ▶ We document a **sharp difference** between adjustment plans based mostly on tax increases and plans based mostly on expenditure reductions

  ▶ There is **no "Austerity" as such**: the effects of austerity policies are sharply different depending on the way they are implemented

▶ Kiss of death?

  ▶ We find that austerity is not the "kiss of death" for governments who adopt these policies

Results: output response to plans

Spending Based (Blue), Tax Based (Red)

Figure: The output effects of TB and EB plans
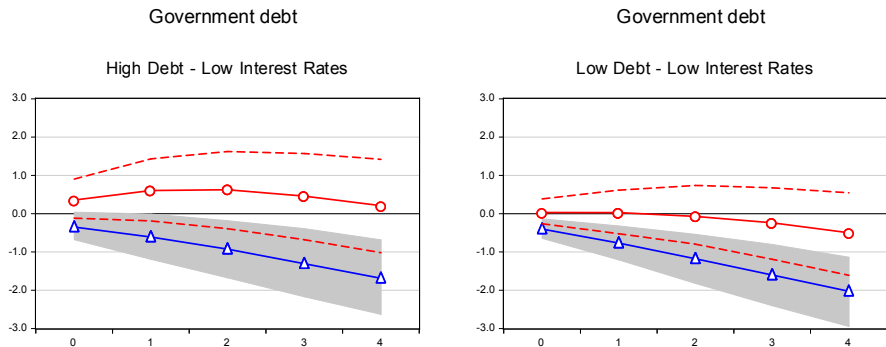
Results: debt dynamics

Figure: Debt/GDP ratio dynamics in response to fiscal plans in a low interest rates scenario but with different levels of initial debt
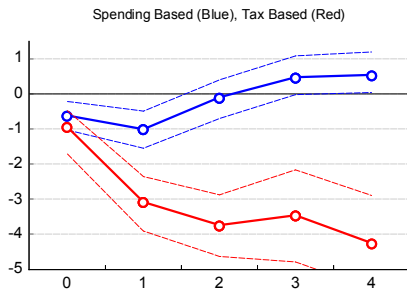
Results: consumption and investment

Figure: Response of consumption (left) and investment (right) to TB and EB plans

Results: business confidence
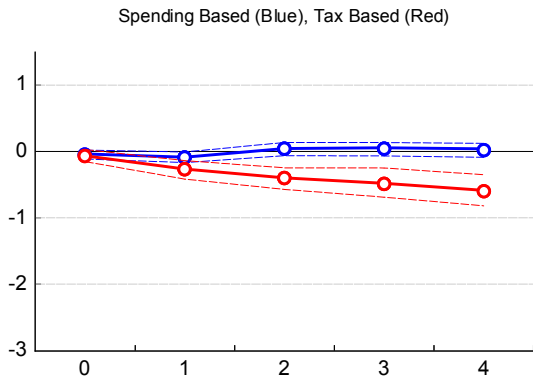

Spending Based (Blue), Tax Based (Red)

Figure: Response of business confidence to TB and EB plans

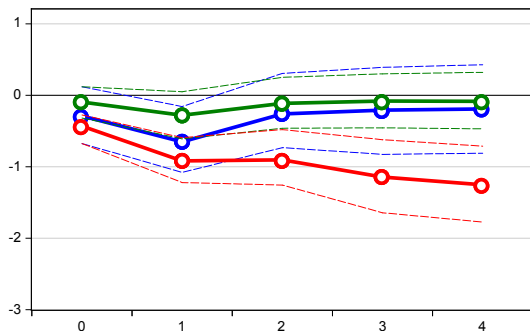# Results: 3-level disaggregation of fiscal adjustments

Figure: Response of GDP to transfer-based (green), consumption-based (blue), and tax-based adjustments (red)

Data, narrative identification and the construction of plans

- ▶ Starting point of our work
  - ▶ Exogenous fiscal consolidations identified by Devries et al. (IMF 2011) using the Romer&Romer (2010) "narrative" methodology
  - ▶ Consolidation episodes are classified as **exogenous** if
    - ▶ geared towards reducing an inherited budget deficit, a long run trend of it (due to pensions, ageing) or the inherited level of debt
  - ▶ Individual shifts in fiscal variables identified à la R&R: Budget Reports, EU Stability Programs, IMF Reports, OECD Surveys, etc.

