

Discussion of Business Dynamism in Spain

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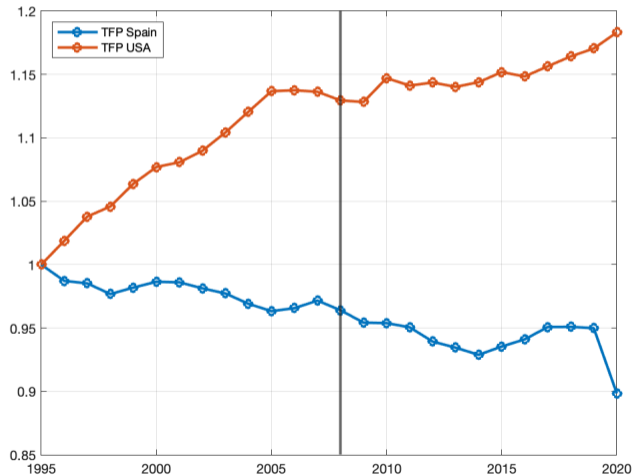
Structure of the discussion

1. Motivation
2. Summary - main takeaways
3. My comments
 - Are the main findings surprising?
 - A preliminary naive interpretation
 - Possible next steps

Motivation

The Spanish Aggregate Productivity (1)

source: *EUKLEMS* (first shown by Conesa-Kehoe, 2015)



The Spanish Aggregate Productivity (2)

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 - High growth via **fast accumulation of factors** \Rightarrow \uparrow **misallocation of resources across firms**
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 - Post-Global Financial Crisis period (> 2008)
 - **Different macroeconomic environment** BUT still **similar pattern** in Spanish TFP
- \rightarrow Need to rethink about Spanish productivity growth

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 - An increase in **market power**
 - A reduction in **business dynamism**
- Continues by **exploring “the life cycle of firms”**. Motivated by the fact that:
 - Firms become more productive as they age
 - Distortions affecting the life cycle has the potential to explain TFP differences across countries
 - Hsieh and Klenow (2014); Guner et al. (2017)

This paper (2)

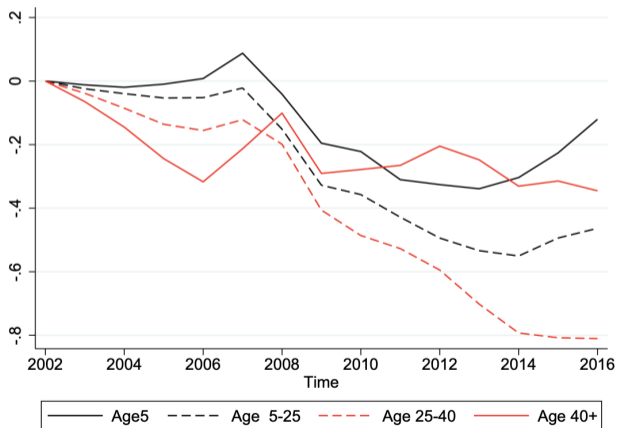
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- In the **US**: a **similar** pattern **for the young** but **different for the old**

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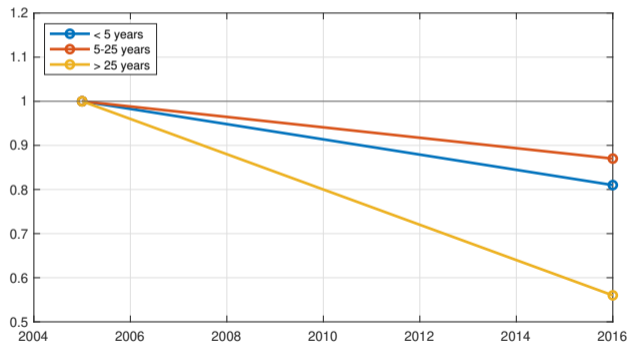


Figure: Spain: Average Number of Employees (2005 = 1)

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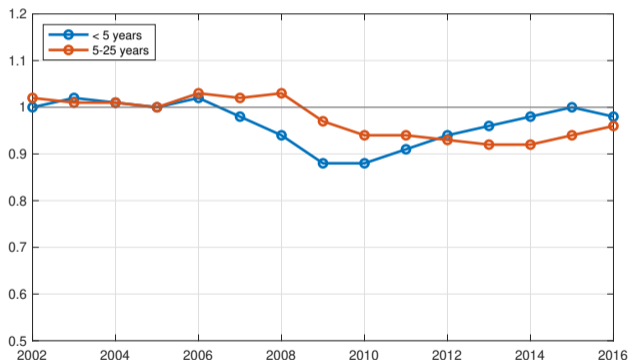


