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Multinationals and local development. Some evidence on Europe.

Roberta Rabbellotti

Università di Pavia

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.

ROBERTARABELLOTTI.IT



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



Apple opens centre to train app coders

© 21 January 2016 | Technology



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.



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

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Estás en: Las Provincias > Noticias Economía > Coca-Cola anuncia el cierre de sus plantas en Alicante, Asturias, Palma y Madrid

ECONOMÍA

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 |   0  Compartir  Recommend 2

 0 votes

Iberian Partners, la nueva empresa matriz fabricante y distribidora 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.

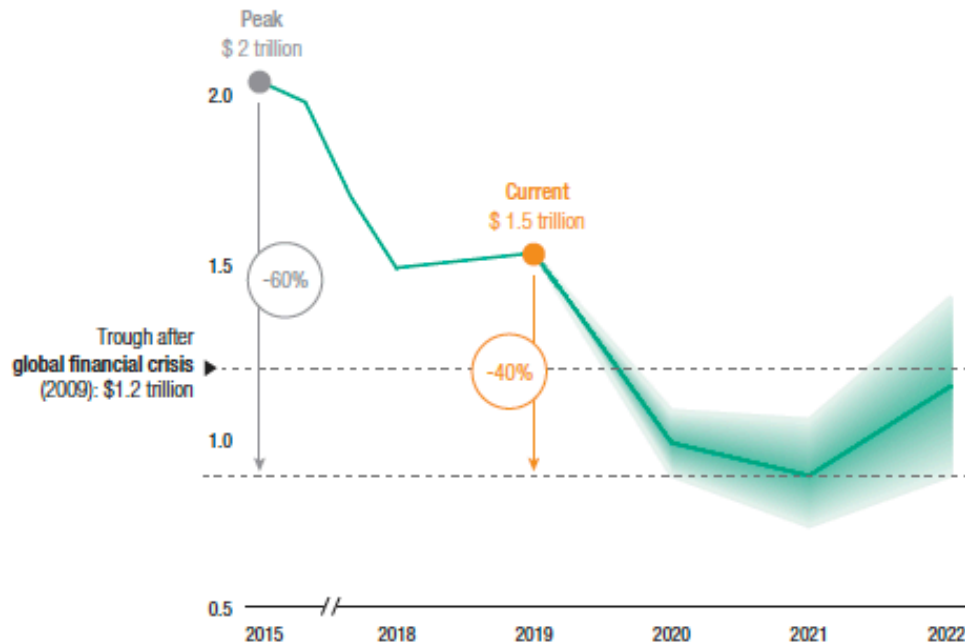
La nueva compañía, que inició a principios de 2013 el proceso de integración de las siete

lasprovinciasTV.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)

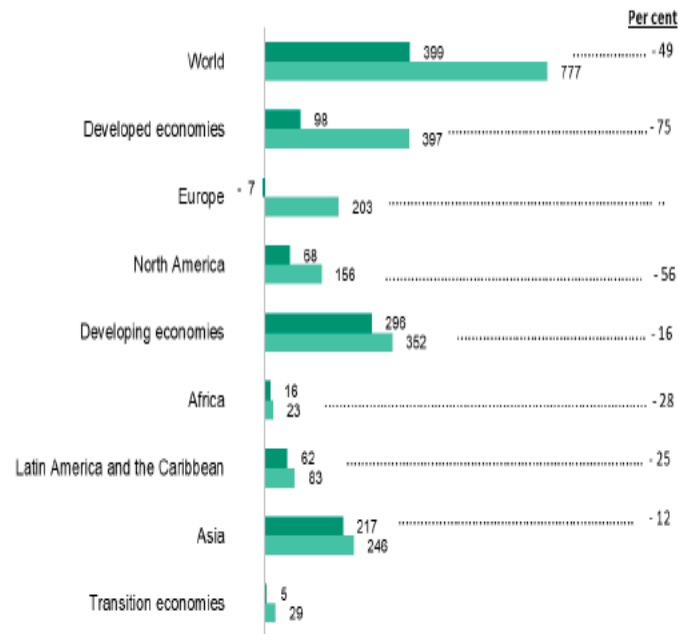


Source: UNCTAD.

