RICCARDO FAINI MEMORIAL CONFERENCE

"ITALY'S LOST PRODUCTIVITY AND HOW TO GET IT BACK"

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Italy's Productivity Conundrum: A Misallocation Perspective

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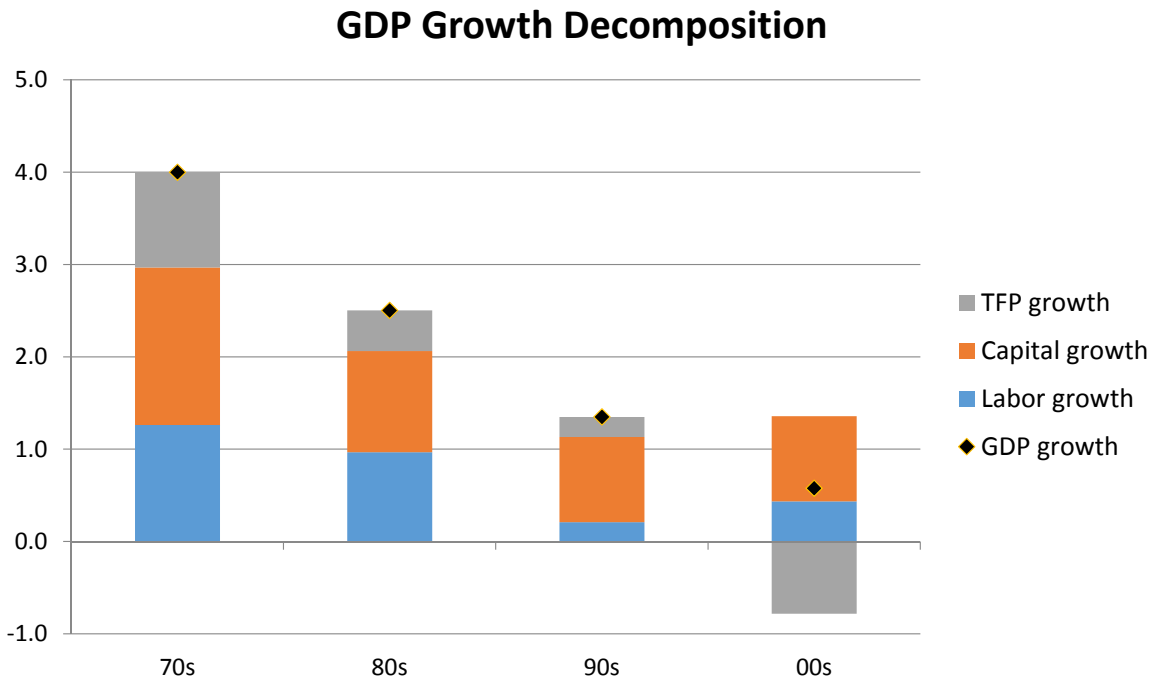
The Italian slowdown



Data: EU-Klems

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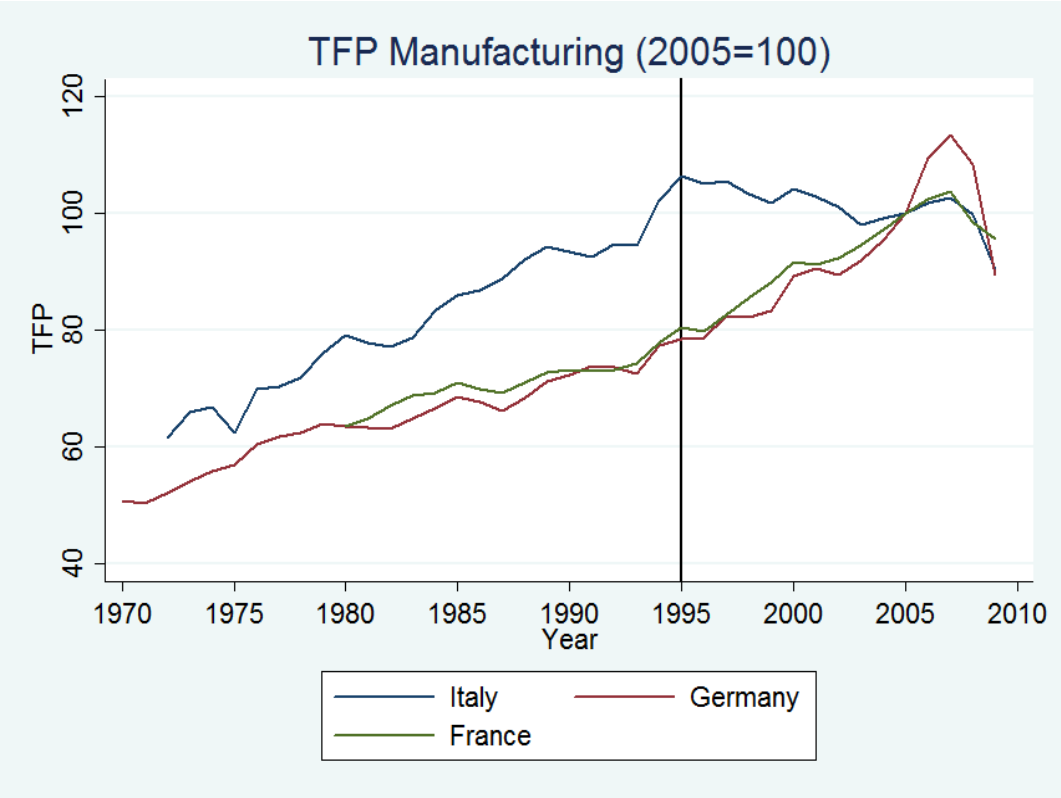
The TFP blackout



Data: EU-Klems

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What might have happened

- Firm TFP growth stalled across the board:
  - Foregone economies of scope and scale
  - Missed opportunities for restructuring and modernizing production processes
  - Lack of innovation and technological development

- Firm TFP did not stalled across the board but:
  - Sluggish reallocation of resources from firms with slow to firms with fast TFP growth

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What might have happened

- When sluggishness in the reallocations of resources:
  - Goes beyond natural ‘time to build/destroy’
  - Is associated with structural ‘wedges’ in the remuneration of capital and labour between firms

- It leads to persistent ‘misallocation’:
  - Resources trapped in less remunerative uses with low TFP growth
  - TFP growth opportunities are lost

- ‘Misallocation’ is the focus of this presentation

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Measuring ‘misallocation’: Hsieh and Klenow (2009)

- ‘Misallocation’ is a normative concept defined with respect to the an ideal efficient benchmark of frictionless reallocation of resources across alternative uses

- When resources can seamlessly move between alternative uses, their remunerations are equalized across firms with different TFP (i.e. ‘output per unit composite input’, or ‘ability to produce’) and thus to average firm TFP

