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# **Building up Innovation Capabilities in China: The Role of Outward Foreign Direct Investments**

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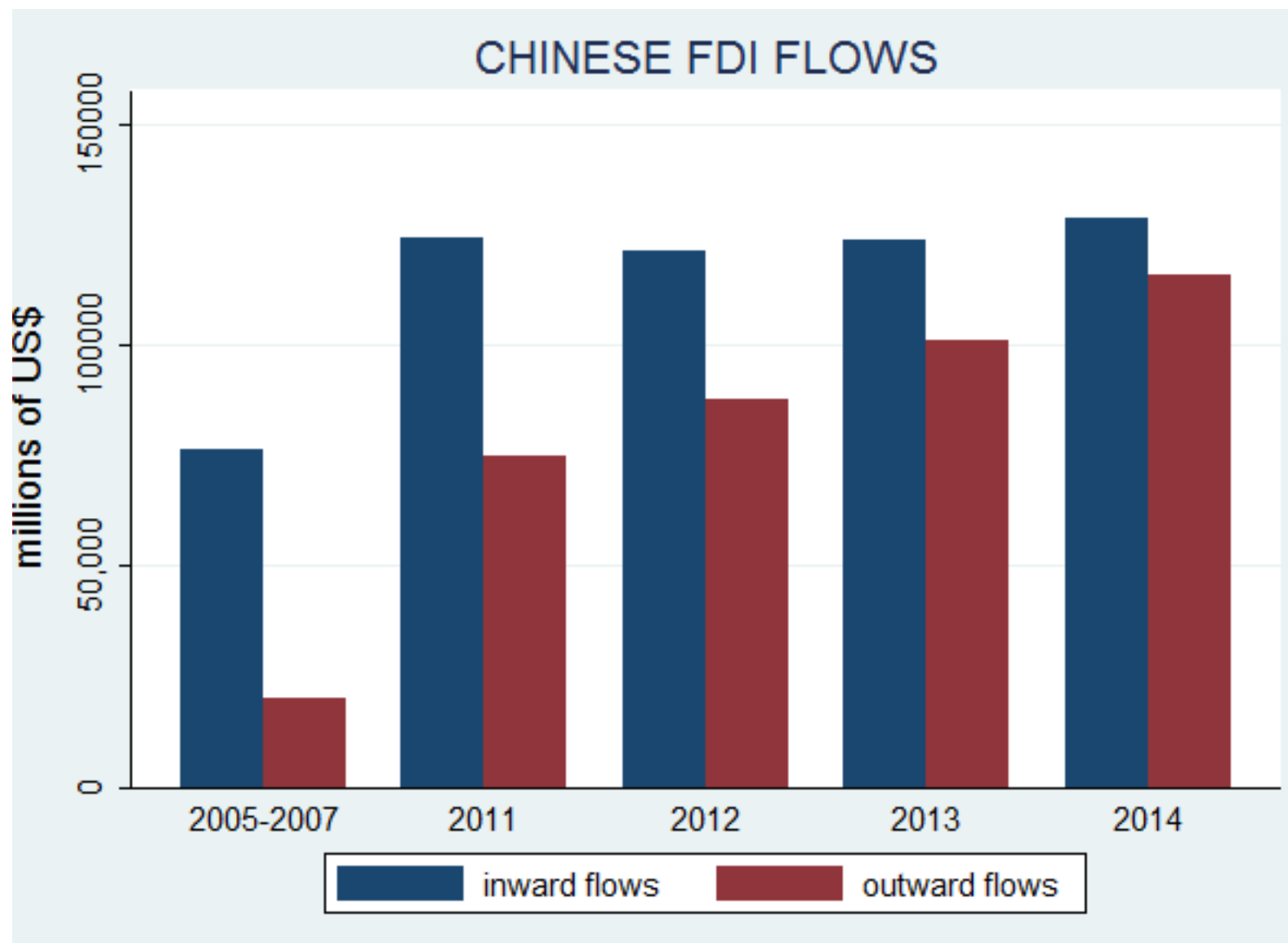
# Outline

- Are **Emerging Market Multinational Enterprises (EMNEs)** important for innovation catch up in emerging countries?
- Some empirical evidence:
  - ① Are EMNEs attracted by innovative regions in Europe?
  - ② Are Chinese (and Indian) acquisitions in Europe, Japan and the USA improving MNEs innovation output?

