

Is “expansionary fiscal austerity” for real?  
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# The paper

Takes issue with the notion that fiscal consolidations based on expenditure cuts are expansionary/not much recessionary

By dissecting earlier analysis of Alesina Favero Giavazzi, paper shows very convincingly

1. Don't need to worry about fiscal plans (→ functions of current surplus surprise)
2. Bias due to i) censoring of sample and ii) common-intercept assumption

Based on appropriately modified specification, paper finds

- ▶ There is no consolidation during “Expenditure-based consolidations”
- ▶ “Tax-based” consolidations only feature spending cuts: very much contractionary

# Result 1: Adjustment of GDP to consolidations

Table 2: Impulse responses of real GDP

|            | real GDP         |                  |                       | real GDP         |                  |                       | real GDP         |                  |                       |
|------------|------------------|------------------|-----------------------|------------------|------------------|-----------------------|------------------|------------------|-----------------------|
|            | (1)<br><i>EB</i> | (2)<br><i>TB</i> | (3)<br><i>TB - EB</i> | (4)<br><i>EB</i> | (5)<br><i>TB</i> | (6)<br><i>TB - EB</i> | (7)<br><i>EB</i> | (8)<br><i>TB</i> | (9)<br><i>TB - EB</i> |
| $h = 0$    | -0.07<br>(0.54)  | -1.01<br>(0.00)  | -0.94<br>(0.00)       | -0.00<br>(0.99)  | -0.78<br>(0.00)  | -0.78<br>(0.00)       | 0.14<br>(0.29)   | -1.04<br>(0.00)  | -1.17<br>(0.00)       |
| $h = 1$    | -0.34<br>(0.03)  | -1.89<br>(0.00)  | -1.55<br>(0.00)       | -0.26<br>(0.11)  | -1.53<br>(0.00)  | -1.27<br>(0.00)       | -0.19<br>(0.22)  | -1.66<br>(0.00)  | -1.47<br>(0.00)       |
| $h = 2$    | -0.18<br>(0.22)  | -2.30<br>(0.00)  | -2.12<br>(0.00)       | -0.07<br>(0.69)  | -1.75<br>(0.00)  | -1.68<br>(0.00)       | -0.06<br>(0.72)  | -1.60<br>(0.01)  | -1.55<br>(0.01)       |
| $h = 3$    | 0.04<br>(0.80)   | -2.73<br>(0.00)  | -2.78<br>(0.00)       | 0.25<br>(0.25)   | -1.94<br>(0.00)  | -2.19<br>(0.00)       | 0.29<br>(0.16)   | -1.70<br>(0.03)  | -1.98<br>(0.01)       |
| $h = 4$    | -0.08<br>(0.72)  | -2.89<br>(0.00)  | -2.81<br>(0.00)       | 0.30<br>(0.32)   | -1.83<br>(0.05)  | -2.13<br>(0.01)       | 0.31<br>(0.27)   | -1.62<br>(0.11)  | -1.93<br>(0.05)       |
| <i>Obs</i> | 511              |                  |                       | 323              |                  |                       | 323              |                  |                       |

Impulse responses of real GDP. Columns (1) to (3): based on AFG's reduced form (42) with one intercept, sample A. Columns (4) to (6): based on AFG's reduced form (42) with on intercept, sample B. Columns (7) to (9): based on our reduced form (40) with regime- and lag-specific intercepts, sample B. All regressions include country and year fixed effects.

