Learning the Ropes? Executive Experience and Location Choices of Multinational Firms

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Motivation

- What makes firms invest in foreign countries?
- For firms, reaching foreign markets is a difficult and risky process.
- Many factors intervene: distance, labor costs, country size, quality of institutions, etc.
- Beyond these well-known determinants, **anecdotal evidence** suggests that **executives** are key to firm performance in international markets.

  > "*Hans-Peter Kuhnert and Koichiro Fukumoto are important appointments for Black Box as they bring extensive experience and add the necessary leadership that will help [the firm] to drive sales growth for the key Europe Middle East and Africa region and Japanese markets.*" (source: Business Wire)

- Yet, **systematic evidence** on this remains scarce, be it in economics, international business, and management.

The paper in a nutshell

- This paper focuses on one particular asset of executives: their **experience in managing multinational activities**. It examines whether executives acquire country-specific knowledge and, thereby, help firms expand overseas.

- In the first part of the paper, I construct a **rich database** on
  - financial statements,
  - executives,
  - and foreign subsidiaries

  of companies listed on the S&P index between 1993 and 2013.

- Armed with this database, I then conduct an **event study**. I scrutinize how a firm's network of subsidiaries in a particular country evolves when it hires an executive having formerly worked with this country.

Preview of the results

- The results confirm that executive experience **fosters** the development of multinational enterprises (MNEs).
  - Appointing an executive who has worked for a company established in country *c* at the time…
  - … increases the probability to report subsidiaries in this country by 2.3 percentage points.
- The effect is corroborated by **a series of robustness checks** and endogeneity is addressed in 4 complementary exercises.
- Additional findings:
  - Only **country-specific** experience is relevant.
  - Stronger effect for **top executives**.
  - The findings also hold at the **intensive margin**.
  - **Compensation premium** for executives used to oversee multinational operations.
  - Same pattern for **tax havens** $\rightarrow$ crucial policy implications for corporate tax avoidance.

Literature

- **Determinants of foreign direct investments (FDIs)** (e.g., Blonigen and Piger, 2014)
  - Firms are treated as "black-box" entities and the nature of the fixed cost of FDIs is vague.
  - New mechanism whereby FDI activities spill over across firms.
- **Management and firm performance in international markets** (e.g., Mion and Opromolla, 2014; Le and Kroll, 2017)
  - In economics, studies concentrate on firm exports and imports.
  - In international business, studies look at executives' international experience broadly defined.
- **Differences in wages across firms/compensations across executives** (e.g., Heyman et al., 2007; Gabaix and Landier, 2008)
  - Experience in supervising operations in foreign countries matters.
  - The multinational wage premium could be inflated.
- **Determinants of corporate tax avoidance and profit shifting** (e.g., Wang et al., 2020; Souillard, 2021)
  - Executives gain knowledge in profit shifting.
  - Profit shifting strategies disseminate through executive mobility.

Outline of the talk

1. Introduction
2. Data
3. Main result
4. Endogeneity
5. Additional results
6. Conclusion

Outline of the talk

Data sources

Compustat

- Consolidated financial statements of publicly listed firms in North America since 1950.
- Assets, sales, pre-tax income, employment, etc.
- These companies are few in number but they are the most productive and the most likely to engage in FDIs (e.g., Helpman et al., 2004).

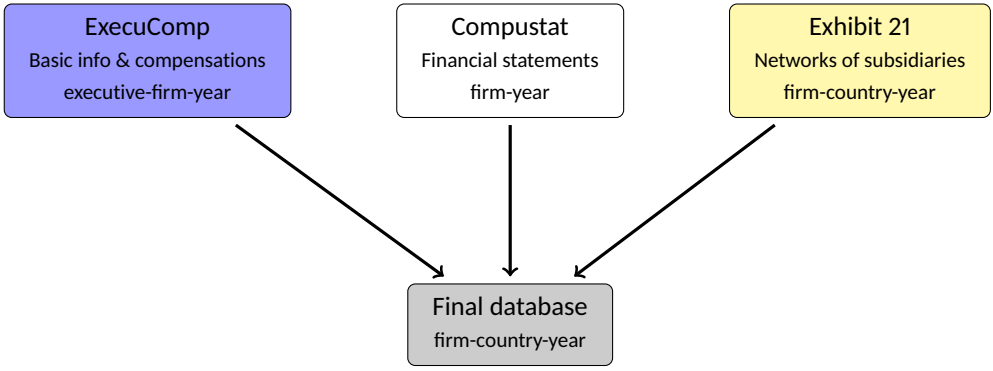
ExecuComp

- Basic info, title, and compensation of executives in S&P 1500 firms since 1992.
- These firms account for 90 percent of US market capitalization.

