



ORGANISATION FOR ECONOMIC CO-OPERATION AND DEVELOPMENT

# **MEASURING GLOBALISATION: THE ROLE OF MULTINATIONALS IN OECD ECONOMIES**

## **USER GUIDE**

2001 EDITION

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## INTRODUCTION

The need to assess the role and impact of direct investment not only in financial terms but also in the context of its impact on jobs, sales and trade has underlined the importance of having data indicative of the industrial activity of multinational firms.

The *Measuring Globalisation* database has been created to analyse the performance of foreign affiliates in OECD countries, and to compare them with that of all firms, particularly in the areas of production, employment, international trade and research. It draws attention to the potential benefits of hosting foreign firms for countries.

This electronic product complements the biennial publication *Measuring Globalisation: the Role of Multinationals in OECD Economies* by providing more complete historical data series than contained in that publication.

This year's edition includes for the first time data on the activity of affiliates of national firms abroad (outward investment) and also presents data on inward and outward investment for services (FATS).

As regards the manufacturing sector, the 18 variables requested in the OECD questionnaire are broken down by industrial sector and by partner country, and are covered in a somewhat uneven manner among countries. Data in this electronic product relate to the years 1983-99 and are classified according to ISIC Revision 2 or Revision 3 or both depending on the year.

As regards the services sector, five variables are covered: employment, turnover, value added, exports and imports. The time period covered (1990-99) is also more limited than for the manufacturing sector, given that the data collection, using a survey prepared jointly with Eurostat, is more recent.

The publication gives not only basic data but also the share of an industry that is "controlled" by foreign multinationals in each country. To obtain these percentages, the same surveys were used to collect data on the activity of all firms (domestic and foreign) in each country and for each of the variables available. This has been essential since the data on the "national total" and on multinational firms are not always based on the same statistical unit. While most of the industrial variables correspond to "establishments", data on multinational firms are collected at a higher level, i.e. "firms", each of which may include several establishments. This means that the figures for a sector's production or employment, for instance, will differ depending on whether the sectoral data refer to "establishments" or "firms".

For certain variables, in particular exports or imports, it has not been possible to produce data on the activity of multinational firms and on all of the firms in a country on a comparable basis (firms or establishments). Work is under way in the countries concerned to solve this problem.

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## PRESENTATION OF DATA ON BEYOND 20/20

### 1. Software

The database on the activity of foreign affiliates is supplied with the Beyond 20/20™ browser under licence from *Ivation Datasystems Inc.* This is a Windows-based data dissemination tool which allows you to view, select and export data in a variety of formats. Users may refer to the accompanying *Quickstart Guide* for further details and general instructions on its use.

### 2. Overview

*Measuring Globalisation* contains 10 tables:

\* 6 tables related to the **manufacturing sector**

- 7DAFA2I: Inward investment by industry according to ISIC Revision 2;
- 7DAFA2C: Inward investment by investing country for the total manufacturing sector (according to ISIC Revision 2);
- 7DAFA3II: Inward investment by industry according to ISIC Revision 3;
- 7DAFA3CI: Inward investment by investing country for the total manufacturing sector (according to ISIC Revision 3).
- 7DAFA3IO: Outward investment by industry according to ISIC Revision 3;
- 7DAFA3CO: Outward investment by country of location for the total manufacturing sector (according to ISIC Revision 3).

\* 4 tables related to the **services sector** (according to ISIC Revision 3 only)

- 7DFATSII: Inward investment by industry;
- 7DFATSCI: Inward investment by investing country for selected services sectors;
- 7DFATSIO: Outward investment by industry;
- 7DFATSCO: Outward investment by country of location for selected services sectors.

### 3. Dimensions

#### A. Tables related to the manufacturing sector

##### ➤ COUNTRY

In ISIC Revision 2 tables (7DAFA2I and 7DAFA2C), data are available for 11 reporting countries: Canada, Finland, France, Germany, Ireland, Japan, the Netherlands, Norway, Sweden, Turkey and the United Kingdom.

In tables 7DAFA3II and 7DAFA3CI, data are available for 18 reporting countries: Canada, the Czech Republic, Finland, France, Germany, Hungary, Ireland, Italy, Japan, Luxembourg, Mexico, the Netherlands, Norway, Poland, Sweden, Turkey, the United Kingdom and the United States.

