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POSTGRADUATE MODULE ECM120  
THE ECONOMICS OF  
THE MULTINATIONAL ENTERPRISE

# Strategic Development of the MNE

- Pre 1870
- Chartered Companies

Had trading rights- used financial and human capital to develop resource-based (agricultural and mineral potential of foreign countries (mostly colonies) and trade that was fully allied to this production

(**resource-seeking**)-----not MNEs though (lacked organization links to VA activity in the home country)

Examples: The [East India Company](#) was established in 1602 as a [joint-stock company](#) with a monopoly of the trade to and from the [East Indies](#).

In [North America](#) the English chartered companies had a colonizing as well as a trading purpose. Although the [Hudson's Bay Company](#) was almost wholly devoted to trade, most companies—such as the [London Company](#), the [Plymouth Company](#), and the [Massachusetts Bay Company](#)—were directly involved in the settlement of colonists.

In the Netherlands the Dutch East India (chartered in 1600) and West India companies were the basis of the commercial and maritime supremacy of the Dutch in the 17th century.

Source: <https://www.britannica.com/topic/chartered-company>

# Migrations

- Groups of people with special skills and knowledge, take with them significant amount of capital and move to new countries where they set up new industries.
- Examples; Peter Ballantine (from Dundee Scotland) to set up brewery in the US (around 1830).
- Joseph Dyer from Connecticut US to set up a factory in Manchester, England to manufacture American –English machinery (1820s) (cotton-spinning)
- Not though multi-country operations (to compromise an MNE)

# Finance Capitalists

- Raising funding from the home country (e.g. UK) to fund **free-standing overseas operations** e.g. copper mining in Russia.
- Had access to home country capital, had organizational skills in managing the foreign operations.
- Companies investing in petroleum are forerunners of today's giant MNEs.
- Example: Rio Tinto Zinc, small office in London but not engage in similar activities in the UK.

1870-1914

- Four factors that changed industry and markets.
  1. Advances in technology (fuel-powered machines and assembly line of production), led to optimal scale of production and thus firms looked for larger markets
  2. Homogenisation of demand for products
  3. Improvements in ocean transport and international communications
  4. Mostly low trade barriers

These factors enabled trade

# 1870-1914 – FDI and MNEs

- **MNEs from Europe:**

1. Securing raw materials to support home country industry- not any more responsibility of trade companies- element of value- added- **vertical integration**
2. Evolution of stand-alone companies into integrated multi-country companies with home-country HQs.
3. Need to supply effectively their overseas markets- **horizontal integration-market seeking** (Nestle, Unilevel, Cadbury)

**MNEs from US:**

1. More oriented towards technology- based industries. Pioneered formal R&D
2. Evolved around managerial skills i.e. organize integrated operations in a range of different locations

**Examples:** US companies produced from sewing machines to drugs to oil to insurance (new products)

Study by Franko (1976) identified 85 large European MNEs with operations in mining, petroleum and plantations (**resource seeking**)

1914-1939

- Economic depression
- High levels of restraints on trade
- Firms built individual facilities in host countries resulting in **horizontal MNEs** and **market-seeking** investments

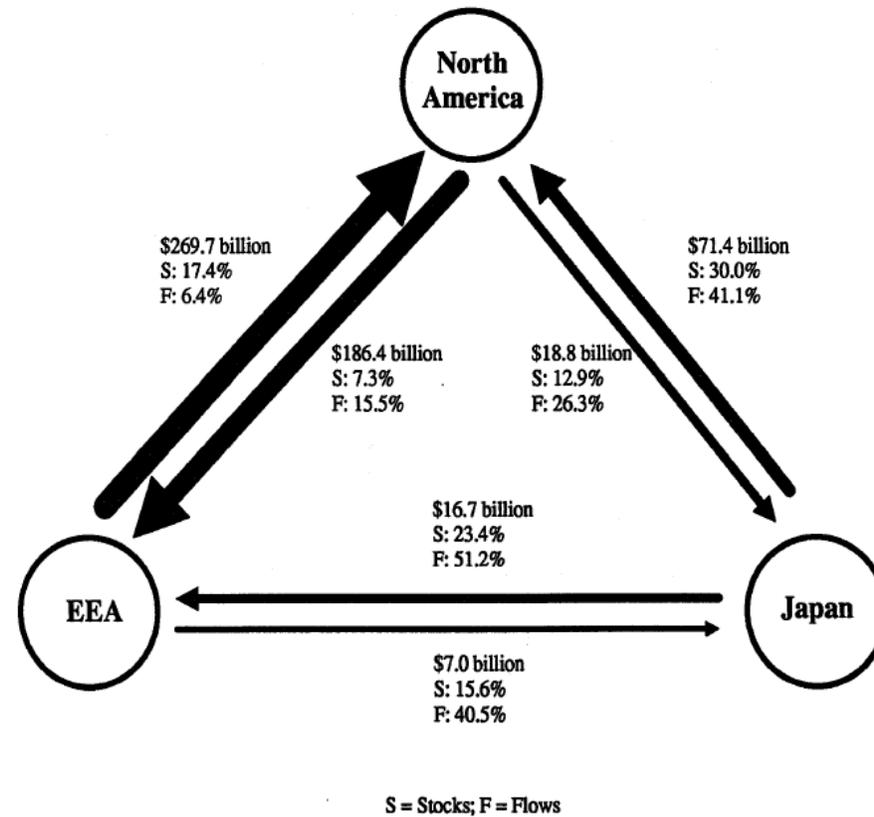
## 1945-1965

- Trade restraints are high
- **Market seeking** is still a predominant motivation
- Significant growth of MNEs
- 1965-
- Major developments:
  1. Lowering of trade barriers led to rationalisation of international production by MNEs through **efficiency-seeking** subsidiaries
  2. Adoption of international and networked approaches to R&D leading to **knowledge-seeking** strategic motivation

## FDI in 1992

- **Developed countries continued to attract more than four fifths of world-wide foreign direct investment inflows in 1990.** The Triad, consisting of the European Community, Japan and the United States, accounted for 70 per cent of world-wide inflows.
- The absolute volume of foreign direct investment flows to **developing countries** has continued to increase, reaching a total of \$32 billion in 1990. But their share in world flows has maintained a downward trend, declining from 25 per cent in the first half of the 1980s to **17 per cent in the second half.** Despite a declining share, the rate of growth of foreign direct investment flows to developing countries was more than twice the rate of growth of domestic output, investment and technology imports of these countries and one-and-a-half times the rate of growth of their total imports.
- Source: <https://unctad.org/en/docs/wir92ove.en.pdf>

Figure 2. Intra-Triad foreign direct investment, 1989



Source: Transnational Corporations and Management Division, *World Investment Report 1992: Transnational Corporations as Engines of Growth* (United Nations publication, Sales No. E.92.II.A.19).