Exhibit 21

- The SEC requires US-listed firms to disclose every year a list of their subsidiaries.
- The reports are electronically filed since 1993 and available on the EDGAR platform.
- I use a dataset that covers the 1993-2013 period. ▸ Example

Compilation of the database



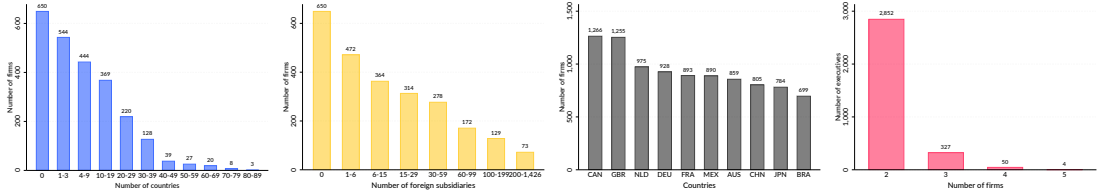
The database contains 2 **key variables**.

- The number of subsidiaries of firm *i* in country *c* and year *t*.
- The number of executives in firm *i* and year *t* already used to run operations in country *c* before joining firm *i*.

Final sample

- **2,452 S&P 1500 firms** operating between 1993 and 2013.
- **3,233 executives** working for at least 2 of these firms between 1993 and 2013.

Figure 1 – Summary statistics



(a) Presence of firms in foreign countries (1)

(b) Presence of US-listed firms in tax havens (2)

(c) Top 10 foreign countries

(d) Presence of executives in companies

Outline of the talk

Identification strategy

The effect of executive experience on FDIs is estimated with a **linear probability model**:

$$FDI_{i,c,t} = \alpha TREAT_{i,c,t} + \mu_{i,t} + \upsilon_{c,t} + \gamma_{i,c} + \epsilon_{i,c,t} \qquad (1)$$

- $FDI_{i,c,t}$: dummy equal to 1 if firm *i* has at least one subsidiary in country *c* and year *t*.
- $TREAT_{i,c,t}$: number of executives in firm *i* and year *t* who have already managed multinational activities in country *c* before joining firm *i*.
- $\mu_{i,t}$: firm- and sector-year determinants of FDIs (e.g., productivity).
- $\upsilon_{c,t}$: country-year factors influencing FDIs (e.g., size).
- $\gamma_{i,c}$: firm-country time-invariant causes of FDIs (e.g., distance between firm *i*'s HQs and foreign country *c*).

→ The three-way fixed effects **neutralize** numerous **confounding variables**.

Benchmark result

Table 1 – Regression results of equation (1)

Dependent variable	$FDI_{i,c,t}$
$TREAT_{i,c,t}$	0.023^{a}
	(0.003)
Average probability	0.044
Firm-year FEs	Yes
Country-year FEs	Yes
Firm-country FEs	Yes
R^2	0.766
No. of obs.	3,138,408

Notes: The standard error, in parentheses, is clustered at the firm-year level. $^{d}p < 0.15$, $^{c}p < 0.10$, $^{b}p < 0.05$, $^{a}p < 0.01$.

The effect is **asymmetric**: departures of executives are not associated with changes in FDIs. ▸ Table

Sensitivity analysis

- ✓ Removing in turn one foreign country at a time. ▸ Graph
- ✓ Selecting 30 random foreign countries. ▸ Table
- ✓ Eliminating firms entering or exiting the database between 1993 and 2013. ▸ Table
- ✓ Using binary models (logit and probit). ▸ Table
- ✓ Using exclusively the 2003-2013 period. ▸ Table
- ✓ Controlling for executives' origin through web scraping and machine learning techniques. ▸ Table

Outline of the talk

Endogeneity

Many sources of **endogeneity**!

- $TREAT_{i,c,t}$ can be correlated with unobserved firm-country-year investments: “omitted variables.”
- Firms might decide to enter a foreign country before recruiting the executive: “reverse causality.”

Finding purely exogenous variations in $TREAT_{i,c,t}$ is challenging.

