Monetary integration vs. real disintegration

Single currency and productivity divergence in the euro area

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Content

- Two tales of monetary integration: Pangloss vs. Murphy
- Some stylized facts
- Many explanations that do not fit the data
- Three recent strands of literature
- Some empirical estimates
- Policy conclusions

Tales of monetary integration /1
Pangloss reloaded: all will be for the best...

- Short-term (manageable) threats:
  - idiosyncratic shocks and one-size-fits-all monetary policy: Eichengreen-Krugman vs. Frankel-Rose;
  - deflationary bias: Dornbusch vs. Modigliani.
- Long-run (invaluables) opportunities:
  - no balance-of-payment constraint anymore;
  - national investment «will not be constrained by national saving» and market allocative mechanism will finance only viable borrowers (Emerson et al. 1991);
  - capital will go where it is needed;
  - nominal convergence will be an opportunity for weaker countries, fostering their real convergence.

Tales of monetary integration /2
A politically constrained research agenda

- A lot of research on idiosyncratic shocks.
- Because the **long-run was not an issue**.
- Because they could be studied using **fashionable VAR models** in the Blanchard-Quah tradition.
- Because of their **political meaning**. If random shocks were the only issue:
  - a federal model could be **politically viable** (it works like an insurance, with transfers randomly going both ways);
  - unifying monetary policy before achieving political integration could have been sensible, insofar as it would **cause business cycle synchronization.**

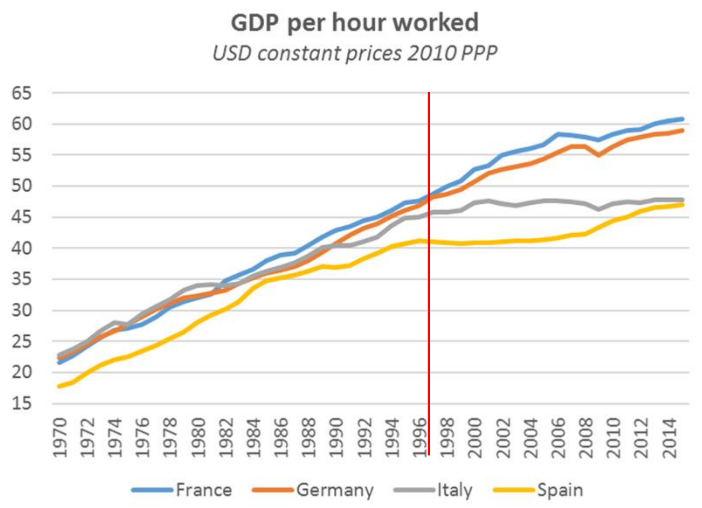
Tales of monetary integration /3

Murphy's law…

- **Anything that can go wrong will go wrong.**
- **Trade promotion:**
  - Glick, R., & Rose, A. K. (2015). Currency unions and trade: A post-EMU mea culpa (No. w21535). NBER.
- **Business cycle synchronization:**
  - Granville, B., & Hussain, S. (2017). Eurozone cycles: an analysis of phase synchronization. Int.Jof Fin.Ec., 22(2), 83-114.
- **Removal of the external constraint:**
  - Pisani-Ferry, J. (2013). The known unknowns and unknown unknowns of EMU. J.Int.Mon.Fin., 34, 6-14.
- **Catch-up:**
  - Gopinath, G., et al. (2017). Capital allocation and productivity in South Europe. QJE, 132(4), 1915-1967.
- **Benefits of labour market reforms:**
  - Gordon, R.J., Dew-Becker, I. 2008. "The Role of Labor Market Changes in the Slowdown of European Productivity Growth", NBER WP 13840.

Stylized facts /1

Average labour productivity



Stylized facts /2
Short- vs. long-run

- A reversal of perspective: asymmetries in behaviours/structures rather than shocks:
  - Boltho A., and Carlin, W. 2013. "EMU's Problems: Asymmetric Shocks or Asymmetric Behavior?" CES, 55(3), 387-403.
- Evidence: the Eurozone crisis starts with a massive «symmetric» shock (the global financial crisis).
- Implications:
  - for politics: a federal model could not be viable (different structures imply persistent one-way transfers);
  - for economics: does monetary union harmonize structure/trends?

Three strands of literature /1
Inadequate explanations

- **Firms' size**
  - Navaretti, G. B. et al. (2010). The global operations of European firms. Second EFIGE Policy Report.
  - **refuted by:** Calligaris, S. et al. (2016). Italy's productivity conundrum. a study on resource misallocation in Italy (No. 030). DG ECFIN, EC.
- **Institutional quality/Lack of structural reforms**
  - Calligaris, S. et al. (2016). Italy's productivity conundrum. a study on resource misallocation in Italy (No. 030). DG ECFIN, EC.
  - **refuted by:** Pellegrino, B., & Zingales, L. (2017). Diagnosing the Italian disease (No. w23964). NBER.
- **Wrong specialization**
  - Faini, R., & Sapir, A. (2005). An obsolete model? Growth and specialization in the Italian economy. in *Beyond decline*, Bologna: il Mulino, 19-77.
  - **refuted by:** Calligaris, S. et al. (2016). Italy's productivity conundrum. a study on resource misallocation in Italy (No. 030). DG ECFIN, EC.

