Multinationals and local development. Some evidence on Europe.

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ERSA Winter School 2021

My recent areas of research

- Emerging market multinationals and their investments in developed countries: JoEG 2019 & 2014; EPS 2016; CER 2015 & 2013; WD 2016; IBR 2014;

- Green FDI: submitted JoCP;

- Global Value Chains: GVC Handbook 2019; WD 2019; JoDR 2018; WD 2011, ODS 2008; JIBP special issue forthcoming on GVC policies;

- Technological catch up
  - in the wine industry: RP 2017 & 2010; CJoE 2012; WD 2010;
  - in green technologies: ICC special issue (forthcoming 2021).

- Clusters: EG 2013; EPS 2013 & 2009; RS 2011.

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I'm an economist. My areas of expertise are the economics of innovation; economic development and regional economics.

I am Professor of Economics in the Department of Political and Social Sciences at the Università di Pavia in Italy. I also hold a position as Assigned Professor at the University of Aalborg, Denmark, where I am associated with the IKE (Innovation, Knowledge and Economic Dynamics) Research Group (Department of Business and Management) in Copenhagen.

I regularly advise international organizations such as UNIDO,UNCTAD, IADB, OECD and the European Commission on questions related to economic development.

PRESENTATIONS

Emerging market multinationals, value chains and innovation

1 - 08 - 2018

Emerging market multinationals, value chains and innovation

On June 2018 I have participated at the LSE workshop on Multinationals, value chains and innovation in regions around the world. Here is the presentation.

Multinationals and regional development

14 - 04 - 2018

PUBLICATIONS

Innovation Trajectories in Developing Countries: Co-evolution of Global Value Chains and Innovation Systems

1 - 08 - 2018

Innovation Trajectories in Developing Countries: Co-evolution of Global Value Chains and Innovation Systems

In this article co-authored with Rasmus Lema and Padmashree Sampath, we investigate how combining global value chain and innovation system approaches can help to foster an understanding of the possible trajectories that learning and innovation may take in developing countries.

Free download here

Multinationals hit the headlines when they arrive in new localities

Volkswagen instalará en Barcelona un gran centro de datos

La iniciativa permitirá a Seat avanzar hacia la conectividad y el coche eléctrico

Apple opens centre to train app coders

Apple is opening a training centre in Naples that aims to teach a "new generation" of computer coders how to develop new software for its app store.

VIDEO. Chez Google, Sarkozy vante les mérites du Web

Nicolas Sarkozy, ici au côté d'Eric Schmidt, ancien numéro un de Google, a inauguré les 10 000 mètres carrés du siège parisien de Google France (Paris 9e). AFP/JACQUES BRINON

Multinationals bring new capital, new knowledge and new jobs

Multinationals also hit the headlines when they leave or threaten they would leave…

October 05, 2020 06:24 AM

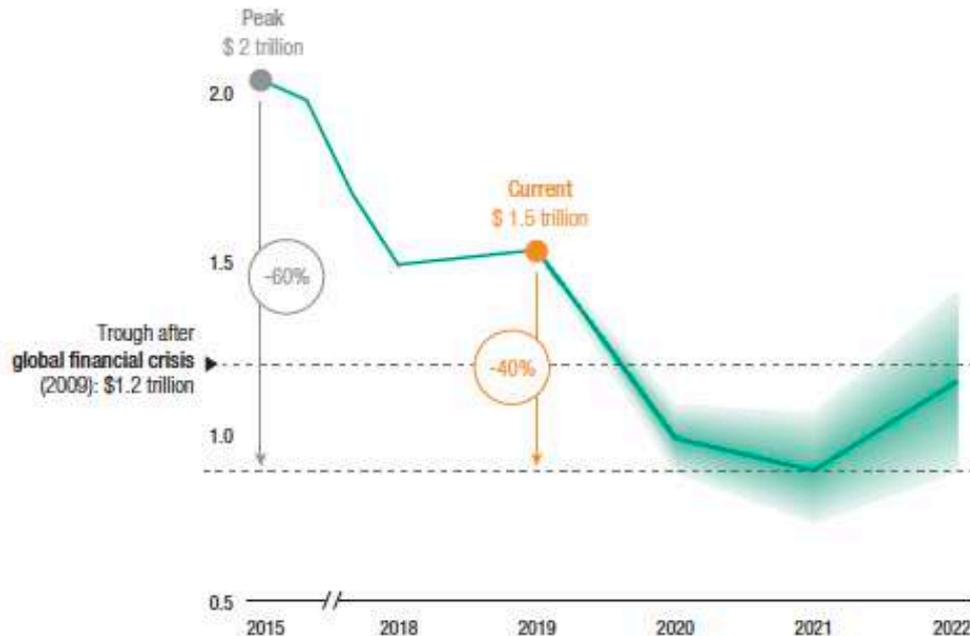# Toyota, Nissan will seek reimbursement from UK if Brexit talks fail, paper says

Reuters

Coca-Cola anuncia el cierre de sus plantas en Alicante, Asturias, Palma y Madrid

La empresa también planteó un ERE para 1.250 personas, con más de 700 despidos y 500 recolocaciones

23.01.14 - 00:19 - BERNAT SIRVENT | ALICANTE.

