Hur varaktig är en förändring i arbetslösheten?

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Focus of this paper

- Key research question: Measure and quantify persistence in Swedish unemployment.
- Is persistence constant over the business cycle?

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- Is persistence constant over the business cycle?
- Apply a time series econometric model allowing for regime switches and test whether persistence is constant across different states of the economy.

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- Earlier related literature: Blanchard and Summers (1986), Bianchi and Zoega (1998), León–Ledesma and McAdam (2003), Warne and Vredin (2006) and Deschampes (2008).
- General result: Large shocks increase the degree of persistence whereas major labor market reforms aiming at a more flexible labor market tend to reduce persistence.

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- General result: Large shocks increase the degree of persistence whereas major labor market reforms aiming at a more flexible labor market tend to reduce persistence.
- Idea is that large shocks tend to increase actual unemployment which in turn tend to permanently increase equilibrium unemployment such that actual unemployment is established on a higher level than initially.

Why study persistence in unemployment?

- Consequences for the evaluation of labor market reforms. A high degree of persistence could imply that the results of reforms become visible after a very long time.
- Labor market reforms may affect persistence.
- Is there a risk that the current increase in unemployment will be permanent?
- Can large shocks make unemployment more persistent? If so, then we can expect recovery to take a very long time.

Empirical strategy

- Time series econometric approach allowing for structural breaks. [Markov Switching univariate autoregressive model (Hamilton (1990,1994))]. Harmonized rate of unemployment, 1970–2009, quarterly data.
- Compare different model specifications including the number of structural breaks. This leads to a model with three different regimes, an upturn in the economy (low unemployment), a slowdown in the economy (moderate unemployment), and a crisis (high unemployment).

