

Real wages and monetary transmission in the euro area

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“The monetary policy transmission mechanism in the euro area in its first 10 years”

Frankfurt, 23 September 2009

Introduction

- **Renewed interest in estimating the effects of monetary policy shocks on labour market outcomes:**
- **Trigari (2004), Ravn and Simonelli (2006), De Bock et al (2005), Normandin (2006), Christoffel et al ...**
- **Useful to validate which features and frictions of modern labour-market matching models should be included in micro-founded New Keynesian DSGE models**

Introduction

- **Many papers focus on the response of quantities (intensive/extensive margin – labour tightness):**
 - **E.g. Ravn and Simonelli (2006) show that employment, hours per worker and vacancies drop in line with output, while unemployment shows a hump-shaped increase. Employment responds by much more than hours per worker**
- **Some exceptions also look at wages:**
 - **E.g. Normandin (2006) argues that the real wage response may be informative about the relative importance of nominal price versus wage rigidities.**

Introduction

- **Focuses on the euro area (1987:1-2005:4)**
- **Uses a large data set (338 variables) covering area-wide, national and sectoral macro time series;**
- **Identifies the effects of a common monetary policy shock;**
- **Investigates the impact on both quantities and prices in the labour market and differences across countries and sectors;**
- **But focus is on the response of real wages.**

FAVAR methodology

- **Large data-set methodology of Bernanke, Boivin and Elias (2005)**
- **Two advantages:**
 - Improve estimates of policy shocks;
 - Analyse the effect on many variables (also across countries and sectors)
- **Two-step approach:**
 - $X_t = \Lambda_f F_t + \Lambda_R R_t + e_t$
 - $$\begin{bmatrix} F_t \\ R_t \end{bmatrix} = \Phi(L) \begin{bmatrix} F_{t-1} \\ R_{t-1} \end{bmatrix} + v_t$$

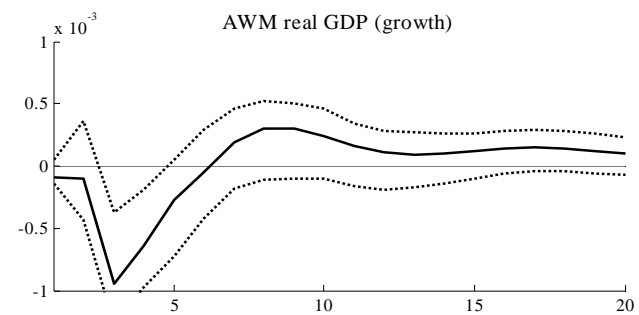
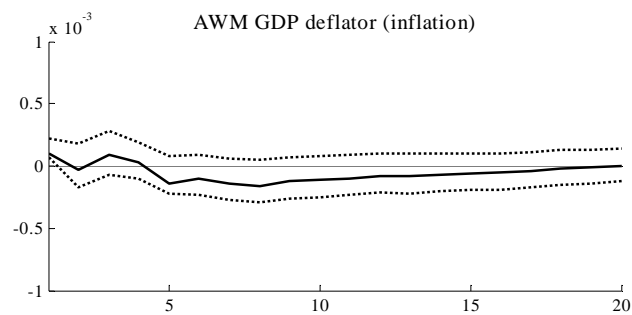
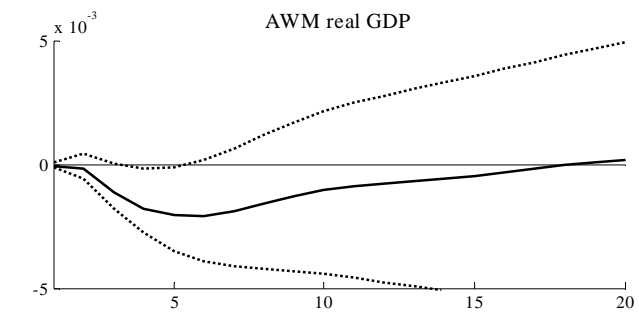
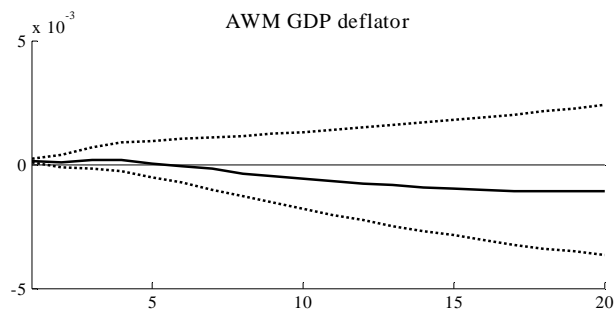
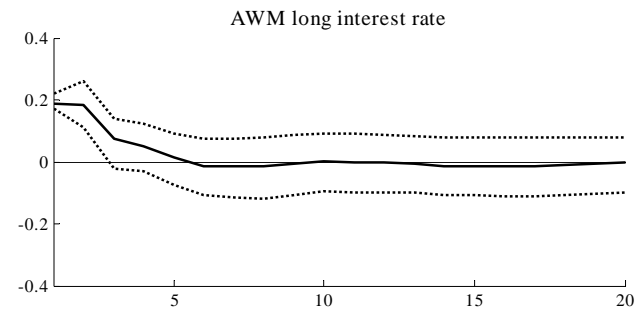
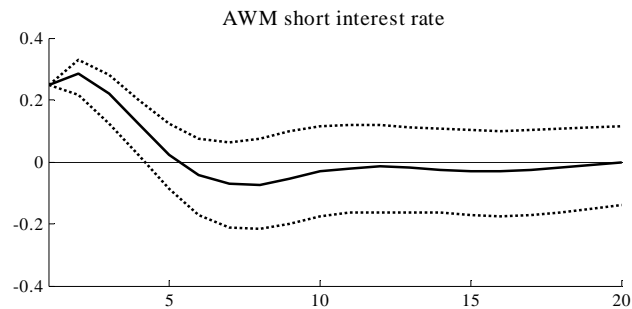
FAVAR methodology

- **338 quarterly macro-economic time series**
 - Of which 19 area-wide variables
- **Baseline model:** $IC_{EA}(k)$
 - Five factors (Bai and Ng, 2005)
 - Three lags
 - Euro area short-term interest rate as policy instrument

