The Performance of Foreign Firms: Accounting for the Effects of Local and Expatriate CEOs

Miklós Koren
Central European University, Institute of Economics – HAS and CEPR
Álmos Telegdy
National Bank of Hungary, CEU and IE–HAS

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Motivation

Some firms produce vastly more output per worker than others (Syverson, 2011).

- technology
- organization
- unmeasured input quality

Foreign-owned firms perform better than domestic firms

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

Why are foreign firms better?

Reasons for superior performance

- Selection: firms that expand internationally are better (okay, but still should be a reason for it)
- Parent companies provide fresh capital: Levine (2005)
- Foreign subsidiaries get up-to-date technology: Guadalupe, Kuzmina, Thomas (2012)
- Foreign owners able to choose good managers (this paper)

Management and managers affect firm performance

Management practices 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)

Managers' identity matter

- 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: Foreign owners improve firm performance by improving management

Compile new, unique data on managers: Hungary, 1992–2016.

Test the effects of

- Local CEOs hired by foreign owners
  - Better general skills
  - Better local knowledge
- Among them expatriate managers
  - Better general skills
  - Better firm-specific skills
  - Loyality

Research design: difference-in-differences comparing the effect of foreign hired managers (local or expat) to domestic managed firms before and after takeover

Why care?

Different modes of global engagement are highly correlated:

- foreign investment/ownership
- foreign management
- foreign trade

Which are most important gains from globalization?

- What are the costs of protectionism?

Unclear why foreign ownership matters

- Unlikely that the stock and quality of capital are the only explanations.

Data

Hungarian Manager Database

- coverage: universe of corporations, 1992–2016
- 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 book keeping firms, 1980–2016
- information: balance sheet and income statement, exports, employment, industry code etc.

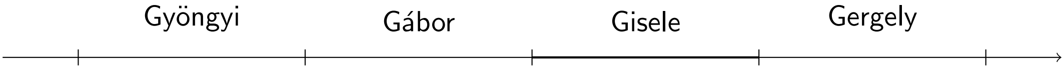
Names

```
firm,manager,from,to
123456,Gyöngyi,1992-01-01,1996-12-31
123456,Gábor,1997-01-01,1999-12-31
```

- We use manager names to infer
  1. CEO change
  2. nationality
- 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)

Data cleaning

1. Convert names to numerical IDs
   - normalization
   - Levenshtein distance of name components
   - stricter matching across firms (not used today)
   - more liberal matching within firm
2. Infer Hungarian nationality from name
   - given name in closed list of admissible Hungarian names
3. Classify everyone else as foreign
   - remove firms
   - but: weird typos with limited supporting information
4. Clean up time interval and position description
5. Create annual panel for June 21

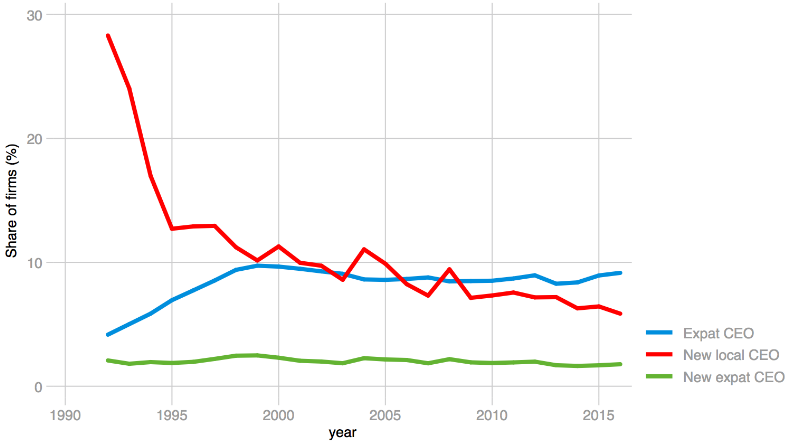


Sample

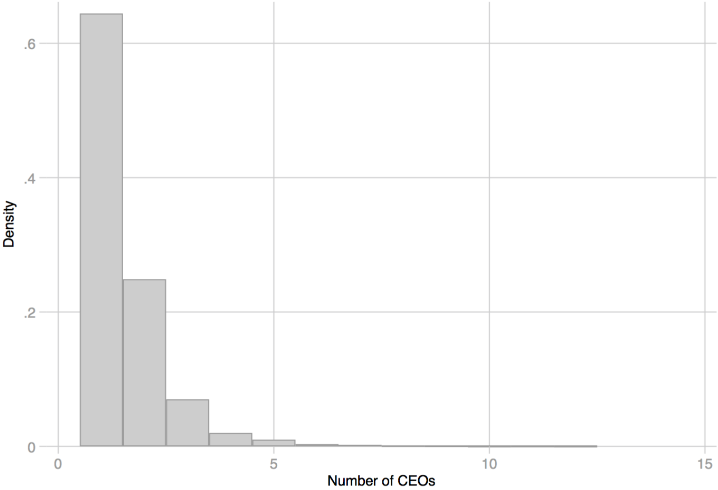
- Exclude:
  - employing less than 20 people on average
  - financial sector
  - domestic firms with expat CEO (very few)
  - firms with more than 15 CEOs
- Left with 20,000 firms
- Focus on years around CEO switches

