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### **Observation of Competitiveness in Service Industries**

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# Observation of competitiveness in service industries

## Executive summary

“Competitiveness” receives much attention. Up to now its assessment has been heavily based on manufacturing industry statistics. This document provides an overview of the work being executed in this field at Eurostat. Secondly the paper indicates whether services statistics fit in the existing competitiveness framework. Thirdly it gives direction on the future development of competitiveness indicators for the service industries at Eurostat.

## Introduction

### Definition,

1. Competitiveness has not one definition. It can be defined as, the ability of the firm, on a sustainable basis, to satisfy the needs of its customers more effectively than its competitors, by supplying goods and services more efficiently, in terms of price and non-price factors, than these competitors. It can also be defined as the ability of a country to reconcile growth with external equilibrium.

### Economic and political background

2. “Productivity, employment and living standards are all linked together. High productivity provides the basis for raising living standards. When both productivity and employment rise together, strong growth can ensue”<sup>1</sup>. Raising (labour) productivity has been described as the main source of higher living standards. In the EU, rising productivity has been accompanied by low activity rates and depressed job creation thereby leading to unused labour resources and high unemployment. The main causes of the poor competitive performance of European industry is often thought to be caused by the malfunctioning of product and services markets and labour markets.

3. Although in a market economy competitiveness is the primary responsibility of enterprises themselves, public authorities can assist in providing a favourable economic environment. The European Union has been active in this by instituting the Single Market, through trade policy with non-EU countries and through its competition policy.

4. It has been argued that policies directly aimed at improving “competitiveness” overestimate the effect of external competition on wealth creation. Our well being is far more influenced by domestic factors and policies other than those aiming at *directly* improving competitiveness<sup>2</sup>. Such statement concerns us in two ways. When creating information on competitiveness more

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<sup>1</sup> The European Commission in “*The competitiveness of European Industry*”, Luxembourg, 1997.

<sup>2</sup> See Paul Krugman, “*Competitiveness: A dangerous obsession*”, in Foreign Affairs, March/April 1994.

than factors which have a direct impact or relevance need to be observed. And observing or analysing the data one must realize that the figures never tell the story in full.

The objective of making “competitiveness” indicators on services available follows logically from observing growth. Service industries are dominant in terms of employment and value added. The western developed economies have been undergoing in the last decades major structural change characterised by an increased dematerialisation, or de-industrialisation of the economy. In 1960 services represented 56% of total gross value added and 40% of total employment in the European Community’s Member States<sup>3</sup>. Since then, they have rapidly expanded to assume the leadership of the European economy, with shares of more than 63% both in terms of gross value added and employment. Trade in services outperforms trade in goods.

### **Competitiveness indicators for manufacturing industry**

5. Competitive performance may be assessed at both the level of enterprises, the level of a sector and the level of the economy as a whole. In Eurostat a database has been developed with the objective of analysing the performance of manufacturing industries on a detailed level and in its wider context. The database has been divided up into three domains<sup>4</sup>.

6. The first domain of the database covers nine key areas, essential for the analysis of a competitive economy, namely:

- General indicators & living standards
- Government
- International trade
- Total manufacturing aggregates
- Monetary indicators
- Energy
- Infrastructure, transport and telecoms
- Investment in intangibles
- Labour force and education

7. The second domain of the database seeks to present a wide-ranging set of performance indicators, designed to give an ex-post evaluation of a country’s competitive performance. Sub-domains include:

- Market share indicators
- Sectoral specialisation indicators
- Geographical specialisation indicators
- Profitability indicators
- “Picking winners” indicators

8. The third domain seeks to offer explanatory indicators on cost, price and productivity,

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<sup>3</sup> Belgium, Germany, France, Italy and the Netherlands. Luxembourg data not available.

<sup>4</sup> The development of the competitiveness database is an ongoing process. Summer 97 the structure of the database has been updated. This updated version has not been used for this paper.

which should go some way to explaining why one country performs better than another. As with the second domain these indicators are available for a large number of industrial activities.

- Use of labour
- Quality of labour skills
- Use of capital
- Use of intermediate goods and services
- Other cost, price and productivity indicators
- Investment in intangibles

9. The “Competitiveness Database” brings together a very large number of disparate sources. Many indicators are available for the members of the OECD. Furthermore, for a number of indicators coverage is wider, including the NICs of south-east Asia and Latin America. Data for the vast majority of indicators exist from at least 1988 to 1995/96. In Annex 1 a further description of methods and the list of indicators has been printed.

The user/analyst should be aware that there is a downside to the combination of so many disparate sources - in that data may not be strictly comparable - especially across indicators. The development of the database has followed a simple principle: wherever possible, for an individual indicator, a single source has been used.

## **Services, competitiveness indicators and globalisation**

10. The competitiveness database on the manufacturing industries is a useful tool for economic analysis. It may seem therefore, at first sight, a good idea to expand domains 2 and 3 of the database to the service sectors. Do services fit in such framework?

11. The GATS, the “General Agreement on Trade in Services and related instruments” defines the supply of services in the following way:

- (a) from the territory of one Member into the territory of any other Member;
- (b) in the territory of one Member to the service consumer of any other Member;
- (c) by a service supplier of one Member, through commercial presence in the territory of any other Member;
- (d) by a service supplier of one Member, through presence of natural persons of a Member in the territory of any other Member.

12. When looking at the above list of the GATS defining the modes of supply we note that 2 out of 4 indicators defined provide the service through what is called a “(commercial) presence”. The simultaneity of production and consumption in services could be identified as a characteristic element. If we assume that in real life these characteristics are valid for sectors, what impact do these characteristics have when looking at competitiveness indicators which concern the performance of a country combined with a specific sector?

13. Let us consider a service sector for which the absolute simultaneity of production and consumption is a fact. By definition trade in the classical sense is in this case zero. In this case Enterprise A has to be present in a country C in order to deliver the service. Thus enterprise A

would have to start or buy a subsidiary there. As there is no trade in this sector other “foreign” competitors need to be present as well if they wish to sell their service in country C. Economic indicators on country C for this sector will be a mix in terms of “nationality”.