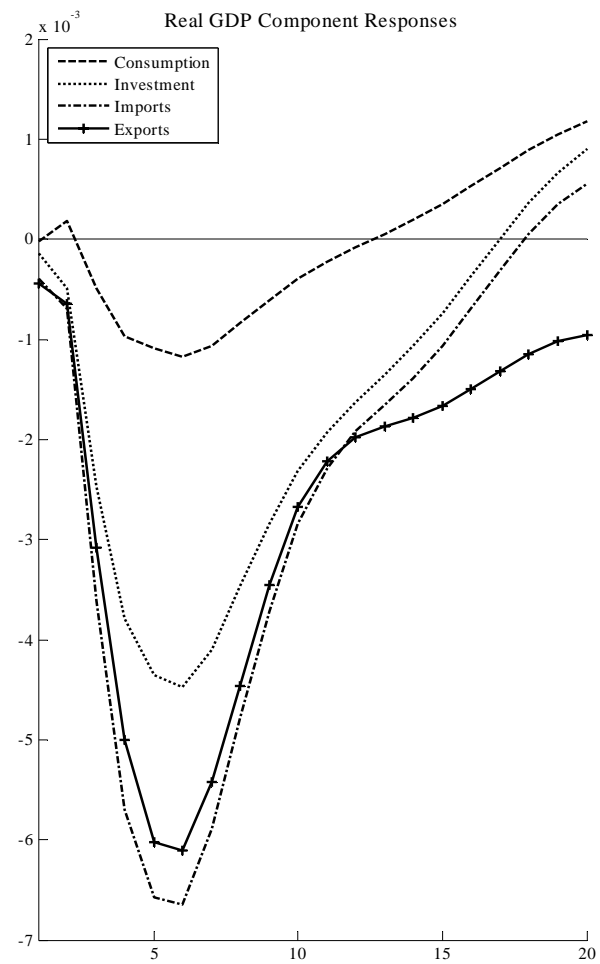
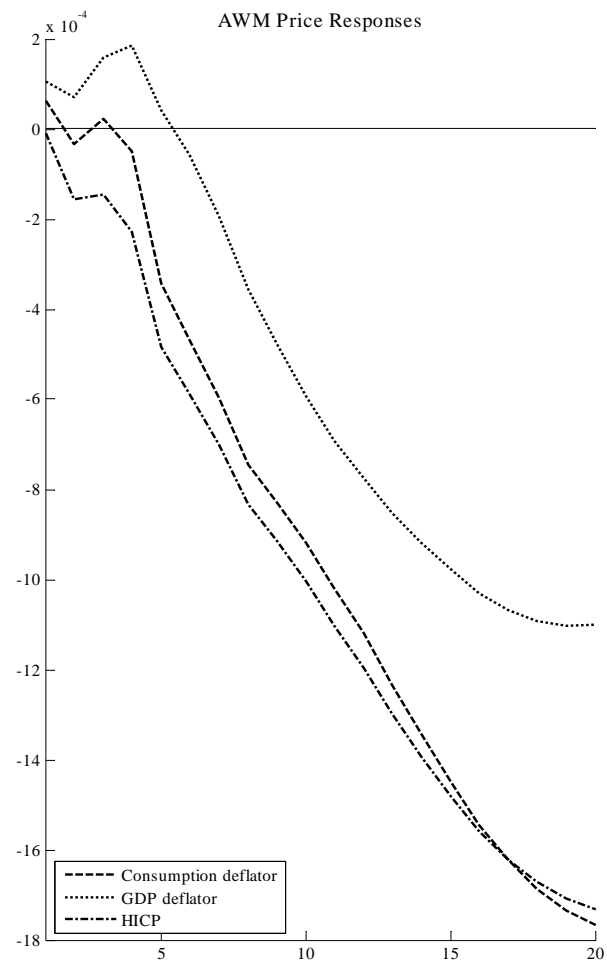
Aggregate findings

- **Area-wide effects of a monetary policy shock are very similar to those found by Peersman and Smets (2003);**
- **No price puzzle;**
- **Hump-shaped effects on GDP and its components, as well as employment;**
- **Real wage falls following a contractionary monetary policy shock (different from PS)**

