

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

Baptiste Souillard

ECARES, SBS-EM, Université Libre de Bruxelles

Society of Labor Economists – Annual Conference

May 15, 2021



Motivation

- A broad question: What makes firms invest in foreign countries?
- For firms, reaching foreign markets is a difficult process.
- This difficulty depends on many factors: e.g., distance, tariffs, institutions.
- Still, only a very few firms – the most productive ones – are able to be multinational.
- Country- and firm-specific determinants aside, 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 remains scarce (even in the international business literature).

The paper in a nutshell

- I focus on one particular attribute of executives: their **experience in managing multinational operations**.
- First, I construct a rich database on S&P 1500 companies'
 - **financial statements**,
 - **executives**,
 - and **subsidiaries**.
- Then, I conduct an **event study**.
- I scrutinize how a firm's presence in a particular country evolves after it has recruited an executive having experience with this country.

Preview of the results

- In line with anecdotal evidence, I find that executive international experience **fosters** firm presence overseas.
 - Hiring an executive who has worked for a company implanted in country c at the time...
 - ... increases the probability to have subsidiaries in this country c by 7 percent.
- The effect is **robust** across multiple specifications and endogeneity, although not a major concern in this particular context, is tackled with 4 complementary exercises (not covered in this talk).
- **Additional findings:**
 - Only country-specific experience is relevant.
 - Stronger effect for C-level executives.
 - Similar pattern at the intensive margin.
 - Compensation premium for executives used to manage multinational operations.
 - Conclusions hold for tax havens → crucial policy implications for profit shifting.

Literature

- **Determinants of FDI** (e.g., Antràs and Yeaple, 2014; Blonigen and Piger, 2014)
 - Firms are treated as “black-box” entities and the nature of the fixed cost of FDI is vague.
 - New mechanism whereby FDI spill over across firms.
- **Management and firm performance in international markets** (e.g., Herrmann and Datta, 2006; Mion and Opromolla, 2014; Le and Kroll, 2017)
 - In economics, studies concentrate on firm exports and imports.
 - In international business, studies look at international experience broadly defined.
- **Differences in wages across firms/compensations across executives** (e.g., Heyman et al., 2007; Gabaix and Landier, 2008)
 - Experience in managing foreign operations 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 develop knowledge in profit shifting.
 - Profit shifting strategies disseminate via executive mobility.

Outline of the talk

- 1 Introduction
- 2 Data
- 3 Main result
- 4 Additional results
- 5 Conclusion

Outline of the talk

1 Introduction

2 Data

3 Main result

4 Additional results

5 Conclusion

Data sources

Compustat

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

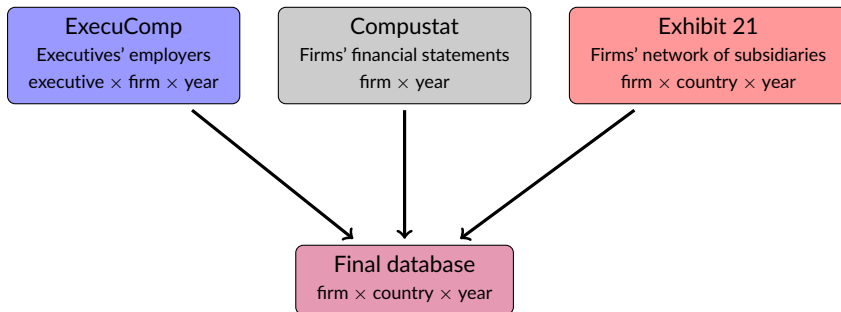
ExecuComp

- 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 in Exhibit 21 of Form 10-K a list of their subsidiaries, be it inside or outside the US.
- These reports are electronically filed since 1993 and available on the EDGAR platform.
- I use a dataset covering the 1993-2014 period. [▶ Example](#)

Compilation of the database



Key variables

- How many subsidiaries in country c .
- How many executives “familiar” with country c , i.e., having been employed by a firm implanted in country c .

Final sample

- **1,858 S&P 1500 firms** operating between 1993 and 2014.
→ Number of subsidiaries in a restricted set of 30 foreign countries.
- **2,446 executives** working for at least 2 of these firms between 1993 and 2014.
→ Experience in managing multinational activities.