14. Without trade, one could conclude that in this situation indicators using trade in the formula lose their specific value (even though, one may argue in some cases, a zero value also reflects a “reality”). In addition the interpretation of the other economic data concerning such sector needs consideration in a new light. The data will still reflect the performance of Country C in the sector. However it now also reflects the openness of the market. Openness not reflected in trade and the observation of trade barriers, but shown by the actual presence of foreign enterprises. Of course when analysing commercial presence economic issues the general economic, political and social situation need to be considered, as well as the general comparative advantage of the country.

15. However, extreme case described above does not exist in reality. How important are trade in services and the provision of services through a commercial presence?

General importance ratings on trade in services are almost impossible to give. It is hard to say what is high or important vs. low. This differs by sector, between subsectors within sectors and also the size of the country influences the importance of international trade. Table 1 provides some quantitative information on the importance of trade in services relative to GDP for some EU Member States (1994 data). It also provides the corresponding figure for goods and travel and financial services (part of the services total). The last column divides the percentage for services by the one for goods.

**Table 1 Importance of trade<sup>1</sup>**

<b>Average flow (in % of GDP) 1994</b>	<b>Goods</b>	<b>Services</b>	<b>Travel</b>	<b>Financial services</b>	<b>Services / Goods</b>
Germany	8.4	1.8	0.4	0.0	0.21
France	5.8	2.9	0.7	0.3	0.50
Italy	7.0	2.2	0.6	0.1	0.31
the Netherlands	11.8	5.2	0.6	0.0	0.44
United Kingdom	9.1	3.4	0.9	0.2	0.37
Spain	5.5	1.4	0.5	0.0	0.25
Belgium, Lux.	12.5	4.1	0.5	0.6	0.33

<sup>1</sup> Note that the data excludes intra EU trade.

Eurostat, International trade in service - Balance of Payments data

16. The highest percentage of trade in services as part of GDP is in the Netherlands (5.2%). In Spain the percentage is only 1.4 per cent. For goods the corresponding figures are between 5.5 and 12.5 per cent. Trade in services is in France half of the corresponding percentage for trade in goods. In all other countries this percentage is less with the lowest rate for Germany (21%). This while services create a greater part of GDP than manufacturing industry. It is important to note that this data excludes intra-EU trade.

As a last example we looked at turnover data for the Netherlands and the UK on air transport and compared this with BoP credit data. For the Netherlands the BoP credit data was 58 per cent of total turnover while in the UK this figure was only 33 per cent. However on the other hand the debit data in the UK was considerably higher than the corresponding figure for the Netherlands. Direct comparison of trade in services data and structural business statistics is difficult as the classifications used differ substantially and do not allow for good comparisons.

17. For commercial presence we looked at some preliminary data on wholesale trade which seems at first sight more or less representative for distributive trades, hotels and restaurants, freight transports by road, supporting and auxiliary transport activities and also business services. For reference years 94/95 the share of “foreign i.e. non-national”<sup>5</sup> turnover (using “Ultimate Beneficial Ownership” concept) in Finland, Sweden and the UK was between 21.1 and 25.6 per cent of the total on the national level while for persons employed the corresponding figure was between 14.5 and 23.0 per cent. However, the importance of commercial presence shows large differences when comparing countries for which data is available and also when comparing methods<sup>6</sup>. In table 2 presented below some indications will be given on the importance of commercial presence. For this an indicative list could be based on turnover and roughly follow the following size classes: <5% of total turnover created by enterprises of which ownership or control in “non-national” is low, 5-15% is mixed and >15% is high.

18. Table 2 entitled “Importance of commercial presence and trade in service sectors” lists in the first column various service sectors. The second column provides the authors impression of whether “commercial presence” is or could be important in these sectors in the EU Member States. The third column provide the same for trade indicators. They are observed here on a global scale and relative to the total creation of income in a sector. Note that the indications given are not based on a comprehensive quantitative analysis.

**Table 2 - Importance in the EU of commercial presence and trade in service sectors**

<b>Sectors</b> (letter refers to Nace Rev.1 activity classification section)	<b>Importance commercial presence</b>	<b>Relevance trade</b>
Retailing (G)	mixed	low
Wholesaling (G)	high	low/mixed
Hotels and travel agencies (H)	mixed	high
Road freight transport (I)	mixed	low/mixed

<sup>5</sup> For Eurostat in commercial presence and trade statistics the EU is normally seen as one entity and thus as “national”. Here however other EU Member States are added into the non-national group.

<sup>6</sup> In the Eurostat FATS pilot study two methods have been tested. Firstly “first shot” information has been collected. This involves only the first enterprise in the ownership chain which is outside the national territory. Included are enterprises which have their direct ownership in for example tax havens. Often these enterprises have their UBO - Ultimate Beneficial Ownership- on the national territory of within the EU and are then seen as “national”.

Air transport (I)	low	high
Railways (I)	low	low/mixed
Communications and postal services (I)	low	high <sup>7</sup>
Insurance (J)	mixed	mixed
Banking (J)	mixed	mixed
Business services (K)	mixed	low/mixed
Personal services (M-O)	mixed	low
Audiovisuals (O)	high	high

19. Concerning commercial presence three sectors out of 12 are listed as “low”, seven as “mixed” and two as “high”. The three sectors listed as low have as a general characteristic the large -dominating- size of the largest enterprises on the market. In general in these markets there is still one dominating national enterprise (the “national” airline, the “national” railroads and the “national” PTT). In the coming years increasing competition in all these sectors will change substantially change the situation. As a conclusion we can say that commercial presence is quite important in the service sectors in the EU.