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.

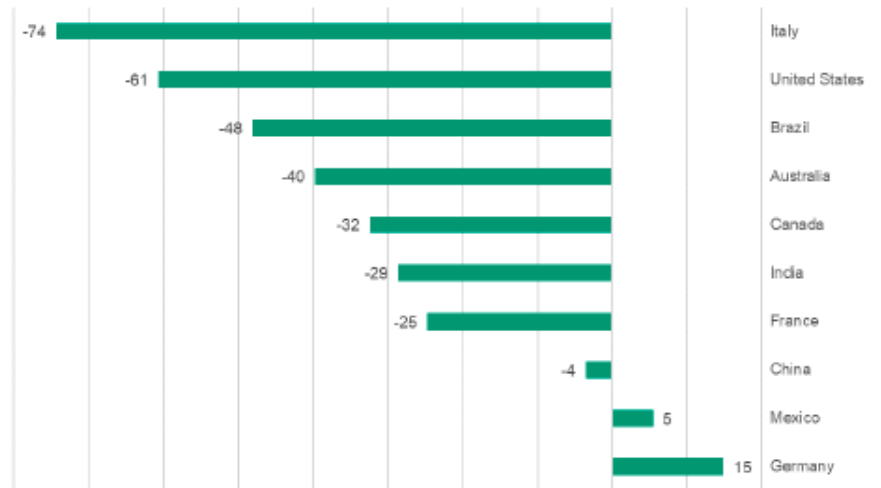
Figure 2. FDI inflows by region, 2020 H1 vs 2019 6-month average

(Billions of US dollars and per cent)



Source: UNCTAD.

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



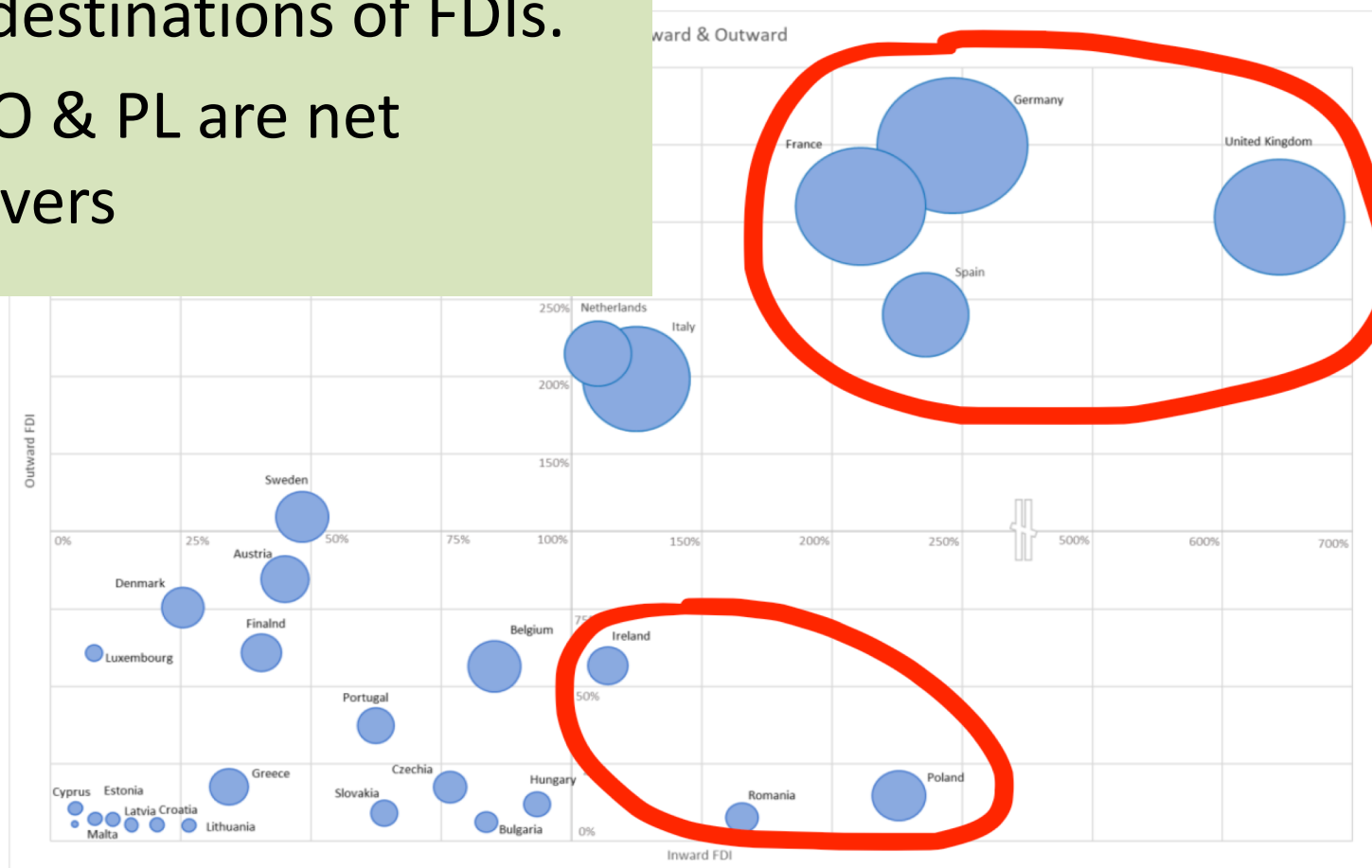
Source: UNCTAD.