**Table I. The top 100 transnational corporations ranked by foreign assets, 1993**  
(Billions of dollars and number of employees)

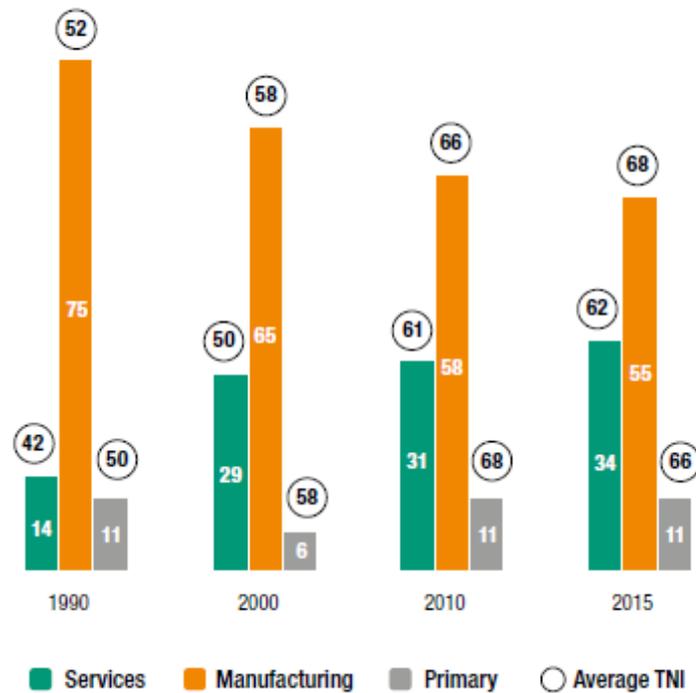
| Ranking by |                    |                                |                     |                                 |                       | Assets |         | Sales |                       | Employment |          | Index <sup>b</sup> |
|------------|--------------------|--------------------------------|---------------------|---------------------------------|-----------------------|--------|---------|-------|-----------------------|------------|----------|--------------------|
| Foreign    | Transnationality   |                                |                     | Industry <sup>a</sup>           | Foreign               | Total  | Foreign | Total | Foreign               | Total      | Per cent |                    |
| Assets     | Index <sup>b</sup> | Corporation                    | Country             | Industry <sup>a</sup>           | (Billions of dollars) |        |         |       | (Number of employees) |            |          |                    |
|            | 26                 | Royal Dutch Shell <sup>c</sup> | U. K. / Netherlands | Petroleum refining              | 69.4                  | 100.8  | 45.5    | 95.2  | 85000                 | 117000     | 63.1%    |                    |
| 2          | 21                 | Exxon                          | United States       | Petroleum refining              | 47.4                  | 84.1   | 87.7    | 111.2 | 57000                 | 91000      | 66.0%    |                    |
| 3          | 35                 | IBM                            | United States       | Computers                       | 44.1                  | 81.1   | 37.0    | 64.1  | 130655                | 256207     | 54.4%    |                    |
| 4          | 86                 | General Motors                 | United States       | Motor vehicles and parts        | 36.9                  | 167.4  | 28.6    | 133.6 | 270000                | 756000     | 26.4%    |                    |
| 5          | 95                 | General Electric               | United States       | Electronics                     | 31.6                  | 251.5  | 11.2    | 60.5  | 59000                 | 222000     | 19.2%    |                    |
| 6          | 74                 | Toyota                         | Japan               | Motor vehicles and parts        | .. <sup>d</sup>       | 97.6   | 41.1    | 94.6  | 23824                 | 110534     | 32.3%    |                    |
| 7          | 66                 | Ford                           | United States       | Motor vehicles and parts        | 30.9                  | 198.9  | 36.0    | 108.5 | 180904                | 332700     | 34.4%    |                    |
| 8          | 88                 | Hitachi                        | Japan               | Electronics                     | .. <sup>d</sup>       | 86.7   | 16.5    | 71.8  | .. <sup>e</sup>       | 330637     | 23.8%    |                    |
| 9          | 25                 | Sony <sup>d</sup>              | Japan               | Electronics                     | .. <sup>d</sup>       | 41.5   | 26.3    | 36.3  | 70000                 | 130000     | 63.2%    |                    |
| 10         | 68                 | Mitsubishi                     | Japan               | Trading                         | .. <sup>d</sup>       | 85.2   | 65.3    | 168.4 | .. <sup>e</sup>       | 157900     | 34.2%    |                    |
| 11         | 1                  | Nestle                         | Switzerland         | Food                            | 24.8                  | 30.6   | 38.4    | 39.2  | 203100                | 209800     | 92.0%    |                    |
| 12         | 32                 | Mobil                          | United States       | Petroleum refining              | 23.1                  | 40.7   | 42.5    | 63.5  | 28600                 | 61900      | 56.6%    |                    |
| 13         | 69                 | Nissan Motor                   | Japan               | Motor vehicles and parts        | .. <sup>d</sup>       | 68.3   | 24.2    | 56.5  | 34464                 | 143916     | 33.4%    |                    |
| 14         | 59                 | Matsushita Electric            | Japan               | Electronics                     | 22.5                  | 77.2   | 31.7    | 64.3  | 98639                 | 254059     | 39.1%    |                    |
| 15         | 46                 | Elf Aquitaine                  | France              | Petroleum refining              | 22.4                  | 45.5   | 14.9    | 35.5  | 44063                 | 94253      | 46.0%    |                    |
| 16         | 5                  | Asea Brown Boveri <sup>f</sup> | Switzerland         | Electrical equipment            | 21.5                  | 24.9   | 24.7    | 28.3  | .. <sup>e</sup>       | 206490     | 89.1%    |                    |