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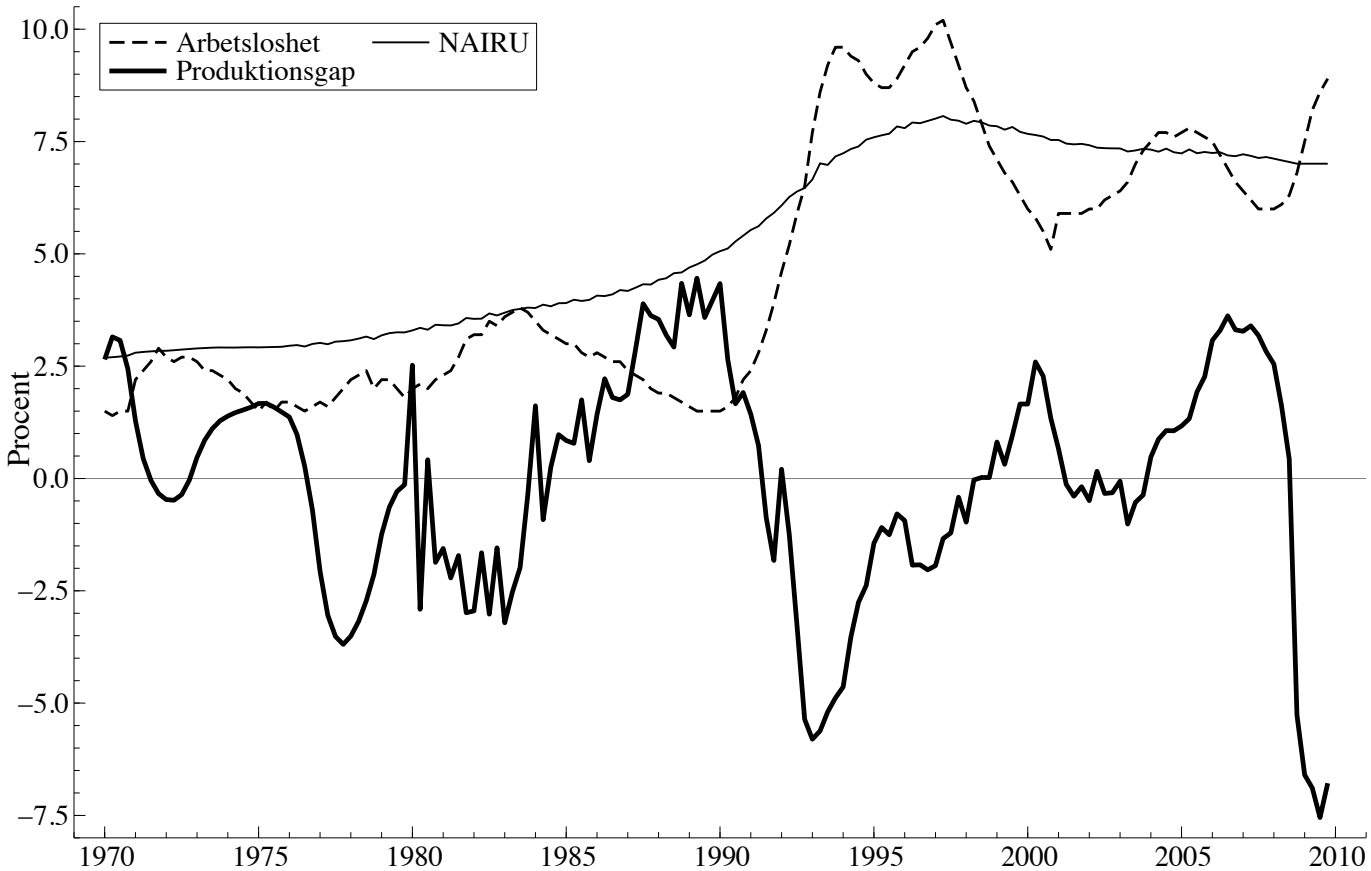
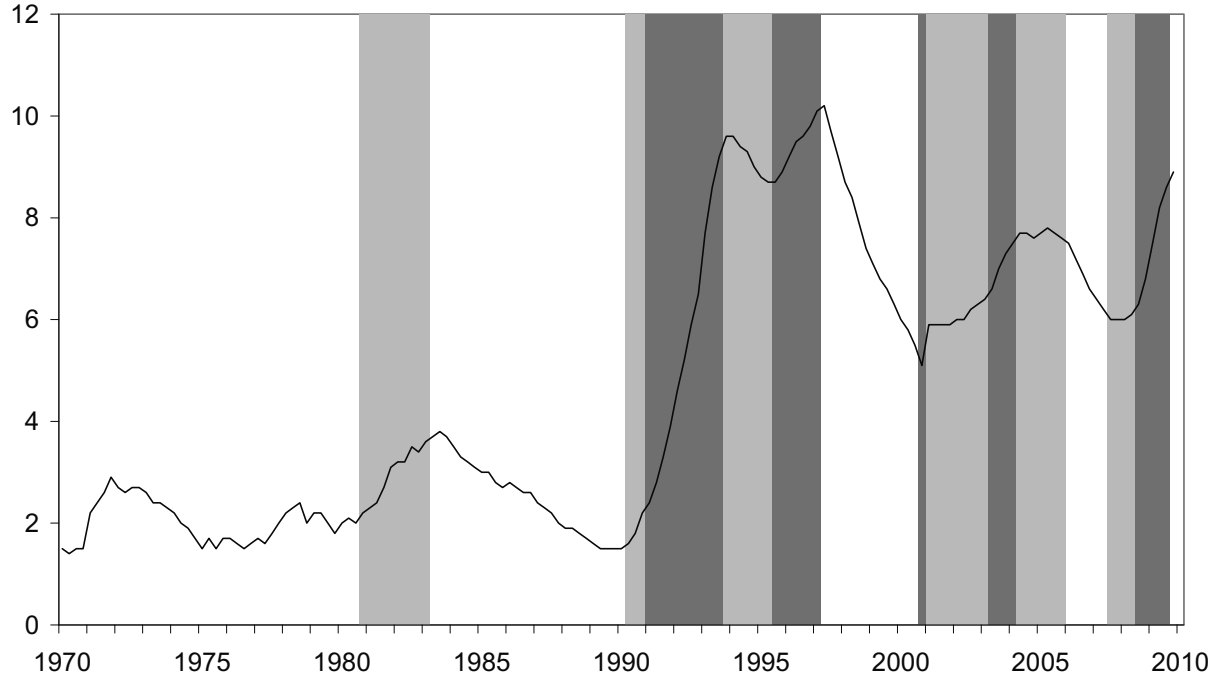
- Compare different model specifications including the number of structural breaks. This leads to a model with three different regimes, an upturn in the economy (low unemployment), a slowdown in the economy (moderate unemployment), and a crisis (high unemployment).
- Main results:
  - Swedish unemployment is highly persistent.
  - We can reject hysteresis after controlling for structural changes.
  - Unemployment persistence is higher during a slowdown and a crisis compared to during an upturn.