- This equalization is reflected in the equalization of firms’ TFPR (i.e. ‘revenue per unit composite input’, aka ‘ability to earn’)

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Measuring ‘misallocation’: Hsieh and Klenow (2009)

- The dispersion of firms’ TFPR around average can thus be used as a measure of ‘misallocation’ with respect to an ideal situation of frictionless reallocation

- With aggregate TFP maximized when the dispersion of firm TFPR is zero

$$\log \mathrm{TFP}_s = \frac{1}{\sigma - 1} \log \left(\sum_{i=1}^{M_s} A_{si}^{\sigma - 1} \right) - \frac{\sigma}{2} \mathrm{var} \left(\log \mathrm{TFPR}_{si} \right)$$

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Decomposing misallocation

- Aggregate TFPR can be decomposed in components:
  - Within groups of firms: dispersion of firms' TFPRs around group average
  - Between groups of firms: dispersion of groups' average TFPRs around aggregate average TFPR

- The groups we consider are:
  - Sectors, macro-regions, firm size classes
  - Keeping track of sector weights also for macro-regions and firm size classes

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Data source

- CERVED: balance sheet data on more than 600.000 companies (listed companies, joint partnerships, and ltds)
- Data sourced from the Italian Registry of Companies and the Chambers of Commerce
- Years available: 1993-2013
- Manufacturing and services

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Group details

- Sectors: for today's presentation only manufacturing (3-digits ATECO)
- Geography: Northwest, Northeast, Centre, South and Islands.
- Firm size (EU definition by turnover, millions of euros): micro(<= 2m), small (<=10m), medium (<= 50m), big (>50m).

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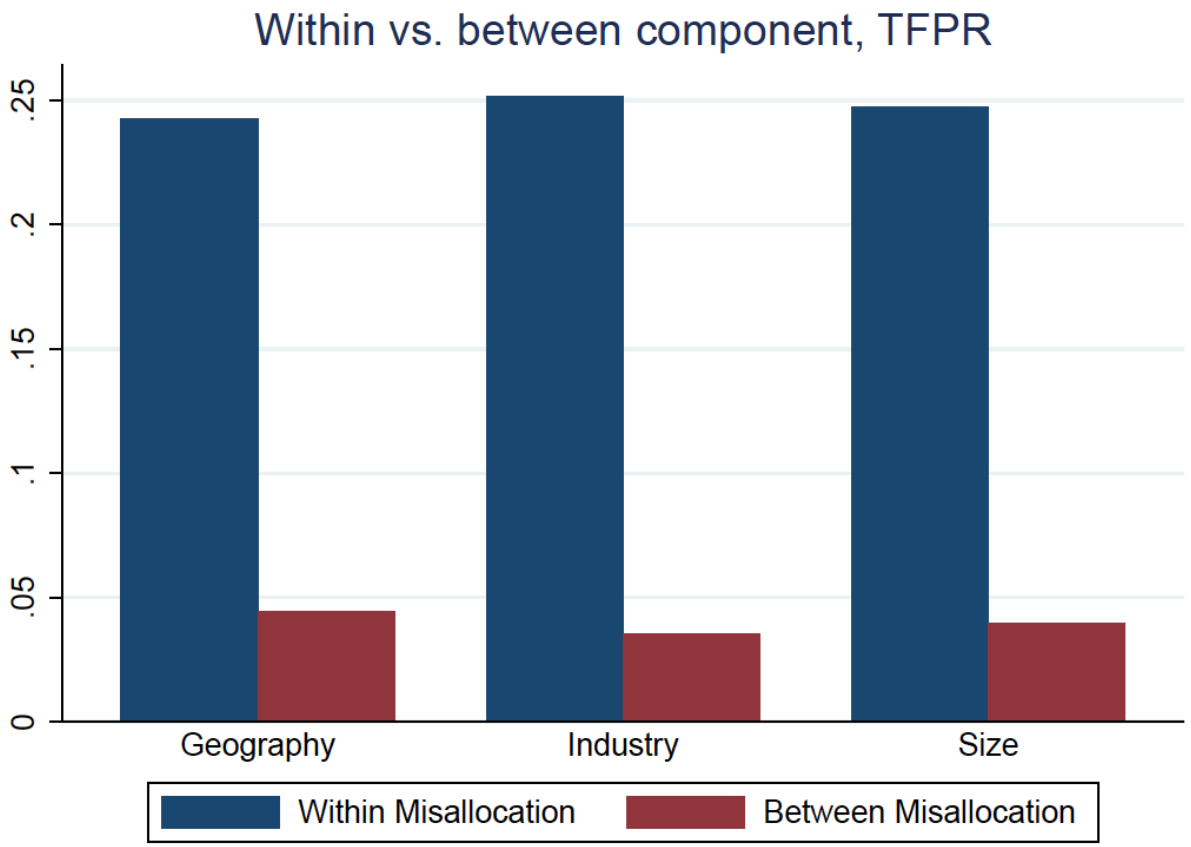
Misallocation decomposition – Mostly a ‘within’ story



