Productivity, Inputs Misallocation and the Financial Crisis

Discussion

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Brussels, 19-20 October 2023

Plan of talk

- What the paper does

- Discussion & policy relevance

- Extensions/future research agenda

# What the paper does: aim/contribution

- The paper tests the differential (regional) impact of the FC on misallocation conditional on size/quality (?) of financial frictions in each region
- Available literature:
  - Static input allocation (e.g. Hsieh and Klenow 2009)
  - Dynamic (frictionless) input allocation (e.g. Asker et al 2015)
- This paper → Dynamic misallocation + frictions

What the paper does: approach

Standard approach (static)
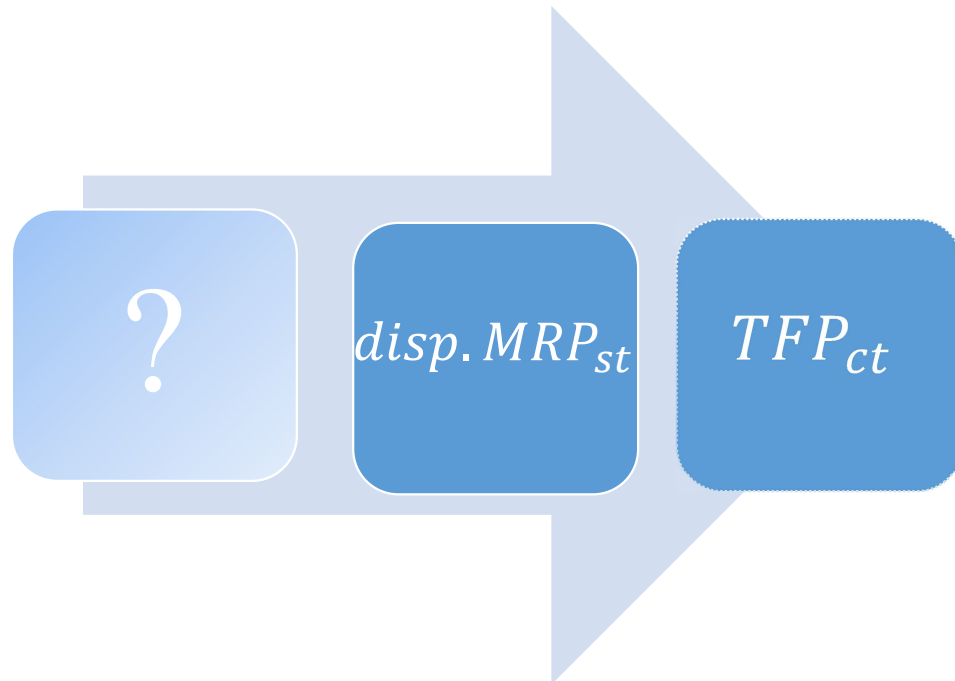
This paper (dynamic + frictions)
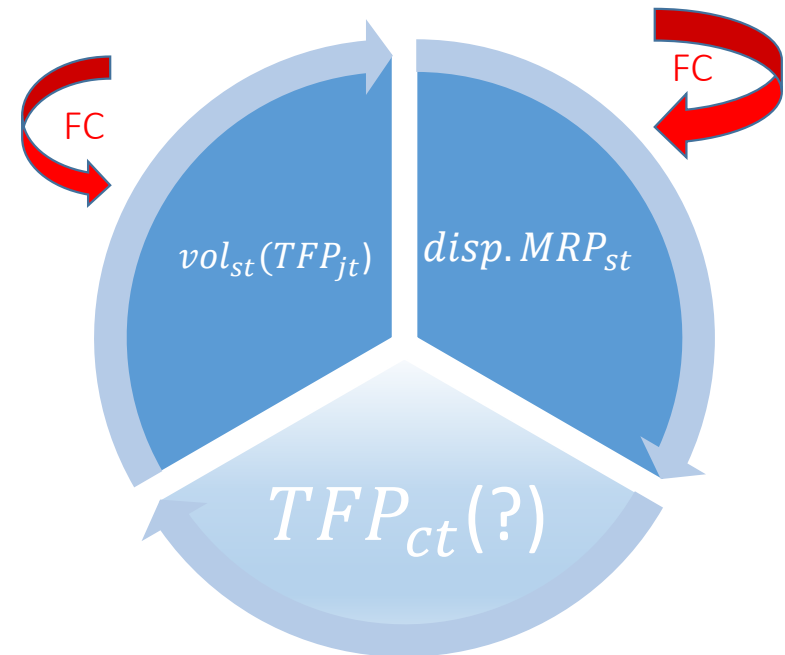
What the paper does: channels