- ▶ Accounting for biases reduces estimate of recessionary impact of TB consolidations
- ▶ But TB still much more contractionary than EB

## Result 2: Actual composition of consolidations

Table 8: Summary results

|            | EB consolidations |                 |                      | TB consolidations |                 |                      |
|------------|-------------------|-----------------|----------------------|-------------------|-----------------|----------------------|
|            | (1)<br>spending   | (2)<br>revenues | (3)<br>revenue share | (4)<br>spending   | (5)<br>revenues | (6)<br>revenue share |
| $h = 0$    | -0.09<br>(0.26)   | 0.31<br>(0.00)  | 0.78                 | -0.56<br>(0.00)   | 0.27<br>(0.21)  | 0.33                 |
| $h = 1$    | -0.12<br>(0.25)   | 0.26<br>(0.00)  | 0.68                 | -0.90<br>(0.00)   | -.03<br>(0.87)  | -0.03                |
| $h = 2$    | .07<br>(0.56)     | 0.16<br>(0.14)  | 0.70                 | -0.85<br>(0.00)   | -0.09<br>(0.86) | -0.12                |
| $h = 3$    | 0.07<br>(0.57)    | 0.17<br>(0.23)  | 1.70                 | -0.94<br>(0.00)   | 0.04<br>(0.89)  | 0.04                 |
| $h = 4$    | 0.19<br>(0.17)    | 0.18<br>(0.14)  | -18                  | -1.17<br>(0.00)   | 0.01<br>(0.97)  | 0.01                 |
| <i>Obs</i> | 323               |                 |                      | 323               |                 |                      |

Columns (1) to (3): EB consolidations. Columns (4) to (6): TB consolidations. Columns (1) and (4): change in cyclically adjusted primary spending, from columns (7) and (8), respectively, of Table 6. Columns (2) and (5): change in cyclically adjusted revenues, from columns (7) and (8), respectively, of Table 7. Columns (3) and (6): share of response of revenues in response of primary surplus. All regressions are estimated on sample B and include country and year fixed effects.

- ▶ EB consolidations: neither is spending cut nor do (cyclically adjusted) tax revenues go up
- ▶ TB consolidations are really only about expenditure cuts

## Question 1

### **Why do (cyclically adjusted) revenues not rise during TB consolidations?**

- ▶ Politically difficult to carry out announced spending cuts, raise taxes instead (Perotti 2013)
- ▶ But no explanation for why tax revenues don't go up in TB...

Assuming cyclical adjustment is correct, two possibilities

- ▶ Failure to implement fiscal plan
- ▶ Narrative record/classification by AFG wrong

Dabla-Norris and Lima (2023), building on earlier work at IMF (Amaglobeli et al 2018)

- ▶ Same data as AFG (and Devries et al 2011): but more detailed on tax side
- ▶ Quarterly frequency, distinguish announcement and implementation date

# AFG classification: examples

## GER 1991 (TB)

The resolution to limit the deficit of the federal government and territorial authorities was announced by the government in November 1990. A set of measures for 1991 and 1992 followed in January 1991, including mainly cuts in transfers to Federal Labor Office compensated by an increase in unemployment insurance contribution rate and cuts in subsidies (IMF Economic Developments and Issues 1991, p.22-23). In addition a one percent rise in VAT rate was planned for 1993. These measures had a budgetary impact of DM 15 billion in 1991. In late February an additional consolidation become necessary due to higher financing needs of East German states and higher outlays for the crisis in Middle East. It consisted in (temporary and permanent) tax hikes for 1991 and 1992 worth DM 18.2 billion in 1991. At the same time the program named “Joint Effort - Upswing East” was implemented, augmenting infrastructure investments and other expenditure in East Germany, along with a set of tax exemptions for East Germany. Thus, overall, according to IMF Economic Developments and Issues 1991 (p. 25), a set of measures (with a majority of tax measures) worth DM 60 billion was put in place for years 1991-1994.

## UK 2010 (EB)

A first budget was set out in March 2010 by the Brown Ministry. In May 2010, David Cameron formed a new government, which implemented additional budget measures in June 2010. The objective of fiscal policy was announced already in the Convergence Programme for the United Kingdom (January 2010, p. 4): *“Setting a credible consolidation path to ensure sustainable public finances is a key element of the Government’s macroeconomic strategy, and is essential for economic stability and the long-term health of the economy. Chapter 4 sets out the Government’s plans for fiscal consolidation. As confidence in recovery grows and financial sector conditions normalize, the economy’s reliance on fiscal support will diminish. This will allow fiscal support to be withdrawn, gradually at first, so as not to harm recovery”*. The motivation of the 2010 budget package can be summarized with the statement *“The Government is acting to ensure sound public finances to provide a stable platform for growth and maintain macroeconomic stability”* (Budget 2010, Securing the recovery, March 2010, p. 1). The new Budget set out in June 2010 confirms: *“the Government will carry out Britain’s unavoidable deficit reduction plan in a way that strengthens and unites the country”* (Budget 2010, June 2010, p. 1).

