

The lab and the plant: offshore R&D and co-location with production activities

Article

Accepted Version

Appendix

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The Lab and the Plant.

Offshore R&D and Co-location with Production Activities

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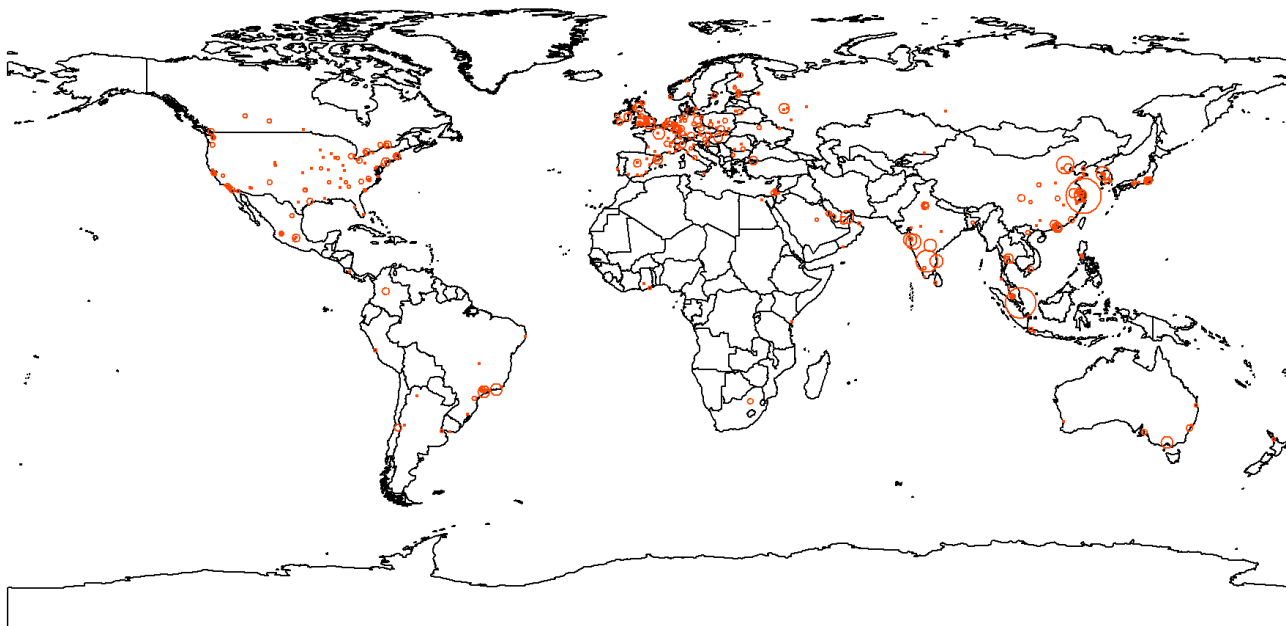
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Appendix

Figure 1: Geographical distribution of R&D and DDT investment projects, by destination city



Source: authors' elaboration from *fDi Markets*

Table A.1: Distribution of projects, intra-firm co-location cases and cities, by city size

City size (population)	R&D and DDT projects		Cases of Co-location R&D/DDT and Production		Cases of Non Co-location R&D/DDT and Production		Cities	
	(No.)	(%)	(No.)	(%)	(No.)	(%)	(No.)	(%)
<i>Greater than 100k</i>	1,476	99.53	186	98.94	1290	99.61	581	98.98
<i>Greater than 500k</i>	1,198	80.78	165	87.77	1033	79.77	270	46.00
<i>Greater than 1m</i>	1,025	69.12	150	79.79	875	67.57	157	26.75
<i>Greater than 5m</i>	642	43.29	110	58.51	532	41.08	38	6.47
Total	1,483	100	188	100	1,295	100	587	100

Source: authors' elaboration from *fDi Markets*

Table A.2: List of cities receiving investments in R&D and DDT activities, 2009-2014.