Comenta esta noticia | Twittear   G+1 0   Compartir   Recommend 2   ★★★★★★ 0 vo

Iberian Partners, la nueva empresa matriz fabricante y distribuidora de Coca-Cola, comunicó ayer
formalmente a los comités de empresa de toda España el cierre definitivo de Alicante, Colloto (Asturias),
Palma de Mallorca y Fuenlabrada. Los trabajadores no descartan ninguna acción de protesta, incluida la
huelga y la paralización total de la actividad, que se inició en Alicante en el año 1964. La empresa
también planteó un ERE para 1.250 personas, con más de 700 despidos y 500 recolocaciones.

La nueva compañía, que inició a principios de 2013 el proceso de integración de las siete

lasprovincias TV.es
VIDEOS DE ECONOMÍA

Outline

- Some figures about foreign direct investments, with a focus on Europe;

- MNEs as global pipelines & regional development in the literature;

- Some empirical studies on
  - location factors attracting different MNEs activities to regions;
  - location factors attracting MNEs from emerging countries (EMNEs) compared with MNEs from advanced countries;
  - EMNEs acquisitions in the EU (and USA) and how their becoming embedded in local clusters impact on their innovation capacity;
  - the choice between acquisitions and greenfield investments and its impact on the local host economies;
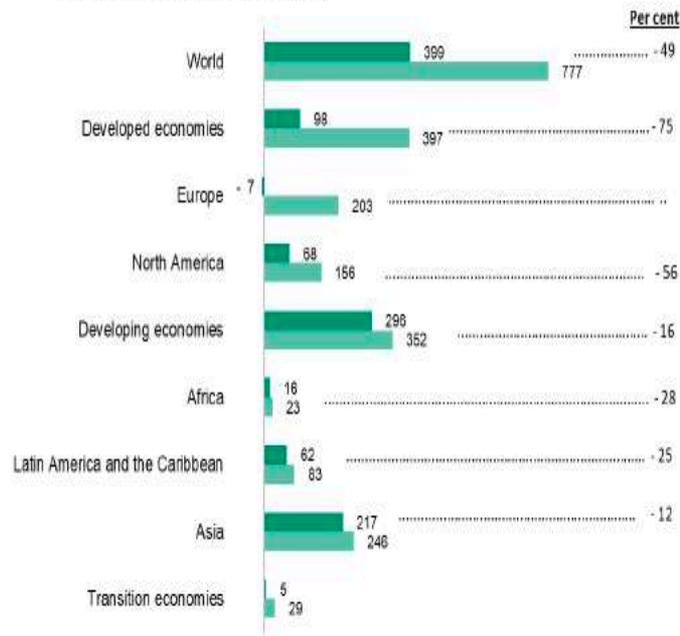
- Some final takeaways.

Figure I.1. Global FDI inflows, 2015–2019 and 2020–2022 forecast
(Trillions of dollars)

Peak
$ 2 trillion

2.0

Current
$ 1.5 trillion

1.5
−60%

Trough after
global financial crisis
(2009): $1.2 trillion
−40%

1.0

0.5
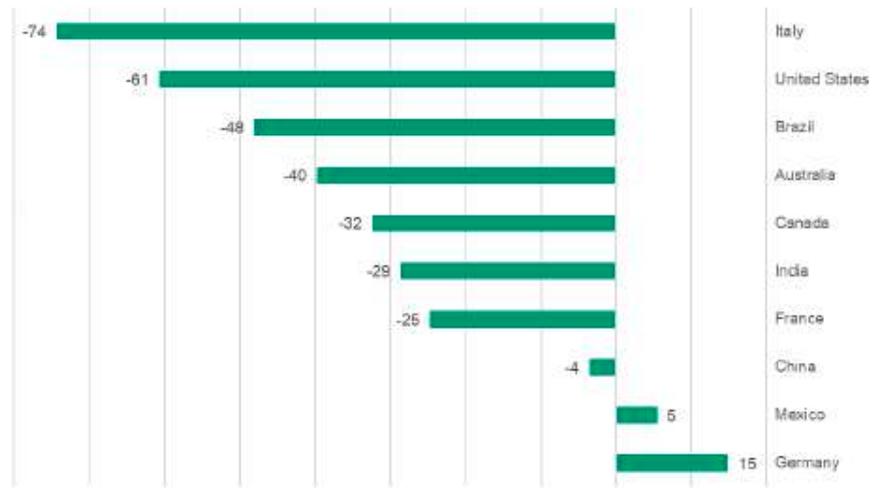2015   2018   2019   2020   2021   2022

Source: UNCTAD.

COVID-19 has caused a dramatic drop of FDIs globally.

In 2020 global FDIs are below 1 trillion US$ for the first time since 2005.

Hopefully, there would be a rebound in 2022.

Figure 2. FDI inflows by region, 2020 H1 vs 2019 6-month average
(Billions of US dollars and per cent)

Per cent

World 399 / 777 — -49
Developed economies 98 / 397 — -75
Europe -7 / 203
North America 68 / 156 — -56
Developing economies 296 / 352 — -16
Africa 16 / 23 — -28
Latin America and the Caribbean 62 / 83 — -25
Asia 217 / 246 — -12
Transition economies 5 / 29

Source: UNCTAD.