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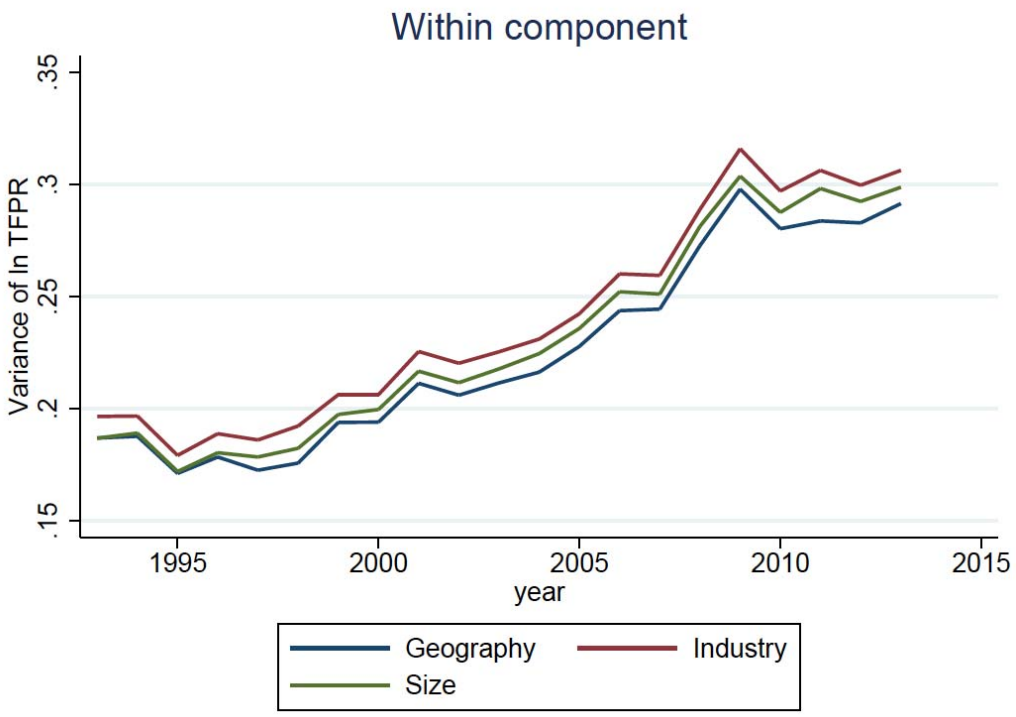
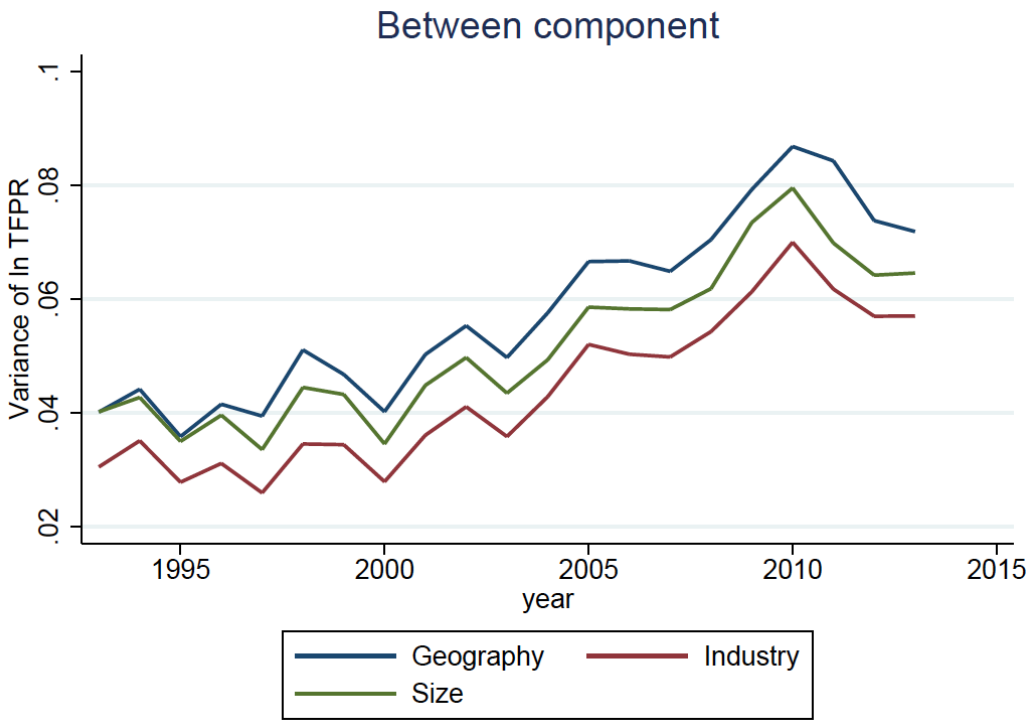
Misallocation decomposition – Mostly a ‘within’ story





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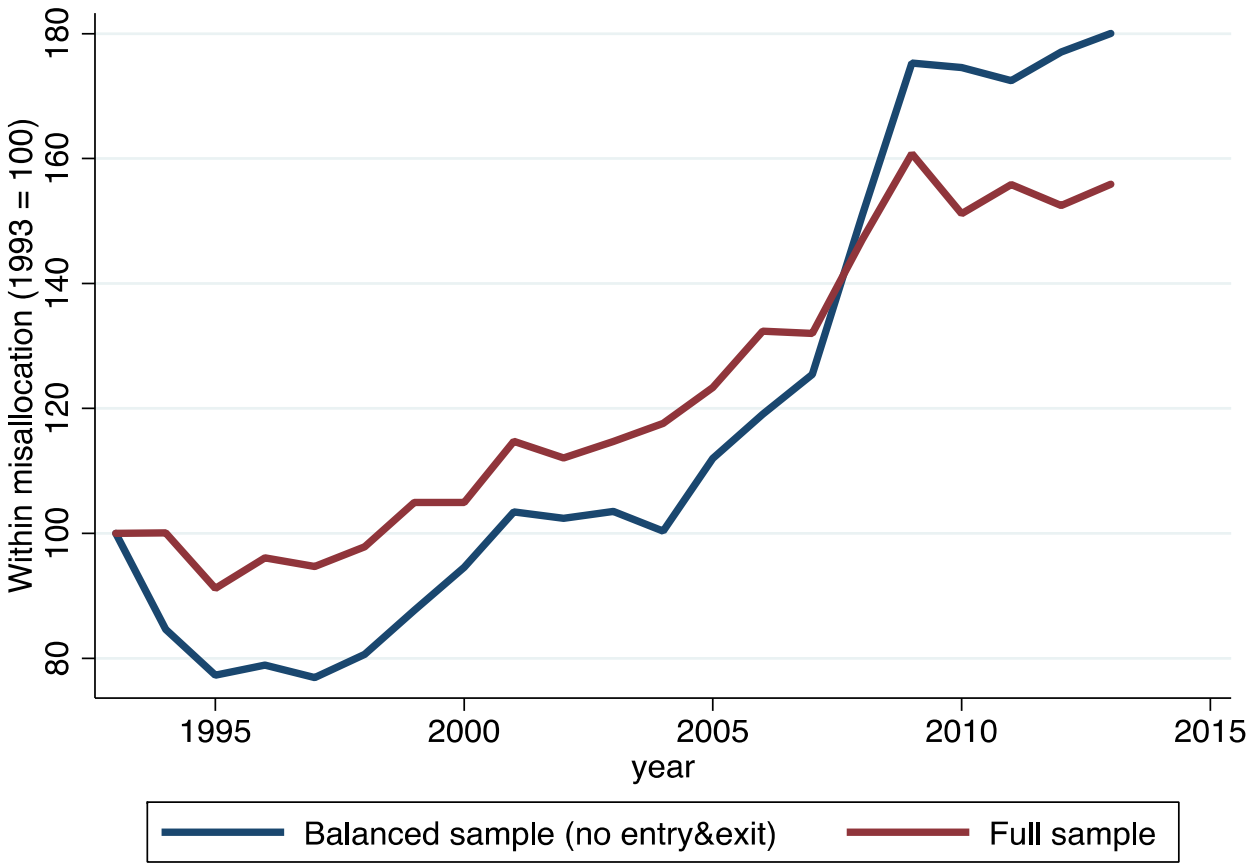
It is not only about entry and exit (‘cleansing’)



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Three possible scenarios

1. Variance rises because of the fattening of the 'right tail' of the TFPR distribution (average increases): *increased share of high TFP firms that are too small*