Destination City	Destination Country	Destination City	Destination Country	Destination City	Destination Country	Destination City	Destination Country
Aachen	Germany	Dortmund	Germany	Malmoe	Sweden	Salalah	Oman
Aberdeen	United Kingdom	Dresden	Germany	Manama (Al-Manamah)	Bahrain	Salta	Argentina
Abu Dhabi	UAE	Dubai	UAE	Manchester	United Kingdom	Salto	Brazil
Accra	Ghana	Dublin	Ireland	Manila	Philippines	Salzburg	Austria
Adelaide	Australia	Duisburg	Germany	Mannheim	Germany	Samut Prakan	Thailand
Aix-en-Provence	France	Durham (NC)	United States	Maribor	Slovenia	San Antonio (TX)	United States
Akron (OH)	United States	Dusseldorf	Germany	Maua	Brazil	San Diego (CA)	United States
Alajuela	Costa Rica	Edinburgh	United Kingdom	Melbourne	Australia	San Francisco (CA)	United States
Albuquerque (NM)	United States	Edmonton	Canada	Memphis (TN)	United States	San Jose (CA)	United States
Alcobendas	Spain	Eindhoven	Netherlands	Mendoza	Argentina	Santa Ana (CA)	United States
Almaty	Kazakhstan	Elgin (IL)	United States	Mesa (AZ)	United States	Santa Rosa (CA)	United States
Almer	Spain	Espoo	Finland	Mexicali	Mexico	Santiago	Chile
Amagasaki	Japan	Essen	Germany	Mexico City	Mexico	Sao Bernardo do Campo	Brazil
Amman	Jordan	Fort Collins (CO)	United States	Milan	Italy	Sao Paulo	Brazil
Amsterdam	Netherlands	Foshan	China	Milton Keynes	United Kingdom	Saskatoon	Canada
Ann Arbor (MI)	United States	Frankfurt am Main	Germany	Miramar (FL)	United States	Scottsdale (AZ)	United States
Antwerp	Belgium	Freiburg	Germany	Mississauga	Canada	Seattle (WA)	United States
Atlanta (GA)	United States	Fremont (CA)	United States	Mombasa	Kenya	Seongnam	South Korea
Auckland	New Zealand	Fresno (CA)	United States	Monterrey	Mexico	Seoul	South Korea
Aurora (IL)	United States	Galway	Ireland	Montevideo	Uruguay	Seville	Spain
Baltimore (MD)	United States	Gdansk	Poland	Montreal	Canada	Shah Alam	Malaysia
Bandung	Indonesia	Geneva	Switzerland	Moscow	Russia	Shanghai	China
Bangalore	India	Genova	Italy	Mumbai	India	Shangyu	China
Bangkok	Thailand	Ghent	Belgium	Munich	Germany	Sheffield	United Kingdom
Baoding	China	Glasgow	United Kingdom	Murcia	Spain	Shenzhen	China
Barcelona	Spain	Gliwice	Poland	Muscat	Oman	Shunde	China
Baton Rouge (LA)	United States	Granada	Spain	NYC (NY)	United States	Siegen	Germany
Beijing	China	Graz	Austria	Nagoya	Japan	Singapore	Singapore
Belfast	United Kingdom	Grenoble	France	Nakhon Pathom	Thailand	Slough	United Kingdom