- From TFP growth to MRP. Channels:

    - Productivity heterogeneity w_{jt-1}
    - Productivity shocks/uncertainty $\eta_{jt}, \varepsilon_{jt}$ $\Big\}$ MRP_{jt}

What the paper does: main results

- TFP volatility drives misallocation (10%)
- Financial frictions increase capital misallocation as confirmed by stronger (mis-allocative) impact of FC on regions with poorly performing financial sectors (it speaks to the objective of "*assessing induced misallocation in relative terms whilst controlling for differences in TFP volatility*")

Discussion: innovation/merits

- Potentially important contribution to the empirical literature on input misallocation:
  - Dynamic *versus* static input allocation
  - Role of uncertainty (!!!)
  - Role of frictions (?) in dynamic input allocation
 - Search for effects from policy variation (?)

Discussion: doubts

- Why potentially?!!...
  - Results remain conventional
  - Channels remain a "black box" (i.e. need to devise more explicit strategy to identify different channels)
  - Capacity to explain policy effects limited → is the shock truly exogenous? Why is the impact so persistent? Identification challenge

Discussion: relevant results?

- Misallocation results consistent with literature
- Controlling for TFP volatility does not dramatically alter results (10% from uncertainty)
- Plus, Orbis-based dataset captures top performers. If, as one would expect, TFP volatility higher amongst top performers, results overstate role of $vol(TFP)$ (<10%)

≠ Entire productivity/size distribution

Labour productivity dispersion in Orbis relative to MultiProd, distribution over country-industry-years (2002-2015)
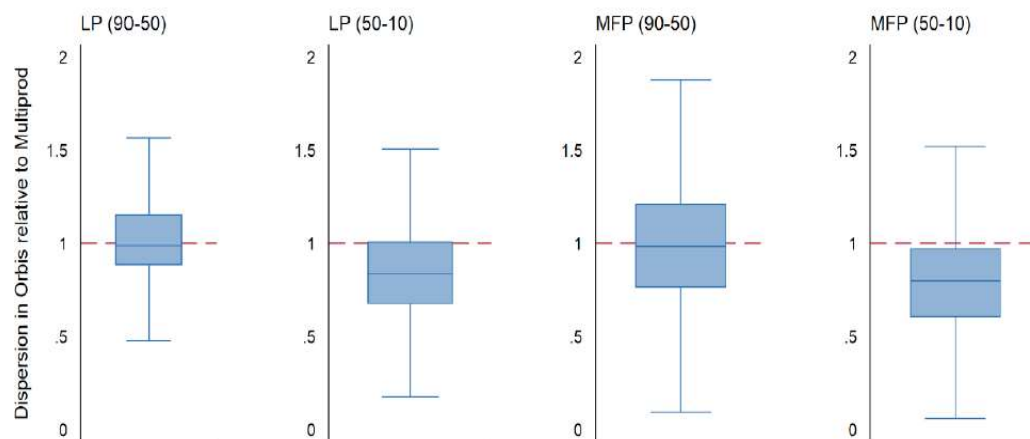
Note: The graph describes ratios of labour productivity and multi-factor productivity dispersions between 90th and 50th percentile and between 50th and 10th percentile of firm productivity distribution. It shows a distribution of the ratios over country-A38-year combinations. Manufacturing and non-financial services (excluding "Coke and refined petroleum", "Real estate" and "Scientific R&D"). Countries: AUT, BEL, DNK, FIN, FRA, DEU, HUN, ITA, JPN, NLD, NOR, PRT, SWE.
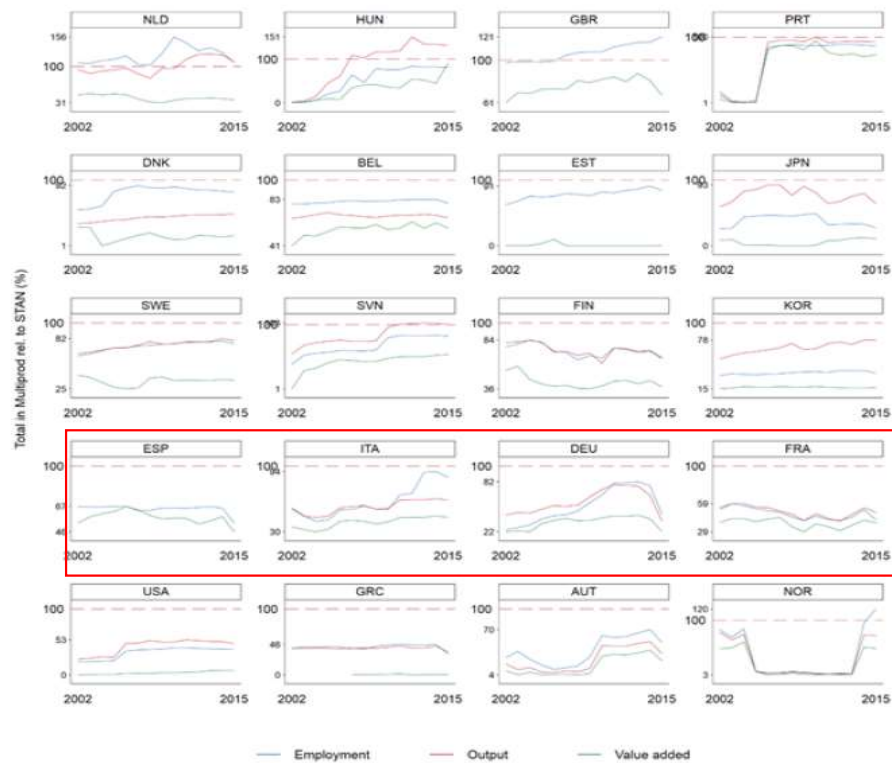Source: Orbis and OECD MultiProd.