Figure 3. Change in 2020 H1 FDI inflows for the top 2019 recipient economies
(Per cent)

-74 Italy
-61 United States
-48 Brazil
-40 Australia
-32 Canada
-29 India
-25 France
-4 China
5 Mexico
15 Germany

Source: UNCTAD.
Note: Excludes top recipient economies with significant conduit FDI.

FDIs flows into Europe were negative in 2020

- F, D & UK are major origins and destinations of FDIs.
- IR, RO & PL are net receivers

...DP - All Industries, 2003-2017

Note: cumulative value of inward (x-axis) and outward (y-axis) FDI normalised by the EU average (=100% at the origin of the axes) over the 2003-2017 period. The size of the circles is proportional to the countries' average total GDP (pps) over the same period.
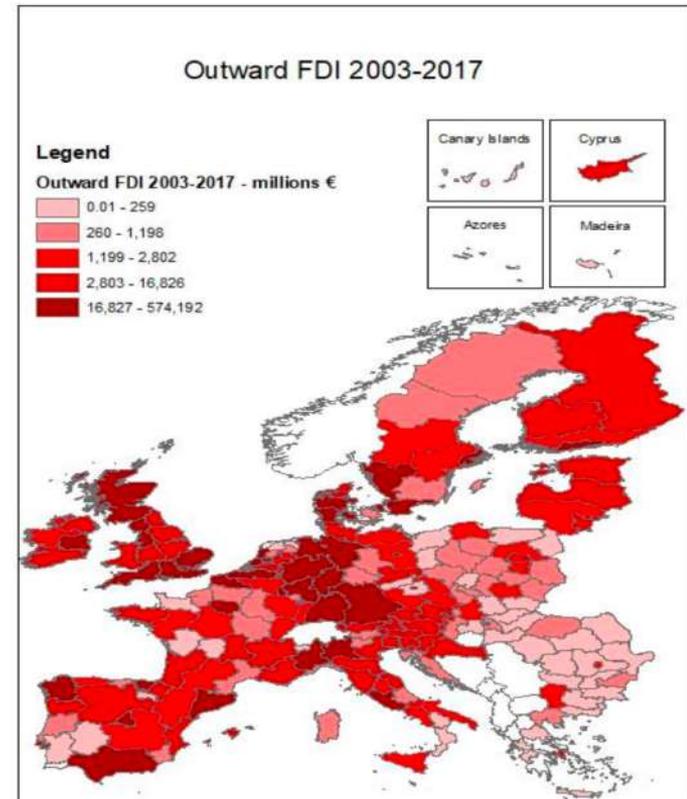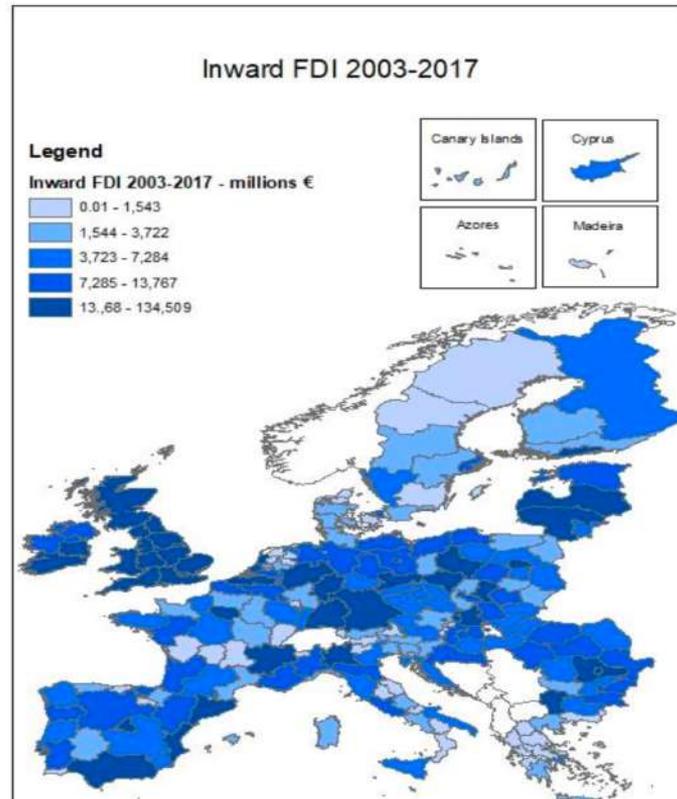
Comotti, Crescenzi & Iammarino (2020)

MNEs and Connectivity

- Account for one third of world GDP being responsible for half of global exports (OECD, 2018);

- The growing fragmentation of production within GVC has increased even more the importance of MNES (OECD, 2018);

- MNEs are also leading actors behind the internalization of technology, knowledge creation and diffusion process (Cantwell and Iammarino, 2003).

MNEs play a key role in connectivity and in the global economic integration of countries and regions.

Connectedness & Connectivity

- The access knowledge and other resources does not anymore depends only on *connectedness* (i.e. transport and communication infrastructures);

- But it also depends on broader *connectivity* defined as the degree of <u>two-way</u> openness and integration that shapes the domestic availability of skills, talents, competences and business functions (Crescenzi and Iammarino, 2017);

- Connectivity is also shaped by the economic and socio-institutional regional context: a) regional and local policies; b) regional innovation systems and c) spatial diffusion of knowledge spillovers and d) regional specialization.