Bellevue (WA)	United States	Guadalajara	Mexico	Nanchang	China	Sofiya	Bulgaria
Berkeley (CA)	United States	Guangzhou	China	Nanjing	China	St Louis (MO)	United States
Berlin	Germany	Gurgaon	India	Nanning	China	St Petersburg	Russia
Bielefeld	Germany	Ha Noi	Vietnam	Nantong	China	Stavanger	Norway
Birmingham (AL)	United States	Haifa	Israel	Naperville (IL)	United States	Sterling Heights (MI)	United States
Bogot	Colombia	Hamburg	Germany	Nashville (TN)	United States	Stockholm	Sweden
Bologna	Italy	Hangzhou	China	Navi Mumbai	India	Stuttgart	Germany
Bonn	Germany	Hannover	Germany	Netanya	Israel	Subang Jaya	Malaysia
Bordeaux	France	Helsinki	Finland	Neuss	Germany	Sunnyvale (CA)	United States
Boston (MA)	United States	Ho Chi Minh	Vietnam	New Delhi	India	Suzhou	China
Boulder (CO)	United States	Hong Kong	Hong Kong	Newark (NJ)	United States	Sydney	Australia
Boulogne-Billancourt	France	Hortolandia	Brazil	Newcastle	Australia	Szczecin	Poland
Brasilia	Brazil	Houston (TX)	United States	Newport (GWENT)	United Kingdom	Tallinn	Estonia
Brasov	Romania	Huntington Beach (CA)	United States	Nice	France	Tampere	Finland
Bratislava	Slovakia	Hyderabad	India	Ningbo	China	Taubat	Brazil
Bremen	Germany	Ibaraki	Japan	Nizhny Novgorod	Russia	Tel Aviv	Israel
Brisbane	Australia	Incheon	South Korea	Noginsk	Russia	Telford	United Kingdom
Bristol	United Kingdom	Indianapolis (IN)	United States	Noida	India	Terrassa	Spain
Brussels	Belgium	Indore	India	North Charleston (SC)	United States	Thane	India
Bucharest	Romania	Ipswich	United Kingdom	Northampton	United Kingdom	Thiruvananthapuram	India
Budapest	Hungary	Irvine (CA)	United States	Nottingham	United Kingdom	Thrissur	India
Buenos Aires	Argentina	Istanbul	Turkey	Novosibirsk	Russia	Tianjin	China
Busan	South Korea	Jakarta	Indonesia	Nuneaton	United Kingdom	Tijuana	Mexico
Cabuyao	Philippines	Jerusalem	Israel	Odense	Denmark	Tlalneantla	Mexico
Cairo	Egypt	Johannesburg	South Africa	Olathe (KS)	United States	Tokyo	Japan
Cambridge	United Kingdom	Jundia	Brazil	Osaka	Japan	Toluca	Mexico
Cambridge (MA)	United States	Karlsruhe	Germany	Oslo	Norway	Toronto	Canada
Campinas	Brazil	Kaunas	Lithuania	Ottawa	Canada	Toulouse	France
Canoas	Brazil	Kharkiv	United Kingdom	Oulu	Finland	Trier	Germany
Cardiff	United Kingdom	Kobe	Japan	Oxford	United Kingdom	Trondheim	Norway
Cary (NC)	United States	Kosice	Slovakia	Oxnard (CA)	United States	TsUnited Kingdom	Japan
Castellon	Spain	Krakow	Poland	Paris (FR)	France	Turin	Italy