		TO	
		domestic	expat
FROM	domestic	24784	848
	expat	874	784

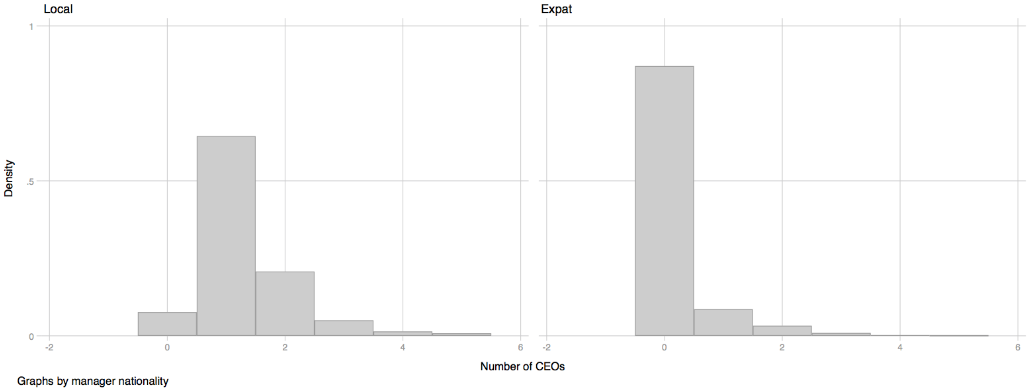
Local and expat managers over time



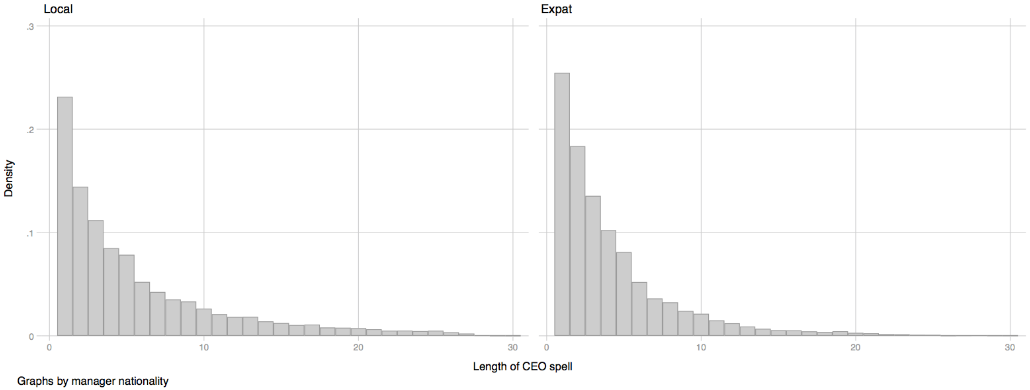
Firms sometimes have multiple CEOs



80 percent of firms have no expat CEO



Expat CEOs leave somewhat earlier (median 3 v 4 years)



Foreign firms, new managers

Foreign firms: 1794 (9 percent)
With new CEO: 1423 (80 percent)
With expat CEO: 755 (42 percent)

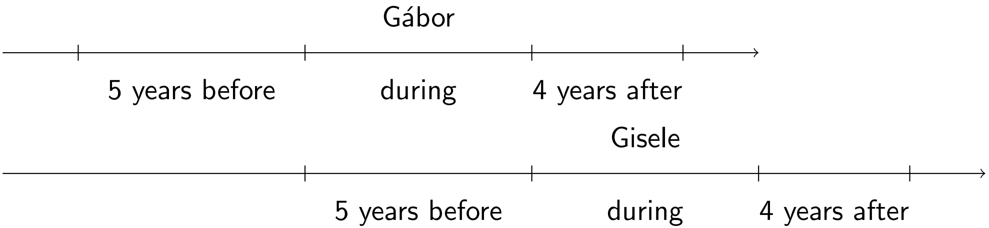
Selection: Better, firms receive expat CEOs

	(1) Foreign hire	(2) Expat
Capital	0.002	0.021***
	(0.005)	(0.007)
Labor Prod.	-0.003	0.030**
	(0.011)	(0.013)
Exporter	0.034	0.012
	(0.025)	(0.031)
Observations	24688	20033
R^2	0.081	0.129

Research design

- Unit of observation: one CEO-firm spell
- Take each CEO spell at each firm
- For each spell, collect firm-level data for three periods:
  - before
  - during
  - after
- Comparing these periods, we estimate the impact of a new CEO/expat CEO and whether it is long lasting.

