

The international fragmentation of production systems and the geographical dispersion of the value chain have opened up new scenarios and opportunities for new actors.

- How has the relative relevance of location factors and geographical hierarchies changed? How are **emerging market countries** capturing these opportunities to catch up and to shift their role in global supply/value chains?

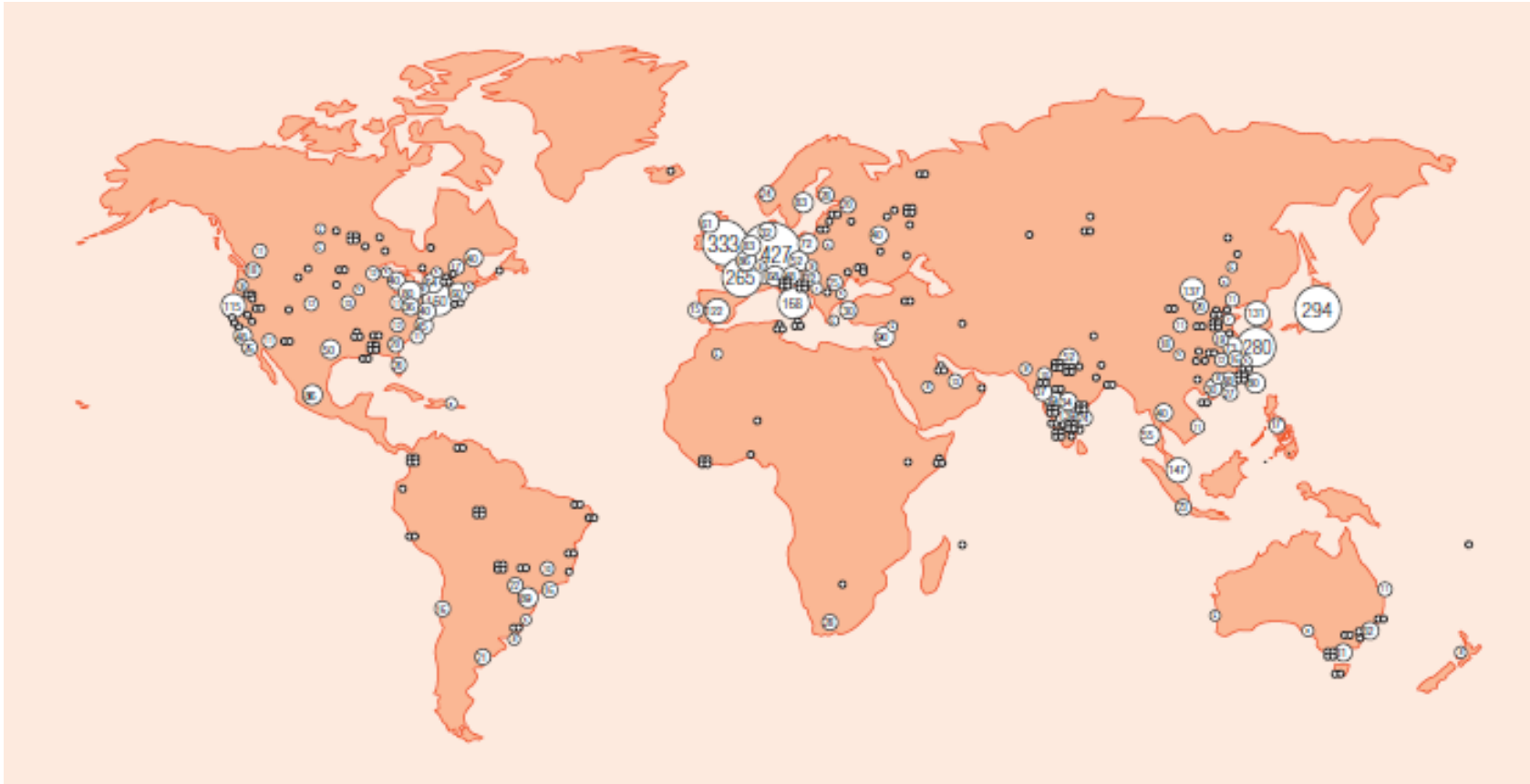
FDIs and Emerging countries

- According to UNCTAD (2017), from 2000 to 2016:
 - FDI stocks in developing countries have risen by 5.4 times (from \$1669 to \$9077 bl);
 - FDI stocks from developing countries have increased by 7.8 times (from \$742 to \$5809 bl) and those from China by 46 times (from \$28 to 1281 bl);
- By 2025, emerging regions are expected to be home to almost 230 companies in the Fortune Global 500, up from 85 in 2010;
- In 2016, there were 215 mega deals: 47 took place in developing countries (11 in China) and 46 were undertaken by Emerging Market Multinationals (EMNEs) (33 by Chinese MNEs).