Catania	Italy	Krefeld	Germany	Pasadena (CA)	United States	Turku	Finland
Cedar Rapids (IA)	United States	Kuala Lumpur	Malaysia	Pathum Thani	Thailand	Ulm	Germany
Changshu	China	Kulim	Malaysia	Perth	Australia	Ulsan	South Korea
Charleston (SC)	United States	Kumagaya	Japan	Petalang Jaya	Malaysia	Vadodara	India
Charlotte (NC)	United States	Kumasi	Ghana	Philadelphia (PA)	United States	Vancouver	Canada
Chattanooga (TN)	United States	Kunshan	China	Phoenix (AZ)	United States	Venezia	Italy
Chengdu	China	Kyiv	United Kingdom	Pittsburgh (PA)	United States	Vienna	Austria
Chennai	India	Kyoto	Japan	Podolsk	Russia	Vilnius	Lithuania
Chesapeake (VA)	United States	Lausanne	Switzerland	Portland (OR)	United States	Warsaw	Poland
Chicago (IL)	United States	Laval	Canada	Poznan	Poland	Washington, DC	United States
Chongqing	China	Leiden	Netherlands	Prague	Czech Republic	Wichita (KS)	United States
Clearwater (FL)	United States	Leipzig	Germany	Pune	India	Wiesbaden	Germany
Cleveland (OH)	United States	Leverkusen	Germany	Qingdao	China	Winnipeg	Canada
Coimbatore	India	Lima	Peru	Quezon	Philippines	Wroclaw	Poland
Colombo	Sri Lanka	Limerick	Ireland	Raipur	India	Wuhan	China
Columbia (MO)	United States	Lincoln	United Kingdom	Raleigh (NC)	United States	Xi'an	China
Copenhagen	Denmark	Linz	Austria	Rayong	Thailand	Xiamen	China
Cork	Ireland	Lipa	Philippines	Reading	United Kingdom	Yamato	Japan
Craiova	Romania	Lipetsk	Russia	Recife	Brazil	Yancheng	China
Curitiba	Brazil	Lisbon	Portugal	Reus	Spain	Yangzhou	China
Daeju	South Korea	Liuzhou	China	Richardson (TX)	United States	Yantai	China
Daejeon	South Korea	Liverpool	United Kingdom	Rio de Janeiro	Brazil	Yeosu	South Korea
Dalian	China	Livorno	Italy	Riyadh	Saudi Arabia	Yokohama	Japan
Dallas (TX)	United States	London	United Kingdom	Rochester (MN)	United States	Zagreb	Croatia
Darmstadt	Germany	Los Angeles (CA)	United States	Rochester (NY)	United States	Zapopan	Mexico
Denver (CO)	United States	Louisville (KY)	United States	Rome	Italy	Zaragoza	Spain
Derby	United Kingdom	Lowell (MA)	United States	Rostock	Germany	Zhengzhou	China
Detroit (MI)	United States	Ludwigshafen	Germany	Rotterdam	Netherlands	Zhenjiang	China
Dhahran	Saudi Arabia	Luxembourg	Luxembourg	Rushan	China	Zhuhai	China
Dhaka	Bangladesh	Lyon	France	Rzesz	Poland	Zurich	Switzerland
Dijon	France	Macao	Brazil	Saarbr	Germany		
Doha	Qatar	Madison (WI)	United States	Sagamihara	Japan		
Dongguan	China	Madrid	Spain	Sakai	Japan		