- ▶ Our extension
  - ▶ We have separated out the unanticipated and announced component of the corrections, extended the sample from 2007 to 2014, isolated transfers from other spending components, organized the data into plans, and double checked the Devries et al. identification
  - ▶ We checked the legislative source of about **3,500 different fiscal measures** adopted in 16 OECD countries between 1978 and 2014

Reconstructing plans I

▶ Consider a legislature that in year t adopts a set of measures aimed at reducing the budget deficit

▶ Let f_t be the **total planned change** in the primary budget deficit identified via the narrative method

   ▶ f_t is measured as a percentage of GDP in the year before the adjustment: the level of GDP while a plan is implemented could reflect the effects of the plan and thus be endogenous

Reconstructing plans II

▶ The overall planned fiscal adjustment occurring in year t, f_t, has **3 components** (for simplicity, consider plans with a forward horizon of 1 year) and each of them features both tax and spending measures

$$f_t = e_t^u + e_{t-1,t}^a + e_{t,t+1}^a$$

$$e_t^u : \left\{ \tau_t^u,\ g_t^u \right\} \quad e_{t-1,t}^a : \left\{ \tau_{t-1,t}^a,\ g_{t-1,t}^a \right\} \quad e_{t,t+1}^a : \left\{ \tau_{t,t+1}^a,\ g_{t,t+1}^a \right\}$$

▶ e_t^u: **unexpected** shifts in fiscal variables (announced upon implementation at time t)

▶ $e_{t-1,t}^a$: shifts implemented at time t that had been **announced** in previous years

▶ $e_{t,t+1}^a$: **future announced** corrections (announced at time t for implementation in future years)

Plans: an example

The multi-year plan introduced in **Belgium** in 1992 (% of GDP)										
year	τ_t^u	$\tau_{t-1,t}^a$	$\tau_{t,t+1}^a$	$\tau_{t,t+2}^a$	$\tau_{t,t+3}^a$	g_t^u	$g_{t-1,t}^a$	$g_{t,t+1}^a$	$g_{t,t+2}^a$	$g_{t,t+3}^a$
1992	1.03	0	0.05	0	0	0.82	0	0.42	0	0
1993	0.40	0.05	0.55	0	0	0.12	0.42	0.28	0	0
1994	0	0.55	0	0	0	0.38	0.28	0	0	0

Plans by country

	TB plans	EB plans		TB plans	EB plans
Australia	3	4	Ireland	6	8
Austria	1	3	Italy	6	12
Belgium	4	11	Japan	3	5
Canada	3	16	Portugal	4	7
Denmark	3	5	Spain	8	7
Finland	2	7	Sweden	0	5
France	3	7	UK	4	6
Germany	3	6	US	4	4
Total TB plans: 57			Total EB plans: 113		

The composition of plans

	Share of Main Component			
Type of Plan	≥ 0.75	< 0.75	< 0.65	< 0.55
TB (57 plans)	30	27	19	9
EB (113 plans)	55	58	33	7
Total Plans: 170				

Plans' Size and Length

Type of Plan	Horizon of plans in years							Size of plans (% GDP)		
	1	2	3	4	5	6	Average	Total	Spending	Taxes
TB	16	20	6	7	7	1	2.51	1.60	0.49	1.10
EB	26	41	7	14	9	16	2.88	1.94	1.46	0.48
All Plans	42	61	13	21	16	17	2.76	1.83	1.14	0.69

▶ When previously-announced plans are revised, the amendment is considered as a new plan

Fiscal corrections in expansion and recession I

▶ We study the impact of TB and EB plans started in expansions and recessions allowing the state of the economy to change after the fiscal shift

	State of the economy	
Type of Plan	*Expansion*	*Recession*
TB (57 plans)	5%	38%
EB (113 plans)	9%	35%

Fiscal corrections in expansion and recession II

▶ The **timing** of the plan does not seem relevant
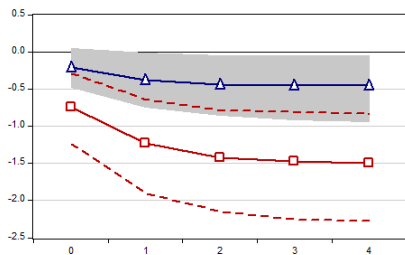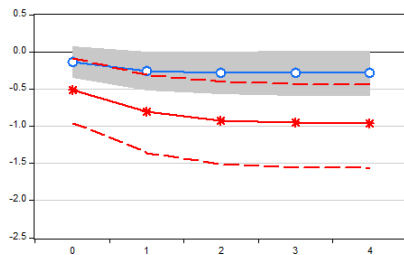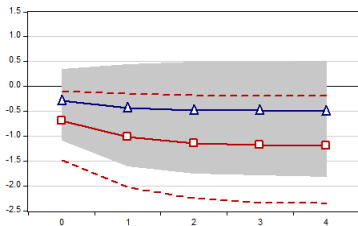
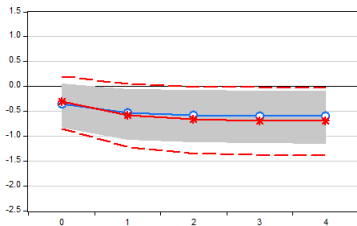# Fiscal corrections in expansion and recession III

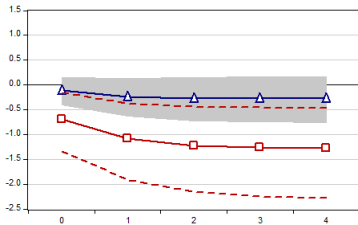▶ GDP response when monetary policy cannot (first row) and can (second row) respond
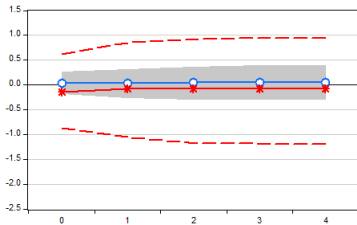
What could explain these findings?