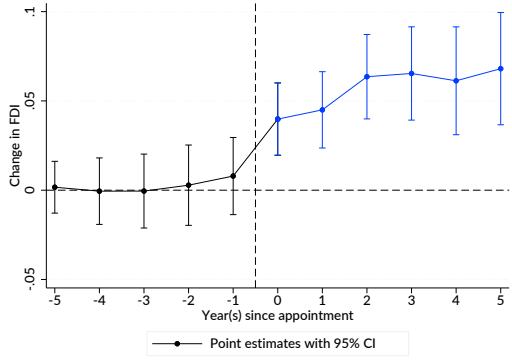
Endogeneity should not be seen as a **fundamental problem** in this paper.

- If firms hire experienced executives after deciding to enter new markets, it is not a coincidence.
- Recruiting such executives is costly and firms strategically select their executives.

However, I carry out 4 exercises to support a **causal** interpretation of the results.

Endogeneity: exercise 1

A placebo test



Takeaways: The results cannot be explained by pre-existing trends + the treatment variable is unlikely to be correlated with *past* unobserved firm-country-year shocks.

Endogeneity: exercise 2

An instrumental variable approach

- **Idea**: Instrument $TREAT_{i,c,t}$ with its 3-year lag (cf. Mion and Opromolla, 2014; Mion et al., 2019).
- **Identifying assumption**: New appointments have no effect after 3 years.
- **Results**: First-stage F-statistic around 200 and $\hat{\alpha} = 0.036^{b}$.
- **Take-away**: If anything, the correlation between the number of experienced executives and *current* firm-country-year shocks does not drive the benchmark results.
- **Caveat**: The hypothesis above might be too strong, even though the previous figure goes in this direction.

Endogeneity: exercise 3

An approach based on “unexpected” movements of executives

- **Idea**: There is no or little correlation between $TREAT_{i,c,t}$ and $\epsilon_{i,c,t}$ when changes in $TREAT_{i,c,t}$ stem from “unexpected events”: deaths, early layoffs/abrupt resignations, and retirements.
- **Identifying assumption**: Changes in $TREAT_{i,c,t}$ are exogenous if they follow these events (unanticipated or initiated by executives themselves).
- **Methodology**: Collect and scrutinize official documents (e.g., SEC and FBI) as well as press releases, newswires, and newspapers (e.g., firms’ websites, Wall Street Journal, New York Times, Business Wire, PR Newswire) to investigate the causes of executive mobility across firms.
- **Results:** $\hat{\alpha} = 0.024^{a}$.
- **Caveat**: Again, the identification relies on a strong assumption.

Endogeneity: exercise 4

The preferred approach, based on the granting of PNTR status to China in 2000

- **Idea**: Policy uncertainty dampens trade, corporate investment, and FDIs + the granting of PNTR status to China in late 2000 substantially reduced trade policy uncertainty (e.g., Gulen and Ion, 2016; Handley and Limao, 2017; Wu et al., 2020).

- **Predictions**: (i) Firms operating in the most exposed sectors invested relatively more in China in response to the shock (literature). (ii) The reaction should be more pronounced for firms having managers familiar with China (this paper).

- **Methodology**: I use a subsample of firms for which $TREAT_i$ is constant between 1995 and 2005 and regress:

$$\begin{aligned} FDI_{i,t} &= \alpha TREAT_i \times TPU_{i,j,t} + \beta TPU_{i,j,t} + \mu_i + \upsilon_t + \epsilon_{i,t} \\ \text{with } TPU_{i,j,t} &= 1_{t \geq 2001} \left(NNTR_{i,j,1999} - NTR_{i,j,1999} \right) \end{aligned}$$

- **Results:** $\hat{\alpha}$ = 0.585[d] and $\hat{\beta}$ = 0.289[a].

Outline of the talk

Additional results: exercises 1, 2, and 3

Country-specific experience, heterogeneous effects across executives, intensive margin of FDIs

- Does FDI-related knowledge have to be **country-specific** to help firms penetrate new destinations?
  - Replace firm-year FEs with a variable measuring multinational experience broadly defined.
  - In the same vein, inclusion of a variable on multinational experience at the continent level.

  → Only country-specific experience is determinant. ▸ Table

- Is the effect the **same for all executives**?
  - Distinction between CEOs, CFOs, COOs, and CMOs, and the other executives.

  → The average effect is actually attributable to top C-level executives. ▸ Table

- Does the effect hold at the **intensive margin**?
  - $FDI_{i,c,t}$: now, the number of subsidiaries (regressed conditional on $FDI_{i,c,t} \geq 1$).