Trade in services, seen in relation to wealth creation in the sector shows somewhat more emphasis on the downside. For some activities the very nature, one could almost say, is to be cross border (money transfers for hotels, air transport, communications, audiovisuals). The other sectors are listed as mixed or low. Even though trade is not to be discarded as irrelevant for services (on the contrary!), the emphasis in an of competitiveness should not be on indicators using trade or trade variables.

## Looking at the indicators of the manufacturing industry compet database

20. As described above the database is divided up into three parts. Part 1 concerns macro-economic indicators. These do not specifically concern services and they have only been presented here in order to provide complete information. Note nevertheless sub-domain 1.7 lists indicators regarding infrastructure, transportation and telecommunication.

The domains relevant for our discussion here are 2 and 3 as they are used for the calculation of indicators by industry. The selection of indicators has taken place on the basis of economic theory and practical economic analysis, user needs and data availability. Domain 2 lists some 40 “performance indicators by industrial activity”. Domain 3 on “cost, price and productivity indicators by industrial activity” has 50 indicators. Table 3 lists the number of indicators per subdomain and in the last column the number of indicators which have in the annex been marked with an “x”. These indicators include either a trade variable in its calculation or they were considered as difficult or irrelevant for services (using price levels of services (not

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<sup>7</sup> The importance of trade in the communications and postal services sector is not reflected in BoP data as this data is reported after the application of an international offsetting mechanism. Thus payments correspond to a net result. Concerning trade in services one “old” remark may be in its place. We could say that that what is being measured is that what is observed and, as the total of trade in services is not reflected in the current data collection, we are prone to think that it is unimportant -which it is not.

available), capacity utilisation rates (even though they may be very important for transport) and stock of unfinished products).

From table 3 one can conclude that trade plays an important role in the presented structure of the database. A reconsideration of the classification plan needs to take place for services. The classification plan must reflect the importance of various domains (rather than data availability) and will limit simply the number and composition of indicators using trade.

**Table 3 Analysis indicators competitiveness database on use trade variables**

<b>Subdomain Competitiveness database</b>	<b>Total number indicators</b>	<b>Indicators using trade variables plus those being irrelevant for other reasons (codes numbers)</b>
2.1 Market share	12	8 (1,6,7, 8, 9,10, 11, 12)
2.2 Sectoral specialisation	5	4 (2, 3, 4, 5)
2.3 Geographical specialisation of exports	13	13
2.4 Profitability indicators	7	0
2.5 “Picking winners indicators”	3	1 (3)
3.1 use of labour	10	3 (4, 5, 6)
3.2 quality of labour	12	0
3.3 use of capital	16	2 (1, 2)
3.4 use intermediate goods and services	3	2 (1, 2)
3.5 other cost, price, productivity indicators	4	3 (1,2,3)
3.6 investment in intangibles	5	0
<b>Total domains 2+3</b>	<b>90</b>	<b>36 (40%)</b>

## Strategy for development

21. The objective for a database on “Competitiveness in services” is to have a database limited in size, prepared for annual updating using easily accessible sources. Development finds its limitations in international data availability and comparability. Further development is to a large extent determined by what will become available. Having stated these points of departure the strategy should be as follows:

- starting point is the manufacturing industry competitiveness database;
- reconsider one by one indicators which include trade;
- expand the database in a number of ways which have special importance for the service sectors - see below;
- redesign structure.

## Expansion of the database



### Commercial presence

22. “No attempt is made in the White Paper<sup>8</sup> to dis-aggregate the sources of this growth in Europe between indigenous and foreign owned companies. Much of employment growth in the US has been in the service sector, and the White Paper argues that information technology has an important role to play in expanding opportunities in this area.”<sup>9</sup>

23. Within the context of an EU regulation on Structural Business Statistics and the GATS agreement information on the nationality of ownership or control will become increasingly available in EU Member States. The data will provide a breakdown of structural business statistics variables by the country where the ownership or control over enterprises producing in the national territory is located.

New indicators could be (at Nace Rev.1. 2 dg level):

- share of national - non-national enterprises in
  - total number of enterprises
  - turnover
  - value added at factor cost
  - number of persons employed
  - personnel cost
  - gross investment
- growth of variable x of non-national enterprises relative to those of non-national enterprises;
- indicator to see the position of national/non-national enterprises in high growth sectors.

Studying this data will allow us to learn about subjects such as:

- internationalisation/globalisation;
- growth and enterprise policies to obtain growth (average labour cost, productivity, investment, etc.)
- openness of markets i.e. market access and barriers;
- comparison of trade policies: are non-national enterprises more “international”?
- success of the internal market (if within the EU non-national is broken down by individual Member States);

Of course limits in data availability remain severe. Eurostat works together with 11 Member States<sup>10</sup> in a pilot project for the collection of inward FATS data. Some first results are expected to be published by Eurostat in October/November 1997. Also in the USA such information is available.

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<sup>8</sup> Commission of the European Communities, *White Paper on Growth, Competitiveness, Employment: The challenges and ways forward into the 21st century*, Bulletin of the European Communities, Brussels, 6/93.

<sup>9</sup> Taken from Seamus Grimes “Low growth, falling competitiveness and high unemployment as Europe approaches the 21st century” in *Administration*, vol. 42, No 1, Spring 1994.

<sup>10</sup> Nine Member States participated in a first pilot project: Finland, Sweden, Denmark, Ireland, UK, the Netherlands, France, Italy, Spain. Also the German Bundesbank contributed to the project. These countries and Belgium intend to participate in Phase 2 of the pilot project which will run up to 1999.

24. In a more distant future also information on outward FATS i.e. the performance of subsidiaries abroad in terms of employment, value added, turnover and other indicators may become available.