TABLE 1: The UK June 2010 Budget (selected measures)

| Measure                                | Tax | Type | $t_0$ | $t_1$ | $t_5$ | Ann.     | Imp.     | Motivation      |
|--|-----|------|-------|-------|-------|----------|----------|-----------------|
| Increase main VAT rate to 20%          | VAT | Rate | 2.9   | 12.1  | 13.5  | 06/22/10 | 01/04/11 | Consolidation   |
| Decrease CIT rate to 24% over 4 years  | CIT | Rate | 0     | -0.38 | -4.1  | 06/22/10 | 04/01/11 | Long-Run        |
| Lower capital & investment allowances  | CIT | Base | 0     | 0     | 2.7   | 06/22/10 | 04/01/12 | Long-Run        |
| Increase personal allowance by £1,000  | PIT | Base | 0     | -3.3  | -3.8  | 06/22/10 | 04/06/11 | Long-Run        |
| Increase capital gains tax rate to 28% | PIT | Base | 0     | 0.7   | 0.9   | 06/22/10 | 06/23/10 | Long-Run        |
| Increase child tax credit              | PIT | Base | 0     | -1.2  | -2.0  | 06/22/10 | 04/06/11 | Spending-Driven |
| Total June 2010 Budget                 |     |      | 2.8   | 6.3   | 7.8   |          |          |                 |
| % GDP                                  |     |      | 0.2   | 0.5   | 0.6   |          |          |                 |

**Note:** Estimated revenue impacts are in billions of pound sterling, and by fiscal year, with  $t_0$  representing fiscal year 2010-11,  $t_1$  representing fiscal year 2011-12, and so on. Data is taken from the June 2010 and March 2011 Financial Statement and Budget Reports.

- EB consolidation includes large tax component, presumably also the other way around

# Dabla-Norris Lima (2023)

Focus on tax measures

$$Y_{i,t+1} - Y_{i,t-1} = \alpha_i + \delta_t + \beta_h \Delta Tax_{i,t} + \text{controls} + \varepsilon_{i,t+h}$$

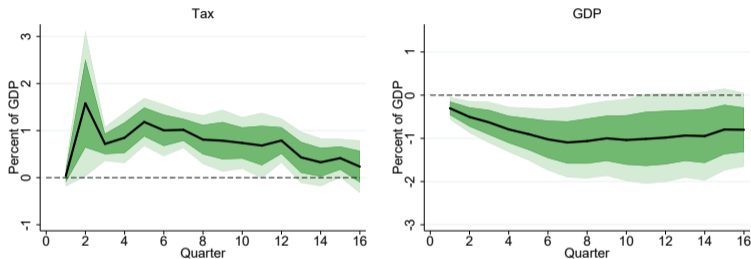
Instrument  $\Delta Tax_{i,t}$  with

$$\text{Tax Shock}_{i,t} = \frac{\text{Intended Year 2 Revenue Effect}_{i,t}}{\text{GDP}_{i,t-1}}$$

in turn derived from narrative measure



FIGURE 3: Response of taxes and GDP to a 1 percent of GDP tax increase



**Note:** Darker (lighter) areas show 68 percent (90 percent) confidence intervals. Standard errors are two-way clustered by country and time. Estimates show the response to shock equivalent to a 1 percent of GDP tax increase.