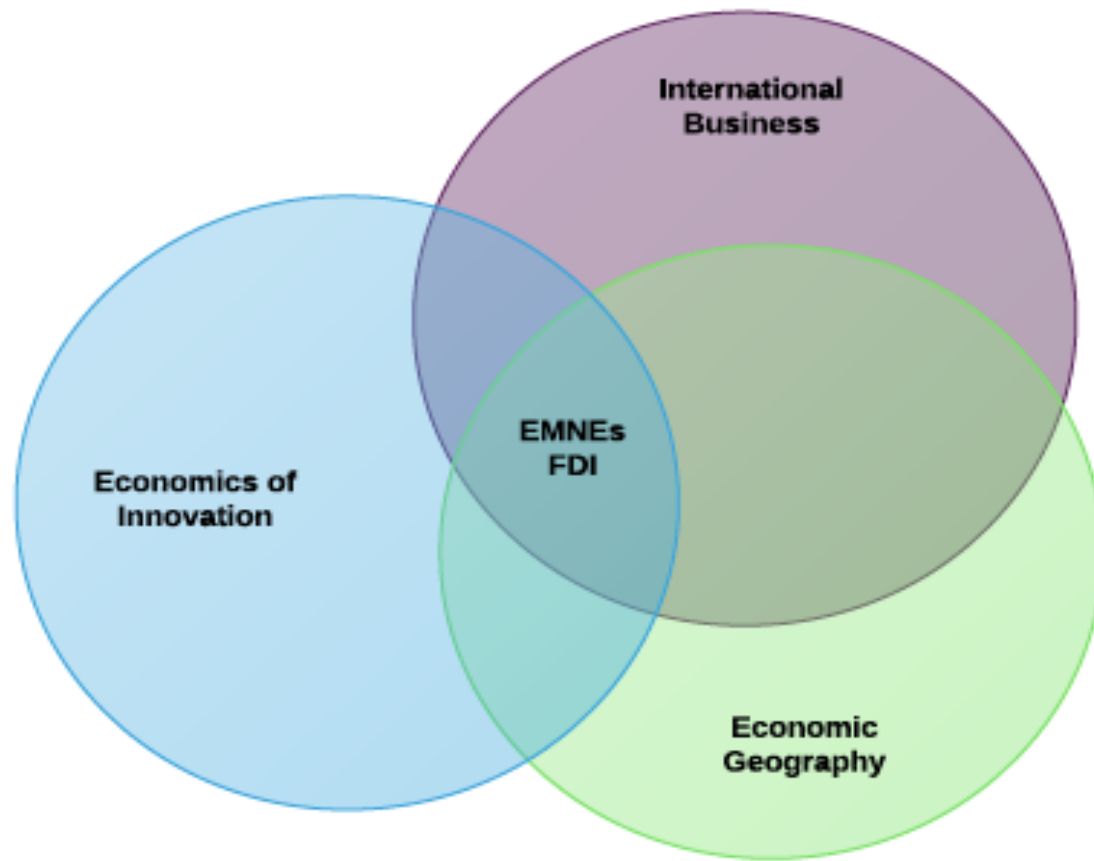
***Multinationals are undoubtedly the most important actors in the worldwide cross-border creation of new technical knowledge***

*(Iammarino & McCann, 2013)*

- **Advanced Country Multinational Enterprises (AMNEs)** have increasingly offshored R&D to emerging countries (Athreye & Cantwell, 2007; Iammarino & McCann, 2013; Fu et al, 2011; Reddy, 2011; Santangelo, 2005 );
- **Emerging Market Multinational Enterprises (EMNEs)** have attracted more limited attention with respect to their role in building innovation capabilities through their foreign investments in advanced countries.



