Expatriate Managers and Firm Performance

Miklós Koren
CEU, MTA KRTK and CEPR
Álmos Telegdy
MNB and MTA KRTK

Thanks: ERC Knowledgeflows
Krisztián Fekete, Olivér Kiss, Szilárd Perédi,
Bálint Szilágyi, András Vereckei, Rita Zágoni, Gergő Závecz

Motivation

Motivation

- Some firms produce vastly more output per worker than others (Syverson, 2011).
  - technology
  - organization
  - unmeasured input quality

Management improves firm performance

- 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)

Manager identity matters

- 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).

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)

This paper

- Foreign owners improve firm performance by improving management.
- Compile new, unique data on which firm is run by expat manager: Hungary, 1992–2016.
- Research design:
  - differences-in-differences comparing expat-managed firms to domestic managed firms before and after takeover
  - controlling for domestic change in management

Contributions

1. Linked firm-CEO data for the universe of corporations.
2. Compare expat CEOs to local CEOs.
3. Research design around CEO switches.

Why care?

- Different modes of global engagement are highly correlated:
  - foreign investment/ownership
  - foreign management
  - foreign trade
- Which are most important for gains from globalization?
  - What are the costs of protectionism?

Outline

Outline

1. Measurement: finding expat managers
2. Research design: comparing CEO spells
3. Estimates from manager-level event studies

Data

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 firms, 1992–2016
- information: sales, exports, employment, equipment 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 (data?)
  - firms with more than 15 CEOs
- Left with 18,000 firms
- Focus on years around CEO switches.