Figure 1: Unemployment, NAIRU and the business cycle (output gap) in Sweden 1970–2009.



Source: OECD

Figure 2: Estimated unemployment regimes and actual unemployment 1970–2009.



White panels = upturns in the economy
light grey panels = slowdowns
dark grey panels = crises.

Table 1: Mean and variance of unemployment in a model with three regimes.

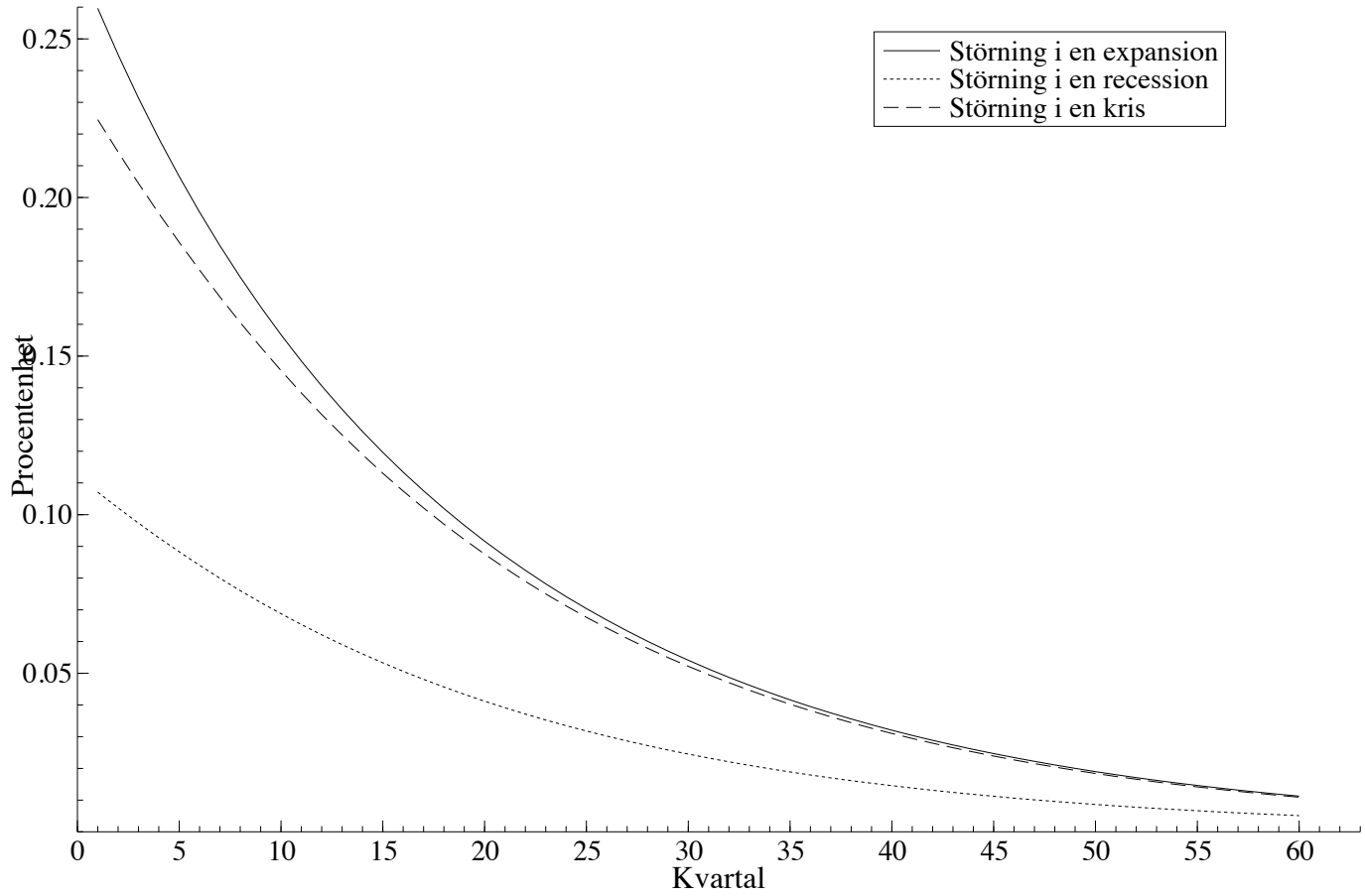
Regime	mean	variance
Upturn	4,5	5,9
Slowdown	7,1	8,3
Crisis	9,1	9,0