MNEs, GVCs and catch up in emerging countries

- In the Information Age, catching up countries, such as India and China, increasingly rely on global connectivity to access knowledge;
- Initially, MNEs from advanced countries have mainly decentralized low value-added activities to emerging and developing countries;
- Thanks to their involvement in GVCs, some local suppliers have improved their production capabilities, learning to produce products suitable for the global market, then gradually climbing up the value chain;
- Upgrading within GVCs is contingent on the GVC governance patterns, among other factors, but upgrading and innovation should not be taken for granted within GVCs (De Marchi, Giuliani & Rabellotti, EJDR 2017).

Cross-Border R&D Centres (2016)



“Between 2000 and 2015 the number of MNE R&D centres in emerging countries grew by a factor of five, while in the Triad countries this number merely doubled”

Global Innovation Index Report, 2016

Source: R&D Locations database, accessed 5 March 2016; see <http://www.glorad.org> and von Zedtwitz and Gassmann, 2002.

Note: The figure shows a total of 5,877 cross-border R&D centres.

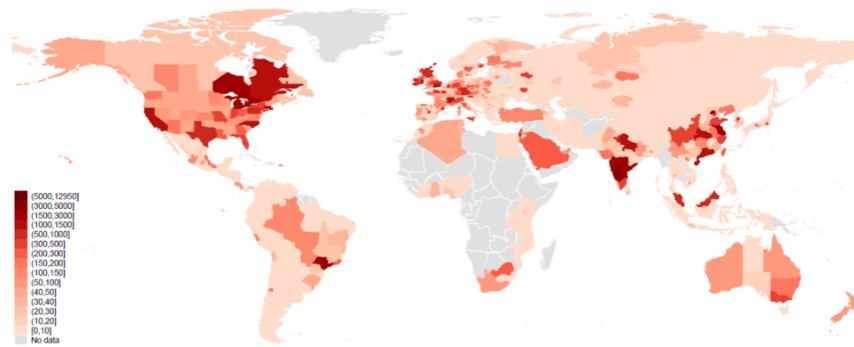
Emerging Market Multinationals (EMNEs) come to the fore

- EMNEs have emerged as key actors in cross-border acquisition of external new knowledge, through their investments in advanced countries;
- Focusing on international collaborations leading to co-inventions as an important channel for accessing knowledge, Giuliani; Martinelli & Rabelotti (WD, 2016) find that:
 - Brazilian, Indian and Chinese MNEs are increasingly involved in cross border inventions (with EU collaborators) and these patents are more valuable (i.e. more forward citations; more general and original) than those involving only domestic collaborators.

Location in the Information Age

- MNEs locate abroad a larger variety of activities, involving different degrees of local embeddedness;

Foreign Investment in R&D activities
2004-2014



Inward FDI projects, Regional Cumulative Capex, Millions \$ – Own Elaboration – FDI Markets Data

- Activities are placed in the locations offering the best characteristics for them.

Fitting location factors with activity characteristics

(Crescenzi, Pietrobelli & Rabellotti, JoEG 2014)

- 19,444 greenfield investments (between 2003 and 2008) from the entire world into the EU25 countries, geocoded at NUTS2 level (Source: FDIMarkets) and disaggregated in 5 activities: Headquarters, Innovative Activities, Commercial Activities, Production, Logistic and Distribution;
- MNEs locate the different activities where they can be carried out most effectively, tapping into location-specific resources and capabilities;
- The relative importance of location factors depends upon the activities undertaken with the investment:
 - Regional factors are strong drivers for:
 - R&D investments attracted by regions with well-developed ecosystems (proxy Social Filter Index – socio-economic context supportive to innovation);
 - Investments in production activities driven by regional labor market conditions;
 - National characteristics better explain MNEs' location decisions of headquarters and commercial activities;
- Emergence of clusters specialized in specific activities: importance of functional agglomeration.