Shape of data

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

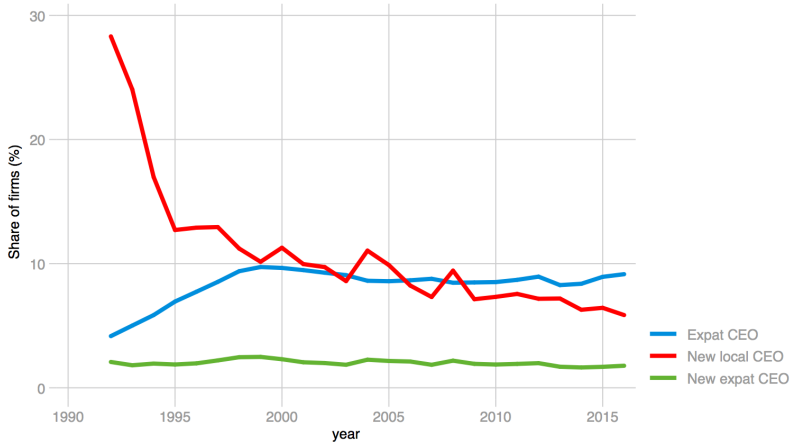
Data cleaning

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

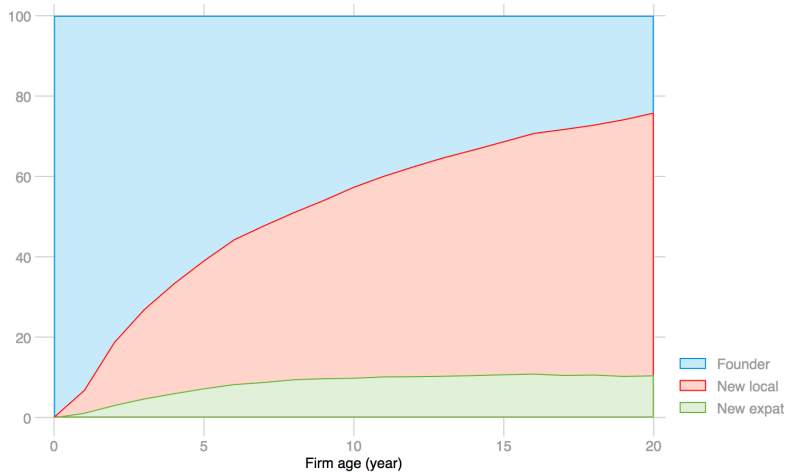
CEO succession

Descriptives

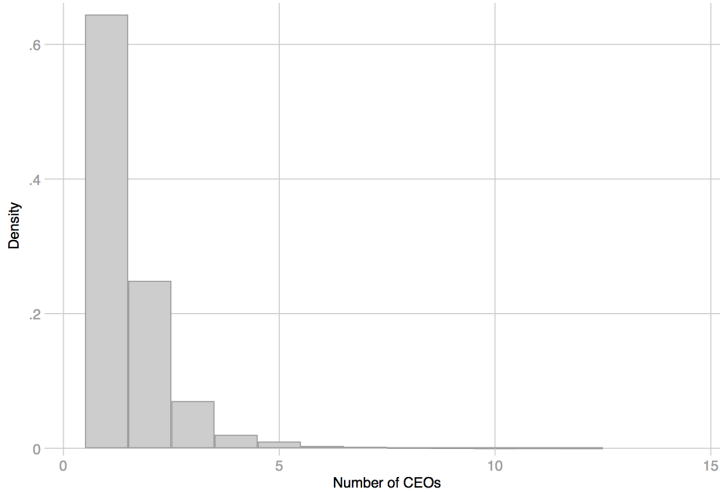
Local and expat managers over time



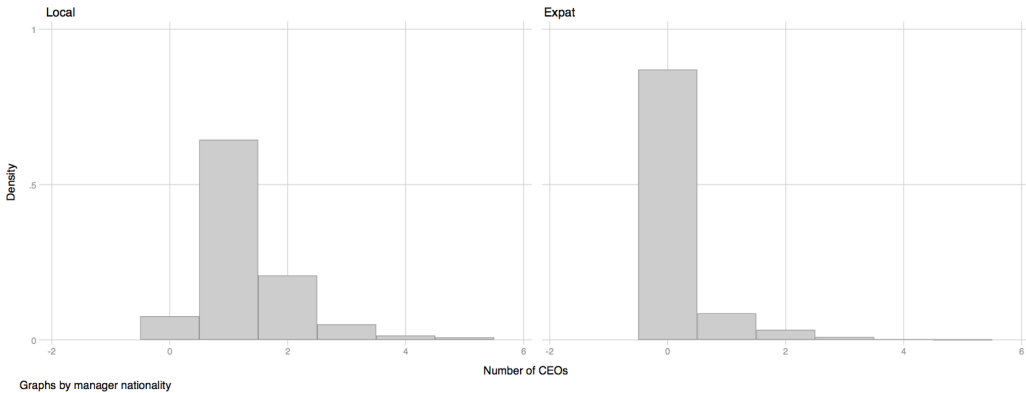
Founder CEOs are slowly replaced



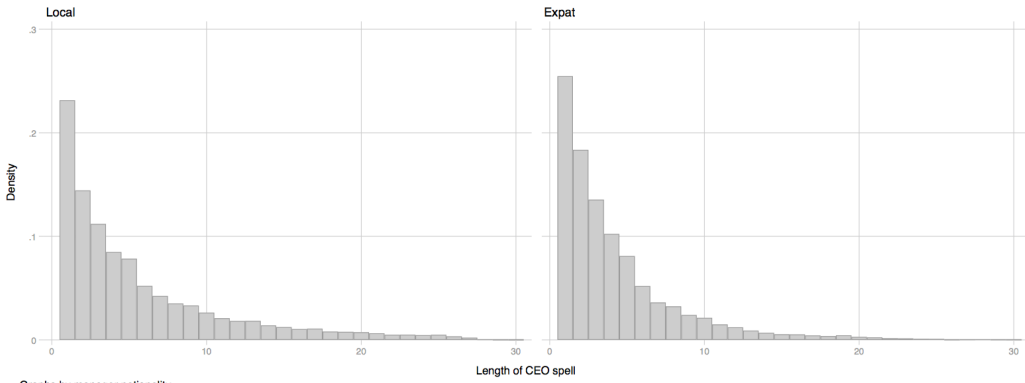
Firms sometimes have multiple CEOs



80 percent of firms have no expat CEO



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



Number of CEO switches

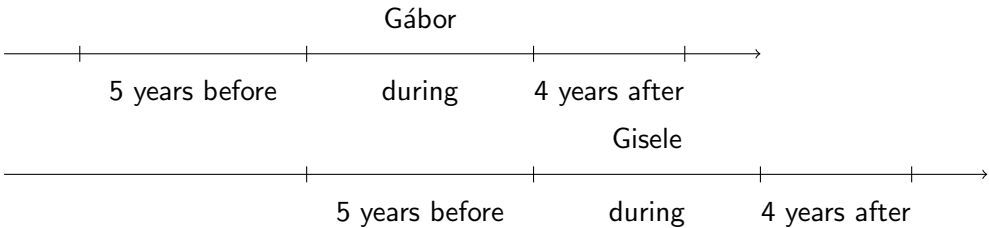
From	To domestic	To expat
domestic	28005	2340
expat	2915	4999

Research design

Research design