### **Small and Medium enterprises**

25. Another area where increasingly data becomes available within the EU is harmonised size class data. Especially in a great number of service areas small enterprises provide much employment and these are seen as essential for growth

An analysis of what will be available in OECD countries should be made in order to establish a common size-class breakdown. To start with we could think of a fairly aggregated one with number of persons employed (or a similar employment variable) as a basis. The size classes could be

1(or 0)-19,      20-49,      50-249,      250+

Some main indicators should then be used as with FATS data to provide :

- a standard analysis by size class of growth, investment, wage policies, etc. (see above)
- an value indicator on “income distribution”: what is the share of small enterprises relative to large ones in terms of turnover, value added, etc..

### **Development**

26. In 1997/1998 Eurostat will aim to start on a limited scale with data collection for OECD Member States using available statistics.

## **ANNEX 1**

### **Competitiveness database on manufacturing industries**

#### **Statistical sources and data treatment**

This is an extract from the description of the database.

Data for production, employment, wages, labour costs, purchases of goods and services and zxxxxxxxxxvalue-added are taken from an international database on structural data, the original sources of these figures are the annual enquiries conducted either by Eurostat (DAISIE database) or the United Nations (UNIDO database). Most of these data concern enterprises with 20 or more employees. Estimates are not made for the smaller firms not covered by the enquiries and hence the data often under-report the actual values. Gaps in the Eurostat data were filled by DEBA GEIE, whilst gaps in non-EU countries data were filled by the team working directly on competitiveness within Eurostat - both groups used the nowcasting technique to extend series. Wherever possible nowcasts have been included to provide the user with the most up-to-date figures possible. *Nowcasting* is a term that is used to describe the extension of historical series through the use of related indices. Nowcasts are made using Multiplicative Exponential Smoothing. A study on different estimation methods showed that it performs at least as well as more sophisticated methods like Box-Jenkins. Data from the UNIDO database are transcoded from International Standard Industrial Classification of All Economic Activities (ISIC) Revision 2 or 3 to NACE Rev.1 through the use of conversion keys on a country by country and year by year basis.

Data for export specialisation ratios, adjusted cover ratios and shares in exports come from two main foreign trade databases. For the EU, Eurostat disposes of the COMEXT database, whilst for non-EU countries, data was extracted from the United Nations database, COMTRADE. Foreign trade data is collected for around 10,000 products (CN product classification) within COMEXT. The data is converted to NACE Rev.1 through the use of conversion keys for each year - aggregating the products to NACE 4-digit level. EU data is available from 1988 to 1995. For non-EU countries conversion keys were created between either SITC Revision 2 or SITC Revision 3 and NACE Rev.1. These keys were checked by carrying out the same operation for CN and SITC to NACE Rev.1 (for Austria, Finland and Sweden) and proved to be very robust. EUR15 totals were back calculated for the whole period.

Data on average hourly wages was collected by the International Labour Office (ILO). Average earnings data from payrolls of establishments usually refer to cash payments received from employers (before deduction of taxes and social security contributions payable by workers) and include remuneration for normal working hours; overtime pay; remuneration for time not worked (public holidays, annual vacation, sick leave and other paid leave); bonuses and gratuities; cost-of-living allowances and special premiums (such as end-of-year bonuses). For international comparison, the wage rates were converted to ECU using the market exchange rates, which do not take into account differences between countries in the prices of consumer goods and services. The data by industry conforms as far as possible to the International Standard Industrial Classification of All Economic Activities (ISIC) Revision 2

or 3. The data (supplied in ISIC) was re-classified into NACE Rev.1, which led to some loss of detail.

Patents data were taken from European Patents Office (EPO) annual reports. Data is given for the number of patent applications under the technical units of the International Patent Classification system (converted to the nearest NACE Rev.1 activity available). The data refers solely to applications made at the EPO and not to patent applications made in individual Member States of the EU.

FDI inflows from Japan and the USA are collected by the Balance of Payments unit within Eurostat. The basis of this data collection is the OECD benchmark definition of FDI Third edition, which is fully consistent with that of the IMF. The direct investment concept refers to the category of international investment made by a resident entity to acquire a lasting interest in an entity operating in an economy other than that of the investor. Direct investment includes the initial transactions, as well as all subsequent capital transactions among affiliated enterprises. Data for flows of FDI may have the negative sign (-), this shows that there has been disinvestment in the industry.

The user/analyst should be aware that there is a downside to the combination of so many disparate sources - in that data may not be strictly comparable - especially across indicators. The development of the database has followed a simple principle: wherever possible, for an individual indicator, a single source has been used.

**List of indicators** - *on the following pages*

## EUROSTAT COMPETITIVENESS INDICATORS DATABASE VERSION 3.0 - CLASSIFICATION PLAN

### DOMAIN 1: Macro-economic indicators

Indicators in this domain have 3 dimensions: country (c), indicator (i), year (y)

#### Sub-domain 1.1: General macro-economic and living standard indicators

Code	Description	Nace coverage	Country coverage	Year coverage
1.1.0 1	Share in OECD GDP	not relevant	OECD	1980-1998
1.1.0 2	Annual growth rate of GDP in constant prices	not relevant	OECD	1980-1994
1.1.0 3	GDP per capita in constant prices (PPP)	not relevant	OECD	1980-1994
1.1.0 4	GDP per employed person in constant prices (PPP)	not relevant	OECD	
1.1.0 5	Gross value added in agriculture, forestry and fishery as a share of GDP	not relevant	TRIAD	1980-1994
1.1.0 6	Gross value added in fuel and power as a share of GDP	not relevant	TRIAD	1980-1994
1.1.0 7	Gross value added in manufacturing as a share of GDP	not relevant	TRIAD	1980-1994
1.1.0 8	Gross value added in building and construction as a share of GDP	not relevant	TRIAD	1980-1994
1.1.0 9	Gross value added in market services as a share of GDP	not relevant	TRIAD	1980-1994
1.1.1 0	Gross value added in non-market services as a share of GDP	not relevant	TRIAD	1980-1994