| 17         | 7                  | Philips Electronics            | Netherlands         | Electronics                     | .. <sup>d</sup>       | 23.8   | 26.6    | 30.3  | 200000                | 244400     | 84.9%    |                    |
| 18         | 14                 | British Petroleum              | United Kingdom      | Petroleum                       | 19.0                  | 28.1   | 39.2    | 52.4  | 62600                 | 84500      | 72.2%    |                    |
| 19         | 29                 | Hanson                         | United Kingdom      | Building materials              | 19.0                  | 37.9   | 7.6     | 15.4  | 53000                 | 71000      | 58.1%    |                    |
| 20         | 73                 | Siemens                        | Germany             | Electronics                     | .. <sup>d</sup>       | 58.4   | 13.8    | 50.0  | 153000                | 403800     | 32.5%    |                    |
| 21         | 28                 | Unilever <sup>e</sup>          | U. K. / Netherlands | Food                            | 18.0                  | 24.7   | 16.1    | 40.0  | 187000                | 294000     | 58.8%    |                    |
| 22         | 85                 | Mitsui                         | Japan               | Trading                         | .. <sup>d</sup>       | 72.5   | 49.2    | 172.9 | .. <sup>e</sup>       | 11528      | 27.3%    |                    |
| 23         | 60                 | Alcatel Alsthom                | France              | Electronics                     | .. <sup>d</sup>       | 44.2   | 5.0     | 26.5  | 115500                | 196500     | 38.6%    |                    |
| 24         | 55                 | Du Pont                        | United States       | Chemicals                       | 16.4                  | 37.1   | 16.8    | 37.1  | 36400                 | 114000     | 40.5%    |                    |
| 25         | 19                 | B.A.T. Industries              | United Kingdom      | Tobacco                         | 15.7                  | 50.5   | 25.3    | 33.2  | 175500                | 190308     | 66.4%    |                    |
| 26         | 61                 | Philip Morris                  | United States       | Food                            | 15.6                  | 51.2   | 22.5    | 65.1  | 86000                 | 173000     | 38.3%    |                    |
| 27         | 53                 | Volkswagen                     | Germany             | Motor vehicles and parts        | 15.6                  | 45.9   | 24.5    | 44.4  | 103000                | 253000     | 43.3%    |                    |
| 28         | 72                 | Nissho Iwai                    | Japan               | Trading                         | .. <sup>d</sup>       | 45.6   | 36.6    | 100.0 | 2078                  | 7245       | 32.7%    |                    |
| 29         | 9                  | Ciba - Geigy                   | Switzerland         | Chemicals                       | 14.9                  | 21.5   | 14.5    | 15.3  | 68854                 | 87480      | 81.0%    |                    |
| 30         | 23                 | Hoechst                        | Germany             | Chemicals                       | .. <sup>d</sup>       | 22.6   | 21.5    | 27.7  | 89963                 | 172483     | 64.8%    |                    |
| 31         | 70                 | Veba                           | Germany             | Trading                         | .. <sup>d</sup>       | 32.0   | 10.8    | 35.3  | 32280                 | 128348     | 33.3%    |                    |
| 32         | 84                 | Sumitomo                       | Japan               | Trading                         | .. <sup>d</sup>       | 51.4   | 47.2    | 162.4 | 2500                  | 9212       | 27.6%    |                    |
| 33         | 62                 | Renault                        | France              | Motor vehicles and parts        | .. <sup>d</sup>       | 36.1   | 13.3    | 28.2  | 39029                 | 139733     | 37.7%    |                    |
| 34         | 81                 | Chevron                        | United States       | Petroleum refining              | 12.6                  | 34.7   | 10.2    | 36.2  | 10627                 | 47576      | 28.9%    |                    |
| 35         | 67                 | Xerox                          | United States       | Scientific and photo. equipment | .. <sup>d</sup>       | 38.8   | 8.6     | 17.2  | 20626                 | 97000      | 34.2%    |                    |
| 36         | 44                 | Dow Chemical                   | United States       | Chemicals                       | 11.5                  | 24.6   | 8.8     | 18.1  | 28250                 | 62200      | 47.0%    |                    |