- Take each CEO spell at each firm (e.g., Steve Ballmer, Microsoft, 2000–2014)
- Exclude founders (e.g., Bill Gates, Microsoft, 1975–1999)
- For each spell, collect firm-level data for three periods:
  - before (1975–1999)
  - during (2000-2014)
  - after (2015–)
- Comparing these periods, we estimate the impact of a new CEO and whether it is long lasting.

Manager-level event study



Estimating equation

$T_{im} \subset [1992, 2016]$: tenure of CEO m at firm i
$I()$: indicator function
X_m: expat dummy

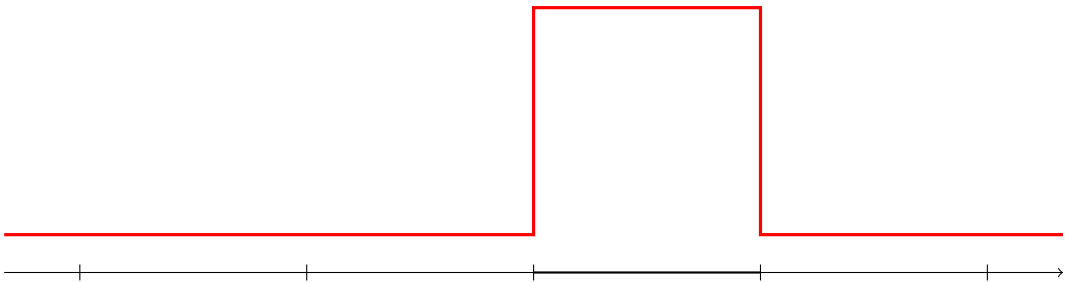
$$Y_{imt} = \beta_1 I(t \in T_{im}) + \beta_2 I(t > T_{im}) + \gamma_1 X_m I(t \in T_{im}) + \gamma_2 X_m I(t > T_{im}) + f(\text{age}_{it}) + \mu_{im} + \nu_{st} + \varepsilon_{imt}$$