Manager-level event study



Estimating equation

$$
\begin{aligned}
Y_{ijkt} = \gamma_M M_{ijkt} + \gamma_F F_{jkt} + \gamma_{Fhire} M_{ijkt} F_{jkt} + \gamma_{Expat} M_{ijkt} Expat_{ijkt} F_{jkt} \\
+ f(age_{jkt}) + ind_k year_t + \mu_j + \varepsilon_{ijkt}.
\end{aligned}
$$

- Domestic firms, CEO local: control group
- Acquired firms, CEO incumbent: foreign effect (γ_F)
- Acquired firms, local CEO hired: **foreign hiring effect** (γ_{Fhire})
- Acquired firms, expatriate CEO hired: **expatriate effect** (γ_{Expat})

Identification concerns

Reverse causality

- Skilled incumbent CEOs are not replaced
- Expats come to firms with good prospects

Omitted variables

- CEO replacement/expats are just a signal of strong owner attention

No plausible IV with strong first stage

- source countries
- EU accession
- bilingual schools

New managers are associated with higher scale of production and productivity

	(1) Output	(2) Labor Prod.	(3) TFP
Foreign Owned	0.109***	0.059***	-0.010
	(0.023)	(0.016)	(0.015)
Foreign Hired CEO	0.069**	0.058***	0.027
	(0.033)	(0.022)	(0.017)
Expatriate	0.097**	0.071**	-0.003
	(0.047)	(0.030)	(0.025)
Observations	408166	408166	362051
R^2	0.837	0.879	0.546

The effect lasts after the CEO left the firm

	(1) Output	(2) Labor Prod.	(3) TFP
Foreign Owned	0.143***	0.090***	-0.003
	(0.033)	(0.021)	(0.019)
Foreign Hired CEO	0.039	0.037**	0.019
	(0.027)	(0.018)	(0.015)
Foreign Hired CEO Post	0.091*	0.063**	0.042*
	(0.049)	(0.031)	(0.024)
Expatriate	0.091**	0.068**	-0.006
	(0.043)	(0.028)	(0.024)
Expatriate Post	0.238***	0.145***	0.006
	(0.060)	(0.036)	(0.031)
Observations	494316	494316	439674
R^2	0.823	0.868	0.533

The effect local-expat manager sequences

	(1) Output	(2) Labor Prod.	(3) TFP
Foreign Owned	0.113***	0.061***	-0.010
	(0.023)	(0.016)	(0.015)
Local-Local	-0.033	0.060**	0.018
	(0.036)	(0.024)	(0.018)
Expat-Local	0.208***	0.160***	0.060**
	(0.052)	(0.033)	(0.029)
Local-Expat	0.078	0.168***	0.024
	(0.056)	(0.034)	(0.034)
Expat-Expat	0.170***	0.172***	0.035
	(0.049)	(0.033)	(0.029)
Observations	408166	408166	362051
R^2	0.837	0.879	0.546

Mechanisms

New CEOs may restructure the firm multiple ways

- Get fresh capital: scale of production, new technology
- Upgrade the labor force (not done yet)
- Search for new markets

New CEOs do not change inputs

	(1) Capital	(2) Emp.	(3) K/L	(4) lnMQ
Foreign Owned	0.137***	0.051**	0.108***	-0.004
	(0.033)	(0.021)	(0.029)	(0.009)
Foreign Hired CEO	-0.168***	0.011	-0.153***	-0.003
	(0.040)	(0.030)	(0.036)	(0.011)
Expatriate	-0.035	0.026	-0.065	0.029
	(0.060)	(0.042)	(0.053)	(0.018)
Observations	388224	408166	388224	386095
R^2	0.822	0.780	0.802	0.748

New managers engage the firm in international trade

	(1) Exporter	(2) Import mat.	(3) Import capital
Foreign Owned	0.026***	0.024*	0.095***
	(0.008)	(0.014)	(0.019)
Foreign Hired CEO	0.018**	0.022	-0.010
	(0.009)	(0.016)	(0.019)
Expatriate	0.027*	-0.022	0.054**
	(0.014)	(0.019)	(0.026)
Observations	408166	66119	66119
R^2	0.692	0.655	0.599

Interpretation

Three alternative explanations

1. Firm-specific skills
   - No substantial heterogeneity with initial firm characteristics
2. General skills
   - Labor productivity improvement has persistent effect
3. Reorganization
   - Long-lasting effects

Costs

Why does not every firm hire a foreign manager?

1. Wages are higher
2. Search costs are higher
3. Match is less than perfect

Conclusions

- Firms with expat managers improve output per worker and enter export markets.
- Patterns are consistent with a transferable skill interpretation:
  - persistent reorganization
  - technology transfer

Next steps

- Improve identification with matching.
- Explore complementarities of expat managers.
- Explore management team and succession in expat firms.
- Link to World Management Survey: how do management practices of expats differ?