► List of countries

► Countries' attractiveness

► Other descriptive statistics

Outline of the talk

- 1 Introduction
- 2 Data
- 3 Main result**
- 4 Additional results
- 5 Conclusion

Econometric exercise

A difference-in-differences equation

I quantify the effect of executive experience on FDI with the **linear probability model**:

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

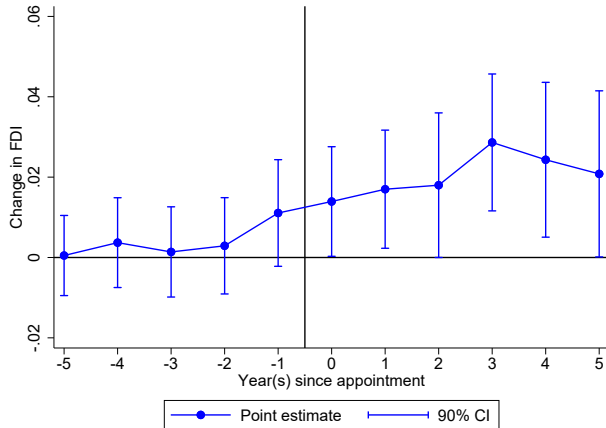
- $FDI_{i,c,t}$: dummy equal to 1 if firm i has at least one subsidiary in country c and year t .
- $TREAT_{i,c,t}$: number of executives in firm i having worked for a firm present in country c at the time.
- $\mu_{i,t}$: firm \times year fixed effects.
- $v_{c,t}$: country \times year fixed effects.
- $\gamma_{i,c}$: firm \times country fixed effects.

Benchmark result

	$FDI_{i,c,t}$
$TREAT_{i,c,t}$	0.015 ^a (0.003)
Average probability	0.229
Firm \times year FEs	Yes
Country \times year FEs	Yes
Firm \times country FEs	Yes
R ²	0.785
Nb. of obs.	478,500

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

Dynamics



Sensitivity analysis

- Removing in turn one country at a time from the regression yields very similar coefficients.
▶ Graph
- Selecting 30 random foreign countries in the database does not affect the findings. ▶ Table
- Using only the 2003-2014 period leads to the same results. ▶ Table
- Using binary models (logit and probit) delivers consistent results. ▶ Table

Endogeneity

Sources of endogeneity

- *TREAT* can be correlated with unobserved firm \times country \times year shocks: omitted variables.
- Firms might (decide to) enter the foreign country first, before recruiting an executive: reverse causality.
- Finding exogenous variations in *TREAT* is challenging.

Is endogeneity a fundamental issue?

- The fact that firms hire experienced executives when they enter new foreign markets is suggestive enough, especially because these executives are “more expensive”.
- Establishing causality is therefore not essential.
- Rather, what seems important is *how* experience stimulates FDI.

Outline of the talk

- 1 Introduction
- 2 Data
- 3 Main result
- 4 Additional results**
- 5 Conclusion

Country-specific knowledge, top executives, and intensive margin

- Does FDI-related knowledge have to be **country-specific** to help firms penetrate new destinations?
 - Replace firm \times year fixed effects with a dummy variable $TREAT_{i,t}$.
 - 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 CEOs, CFOs, COOs, and CMOs. [► Graph](#)
- Does the effect persist at the **intensive margin**?
 - The dependent variable $FDI_{i,c,t}$ now represents the number of subsidiaries and equation (1) is estimated conditional on $FDI_{i,c,t} \geq 1$.
 - Similar effect at the intensive margin. [► Table](#)

More results (2/2)

Compensations and profit shifting

- Does this knowledge translate into **higher compensations** all else equal?
 - Data on executive compensation (salary, bonuses, stock and option awards, long-term incentive plans, and all other pay).
 - Experience in managing multinational activities entails a 11.2 percent premium in the labor market. [▶ Graph](#) [▶ Table](#)
- Do the findings hold for **tax havens**?
 - 2 standard classifications: Hines and Rice (1994) and Dyreng and Lindsey (2009).
 - The effect remains positive and has important policy implications. [▶ Table](#)

Outline of the talk

- 1 Introduction
- 2 Data
- 3 Main result
- 4 Additional results
- 5 Conclusion**

Conclusion

- I build and exploit a database on S&P 1500 firms' subsidiaries and executives between 1993 and 2014.
- With 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 curb profit shifting.

Thank you for your attention!