Discussion: role of persistence

- No clear explanation of why the effect of the FC is so persistent over time even after alleged financial frictions are removed (e.g. Banerjee and Moll 2010)
- Paper's message (?) $\rightarrow$ Productivity heterogeneity (w_{jt-1}) more important than shocks ($\eta_{jt}, \varepsilon_{jt}$)?!
- Bottomline: role of frictions! What about adj. costs?
- Adjustment costs & frequency/size of shocks?
- Data problem (coverage over time $\neq$ diff-in-diff)

≠ full coverage over time

Figure A.1. Share of total output and input captured by Orbis by country over time
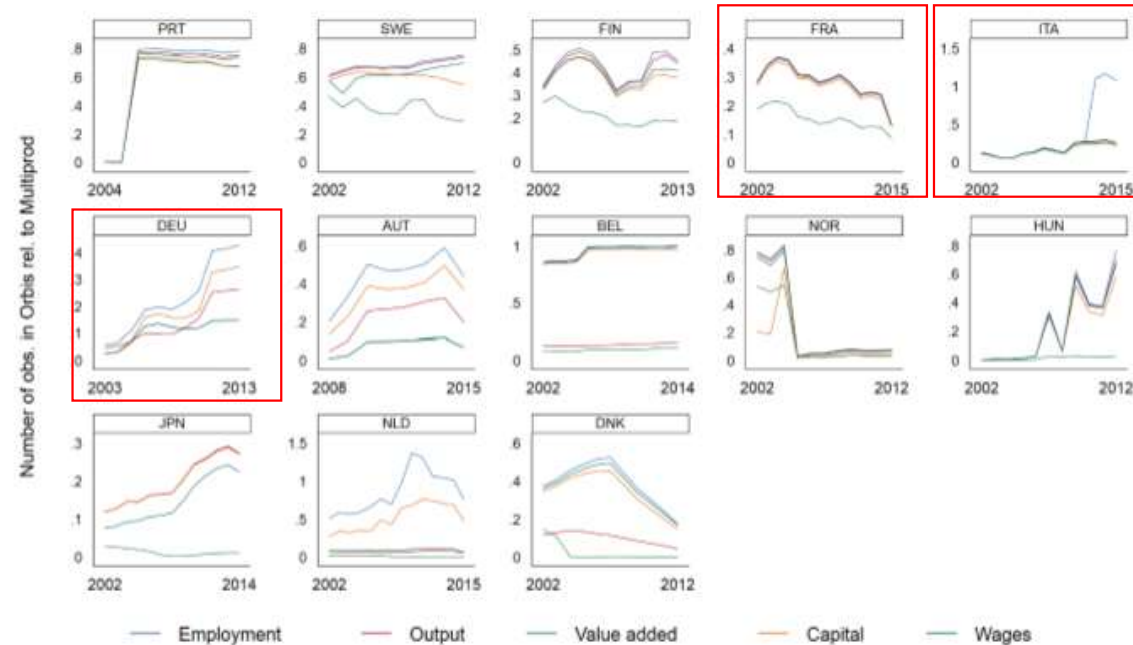
Total employment, output and value added relative to STAN, by country over time (2002-2015)

