The Euro Plus Pact: Competitiveness and External Capital Flows in the EU Countries

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Eesti Pank, Estonia

Joint with Hubert Gabrisch, IWH

All viewpoints personal!
Next 19½ minutes

1. The Euro Plus Pact
2. Briefly on the literature
3. Data
4. Granger causality tests
5. VAR models
6. Final comments

Gabrisch & Staehr (2012)
- Working Papers of Eesti Pank, no. 5/2012
- IOS Working Paper, no. 324
1. The Euro Plus Pact

- Late 2010 → *Pact of competitiveness*
- Early 2011 → *Pact for the euro*
- Adopted on 25 March 2011 → *Euro Plus Pact*

Euro Plus Pact → countries are crisis countries because of weak competitiveness!

Competitiveness ↓ (e.g. Unit Labour Cost = ULC ↑)

⇒

“Deterioration” of Current Account balance, CA ↓

⇒

Crisis in case of financial shock

Gros (2011, p. 1):

*The (relative) unit labour costs of GIP(S) countries Greece, Ireland, Portugal and Spain have increased: this is the fundamental cause of their problems as export performance must have been bad, pushing them into current account deficits.*
Figure: Unit Labour Costs relative to euro area average, 1998 = 100

Note: ULC is computed as the ratio between compensation per employee and real GDP per employed person

Source: European Commission
This paper → is the implied / assumed direction of causality correct?

- Does improved competitiveness reduce financial imbalances?
- Does relative ULC ↓ ⇒ current account ↑?
  - Time-based identification of direction of causality… 😊
2. Briefly on the literature

Discussion of Euro Plus Pact

Mostly from spring and summer 2011)

Gros & Alcidi, Gros (Eurointelligence), Schiliro, Wyplosz

- How to measure competitiveness?
  - Why not start ULC index series in 1992?
  - ULC ↑ if more attractive product 😊
- Adjustment by deficit countries vs. surplus countries
- Urgent crisis, but slow-working instruments
Linkages between capital flows and competitiveness

Competitiveness ↓ ⇒ current account balance ↓

Theory

Real exchange rate appreciation / ULC ↑ / competitiveness ↓ ⇒ NX ↓ ⇒ current account ↓
- Marshall-Lerner
- j-curve

Empirics [← many studies of Marshall-Lerner condition]


CA ↓ (capital inflow) ⇒ Competitiveness ↓

Theory

- Capital inflow ⇒ demand for non-traded products ↑ ⇒ wages etc. ↑ ⇒ unit labour costs ↑ / real exchange rate appreciation [↼ “demand story”]
  - Dutch disease ⇒ foreign exchange earnings ↑ ⇒ real exchange rate appreciation
  - The transfer paradox ⇒ post-WWI reparation recipients 😞

Empirics [↼ many papers, in particular for emerging markets]


3. Data

Panel
- 27 EU countries
- Annual data 1995-2011

Notation
- RULC = Relative Unit Labour Costs (in euro, relative to EA12 average)
  - RULC ↑ ⇒ competitiveness ↓
- GRULC = percentage Growth in Relative change in Unit Labour Cost
  - GRULC > 0 ⇒ competitiveness ↓
- CA = Current Account balance in percent of GDP
  - CA < 0 ⇒ negative current account balance → capital inflow
- DCA = Difference in Current Account balance in percent of GDP
  - DCA < 0 ⇒ “deterioration” of current account balance → capital inflow ↑

“Preparations”
- GRULC, DCA → panel stationary in sample 1997-2011 😊
  - CA → borderline case [← use DCA in baseline regressions]
Figure: Changes in competitiveness and changes in capital inflows (EU27)
4. Granger causality tests

Which direction of causality? → Granger causality

Questions
  ▪ Does DCA Granger-cause GRULC? → does lagged DCA help explain GRULC?
  ▪ Does GRULC Granger-cause DCA? → does lagged GRULC help explain DCA?