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

FDI - 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.

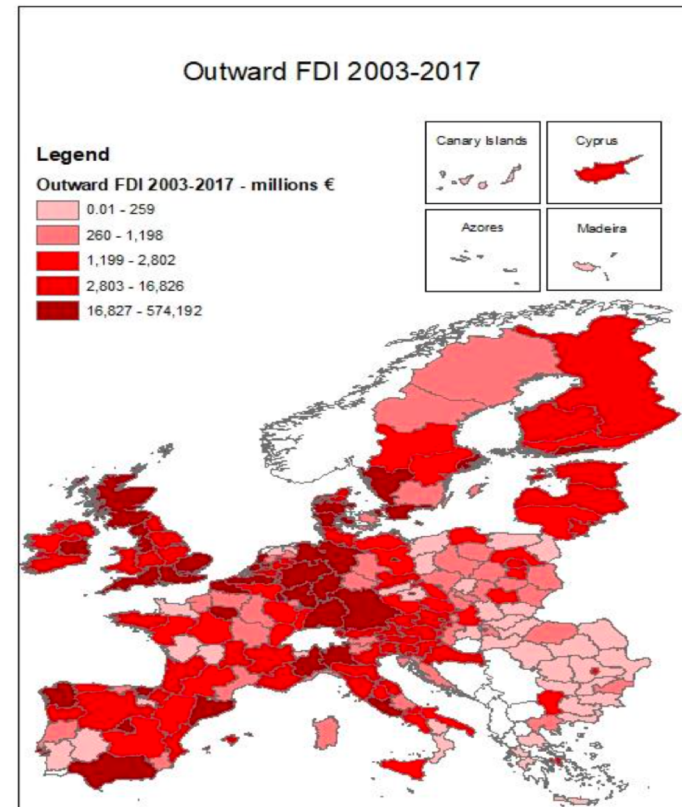
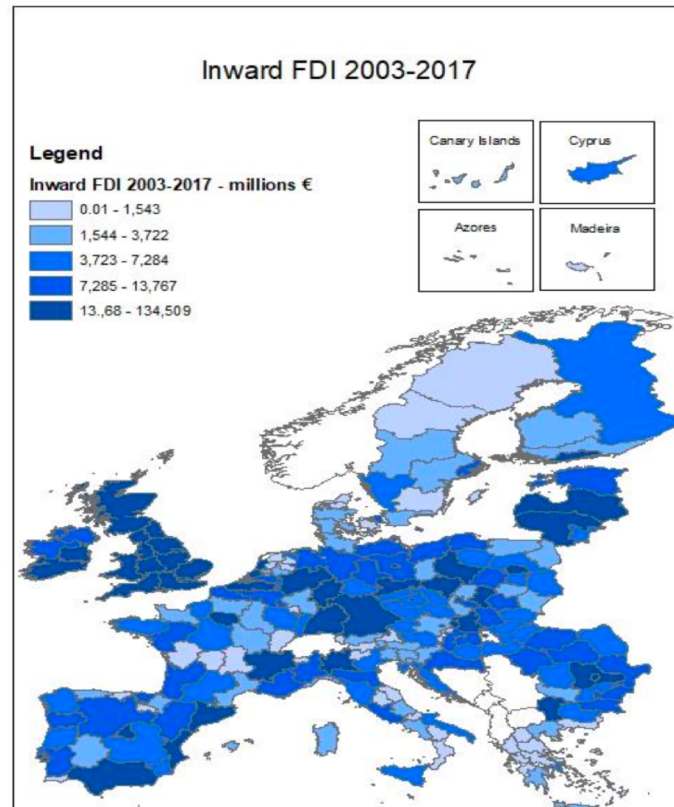
MNEs and Connectivity