EMNEs do it differently

(Crescenzi, Pietrobelli & Rabellotti, EPS 2016)

- Are EMNEs driven by a different set of drivers when selecting their locations than advanced countries MNEs?
 - EMNEs are attracted to EU regions with high technological capabilities (patent per capita) only when they are conducting abroad high value-added activities, such as R&D, design and testing;
 - Large cultural and cognitive distance makes it difficult for EMNEs to ‘de-code’ the nuances of ‘soft factors’ (measured by the Social Filter) in European cities and regions;
 - EMNEs locate where there are other multinationals active in the same activity to maximize what they can learn from proximity to similar companies;
- Policy-makers should support the development of ‘institutional bridges’ able to facilitate EMNEs in their understanding of ‘soft’ innovation drivers, enabling and accelerating their ‘insidership’;
- Understanding better the behavior of EMNEs would allow local policymakers to minimize predatory investment strategies and attract investments keen to contribute to local economic development.

(New?) role for ownership advantages

- What is the relationship between location and ownership advantages (especially from emerging market firms' perspectives)? What are the determinants of 'insidership' (and 'outsidership') in the knowledge networks of different places and different MNEs?

Ownership advantages in the Information Age

- Due to the increasing complexity of knowledge and technology, MNEs are complementing their own knowledge by tapping into geographically dispersed, local knowledge bases;
- *MNEs as orchestrators of international networks* (Dunning and Lundan, 2008): Ownership Advantages are the combinations of MNEs' own capabilities AND of the capabilities that can be accessed externally through networks of various kind to which MNEs participate;
- **EMNEs**: firm or country based advantages may be weaker or diverse from traditional O advantages, but O advantages do also depend on the networks in which they are able to enter.

Insidership and outsidership in networks

- In this more decentralized knowledge system, the capacity of MNEs to *create value* and *to capture value* also depends on the building of networks and on the **insidership** in these networks;
 - Key is whether MNEs are insiders or outsiders within local knowledge networks as well as the determinants of insidership vs. outsidership, which are likely to be locally and firm specific;
 - There are key elements of reciprocity in these knowledge networks, which also depends on MNEs' position and history within them (Alcacer et al 2016);
- **EMNEs**: Whether and how are EMNEs able to access knowledge through their investments in advanced countries? Which are the main determinants of their insidership in local networks? What are the frictions and impediments in getting embedded in local networks?

Chinese and Indian MNEs' shopping spree in advanced countries. How good it is for their innovative output?



(with Amendolagine, Giuliani & Martinelli)

- 206 cross-border acquisitions (CBAs) accomplished by Chinese and Indian medium to high-tech firms in Europe (EU28) and the U.S. (2003–2011);
- Are EMNEs innovating more following their acquisitions in advanced countries? If so, what does facilitate innovation? And what does block it?
- Baseline expectation: **the more innovative the target firm or region, the more the acquiring firm will innovate after the deal** (# of patents in the 3 years after the acquisition);
- Moderating factors:
 - **Absorptive capacity of the acquiring firm** (# of patents and citations in the 5 years before the acquisition);
 - **Status**: EMNEs more positively portrayed in the international press face less difficulties in the process of accessing local knowledge residing in the target firm or region.

Learning through acquisitions is not for everyone

- Target firms may resist to knowledge transfer, creating barriers to EMNEs' attempts to absorb and appropriate relevant knowledge;
 - This resistance is moderated by a strong knowledge base and high status;
- EMNEs are able to benefit from locating in innovative regions, characterized by an ecosystem facilitating innovation and knowledge circulation (measured by the Social Filter);
 - But tapping into regional knowledge is not a trivial issue for EMNEs with low status;
 - EMNEs may find it difficult to benefit from regional assets and actors no matter how innovation-prone the region.

after the acquisition, several of our engineers left, given the fact that it was not clear what would have been the future, and several things were not duly communicated also in top management teams. Also, some top managers left the company, ... due to the uncertainty. ... You know, if it was a German or U.S. acquirer, it would have been much easier to understand who they [the acquiring company] were, being Chinese you don't have a clear feedback about who they are, what they do and how.

making funny jokes about the fact that our firm had become Chinese....locally this news was used, especially from our local competitors, to question the quality of our products, as everything that comes from China is second or even third class, and it took some time to demonstrate that the product quality was not impoverished by the acquisition.

Final takeaways

- In the Information Age, both firms and locations are more open and connected;
- This opens up opportunities and challenges for EMNEs and their host locations;
- We need to know more about the factors that allow EMNEs to become insiders in local innovation ecosystems;
- Local policy makers need to know more about the relationships between local and international knowledge networks (in particular those involving EMNEs) and about how and whether these networks help to promote or rather impede local innovation and economic development.