  → Similar effect at the intensive margin. ▸ Table

Additional results: exercises 4 and 5

Compensations and the case of tax havens

- Does multinational experience translate into **higher compensations** all else equal?
  - Rich data on executive compensation (salary, bonuses, stock and option awards, non-equity incentive plans, etc).
  - → Experience in managing multinational activities entails a 37.4 percent premium. ▸ Graph ▸ Table

- Quid of **tax havens**?
  - Disproportionate number of firms in tax havens given their size and remoteness. ▸ Graph
  - 2 standard classifications: Hines and Rice (1994) and Dyreng and Lindsey (2009).
  - → The effect remains positive and carries important policy implications. ▸ Table

Outline of the talk

Conclusion

- I build and exploit a database on S&P 1500 firms' foreign subsidiaries and executives between 1993 and 2013.
- With a diff-in-diff approach, I assess the effect of executive **international experience** on **multinational firms' location choices**.
- The results confirm that **top executives** acquire **country-specific knowledge**, an asset valuable in the labor market, and help their current firm **expand** in the countries they have worked with.
- Example of **policy implication**: Inspecting movements of executives could allow public authorities to better predict firms' future use of tax havens and thereby curb profit shifting.

Thank you for your attention!

Appendix

Figure 2 – Non-exhaustive list of the subsidiaries disclosed by Johnson & Johnson in 2012

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EX-21 5 ex21-subsidiariesxform10kk.htm SUBSIDIARIES

EXHIBIT 21

SUBSIDIARIES

Johnson & Johnson, a New Jersey corporation, had the domestic and international subsidiaries shown below as of December 30, 2012. Certain U.S. subsidiaries and international subsidiaries are not named because they were not significant in the aggregate. Johnson & Johnson has no parent.

Name of Subsidiary	Jurisdiction of Organization
U.S. Subsidiaries:	
Acclarent, Inc.	Delaware
ALZA Corporation	Delaware
Animas Corporation	Delaware
Biosense Webster, Inc.	California
CNA Development LLC	Delaware
Codman & Shurtleff, Inc.	New Jersey
Cordis Corporation	Florida
Cordis International Corporation	Delaware
Cordis LLC	Delaware
DePuy Mitek Holding Corporation	Delaware
DePuy Mitek, LLC	Massachusetts
DePuy Orthopaedics, Inc.	Indiana
Rutan Realty LLC	New Jersey
Scios Inc.	Delaware
SterilMed, Inc.	Minnesota
Synthes USA Products, LLC	Delaware
Synthes USA, LLC	Delaware
Synthes, Inc.	Delaware
The Anspach Effort, LLC	Florida
Wellness & Prevention, Inc.	Michigan
International Subsidiaries:	
Almaco Holding AG	Switzerland
Apsis	France
Apsis Germany GmbH	Germany
Beijing Dabao Cosmetics Co., Ltd.	China
Berna Biotech Korea Corporation	Korea, Republic of
Berna Rhein B.V.	Netherlands
Biosense Webster (Israel) Ltd.	Israel
Cilag Advanced Technologies GmbH	Switzerland
Cilag AG	Switzerland
Cilag GmbH International	Switzerland

Figure 3 – Robustness check: dropping one country at a time

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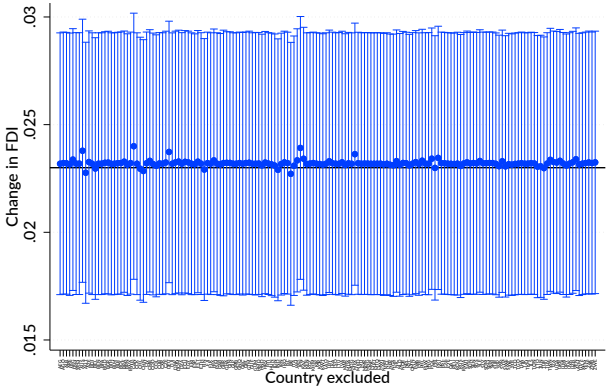

Table 2 – Regression results of equation (1): asymmetric effects

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Dependent variable	Exit $FDI_{i,c,t}$	Entry $FDI_{i,c,t}$
$TREAT_{i,c,t}$	0.013	0.020^{a}
	(0.068)	(0.005)
Firm-year FEs	Yes	Yes
Country-year FEs	Yes	Yes
Firm-country FEs	Yes	Yes
R^2	0.766	0.766
No. of obs.	3,138,408	3,138,408

Notes: This table reports the regression results of equation (1). *TREAT* is slightly modified to compare the effect of arrivals and departures of experienced executives on FDIs. Standard errors, in parentheses, are clustered at the firm-year level. $^{d}p < 0.15$, $^{c}p < 0.10$, $^{b}p < 0.05$, $^{a}p < 0.01$.