Source: UNCTAD 2015



INTERNATIONALIZATION STRATEGIES & INTERNAL ORGANIZATIONAL PROCESSES

MECHANISMS OF LEARNING, CAPACITY BUILDING AND INNOVATION

THE LOCATION AND AGGLOMERATION ISSUES AND THE SPATIAL DIMENSION OF THE KNOWLEDGE LINKAGES

# **Regional strategic assets and the location strategies of Emerging Countries' Multinationals in Europe**

*European Planning Studies*, 2016, 24(4): 645-667



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# Research questions

- ① What are the characteristics of the destination areas that matter the most for EMNEs investments?
- ② Are EMNEs local attraction factors and spatial behaviours different from the location drivers of AMNEs investments?

# Empirical Setting

- Greenfield investments (2003 to 2008) from the entire world into the EU25 NUTSI/2 regions (22,065 deals; Source: fDi Markets);
- Classification in 18 functions, aggregated in two categories manufacturing investments and more knowledge intensive investments, including headquarters, R&D, design;
- Nested Logit Model.

# Location drivers

## ① Regional innovation dimension:

- a) Patent Intensity to capture the extent to which EMNEs expect to benefit from localised knowledge spillovers from indigenous firms (McCann and Mudambi, 2005);
- b) Social filter: existence of socio-economic conditions favourable to innovation measuring the “soft” features of the regional innovation systems (Crescenzi et al, 2007 and 2012);

## ② Established patterns of regional agglomeration of FDI:

- a) Total pre-existing FDIs;
- b) Total FDIs in the same sector;
- c) Total FDIs in the same function.

Table 4 – The location drivers of MNEs in the EU regions: A summary

SAS investments		ORIGIN		
		EU-25	NA	EE
Innovation				
	• Hard drivers (patents)	(+)	(+)	<b>(+)</b> <b>Only for</b> <b>KNOWLEDGE</b> <b>INTENSIVE FDI</b>
	• Soft drivers (Social Filter)	(+)	(+)	<b>Not significant</b>
Agglomeration				
	• # FDI	(-)	Not significant	<b>Not significant</b>
	• Same Function	(+)	(+)	<b>(+)</b>
	• Same Sector	(+)	(+)	<b>(+)</b> <b>Only for</b> <b>MANUFACTURING</b> <b>FDI</b>

# Conclusions

- EMNEs seek technological competences (i.e. patent intensity) only when investing in more knowledge intensive functions;
- Technological and cognitive gaps still prevent EMNEs to directly capture the potential asset seeking advantages generated by innovation prone regional environments (i.e. the Social Filter);
- The imitation of the location choices of other 'selected' (in functional and sectorial terms) foreign investments offers an **easy and clearly detectable indication of the availability of specialized pools of strategic assets**, more easily intelligible by EMNEs than the soft innovation factors.

# Chinese and Indian MNEs' shopping sprees in advanced countries. How good is it for their innovation output?

(work in progress)



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## **Research questions**

- **Do EMNEs benefit – in terms of their innovative output – from their acquisitions in advanced economies?**
- **What are the factors moderating this impact?**
  - **Acquisitions of medium and high-tech EU28, Japanese and US companies (466 deals) made by 301 Chinese and Indian multinationals in the period 2003-2011 (Zephir & SDC Platinum);**
  - **Focus on post acquisition innovation output, by measuring the number of patents of the acquiring EMNEs.**