EU: EU countries

TRIAD: EU countries, USA and Japan

TRIAD+: TRIAD plus some other countries

OECD: OECD countries

FULL: OECD countries plus other major trading partners

1.1.1 1	Inequality of the income distribution (share of total income of bottom 20% of the population compared to the top 20%)	not relevant	FULL	
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EU: EU countries  
 TRIAD: EU countries, USA and Japan  
 TRIAD+: TRIAD plus some other countries

OECD: OECD countries  
 FULL: OECD countries plus other major trading partners

**DOMAIN 1: Macro-economic indicators**

Indicators in this domain have 3 dimensions: country (c), indicator (i), year (y)

**Sub-domain 1.2: Indicators regarding international trade**

<b>Code</b>	<b>Description</b>	<b>Nace coverage</b>	<b>Country coverage</b>	<b>Year coverage</b>
1.2.0 1	Level of direct taxation as a share of GDP	not relevant	OECD	
1.2.0 2	Level of indirect taxation as a share of GDP	not relevant	OECD	
1.2.0 3	Level of social contributions as a share of GDP	not relevant	FULL	
1.2.0 4	Level of government consumption and redistribution as a share of GDP	not relevant	OECD	
1.2.0 5	Level of government investment as a share of GDP	not relevant	OECD	
1.2.0 6	General government budget deficit as a share of GDP	not relevant	OECD	
1.2.0 7	General government debt as a share of GDP	not relevant	OECD	

EU: EU countries

TRIAD: EU countries, USA and Japan

TRIAD+: TRIAD plus some other countries

OECD: OECD countries

FULL: OECD countries plus other major trading partners

**DOMAIN 1: Macro-economic indicators**

Indicators in this domain have 3 dimensions: country (c), indicator (i), year (y)

**Sub-domain 1.3: Indicators regarding international trade**

<b>Code</b>	<b>Description</b>	<b>Nace coverage</b>	<b>Country coverage</b>	<b>Year coverage</b>
1.3.0 1	Exports of goods and services as a share of GDP	not relevant	OECD	
1.3.0 2	Exports of goods and services as a share of GDP corrected for the size of the economy and income per capita	not relevant	OECD	
1.3.0 3	Imports of goods and services as a share of GDP	not relevant	OECD	
1.3.0 4	Imports of goods and services as a share of GDP corrected for the size of the economy and income per capita	not relevant	OECD	
1.3.0 5	Exports of raw materials as a share of GDP	not relevant	OECD	
1.3.0 6	Exports of raw materials as a share of GDP corrected for the size of the economy and income per capita	not relevant	OECD	
1.3.0 7	Imports of raw materials as a share of GDP	not relevant	OECD	
1.3.0 8	Imports of raw materials as a share of GDP corrected for the size of the economy and income per capita	not relevant	OECD	
1.3.0 9	Exports of manufactured products as a share of GDP	not relevant	OECD	
1.3.1 0	Exports of manufactured products as a share of GDP corrected for the size of the economy and income per	not relevant	OECD	

EU: EU countries

TRIAD: EU countries, USA and Japan

TRIAD+: TRIAD plus some other countries

OECD: OECD countries

FULL: OECD countries plus other major trading partners



	capita			
1.3.1 1	Imports of manufactured products as a share of GDP	not relevant	OECD	
1.3.1 2	Imports of manufactured products as a share of GDP corrected for the size of the economy and income per capita	not relevant	OECD	

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EU: EU countries  
 TRIAD: EU countries, USA and Japan  
 TRIAD+: TRIAD plus some other countries

OECD: OECD countries  
 FULL: OECD countries plus other major trading partners

**DOMAIN 1: Macro-economic indicators**

Indicators in this domain have 3 dimensions: country (c), indicator (i), year (y)

**Sub-domain 1.4: Indicators regarding total manufacturing**

<b>Code</b>	<b>Description</b>	<b>Nace coverage</b>	<b>Country coverage</b>	<b>Year coverage</b>
1.4.0 1	Investment in manufacturing as a share in GDP	not relevant	OECD	
1.4.0 2	Investment in equipment (including transport) as a share of GDP	not relevant	OECD	
1.4.0 3	Capital stock per employee	not relevant	OECD	
1.4.0 4	Gross value added per unit of capital stock	not relevant	OECD	
1.4.0 5	Growth in total factor productivity	not relevant	OECD	
1.4.0 6	Growth of production in constant prices	not relevant	OECD	1985-95
1.4.0 7	Growth in production relative to the OECD due to different industry shares	not relevant	OECD	
1.4.0 8	Growth in production relative to the OECD due to different industry growth rates	not relevant	OECD	
1.4.0 9	Growth in production relative to the OECD due to interaction between industry growth rates and shares (interaction effect)	not relevant	OECD	
1.4.1 0	Share of capital intensive industries in total manufacturing production	not relevant	FULL	
1.4.1	Share of labour intensive industries in total manufacturing	not relevant	FULL	

EU: EU countries

TRIAD: EU countries, USA and Japan

TRIAD+: TRIAD plus some other countries

OECD: OECD countries

FULL: OECD countries plus other major trading partners

1	production			
1.4.1 2	Share of high technology industries in total manufacturing production	not relevant	FULL	
1.4.1 3	Inter-sectoral specialisation in production	not relevant	FULL	
1.4.1 4	Intra-sectoral specialisation in trade	not relevant	FULL	
1.4.1 5	Inter-sectoral specialisation in exports	not relevant	FULL	
1.4.1 6	Inter-sectoral specialisation in imports	not relevant	FULL	
1.4.1 7	Profit tax rate	not relevant	OECD	
1.4.1 8	Capacity utilisation rate	not relevant	EUR15	1985-1996
1.4.1 9	Average hourly wages in manufacturing	not relevant	OECD	
1.4.2 0	Share in turnover from subcontracts (%)	not relevant	OECD	

EU: EU countries

TRIAD: EU countries, USA and Japan

TRIAD+: TRIAD plus some other countries

OECD: OECD countries

FULL: OECD countries plus other major trading partners

**DOMAIN 1: Macro-economic indicators**

Indicators in this domain have 3 dimensions: country (c), indicator (i), year (y)

