Cross-border Investments and Uncertainty: 
Firm-level Evidence of a Reallocation Effect 
Rafael Cezar1, Timothee Gigout2, & Fabien Tripier3

Motivation

How do foreign investors respond to those situations?
Newspapers: Are they right?

Contribution

What we do

- We build a dataset of firm-level outward Foreign Direct Investments between 2000 and 2015 with flows and returns.
- We create a time and country varying measure of uncertainty based on the dispersion of idiosyncratic investment returns.
- We study the effects of uncertainty on FDI flows.
- Newspapers are right ... but they don’t mention the strong heterogeneity of dynamic effects!
- Firms with low ex-ante performance (≠ return) durably lower their foreign investments contrary to high-performing firms.
- Reallocation of relative international positions from lower performing to higher performing firms.
- Consistent with the effect of financial frictions in a CSV model with Risk Shocks.

Intersection of three Literature

- Aggregate FDI data and one dimension of uncertainty:
  - The electoral cycle in Julio et Yoak (2016), the stock market volatility in Gourio et al. (2016),
  - the exchange rate uncertainty in Jeanneert (2016).
- Dispersion of idiosyncratic outcomes as uncertainty:
- Cross-border flows firm-level data:
  - Widely used for “Trade and uncertainty”, e.g. Haudry 2015, De Sousa et al (2016), Hericourt & Nedoncette (2018), but less so for FDI.

Measuring Uncertainty

Let ROJ,j,t be the return of affiliate j operating in country-sector j × k in year t:

\[ ROJ,j,t = \frac{\text{Market Factors}}{\text{Time Invariant Factors}} \]

Then \( \sigma_{j,t} \) is the idiosyncratic performance shock.

Cross country variation

Uncertainty in country j, year t = standard deviation of the idiosyncratic performance shocks \( \sigma_{j,t} \):

\[ \text{DISP}_{j,t} = \left( \frac{1}{T-j} \sum_{t=1}^{T-j} (\sigma_{j,t} - \text{MEAN}_{j,t})^2 \right)^{1/2} \]

Empirical Specification

We use Local Projections as in Jordà (2005) to estimate the effect of a standard increase in Uncertainty on the growth path of French foreign affiliates:

\[ \Delta \text{GDP}_{j,t+h} = \sum_{i=0}^{6} \alpha_{i,j} X_{j,t+1} + \beta_i X_{j,t+1} + \gamma_i \text{DISP}_{j,t} I_{[i_{-1}]} \]

for \( h \in \{-4,6\} \) period ahead. Where \( i \) are parent company bins based on their ex-ante performance:

\[
\begin{align*}
I_{[i_{-1}]} &= \begin{cases} 1 & \text{if } i_{-1} = 100 \setminus P40 \\
0 & \text{otherwise} \end{cases} \\
I_{[P40]} &= \begin{cases} 1 & \text{if } i_{-1} = 100 \setminus P60 \\
0 & \text{otherwise} \end{cases}
\end{align*}
\]

Main Result

- The temporary average effect hides a much more persistent heterogeneous impact.

Quantification

- Average effect is equivalent to about a quarter of the mean growth rate.
- Initial difference between low and high performance parent MNE: 1.3 pcp.
- 3 years later: -0.38 vs. +2.60 pcp: ± 6 pcp. difference.
- Growth rates converge back toward the end of the 6 year window.

Model

- The issue: what is the theory behind such a strong re-allocative effect ?
- Solution: Simple CSV model with risk shocks and heterogeneous monitoring costs
- It generates results qualitatively similar to our empirical model.

Numerical Simulation

- Average effect
- Re-allocative effect