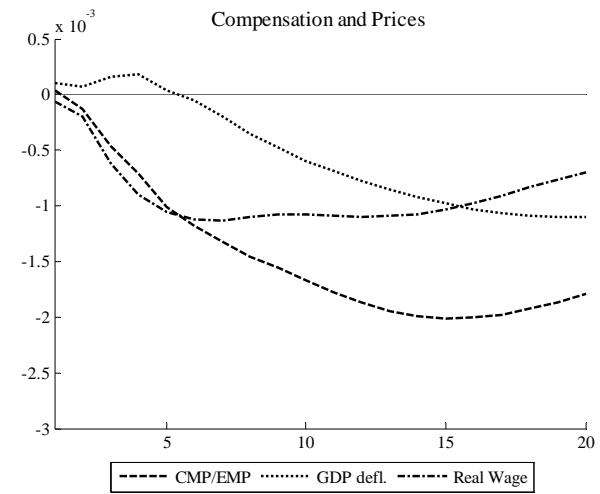
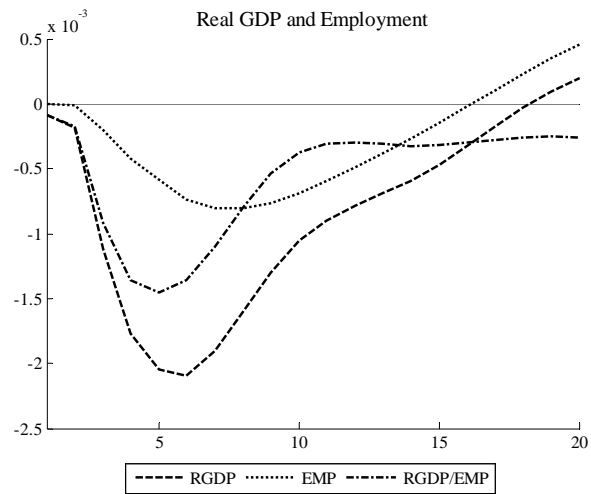
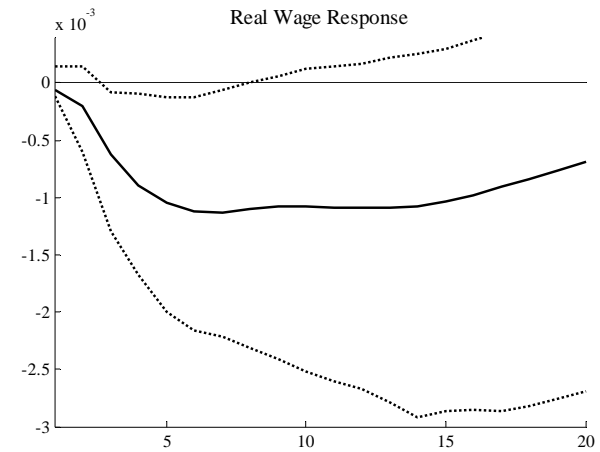
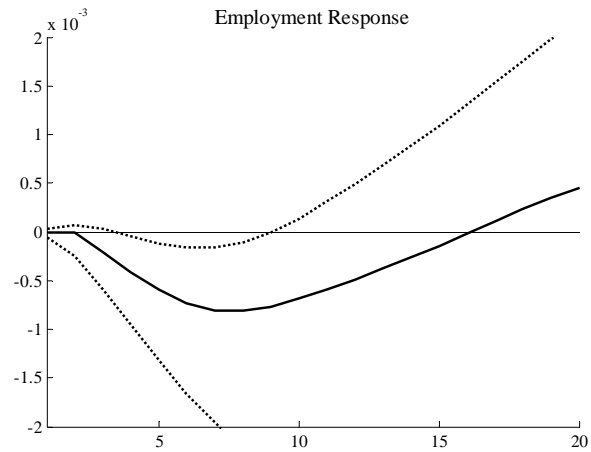
Aggregate results