- 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 two-way 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.



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.

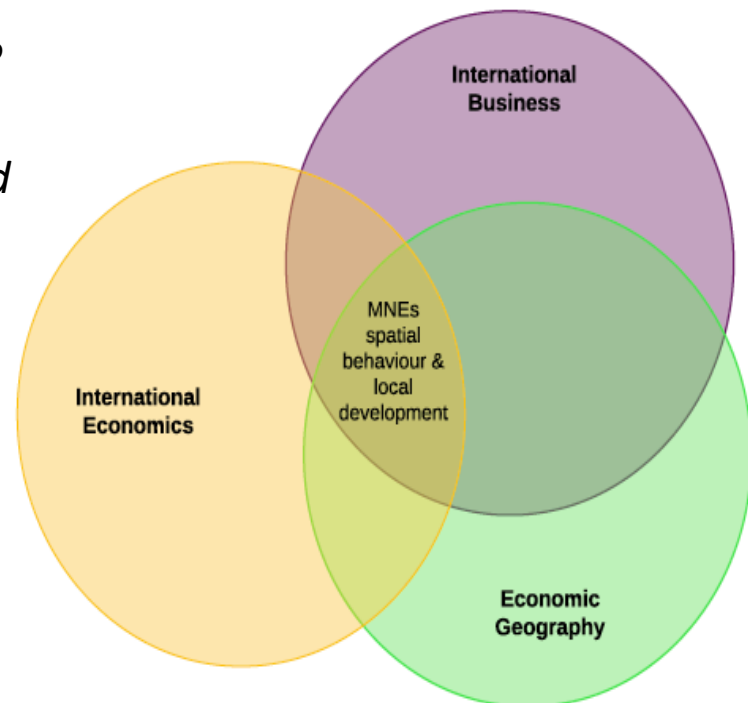
Key questions are:

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?



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: FDI Markets) 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.

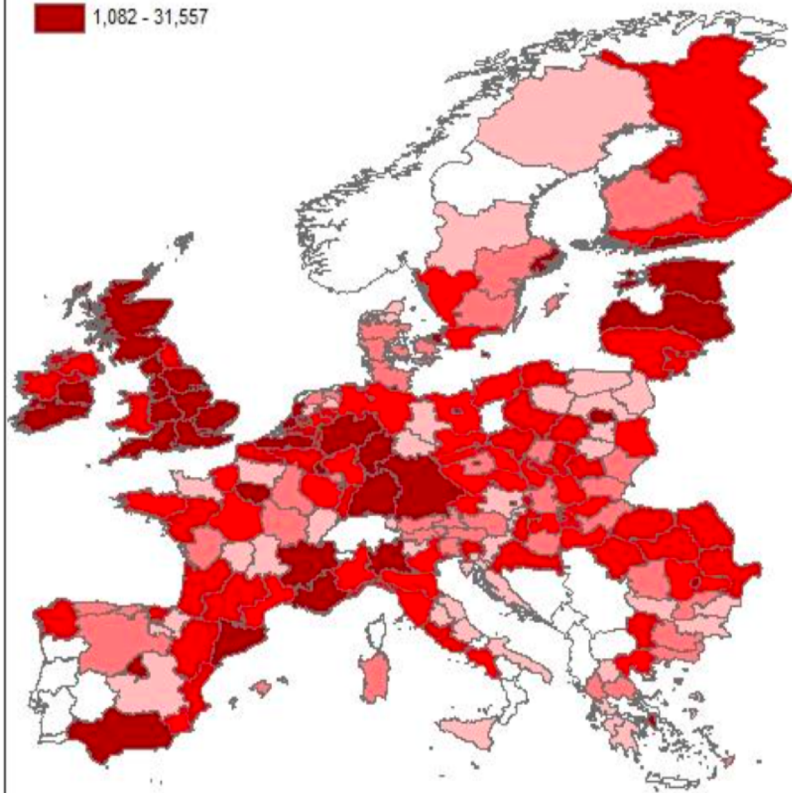
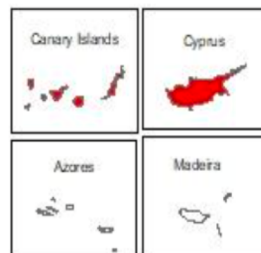
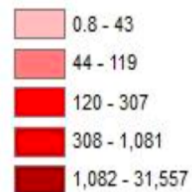
Table 17. IFDI and OFDI by FDI Function, 2003-2017