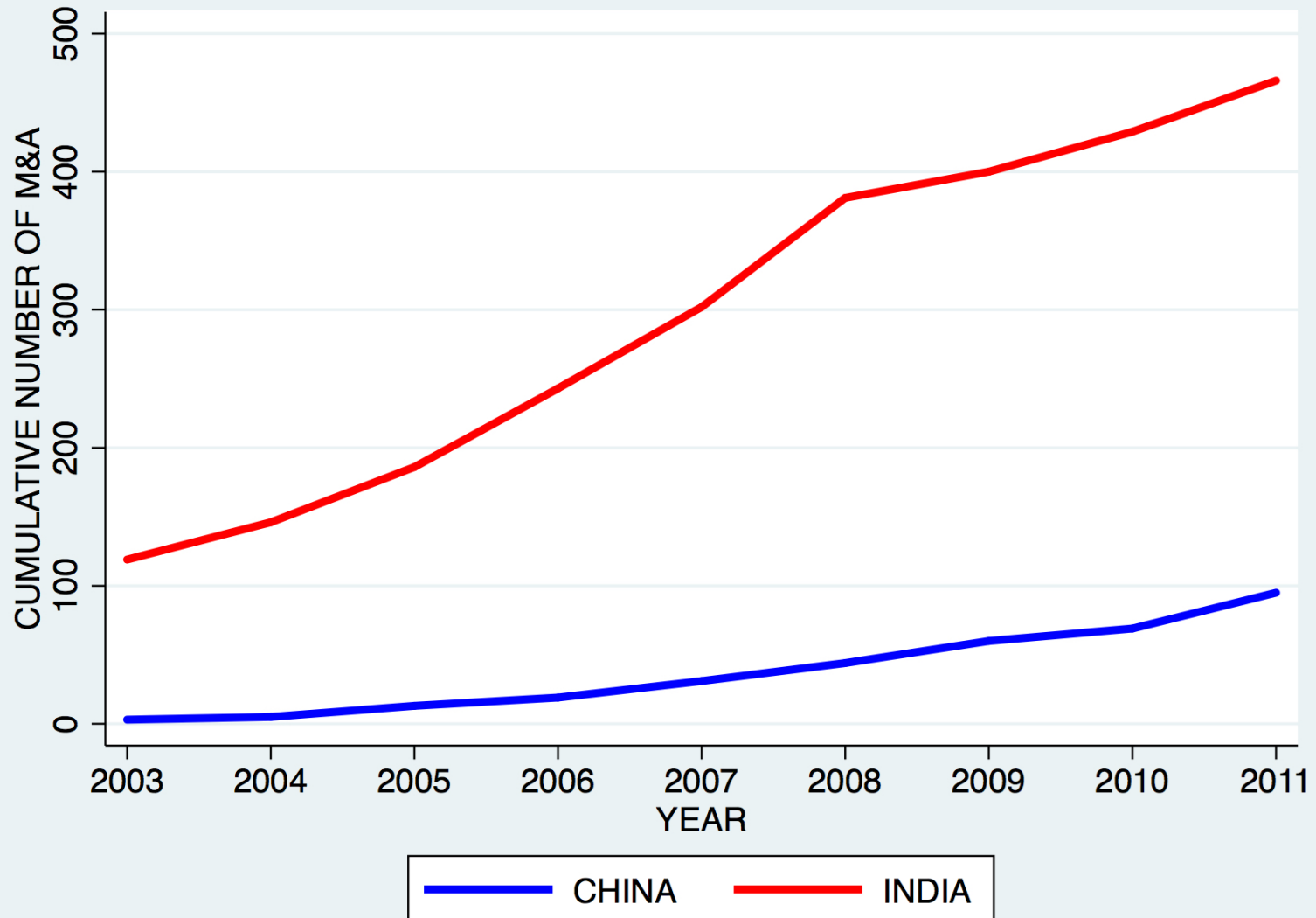
# Our hypotheses (I)

- **Liability of emergingness** (LOE) (Madhok & Kayhani, 2012; Ramachandran & Pant, 2001) and social status theory:
  - The **more innovative acquired firms** perceive a stronger distance from their acquiring companies and they are likely **to resist more to EMNEs sourcing of knowledge**  
**Hypothesis 1:** All else constant, the more innovative the acquired firm, the less innovative the acquiring EMNE after the deal.
  - In the **more innovative regions** the EMNEs opportunity to tap into the local knowledge is affected by a possible **disruption of the pre-existing networks**  
**Hypothesis 2:** All else constant, the more innovative the target region, the less innovative the acquiring EMNE after the deal.