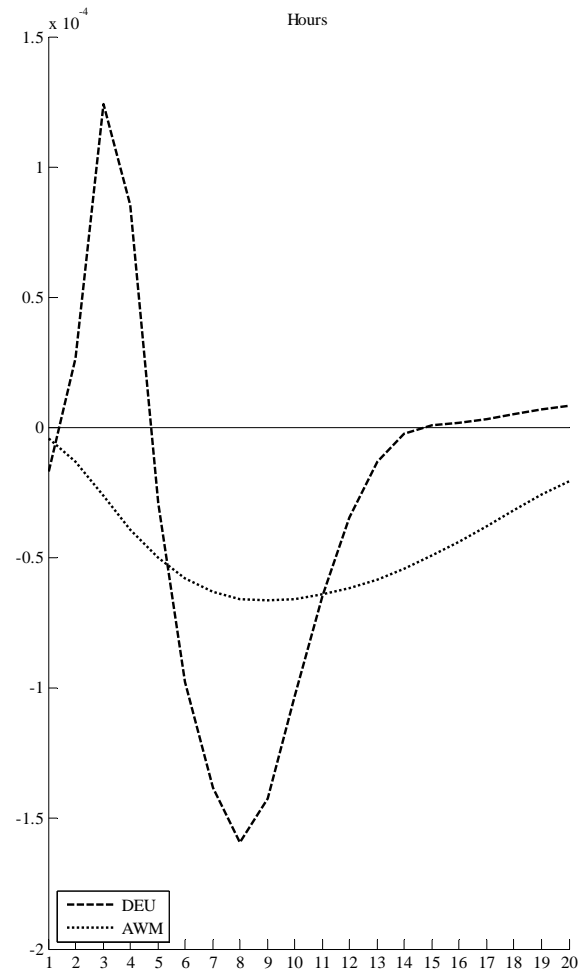
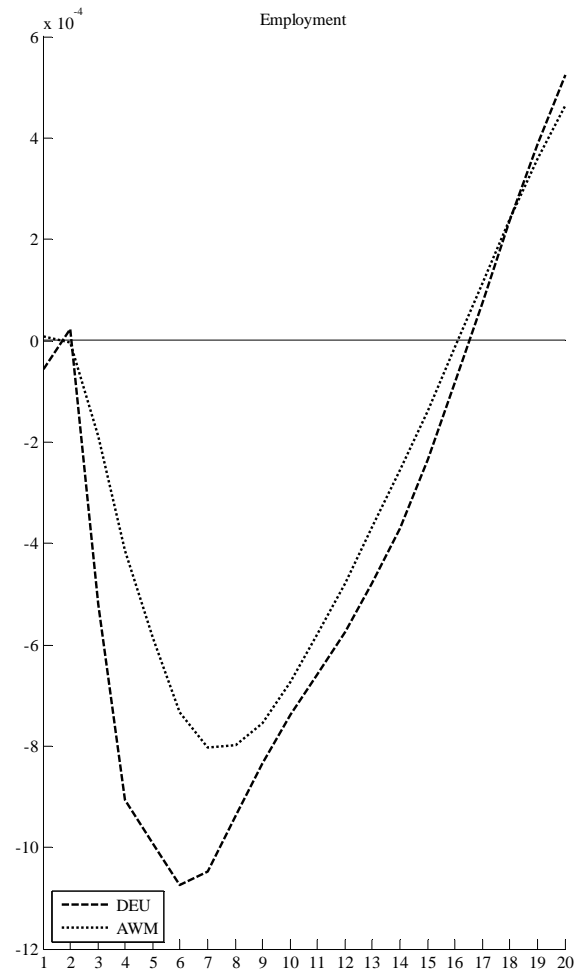
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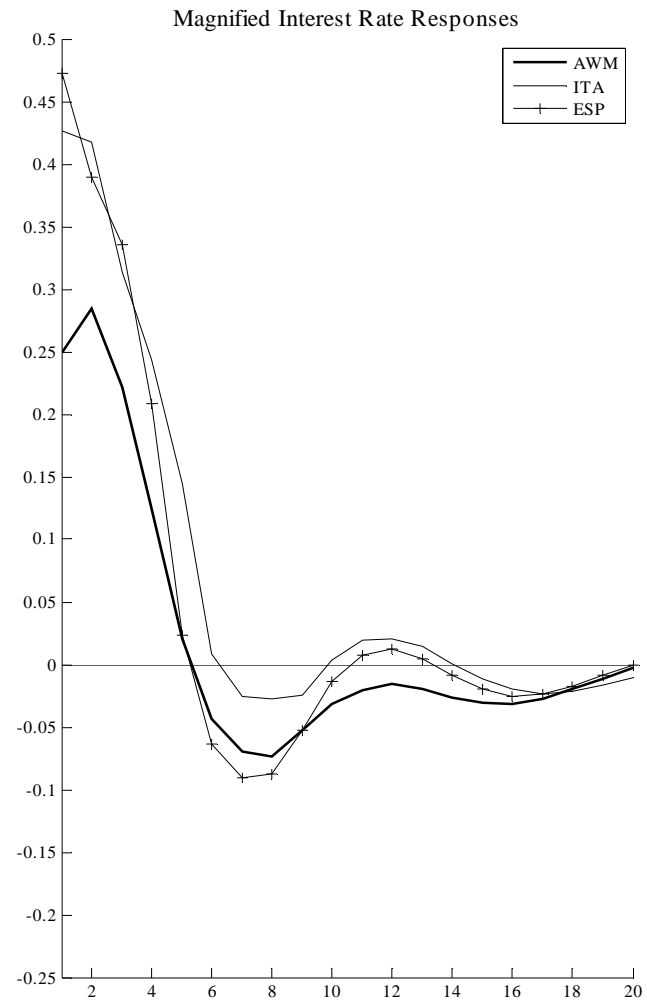
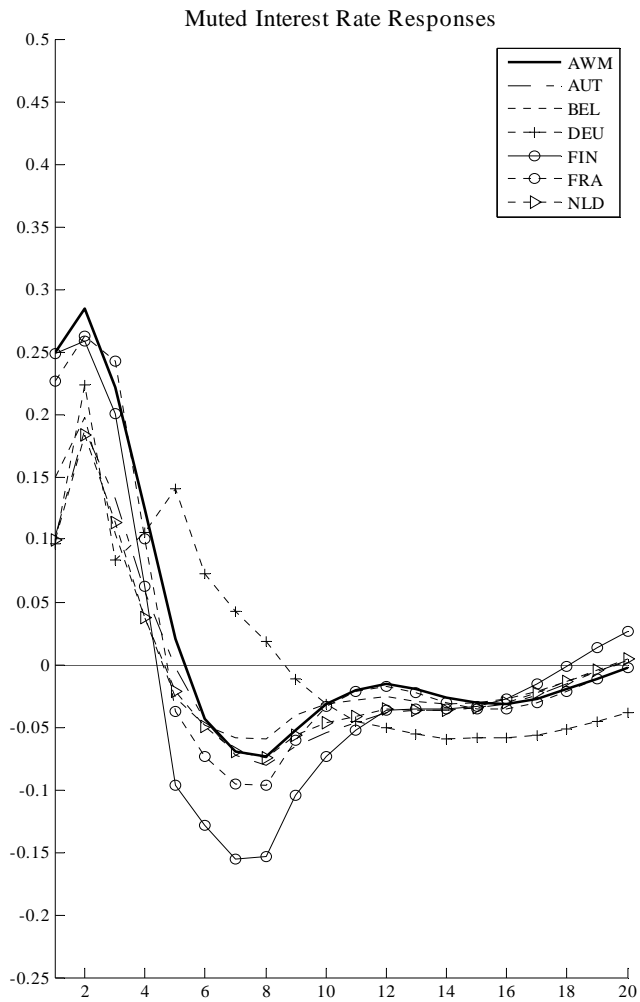
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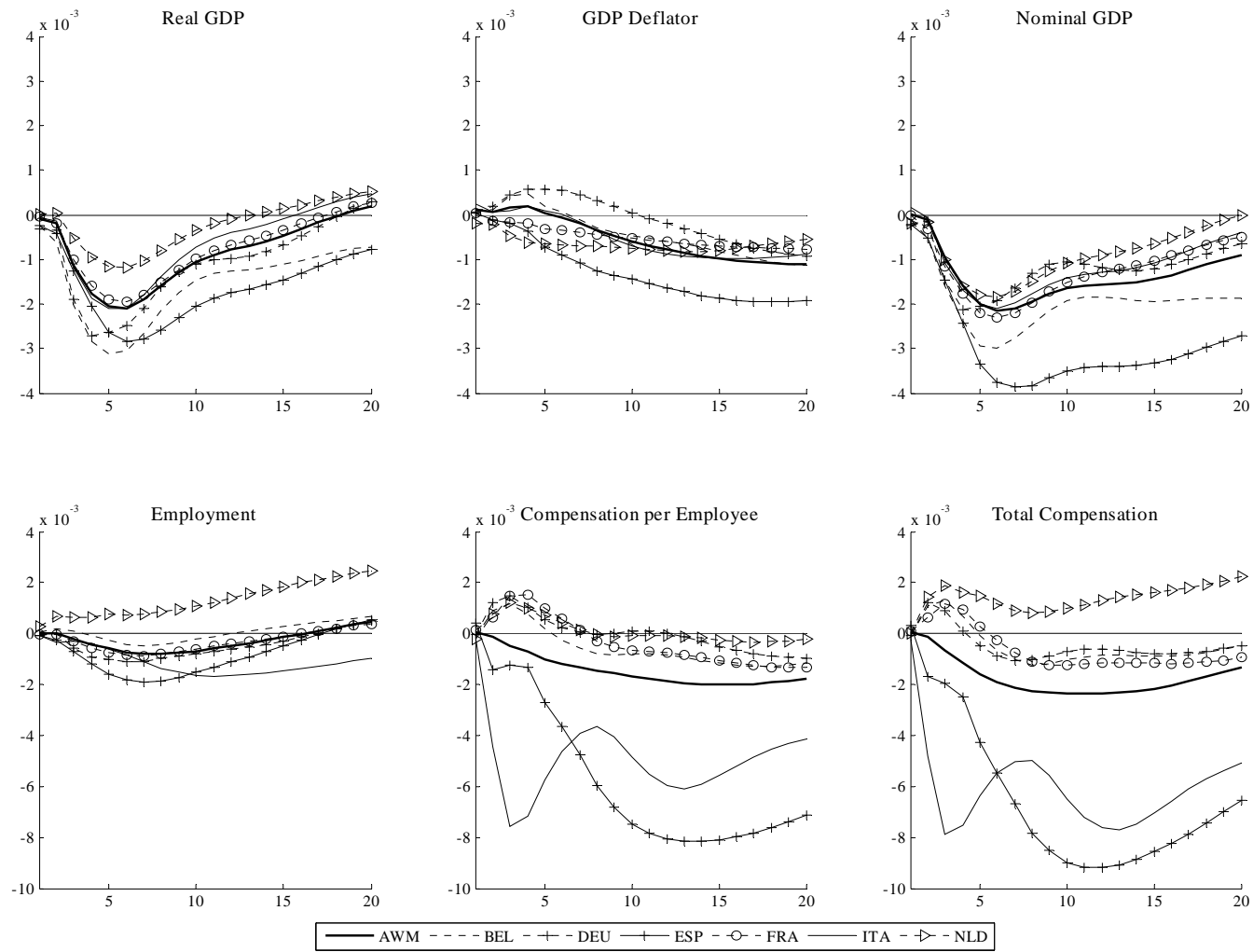
