

# Introduction: Superstar firms

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Granularity and Networks  
in a Global Economy  
MIE, 2nd year

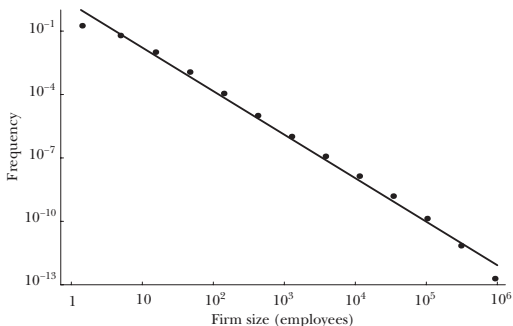
# Stylized Facts on Superstar Firms

- Many firms are not atomistic :
  - In Korea, the top two firms (Smasung and Hyundai) together account for 22% of Korean GDP (di Giovanni and Levchenko, 2009)
  - In 2005, Nokia was responsible for 25% of Finland's exports and 3.6% of its GDP
  - In New Zealand, one firm (Fonterra) is responsible for one-third of global dairy exports (it is the world's single largest exporter of dairy products). This represents 20% of New Zealand's overall exports, and 7% of its GDP
- Distribution of firms' size is extremely fat-tailed :
  - In the United States, the sales of the top 50 firms represent about 25% of output (Gabaix 2011)
  - In France, the Top 100 firms represent 22% of value added, 22% of exports and 18% of imports (di Giovanni et al, 2018)

# Distribution of Firm Size

## United States

Log Frequency versus log Size of US firms (by Number of Employees) for 1997

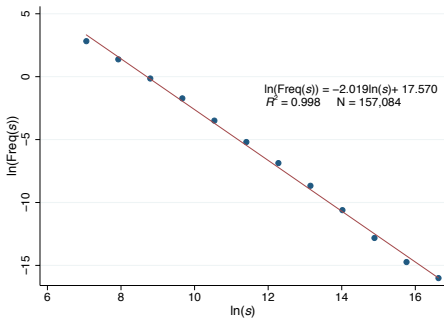


Source: Axtell (2001).

Notes: Ordinary least squares (OLS) fit gives a slope of 2.06 (s.e. = 0.054;  $R^2 = 0.99$ ). This corresponds to a frequency  $f(S) \sim S^{-2.059}$ , which is a power law distribution with exponent 1.059. This is very close to an ideal Zipf's law, which would have an exponent  $\zeta = 1$ .

# Distribution of Firm Size

## France

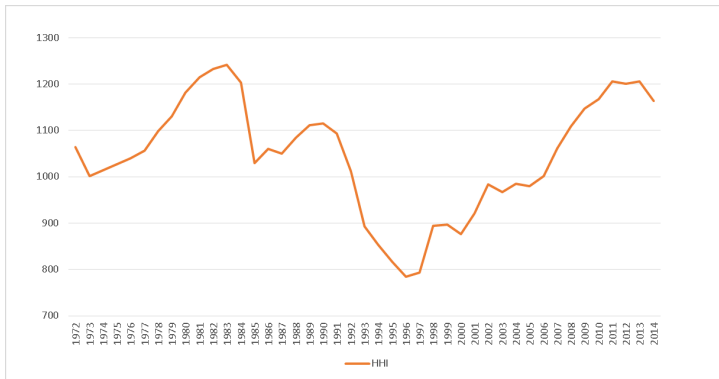


(b)

Notes: This figure reports the estimated power laws in firm size based on total sales and all firms. The power laws are estimated with two different methods, the cdf (panel a) and the pdf (panel b).

Source : di Giovanni et al (JIE, 2011)

# Concentration of activity in the US



Source : Grullon al. (Review of Finance, 2019).

# Mean mark-up in the US

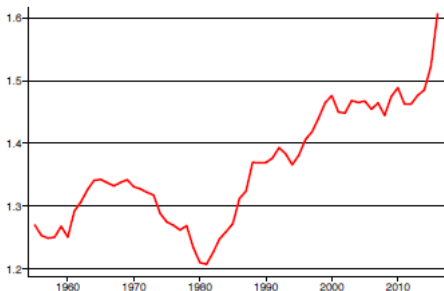
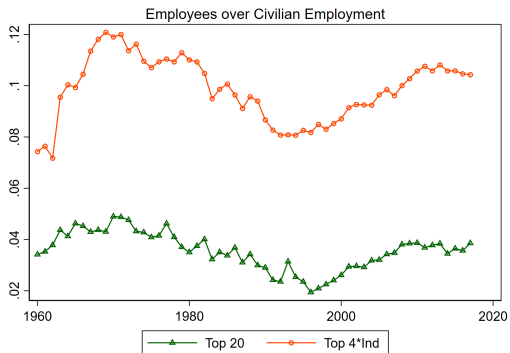


Figure 1: Average Markups for Conventional Production Function. Output elasticities  $\theta_{st}$  from estimated PF1 are time-varying and sector-specific (2 digit). Average is sales weighted. Evolution 1955-2016.

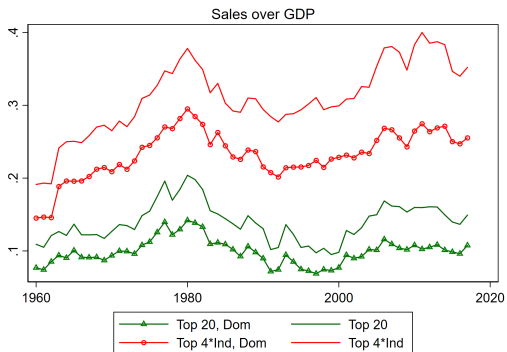
Source : De Loecker, Eeckhout, Unger (2018)

# Superstars as a share of employment



Source : Gutiérrez et Philippon (2019)

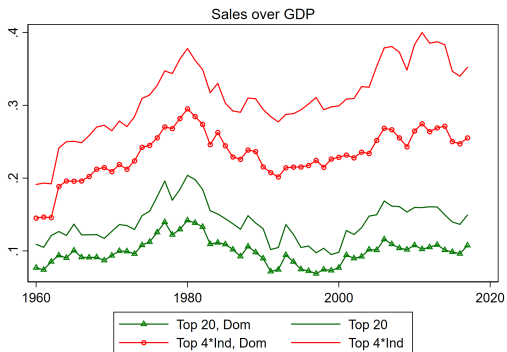
# Superstars as a share of GDP



Source : Gutiérrez et Philippon (2019)



# Superstars as a share of GDP



Source : Gutiérrez et Philippon (2019)

# Why do we care ?

- Why do I care ?
  - Granularity as a source of aggregate fluctuations
  - Granularity as a source of international comovements
- Why may you care ?
  - Granularity and misallocation : Baqaee & Fahri (2019)
  - Granularity as a source of structural changes : Gaubert & Itskhoki (2019)
  - Granularity and the labor market : Berger, Herkenhoff & Mongey (2019), Autor, Dorn, Katz, Patterson & van Reenen (2017), Azar, Marinescu, Steinbaum (2017)
  - Granularity and market power : Grassi (2018), Brustein, Carvalho & Grassi (2019)
  - Granularity, concentration and investment : Gutierrez & Philippon (2019)