# Our hypotheses (2)

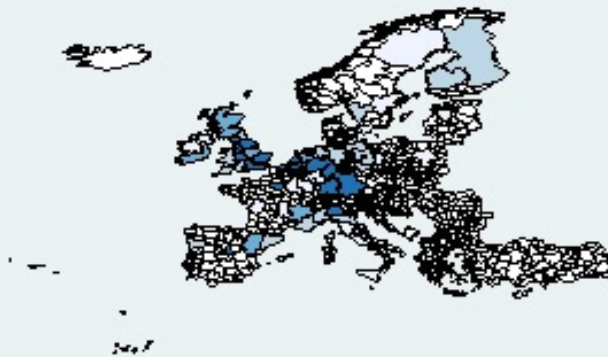
- **EMNEs' knowledge base prior to the acquisition acts as a moderating factor:** a) it enhances the EMNE absorptive capacity of local knowledge and b) it signals about EMNEs' capabilities, contributing to reduce LOE.
  - **Hypothesis 3:** All else constant, the relationship between the innovativeness of the **acquired firm** and the post-deal innovation output of the acquiring EMNE is positively moderated by the acquiring EMNE's knowledge base;
  - **Hypothesis 4:** All else constant, the relationship between the innovativeness of the **target region** and the post-deal innovation output of the acquiring EMNE is positively moderated by the acquiring EMNE's knowledge base.

# Time evolution of CBAs

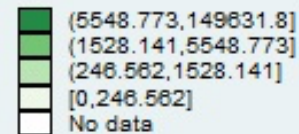
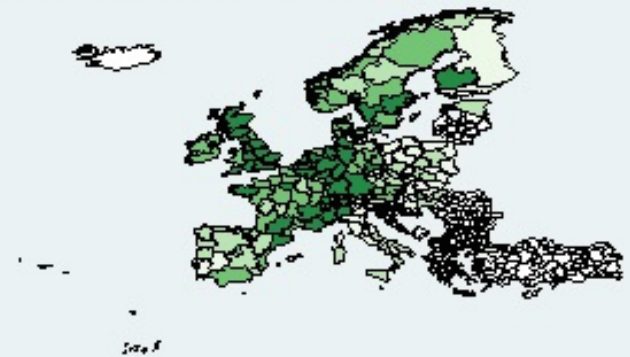