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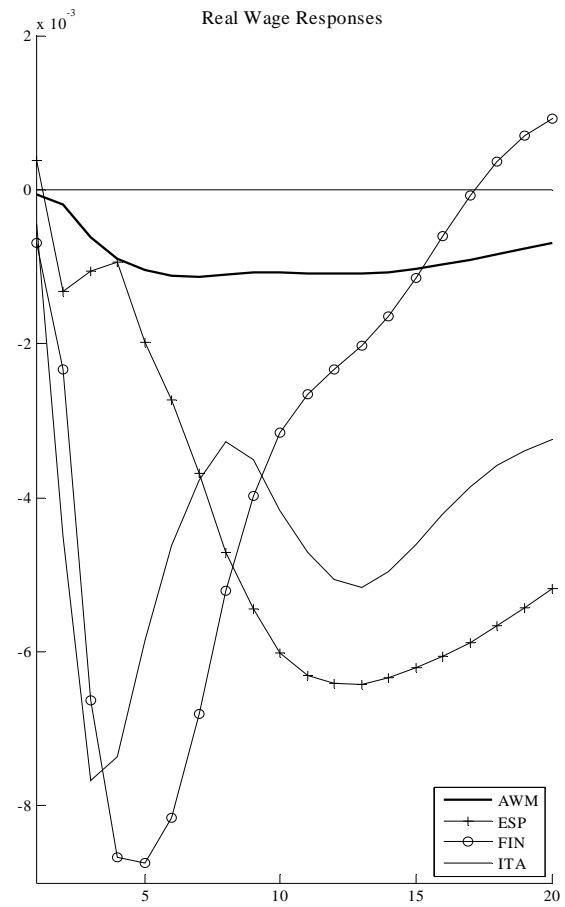
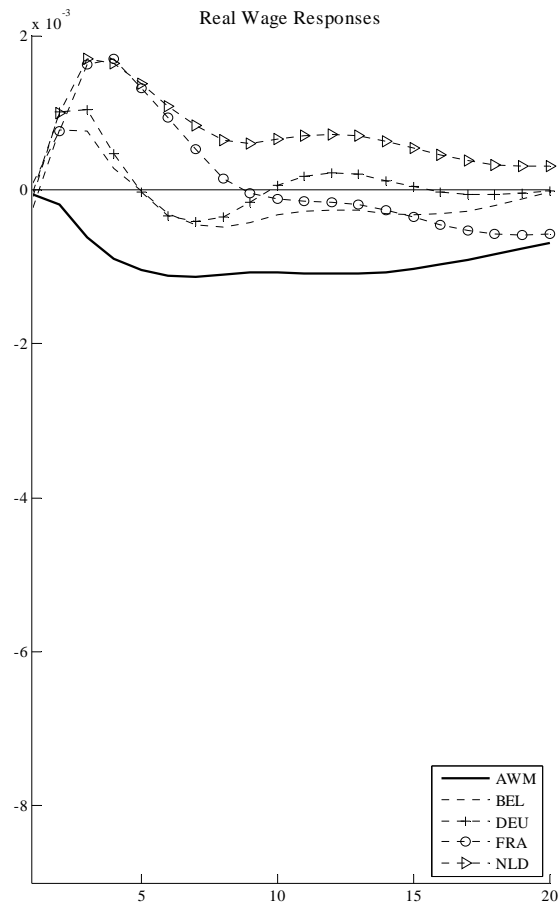
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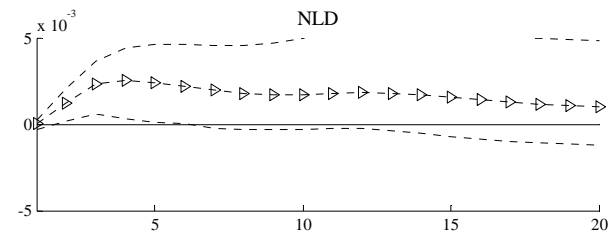
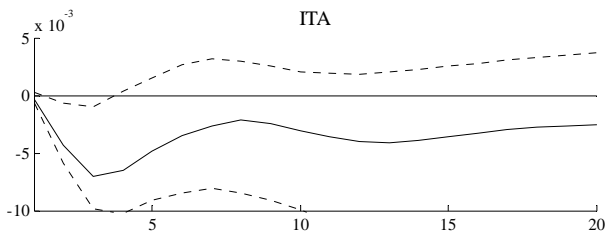
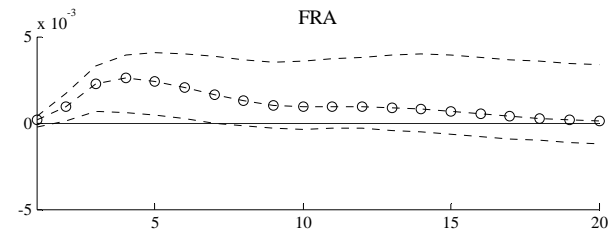
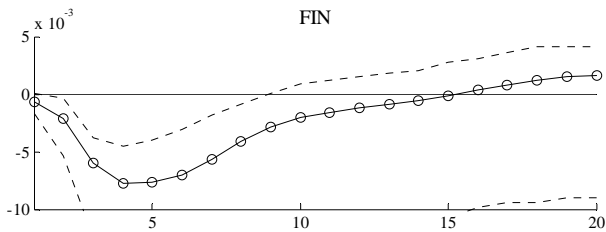
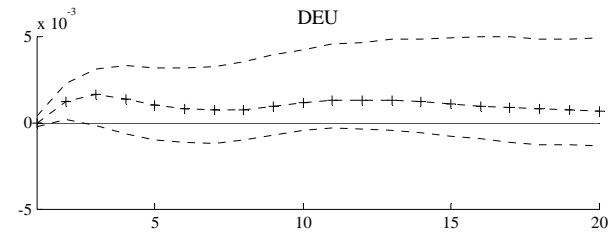