Inward FDI 2003-2017

Legend
Inward FDI 2003-2017 - millions €
- 0.01 - 1,543
- 1,544 - 3,722
- 3,723 - 7,284
- 7,285 - 13,767
- 13.,68 - 134,509

Canary Islands · Cyprus · Azores · Madeira

Outward FDI 2003-2017

Legend
Outward FDI 2003-2017 - millions €
- 0.01 - 259
- 260 - 1,198
- 1,199 - 2,802
- 2,803 - 16,826
- 16,827 - 574,192

Canary Islands · Cyprus · Azores · Madeira

Investment flows are identified in terms of:

Directionality: inflows and outflows;

Nature: capital, skills, knowledge, jobs (i.e. different business activities undertaken by MNEs) ;

Spatial extent: regional and global (i.e. intra EU vs extra EU).

MNEs and regional development

- MNEs and local/regional economies are confronting similar challenges and their competitiveness is increasingly interconnected:

  – Multinationals are knowledge integrators, complementing their own knowledge by tapping into geographically dispersed, local knowledge bases in clusters/regions around the world;

  – Local economies depend on a combination between localized productive and knowledge assets(i.e. the ' local buzz': Storper & Venable, 2004) and access to global pipelines (i.e. MNEs) (Bathelt, Mamberg & Maskell, 2004).

International Business Studies: focus on MNES and their corporate networks, treating location (mainly at country level) as an independent source of advantages or disadvantages for geographically mobile firms; **International Economics**: direct and indirect impact of FDIs on home and host countries (and regions).
Economic Geography: focus on the nature and growth of local economies and in particular of agglomerations and clusters.
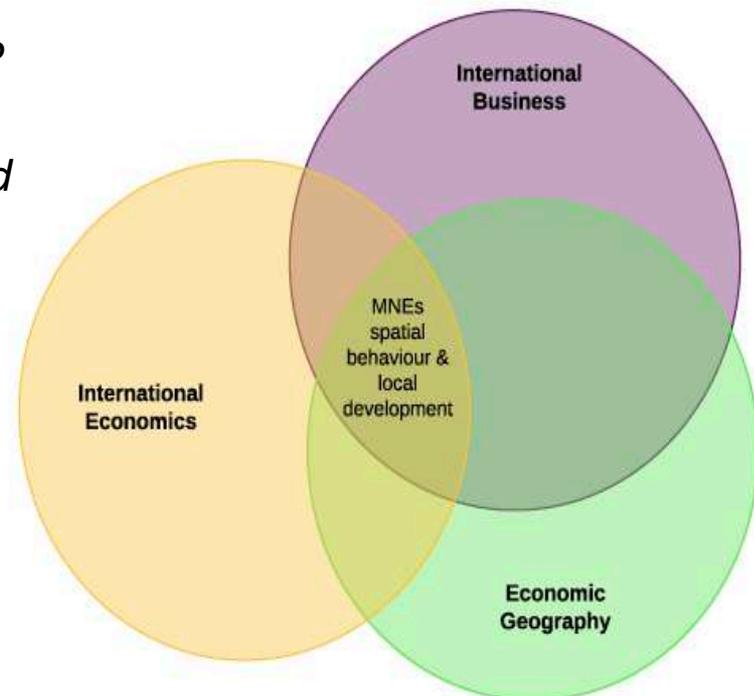
Key questions are:

Where do multinationals choose to locate?
And why?
What activities are (de)localized where and how?
Do MNEs benefit from their investments in different regions?

International Business

International Economics

MNEs spatial behaviour & local development

Economic Geography

A research agenda on MNEs and local economies

1. Location factors attracting MNEs and emerging countries MNEs different activities to regions;

2. Impact of EMNEs acquisitions in the EU (and USA) on their innovation capacity;

3. Choice between acquisitions and greenfield investments and its impact on the local host economies.

Fitting location factors with activity characteristics
(Crescenzi, Pietrobelli & Rabellotti, JoEG 2014)

- MNEs locate different activities where they can be carried out most effectively, tapping into location-specific resources and capabilities;

  RQ: How do MNEs organise the different activities of their value chains in space? What is the role of national vs regional factors?

- 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;

- **Nested logit model:** a) choosing a country i and b) selecting a region j in the chosen i country.