2. Variance raises because of the fattening of the 'left tail' of the TFPR distribution (average decreases): *increased share of low TFP firms that are too large*

3. Variance raises because of the fattening of 'both tails' of the TFPR distribution (average does not change): *increased shares of both high TFP firms that are too small and low TFP firms that are too large*

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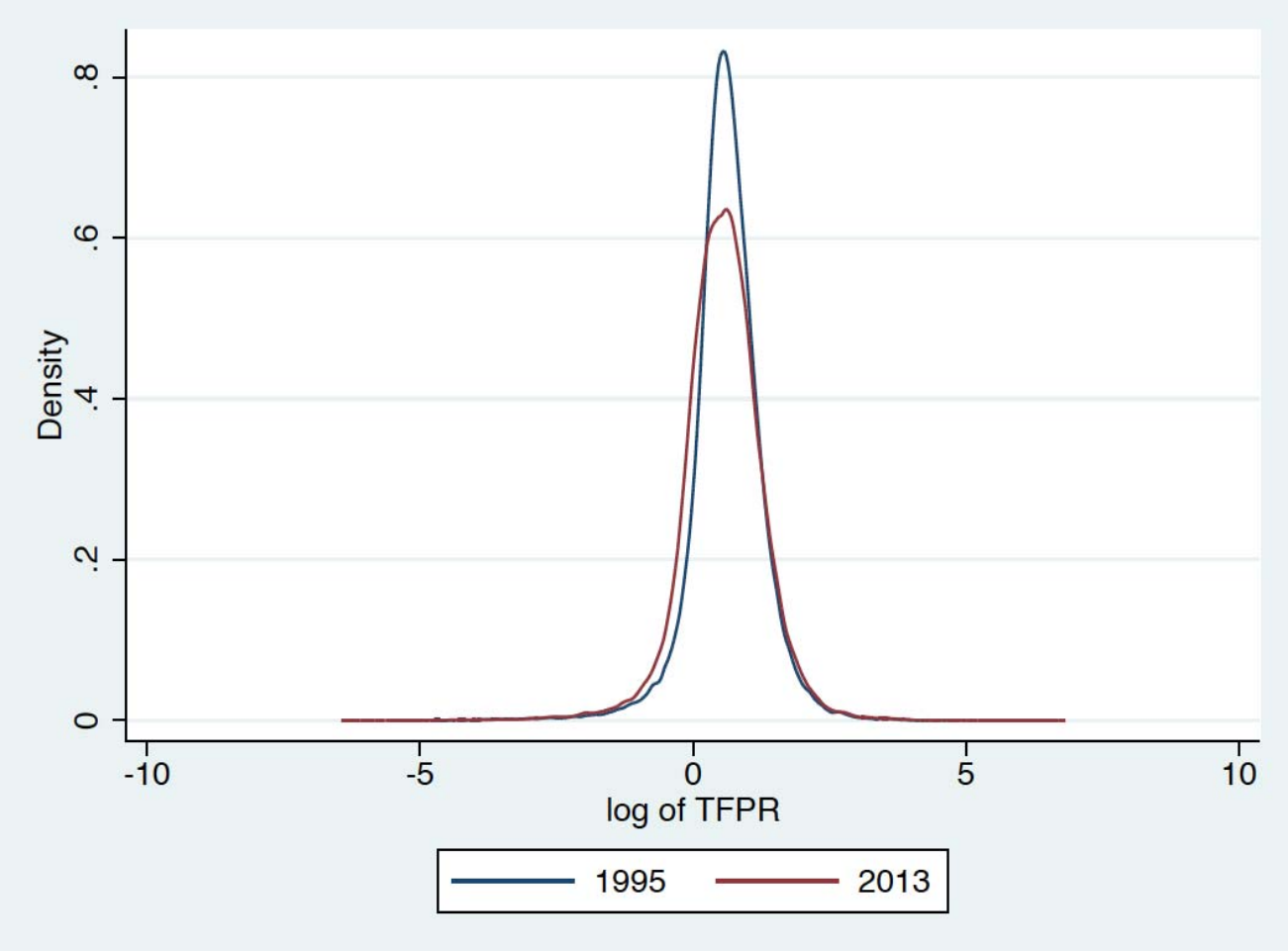
It is Scenario #2: increased share of small firms that are too large



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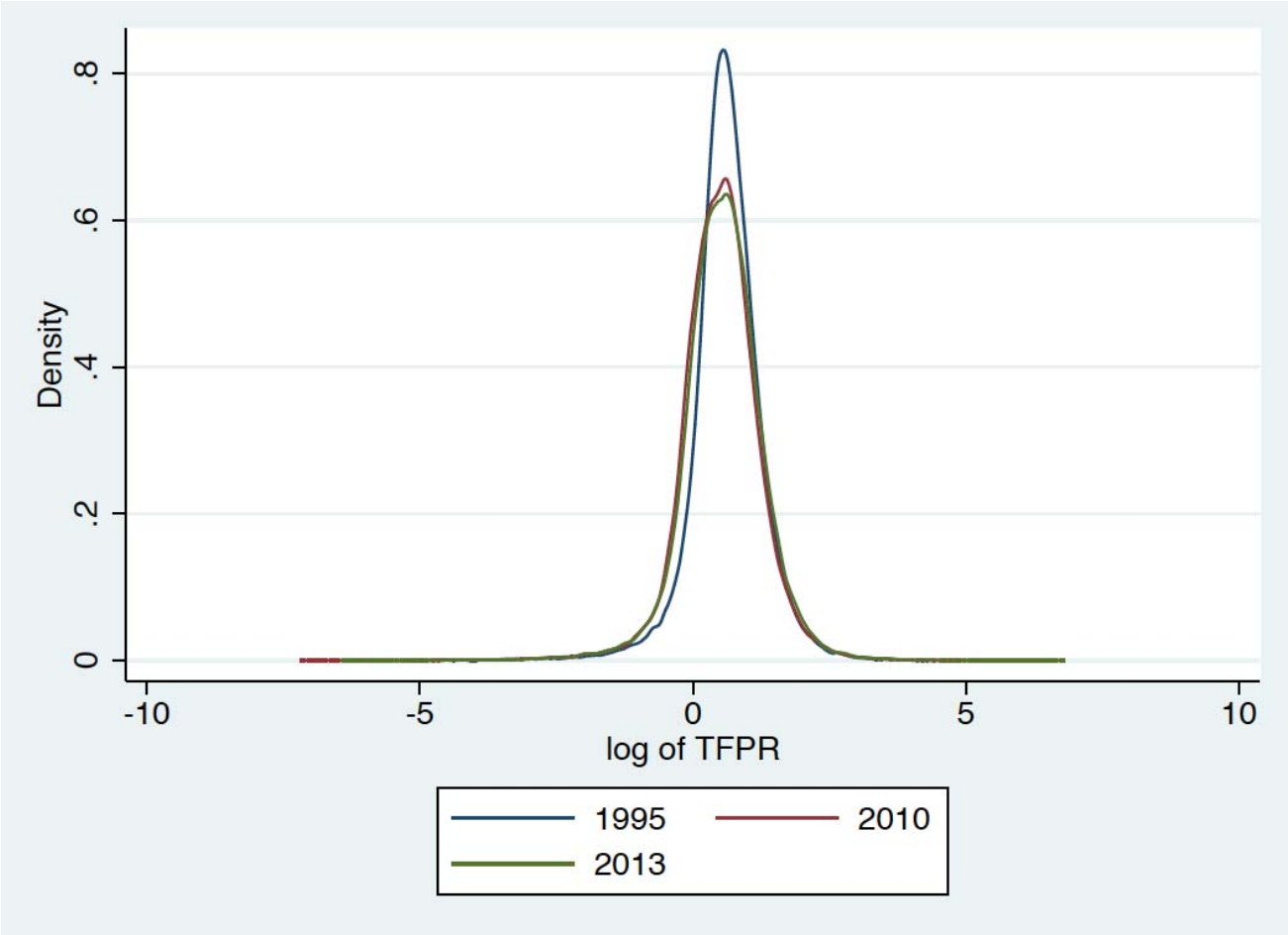
Despite the Euro-debt crisis



