FOREIGN MNES AND DOMESTIC INNOVATIVE CAPABILITES: ARE THERE CONDITIONS FOR REVERSE SPILLOVERS IN SPANISH INDUSTRY?

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FDI is a potential source of skills and new knowledge but…

- MNEs may operate as enclaves in host-countries
- They may find the technological resources they need within the multinational network
- They may encounter a liability of foreignness (LOF) in host countries
- There are "multinationals without advantages" (Fosfuri and Motta, 1999)

Research questions

- RQ1a : Are FS engaged in domestic R&D cooperation to a higher degree than domestic firms?
- RQ1b: Are FS engaged in domestic R&D cooperation to a higher degree than *affiliated* domestic firms?
- RQ2: In priority sectors, are highly innovative FS more cooperative than highly innovative domestic firms?
- RQ· 3: In sectors where Spain has RTA, are highly innovative FS more cooperative than highly innovative domestic firms?

Contributions of our study

- One of the few studies which compare innovation-intensive FS and innovation-intensive domestic firms.
- Analyse FDI in sectors where the host-country displays RTA
- Focuses on FDI in priority sectors for host country (as defined by technological dynamism at the international level).

Literature review

- FDI and local cooperation for innovation. The literature is not conclusive.
- Foreign status is negatively associated with domestic collaboration for innovation in a pan European study (Ebersberger et al 2011).
- Poor embeddedness is common in EU countries that are not technology leaders (Srholec 2009)
- However, Holl and Rama (2014) find a positive association in the Spanish case.

Methodology (1)

- PITEC database. Spanish Innovation Survey, 2004-2008
- Firms: unaffiliated domestic firms, affiliated domestic firms, FS
- Local R&D cooperation: number of different types of cooperative linkages with local partners (e.g. suppliers, customers, etc). Takes values 0 (no domestic cooperation) to 7.
- Innovation: measures whether the company is more innovative than the average company in its two-digit industry. Aggregated index includes internal R&D expenditures, external R&D expenditures, expenditures to acquire external knowledge, R&D personnel per 1000 employees

Methodology (2)
Molero and García 2008 taxonomy

- *Dynamic Specialization* : the sector is dynamic worldwide and the host country displays technological advantages

- *Lost Opportunities:* the sector is dynamic worldwide but the host-country shows technological disadvantages

- *Stationary Specialization:* the host-country shows technological advantages but the sector shows scarce technological dynamism worldwide

- *Retreat:* the host-country has technological disadvantages and the sector displays poor technological dynamism worldwide.

Table 1
Comparison between foreign subsidiaries and all Spanish companies. Total sample and subsamples of innovative firms

	All sectors	Lost Opportunities	Retreat	Dynamic Specialization	Stationary
All firms	S	S	S	S	S
Innovation intensive firms according to internal R&D expenditures	S	S	S	S	S
Innovation intensive firms according to external R&D expenditures	S	S	S*	S	S
Innovation intensive firms according to external knowledge acquisition	S	S*	S*	S*	S
Innovation intensive firms according to R&D personnel per 1000 employees	S	S	S*	S	S
Innovation intensive firms according to the aggregate index	S	S	S	S	S

Comparison of FS and all Spanish firms

- Foreign status increases the probability that a particular firm cooperates with local agents in innovative tasks (RQ 1a).

- The positive and significant association of foreign status and local cooperation is also confirmed for innovation intensive companies.

Table 2
Comparison between foreign subsidiaries and affiliated Spanish companies. Total sample and subsamples of innovative firms

	All firms	Lost Opportunities	Retreat	Dynamic Specialization	Stationary
All firms	S*	S*	S*	S*	S
Innovation intensive firms according to internal R&D expenditures	S	S*	S*	N	S
Innovation intensive firms according to external R&D expenditures	N	S*	N	N	N
Innovation intensive firms according to external knowledge acquisition	S*	N	N	N	S
Innovation intensive firms according to R&D personnel per 1000 workers	S	S*	N	S*	S*
Innovation intensive firms according to the aggregate index	N	N	S*	N	S*

Comparing subsidiaries and affiliated domestic firms (1)

- All firms: In most cases, the association between foreign status and cooperation is negative or not statistically significant
- The sectoral breakdown confirms this point , the only exception being activities included in Stationary sectors
- Sample of innovation intensive firms: Negative association is confirmed in dynamic sectors, Lost Opportunities and Dynamic Specialization
- In non dynamic sectors –Retreat and Stationary– differences between FS and affiliated domestic firms are not statistically significant
- In priority sectors, FS tend to cooperate *more* than SFG. However, highly innovative FS tend to cooperate *less* than highly innovative SFG or do not differ significantly from them (RQ 2).

Comparing subsidiaries and affiliated domestic firms (2)

- FS tend to cooperate *more* than affiliated domestic firms.
- However, highly innovative FS tend to cooperate *less* than highly innovative affiliated domestic firms or do not differ significantly from them (RQ 2).

- The cooperative behavior of FS and affiliated domestic firms does not differ significantly.
- However, highly innovative FS tend to cooperate *more* than highly innovative affiliated domestic firms (RQ 3).

Priority sectors

Traditional sectors

Conclusions

- The general comparison of FS with Spanish firms shows a higher level of cooperative activities of the former
- However, when we control for group affiliation, the situation is substantially different.
- Superior cooperation levels of Spanish affiliated firms are especially evident in dynamic sectors
- Stationary Specialization sectors: innovation intensive FS do perform significantly more local cooperative activities.