Anm: Means and variances are computed within the estimated model.

Table 2: Properties of the three regimes.

	Observations	Duration
Upturn	91,5	19,2
Slowdown	39,1	5,7
Crisis	28,4	6,5

Figure 3: Exact impulse responses of unemployment.

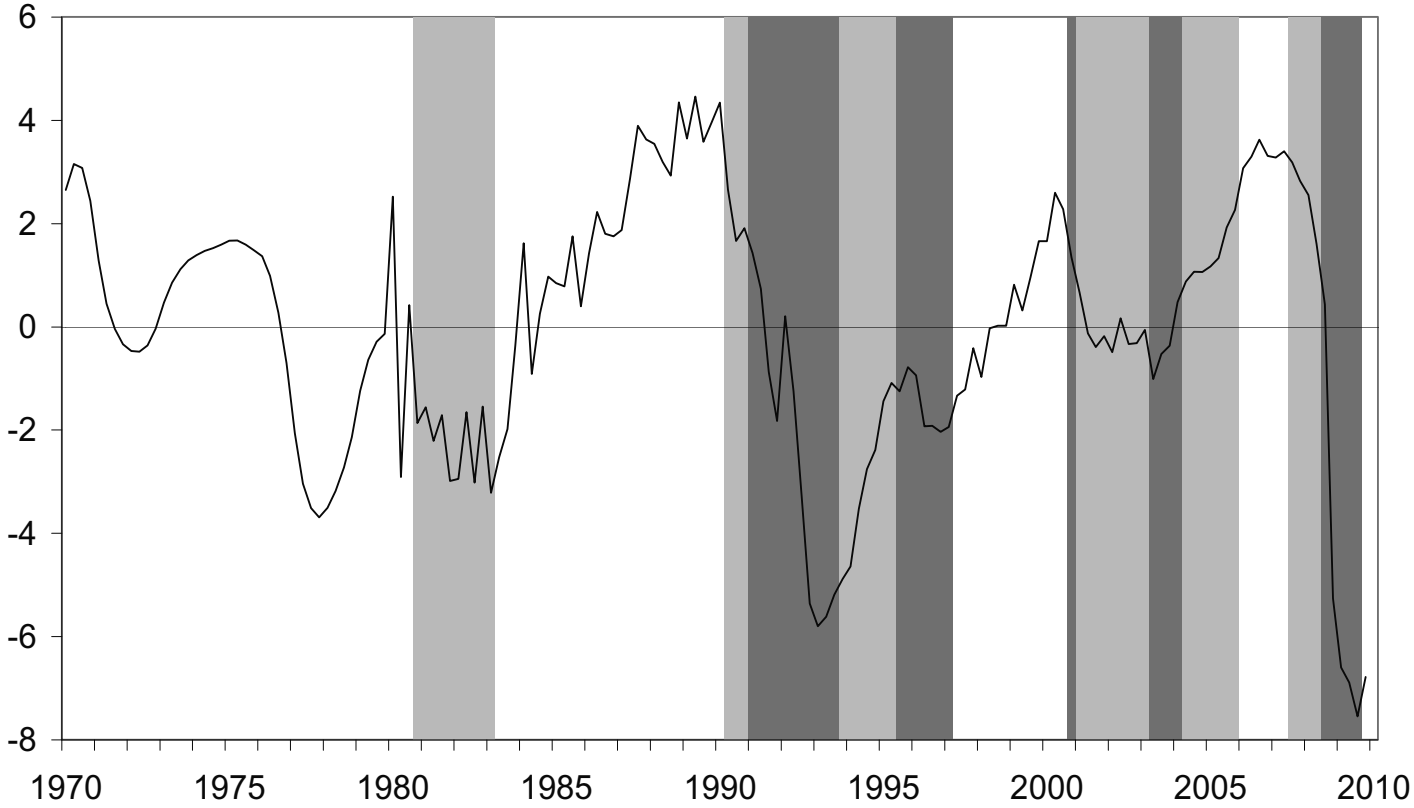


Note: We assume that a one standard deviation shock occurs in each of the three regimes.

Table 3: Unemployment persistence in quarters.

	Upturn	Slowdown	Crisis
Half–life (exact impulse responses)	13.4	14.9	15.1
Regime dependent half–life	11.7	15.2	15.2

Figure 4: Estimated unemployment regimes and the output gap.



White panels = upturns in the economy
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Conclusions

- The degree of persistence is not constant over time, it depends on the state of the economy.
- Persistence is higher during slowdowns and crises compared to during upturns.
- The effects of labor market reforms will not become visible immediately. Risk that policiy will be procyclical (and expansionary).
- Persistent negative effect on budget balance (through Okuns law) if persistence is high.

Har finanspolitik omvända effekter under omfattande budgetsaneringar? Den svenska budgetsaneringen 1994-97

Focus of this paper

- Key research question: Has fiscal policy reversed effects during major fiscal consolidations? The Swedish budget consolidation 1994–97.
- 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 on the Swedish economy by including a measure of world business cycles.

Why study budget consolidations?

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- Based on standard macroeconomic theory we know that restrictive fiscal policy leads 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) (Blanchard (1987), Giavazzi and Pagano (1990), Bertola and Drazen (1993), Sutherland (1997), Barry (1999), Perotti (1999), Giavazzi, Jappell and Pagano (2000)).

Earlier empirical evidence

- Results consistent with EFC hypothesis: Alesina and Perotti (1995) Perotti (1999), Giavazzi, Jappelli and Pagano (2000), Höppner and Wesche (2000), Afonso (2006), and Bergman and Hutchison (1999,2010).
- Results inconsistent with EFC hypothesis: van Aarle and Garretsen (2003), Hjelm (2002), Andersen and Risager (1990,1991) and Andersen (1994)

Why study the Swedish budget consolidation?

- The large Swedish fiscal contraction that was implemented after the financial crisis in 1994 is an interesting case study.
- It was substantial and broad reaching in that it covered both public sector spending as well as taxes and other reforms.
- The primary budget deficit as a percentage of GDP improved from a large deficit (-7.9 percent) in 1994:3 to surplus (2.1 percent) in 1998:1. Economic growth increased significantly (from -0.5 to 4.2 percent).
- Public expenditures declined from 68.2 percent of GDP to 58.1 whereas total revenue increased from 59.4 to 61.8 percent of GDP.

Empirical strategy

- ”Event study” approach using standard structural vector autoregression model (VAR) (Blanchard and Perotti (2002)).
- Model is comprised of five variables (GDP, private consumption, public consumption, direct taxes and unemployment). G–7 ouput gap is included as an exogenous variable. Budget consolidation is modelled using a dummy variable. Sample is 1971–2008, quarterly data.