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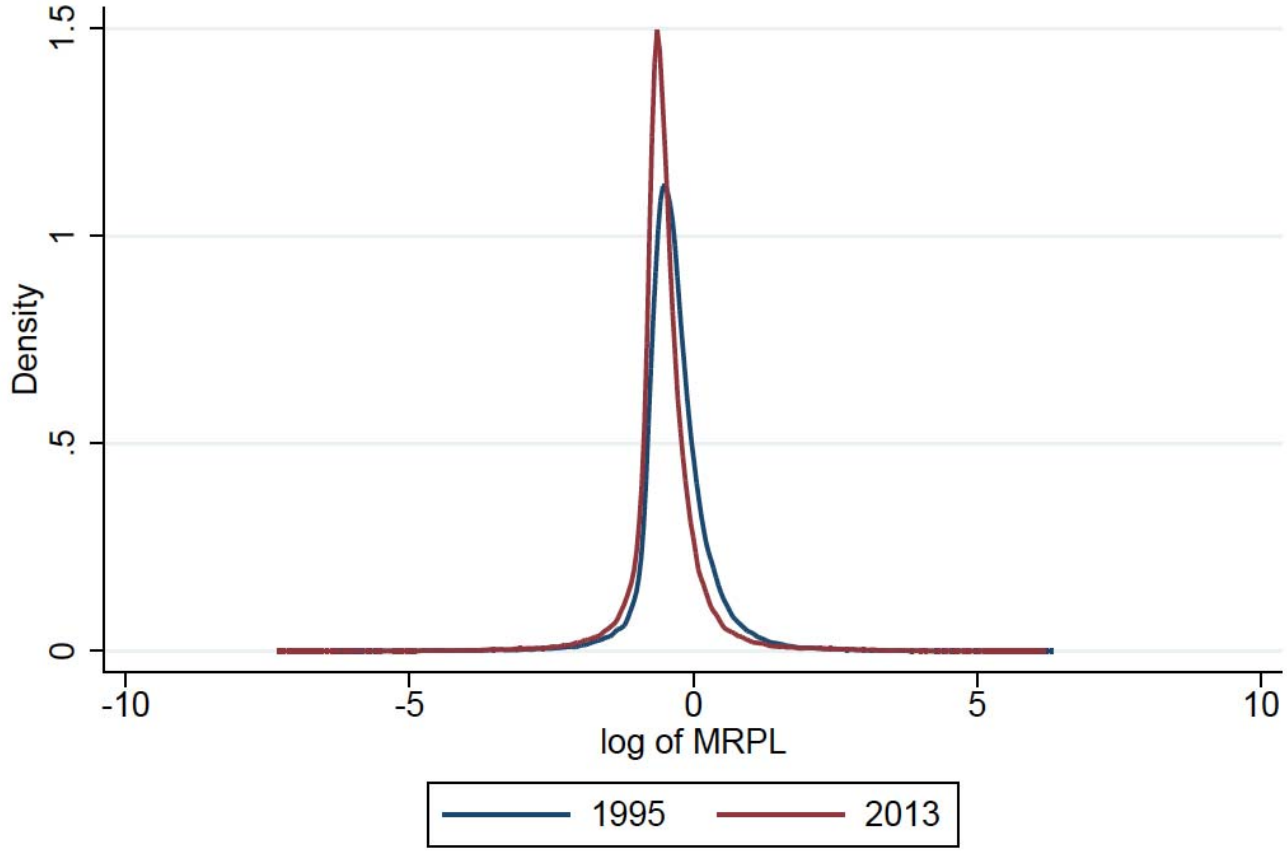
Scenario #2 is due to growing labour misallocation: rising share of workers in low paid jobs