Questions, suggestions, and comments are welcome:
baptiste.souillard@ulb.be

Full paper and more info about my research:
www.baptistesouillard.com

Example of Exhibit 21 report

(Non-exhaustive) list of the subsidiaries disclosed by Johnson & Johnson 2011

<u>Name of Subsidiary</u>	<u>Jurisdiction of Organization</u>
U.S. Subsidiaries:	
Acclarent, Inc.	Delaware
ALZA Corporation	Delaware
Alza Development Corporation	California
Alza Land Management, Inc.	Delaware
Animas Corporation	Delaware
Biosense Webster, Inc.	California
Centocor Biologics, LLC	Pennsylvania
Centocor Research & Development, Inc.	Pennsylvania
CNA Development LLC	Delaware
Codman & Shurtleff, Inc.	New Jersey
Cordis Corporation	Florida
Cordis International Corporation	Delaware
Cordis LLC	Delaware
Cougar Biotechnology, Inc.	Delaware
Crescendo Pharmaceuticals Corporation	Delaware
Crucell Holdings Inc.	Delaware
DePuy, Inc.	Delaware
DePuy Mitek, Inc.	Massachusetts
DePuy Orthopaedics, Inc.	Indiana
International Subsidiaries:	
Apsis	France
Beijing Dabao Cosmetics Co., Ltd.	China
Berna Biotech Korea Corporation	Korea
Berna Rhein B.V.	Netherlands
Biosense Webster (Israel) Ltd.	Israel
Cilag Advanced Technologies GmbH	Switzerland
Cilag AG	Switzerland

► Back

List of the 30 foreign countries

- Top locations of S&P 1500 firms' subsidiaries worldwide (US excluded).
- Argentina, Australia, Austria, Belgium, Brazil, Canada, Chile, China, Czech Republic, Denmark, France, Germany, Hungary, India, Italy, Israel, Japan, Mexico, the Netherlands, New Zealand, Norway, Poland, Republic of Korea, Russia, South Africa, Spain, Sweden, Taiwan, Thailand, and the United Kingdom.
- Tax havens are omitted in the first part of the paper. [▶ Back](#)

Descriptive statistics (foreign countries)

Country	Attractiveness
Canada	68.999
United Kingdom	68.192
Netherlands	53.229
Germany	50.431
France	48.661
Mexico	48.332
Australia	46.878
China	44.133
Japan	42.842
Brazil	38.213
Italy	37.944
India	35.953
Spain	35.630
Belgium	29.279
Republic of Korea	27.503
Sweden	27.018
Argentina	24.704
Austria	21.905
Denmark	21.529

► Back

Descriptive statistics (foreign countries)

Country	Attractiveness
Poland	21.098
Taiwan	20.542
New Zealand	20.183
Thailand	19.860
South Africa	19.699
Chile	18.891
Norway	17.560
Czech Republic	16.846
Hungary	16.577
Russia	16.362
Israel	13.402

► Back

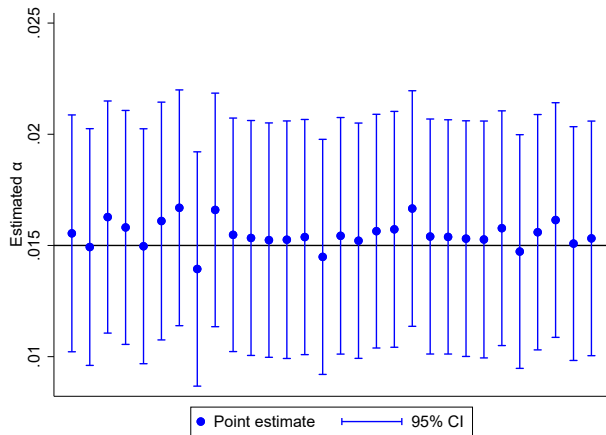
Descriptive statistics (firms)

Firms

Total number of firms	1,858
of which have had at least one subsidiary in one of the 30 foreign countries	1,772
Average number of countries in which they have had subsidiaries (conditional)	10.195
Average number of subsidiaries in foreign countries (conditional)	26.235

► Back

Sensitivity test 1



► Back

Sensitivity test 2

	$FDI_{i,c,t}$
<i>Panel A: 30 randomly drawn foreign countries</i>	
$TREAT_{i,c,t}$	0.027 ^a
<i>Panel B: 2003-2014 period</i>	
$TREAT_{i,c,t}$	0.017 ^a
<i>Panel C: logit and probit</i>	
$TREAT_{i,c,t}$ (logit)	0.074 ^c
$TREAT_{i,c,t}$ (probit)	0.052 ^c