In tables 7DAFA3IO and 7DAFA3CO, data are available for 5 reporting countries: Germany, Italy, Luxembourg, Sweden and the United States.

##### ➤ TIME PERIOD

Data are available from 1983 to 1996 for tables in ISIC Revision 2 and from 1985 to 1999 for tables in ISIC Revision 3.

All countries have adopted the ISIC Revision 3 classification. Consequently, the tables in ISIC Revision 2 are no longer updated.

##### ➤ VARIABLE

The tables contain the following variables. Data availability varies according to country.

- Number of enterprises / establishments
- Number of employees (units or full-time equivalents)
- Gros output: at current prices (million national currency)
- Turnover: at current prices (million national currency)
- Value added: at current prices (million national currency)
- Wages and salaries: at current prices (million national currency)
- R&D expenditure: at current prices (million national currency)
- Number of researchers (units or full-time equivalents)
- Gross fixed capital formation: at current prices (million national currency)
- Total exports: at current prices (million national currency)
- Total imports: at current prices (million national currency)
- Intra-firm exports: at current prices (million national currency)
- Intra-firms imports: at current prices (million national currency)
- Gross operating surplus: at current prices (million national currency)
- Technological payments: at current prices (million national currency)
- Technological receipts: at current prices (million national currency)
- Stock of foreign direct investment: at current prices (million national currency)
- Capital under foreign influence: at current prices (million national currency)

Data for EMU Member countries are not expressed in euros.

➤ INDUSTRY (ISIC Revision 2/3)

The electronic edition of *Measuring Globalisation* contains data according to both versions of the International Standard Industrial Classification, ISIC Revision 2 and ISIC Revision 3. Most data are available at the 2-digit level of ISIC, except for Pharmaceuticals, Shipbuilding and Aircraft. The description of the industrial classification is detailed in Annex 1 and 2.

➤ PARTNER COUNTRY

The database includes the following partner countries (investing countries for inward investment, host countries for outward investment):

- Total OECD
- United States
- Canada
- Mexico
- Japan
- Korea
- Australia
- New Zealand
  - European Union
    - Austria
    - Belgium
    - Denmark
    - Finland
    - France
    - Germany
    - Greece
    - Ireland
    - Italy
    - Luxembourg
    - Netherlands
    - Portugal
    - Spain
    - Sweden
    - United Kingdom
  - Czech Republic
  - Hungary
  - Iceland
  - Norway
  - Poland
  - Slovak Republic
  - Switzerland
  - Turkey
- Non-OECD Europe
  - Baltic countries
  - Bulgaria
  - Croatia
  - Romania
  - Russia

- Slovenia
- Ukraine
- Yugoslavia
- Europe
- Asia (non-OECD)
  - China
  - Chinese Taipei
  - Hong Kong (China)
  - Indisa
  - Indonesia
  - Malaysia
  - Philippines
  - Singapore
  - Thailand
- Near and Middle East
- Africa
- Latin America
  - Argentina
  - Brazil
  - Chile

➤ SOURCE (only for tables 7DAFA3II and 7DAFA3CI)

Three countries have two different data sources: Finland, Sweden and the United States.

➤ MEASURE (only for data broken down by industrial sector, i.e. tables 7DAFA2I, 7DAFA3II and 7DAFA3IO)

Two measures are available: basic data related to the activities of foreign affiliates and the share of each industrial sector that is “controlled” by foreign multinationals. This latter indicator is calculated by taking the percentage of the activity of foreign affiliates as compared to the activity of all firms (foreign and national) in the given country.

## **B. Tables related to the services sector**

➤ COUNTRY AND YEAR (for tables 7DFATSCI and 7DFATSCO)

As data broken down by partner country are not available for all countries and years, it was preferable to create a joint dimension country-year in order to access the data more easily. This dimension is a list of couples country-year.