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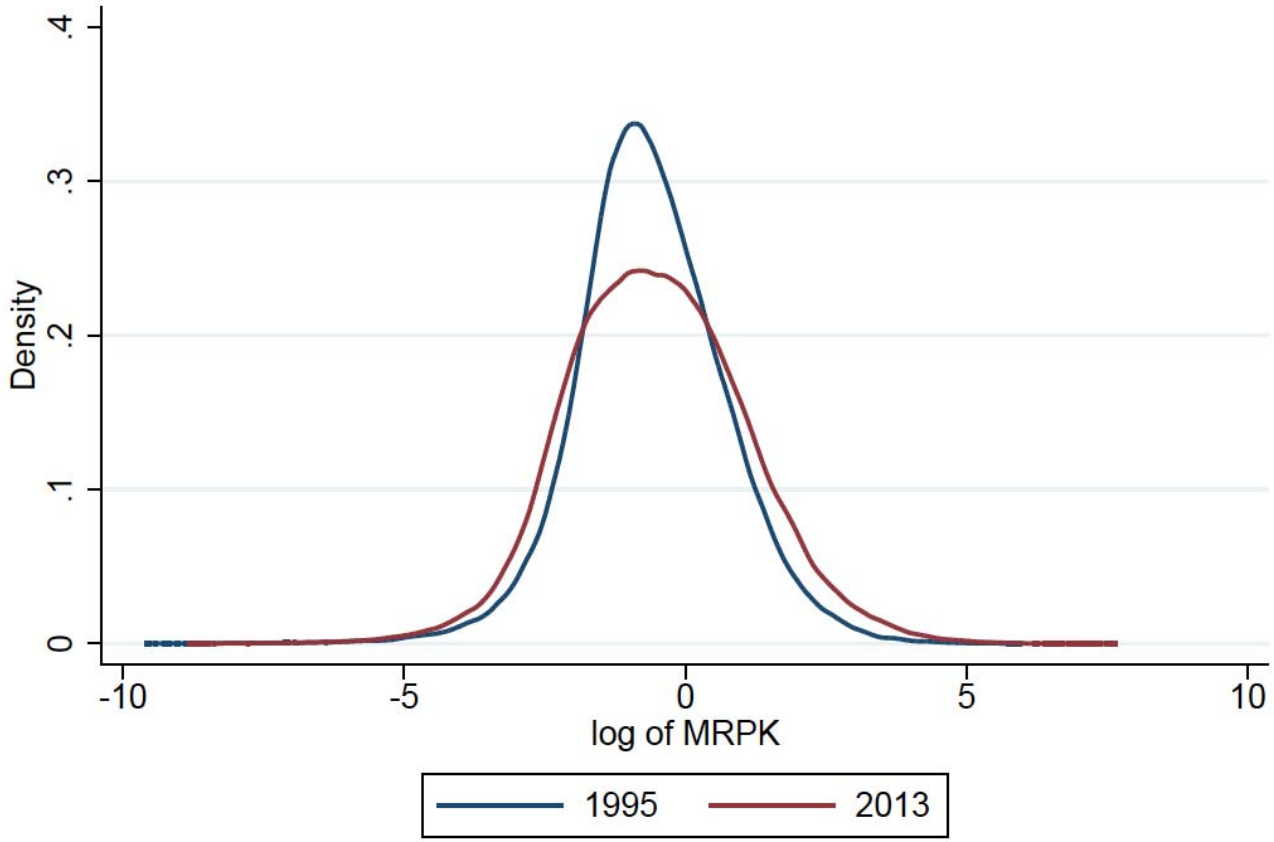
Growing capital misallocation would deliver Scenario #3: rising shares of too small/large firms



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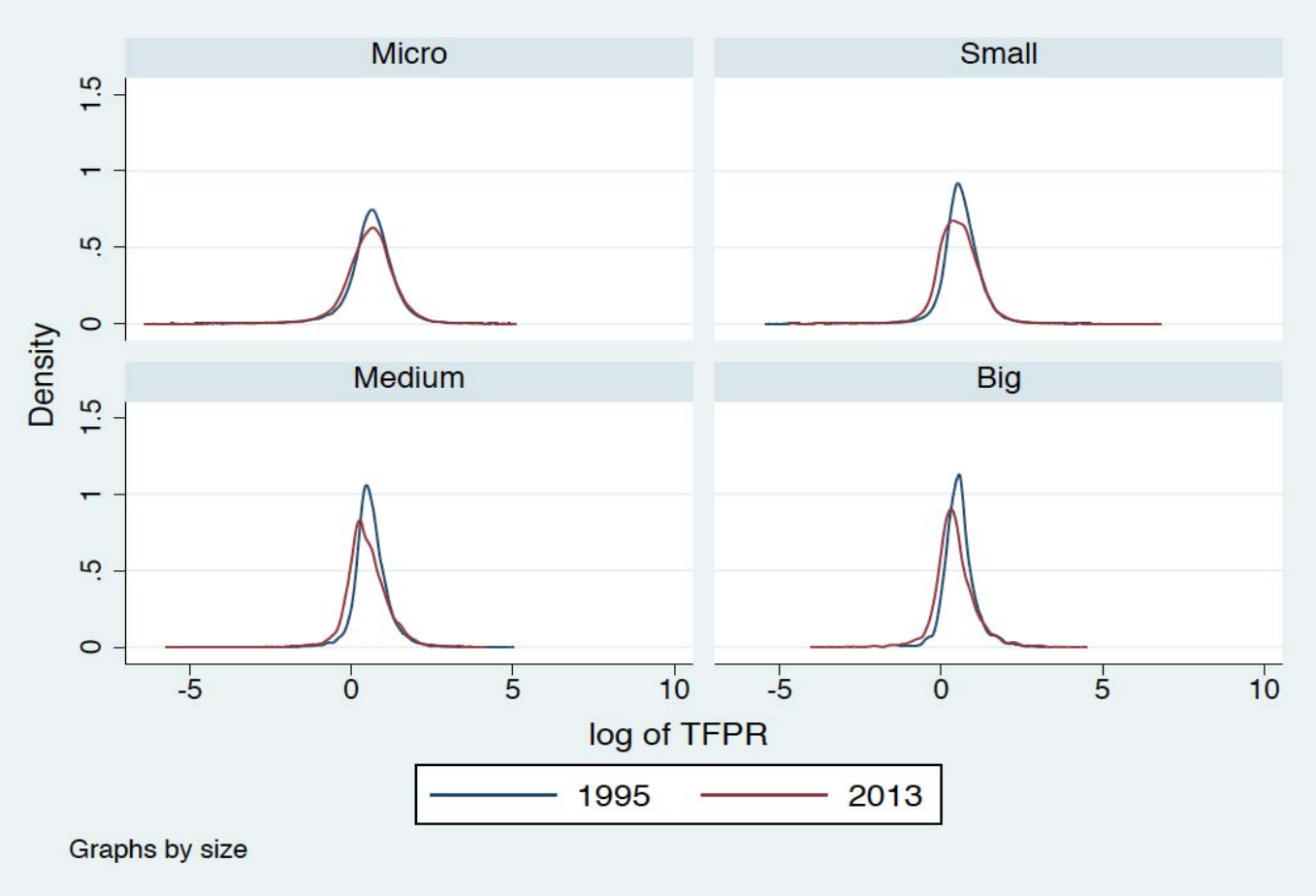
Growing misallocation concerns all firm size classes