**Sub-domain 1.5: Monetary indicators**

<b>Code</b>	<b>Description</b>	<b>Nace coverage</b>	<b>Country coverage</b>	<b>Year coverage</b>
1.5.0 1	Consumer price index/inflation	not relevant	ALL	1985-1995
1.5.0 2	Short-term interest rate	not relevant	OECD	1985-1995
1.5.0 3	Long-term interest rate	not relevant	TRIAD	1985-1995
1.5.0 4	Real short-term interest rate	not relevant	OECD	1985-1995
1.5.0 5	Real long-term interest rate	not relevant	TRIAD	1985-1995
1.5.0 6	Exchange rate to the ECU	not relevant	ALL	1985-1996
1.5.0 7	Effective exchange rate (trade weighted)	not relevant	ALL	1985-1995
1.5.0 8	Real exchange rate to the ECU (deflated using CPI)	not relevant	ALL	1985-1995
1.5.0 9	Real effective exchange rate (trade weighted, deflated using CPI)	not relevant	ALL	1985-1995
1.5.1 0	Purchasing power standard	not relevant	ALL	1985-1995
1.5.1 1	Exchange rate variability (standard deviation of monthly market exchange rates to the ECU as a percentage of the	not relevant	ALL	1985-1996

EU: EU countries

TRIAD: EU countries, USA and Japan

TRIAD+: TRIAD plus some other countries

OECD: OECD countries

FULL: OECD countries plus other major trading partners

	annual mean)			
1.5.1 2	Value of merger and acquisition activity (million ECU - bids+targets)	not relevant	ALL	1985-1995
1.5.1 3	F.D.I. inflows (million ECU)	not relevant	OECD	1985-1994
1.5.1 4	F.D.I. outflows (million ECU)	not relevant	OECD	1985-1994
1.5.1 5	F.D.I. outflows to OECD (million ECU)	not relevant	OECD	1985-1994
1.5.1 6	F.D.I. outflows to NICs (million ECU)	not relevant	OECD	1985-1994
1.5.1 7	F.D.I. outflows to China (million ECU)	not relevant	OECD	1985-1994
1.5.1 8	F.D.I. outflows to Latin America (million ECU)	not relevant	OECD	1985-1994
1.5.1 9	F.D.I. outflows to CIS (million ECU)	not relevant	OECD	1985-1994
1.5.2 0	F.D.I. inflows from OECD countries (million ECU)	not relevant	OECD	1985-1994
1.5.2 1	F.D.I. inward, stocks of (year end) (million ECU)	not relevant	OECD	1985-1994
1.5.2 2	F.D.I. outward, stocks of (year end) (million ECU)	not relevant	OECD	1985-1994
1.5.2 3	F.D.I. stocks (year end) in NICs (million ECU)	not relevant	OECD	1985-1994
1.5.2 4	F.D.I. stocks (year end) in China (million ECU)	not relevant	OECD	1985-1994
1.5.2	F.D.I. stocks (year end) in Latin America (million ECU)	not relevant	OECD	1985-1994

EU: EU countries

TRIAD: EU countries, USA and Japan

TRIAD+: TRIAD plus some other countries

OECD: OECD countries

FULL: OECD countries plus other major trading partners

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1.5.2	F.D.I. stocks (year end) in CIS (million ECU)	not relevant	OECD	1985-1994
6				

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EU: EU countries  
 TRIAD: EU countries, USA and Japan  
 TRIAD+: TRIAD plus some other countries

OECD: OECD countries  
 FULL: OECD countries plus other major trading partners

**DOMAIN 1: Macro-economic indicators**

Indicators in this domain have 3 dimensions: country (c), indicator (i), year (y)

**Sub-domain 1.6: Indicators regarding energy**

<b>Code</b>	<b>Description</b>	<b>Nace coverage</b>	<b>Country coverage</b>	<b>Year coverage</b>
1.6.0 1	Primary energy production as a share of gross inland consumption	not relevant	OECD	
1.6.0 2	Electricity intensity share of GDP in kWh per thousand ECU	not relevant	OECD	
1.6.0 3	Fuel and power expenditure as a share of GDP (%)	not relevant	FULL	
1.6.0 4	Energy consumption per capita (kg of oil equivalents)	not relevant	FULL	
1.6.0 5	Wholesale price index of oil products	not relevant	OECD	
1.6.0 6	Wholesale price index of electricity	not relevant	OECD	
1.6.0 7	Wholesale price index of natural gas	not relevant	OECD	
1.6.0 8	Wholesale price index of coal	not relevant	OECD	

EU: EU countries

TRIAD: EU countries, USA and Japan

TRIAD+: TRIAD plus some other countries

OECD: OECD countries

FULL: OECD countries plus other major trading partners

**DOMAIN 1: Macro-economic indicators**

Indicators in this domain have 3 dimensions: country (c), indicator (i), year (y)

**Sub-domain 1.7: Indicators regarding infrastructure, transportation and telecommunication**

<b>Code</b>	<b>Description</b>	<b>Nace coverage</b>	<b>Country coverage</b>	<b>Year coverage</b>
1.7.0 1	Investment in civil engineering as a share of GDP	not relevant	FULL	
1.7.0 2	Transport expenditure as a share of GDP	not relevant	FULL	
1.7.0 3	Fixed investment in transport equipment as a % of GDP	not relevant	FULL	
1.7.0 4	Road length / land area in sq kms	not relevant	FULL	
1.7.0 5	Road infrastructure, kilometres of motorway per million vehicles	not relevant	TRIAD	
1.7.0 6	Rail infrastructure, kilometres of railway per million inhabitants	not relevant	TRIAD	
1.7.0 7	Per capita spending on information technology (ECU)	not relevant	TRIAD	
1.7.0 8	Market value of software and computing services as a share of GDP	not relevant	TRIAD	
1.7.0 9	Gross investment in telecommunication services as a share of GDP	not relevant	TRIAD	