Three strands of literature /2
Recent explanations

- **Capital misallocation**
  - Gopinath et al. 2015. "Capital Allocation and Productivity in South Europe", NBER Working Paper No. 21453.
  - Cette et al. 2016. "The pre-Great Recession slowdown in productivity". European Economic Review, 88, 3-20.
- **Exchange rate**
  - Marconi et al. 2016. "Manufacturing and economic development: The actuality of Kaldor's first and second laws", SCED, 37: 75-89.
  - Tomlin, B., Fung, L., 2010. "The effect of real exchange rate movements on heterogeneous plants: a quantile regression analysis", BoC WP2010-25.
- **Labour market reforms**
  - Tridico, P. 2015. "From economic decline to the current crisis in Italy", International Review of Applied Economics, 29(2): 164-193.
  - Addessi, W. 2014. The productivity effect of permanent and temporary labor contracts in the Italian manufacturing sector. *Economic Modelling*, *36*, 666-672.

Three strands of literature /3
Previous research

- Bagnai, A. 2016. Italy's decline and the Balance-of-Payments constraint: a multicountry analysis. IRAE 30: 1-26.
  - Kaldor-Dixon-Thirlwall growth model
  - Cointegration estimates of the structural breaks in the BoP-constraint
- Cette et al. 2016 "The pre-Great Recession slowdown in productivity". EER, 88, 3-20.
  - Gopinath et al. misallocation analysis
  - Dynamic panel evidence on misallocation

Three strands of literature /4
Poor quality of neoclassical studies

- Cette et al. 2016 present several shortcomings:
  - assume homogeneity between core and periphery (Gopinath et al. stress the asymmetry)
  - use an incorrect estimator (subject to Nickell bias)
  - adopt a completely ad hoc dynamics specification
  - provide wrong estimates of the long-run effect
  - consider a very short sample (starting in 1995)
- As a consequence, the misallocation evidence is extremely fragile:
  - it disappears once you drop Italy from the panel
  - it disappears once you add the real exchange rate to the equation
  - Bagnai, A., Mongeau Ospina, C.A. «Neoclassical vs. Kaldorian explanations of Soutern Europe's productivity slowdown», Acta Œconomica, 67(s1), https://doi.org/10.1556/032.2017.67.S.9

Three strands of literature /5
Motivation of the study

- Study the long-run impact on productivity of:
  - the real interest rate (as Cette et al., 2016)
  - the real exchange rate (as Bagnai, 2016)
  - the employment protection index, taken as a proxy of labour market reforms (as Tridico, 2015)
- Verify the robustness of this relation by controlling for other variables used in the productivity literature
  - governance indicators: regulatory quality, corruption (Rodrik, 2008)
  - innovation

Empirical results/1
Data and methodology

- EU KLEMS data on 26 ISIC sectors on the four largest Eurozone countries from 1986 to 2007 (the pre-crisis period)
- Two core and two peripheral countries
- Auto Regressive Distributed Lag (ARDL) panel estimation (Pesaran et al., 1999)
  - deals with different orders of integration
  - provides estimates of both the short- and long-run parameters at once

Empirical results/2
Definitions

- real interest rate
  - composite cost of borrowing for nonfinancial corporations (ECB) deflated by sectoral value added deflators (KLEMS)
- REER
  - CPI based REER (BIS)
  - ULC based REER (IMF)
- EPL
  - strictness of employment protection indicator (OECD)
- ICT
  - share of computing equipment, communication equipment and software over gross fixed capital formation (KLEMS)

Empirical results/3
Total Factor Productivity

dependent variable: TFP

	all sectors	manufacturing	services
real interest rate	1.26	1.91	1.65
	(11.43)	(11.31)	(7.27)
REER	-0.53	-0.63	-0.71
	(-11.34)	(-9.42)	(-7.78)
EPL	0.28	0.19	1.01
	(4.48)	(2.41)	(6.30)
ICT	0.07	0.14	-0.05
	(4.34)	(5.22)	(-1.41)

Empirical results/4
Average Labour Productivity

dependent variable: value added per hour worked

	all sectors	manufacturing	services
real interest rate	1.52	1.38	0.46
	(12.09)	(8.23)	(3.34)
REER	-0.59	-0.55	-0.93
	(-11.62)	(-8.95)	(-12.28)
EPL	0.50	0.56	0.42
	(7.19)	(6.17)	(4.62)
ICT	0.11	0.09	0.07
	(6.57)	(3.40)	(5.31)

Empirical results/5
Discussion

- Two major causes of asymmetries:
  - interest rate (the fall in Southern countries was larger; Lane, 2005)
  - exchange rate (depreciation in the core and appreciation in the periphery)
- Once the «scale effect» is taken into account, through REER, evidence on the misallocation effect becomes more robust

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Conclusions/1
A radical change of policy is needed...

- By fostering productivity divergence, monetary union, rather than endogenously optimal, could become endogenously unsustainable.
- Over time, benefits from low interest rate for public finance are offset by the consequences of subdued growth on the banking system.
- Low interest rates:
  - foster political credit cycles
  - bring about capital misallocation (among countries and sectors)

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Conclusions/2

...but extremely unlikely to happen

Nicholas Kaldor (1971)

It is a dangerous error to believe that monetary and economic union can precede a political union. For if the creation of a monetary union and Community control over national budgets generates pressures which lead to a breakdown of the whole system it will prevent the development of a political union, not promote it.

«The dynamic effects of the common market», *The New Statesman*