## EU REGIONS

N. of Chinese and Indian M&As to Europe

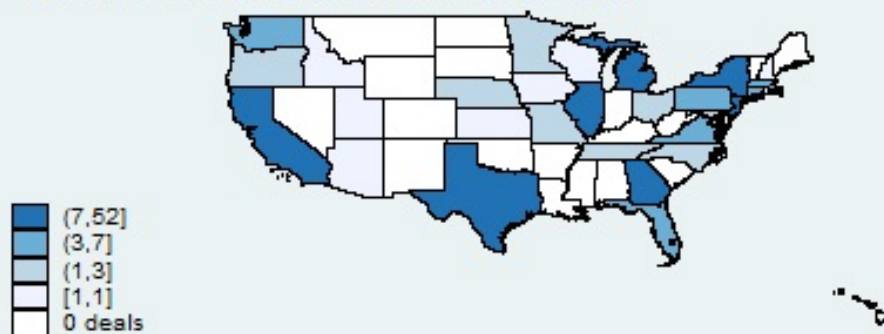


PCT patents in European regions

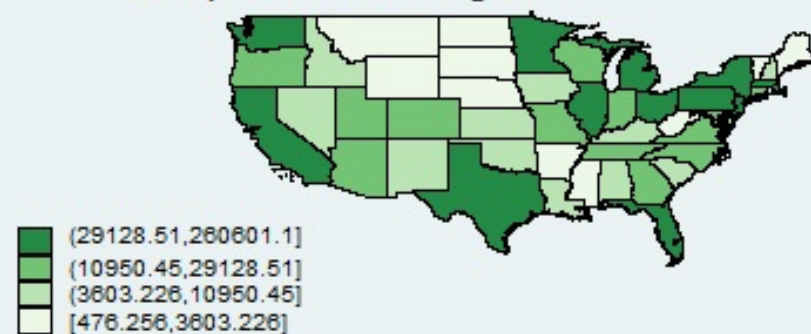


## US REGIONS

N. of Chinese and Indian M&As in US

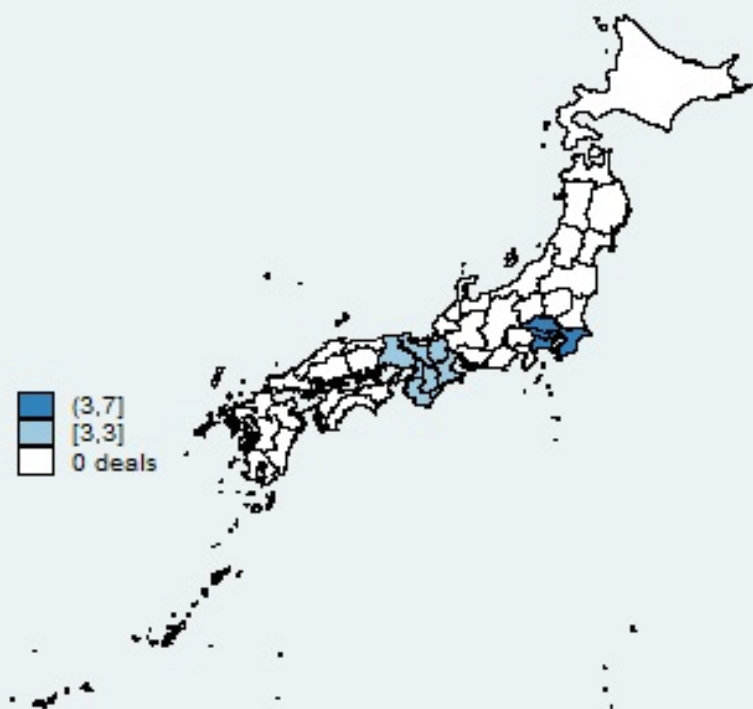


PCT patents in US regions

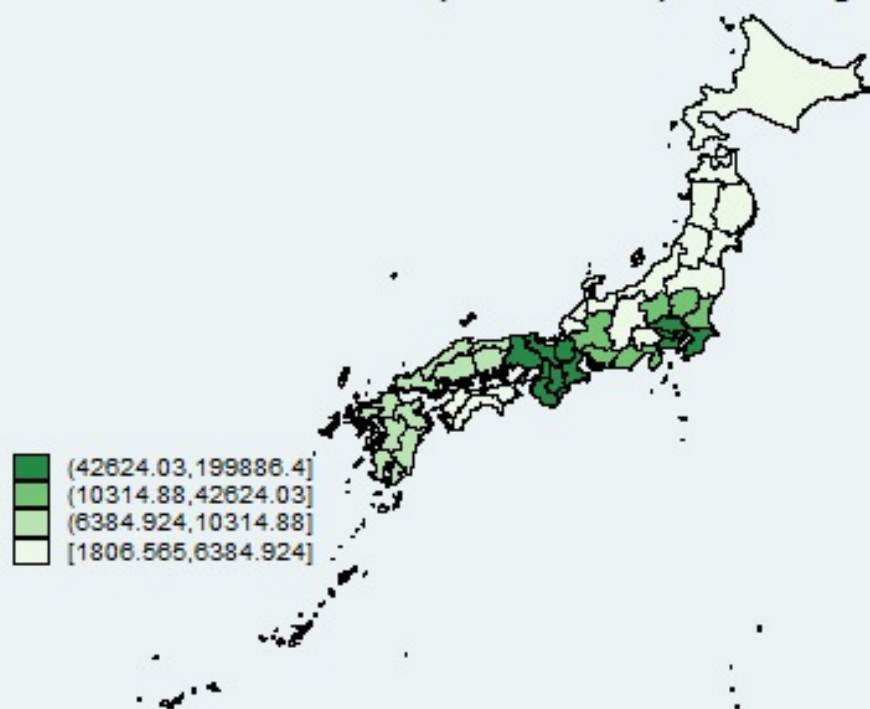


## JAPANESE REGIONS

N. of Chinese and Indian M&As in Japan



PCT patents in Japanese regions



# Dependent and Independent Variables

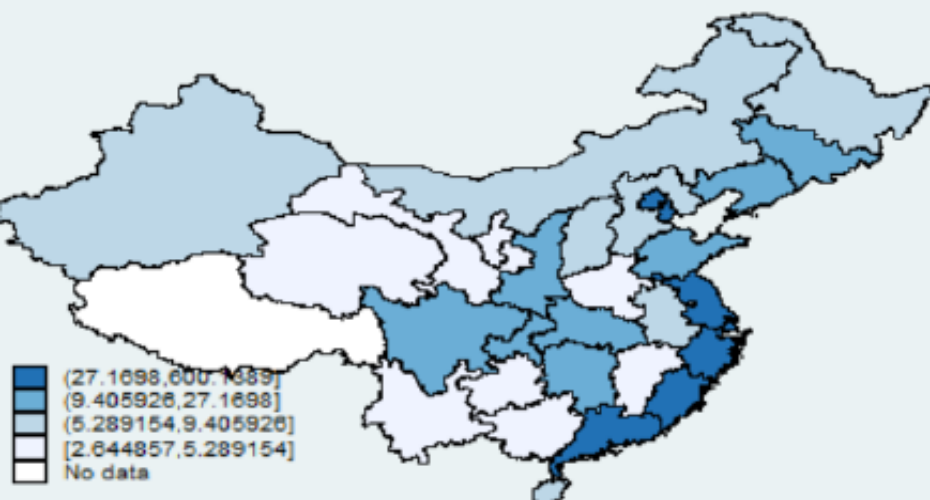
- **EMNE\_POST\_INNOV**: # of patent families (INPADOC – International Patent Documentation) filed by the acquirers at any patent office in the **3 years after the acquisition**.