/...

| Ranking by:    |                  |                               |                  |                                     |         |         |         |         |                      |         |                                |
|----------------|------------------|-------------------------------|------------------|-------------------------------------|---------|---------|---------|---------|----------------------|---------|--------------------------------|
| Foreign assets | TNI <sup>b</sup> | Corporation                   | Home economy     | Industry <sup>c</sup>               | Assets  |         | Sales   |         | Employment           |         | TNI <sup>b</sup><br>(Per cent) |
|                |                  |                               |                  |                                     | Foreign | Total   | Foreign | Total   | Foreign <sup>d</sup> | Total   |                                |
| 1              | 38               | Royal Dutch Shell plc         | United Kingdom   | Mining, quarrying and petroleum     | 349 720 | 411 275 | 152 018 | 233 591 | 67 000               | 92 000  | 74,3                           |
| 2              | 63               | Toyota Motor Corporation      | Japan            | Motor Vehicles                      | 303 678 | 435 958 | 173 529 | 254 753 | 148 941              | 348 877 | 60,2                           |
| 3              | 36               | BP plc                        | United Kingdom   | Petroleum Refining and Related      | 235 124 | 263 316 | 140 683 | 183 008 | 43 598               | 74 500  | 74,9                           |
| 4              | 24               | Total SA                      | France           | Petroleum Refining and Related      | 233 217 | 243 468 | 110 255 | 141 526 | 70 496               | 102 168 | 80,9                           |
| 5              | 20               | Anheuser-Busch InBev NV       | Belgium          | Food & beverages                    | 208 012 | 258 381 | 39 507  | 45 517  | 163 177              | 206 633 | 82,1                           |
| 6              | 61               | Volkswagen Group              | Germany          | Motor Vehicles                      | 197 254 | 431 888 | 192 093 | 240 366 | 346 715              | 626 715 | 60,3                           |
| 7              | 67               | Chevron Corporation           | United States    | Petroleum Refining and Related      | 189 116 | 260 078 | 54 160  | 110 484 | 28 704               | 55 200  | 57,9                           |
| 8              | 68               | General Electric Co           | United States    | Industrial and Commercial Machinery | 178 525 | 365 183 | 70 352  | 123 692 | 191 000              | 295 000 | 56,8                           |
| 9              | 79               | Exxon Mobil Corporation       | United States    | Petroleum Refining and Related      | 165 969 | 330 314 | 121 881 | 218 608 | 35 725               | 71 100  | 52,1                           |
| 10             | 58               | Softbank Corp                 | Japan            | Telecommunications                  | 145 611 | 220 296 | 45 324  | 82 166  | 42 032               | 63 591  | 62,5                           |
| 11             | 23               | Vodafone Group Plc            | United Kingdom   | Telecommunications                  | 143 574 | 165 367 | 44 602  | 52 238  | 75 666               | 105 300 | 81,4                           |
| 12             | 64               | Daimler AG                    | Germany          | Motor Vehicles                      | 138 967 | 256 127 | 143 547 | 169 555 | 112 430              | 282 488 | 59,6                           |
| 13             | 32               | Honda Motor Co Ltd            | Japan            | Motor Vehicles                      | 130 067 | 169 537 | 112 614 | 129 228 | 143 424              | 208 399 | 77,6                           |
| 14             | 86               | Apple Computer Inc            | United States    | Computer Equipment                  | 126 793 | 321 686 | 139 972 | 215 639 | 45 721               | 116 000 | 47,9                           |
| 15             | 26               | BHP Billiton Group Ltd        | Australia        | Mining, quarrying and petroleum     | 118 953 | 118 953 | 29 751  | 30 912  | 10 993               | 26 827  | 79,1                           |
| 16             | 42               | Nissan Motor Co Ltd           | Japan            | Motor Vehicles                      | 116 612 | 164 734 | 88 651  | 108 189 | 87 584               | 152 421 | 70,1                           |
| 17             | 51               | Siemens AG                    | Germany          | Industrial and Commercial Machinery | 115 251 | 140 309 | 67 737  | 88 346  | 136 890              | 351 000 | 65,9                           |
| 18             | 71               | Enel SpA                      | Italy            | Electricity, gas and water          | 111 240 | 164 010 | 37 622  | 75 898  | 30 124               | 62 080  | 55,3                           |
| 19             | 17               | CK Hutchison Holdings Limited | Hong Kong, China | Retail Trade                        | 110 515 | 130 677 | 26 050  | 33 474  | 263 900              | 290 000 | 84,5                           |
| 20             | 57               | Mitsubishi Corporation        | Japan            | Wholesale Trade                     | 107 860 | 140 879 | 20 360  | 59 317  | 52 251               | 68 247  | 62,5                           |
| 21             | 35               | Glencore Xstrata PLC          | Switzerland      | Mining, quarrying and petroleum     | 107 077 | 124 600 | 97 927  | 152 948 | 115 820              | 154 832 | 74,9                           |
| 22             | 29               | Telefonica SA                 | Spain            | Telecommunications                  | 106 765 | 130 327 | 43 504  | 57 568  | 99 216               | 127 323 | 78,5                           |
| 23             | 65               | Eni SpA                       | Italy            | Petroleum Refining and Related      | 106 408 | 131 280 | 35 510  | 61 690  | 12 626               | 33 536  | 58,8                           |
| 24             | 8                | Nestlé SA                     | Switzerland      | Food & beverages                    | 106 319 | 129 467 | 89 307  | 90 804  | 317 954              | 328 000 | 92,5                           |
| 25             | 69               | BMW AG                        | Germany          | Motor Vehicles                      | 106 244 | 198 730 | 88 934  | 104 174 | 36 670               | 124 729 | 56,1                           |
| 26             | 53               | Johnson & Johnson             | United States    | Pharmaceuticals                     | 104 274 | 141 208 | 34 079  | 71 890  | 93 339               | 126 400 | 65,0                           |
| 27             | 62               | Deutsche Telekom AG           | Germany          | Telecommunications                  | 102 176 | 156 514 | 53 588  | 80 866  | 106 972              | 218 341 | 60,2                           |
| 28             | 41               | Iberdrola SA                  | Spain            | Electricity, gas and water          | 100 890 | 112 476 | 19 178  | 32 321  | 17 992               | 28 389  | 70,8                           |
| 29             | 70               | Allergan PLC                  | Ireland          | Pharmaceuticals                     | 94 512  | 128 986 | 2 885   | 14 571  | 12 237               | 16 700  | 55,4                           |
| 30             | 1                | Rio Tinto PLC                 | United Kingdom   | Mining, quarrying and petroleum     | 89 177  | 89 263  | 33 429  | 33 781  | 50 531               | 51 018  | 99,3                           |
| 31             | 31               | Fiat Chrysler Automobiles     | United Kingdom   | Motor Vehicles                      | 86 599  | 109 985 | 113 442 | 122 821 | 145 389              | 234 499 | 77,7                           |
| 32             | 84               | Pfizer Inc                    | United States    | Pharmaceuticals                     | 85 930  | 171 615 | 26 455  | 52 824  | 48 318               | 96 500  | 50,1                           |
| 33             | 100              | EDF SA                        | France           | Electricity, gas and water          | 84 508  | 296 869 | 17 923  | 78 773  | 25 142               | 154 808 | 22,5                           |
| 34             | 87               | Microsoft Corporation         | United States    | Computer and Data Processing        | 82 992  | 193 468 | 44 742  | 85 320  | 51 000               | 114 000 | 46,7                           |
| 35             | 40               | Mitsui & Co Ltd               | Japan            | Wholesale Trade                     | 82 233  | 102 850 | 22 161  | 40 284  | 34 868               | 43 611  | 71,6                           |