In the table 7DFATSCI, data are available for the following 15 countries (years available in brackets): Austria (from 1995 to 1998), Finland (1995 and 1998), France (from 1995 to 1998), Germany (1995 and 1998), Ireland (1997), Italy (1997), Japan (1997), Luxembourg (1998), the Netherlands (1997), Norway (1995 and 1997), Poland (1998), Portugal (from 1996 to 1999), Sweden (1997), the United Kingdom (1997) and the United States (from 1977 to 1998).

In the table 7DAFA3CO, data are available for the following 9 countries (years available in brackets): Austria (from 1996 to 1998), Belgium (from 1996 to 1998), Finland (1997 and 1998), France

(from 1995 to 1998), Germany (1995 and 1998), Japan (1997), Portugal (from 1997 to 1999), Sweden (1997) and the United States (from 1983 to 1998).

➤ COUNTRY (for tables 7DFATSII and 7DFATSIO)

In the table 7DFATSII, data are available for 19 reporting countries: Austria, Belgium, the Czech Republic, Finland, France, Germany, Hungary, Ireland, Italy, Japan, Luxembourg, the Netherlands, Norway, Poland, Portugal, Sweden, Turkey, the United Kingdom and the United States.

In the table 7DAFA3IO, data are available for 9 reporting countries: Austria, Belgium, Finland, France, Germany, Japan, Portugal, Sweden and the United States.

➤ TIME PERIOD (for tables 7DFATSII and 7DFATSIO)

Data are available from 1990 to 1999 (data are only available for the United States prior to 1994).

➤ ISIC Revision 3

See the list of services sectors in Annex 3.

➤ PARTNER COUNTRY

Same list than for the manufacturing sector.

➤ VARIABLE

The tables contain the following variables. Data availability varies according to country.

- Number of employees (units or full-time equivalents)
- Turnover: at current prices (million national currency, millions of euros for Luxembourg and Portugal)
- Value added: at current prices (million national currency)
- Total exports: at current prices (million national currency)
- Total imports: at current prices (million national currency)

#### **4. Country specific notes**

These notes specify the source of the data, the definition of the variables and the deviations of the national industrial classification from the ISIC schemes in each country. They should be reviewed carefully to measure the comparability between countries.

They are available on-line.

*Beyond 20/20<sup>TM</sup> Note :*

Notes, sources and definitions for each country are stored in the “COUNTRY” or “COUNTRY AND YEAR” dimension. There are two ways of accessing this information:

- Highlight the “COUNTRY” or “COUNTRY AND YEAR” dimension and then choose “Item” from the menu bar. Select “Summary”;
- Double click on the underlined link.

## **5. Missing data**

A dash (-) indicate that data are not available, confidential, or not separately reported.

## DEFINITIONS

### 1. Concept of control

Unlike data on direct investment flows which cover all transactions representing more than 10% of firms' capital, data on the activity of affiliates are based on the concept of controlling interest. This is more difficult to assess and that is why the statistical test for collection of data is that of a majority interest (more than 50% of shares in a company that carry voting rights on the board of management). It is assumed that possession of more than 50% of the shares in a company does give real control over its management, even though such control may sometimes be exercised with less than 50% of the shares. The United States and Hungary for example include firms under minority control (between 10 and 50%) in their data, where investors may influence the management of firms without necessarily having a controlling interest. Depending on the country availability, data thus refer to majority or majority and minority foreign-owned firms.

### 2. Direct and indirect control

A company A which possesses the majority of voting stock in a company B is considered to have direct control of that company. For example, if company A controls 70% of the shares of company B and company B in its turn controls 60% of the shares of company C, company A has *indirect control* over company C via its control over company B, even though it does not directly possess a majority of shares in company C. Actually, if no other firm controls company A, then company A is the parent company of companies B and C.

### 3. Country of origin (inward investment) / host country (outward investment)

For inward investment, the geographical origin of the foreign affiliate corresponds to the home country of the parent company. In principle, the ultimate beneficial owner (UBO) should be considered, but given that some investments are carried out through holding companies or affiliates different from that in which the parent company is located, it is difficult to identify the initial investor. In this case, the country of origin is that of the "immediate controller".

For outward investment, in principle, the ultimate host country should be considered, but if it is difficult to identify it, the concept of "immediate host country" can be used.