Note: Manufacturing, utilities, construction and non-financial services. Figures for gross output exclude "Wholesale and retail".
Source: Orbis and OECD STAN.

Figure 3.5. Firm coverage in Orbis changes sharply over time

Firm coverage by country over time (2002-2015)

Note: The graph shows the number of observations in Orbis with employment and given variable available relative to the number of observations in MultiProd with employment available. Manufacturing and non-financial services (excluding "Coke and refined petroleum", "Real estate" and "Scientific R&D").
Source: Orbis and OECD MultiProd.

Discussion: the right shock?!

- Is the FC the type of «policy variation» that is needed? Largely endogenous financial disruption
- Plus nature of the disruption not specified (≠ large capital inflows and lower user cost of capital have clear connotation, e.g. Gopinath et al 2017)
- OMT (i.e. more exogenous)? Monetary policy shocks (i.e. unconventional monetary policy able to explain persistence)?

Discussion: my overall interpretation

- In the absence of measurement errors...

- Misallocation higher in South/East due to standard financial cycle and maybe the prevalence of asset-based *versus* cash-flow based borrowing → def. of financial sector efficiency?!

- Asset-based borrowing: i) valuation effects, ii) no precautionary cash (e.g. Marzinotto 2023), iii) present profit.

- Misallocation persistent as crisis followed by accommodative monetary policy up to QE (2015) → adverse selection (i.e. the least productive firms obtain relatively easy credit access)

Discussion: why not other inputs?

- Rising capital misallocation versus constant labour and materials misallocation taken as evidence of the presence of financial frictions

- Hard to imagine that there are no frictions of other kind (e.g. labour) driving heterogeneity (w_{jt-1}) considering number of firm-size contingent labour market reforms before/after FC

Table 1: Size exemptions for individual and collective dismissal and reform years

	Individual dismissal	Collective dismissal	Reform years*	Sign of reform**
Austria	yes	yes	2003	(-)
Belgium	no	yes	2005	(-)
Croatia	yes[a]	yes		
Czech Republic	no	yes		
Denmark	no	yes		
Estonia	no	no[b]		
Finland	yes	yes		
France	no	yes	2003	*(+)*
Germany	yes	yes	2004	(+)
Greece	no	yes	2010	
Hungary	no	no[c]		
Ireland	no	yes		
Italy	yes	yes	2014	(+)
Latvia	no	no[d]		
Lithuania	no	no[e]		
Luxembourg	yes	no		
Netherlands	yes	yes		
Poland	yes	yes		
Portugal	yes	no[g]	2011/15	
Romania	no	yes		
Slovakia	no	yes		
Slovenia	yes	yes	2013	
Spain	yes	no	2012	(+)

Notes:
* = capturing only reforms that concern firm size exemptions
** = direction of reform; (-) less exemptions for small firms; (+) more exemptions for small firms; *(+)* more exemptions for small firms obtained by a tightening of constraints on large firms
[a] Minor exemption.
[b] Since the minimum number of workers involved grows with firm size without excluding any class size, it is assumed that there are no firm size exemptions as such.
[c] See above
[d] See above.
[e] See above.
[f] See above.
[g] See above.

Marzinotto and Wintr (2019), Employment protection and firm-level job reallocation, IWH-CompNet Discussion Papers No. 5.