UNCTAD: 2016

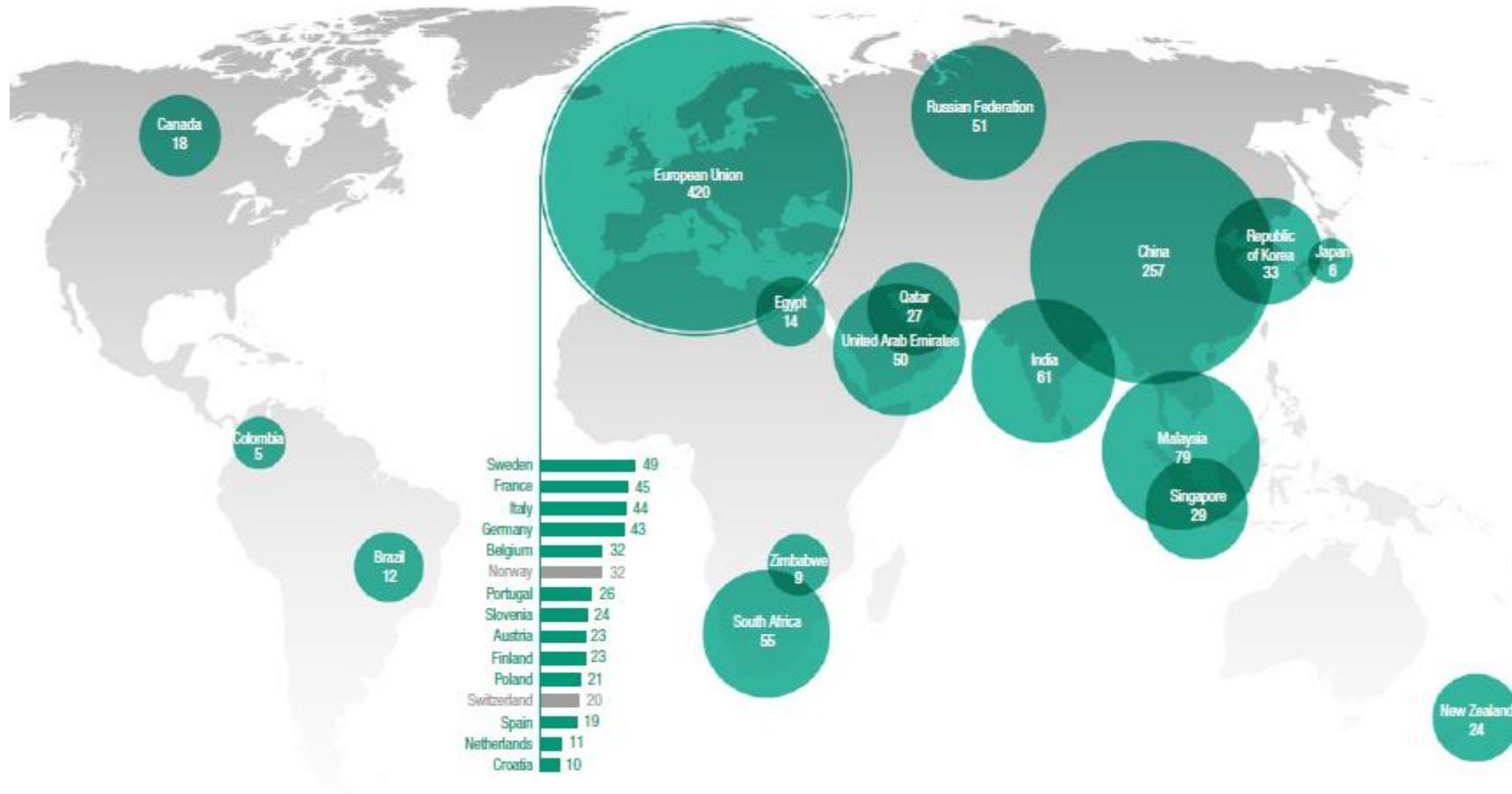
**Figure I.24. Sectoral composition of top 100 MNEs, selected years**  
(Number of companies and per cent)



Source: ©UNCTAD, FDI/MNE database ([www.unctad.org/fdistatistics](http://www.unctad.org/fdistatistics)).

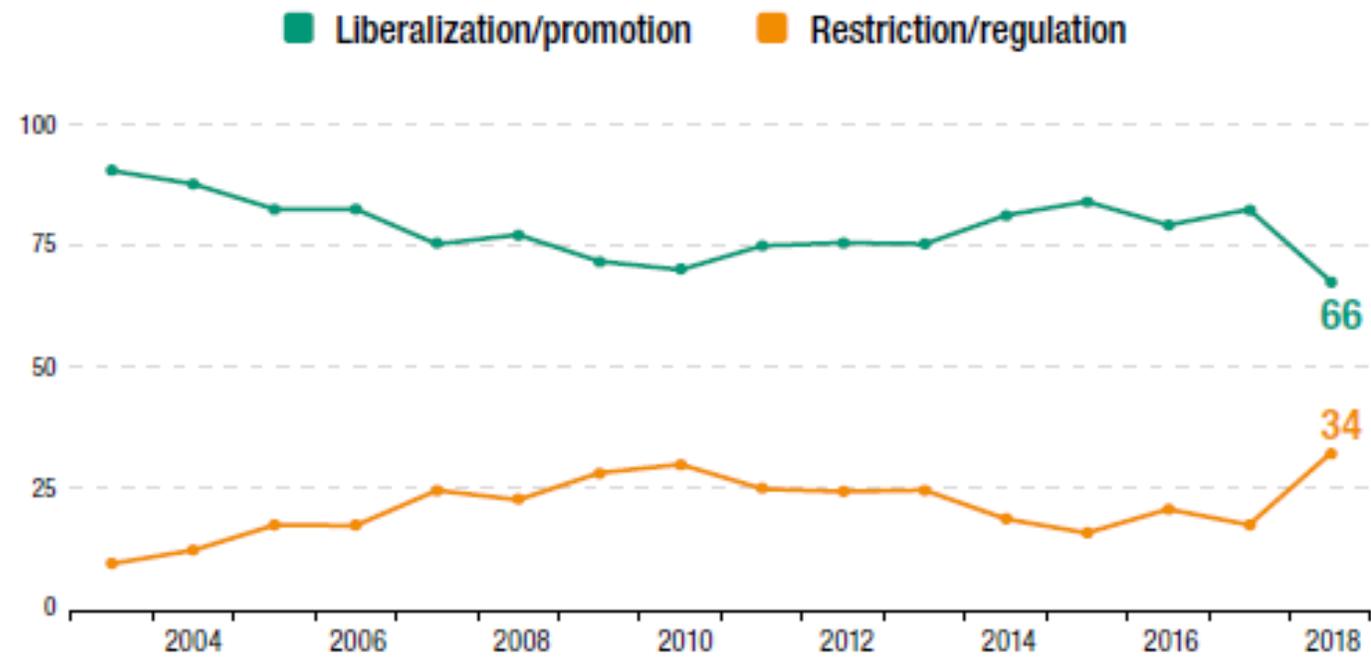
Note: TNI = Transnationality Index. The index is calculated as the unweighted average of the following three ratios: foreign assets to total assets, foreign sales to total sales, and foreign employment to total employment.

Figure I.25. SO-MNEs: Distribution by major home economy, 2017 (Number of companies)



Source: ©UNCTAD, SO-MNE database ([www.unctad.org/fdistatistics](http://www.unctad.org/fdistatistics)).  
 Note: Grey bars indicate European countries that are not members of the EU.

**Figure 5.** | **Changes in national investment policies, 2003–2018** (Per cent)



Source: UNCTAD, Investment Policy Hub.

UNCTAD:2019

# Geography and Hymer

- Analysis based on :  
Pearce, R. and Papanastassiou, M. (2006) To almost see the world; Hierarchy and strategy in Hymer's view of the Multinational, **International Business Review**, 15, 2, 151-165.

