

Do Political events affect business cycle? The Maastricht treaty, the creation of the ECB and the euro economy.

Canova, Ciccarelli and Ortega.

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# 1 What the paper does?

Analyze the effects of the Maastricht treaty and the creation of the ECB on the Euro Area business cycles?

Changes in institutional and operational features of markets affect business cycles.

No previous study for OECD countries. (**CONTRIBUTION 1**)

I enjoy the paper: I believe institutions matter.

## 2 How they address this question?

Panel data VAR

7 European countries (Germany, France, Italy, Spain, Belgium, the Netherlands and Finland)

5 endogenous variables (output, employment, industrial production, consumption, investment)

5 exogenous variables (oil price,  $Y^*$ ,  $Y^*$ ,  $StockPrices^{us,ifed}$ )

1980:1-2004:4 (100 observations)

### 3 Panel data VAR

Simultaneous equation format:

$$Y_t = Z_t \delta_t + E_t \quad E_t \sim N(0, \Omega)$$

Structural changes  $\rightarrow$  coefficients change over time!

5250 coefficients to estimate in  $\delta_t$

**Solution:** flexible factor structure (**CONTRIBUTION 2**)

$$\delta_t = \Xi_1 \lambda_t + \Xi_2 \alpha_t + \Xi_3 \rho_t + \Xi_4 \psi_t + u_t$$

(time variant, country, variable specific, exogenous variables).

$$1 + N + G + 1 = 1 + 7 + 5 + 1 = 14$$

Use Bayesian methods

## 4 Synchronicity

$\lambda_t$  : time varying measure of synchronicity

$\lambda_t$  large: endogenous variables co-move

$\lambda_t$ : shrinks co-movement.

## 5 Results:

Some evidence of changes in the features of the European business cycles.

1990's: less volatile, more persistent, more co-movements.

**But** they not seem to line-up with these 2 events.

## 6 But:

### 6.1 Are the results robust to Lucas' Critique?

Maastricht treaty → change in the fiscal policy rule

ECB → change in the monetary policy rule

There are neither **fiscal** nor **monetary** policy variables in the data.

Are our results **biased** for this missing variables?

## 6.2 Data only from the 80's

If including data from the 70's:

Oil price shocks → synchronized recession -would change results?



## 6.3 Data (again)

GDP ( $Y$ )

Consumption ( $C$ )

Investment ( $I$ )

Employment ( $U$ )

Industrial production ( $Y^{ind}$ )

$C$  and  $I$  are already in  $Y$  (they co-move already)

## **6.4 As effects of institutional changes are slow- > effects are mixed up.**

This issue has not been addressed