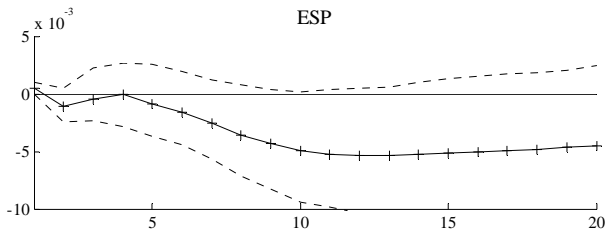
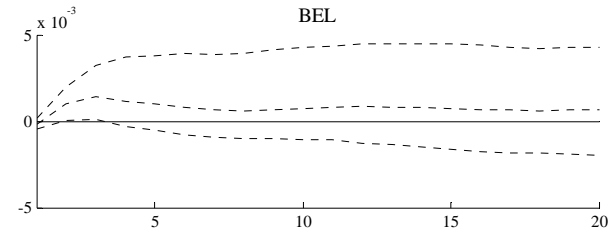
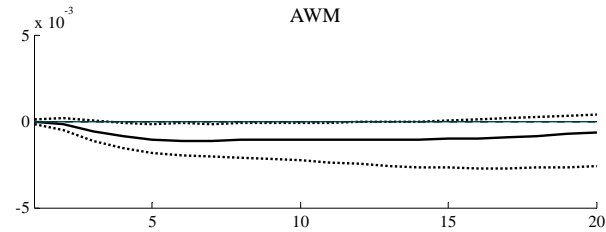
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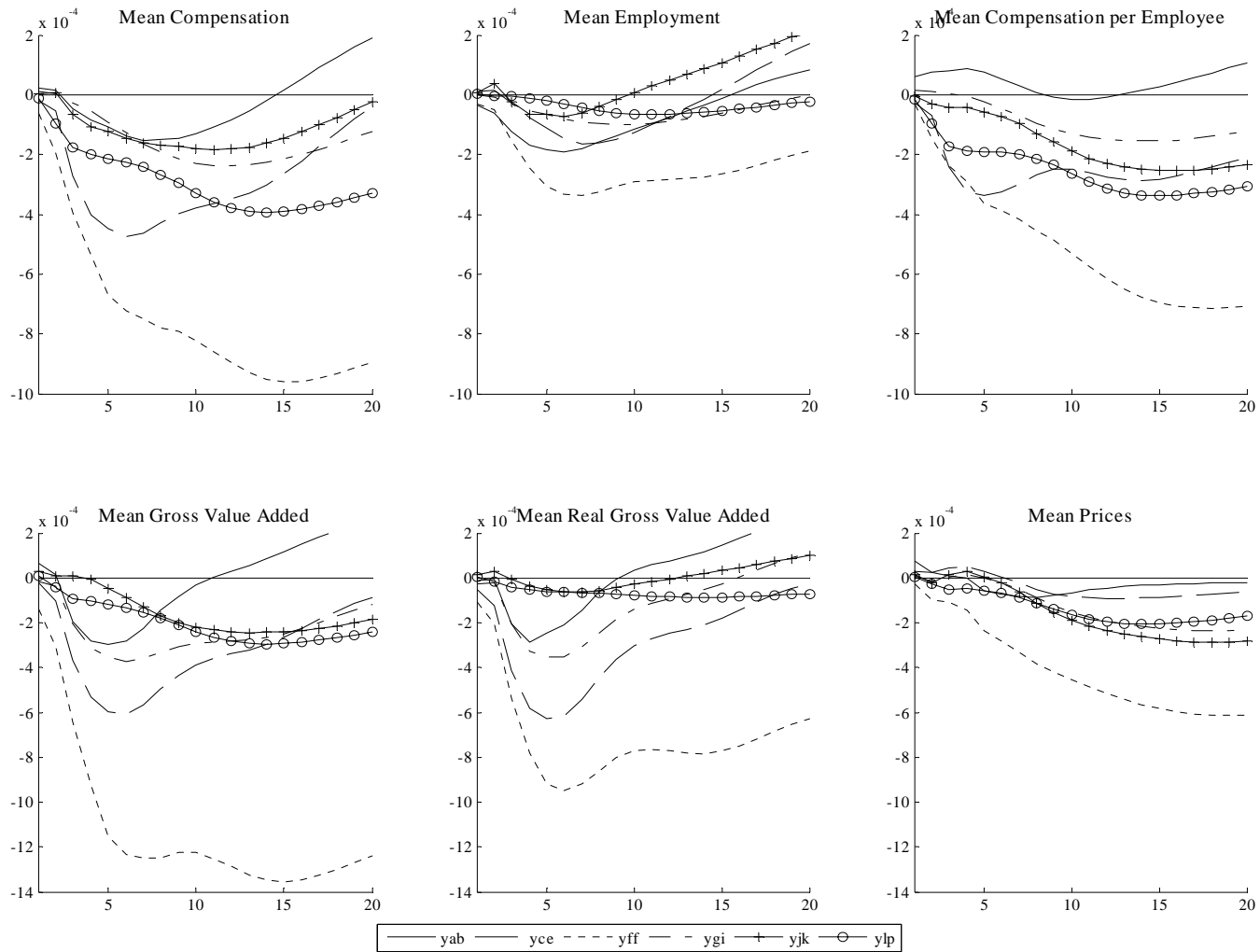
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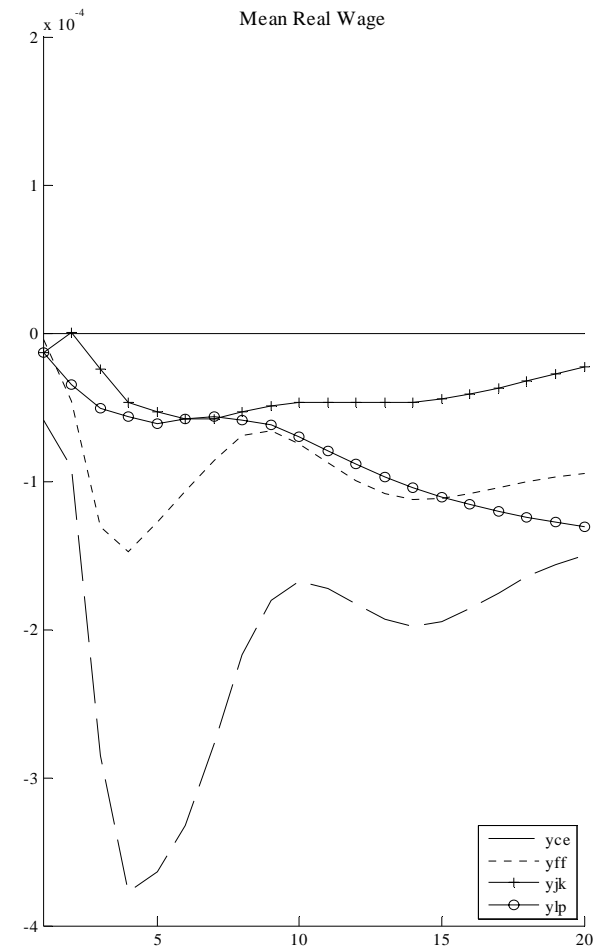