Note: table reports the list of cities receiving at least one investment in R&D during the period 2009-2014. However, the final set of alternative locations in the econometric model includes the total number of cities receiving at least one investment in R&D during the all period covered by *fDi Markets* (2003-2014).

Table A.3: Distribution of R&D and DDT projects and intra-firm co-location cases, by geographical area of destination

Area/Country of Destination	R&D projects		Cases of Co-location R&D and Production		Cases of Non Co-location R&D and Production	
	(No.)	(%)	(No.)	(%)	(No.)	(%)
Europe	365	24.61	24	12.77	341	26.33
United Kingdom	77	5.19	3	1.6	74	5.71
Germany	75	5.06	6	3.19	69	5.33
Spain	31	2.09	3	1.6	28	2.16
France	28	1.89	0	0	28	2.16
Ireland	20	1.35	2	1.06	18	1.39
Poland	20	1.35	1	0.53	19	1.47
Italy	18	1.21	1	0.53	17	1.31
Finland	13	0.88	0	0	13	1
Austria	11	0.74	3	1.6	8	0.62
Belgium	10	0.67	2	1.06	8	0.62
Hungary	10	0.67	0	0	10	0.77
Non-EU Europe	17	1.15	0	0	17	1.31
Turkey	10	0.67	0	0	10	0.77
North America	180	12.14	4	2.13	176	13.59
United States	144	9.71	4	2.13	140	10.81
Canada	36	2.43	0	0	36	2.78
East Asia & Pacific	564	38.03	127	67.55	437	33.75
China	306	20.63	91	48.4	215	16.6
Singapore	107	7.22	31	16.49	76	5.87
South Korea	33	2.23	2	1.06	31	2.39
Australia	32	2.16	1	0.53	31	2.39
Japan	29	1.96	0	0	29	2.24
Thailand	16	1.08	1	0.53	15	1.16
Hong Kong	12	0.81	0	0	12	0.93
Malaysia	10	0.67	1	0.53	9	0.69
South Asia	176	11.87	28	14.89	148	11.43
India	172	11.6	28	14.89	144	11.12
Central Asia	21	1.42	0	0	21	1.62
Russia	20	1.35	0	0	20	1.54
Latin America & Caribbean	96	6.47	4	2.13	92	7.1
Brazil	51	3.44	3	1.6	48	3.71
Mexico	23	1.55	0	0	23	1.78
Middle East & North Africa	55	3.71	1	0.53	54	4.17
United arab emirates	29	1.96	1	0.53	29	2.24
Sub-Saharan Africa	9	0.61	0	0	9	0.69
South Africa	5	0.34	0	0	5	0.39
Total	1483	100	188	100	1,295	100

Source: authors' elaboration from *fDi Markets*

Table A.4: Distribution of R&D and DDT projects and intra-firm co-location cases, by geographical area of origin

Area/Country of Origin	R&D and DDT projects		Cases of Co-location R&D/DDT and Production		Cases of Non Co-location R&D/DDT and Production	
	(No.)	(%)	(No.)	(%)	(No.)	(%)
Europe	554	37.36	79	42.02	475	36.68
Germany	189	12.74	35	18.62	154	11.89
France	80	5.39	14	7.45	66	5.1
United Kingdom	78	5.26	3	1.6	75	5.79
Netherlands	47	3.17	14	7.45	33	2.55
Sweden	32	2.16	6	3.19	26	2.01
Finland	23	1.55	0	0	23	1.78
Denmark	21	1.42	1	0.53	20	1.54
Belgium	18	1.21	3	1.6	15	1.16
Italy	13	0.88	1	0.53	12	0.93
Ireland	12	0.81	0	0	12	0.93
Norway	11	0.74	1	0.53	10	0.77
Spain	10	0.67	0	0	10	0.77
Non-EU Europe	65	4.38	13	6.91	52	4.02
Switzerland	63	4.25	13	6.91	50	3.86
North America	567	38.23	68	36.17	499	38.53
United States	536	36.14	65	34.57	471	36.37
Canada	31	2.09	3	1.6	28	2.16
East Asia & Pacific	241	16.25	25	13.3	216	16.68
Japan	125	8.43	23	12.23	102	7.88
China	65	4.38	0	0	65	5.02
Taiwan	22	1.48	2	1.06	20	1.54
South Asia	16	1.08	0	0	16	1.24
India	16	1.08	0	0	16	1.24
Latin America & Caribbean	7	0.47	0	0	7	0.54
Brazil	3	0.2	0	0	3	0.23
Mexico	3	0.2	0	0	3	0.23
Venezuela	1	0.07	0	0	1	0.08
Middle East & North Africa	30	2.02	3	1.6	27	2.08
Israel	12	0.81	1	0.53	11	0.85
Saudi Arabia	8	0.54	0	0	8	0.62
United arab emirates	8	0.54	2	1.06	6	0.46
Egypt	2	0.13	0	0	2	0.15
Sub-Saharan Africa	3	0.2	0	0	3	0.23
South Africa	3	0.2	0	0	3	0.23
Total	1483	100	188	100	1295	100

Source: authors' elaboration from *fDi Markets*

Table A.5: Distribution of R&D and DDT projects and intra-firm co-location R&D-production cases, by industry