Extensions

- Find the right policy variation: test effects of different shocks (i.e. OMT/MP); but also other inputs (e.g. changes in labour legislation and/or fragmentation)
- Explore/identify channels: i) compare EU to frictionless economy (e.g. US); ii) substitute K with intangibles to assess relative importance of adjustment costs
- Strengthen comparability with standard approach: take the data to the aggregate level and derive implications for productivity gains/losses
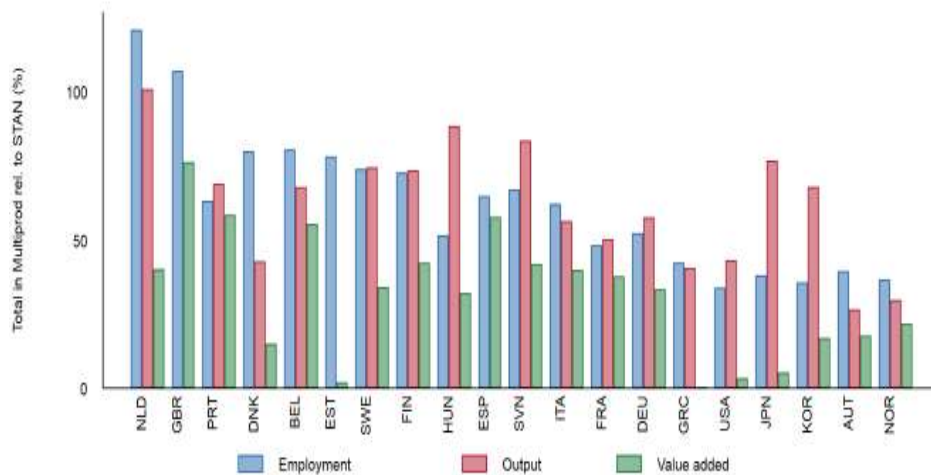
Reserve slides

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≠ representative sample

Figure 3.1. Orbis data capture around 60% of aggregate employment and output and around 40% of aggregate value added

Total employment, output and value added relative to STAN, by country (mean over years, 2002-2015)
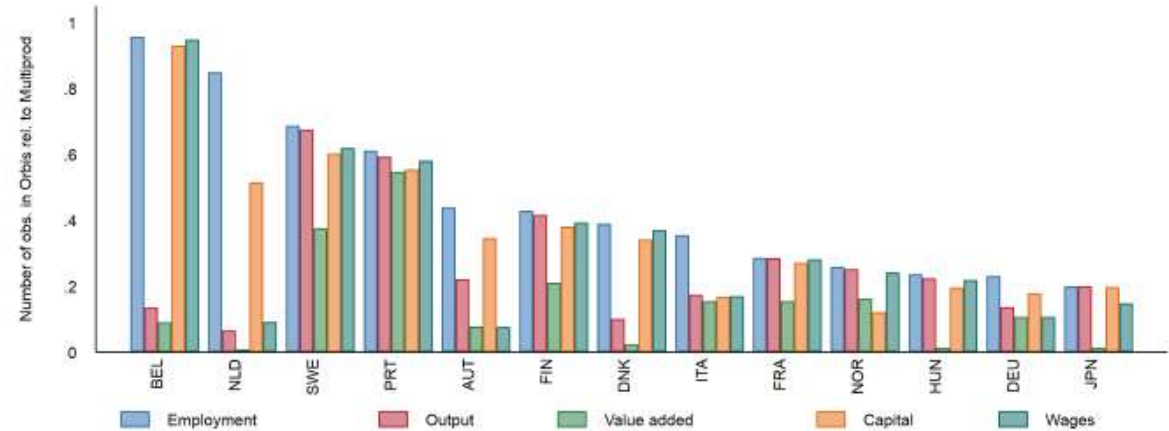
Note: The graphs shows the total employment, output and value added in Orbis relative to STAN. Only Orbis firms with non-missing employment included. Manufacturing, utilities, construction and non-financial services. Figures for gross output exclude "Wholesale and retail".
Source: Orbis and OECD STAN.

Figure 3.4. Orbis covers only a minority of firms in most countries

Firm coverage by country, (mean over years, 2002-2015)

Note: The graph shows the number of observations in Orbis with employment and given variable available relative to the number of observations in MultiProd with employment available. Manufacturing and non-financial services (excluding "Coke and refined petroleum", "Real estate" and "Scientific R&D").
Source: Orbis and OECD MultiProd.