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A financial crisis quickly develops into a debt crisis.

- The cost of supporting and rescuing the financial sector and the expansionary fiscal policy during a recession tend to increase budget deficits and debt ratios.

- This pattern is not new as shown by Reinhart and Rogoff (2010).

- Budget deficits as well as debt ratios in many European countries have now reached levels that would have been unthinkable just a couple of years ago.

- The crisis in Europe is so serious that it even threatens the foundations of the EU project and the euro.

- Conclusion: Budget consolidations are warranted throughout Europe.
Focus of this paper


- Study the effects of fiscal policy on output, private consumption and unemployment and distinguish between normal and non–normal times (during major budget consolidations).

- Also condition on external influences by including a measure of world business cycles and exchange rate movements.
Why study the Swedish budget consolidation?

- The Swedish fiscal contraction was implemented after the financial crisis in 1994.

- It was substantial and broad reaching in that it covered both public sector spending as well as taxes and other reforms.

- The budget deficit as a percentage of GDP improved from a large deficit (-8.8 percent) in 1994:3 to surplus (0.6 percent) in 1998:1 whereas primary balance improved from -7.9 to 2.1 percent. Economic growth (annual rates) fell from 4.3 to 3.6 percent during the consolidation. Consumption growth increased from 1.5 to 2.5 percent (annual rates).

- Public expenditures declined from 68.2 percent of GDP to 58.7 whereas total revenue was almost constant, 59.4 percent of GDP in 1994:3 and 59.3 percent of GDP in 1998:1.
**Expected effects of budget consolidations**

- Fear among politicians (and the public) that restrictive fiscal policy will lead to lower output and private consumption and higher unemployment.

- A major fiscal contraction which leads to the expectation of permanently lower future paths of government consumption and taxation could in some circumstances be expansionary (termed the “expansionary fiscal contraction hypothesis” (EFC) (Giavazzi and Pagano (1990)).

- If debt ratios are high and growing then households will be more likely to expect a future consolidation as they know that debt cannot continue to increase indefinitely (Bertola and Drazen, 1993; Sutherland, 1997).

- Perotti (1999), three period model with liquidity constrained agents, distortionary taxes, the policy–maker discounts the future more than the individuals. (Afonso, 2001)

  - There are two effects through which a budget consolidation can affect private consumption, either a standard wealth effect or a demand effect.

  - The effects of fiscal consolidations tend to be more expansionary for high initial debt ratios compared to when initial debt ratios are low and if the consolidation is achieved through cuts in government expenditures.
Expected effects of budget consolidations

- There are also other channels through which budget consolidations can have expansionary effects
  - expectations effects as households revise their expectations about future disposable income (Feldstein, 1980; Blanchard, 1990; Giavazzi and Pagano, 1996),
  - wealth effects (McDermott and Wescott, 1996),
  - substitution effects (Giavazzi and Pagano, 1990), and
  - interest rate effects (Alesina and Perotti, 1997; McDermott and Wescott, 1996).
- Supply side effect: less upward pressure on private sector wages then there will be a positive effect on profits and investment (Alesina and Ardagna, 1998; Alesina, Ardagna, Perotti and Schiantarelli, 2002).

- Recent ‘New Keynesian’ models with price stickiness also predict that increases in government consumption financed by lump–sum taxation have negative effects on private consumption (Canzoneri, Cumby and Diba, 2003; Linnemann and Schabert, 2003). Linnemann and Schabert (2004) show, however, that the standard Keynesian effect re–emerges if the elasticity of substitution between government and private consumption is low.
Earlier empirical evidence


- Note: Almost all earlier papers focus on a cross-section of countries, there are very few case studies in the literature.