▶ We can think of at least **three explanations** for the above empirical findings:

    1. accompanying policies

        ▶ monetary policy

        ▶ exchange rate

        ▶ structural reforms

    2. confidence and uncertainty

    3. supply side: labour supply and the persistence of fiscal shifts

Accompanying policies: exchange rate

▶ We exclude from the sample all episodes of fiscal consolidation that are **preceded** by a nominal devaluation of at least 3 percent (1st quintile of the distribution of exchange rate changes in our sample) to at least 10 percent (10th percentile) over the previous three years

  ▶ Dropping these episodes, our results are unchanged

▶ We also add to the estimated equation for output growth, in addition to TB and EB corrections, the two lags of the change in the **nominal effective exchange rate**

  ▶ Impulse responses based on these new estimates are very similar to those obtained without conditioning on the exchange rate

Accompanying policies: structural reforms

▶ The TB/EB asymmetry might be explained by the fact that EB plans (but not TB) are adopted as part of a wider set of **market-oriented reforms**, such as labor and product market liberalizations

▶ We use two OECD indices for labor market reforms and product market reforms respectively, and run a probit regression of two dummies for TB and EB episodes on these indices

▶ We find **no evidence** of a relation between the degree of labor or product market reforms and the choice of whether to implement an EB or TB adjustment

Uncertainty

▶ Models by Blanchard (1990) and Alesina and Drazen (1991) show that stabilizations which eliminate the **uncertainty** about higher fiscal costs in the future may stimulate demand and investments today

▶ Croce, Nguyen and Schmid(2012) show that both volatility and the intertemporal distribution of tax rates are first-order determinants of the cost of equity and capital accumulation.

Uncertainty

▶ The beneficial effects associated with the removal of uncertainty are more likely to occur in the presence of EB rather than TB consolidation plans:

  ▶ a TB plan which does not address the automatic growth of entitlements and other spending programs which grow over time is much less likely to produce a long lasting effect on the budget

  ▶ if the automatic increase of spending is not addressed, taxes will have to be continually increased to cover the increase in outlays (e.g. the growth of entitlements)

Persistence of fiscal shifts

▶ Effects of TB/EB plans in a basic neo-Keynesian model with tax distortions:

▶ EB plans are less recessionary the **longer lived** is the reduction in government spending

▶ TB plans are more recessionary the **longer lasting** is the increase in the tax burden and thus in distortions
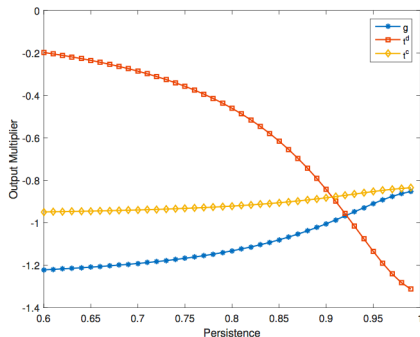
Instantaneous multiplier as a function of persistence

European austerity in 2010-14

- ▶ Two questions often confused:
    1. Was austerity too draconian?
    2. Were the fiscal multipliers underestimated?

- ▶ The IMF, especially the chief economist Olivier Blanchard, answered 'yes' to both questions

- ▶ Many commentators confused the two questions

Extending the Blanchard-Leigh model II

TABLE 12.5. Blanchard and Leigh Regressions

	Baseline	Model 1	Model 2	Model 3	Model 4
const	0.775 (2.03)	1.319 (2.24)	1.014 (1.74)	0.195 (0.46)	0.817 (1.24)
$\left(\dfrac{F^f_{i,2011}}{Y^{f,pot}_{i,2011}} - \dfrac{F_{i,2009}}{Y^{pot}_{i,2009}} \right)$	−1.095 (−4.29)				
$\left(\dfrac{F^f_{i,2011}}{Y^{f,pot}_{i,2011}} - \dfrac{F_{i,2009}}{Y^{pot}_{i,2009}} \right) * D^{EXP}$		−0.394 (−0.65)	−0.461 (−0.74)		−0.507 (−0.79)
$\left(\dfrac{F^f_{i,2011}}{Y^{f,pot}_{i,2011}} - \dfrac{F_{i,2009}}{Y^{pot}_{i,2009}} \right) * (1 - D^{EXP})$		−1.401 (−3.95)	−1.183 (−3.55)		−0.922 (−1.86)
$\Delta 10 Y_{i,2007/2009}$			−0.6433 (−4.06)	−0.95 (−2.42)	−0.675 (−3.07)
$\Delta 10 Y_{i,2009/2011}$				−0.20 (−6.48)	−0.0647 (−1.08)
R^2	0.49	0.53	0.62	0.51	0.63
No. of obs.	26	26	24	24	24

Conclusions

▶ If you need to reduce deficits and stabilize the debt, **cut spending** and do not raise taxes