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# Introduction to the roundtable discussion

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R&D, education and employment

High growing firms, growth and R&D

Digression on initial public offerings

Q: 06.07.2016



## R&D, education and employment

- In most countries the perspectives of unskilled workers have deteriorated
- Skill-bias in technical change. Reduction of labour input in routine tasks - digitalization - computerization
- At the same time evidence for over-education and skill-mismatches (over-education).
- However, wage premia for higher education seem not to decrease.

Do mismatches primarily because formal qualifications are not alighned to the requirements of the labour market?



- 1. HGFs are defined as fastest growing firms (10% or 20% annualized growth over 3 years and more than 10 employees in t-1). Contribute most jobs.
- 2. HGFs are overproportionally young and most HGF are small (Coad et al. 2014).
- 3. R&D is especially relevant for HGFs in advanced countries and in high tech industries (Hölzl 2009, 2016).
- They do not "scale up". High growth is not persistent (e.g. Hölzl 2014).
- 5. Innovation behaviour ist very much similar to non-HGFs in the same industry (Hölzl 2016)



#### High growth firms and economic growth

- 1. At the macroeconomic level close correlation between R&D, quality of institutions and HGF shares (at least European evidence points in this direction)
- 2. There is some (preliminary) evidence that share of high growth firms (firm growth dynamics) is related to higher aggregate productivity growth.

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#### High growth firms and economic growth

Theory suggests that cross-country differences in productivity are linked to the heterogeneity in firm (growth) performance (Andrews and Cigano 2014, Bartelsman et al. 2013, Hsieh and Klenow 2009).

- Are differences in firm growth dynamics primarily related to differences in the ability of economies to direct resources to the most productive firms?
- A lack of HGFs is unlikely to be purely the result of missing innovation projects and low start-up rates.
- Which institutions, ecosystems, factors are relevant?



## Digression: initial public offerings

• Initial public offerings are interesting, because weak capital markets are often seen as part of the explanation of the "weakness" in Europe to generate new large firms.

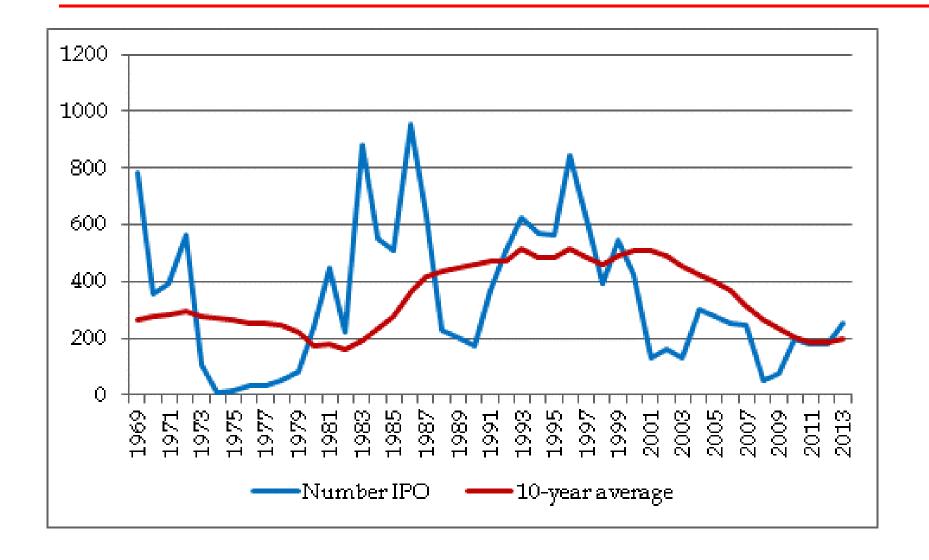
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- Evidence for the USA shows declining HGFs shares over the time period 1994-2012 (Clayton et al. 2013).
- Haltiwanger et al. (2014) and Decker et al. (2014) show that the business dynamics slowed down in the USA in high-technology industries.
- Gao et al. (2013) document a decrease in initial public offerings for the USA since the 2000s.



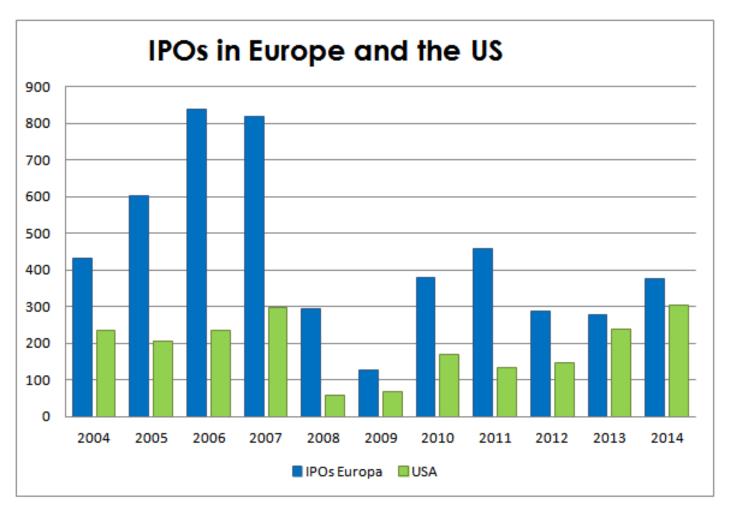
## IPOs in the US





## Young fast-growing firms and R&D

## **IPO** dynamics







- Overregulation: IPOs are expensive and additional regulation in the past decades made them even more expensive.
- Capital Market Structure: Increase in importance of ETF (exchange traded funds), electronic trading and high frequency trading move attention to big caps. Small caps are loosing out.
- 3. Economies of Scope hypothesis: structural change favor larger enterprises. Globalization and ICT change markets in "the winner takes it all" markets. It is better for small firms to be bought than trying to grow fast.



thank you for the attention