Mechanism

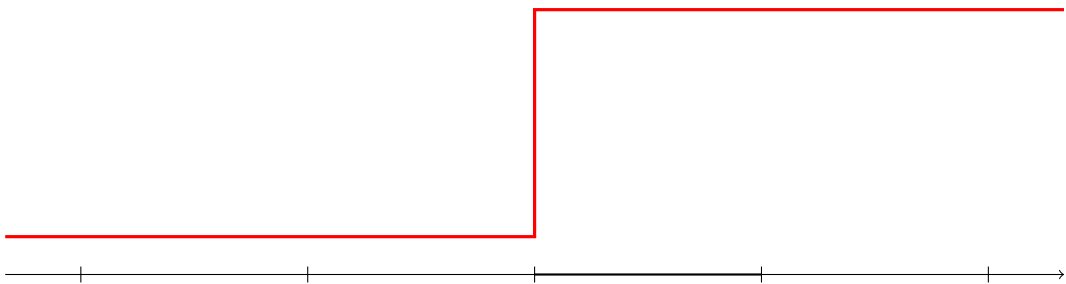
Three potential benefits

1. Better firm-specific skills and loyalty
2. Better general management skills
3. Reorganization

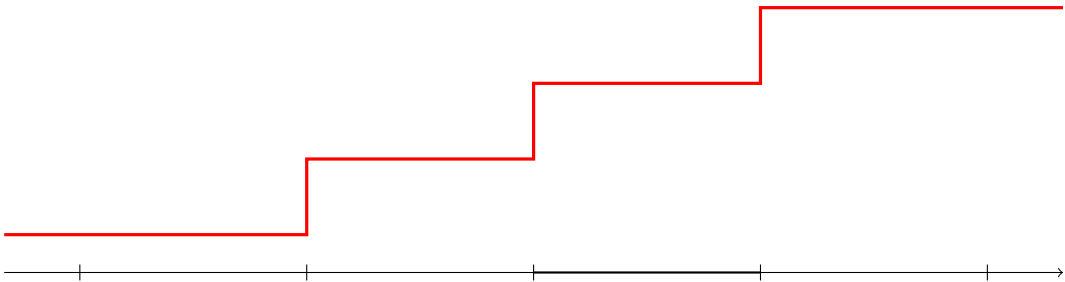
Specific skills



Transferable skills



Reorganization



Identification concerns

- Reverse causality: Expats come to firms with good prospects.
  - no plausible IV with strong first stage (source countries, EU accession, bilingual schools)
- Omitted variables: Expats are just a signal of strong owner attention.

Estimates

Foreign firms are better in every respect (OLS estimates)

	(1) lnL	(2) lnKL	(3) lnQL	(4) exporter
Foreign owner (dummy)	0.401***	0.602***	0.664***	0.350***
	(0.021)	(0.032)	(0.023)	(0.007)
Expat manager (dummy)	0.016	0.073*	-0.076***	0.050***
	(0.025)	(0.041)	(0.028)	(0.008)
R^2	0.069	0.166	0.235	0.190
Number of observations	368,493	368,493	368,493	368,493

Notes: All specifications control for industry-year fixed effects and firm age. Standard errors, clustered by firm, are reported in parantheses. Coefficients significantly different from zero at 1, 5 and 10 percent are marked by ***, ** and *, respectively.

Foreign takeover is associated with higher capital intensity, productivity and exporting (firm FE estimates)

	(1) lnL	(2) lnKL	(3) lnQL	(4) exporter
Foreign owner (dummy)	-0.031	0.142***	0.080***	0.030***
	(0.029)	(0.037)	(0.021)	(0.011)
Expat manager (dummy)	-0.039***	0.021	0.015	0.010***
	(0.012)	(0.014)	(0.009)	(0.004)
R^2	0.107	0.184	0.285	0.047
Number of observations	368,493	368,493	368,493	368,493

Notes: All specifications control for industry-year and firm fixed effects as well as firm age. Standard errors, clustered by firm, are reported in parantheses. Coefficients significantly different from zero at 1, 5 and 10 percent are marked by ***, ** and *, respectively.

Foreign takeover is associated with higher productivity (firm FE estimates on acquisition sample only)

	(1) lnL	(2) lnKL	(3) lnQL	(4) exporter
Foreign owner (dummy)	-0.004	0.009	0.062**	0.010
	(0.037)	(0.046)	(0.026)	(0.012)
Expat manager (dummy)	-0.002	0.004	0.123***	0.032***
	(0.035)	(0.039)	(0.024)	(0.010)
R^2	0.101	0.210	0.283	0.050
Number of observations	288,264	288,264	288,264	288,264

Notes: All specifications control for industry-year and firm fixed effects. Standard errors, clustered by firm, are reported in parantheses. Coefficients significantly different from zero at 1, 5 and 10 percent are marked by ***, ** and *, respectively.