Sector	R&D and DDT projects		Cases of Co-location R&D/DDT and Production		Cases of Non Co-location R&D/DDT and Production	
	(No.)	(%)	(No.)	(%)	(No.)	(%)
Electronics	492	33.18	34	18.09	458	35.37
<i>Electronic Components</i>	103	6.95	12	6.38	91	7.03
<i>Semiconductors</i>	85	5.73	4	2.13	81	6.25
<i>Consumer Electronics</i>	22	1.48	5	2.66	17	1.31
Pharma, Chemicals, & Biothech	391	26.37	61	32.45	330	25.48
<i>Pharmaceuticals</i>	194	13.08	11	5.85	118	9.11
<i>Chemicals</i>	129	8.7	42	22.34	152	11.74
<i>Biotechnology</i>	68	4.59	8	4.26	60	4.63
Transport	168	11.33	43	22.87	125	9.65
<i>Aerospace</i>	114	7.69	8	4.26	20	1.54
<i>Automotive</i>	28	1.89	33	17.55	81	6.26
Machinery	172	11.6	17	9.04	155	11.97
Food & Beverages	70	4.72	7	3.72	63	4.86
Plastics & Rubber	44	2.97	13	6.91	31	2.39
Mining	45	3.03	2	1.06	43	3.32
Metals	13	0.88	2	1.06	11	0.85
Other	88	5.93	9	4.79	79	6.1
Synthetic Sectors	986	66.49	115	61.17	871	67.26
Analytical Sectors	467	31.49	68	36.17	399	30.81
Total	1,483	100	188	100	1,295	100

Source: authors' elaboration from *fDi Markets*

Table A.6: Distribution of R&D and DDT projects, by knowledge bases taxonomy

Synthetic Sectors	R&D and DDT projects	
	Projects (N.)	Projects (%)
Aerospace	28	2.84
Automotive Components	64	6.49
Automotive OEM	50	5.07
Beverages	6	0.61
Business Machines & Equipment	30	3.04
Coal, Oil and Natural Gas	34	3.45
Communications	225	22.82
Consumer Electronics	22	2.23
Consumer Products	29	2.94
Electronic Components	103	10.45
Engines & Turbines	16	1.62
Food & Tobacco	64	6.49
Industrial Machinery, Equipment & Tools	126	12.78
Metals	13	1.32
Minerals	11	1.12
Non-Automotive Transport OEM	8	0.81
Plastics	28	2.84
Rubber	16	1.62
Semiconductors	85	8.62
Textiles	19	1.93
Transportation	9	0.91
Total	986	100
Analytical Sectors		
Biotechnology	68	14.56
Chemicals	194	41.54
Healthcare	10	2.14
Medical Devices	57	12.21
Pharmaceuticals	129	27.62
Space & Defence	9	1.93
Total	467	100

Source: authors' elaboration based on innovation and economic geography literature. For more details, Grabhe, (2002); Garmann Johnsen (2011); Broekel & Boschma (2011); Plum & Hassink (2011); Martin & Moodysson, (2013); Herstad, Eberberger and Asheim (2013); Herstad, Aslesen & Ebersberger, (2014); Zukauskaitė & Moodysson (2016); Asheim, (2007); Grillitsch et al. (2017).

Table A.7: Descriptive statistics (first stage model)