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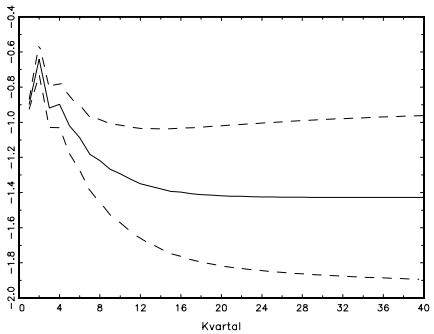
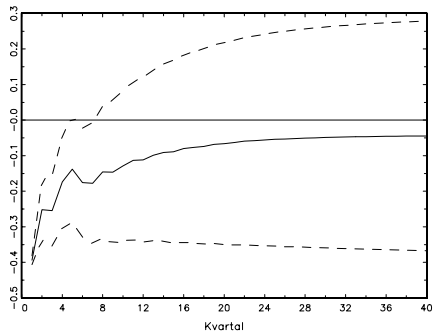
- Main results:
  - Fiscal policy has the standard Keynesian effects during normal times; a fall (rise) in government consumption expenditures (taxes) reduce consumption and output and increase unemployment.
  - No significant EFC effects during the Swedish budget consolidation.

Figure 1: Impulsresponse of GDP (Y), private consumtion (C) and unemployment (U) to increased taxes (T) and to a fall in public consumption (G) during "normal" times.

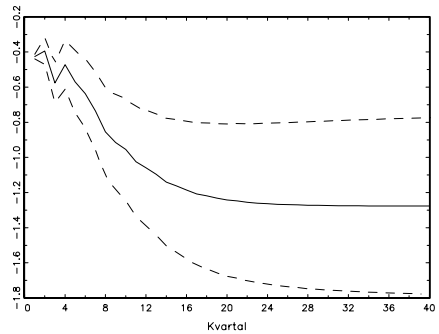
(a) Effect of T on Y



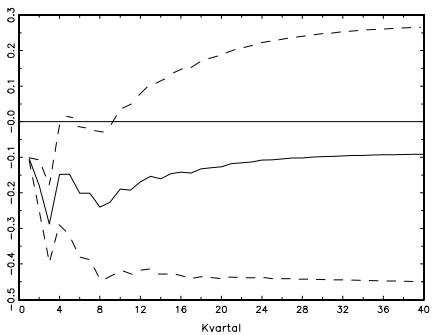
(b) Effect of G on Y



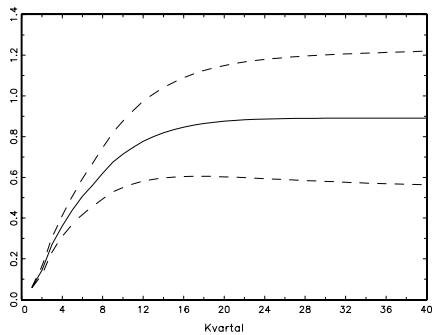
(c) Effect of T on C



(d) Effect of G on C



(e) Effect of T on U



(f) Effect of G on U

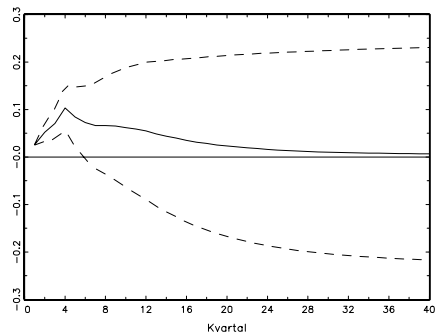
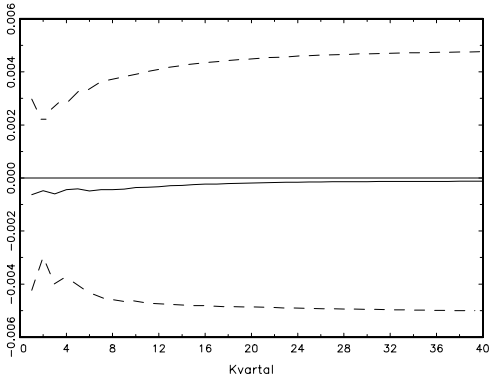
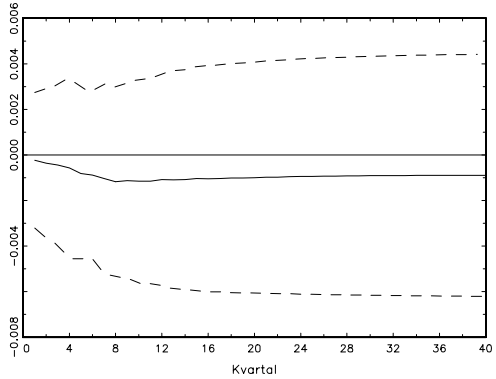


