

## Discussion of

# Shock transmission in a monetary union: aggregate impacts and cross-sectional incidence across EA countries

by E. Rubbo, C. Osbat, G. Bušs, A. Cantelmo, M. Dobrew, R. Domínguez-Díaz, M. Elfsbacka Schmöller, J.-E. Gallegos, N. Lisack, M. Pisani, J. Quintana Gonzalez, D. Verdini

Glenn Magerman

ECARES, ULB CEPR and CESifo

Challenges to Monetary Policy – closing conference, Rome  
July 7, 2026

# What this paper does

**Question:** why do common shocks generate heterogeneous effects across EA members?

**Reduced form:** country(-industry) LPs of quantities and prices on identified shocks.

- ▶ **Mon pol:** largest, fastest, most dispersed on *quantities* (empl., hours, cons.). Flexible sectors absorb more in prices.
- ▶ **Energy:** largest, fastest, most dispersed on *prices* (HICP). Cross-country heterogeneity larger still.

**Model:** 20 countries  $\times$  62 industries  $\times$  23 factors, I–O network.

- ▶ **Toy version:** 2 countries, 2 sectors, 2 occupations, 2 households (Poor: labor; Rich: inelastic labor + all capital).
- ▶ **Mechanism:** sticky/elastic segments absorb in *quantities*; flexible/inelastic in *prices*.
- ▶ **Dispersion:** driven by capital intensity and labour composition (ownership: *minor*); aggregate  $\approx$  conventional NK  $\rightarrow$  dispersion is the key result.

# Contributions & why we should care

## Contributions

- ▶ Empirical evidence on the transmission of monetary and oil shocks across EA countries.
- ▶ Multi-country NK–IO model of the EA: segmented factor markets, with *measured* rigidities, networks, baskets, and ownership.
- ▶ Quantify the cross-country incidence of common shocks and its structural drivers.

## Why should we care?

- ▶ One policy rate, heterogeneous incidence → uneven stabilization is a design constraint.
- ▶ Energy security: who bears the (next) supply shock, and through which channels?

# 1. Reduced form: inference and asymmetry

## One shock, twenty regressions.

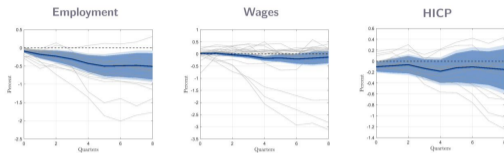
- ▶ Point estimates OK: same regressor across equations  $\Rightarrow$  SUR = OLS country by country.
  - ▶ Residuals are *correlated* across countries (common realizations, shared EA disturbances).
  - ▶ SEs on  $\hat{\beta}_k - \hat{\beta}_j$  or on cross-country dispersion need the full covariance.
  - ▶ E.g. joint system or time-series bootstrap (resample periods, all countries together).
- Feeds the shrinkage in comment 2.

## Symmetry is imposed by linearity, you can test it.

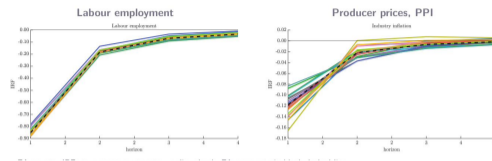
- ▶ Paper states monetary tightening / negative oil supply shock.
- ▶ “Tightening” is a sign normalisation in linear LP: it pools  $\varepsilon^+$  and  $\varepsilon^-$ .
- ▶ Cheap test: split  $\varepsilon^+/\varepsilon^-$ , test  $\beta_k^+ = -\beta_k^-$  country by country.
- ▶ Payoff: out-of-model validation of the supply-side channel: contractions should bite harder than easings help, especially in the most rigid sectors/countries.

## 2. How much dispersion should the model explain?

**Empirics** (LP on Jarocinski–Karadi shocks)



**Model** (common monetary shock)



**Step 1 – Same centering:** Empirics = separate aggregate LP. Model = weighted average.

Composition effect: part of gap is wedge between both EA aggregates. Free check: use model weights.

**Step 2 – Same noise:**

- ▶ Large SEs for most dispersed  $\rightarrow$  overestimates dispersion. Shrink using covariance matrix (comment 1):  $\text{Var}(\beta) = \text{Var}(\hat{\beta}) - \overline{\text{s.e.}^2} + \overline{\text{cov}}$ . How much survives?
- ▶ Mirror image on the model side: PPI rigidity is measured for FR/PT and imputed to all  $\rightarrow$  the model dispersion is too *narrow* by construction.

**Step 3 – Calculate share:** Model dispersion over *true* dispersion  $\rightarrow$  quantifies supply-side channel.

Remainder is plausibly demand-side heterogeneity.

### 3. Two country model: mechanisms and quantitative results

**Mechanism and calibration are stated jointly.**

Separate environment from Table 1: which results are generic, which are calibration?

**Separate the counterfactuals.** “Rich” bundles three primitives (inelastic supply, flexible wages, all equity) → switch them *one at a time* to identify which one drives what.

**Stark calibration yields modest dispersion.** Strong rigidities (wages, prices, capital) are *common* to countries. Only *composition* differs, and GE compresses this → what share can the mechanism claim in the data (comment 2)?

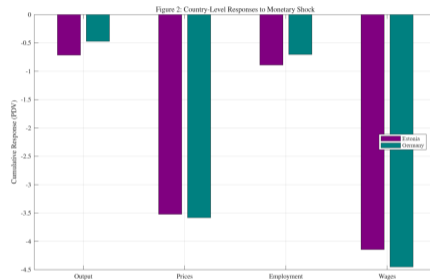


Fig. 8: cumulative country responses.

## 4. The general model: measurement or calibration?

**Dimensions:** 20 countries  $\times$  62 industries  $\times$  23 factors; I-O network (FIGARO), segmented factor markets.

**All heterogeneity collapses into two matrices:** incidence of common shock =  $(I + \Theta\kappa)^{-1}\mathbf{1}$ .

- ▶  $\kappa$ : supply slopes (rigidities  $\times$  multipliers  $\times$  elasticities).
- ▶  $\Theta$ : expenditure switching + income feedback.

**What varies across countries in the data, and what is assumed common?**

- ▶ **Measured, country-varying:** I-O, composition, Domar weights, baskets, wage rigidities.
- ▶ **Assumed, common to all:** Frisch elasticities,  $\sigma$ 's, PPI rigidity (FR/PT  $\rightarrow$  all).

**Model dispersion** = composition  $\times$  common slopes: *narrow by construction*. The missing correction in comment 2 and the toy model's design (comment 3).

# Taking stock

## For academics

- ▶ A unified supply-side framework for shock incidence in a currency union: measurable structure (rigidities, factor markets, networks, baskets, ownership) → two sufficient objects ( $\kappa, \Theta$ ) → closed-form incidence.
- ▶ Bridges the currency-union NK literature (Benigno; Galí–Monacelli) and production networks (Rubbo; Baqaee–Farhi).

## For policy

- ▶ Makes uneven transmission *diagnosable*: which national structures drive exposure to a common rate or energy supply shocks?
- ▶ Natural laboratory for structural reform and energy security questions the ECB faces.

Important paper & looking forward to the next iteration!