	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

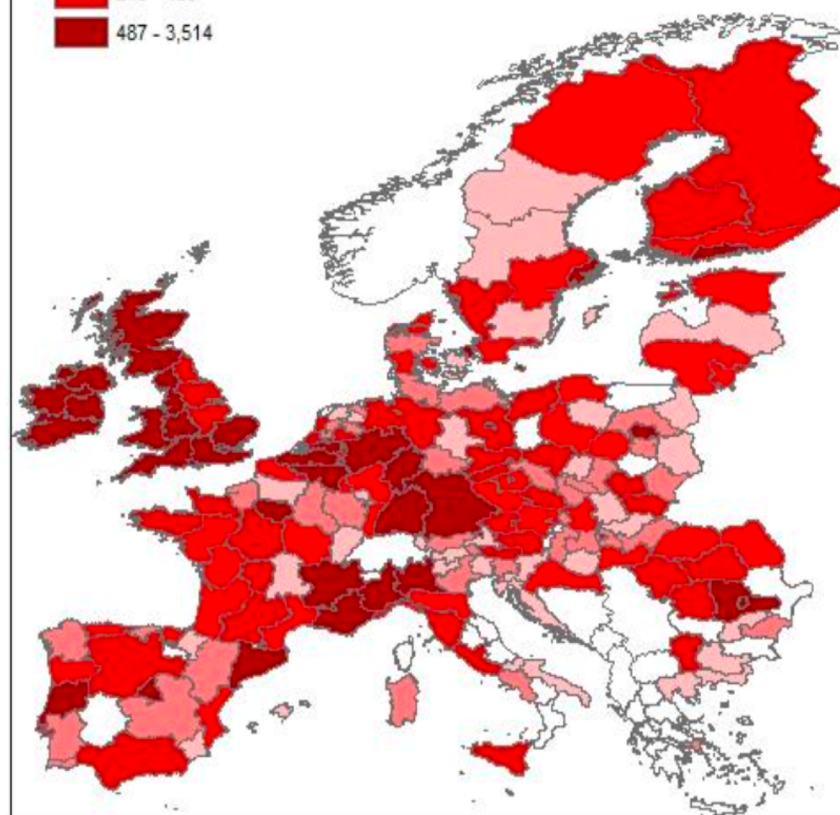
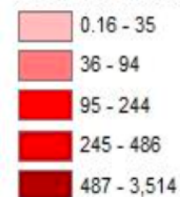
Inward FDI in HQ 2003-2017 - millions €