Variable	Obs	Mean	Std. Dev.	Min	Max
DV: Location Choice	795,326	0.00186	0.04314	0	1
Prior firm Production (city) (dummy)	795,326	0.00756	0.08663	0	1
Prior firm Other activities (dummy)	795,326	0.01815	0.13348	0	1
Firm host-country specific experience	795,326	1.74354	4.95856	0	72
Agglomeration economies in R&D	795,326	1.26608	1.03143	0	6.10479
Agglomeration economies in Prod	795,326	1.61055	1.26944	0	6.49375
Agglomeration economies in Other act.	795,326	2.57475	1.71154	0	7.85903
Geographical Distance	795,326	8.62625	0.94675	0.50359	9.89724
Population	795,326	13.20567	1.23249	10.12238	16.81707
Home-country specific agglomerations	795,326	1.09946	1.31638	0	7.16858
Num. patents	795,326	5.71656	2.88708	0.69315	12.17017
GDP per capita	795,326	9.79168	1.17901	6.33695	11.59522
GDP	795,326	27.97389	1.58777	22.80793	30.39121
Taxation	795,326	3.84223	0.30443	2.42480	4.68849
Psychic Distance: Industrial development	795,326	0.01908	1.02856	-3.03069	1.98490
Psychic Distance: degree of democracy	795,326	0.03610	1.15037	-3.40437	2.72839
Psychic Distance: Education Level	795,326	0.03645	1.02309	-3.23200	3.05695
Psychic Distance: Religion	795,326	0.11009	1.03457	-1.28792	1.73742
Psychic Distance: Language	795,326	0.12715	0.91501	-2.89872	0.76533
Rule of Law	795,326	-0.11810	1.02041	-3.10421	1.20021

Table A.8: Correlations (first stage model)

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	
1 DV: Location Choice	1																				
2 Prior firm Production (city) (dummy)	0.06	1																			
3 Prior firm Other activities (dummy)	0.06	0.17	1																		
4 Firm host-country specific experience	0.01	0.17	0.14	1																	
5 Agglomeration economies in R&D	0.08	0.12	0.20	0.01	1																
6 Agglomeration economies in Prod	0.06	0.14	0.15	0.07	0.59	1															
7 Agglomeration economies in Other act.	0.06	0.09	0.19	-0.02	0.74	0.61	1														
8 Geographical Distance	0.00	0.00	0.01	0.04	-0.01	0.02	-0.07	1													
9 Population	0.05	0.09	0.15	0.04	0.52	0.55	0.61	0.16	1												
10 Home-country specific agglomerations	0.06	0.12	0.21	0.04	0.62	0.55	0.70	0.01	0.50	1											
11 Num. patents	0.01	-0.02	0.02	0.01	0.12	-0.25	0.09	-0.09	-0.12	0.04	1										
12 GDP per capita	-0.01	-0.05	-0.03	-0.06	-0.09	-0.32	-0.03	-0.22	-0.40	-0.09	0.67	1									
13 GDP	0.01	0.01	-0.02	0.27	-0.06	-0.10	-0.19	0.08	-0.03	-0.10	0.44	0.31	1								
14 Taxation	0.00	0.02	-0.02	0.12	-0.05	0.13	-0.15	0.05	0.13	-0.06	-0.20	-0.26	0.33	1							
15 Psychic Distance: Industrial development	0.01	0.05	0.04	0.04	0.11	0.34	0.06	0.17	0.33	0.30	-0.64	-0.75	-0.35	0.23	1						
16 Psychic Distance: degree of democracy	0.02	0.07	0.05	0.15	0.09	0.34	0.09	0.10	0.36	0.26	-0.47	-0.52	-0.09	0.12	0.74	1					
17 Psychic Distance: Education Level	0.02	0.06	0.04	0.10	0.10	0.27	0.04	0.18	0.32	0.22	-0.51	-0.71	-0.21	0.12	0.80	0.74	1				
18 Psychic Distance: Religion	0.01	0.03	0.03	0.09	0.09	0.14	-0.01	0.35	0.19	-0.07	-0.12	-0.35	0.10	0.03	0.08	0.09	0.15	1			
19 Psychic Distance: Language	-0.01	0.01	0.01	0.01	-0.03	0.12	-0.01	0.02	0.10	-0.18	-0.15	-0.08	-0.04	0.19	0.01	0.08	0.00	0.26	1		
20 Rule of Law	-0.01	-0.05	-0.03	-0.04	-0.04	-0.35	-0.01	-0.21	-0.44	-0.08	0.69	0.85	0.27	-0.34	-0.70	-0.59	-0.64	-0.25	-0.22	1	