## Hymer and the MNC

- The paper firstly describes how, using the two laws of 'increasing firm size' and 'uneven development', Hymer characterises the multinational corporation (MNC) as a geographically segmented hierarchy.
- In this structure HQs in a limited number of core countries exercise authoritarian control over global operations through the centralised generation of competitive advantages and determination of strategy.
- Poor hinterland countries then execute static and dependent low-value roles.

# Hierarchy

- Hymer develops his characterisation of the MNC as a centralised hierarchical system of authority and control through two complementary lines of argument; applying respectively what he terms the laws of increasing firm size and of uneven development.
- In the first of these laws he describes the tendency for firm size to increase as the organisational form developed from the workshop of the industrial revolution, through the factory to the national corporation and from the multidivisional corporation to the multinational corporation (1970, pp. 442–443; 1972a, pp. 115–122; 1979, pp. 145–147).

## The role of center in Hymer's MNC

- Hymer's narrative shows that each widening of the firm's base through new dimensions of product and/or geographical diversification also adds an extra level of administration, but with a unique 'all seeing' centre still retaining ultimate control.

# The hierarchical MNC and uneven development

- At the bottom of the hierarchical pyramid level-III is concerned with managing day-to-day operations of the MNC. Level-III activities are, therefore, the most widespread 'according to the pull of manpower, markets, and raw materials' (1972a, p. 124).

# The hierarchical MNC and uneven development

- The intermediate level-II is concerned with the coordination of the managers at level-III, essentially assuring the effective regional application of a particular part of a wider strategic framework that it does not help to formulate. The need for trained and skilled white-collar workers and effective communications infrastructure tended to lead certain cities to become regional centres for MNCs' level-II activity.
- Level-I is then the apex of the pyramid, where top management, concerned with goal determination and strategic planning, sets the framework within which the lower levels operate. Even more than level-II these general offices tend to be concentrated in a very limited number of metropolitan centres where they have close access 'to the capital market, the media and the government' (1972a, p. 124).

## Hierarchy in Location

- Such a functional hierarchy in MNCs is then innately associated with the developmental stratification of the world economy (Hymer, 1970, p. 446; 1972a, pp. 124–125; Hymer & Resnick, 1971, pp. 493–494).
- The unique strategic-planning centres of an MNC will be located in one of a very small number of major capital cities. The most powerful and highly-rewarded MNC personnel will, therefore, be located there, providing spillover benefits in strengthening the competitive infrastructure and cultural life of these metropolises.

## Hierarchy in Location

- A wider range of still powerful and influential secondary cities will host level-II HQs of MNCs, learning the strategic priorities from level-I and organising their implementation throughout a significant regional component of the group's operations. Personnel here still possess distinctive tactical responsibility, in that they will need to address any problems relating to applying level-I strategies to the specific (market or production) conditions of their region.
- Finally, at level III, a very large number of facilities routinely fulfil particular production responsibilities in a strategically totally dependent status.

APPENDIX

Table A.1

| Business activity                        | N. investments projects |               | % projects   |
|--|-------------------------|---------------|--------------|
| <i>Coordination activities</i>           | <b>6,026</b>            | <b>6,026</b>  | <b>5.4%</b>  |
| Headquarters                             | 6,026                   | 6,026         | 5.4%         |
| <i>Support Services</i>                  |                         | <b>10,980</b> | <b>9.9%</b>  |
| Customer Contact Center                  | 1,589                   |               |              |
| Logistics, Distribution & Transportation | 6,580                   |               |              |
| Maintenance & Servicing                  | 1,321                   |               |              |
| Shared Services Center                   | 765                     |               |              |
| Technical Support Center                 | 725                     |               |              |
| <i>R&amp;D-related activities</i>        |                         | <b>7,788</b>  | <b>7.0%</b>  |
| Design, Development & Testing            | 5,610                   |               |              |
| Research & Development                   | 2,178                   |               |              |
| <i>Production</i>                        |                         | <b>33,346</b> | <b>30.0%</b> |
| Manufacturing                            | 26,507                  |               |              |
| Construction                             | 5,205                   |               |              |
| Electricity                              | 841                     |               |              |
| Extraction                               | 448                     |               |              |
| Recycling                                | 345                     |               |              |
| <i>Advanced Services</i>                 |                         | <b>53,170</b> | <b>47.8%</b> |
| Business Services                        | 20,877                  |               |              |
| Education & Training                     | 1,261                   |               |              |
| ICT & Internet Infrastructure            | 1,563                   |               |              |
| Sales, Marketing & Support               | 29,469                  |               |              |

Source: Castellani, D., & Santangelo, G. (2016). Quo vadis? Cities and the location of cross-border activities. In *Conference Paper Presentation, iBEGIN Conference*.

Figure A.4 – Geographical distribution of cross-border investment projects in Production activity