Selection: Better, more global firms receive expat CEOs

	(1) Selection	(2) Persistence	(3) Local	(4) Expat
Foreign owner (dummy)	0.484***	0.347***	0.350***	
	(0.007)	(0.008)	(0.008)	
Previous manager expat (dummy)		0.264***		
		(0.011)		
Exporting firm (dummy)	0.031***	0.022***	0.024***	0.019
	(0.005)	(0.005)	(0.004)	(0.018)
Employment (log)	0.007***	0.005***	0.002	0.011**
	(0.002)	(0.002)	(0.002)	(0.006)
Capital per worker (log)	0.004***	0.003**	0.003***	0.000
	(0.002)	(0.001)	(0.001)	(0.005)
Revenue per worker (log)	0.006***	0.004*	-0.000	0.016***
	(0.002)	(0.002)	(0.002)	(0.006)
R^2	0.404	0.445	0.314	0.036
Number of observations	31,482	31,482	24,556	6,926

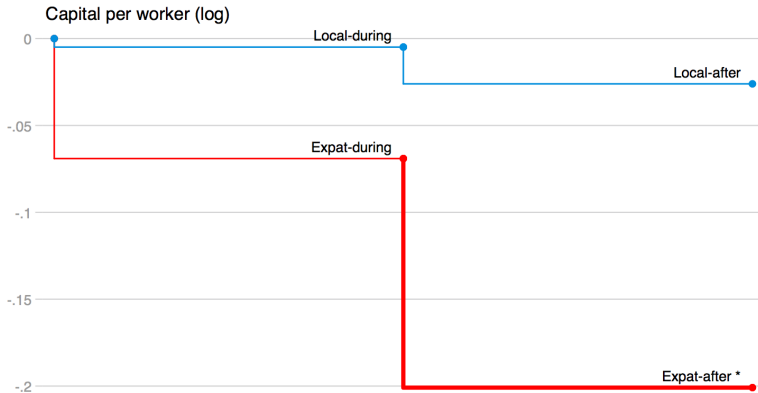
Manager-level estimates on acquisitions sample

	(1) lnL	(2) lnKL	(3) lnQL	(4) exporter
Foreign owner (dummy)	0.038	0.018	0.072***	0.022*
	(0.038)	(0.049)	(0.027)	(0.013)
During manager tenure (dummy)	-0.048***	-0.001	0.036***	-0.007**
	(0.011)	(0.013)	(0.008)	(0.004)
After manager tenure (dummy)	-0.209***	-0.018	0.065***	-0.025***
	(0.020)	(0.023)	(0.014)	(0.006)
During expat manager (dummy)	-0.006	-0.083	0.145***	0.035***
	(0.043)	(0.052)	(0.029)	(0.013)
After expat manager (dummy)	0.079	-0.189***	0.210***	0.039**
	(0.055)	(0.068)	(0.038)	(0.018)
R^2	0.102	0.173	0.232	0.048
Number of observations	354,772	354,772	354,772	354,772

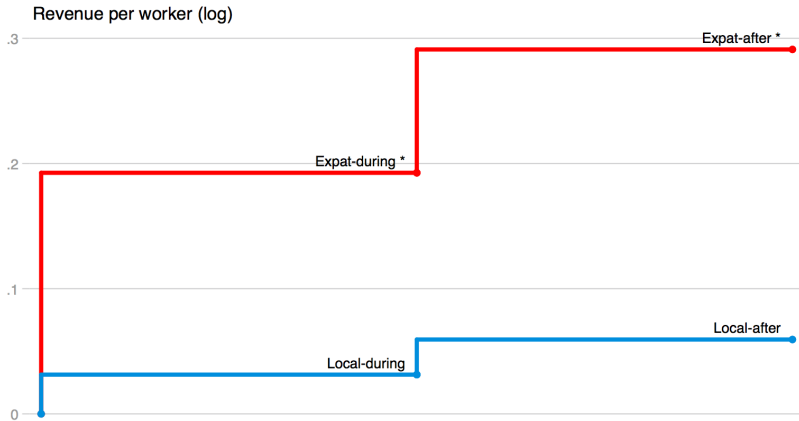
Notes: All specifications control for industry-year, firm age and manager spell fixed effects.