Table 17. IFDI and OFDI by FDI Function, 2003-2017

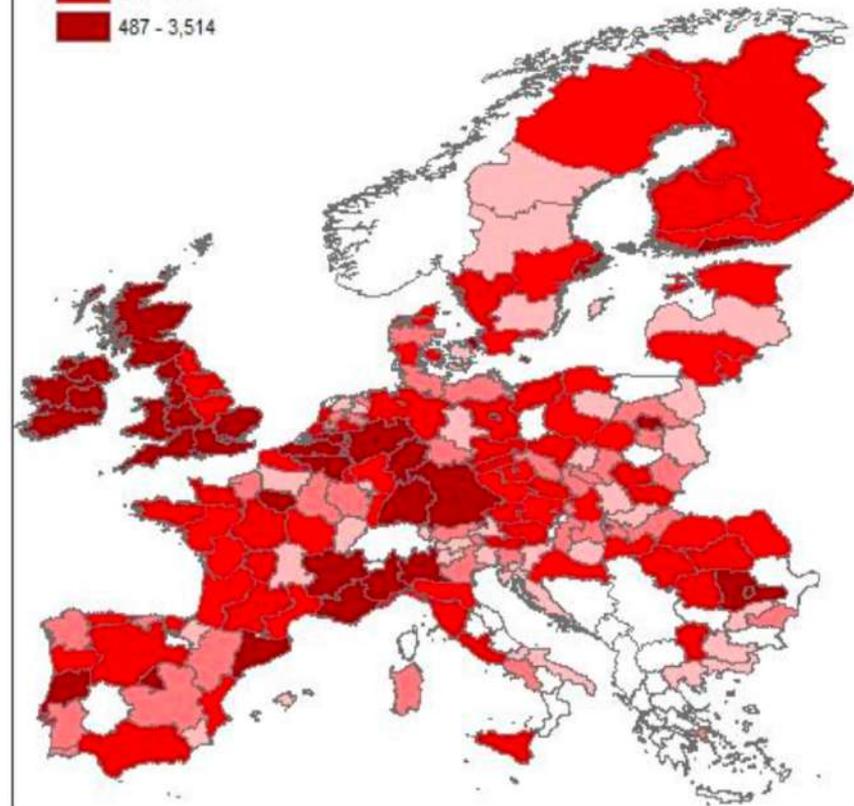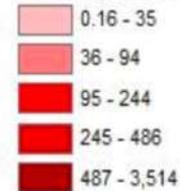|	EU 28 Destination		EU 28 Source	
	Tot 2003-2017	Share	Tot 2003-2017	Share
Headquarters	221,054	11%	336,189	8%
Innovation	81,053	4%	126,789	3%
Sales	313,263	15%	658,096	16%
Production	1,260,364	61%	2,791,880	67%
Logistics & Distribution	200,721	10%	269,458	6%

Headquarter Inward FDI 2003-2017

Legend

Inward FDI in HQ 2003-2017 - millions €

- 0.8 - 43
- 44 - 119
- 120 - 307
- 308 - 1,081
- 1,082 - 31,557

Canary Islands
Cyprus
Azores
Madeira
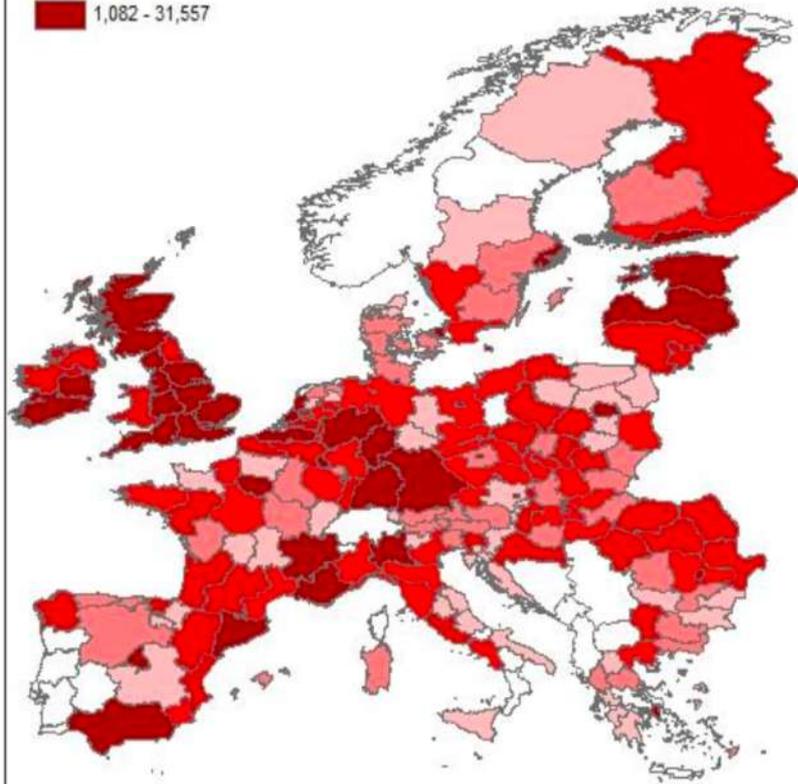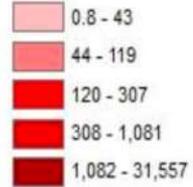
Innovation Inward FDI 2003-2017