EU: EU countries

TRIAD: EU countries, USA and Japan

TRIAD+: TRIAD plus some other countries

OECD: OECD countries

FULL: OECD countries plus other major trading partners



**DOMAIN 1: Macro-economic indicators**

Indicators in this domain have 3 dimensions: country (c), indicator (i), year (y)

**Sub-domain 1.8: Indicators regarding investment in intangibles**

Code	Description	Nace coverage	Country coverage	Year coverage
1.8.0 1	GERD as a share of GDP	not relevant	OECD	1985-1995
1.8.0 2	GERD per capita of population (current PPP ECU)	not relevant	OECD	1985-1995
1.8.0 3	R&D intensity (GERD / manufacturing output)	not relevant	OECD	1985-1995
1.8.0 4	Share of R&D made by business (as % of GDP)	not relevant	OECD	1985-1995
1.8.0 5	Share of R&D made by higher education (as % of GDP)	not relevant	OECD	1985-1995
1.8.0 6	Share of R&D made by government (as % of GDP)	not relevant	OECD	1985-1995
1.8.0 7	Number of domestic patent applications (units)	not relevant	OECD	1985-1994
1.8.0 8	Number of patent applications / 10 thousand of working population	not relevant	OECD	1985-1994
1.8.0 9	Number of resident patent applications / thousand R&D personnel (fte)	not relevant	OECD	1985-1994
1.8.1 0	Number of external patent applications (units)	not relevant	OECD	1988-1993
1.8.1 1	Number of patents granted at EPO (units)	not relevant	FULL	1988-1995

EU: EU countries

TRIAD: EU countries, USA and Japan

TRIAD+: TRIAD plus some other countries

OECD: OECD countries

FULL: OECD countries plus other major trading partners

1.8.1 2	Business enterprise R&D personnel (fte), share in total R&D personnel	not relevant	OECD	1985-1995
1.8.1 3	Business enterprise R&D personnel (fte), share in total labour force	not relevant	OECD	1985-1994
1.8.1 4	Advertising expenditure per capita (ECU)	not relevant	TRIAD	1985-1994

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EU: EU countries

TRIAD: EU countries, USA and Japan

TRIAD+: TRIAD plus some other countries

OECD: OECD countries

FULL: OECD countries plus other major trading partners

**DOMAIN 1: Macro-economic indicators**

Indicators in this domain have 3 dimensions: country (c), indicator (i), year (y)

**Sub-domain 1.9: Indicators regarding the labour force and education**

<b>Code</b>	<b>Description</b>	<b>Nace coverage</b>	<b>Country coverage</b>	<b>Year coverage</b>
1.9.0 1	Activity rate, total population	not relevant	OECD	1985-1995
1.9.0 2	Activity rate, population of working age	not relevant	OECD	1985-1995
1.9.0 3	Growth rate of total employment	not relevant	OECD	1985-1995
1.9.0 4	Share of female labour force in the total (%)	not relevant	FULL	1985-1995
1.9.0 5	Share of the labour force with a primary education or less	not relevant	EU -	1992-1994
1.9.0 6	Share of the labour force with a secondary education	not relevant	EU -	1992-1994
1.9.0 7	Share of the labour force with a higher education	not relevant	EU -	1992-1994
1.9.0 8	Number of students per teacher in primary education	not relevant	FULL-	1985-1993
1.9.0 9	Number of students per teacher in secondary education	not relevant	FULL-	1985-1993
1.9.1 0	Unemployment rate, as a share of the total labour force	not relevant	OECD	1985-1996
1.9.1 1	Share of unemployed, out of work for less than one year	not relevant	EU	1985-1995

EU: EU countries

TRIAD: EU countries, USA and Japan

TRIAD+: TRIAD plus some other countries

OECD: OECD countries

FULL: OECD countries plus other major trading partners

1.9.1 2	Share of unemployed, out of work for more than one year	not relevant	EU	1985-1995
1.9.1 3	Share of unemployed having completed a basic level of education	not relevant	EU	1992-1994
1.9.1 4	Share of unemployed having completed secondary education	not relevant	EU	1992-1994
1.9.1 5	Share of unemployed having completed high level education	not relevant	EU	1992-1994
1.9.1 6	Youth unemployment compared to average unemployment	not relevant	OECD	1985-1994
1.9.1 7	Employment through temporary work agencies as a share of total employment	not relevant	TRIAD+	1988-1995
1.9.1 8	Share of the male labor force with a primary education or less	not relevant	OECD -	1992-1994
1.9.1 9	Share of the female labor force with a primary education or less	not relevant	EU -	1992-1994
1.9.2 0	Share of the male labor force with a secondary education	not relevant	OECD -	1992-1994
1.9.2 1	Share of the female labor force with a secondary education	not relevant	EU -	1992-1994
1.9.2 2	Share of the male labor force with a higher education	not relevant	OECD -	1992-1994
1.9.2 3	Share of the female labor force with a higher education	not relevant	EU -	1992-1994
1.9.2 4	Share of self-employment in total employment	not relevant	TRIAD +	1985-1990
1.9.2 5	Male unemployment rate, as a share of the total male labour force	not relevant	FULL	1985-1995