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

► Back

Sensitivity test 3

	$FDI_{i,c,t}$
Panel A: 30 randomly drawn foreign countries	
$TREAT_{i,c,t}$	0.027 ^a
Panel B: 2003-2014 period	
$TREAT_{i,c,t}$	0.017 ^a
Panel C: logit and probit	
$TREAT_{i,c,t}$ (logit)	0.074 ^c
$TREAT_{i,c,t}$ (probit)	0.052 ^c

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

► Back

Sensitivity test 4

	$FDI_{i,c,t}$
Panel A: 30 randomly drawn foreign countries	
$TREAT_{i,c,t}$	0.027 ^a
Panel B: 2003-2014 period	
$TREAT_{i,c,t}$	0.017 ^a
Panel C: logit and probit	
$TREAT_{i,c,t}$ (logit)	0.074 ^c
$TREAT_{i,c,t}$ (probit)	0.052 ^c

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

► Back

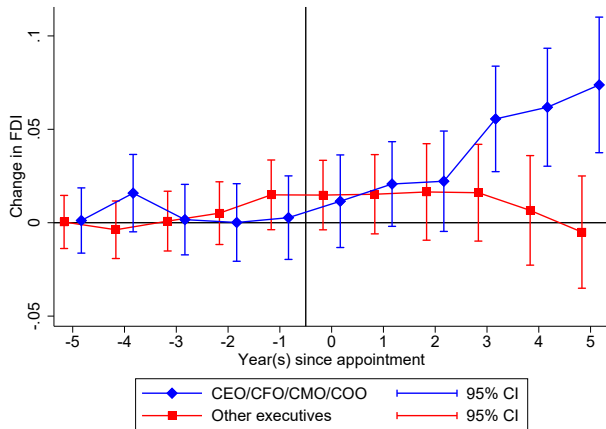
Global versus country-specific international experience

	$FDI_{i,c,t}$
$TREAT_{i,c,t}$	0.020 ^a
$TREAT_{i,t}$	0.006 ^d
Average probability	0.229
Country \times year FEs	Yes
Firm \times country FEs	Yes
R ²	0.692
Nb. of obs.	478,500

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

► Back

C-level executives *versus* the other executives



► Back

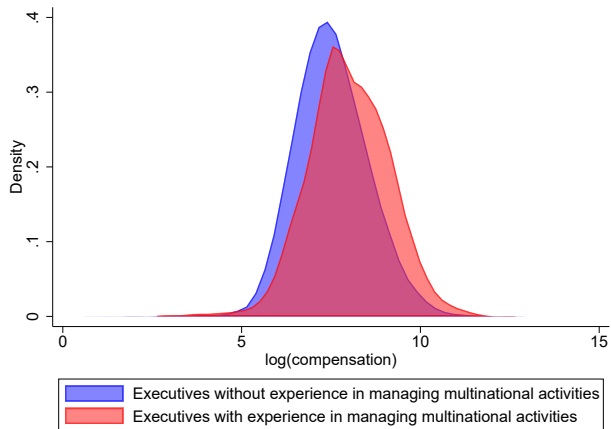
Intensive margin

	$FDI_{i,c,t}$
Panel A: OLS estimator	
$TREAT_{i,c,t}$	0.264 ^a

Notes: Regressions are run conditional on $FDI_{i,c,t} \geq 1$. The standard error is clustered at the firm \times year level. ^d $p < 0.15$, ^c $p < 0.10$, ^b $p < 0.05$, ^a $p < 0.01$.

► Back

Experience and compensation (1/2)



► Back

Experience and compensation (2/2)

	$\log(\text{compensation}_{e,i,t})$
$FDI\ experience_{e,t}$	0.112 ^c
Executive FEs	Yes
Firm FEs	Yes
Year FEs	Yes
R ²	0.775
Nb. of obs.	52,273

Notes: Executive e 's age in year t is included as control. The standard error is clustered at the firm \times year level and is not reported for space. ^d $p < 0.15$, ^c $p < 0.10$, ^b $p < 0.05$, ^a $p < 0.01$.

► Back

The case of tax havens

	$FDI_{i,c,t}$
<i>Panel A: definition of Hines and Rice (1994) and Dyreng and Lindsey (2009)</i>	
$TREAT_{i,c,t}$	0.028 ^a
<i>Panel B: restricted set of small and remote tax havens</i>	
$TREAT_{i,c,t}$	0.024 ^a

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

► Back