- **TARGET\_FIRM\_INNOV**: # of patent families filed by the acquired company in the **5 years before the acquisition (HP1)**;
- **TARGET\_REGION\_INNOV**: log of cumulated # of PCT patent per capita in the **5 years before the acquisition** in the TL2 (e.g. NUTS2) regions where the acquired firms are located (**HP2**);
- **EMNE\_KB**: # of patent families of the acquiring EMNE filed **in the 5 years before the acquisition** augmented with the number of their citations (**HP3&4**).

# Main findings:

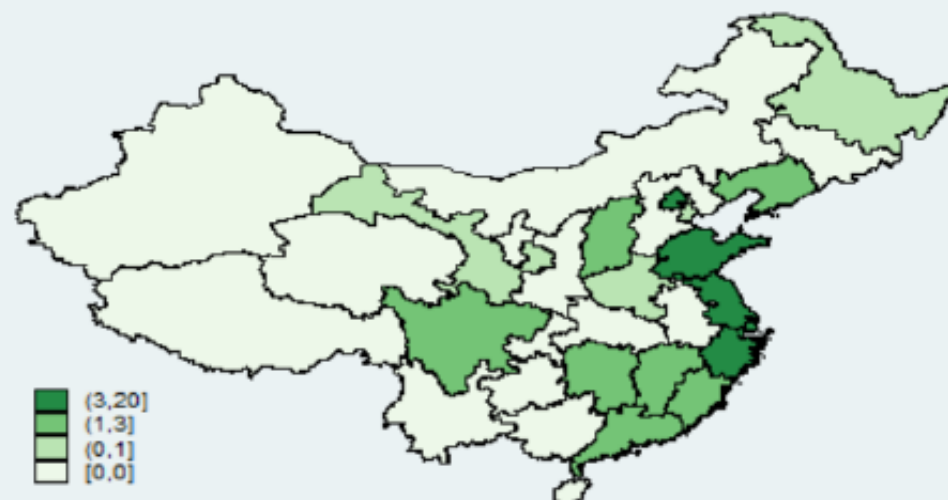
## The moderating effect of the knowledge base