Legend

Inward FDI in INNO 2003-2017- millions €

- 0.16 - 35
- 36 - 94
- 95 - 244
- 245 - 486
- 487 - 3,514

Canary Islands
Cyprus
Azores
Madeira

Production Inward FDI 2003-2017

Legend

Inward FDI in PROD 2003-2017 - millions €

- 16 - 957
- 958 - 2,020
- 2,021 - 3,925
- 3,926 - 7,119
- 7,120 - 49,343

Canary Islands

Cyprus

Azores

Madeira
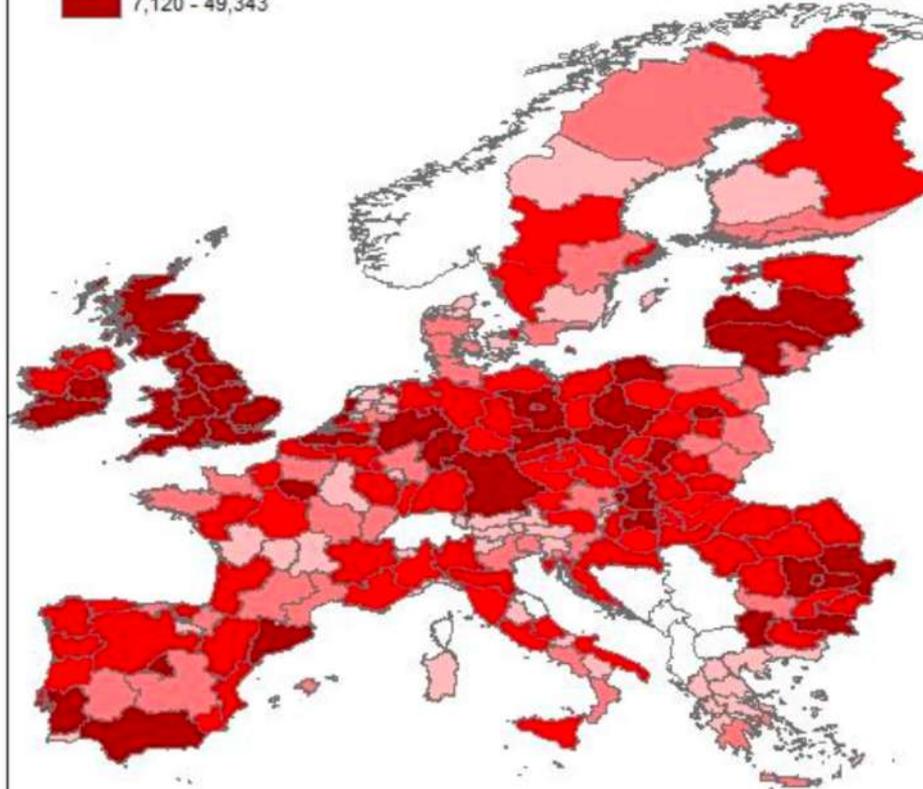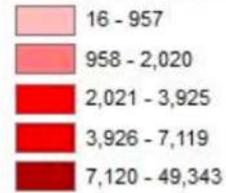
Investment location drivers

1) **Regional Innovative Capacity:**

 – **R&D Investments** as a share of Regional GDP and **Patent Intensity**;

 – **Social Filter** measuring structural pre-conditions to establish well functioning regional systems of innovation (Crescenzi & Rodriguez Pose, 2011);

2) **FDIs Regional Agglomeration**:

 – total pre-existing investments;

 – total investments in the same sector;

 – total investments in the same functions;

3) **Market size and labour market indicators**.

Findings in a nutshell

- MNEs locate different activities where they can be carried out most effectively tapping into location-specific resources and capabilities;

- Regional factors are stronger drivers for:

Policy implications

- Local governments should not try to attract headquarters, as decisions on their location depend on national-level features;

- They rather should attract innovative activities by improving their innovation system, their local knowledge assets and their socio-institutional environment.

EMNEs do it differently

(Crescenzi, Pietrobelli & Rabellotti, EPS 2016)

- What is special in EMNEs?

  - Acquisition of strategic intangible assets for catching up (Meyer, 2015);

  - Exploration (rather than exploitation) investments aimed at enhancing capabilities for improving long-term global competitiveness (Dunning, 1993).

RQ: Are EMNEs driven by a different set of factors when selecting their locations than advanced countries MNEs?

Main findings

- Only EMNEs R&D investments are attracted to EU regions with high technological capabilities (patent per capita);

- Large cultural and cognitive distance make it difficult for E... o... S...

- E... a... s... w... p...

Table 4. The location determinants of MNEs in the EU regions: a summary.

Investment drivers	Source of foreign investment		
	EU 25	NA	EE
Strategic asset-seeking[a]			
Hard drivers (patents)	(+)	(+)	(+) Only for NON-PRODUCTION FDI
Soft drivers (social filter)	(+)	(+) Only without full country controls	Never significant
Agglomeration[a]			
Total FDI	(−)	Not significant	Not significant
Same function	(+)	(+)	(+)
Same sector	(+)	(+)	(+) Only for PRODUCTION FDI

Policy implications

- Development of 'institutional bridges' to facilitate EMNEs in their understanding of 'soft' innovation drivers, enabling their 'insidership' in regions and clusters;

- Better understanding of the behavior of EMNEs allow local policymakers to minimize predatory investment strategies and attract investments keen to contribute to local economic development.

**What frictions (emerging market) multinationals
do face in the process of acquiring locally embedded knowledge?**
(JoEG 2018 with Amendolagine, Giuliani & Martinelli)

What are the EMNEs' key targets?

Individual firms'
technological knowledge
and expertise

Specific regions/clusters to
tap into local knowledge and
networks

EMNEs face two challenges

1. **Weak absorptive capacities**
    – Needed to identify useful knowledge (Bell and Pavitt, 1993; Awate et al. 2014)
    – Needed to take advantage of the 'local buzz' (Duysters et al., 2009; Awate et al., 2012; Hansen et al., 2016);
2. **Low status**
    – Liability of emergingness (Madhok and Kayhani, 2012)
    – Negative stigma jeopardizing EMNEs legitimacy (Hansen et al., 2016).