Estimations (1 year lag)
  ▪ DCA = α₀ + α₁DCA(-1) + α₂GRULC(-1) + ε_{CA}
  ▪ GRULC = β₀ + β₁GRULC(-1) + β₂DCA(-1) + ε_{GRULC}

  ▪ GRULC ⇆ DCA if H₀: α₂ = 0 cannot be rejected
  ▪ DCA ⇆ GRULC if H₀: β₂ = 0 cannot be rejected
Panel estimations
- Few observations along time dimension
- “Average effect” across EU countries 😊

NB1: Few observations along time dimension → 1 and 2 year lags
NB2: Most often → country fixed effects

Clustered standard errors in ( )-brackets, $p$-values in [ ]-brackets
Table 2: Panel data Granger causality tests. Dependent variable DCA

<table>
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“Wrong sign”
**Table 3: Panel data Granger causality tests. Dependent variable GRULC**

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<td><strong>GRULC(-1)</strong></td>
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<td>0.671</td>
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<td><strong>GRULC(-2)</strong></td>
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//12EPP-show8_CompNet.doc
Summary of results of Granger causality tests

- No effect from GRULC(-1) to DCA
- Effect from DCA(-1) to GRULC
  - Sign “correct” \( \rightarrow \) DCA ↓ \( \Rightarrow \) GRULC ↑
  - Magnitude reasonable (-0.4 to -0.6)
- Robustness \( \rightarrow \) similar but slightly less “clear” results with CA
5. VAR models

Advantages
- Model dynamic linkages between endogenous variables
- Allow contemporaneous effects

Panel Vector AutoRegressive models $\rightarrow$ GRULC, DCA $\sim$ I(0)

Results
- Estimates from GRULC to DCA (violet) $\rightarrow$ small and statistically insignificant
- Estimates from DCA to GRULC (orange) $\rightarrow$ larger (in numerical terms) and statistically significant

Country fixed effects
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<td>(R^2)</td>
<td>0.129</td>
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NB: Estimates like (2.4)-(3.4), (2.5)-(3.5) and (2.6)-(3.6), but standard errors not clustered
Impulse responses…

Problem → identification!

a) No contemporaneous effects (over-identification)
b) Contemporaneous effect from DCA to GRULC, but not the other way (Cholesky orthogonalisation)
c) Contemporaneous effect from GRULC to DCA, but not the other way (Cholesky orthogonalisation)

Impulse responses with +/- 2 S.E. confidence interval
Figure 2: a) Over-identification $\rightarrow$ no contemporaneous effects

(a) Non-factorised innovations
Figure 3: b) Contemporaneous effect from GRULC to DCA, but not the other way

(b) Cholesky decomposition, only contemporaneous effects from GRULC to DCA

If negative effect ("correct sign"), then small and short-lived
Figure 3: c) Contemporaneous effect from DCA to GRULC, but not the other way

(c) Cholesky decomposition, only contemporaneous effects from DCA to GRULC
Results

- Competitiveness $\uparrow \Rightarrow$ capital inflow / current account $0$
  - At short-term “positive” effect, possible counter-intuitive effect in longer term
- Capital inflow $\uparrow \Rightarrow$ competitiveness 2-3 year $\downarrow$ 😊

Robustness

- Without country fixed effects
- EA12, CEE
- Sample shortening (not so strong for EA12…)
- CA level (but results of CA $\uparrow$ on GRULC less clear…)
6. Final comments

Summary
- No / few signs of effect from competitiveness to current account balance
- Effect from current account balance to competitiveness
  - Increased capital inflow ⇒ real exchange rate appreciation in the short term

Policy implications
- Competitiveness “very endogenous” variable ← dependent on capital flows…
  - Focus on (excessive) capital flows?
- Euro Plus Pact → the cart in front of the horse
  - Focus or diversion?

More work ← CompNet?
- Other means of identification than time dimension?
- Different effects of different types of capital flows?
- Different effects across different exchange rate regimes?
- Richer VAR models with aim to test different theories?