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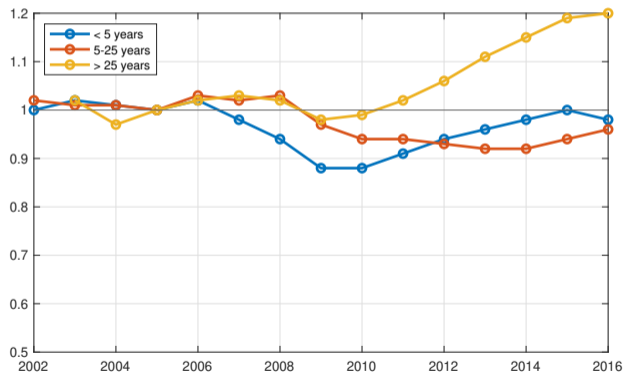


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$$\max_{L_i} \{P_i Y_i - L_i w (1 + \tau_i)\}$$

$$\text{subject to } Y_i = A_i L_i$$

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$$\text{subject to } \begin{aligned} Y_i &= A_i L_i \\ P_i &= \bar{P} Y_i^{-\frac{1}{\sigma}} \end{aligned}$$

- Solution of this problem implies

$$L_i^* \propto A_i^{\sigma-1} (1 + \tau_i)^{-\sigma}$$

Discussion (5)

B. A naive decomposition of the facts

- For the US:
 1. Assume $\tau_i = 0$ for all firms throughout the sample
 2. Set values of **relative A_i 's** to **replicate the observed changes** in size

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 2. **Recover the relative τ_i ’s** across age groups to **match the observed relative firm sizes**

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 1. Use the (extended to capital) structure of the model to **“calibrate” relative A_i ’s** across age groups
 2. **Recover the relative τ_i ’s** across age groups to **match the observed relative firm sizes**

Is the pattern in Spain a result of asymmetric productivity growth or distortions across firms?

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⇒ **Convergence** in firm size **lower than predicted** by evolution of relative A_i 's

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$\Rightarrow \tau_{\text{young}} = 0.20$ in **2005** [young firms faced a **20% “tax”** relative to old ones]

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- Assuming that $\tau_{\text{old}} = 0$ in both periods:
 - $\Rightarrow \tau_{\text{young}} = 0.20$ in **2005** [young firms faced a **20% “tax”** relative to old ones]
 - $\Rightarrow \tau_{\text{young}} = 0.33$ in **2016** [young firms faced **33% “tax”** relative to old ones]

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B. A naive decomposition of the facts

- Assuming that $\tau_{\text{old}} = 0$ in both periods:
 - $\Rightarrow \tau_{\text{young}} = 0.20$ in **2005** [young firms faced a **20% “tax”** relative to old ones]
 - $\Rightarrow \tau_{\text{young}} = 0.33$ in **2016** [young firms faced **33% “tax”** relative to old ones]
- If allocation purely driven by A_i 's (keeping constant the relative τ_i):

$$\underbrace{\frac{L_{\text{old}}^*}{L_{\text{young}}^*}}_{\approx 3.5} = \underbrace{\left(\frac{A_{\text{old}}}{A_{\text{young}}}\right)^{\sigma-1}}_{\approx 1.7} \underbrace{\left(\frac{1 + \tau_{\text{old}}}{1 + \tau_{\text{young}}}\right)^{-\sigma}}_{\approx 1.8(\text{from 2005})}$$

Discussion (8)

B. A naive decomposition of the facts

Table: A naive decomposition

		2005		
		$\frac{L_o/L_y}{}$	$\frac{[A_o/A_y]^{\sigma-1}}{}$	$\frac{(1 + \tau_y)^\sigma}{}$
< 5 years		11.0	5.5	2.0
5-25 years		6.4	3.6	1.8
		2016		
		$\frac{L_o/L_y}{}$	$\frac{[A_o/A_y]^{\sigma-1}}{}$	$\frac{(1 + \tau_y)^\sigma}{}$
< 5 years		7.8	3.6	1.7
5-25 years		4.1	1.7	2.3

Discussion (8)

B. A naive decomposition of the facts. CAVEATS:

1. Probably samples not totally comparable across countries
2. Tension between model assumptions and TFP estimation
3. Aggregation at the age group level. Heterogeneity across firms within groups
4. Ignore distortions at the factor level different for capital and labor
5. Feedback effects between A_i and τ_i
6. Extremely naive production function estimation
7. Same fundamental parameters across industries
8. 2-digit industry for US versus 4-digit industry for Spain
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Discussion (8)

C. Taking stock and moving forward

- Extremely interesting facts which generate many questions
- Potentially very relevant to know more about aggregate TFP in Spain
- Distinction between fundamental productivity versus distortions matters
- Could we map some of the patterns to actual policies, regulations?
- Promising avenues for future research about the Spanish economy!