### Production

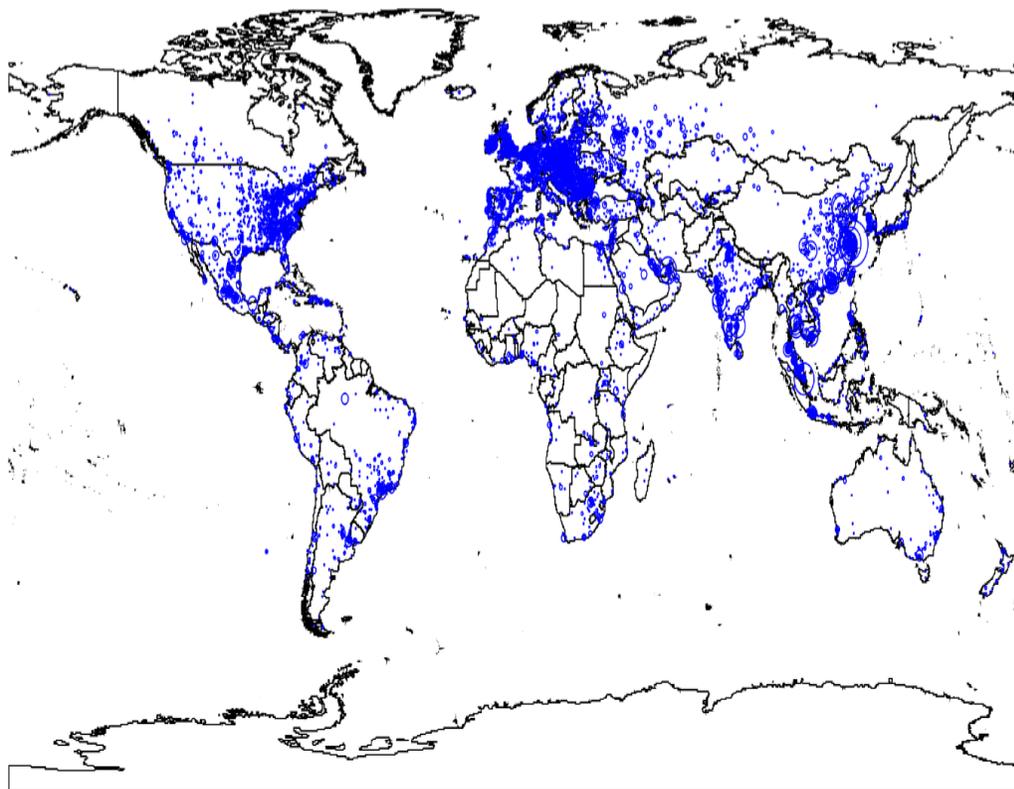


Figure A.1 – Geographical distribution of cross-border investment projects in Headquarter activity

### Headquarters

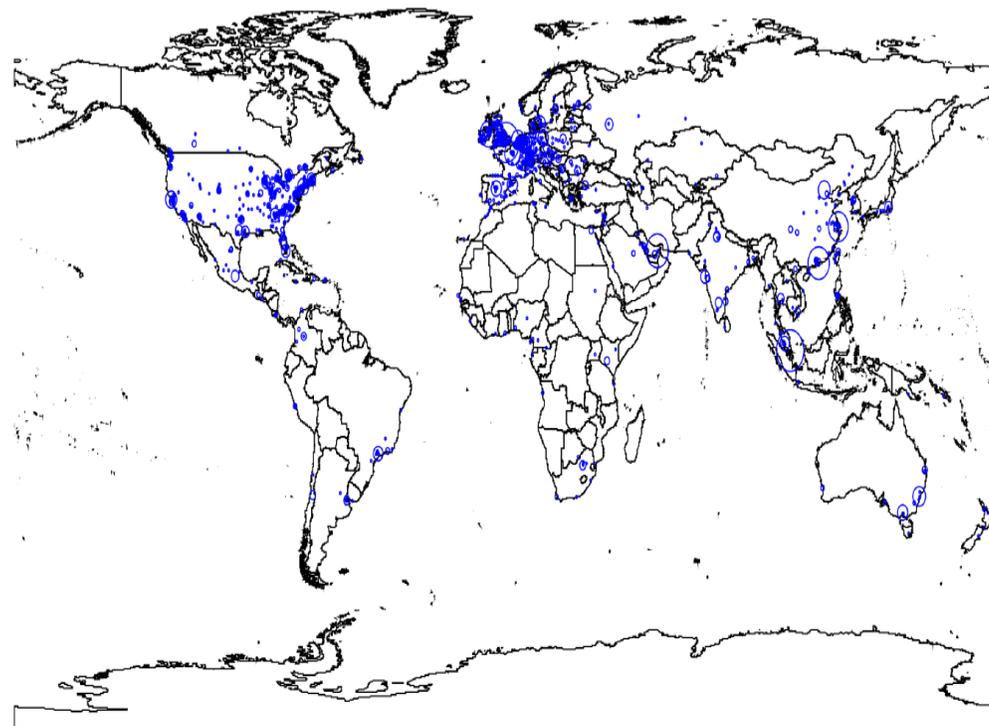


Figure A.5 – Geographical distribution of cross-border investment projects in Advanced services activity

### Advanced Services

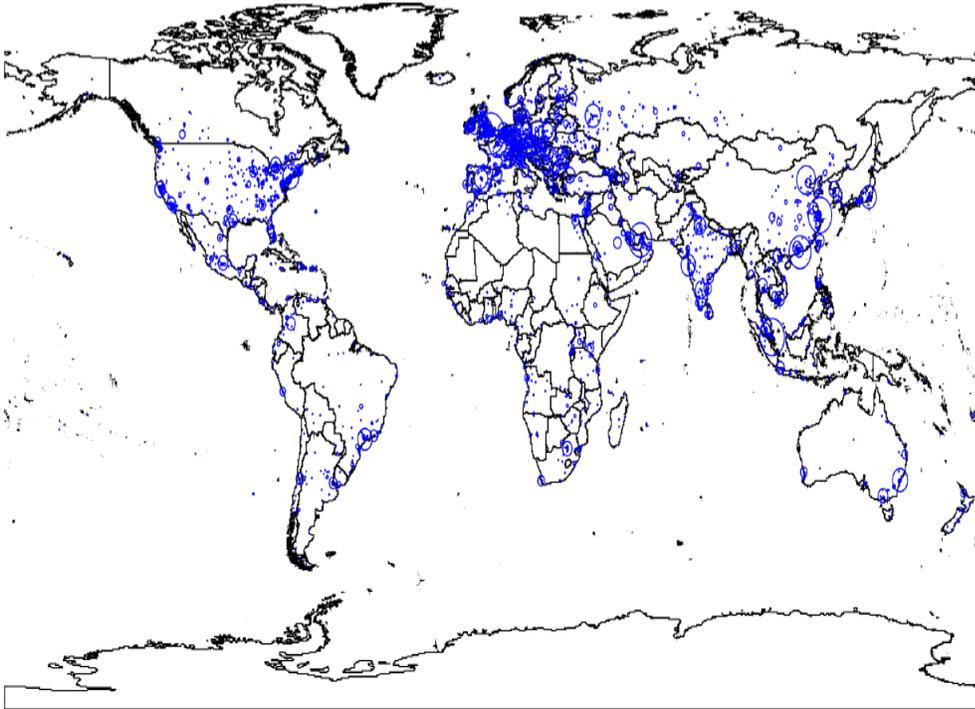


Figure A.2 – Geographical distribution of cross-border investment projects in Support services activity