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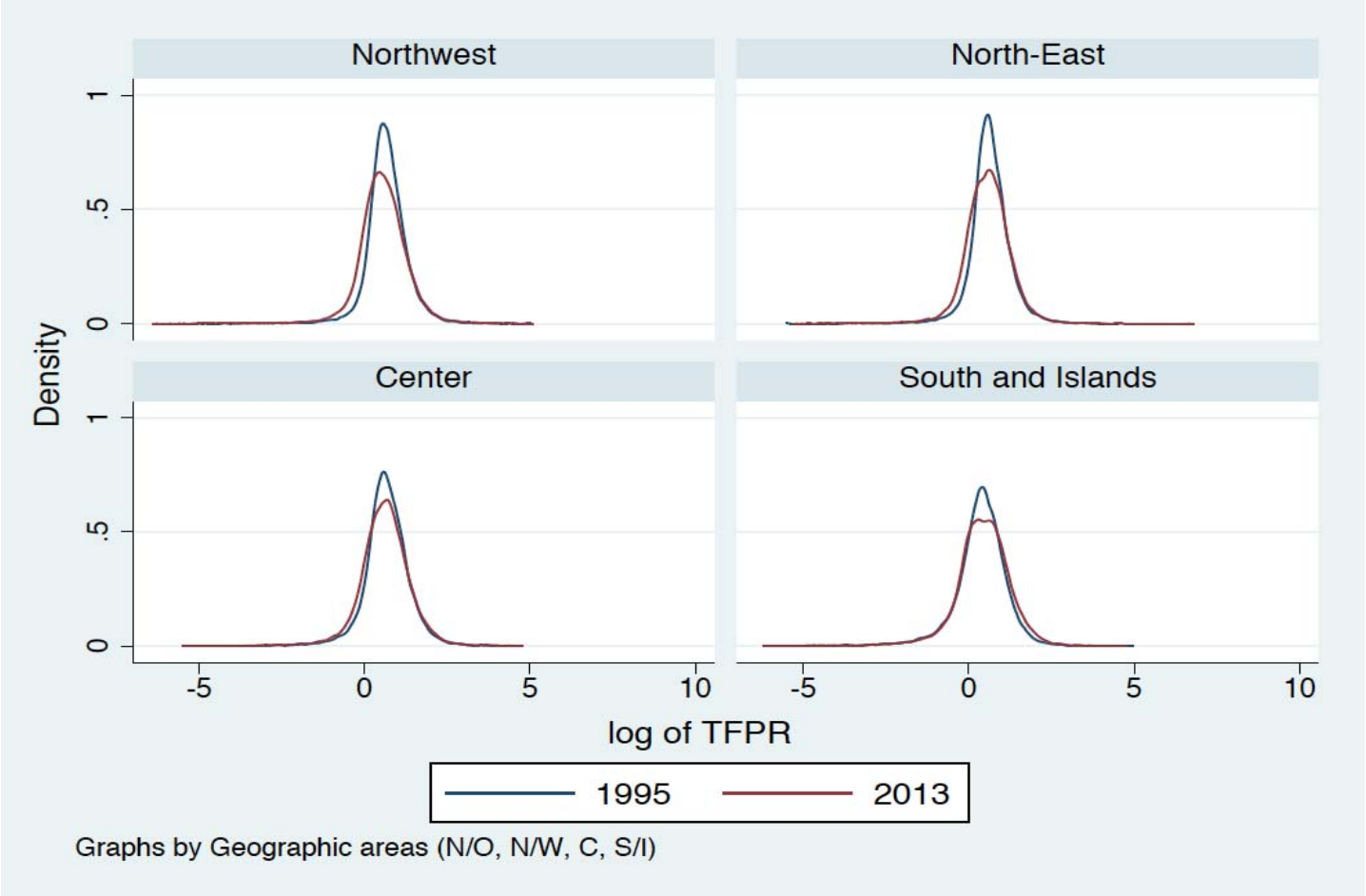
Growing misallocation does not concern South and Islands



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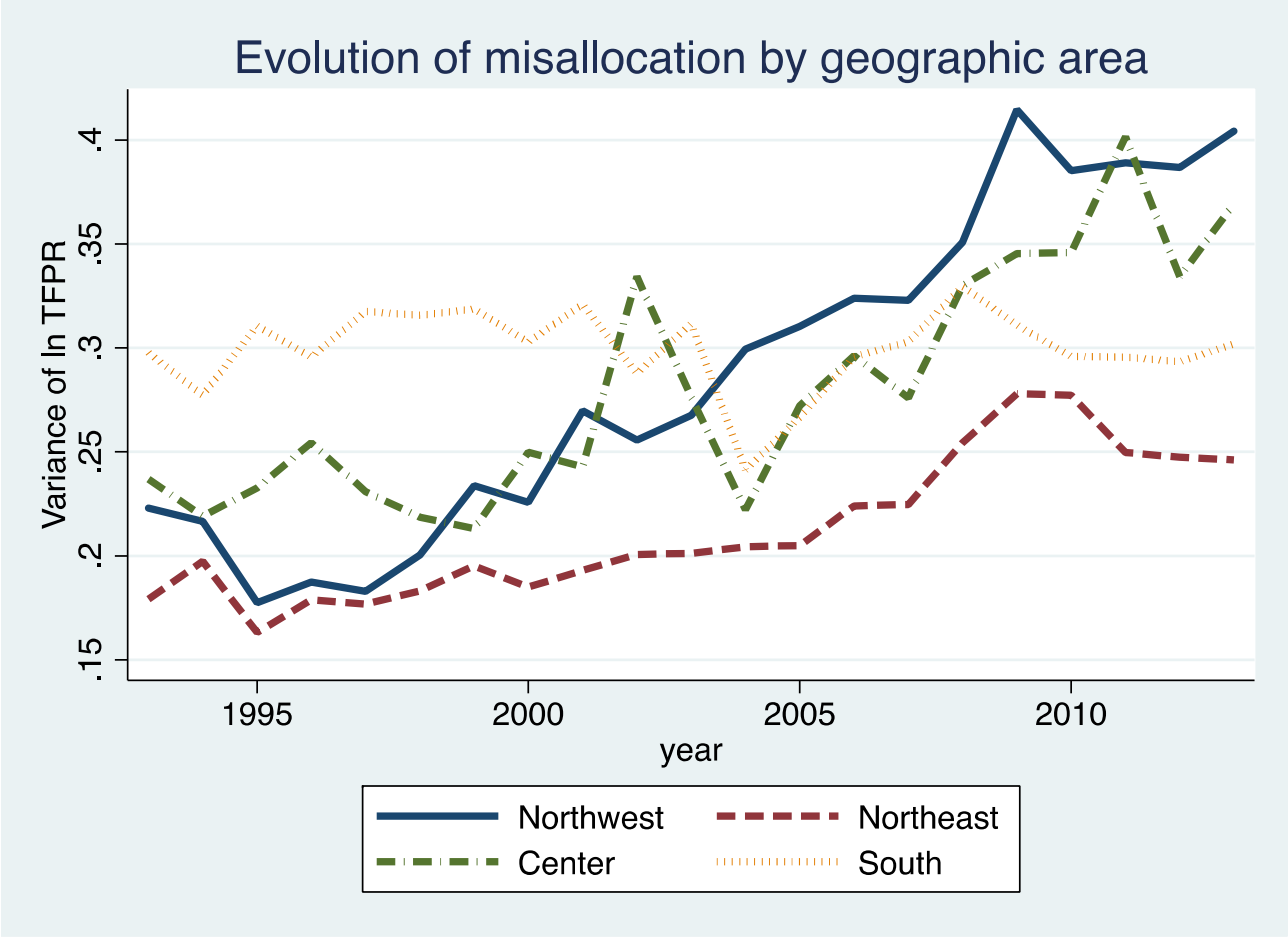
Growing misallocation is most evident in Northwest