Innovation Inward FDI 2003-2017

Legend

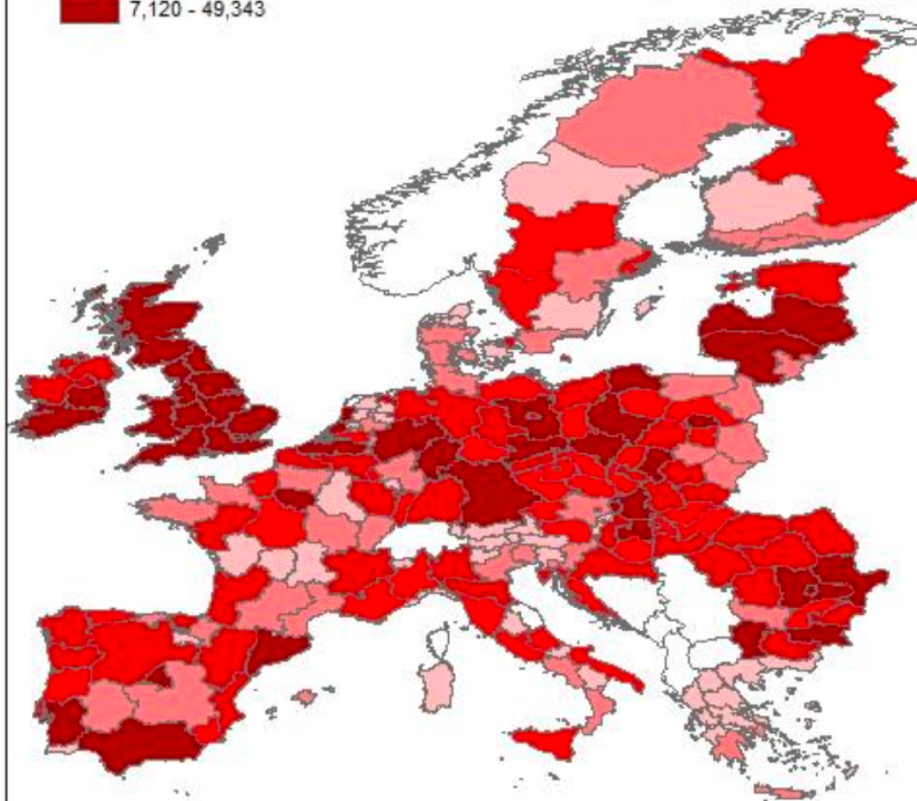
Inward FDI in INNO 2003-2017- millions €



Production Inward FDI 2003-2017

Legend

Inward FDI in PROD 2003-2017 - millions €



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 & Rabelloiti, 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

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

Investment drivers	Source of foreign investment		
	EU 25	NA	EE
<i>Strategic asset-seeking^a</i>			
Hard drivers (patents)	(+)	(+)	(+) Only for NON-PRODUCTION FDI Never significant
Soft drivers (social filter)	(+)	(+) Only without full country controls	
<i>Agglomeration^a</i>			
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



EUROPEAN ICT POLES OF EXCELLENCE

Best performing EU regions in ICT R&D, ICT Innovation and ICT Business activities with a central role in global international networks.



Key Findings

THREE TOP POLES

Paris Munich London
Cambridgeshire
Karlsruhe
Stockholm

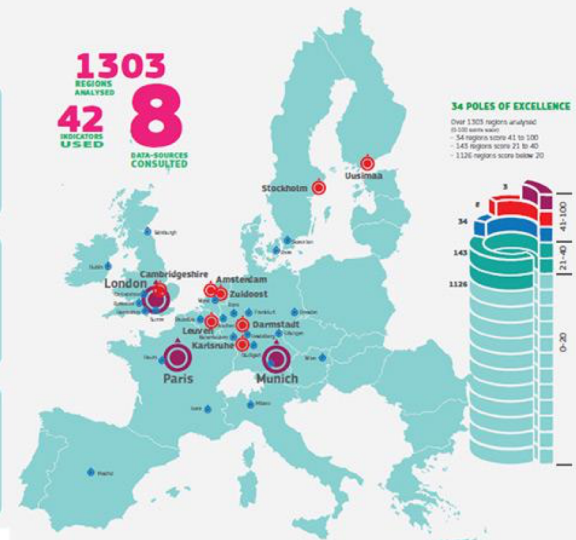
GEOGRAPHICAL CONCENTRATION

ICT R&D, Innovation and Business activities are concentrated in 34 EU regions spread across 12 countries.

STRONG CLUSTERING

The areas with intensive ICT activity are clustered together around the best performing locations.