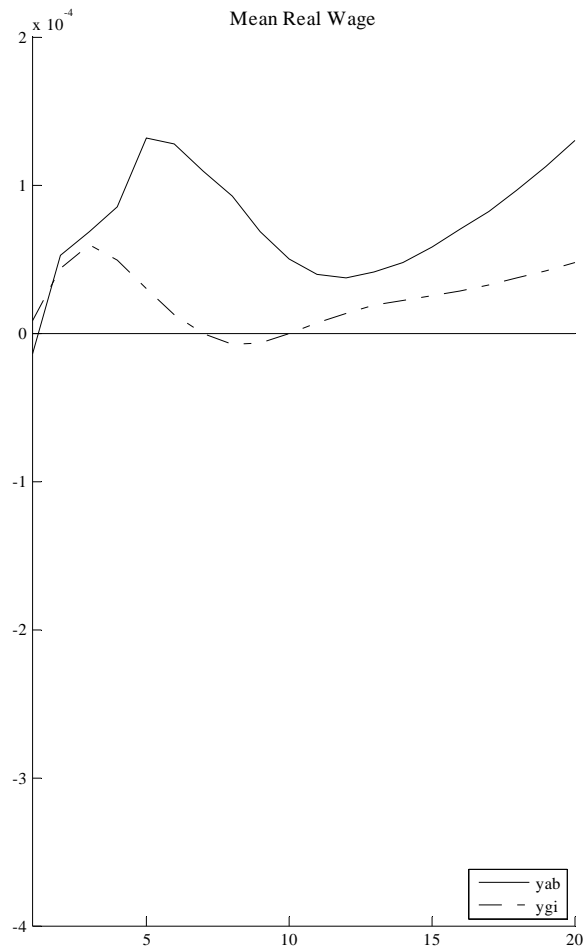
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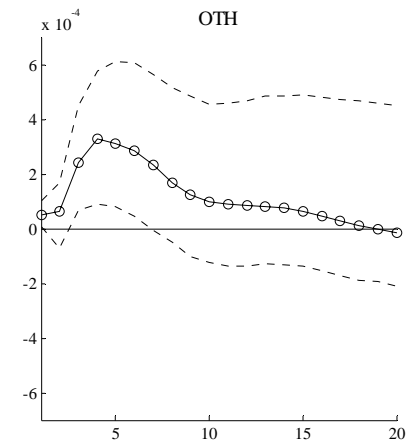
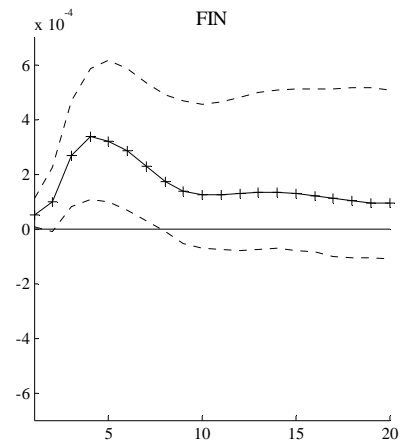
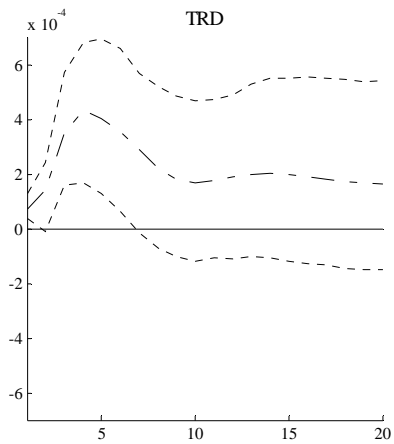
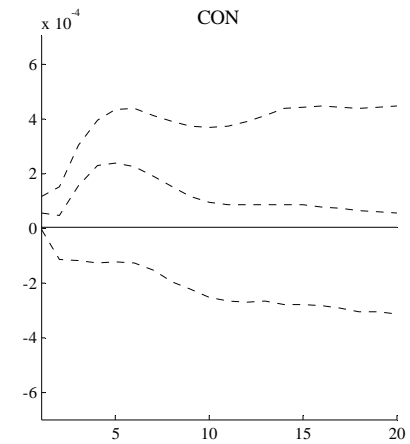
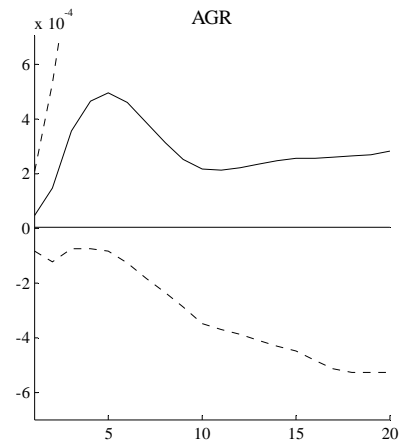
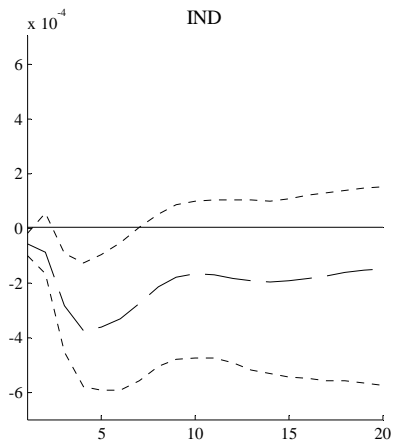
Sector results