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Growing misallocation cost Italian manufacturing TFP around 20 percentage points over 20 years

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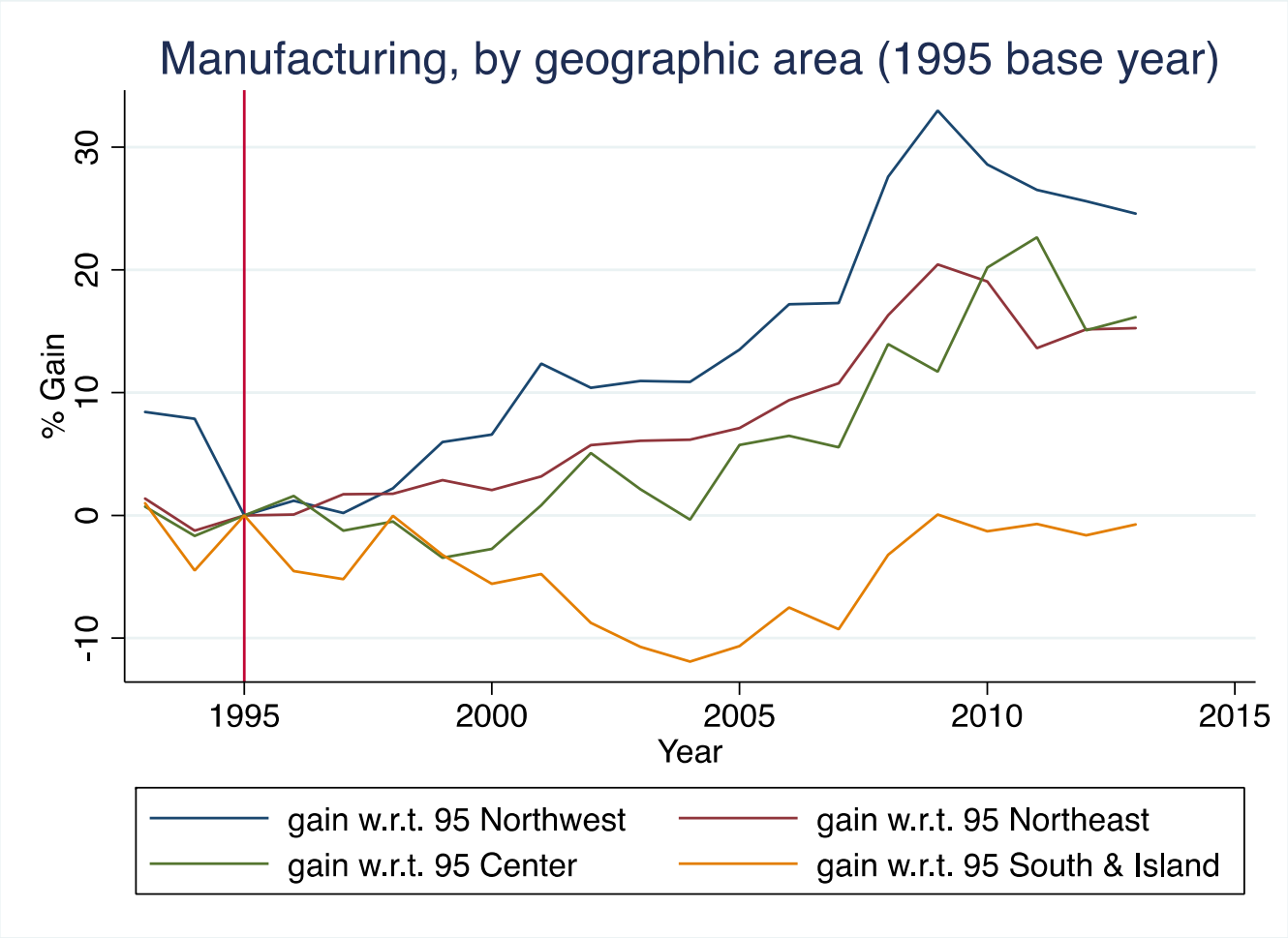
Growing misallocation cost the Northwest even more



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Which firm characteristics ('markers') are associated with size inefficiency?

- A firm is inefficiently large (small) if its TFPR is smaller (larger) than the group average, i.e. if the ratio of the former to the latter ('relative TFPR') is smaller (larger) than one

- Hence, positive correlation between a firm's marker and its relative TFPR reveals that high (low) values of that marker are associated with inefficiently small (large) firm size

- Vice versa, negative correlation reveals that high (low) values of that marker are associated with inefficiently large (small) firm size

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Data sources

- INVIND (Bank of Italy): panel of manufacturing firms above 50 employees
- Additional balance sheet information matched with “Centrale Bilanci”
- 19,924 firm-year observations, with 2 digits sector identifier
- Years available: 1987-2011, on average 11 observations per firm

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Significant markers

- Ownership structure:
  - [-] Family ownership is associated with inefficiently large firms
- Access to finance:
  - [-] Being credit constrained is associated with inefficiently large firms
  - [-] Relying on relational banking is associated with inefficiently large firms
- Workforce composition:
  - [-] Relying on layoffs is associated with inefficiently large firms
  - [-] Relying on foreign workers is associated with inefficiently large firms
  - [+] A high share of graduates among white collars is associated with inefficiently small firms

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Significant markers

- Internationalization:
  - [+] Being part of a foreign group is associated with inefficiently small firms
  - [-] Being sub-contractor of a foreign group is associated with inefficiently large firms
  - [+] Engaging in FDIs is associated with inefficiently small firms
- Innovation:
  - [+] High share of intangible assets is associated with inefficiently small firms
- Public procurement:
  - [+] High share of revenues from public procurement is associated with inefficiently small firms

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Conclusion

- ‘Within-misallocation’ matters more than ‘between-misallocation’
  - Misallocation is much less about sluggish reallocation of capital and labour from less to more productive sectors/regions than it is about sluggish reallocation of capital and labour from less to more productive firms within sectors/regions

- With respect to misallocation there is a ‘Northern problem’ (‘Questione Settentrionale’)
  - Misallocation has grown more in the North than in the South

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Conclusion

- Large shares of Italian firms are inefficiently (small) large and do not grow (downscale) despite (high) low TFP levels
- The share of inefficiently large firms with low productivity has grown and this is driven by the increased share of firms offering inefficiently low wages
- In terms of capital allocation, the shares of firms offering inefficiently high/low remuneration have both risen
- Firm that invest in intangible assets and in graduate white collars are inefficiently small

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Thank you for your attention

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