Local and expat managers reduce employment by same amount

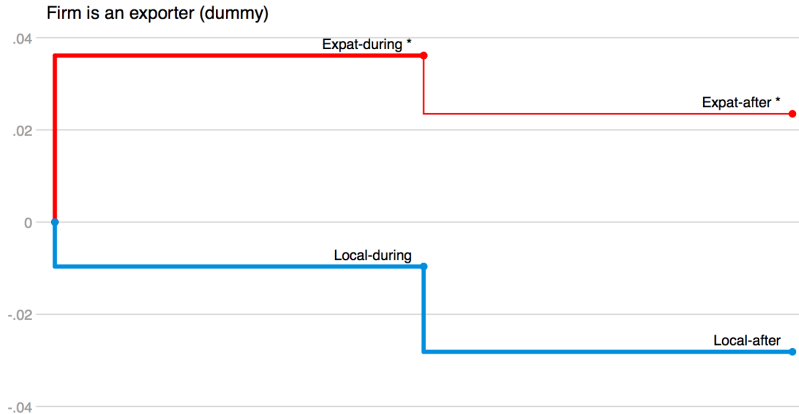
Capital intensity drops after first expat manager leaves



Expat managers improve revenue per worker by 15–25 percent

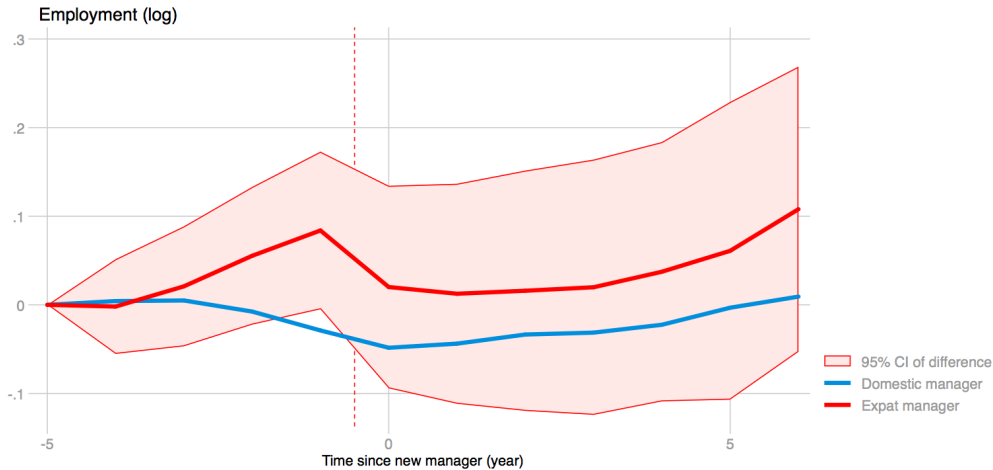