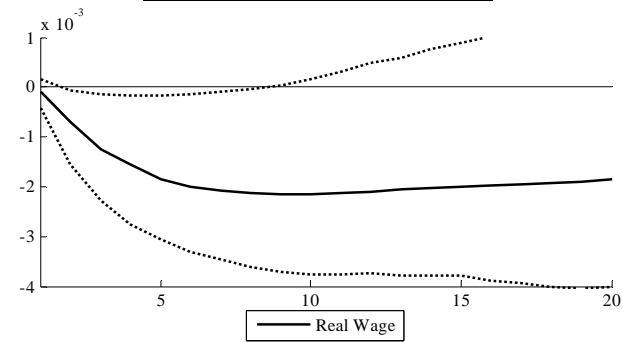
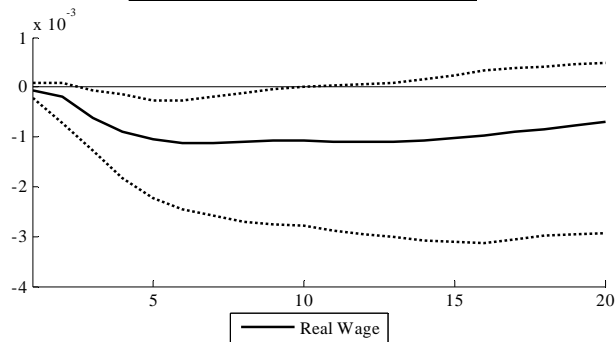
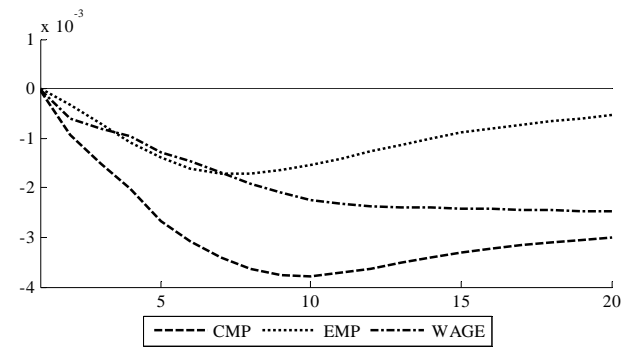
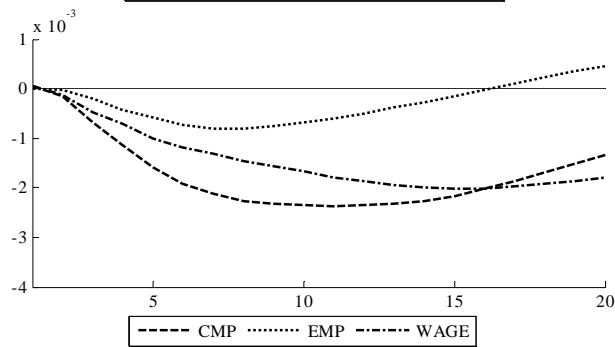
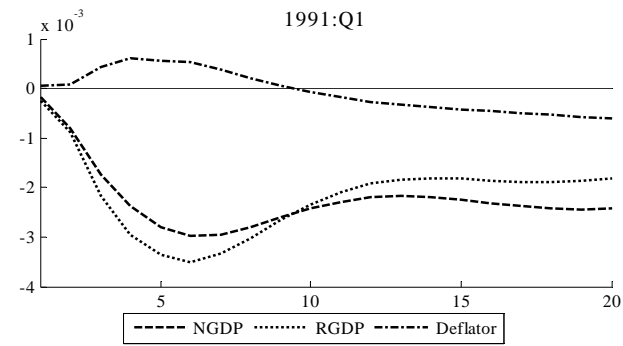
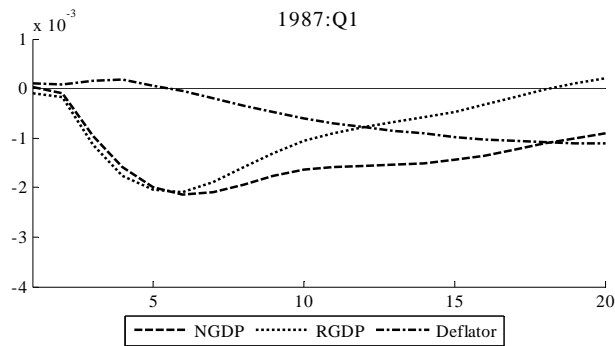
Sector results



Sector results



Has the response changed over time?



Conclusions

- **On average, real wages do fall following a monetary policy contraction in the euro area;**
- **But...**
 - **Differences across countries**
 - **Differences across sectors**
 - **Potential changes over time**
- **Need to:**
 - **Update sample and check robustness**
 - **Understand reasons behind the robust differences**

Has the response changed over time?