- ▶ Tax revenues go up, after all...
- ▶ TB/EB classification seems flawed

## Question 2

### Are consolidations special?

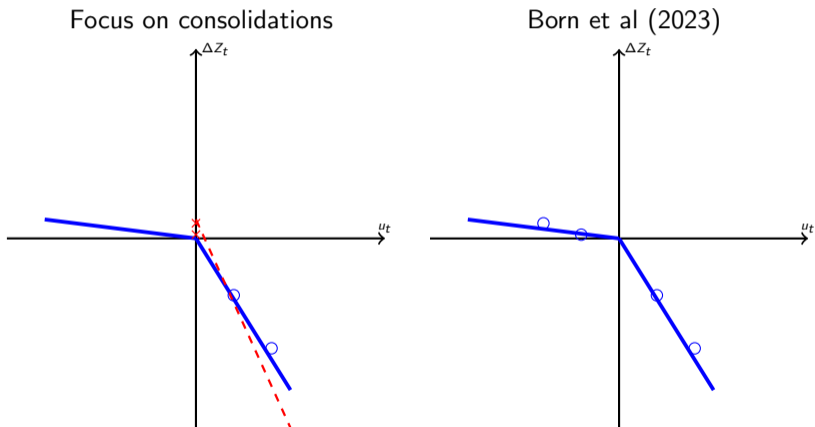
- ▶ Why not using conventional multiplier estimates to assess impact of consolidation
- ▶ May need to control for sign of fiscal shock

Born D'Ascanio Müller Pfeifer (2023): model small open economy with downward nominal wage rigidity (and fixed exchange rate)

- ▶ Government spending  $\uparrow$ : (almost) no effect on output, appreciates real exchange rate
- ▶ Government spending  $\downarrow$ : reduces output, no effect on real exchange rate

# Estimating non-linear model also avoids censoring bias ...

Using framework of Perotti Sala:



# Born D'Ascanio Müller Pfeifer (2023)

Estimate local projection

$$x_{i,t+h} = \alpha_{i,h} + \eta_{t,h} + \psi_h^+ \varepsilon_{i,t}^{g^+} + \psi_h^- \varepsilon_{i,t}^{g^-} + \gamma Z_{i,t} + u_{i,t+h}$$

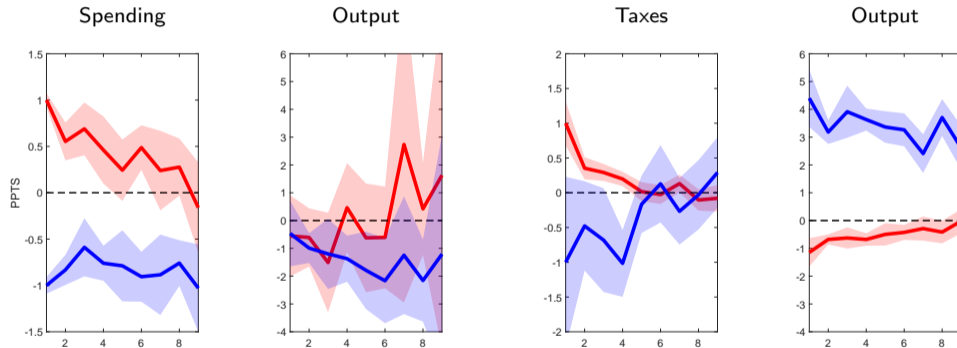
where  $\varepsilon_{i,t}^{g^+} = \varepsilon_{i,t}^g$  if  $\varepsilon_{i,t}^g \geq 0$  and likewise for negative shocks

Shock identified in a VAR with sign restrictions (Caldara Kamps 2017)

- ▶ Robust towards estimating in one step
- ▶ Estimate also for tax shocks
- ▶ Baseline sample: quarterly observations for EA countries 1999–2017

## Spending shocks

## Tax shocks



- ▶ Spending cuts indeed highly recessionary; multiplier for spending hikes zero
- ▶ Effects of tax hikes much weaker than those of tax cuts

## In sum

Important paper, identifies major flaws in influential work of AFG

- ▶ Illustrates methodological challenges when focusing on consolidation episodes
- ▶ Shows that classification TB/EB does not work in practice

Policy message

- ▶ Spending-based consolidations no panacea