Expat managers increase probability of exporting by 3pp

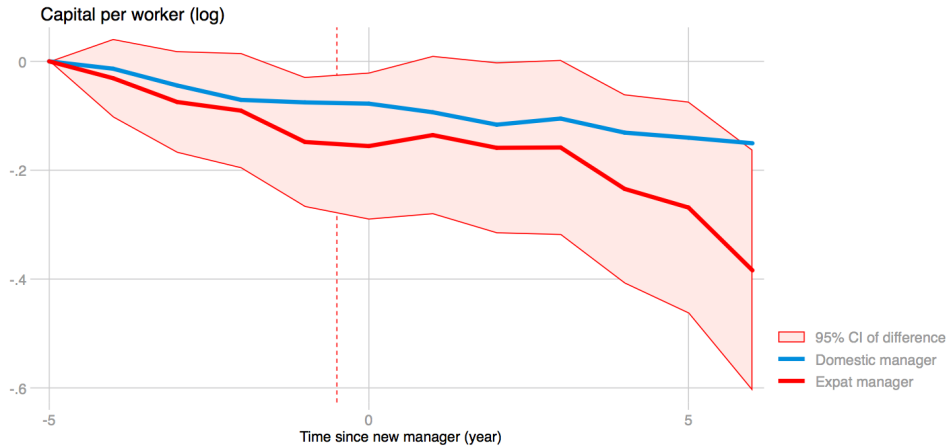


Event studies

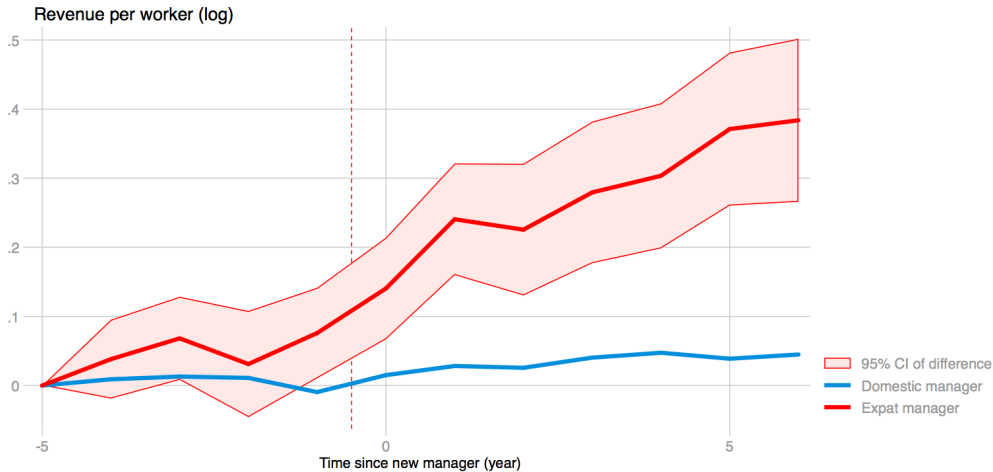
Expat managers come to somewhat faster growing firms



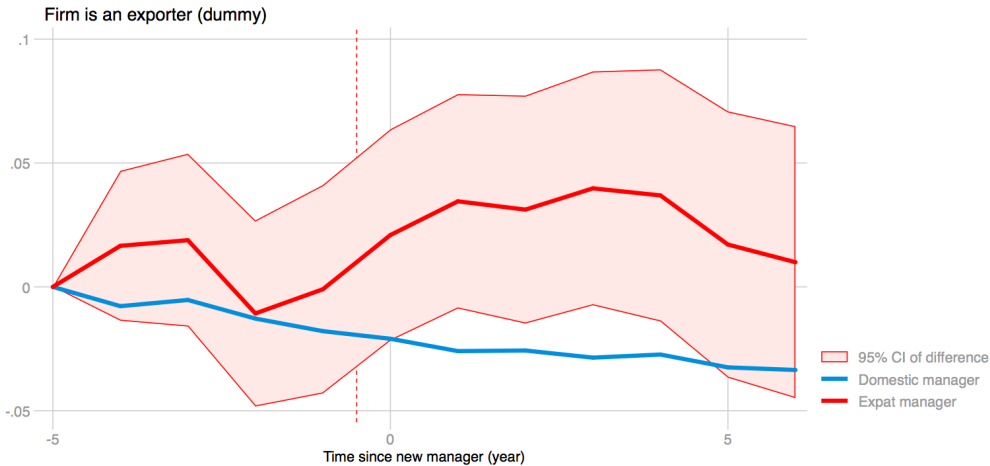
No significant changes in capital per worker