Figure 2: Impulse response of (Y), private consumtion (C) and unemployment (U) to the Swedish budget consolidation.

(a) Effect on Y



(b) Effect on C



(c) Effect on U

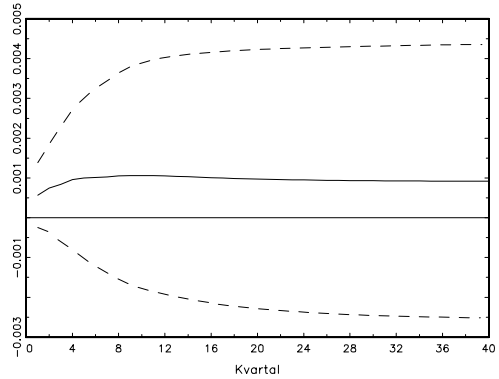
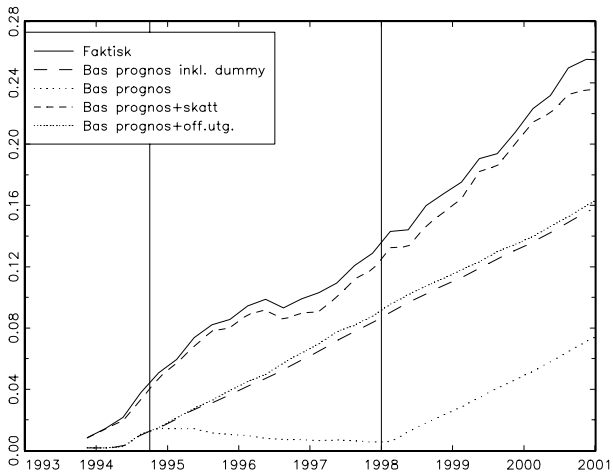
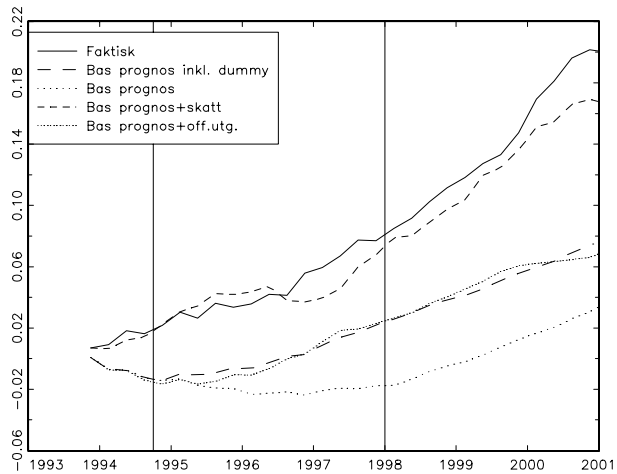


Figure 3: Historical decomposition of GDP and private consumption during and after the Swedish budget consolidation 1994–97.

(a) GDP



(b) Private consumtion



Conclusions

- Standard Keynesian effects of fiscal policy during normal times. Consistent with most other empirical studies.
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- No significant of the Swedish fiscal consolidation.
- Possible explanations of why the EFC hypothesis is rejected:
  - 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 permament).
  - Households expected no permanent change in government expenditures.

Thank you!