- Related papers: Barrios, Langedijk and Pench (2010) study whether there is a link between banking crises resolutions and successful budget consolidations using a cross-section of countries. Reinhart and Reinhart (2010) study the macroeconomic development prior to and after major crises and Afonso, Grüner and Kolerus (2010) compare the effects of fiscal policy during crises and non-crises.
Empirical strategy

- “Event study” approach using standard structural vector autoregression model (VAR) combining structural VAR analysis following Blanchard and Perotti (2002) and the narrative approach (Romer and Romer, 1989) where fiscal episodes are captured using a dummy variable. Based on prior knowledge of fiscal periods and implicitly assumes that these episodes are exogenous and unanticipated (Edelberg, Eichenbaum and Fisher, 1999; Perotti, 2002; Burnside, Eichenbaum and Fisher, 2004; Afonso and Claeys, 2008; and Bergman and Hutchison, 2010).

- Model is comprised of four or five variables (GDP, private consumption, public consumption, direct taxes and unemployment). G–7 output gap and real (or nominal) effective exchange rate are included as exogenous variables. Budget consolidation is modeled using a dummy variable (equal to unity 1994:4–1997:4 and zero otherwise).

Findings

Figure 1: Impulse response of GDP ($Y$), private consumption ($C$) and unemployment ($U$) to increased taxes ($T$) and to a fall in public consumption ($G$) during “normal” times.

(a) Effect of $T$ on $Y$  (b) Effect of $G$ on $Y$  (c) Effect of $T$ on $C$

(d) Effect of $G$ on $C$  (e) Effect of $T$ on $U$  (f) Effect of $G$ on $U$
Findings

Figure 2: Impulse response of ($Y$), private consumption ($C$) and unemployment ($U$) to the Swedish budget consolidation.

(a) Effect on $Y$  
(b) Effect on $C$  
(c) Effect on $U$
Findings

Figure 3: Historical decomposition of GDP and private consumption during and after the Swedish budget consolidation 1994–97.
Findings

- Standard Keynesian effects of fiscal policy during normal times. Consistent with most other empirical studies.

- No significant of the Swedish fiscal consolidation.
Why do we reject EFC effects for Sweden during the fiscal consolidation?

- Households did not revise their expectations about future taxes, they expected all tax changes to be permanent not temporary (one example is the extra tax on high income "värnskatten" which was said to be temporary but became permanent). Households expected no permanent change in government expenditures, only a return to the pre-crisis level.

Figure 4: Household perception of economic conditions before, during and after the budget consolidation.

*Source: National Institute of Economic Research (NIER).*
Why do we reject EFC effects for Sweden during the fiscal consolidation?

Table 1: Macroeconomic key figures before, during and after the budget consolidation 1994:4 to 1997:4.

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<th>Before</th>
<th>During</th>
<th>After</th>
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<tbody>
<tr>
<td>Government outlays as a percentage of GDP</td>
<td>67.5</td>
<td>63.3</td>
<td>58.5</td>
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<tr>
<td>Government revenue as a percentage of GDP</td>
<td>60.3</td>
<td>58.9</td>
<td>60.6</td>
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<tr>
<td>Budget deficit as a percentage of GDP</td>
<td>-7.2</td>
<td>-4.4</td>
<td>2.1</td>
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<tr>
<td>Primary balance as a percentage of GDP</td>
<td>-7.7</td>
<td>-2.9</td>
<td>3.3</td>
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<tr>
<td>GDP growth</td>
<td>-0.5</td>
<td>2.9</td>
<td>4.2</td>
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<tr>
<td>Consumption growth</td>
<td>-0.7</td>
<td>1.8</td>
<td>4.0</td>
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<td>Unemployment</td>
<td>8.0</td>
<td>11.3</td>
<td>8.5</td>
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<td>10.3</td>
<td>6.3</td>
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Conclusion

- Our results are consistent with earlier empirical and theoretical work on EFC.
- We fail to find EFC effects during the Swedish budget consolidation because
  - households did not revise their expectations about future disposable income,
  - the consolidation was, to a large part, achieved through tax hikes, and
  - households expected that government expenditures would return to pre–crisis levels whereas tax hikes were seen as permanent.