We claim that there is variation among EMNEs on these two dimensions.

RQ: Is EMNEs' post-deal innovative output higher, the higher the innovative capacity of the target firm and/or region?

Does EMNEs' absorptive capacity and status positively moderate the relationship between EMNEs' post-deal innovative output and the innovative capacity of the target firm and/or region?

Empirical setting: 466 cross-border acquisitions (CBAs) accomplished by 301 Chinese and Indian medium to high-tech firms in Europe (EU28) and the U.S. (2003–2011).

Dependent Variable

Post-deal innovative performance of the acquirer:

- # of INPADOC patent families applied by the acquirer firm in the 3 years after the deal
  - Data source: EPO-PATSTAT Database and ORBIS
  - Differently from patent count from a single legislation, family count makes easier to compare the innovative performance of firms of different nationality;
  - Robustness check: # of USPTO patents.

Baseline variables

- *Target firm innovativeness*:

  - # of INPADOC families of the target company filed in the 5 years before the acquisition

- *Target region innovativeness*:

  - Social filter as a proxy for regional innovative capacity (Crescenzi and Rodriguez Pose, 2014)

  - Logarithm of the cumulated # of PCT patents per capita in the region (TL2) where the target company is located

Moderators

- *EMNE absorptive capacity (knowledge base)*
  - # of INPADOC families of the acquired company filed in the 5 years before the acquisition augmented with the number of their cited patents (Katila and Ahuja, 2001)
- *EMNE Status*
  - "positive news" in the international press
  - 497,873 news (Lexis Nexis All News, between 1990 and 2016) - "positive" dictionary through automated content analysis using LIWC.
- **Poisson Quasi Maximum Likelihood** estimation with industry fixed effects at NACE 1 digit;
  - Controlling for the possibility that patenting and acquiring might not be independent (Valentini and Di Guardo, 2012) with a two-stage count model with sample selection adding an auxiliary equation to control for the probability to undertake an international acquisition (Bratti and Miranda, 2011);

Learning through acquisitions is not for everyone

- Acquisitions are not a quick fix for EMNEs' lack of technological capabilities at home;

- 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 (expected) and high status (additional mechanism);

- 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.

Greenfield or acquisitions? This is the question

(working progress with Amendolagine...)

- MNEs may choose to undertake:
  - greenfield investments: entering a foreign market

...ring a foreign market by buying

- ...vestments on the host
  - UNCTAD stresses that acquisitions do no add to productive capacity at the time of entry, but simply transfer ownership from domestic to foreign hands, often accompanied by lay-offs, closing of domestic facilities and potentially, also by a reduction in domestic competition;
  - In Europe there are growing concerns about the impact that foreign acquisitions, in particular those undertaken by EMNEs may have on security and public order;
  - Covid-19 has exacerbated these polarized views, further increasing reservations on foreign acquisitions while placing the attraction of greenfield investments at the very center of national and regional recovery packages.

What does drive the mode choice?

- "*The two modes of FDI differ significantly in both <u>the characteristics of the firm</u> that engage in these modes as well as in the <u>characteristics of the host countries</u> in which firms invest*" (Nocke and Yeaple, 2007, 2008);

- Sub-national factors might matter more than national-level ones in entry mode choices (Slangen, 2016);

- Following Nocke and Yeaple (2008), we investigate the entry mode choice as a positive assertive matching process between subsidiaries and headquarters introducing:

  - sub-national regional analysis to account for the importance of local factors in shaping the mode of entry;

  - technological dynamism and institutional conditions at country and regional level:

  - interaction between firm-level heterogeneity with the characteristics of the host (national and regional) economy in shaping FDI mode decisions.
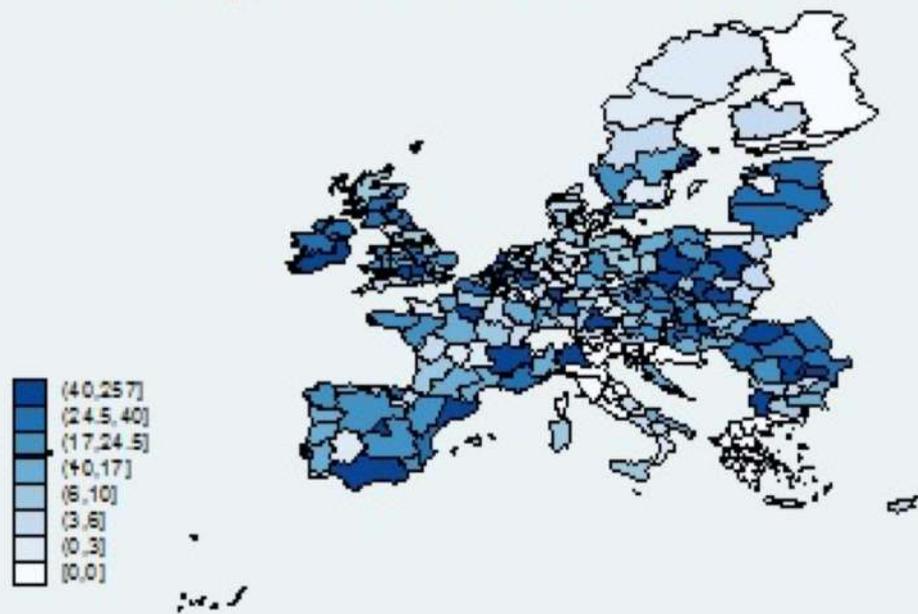
Research Questions

① What MNEs' characteristics do influence the choice of the investment entry mode?