Table A.9: Descriptive statistics (second-stage model)

Variable	Obs	Mean	Std. Dev.	Min	Max
DV: propensity to co-locate	855	1.1345	0.7138	-2.4991	4.6169
Geographical Dispersion	855	0.0239	0.0393	0	0.2717
International Experience	855	2.8678	2.6524	0	6
Share of intangible assets	358	0.1783	0.1870	0	0.8357
Firm Age	488	3.1882	1.2701	0	5.8861
Number of patents	600	3.6373	3.6824	0	12.9724
Large MNE	855	0.4760	0.4997	0	1
Share of foreign subsidiaries	530	0.6684	0.3162	0	1
Synthetic Sectors (dummy)	855	0.8140	0.3893	0	1
Food & Beverages	855	0.0503	0.2187	0	1
Machinery	855	0.1298	0.3363	0	1
Metals	855	0.0175	0.1314	0	1
Mining	855	0.0234	0.1512	0	1
Other	855	0.0795	0.2707	0	1
Pharma, Chemicals & Biotech	855	0.2386	0.4265	0	1
Plastics & Rubber	855	0.0304	0.1718	0	1
Transport	855	0.0994	0.2994	0	1
EU (dummy)	855	0.4082	0.4918	0	1
USA (dummy)	855	0.3766	0.4848	0	1

Table A.10: Correlations (second-stage model)

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	
1 DV: propensity to co-locate	1																			
2 Geographical Dispersion	-0.09	1																		
3 International Experience	-0.04	0.63	1																	
4 Share of intangible assets	-0.04	0.04	0.10	1																
5 Firm Age	0.00	0.32	0.43	0.03	1															
6 Number of patents	-0.02	0.36	0.42	-0.09	0.42	1														
7 Large MNE	0.03	0.19	0.27	0.06	0.29	0.57	1													
8 Share of foreign subsidiaries	-0.05	0.07	-0.02	0.07	-0.05	-0.16	-0.24	1												
9 Synthetic Sectors (dummy)	0.02	0.13	0.14	-0.20	0.17	0.10	0.07	-0.09	1											
10 Food & Beverages	-0.02	0.02	0.03	0.11	-0.01	-0.09	0.01	-0.01	0.11	1										
11 Machinery	-0.06	-0.02	0.02	0.00	0.04	0.07	0.00	0.04	0.15	-0.09	1									
12 Metals	0.00	-0.01	0.00	0.05	0.05	-0.05	0.02	0.02	0.06	-0.03	-0.05	1								
13 Mining	-0.03	0.05	0.09	-0.06	0.09	0.00	0.02	-0.04	0.07	-0.04	-0.06	-0.02	1							
14 Other	0.00	0.01	0.01	0.00	0.00	-0.05	-0.02	0.06	0.06	-0.07	-0.11	-0.04	-0.05	1						
15 Pharma, Chemicals & Biotech	0.02	-0.08	-0.08	0.08	-0.10	-0.07	-0.01	0.12	-0.51	-0.13	-0.22	-0.07	-0.09	-0.16	1					
16 Plastics & Rubber	0.09	-0.01	0.06	-0.09	0.03	0.02	0.08	-0.09	0.07	-0.04	-0.07	-0.02	-0.03	-0.05	-0.10	1				
17 Transport	0.08	0.21	0.15	-0.13	0.15	0.08	0.00	0.00	0.12	-0.08	-0.13	-0.04	-0.05	-0.10	-0.19	-0.06	1			
18 EU (dummy)	0.00	0.07	0.04	0.09	-0.01	-0.03	0.03	0.22	-0.03	0.04	0.00	0.07	0.03	0.04	0.02	-0.06	0.07	1		
19 USA (dummy)	0.05	-0.03	-0.01	0.21	-0.06	-0.14	-0.04	-0.08	-0.03	-0.01	-0.04	-0.10	-0.04	-0.04	0.05	0.00	-0.07	-0.65	1	