- **HPI is confirmed**
  - **the more EMNEs acquire innovative target firms, the lower is their innovation output after the deal**, suggesting that very innovative target firms, despite potentially being able to offer substantial and valuable knowledge assets to the acquiring EMNEs, may be resistant to knowledge transfer;
- **HP 3 & 4 are also confirmed**
  - **EMNE knowledge base\*Target firm innovation & EMNE knowledge base\*Target region innovation** are positive and significant:
    - The strength of the EMNE's knowledge base allow more effective building on the knowledge available in the target firm and region;
    - It is an important signal of quality, improving status perception and mitigating LOE problems, encouraging the target firm's managers and other actors in the target region to share knowledge and collaborate with the acquiring EMNE.

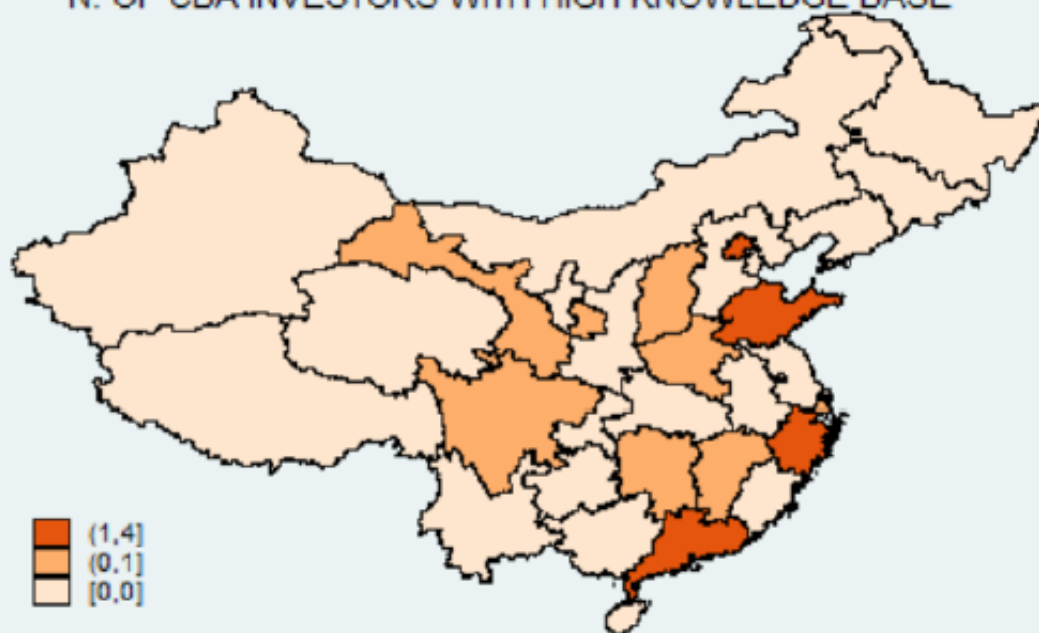
INPADOC FAMILIES PER CAPITA IN CHINESE PROVINCES



N. OF CBA INVESTORS



N. OF CBA INVESTORS WITH HIGH KNOWLEDGE BASE



# General takeaways

## In emerging countries:

- ① Acquisitions are not a quick fix for the lack of technological capabilities at home;
- ② EMNEs policy-makers should develop and strengthen policies oriented towards technological capability building in their home country;

## In advanced countries:

- ① Policy makers need to find ways to ensure that CBAs are also beneficial and asset-augmenting for the acquired firms;
- ② They should try to minimize the probability of predatory behaviors, and attract investors interested in becoming embedded in the local context of the acquired company (Giuliani et al., 2014);
- ③ The entry of new entrepreneurial forces from emerging countries may open up opportunities in advanced host countries for learning from these investors and for bridging cultural and market distances with emerging economies.

**Thank you**

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