– Are more productive (or more innovative firms) systematically favouring one entry mode over the other?

② Do national AND regional characteristics of the host economy matter for this choice?

• Do institutional quality & innovative capacity matter? At which geographical level?

Data

• Investors are selected from the **Forbes Global 2000 list** (2015): 1,116 companies with at least one investment in the EU-28 during the period from 2003-14;

• For each company, we identify all foreign investments in the EU-28 (2003-2014): M&A (Zephyr) and Greenfield FDI (fDi Markets)**:**

• After dropping greenfield investments where there are not potential acquisition targets (i.e. domestic companies in the same NACE 2-digit sector as the investment):

– 7,338 deals: 2,001 majority-owned acquisitions (27%) and 5,337 greenfield investments (73%).

all greenfields 2003-2014

all M&As 2003-2014

(40,257]
(24.5,40]
(17,24.5]
(10,17]
(6,10]
(3,6]
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(16,207]
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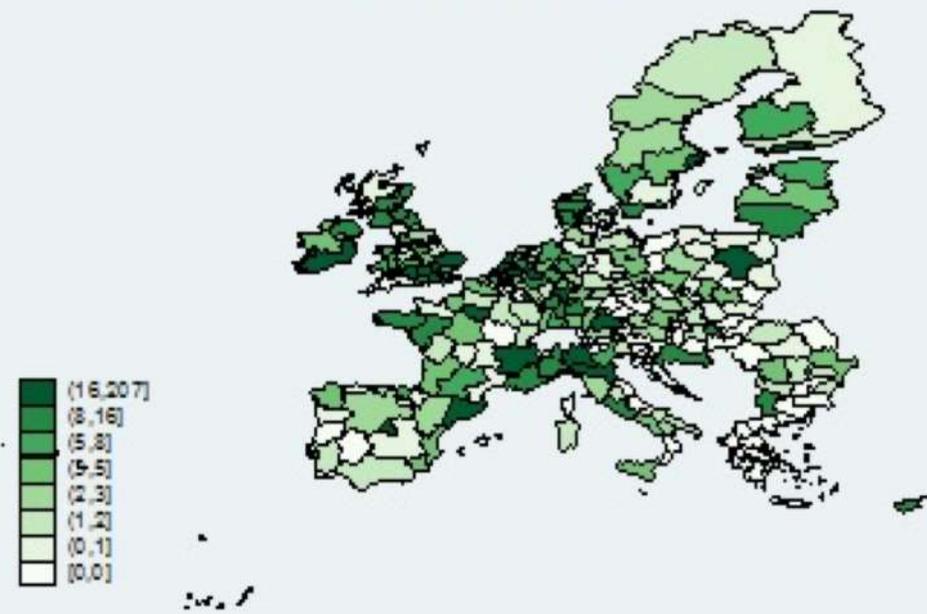
The empirical model

- Logit model (Nocke & Yeaple, 2008)

- Dependent variable:
    - **1** for **greenfield FDI**;
    - **0** for **acquisition.**

Drivers of the mode choice

- Firm-level characteristics: productivity, size, industry diversification, past FDI experience; # of patents;

- Regional characteristics (as deviation from the national mean): size; GDP per capita, institutional quality, innovation level;

- Country characteristics: openness, geographical distance between the origin and the destination country of FDI;

- Time controls; country and industry fixed effects.

Preliminary findings in a nutshell

- Are different types of firms involved in different modes?
  - More efficient and innovative MNEs are more likely to undertake greenfield investments;
  - MNEs with previous investments in the same country prefer acquisitions;
- Do local strategic assets influence the entry mode choice?
  - National and Regional QoG and innovative capacity increase the probability of foreign acquisitions;
- When we join the considerof... between... it... and host region's characteristi... companies p... environmen... investments...

Regional (and national) FDI policies should be tailored towards the particular FDI mode: greenfield vs. acquisitions.

Final takeaways

- MNEs are driven by different location drivers according to their value chain activities, country of origin, establishment mode choice;

- This heterogeneity results in complex sub-national strategies of internationalization;

- Local development policies should evolve from the attraction of '*inward FDIs no matter what*' to more diversified and place-sensitive policies accounting for this heterogeneity;

- 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 regional economic development.

Issues for future research

- On regions: connectivity entails bi-directional links, i.e. regions are receivers and senders of FDI. So far policy emphasis at regional level has been on attracting FDI while disregarding internationalization through investments abroad;

- On MNEs:

  - How MNEs master the process of embedding locally? Which are the effective sources of knowledge and the learning mechanisms: learning from customers? from co-operation? from labor mobility?

  - What range of frictions MNEs face in the process of integrating in locally embedded knowledge networks?

  - How facilitators can help less experienced MNEs to understand the local context, to access local resources and networking with local partners?

  - Which are the pathways for reverse knowledge? How new knowledge is disseminated and integrated within MNEs? As well as back in the home countries?

  - How do different entry modes influence routines of knowledge accumulation in MNEs and in the host local economies?

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Thank you

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