

# Foreign Firms and Foreign Managers

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NOITS 2021. Thanks: ERC Knowledgeflows, Krisztián Fekete, Dávid Koller, Olivér Kiss, Szilárd Perédi, Bálint Szilágyi, András Vereckei, Rita Zágoni, Gergő Závecz

# Motivation

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Why and how do firms produce abroad?

- 1 What are the boundaries of (global) firms?
- 2 Foreign owned firms perform better than domestic firms
- 3 Managers matter

# What are the boundaries of (global) firms?

arm's length —————> relational —————> acquisition —————> management

# Foreign owned firms perform better than domestic firms

- US: Doms and Jensen (1998)
- UK: Griffith (1999)
- Hungary, Romania, Russia, Ukraine: Brown, Earle, Telegdy (2006)
- Indonesia: Arnold and Javorcik (2009)

# Managers matter

- Good management practices increase productivity (Bloom and Van Reenen 2010; Bloom et al. 2012; Bloom et al. 2014) and market access (Bloom et al. 2016).
- CEOs behaving like "leaders" gradually improve firm performance. (Bandiera, Hansen, Prat and Sadun 2018)
- Large increase in the level and inequality of CEO pay. (Murphy and Zábojník 2004; Gabaix and Landier 2008; Tervio 2008; Frydman and Saks 2010)
- Managers have persistent effects across firms on investment policy, R&D, advertising, return on assets. (Bertrand and Schoar 2003)
- Sudden CEO death worsens firm performance. (Bennedsen, Pérez-González and Wolfenzon 2007)
- Managers having past export experience increase likelihood of exporting (Mion and Opromolla 2014; Mion, Opromolla and Sforza 2016) and importing (Bisztray, Koren and Szeidl 2018).

# This paper

- Compile new data on which firm is run by which manager: Hungary, 1980–2018.
- Measure different degrees of foreign control:
  - 1 acquisition
  - 2 replace CEO
  - 3 hire expat CEO
- Results:
  - Exporters and low-productivity firms become more tightly controlled.
  - Firms with high immaterial capital receive local managers.
  - Foreign controlled firms become more productive and more likely to export.

Data



# Data

## Hungarian Manager Database

- coverage: universe of corporations, 1980–2018
- CEO: highest officer of corporation as specified in corporate law.
  - information: name, mother's name, address, tenure at firm
- 1 million firms, 2 million CEOs, 5 million job spells

## Balance sheet data

- coverage: universe of double entry firms, 1980–2018
- information: sales, exports, employment, equipment, immaterials etc.

# Names

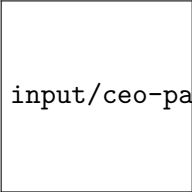
- We use manager names to infer
  - 1 CEO change
  - 2 nationality
  - 3 gender (not used today)
- Foreign manager: firm representative with a non-Hungarian first name
  - e.g. Eva Bauer v Bauer Éva
  - but: George Soros v Soros György
- Allow for misspelling, omitted middle name, missing data (jr, dr)

# Sample

- Exclude:
  - employing less than 20 people
  - financial sector
  - domestic firms with expat CEO
  - greenfield FDI
  - firms with more than 15 CEOs
- Left with 24,500 firms

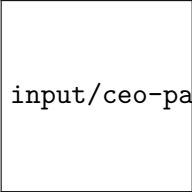
## Descriptives

The number of CEOs increased sharply until 2010



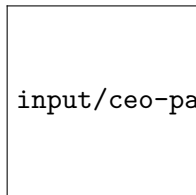
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The share of firms managed by founders gradually decreases with age



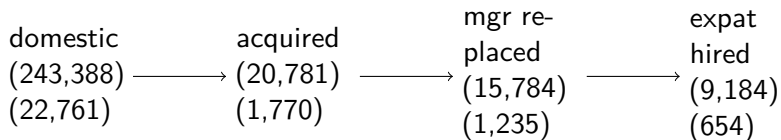
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## Founders stay longest at the firm



input/ceo-panel/fig/tenure-by-type-weighted/fig.pdf

## Degree of control





# Variables

- **foreign**: firm has majority foreign owner
- **foreign\_hire**: firm has a manager hired by foreign owner
- **has\_expat**: firm has an expat manager
- **CONTROL<sup>k</sup>**: one of the three ( $k = 1, 2, 3$ )
- **lnL**: log employment
- **lnQL**: log output per worker
- **TFP\_cd**: TFP (simple Cobb–Douglas)
- **exporter**: firm has positive exports
- **RperK**: share of immaterial assets in total  $[0,1]$

## Estimation

# Differences in differences

$$Y_{it} = \alpha_i + \nu_t + \beta \text{CONTROL}_{it} + u_{it}$$

## Old diff-in-diff

Estimate (\*) by two-way fixed effects.

## New diff-in-diff

Compute group-specific treatment effects and aggregate. (Callaway and Sant'Anna 2020)

## Problem with TWFE

## Callaway - Sant'Anna solution

$G_i$ : time of treatment of unit  $i$  (may be  $\infty$ )

$C_{gt} = \{i : G_i > \max(g, t)\}$ : control group is not yet treated

$$\gamma_{gt} := \sum_{i: G_i = g} (Y_{it} - Y_{ig}) - \sum_{i \in C_{gt}} (Y_{it} - Y_{ig})$$

Aggregate  $\gamma_{gt}$  with “suitable” weights

## Multiple treatments

We have three treatments: acquisition only, domestic hire, expat hire.

How to do Callaway-Sant'Anna in this case?

Make sure treatments don't "leak" into controls.

## Our solution

$G_i^k$ : time of treatment  $k$  of unit  $i$  (may be  $\infty$ )

$C_{gt} = \{i : \min_k G_i^k > \max(g, t)\}$ : control group is not yet treated with **any** of the treatments

$$\gamma_{gt}^k := \sum_{i: G_i^k = g} (Y_{it} - Y_{ig}) - \sum_{i \in C_{gt}} (Y_{it} - Y_{ig})$$

Each treatment has the **same** control group.

# Estimating equations

## Bernard-Jensen

Sample: domestic firms and acquisitions

$$Y_{ist}\mu_{st} + \sum_{k=1}^3 \beta_k \text{CONTROL}_{it}^k + u_{ist}$$

## Selection

Sample:  $\text{CONTROL}_i^{k-1} 1$ , years before acquisition

$$\text{CONTROL}_i^k \mu_{st} + \gamma X_{it} + u_{ist}$$

## Diff-in-diff

Sample: domestic firms and acquisitions

$$Y_{ist}\alpha_i + \mu_{st} + \sum_{k=1}^3 \beta_k \text{CONTROL}_{it}^k + u_{ist}$$



## Callaway-Sant'Anna estimates

Foreign firms are better in most respects

*cross<sub>s</sub>ection*

Positive selection on exports, negative on TFP

selection

Hiring an expat is associated with increased productivity and exporting

diffindiff

Expats help start exporting, but have no effect on continuation

exporter

## Conclusions

# Conclusions

- What are the causes and consequences of foreign acquisitions?
- We ask when managers are also replaced.
- Using data on the universe of foreign acquisitions in Hungary, 1980-2018, we estimate that exporters and low-productivity firms become more tightly controlled.
- Foreign controlled firms become more productive and more likely to export.
- These facts help inform theories about the boundaries of global firms and about the role of managers in firm performance.

## Next steps

- Collect data on parent firms.
- Build an incomplete-contract model.