### Support Services

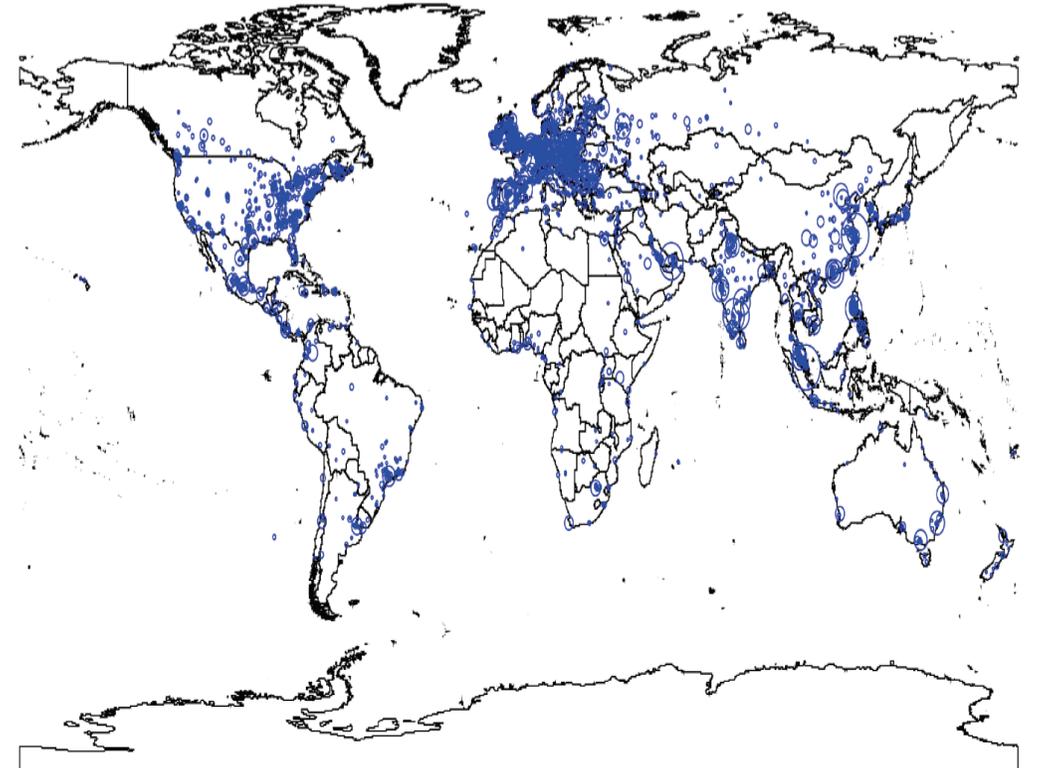


Figure A.3 – Geographical distribution of cross-border investment projects in R&D-related activity

R&D-related

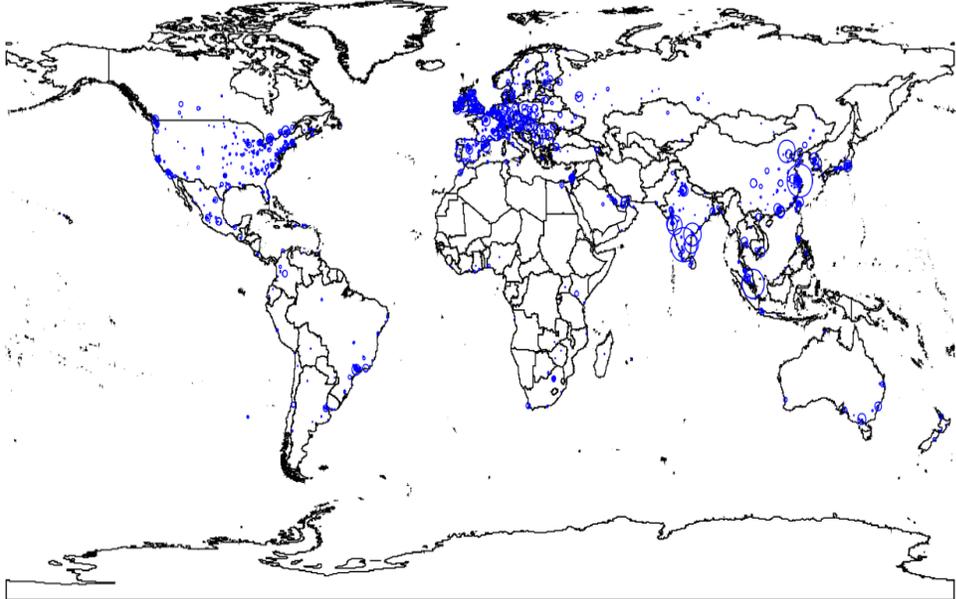


Figure A.4 – Geographical distribution of cross-border investment projects in Production activity

Production

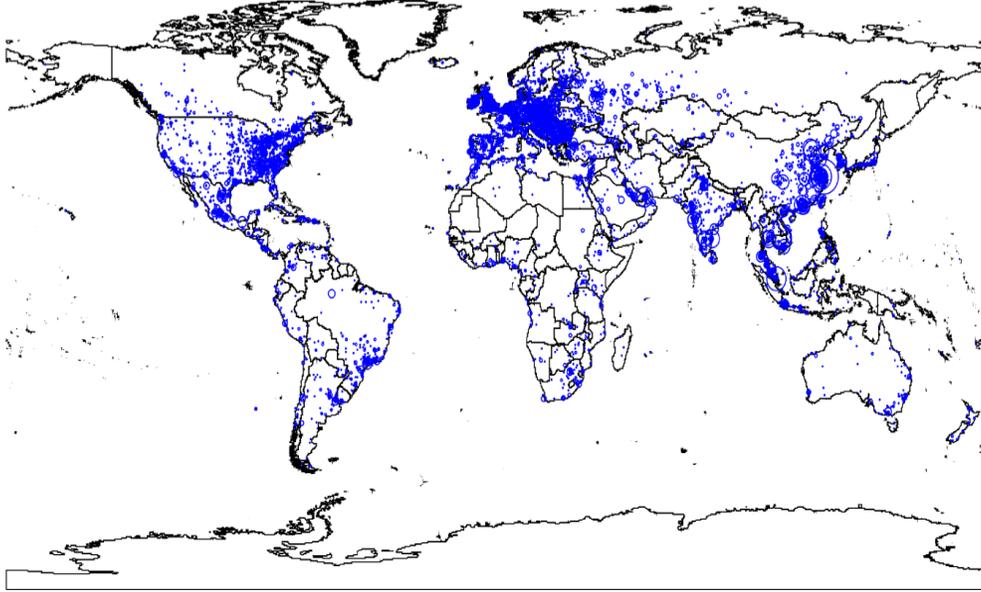


Figure A.4 – Geographical distribution of cross-border investment projects in Production activity

## Production