1303
REGIONS
ANALYSED
42
INDICATORS
13 TO 16 ICD
8
DATA-SOURCES
CONSULTED



34 POLES OF EXCELLENCE
Over 1303 regions analysed
in 16 countries
- 34 regions score 41 to 100
- 145 regions score 21 to 40
- 1126 regions score below 20

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

investments on the host

- UNCTAD stresses that acquisitions do not 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.

Chinese supplier plans electric car factory in Germany

Brian Parkin

Bloomberg

May 4, 2017 15:56 CET

BERLIN — China's Beijing WKW Automotive Parts Co. is betting on the future of electric mobility in Germany with a billion-euro factory.

Beijing WKW will invest as much as 1.13 billion euros (\$1.24 billion) on an electric car factory in the eastern state of Saxony that will create over 1,000 new jobs, according to a statement by the regional government on Thursday. Saxony courted WKW to set up manufacturing in the state to produce "premium" electric cars, according to the statement.

"Saxony is already a car state and we want that to remain so in the future," regional Economy Minister Martin Dulig said. WKW hopes to benefit from a "Made in Germany" cachet for marketing its cars. Ministry spokesman Marco Henkel said by telephone on Thursday, WKW hasn't requested state aid, he said.

The Chinese company's planned investment in a plant in Rothenburg/Oberlausitz near the German/Polish border is occurring just as German carmakers gear up to boost production of electric vehicles. Saxony is already home to plants owned by Volkswagen and BMW. WKW will benefit from proximity to about 750 car part suppliers in the region, according to the statement.

Volkswagen has production sites in Zwickau and Chemnitz in the Saxony, while Porsche builds its Cayenne, Macan and Panamera models in Leipzig. BMW says it has one of its most modern plants in the same city, where it has built electric cars since 2013.

MAR 23, 2015 @ 06:21 AM 20,534

The Little Black Book of Billionaire Secrets

Pirelli Gets China As New Owner But Communist Driver Carries Big Risk



Marcel Michelson, CONTRIBUTOR

I write about European business: firms, people, politics and economy.

FULL BIO

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What does drive the mode choice?

- “*The two modes of FDI differ significantly in both the characteristics of the firm that engage in these modes as well as in the characteristics of the host countries 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.

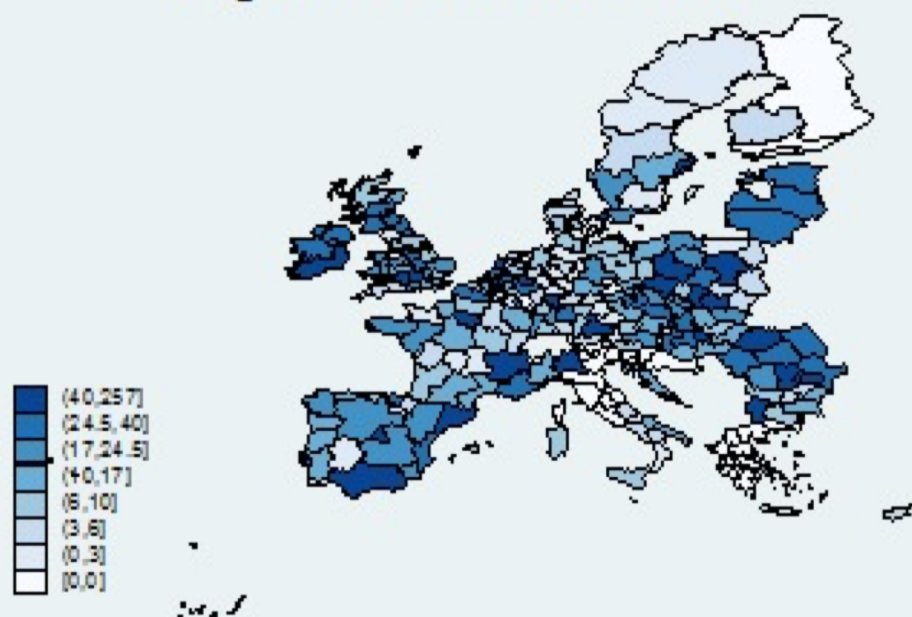
Research Questions

- 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?