Expat managers have persistent effect on revenue per worker



Expat managers have temporary effect on likelihood of exporting



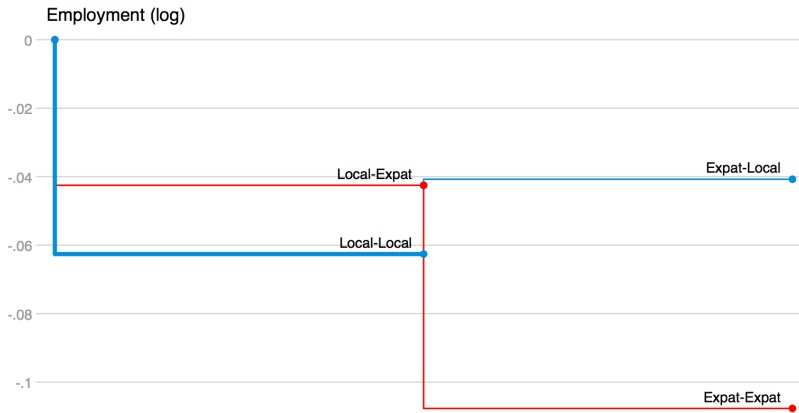
Estimates from manager switches

Estimating equation

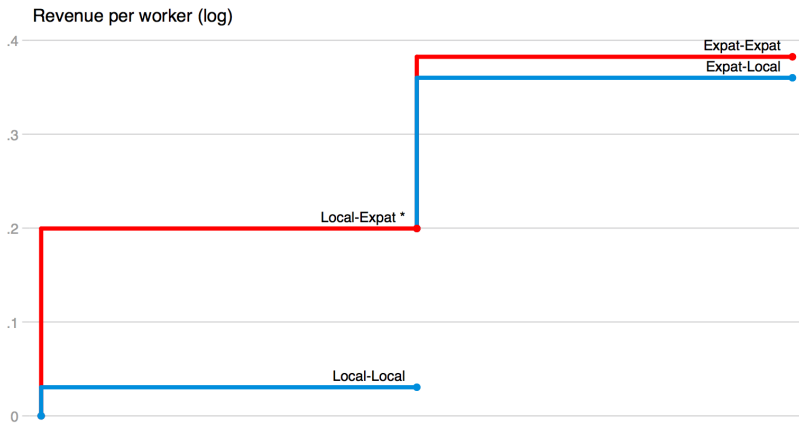
X_m: manager m is expat
X_{m-1}: previous manager is expat
omit $t > T_{im}$ years

$$Y_{imt} = \sum_{j=0,1} \sum_{k=0,1} \beta_{jk} I(X_{m-1} = j) I(X_m = k) I(t \in T_{im}) + f(\text{age}_{it}) + \mu_{im} + \nu_{st} + \varepsilon_{imt}$$

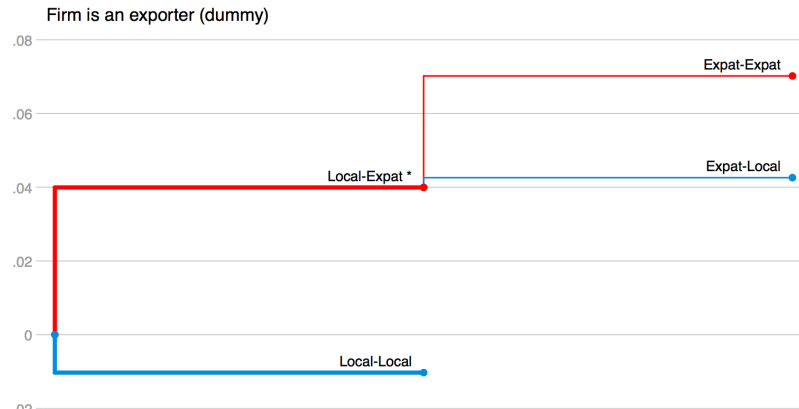
All reorganization results in loss of employment



Productivity effect of expats remains after they leave



Exporting effect of expats remains after they leave



Expats help start exporting, but have limited effect on continuation

	(1) Start	(2) Continue	(3) Domestic	(4) Global
Foreign owner (dummy)	0.033**	-0.013	0.019	
	(0.017)	(0.016)	(0.018)	
During manager tenure (dummy)	0.029***	-0.069***	0.011**	-0.012
	(0.004)	(0.005)	(0.004)	(0.019)
After manager tenure (dummy)	0.030***	-0.104***	0.005	-0.026
	(0.006)	(0.009)	(0.007)	(0.030)
During expat manager (dummy)	0.109***	0.065***	0.141***	0.031
	(0.029)	(0.014)	(0.034)	(0.022)
After expat manager (dummy)	0.115***	0.087***	0.131***	0.067**
	(0.041)	(0.019)	(0.047)	(0.033)
R^2	0.043	0.068	0.052	0.035
Number of observations	250,474	204,875	128,152	7,485

Notes: All specifications control for industry-year fixed effects and firm age. Standard errors,

Interpretation

Interpretation

Three alternative explanations

1. Firm-specific skills
   - no substantial heterogeneity with initial firm characteristics other than exporting
2. General skills
   - labor productivity improvement has persistent effect
3. Reorganization
   - effects of domestic change in management much smaller

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

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?