## ANNEX 1. LIST OF ISIC REVISION 3 INDUSTRIES

10/14	Mining and quarrying
15/37	Total manufacturing
15/16	Food, beverages and tobacco
17/19	Textiles, wearing apparel, leather, footwear
20/22	Wood and paper products, publishing, printing
20	Wood and wood products, except furniture
21/22	Paper and paper products; printing, publishing and reproduction of recorded media
23/25	All chemical products
23	Coke, refined petroleum products and nuclear fuel
24/25	Chemicals, rubber and plastics products
24	Chemical products
2423	Pharmaceuticals
25	Rubber and plastics products
26	Non-metallic mineral products
27/28	Basic and fabricated metal products
27	Basic metals
28	Fabricated metal products, except machinery and equipment
29/32	Total machinery and equipment
29/30	Non-electrical machinery and equipment
29	Machinery and equipment n.e.c.
30	Office, accounting and computing machinery
31/32	Electrical machinery and electronic equipment
31	Electrical machinery and apparatus n.e.c.
32	Radio, television and communication equipment
33	Medical, precision and optical instruments; watches and clocks
34/35	Transport equipment
34	Motor vehicles
35	Other transport equipment
351	Building and repairing of ships and boats
353	Aircraft and spacecraft
36/37	Furniture, manufacturing n.e.c.; recycling
40/45	Electricity, gas and water supply; construction
50/55	Wholesale and retail trade, repair; hotels and restaurants
65/74	Finance, insurance, real estate, business activities
Other activities	Agriculture, fishing, transport, communications, social and personal services (ISIC 01/05; 60/64; 75/99)
01/99	TOTAL

## ANNEX 2. LIST OF ISIC REVISION 2 INDUSTRIES

2	Mining and quarrying
3	Manufacturing
31	Food, beverages and tobacco
32	Textile, wearing apparel and leather
33/34	Wood and paper products
33	Wood and wood products (including furniture)
34	Paper and paper products, printing and publishing
35	All chemical products
351/352	Chemical products
3522	Drugs and medicines
353/354	Refined petroleum and coal products
355/356	Rubber and plastics products
36	Non-metallic mineral products
37	Basic metals
38	Fabricated metal products, machinery and equipment
381	Fabricated metal products, except machinery and equipment
382/385	Machinery, total
382	Non-electrical machinery
382-3825	Non-electrical machinery, except computers
3825	Office machinery, computers
383	Electrical machinery and electronic equipment
383-3832	Electrical machinery
3832	Radio, television and communication equipment
384	Transport equipment
3841	Shipbuilding and repairing
3843	Motor vehicles
3845	Aircraft
385	Professional, scientific, measuring and controlling equipment n.e.c., photographic and optical goods
39	Other manufacturing
4/5	Electricity, gas and water supply; construction
6	Wholesale and retail trade; hotels and restaurants
8	Bank, insurance, real estate, business services
7&9	Transport, storage and communication, other services
2/9	TOTAL

### ANNEX 3. LIST OF ISIC REVISION 3 SERVICES SECTORS

01/05	Agriculture, hunting and forestry; fishing
10/14	Mining and quarrying
15/37	Total manufacturing
40/41	Electricity, gas and water supply
45	Construction
50/99	TOTAL SERVICES
50/52	Wholesale and retail trade, repair
50	Sale and repair of motor vehicles
51	Wholesale trade, except motor vehicles
52	Retail trade and repair of personal goods
55	Hotels and restaurants
60/64	Transport, storage and communications
60/62	Total transport
60	Land transport
61	Water transport
62	Air transport
642	Telecommunications
65/67	Financial intermediation
651	Monetary intermediation
659	Other financial intermediation
Part of 6599	Financial holding companies
66+672	Insurance companies, pension funding and auxiliary activities
6601	Insurance companies
6602	Pension funding
672	Auxiliary insurance activities
70/74	Real estate, renting and business activities
70	Real estate
72	Computer and related services
722	Software consultancy and supply
73	Research and development
74	Other business activities
741	Legal, accounting, book-keeping, auditing activities, etc
743	Advertising
75/99	Community, social and personal services
921	Motion picture, radio, television and other entertainment activities
9996	Not allocated
01/99	GRAND TOTAL