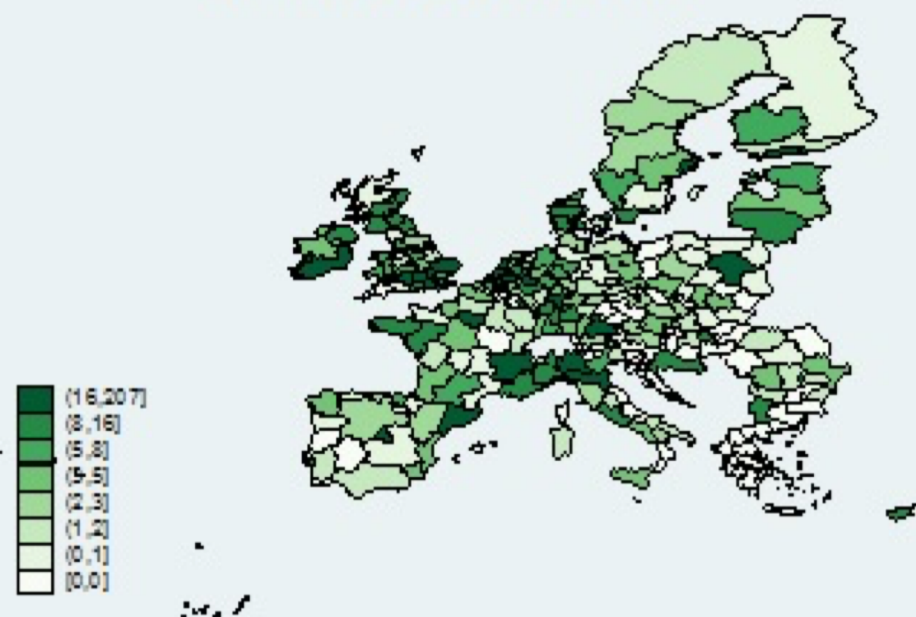
Data

- 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



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 different firms in different countries, we find that Regional (and national) FDI policies should be characterized by different FDI modes: greenfield vs. acquisitions. companies prefer different FDI modes: greenfield vs. acquisitions. environment influences the choice of FDI mode: greenfield vs. acquisitions. investments

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 FDI 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?

References

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Thank you

robertarabellotti.it

roberta.rabellotti@unipv.it

Social Filter

- As in Crescenzi and Rodríguez-Pose (2013), Principal Components of share of labor force with tertiary education (*Tertiary education*); unemployment rate (*Unemployment rate*) and agricultural employment as a share of total employment (*Agricultural employment*); and share of people aged 15-24 in the total population (*Young population*).
- The OECD Regional Database is the source for all the variables of interest at the OECD-TL2 level.

[Back](#)

Status is calculated as the standardized residual of the cross-section regression:

- $\ln StatusNews_{i,t-1} = \alpha + \beta \ln Assets_{i,t-1} + \gamma Profit_{i,t-1} + \delta NSubsidiaries_{i,t-1} + \vartheta PatentStock_{i,t-1} + \mu CHINA_i + \pi Listed_{i,t-1} + \sum \rho_j Sector_{i,j} + \sum \varphi_t DealYear_{i,t} + \epsilon,$
- where *lnStatusNews* is the natural log of the number of items of “positive news” collected from Lexis Nexis concerning the acquirer involved in deal *i* in the year before the deal (i.e. at time *t*-1).

Media based status

- We have searched for news concerning the EMNEs in our sample in Lexis Nexis All News database and retrieved 497,873 news (in English only) between 1990 and 2016.
- Then with an automated content analysis using the Linguistic Inquiry and Word Count (LIWC) software, we have identified articles portraying the EMNEs in a positive way.
- The variable is calculated as the standardized residual of the following cross-section regression:

$$\ln StatusNews_{i,t-1} = \alpha + \beta \ln Assets_{i,t-1} + \gamma Profit_{i,t-1} + \delta NSubsidiaries_{i,t-1} + \theta PatentStock_{i,t-1} + \mu CHINA_i + \pi Listed_{i,t-1} + \rho jSector_{i,j} + \varphi tDealYear_{i,t} + \epsilon,$$

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