Table 3 – Regression results of equation (1): robustness checks

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Dependent variable	$FDI_{i,c,t}$
Panel A: benchmark estimate	
$TREAT_{i,c,t}$	0.023^{a}
Panel B1: 30 random foreign countries	
$TREAT_{i,c,t}$	0.026^{a}
Panel B2: elimination of firms entering/exiting the sample	
$TREAT_{i,c,t}$	0.027^{a}
Panel B3: binary models	
$TREAT_{i,c,t}$ (logit)	0.210^{a}
$TREAT_{i,c,t}$ (probit)	0.176^{a}
Panel B4: 2003-2013 period	
$TREAT_{i,c,t}$	0.018^{a}
Panel B5: disentangling experience and origin	
$TREAT_{i,c,t}$ (FamilySearch)	0.023^{a}
$origins_{i,c,t}$ (FamilySearch)	0.006^{a}
$TREAT_{i,c,t}$ (NamePrism)	0.023^{a}
$origins_{i,c,t}$ (NamePrism)	0.004^{d}

Notes: Standard errors, not reported for space, are clustered at the firm-year level. $^{d}p < 0.15$, $^{c}p < 0.10$, $^{b}p < 0.05$, $^{a}p < 0.01$.

Table 4 – Additional results

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Dependent variable	$FDI_{i,c,t}$
Panel A1: global experience in multinational activities	
$TREAT_{i,c,t}$	0.025^{a}
$TREAT_{i,t}$	0.002^{b}
Panel A2: experience in multinational activities with other countries from the same continent	
$TREAT_{i,c,t}$	0.022^{a}
$TREAT^{continent}_{i,c,t}$	$4.569\text{e-}4^{a}$
Panel B: CEOs/CFOs/CMOs/COOs and the rest of executives	
$TREAT_{i,c,t}$	0.011
$TREAT^{TE}_{i,c,t}$	0.029^{a}
Panel C: Intensive margin	
$TREAT_{i,c,t}$ (OLS)	0.178^{b}
$TREAT_{i,c,t}$ (PPML)	0.023^{b}
Panel D: tax havens	
$TREAT_{i,c,t}$ (50 tax havens)	0.027^{b}
$TREAT_{i,c,t}$ (44 tax havens)	0.025^{b}

Notes: $^{d}p < 0.15$, $^{c}p < 0.10$, $^{b}p < 0.05$, $^{a}p < 0.01$.

Figure 4 – Executive compensation

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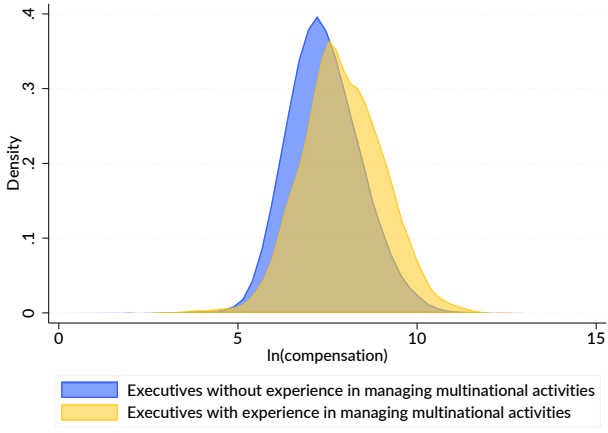

Table 5 – Executive pay and multinational experience

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Dependent variable	$log\left(compensation_{e,i,t}\right)$
$FDI\ experience_{e,i,t}$	0.374^{a}
	(0.071)
$age_{e,t}$	-0.007
	(0.007)
$firm\ experience_{e,i,t}$	0.014^{c}
	(0.007)
$CEO_{e,i,t}$	0.405^{a}
	(0.016)
$CFO_{e,i,t}$	0.226^{a}
	(0.019)
Executive FEs	Yes
Firm-year FEs	Yes
R^2	0.912
No. of obs.	54,542

Notes: This table evaluates the explores the effect of multinational experience on executive pay. Standard errors, in parentheses, are clustered at the firm-year level. $^{d}p < 0.15$, $^{c}p < 0.10$, $^{b}p < 0.05$, $^{a}p < 0.01$.

Figure 5 – The particular case of tax havens

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