EU: EU countries

TRIAD: EU countries, USA and Japan

TRIAD+: TRIAD plus some other countries

OECD: OECD countries

FULL: OECD countries plus other major trading partners

1.9.2 6	Female unemployment rate, as a share of the total female labour force	not relevant	FULL	1985-1995
1.9.2 7	Activity rate, all level of education, male	not relevant	OECD -	1987-1992 (1 year)
1.9.2 8	Activity rate, all level of education, female	not relevant	OECD -	1987-1992 (1 year)
1.9.2 9	Activity rate for men with a primary education or less	not relevant	OECD -	1987-1992 (1 year)
1.9.3 0	Activity rate for women with a primary education or less	not relevant	OECD -	1987-1992 (1 year)
1.9.3 1	Activity rate for men with a secondary or higher education	not relevant	OECD -	1987-1992 (1 year)
1.9.3 2	Activity rate for women with a secondary or higher education	not relevant	OECD -	1987-1992 (1 year)
1.9.3 3	Activity rate for men with a higher education	not relevant	OECD -	1987-1992 (1 year)
1.9.3 4	Activity rate for women with a higher education	not relevant	OECD -	1987-1992 (1 year)
1.9.3 5	Unemployment rate for men with a low level of education	not relevant	OECD -	1987-1992 (1 year)
1.9.3 6	Unemployment rate for women with a low level of education	not relevant	OECD -	1987-1992 (1 year)
1.9.3 7	Unemployment rate for men with medium or high level of education	not relevant	OECD -	1987-1992 (1 year)
1.9.3 8	Unemployment rate for women with medium or high level of education	not relevant	OECD -	1987-1992 (1 year)
1.9.3 9	Unemployment rate for men with a medium level of education	not relevant	EU	1992-1994

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TRIAD: EU countries, USA and Japan

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FULL: OECD countries plus other major trading partners

1.9.4 0	Unemployment rate for women with a medium level of education	not relevant	EU	1992-1994
1.9.4 1	Unemployment rate for men with a high level of education	not relevant	EU	1992-1994
1.9.4 2	Unemployment rate for women with a high level of education	not relevant	EU	1992-1994
1.9.4 3	Youth unemployment rate, as a share of youth labour force	not relevant	EU	1985-1994
1.9.4 4	Youth unemployment rate, male	not relevant	EU	1985-1994
1.9.4 5	Youth unemployment rate, female	not relevant	EU	1985-1994
1.9.4 6	Female unemployment compared to average unemployment	not relevant	OECD	

EU: EU countries

TRIAD: EU countries, USA and Japan

TRIAD+: TRIAD plus some other countries

OECD: OECD countries

FULL: OECD countries plus other major trading partners

## DOMAIN 2: Performance indicators by industrial activity

Indicators in this domain have 4 dimensions: country (c), indicator (i), branch by nace rev.1 (n) and year (y)

### Sub-domain 2.1: Market share indicators

Code	Description	*1	Nace coverage	Country coverage	Year coverage
2.1.0 1	Growth rate of production in constant prices	X	2 or 3-Digits, 4-Digits where available	OECD	
2.1.0 2	Share of OECD production		2 or 3-Digits, 4-Digits where available	OECD	
2.1.0 3	Share of OECD market		2 or 3-Digits, 4-Digits where available	OECD	
2.1.0 4	Share of value-added in GDP		2 or 3-Digits, 4-Digits where available	OECD	
2.1.0 5	Share of value-added relative to OECD		2 or 3-Digits, 4-Digits where available	OECD	
2.1.0 6	Share of domestic market $Q/(C+X)$	X	2 or 3-Digits, 4-Digits where available	OECD	
2.1.0 7	Relative trade balance $(X-M)/Q$ (or $(X-M)/C$ ?)	X	2 or 3-Digits, 4-Digits where available	OECD	
2.1.0 8	Export ratio (Exports/value of production)	X	2 or 3-Digits, 4-Digits where available	OECD	
2.1.0 9	Share of exports in OECD	X	2 or 3-Digits, 4-Digits where available	OECD	
2.1.1 0	Import penetration ratio	X	2 or 3-Digits, 4-Digits where available	OECD	
2.1.1 1	Share of imports in OECD	X	2 or 3-Digits, 4-Digits where available	OECD	

EU: EU countries

TRIAD: EU countries, USA and Japan

TRIAD+: TRIAD plus some other countries

OECD: OECD countries

FULL: OECD countries plus other major trading partners

2.1.1 2	Cover ratio (exports/ imports)	X	2 or 3-Digits, 4-Digits where available	OECD	
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\*1 The “X” indicates the use of trade (imports or exports) as a variable and other indicators which may pose problems in the service sectors .

EU: EU countries  
 TRIAD: EU countries, USA and Japan  
 TRIAD+: TRIAD plus some other countries

OECD: OECD countries  
 FULL: OECD countries plus other major trading partners



**DOMAIN 2: Performance indicators by industrial activity**

Indicators in this domain have 4 dimensions: country (c), indicator (i), branch by nace rev.1 (n) and year (y)

**Sub-domain 2.2: Sectoral specialisation indicators**

<b>Code</b>	<b>Description</b>		<b>Nace coverage</b>	<b>Country coverage</b>	<b>Year coverage</b>
2.2.0 1	Production specialisation ratio relative to OECD (B+/-)		2 or 3-Digits, 4-Digits where available	OECD	
2.2.0 2	Export specialisation relative to competitors (B+/-)	X	2 or 3-Digits, 4-Digits where available	OECD	
2.2.0 3	Import specialisation relative to competitors (B+/-)	X	2 or 3-Digits, 4-Digits where available	OECD	
2.2.0 4	Cover ratio relative to total manufacturing (B+/-)	X	2 or 3-Digits, 4-Digits where available	OECD	
2.2.0 5	Intra-sectoral specialisation in trade	X	2 or 3-Digits, 4-Digits where available	FULL	

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TRIAD+: TRIAD plus some other countries

OECD: OECD countries

FULL: OECD countries plus other major trading partners

## DOMAIN 2: Performance indicators by industrial activity

Indicators in this domain have 4 dimensions: country (c), indicator (i), branch by nace rev.1 (n) and year (y)

### Sub-domain 2.3: Indicators of the geographical specialisation of exports

Code	Description		Nace coverage	Country coverage	Year coverage
2.3.0 1	Country share of exports to the EUR15 market	x	2 or 3-Digits, 4-Digits where available	OECD	
2.3.0 2	Country share of exports to the North American market	x	2 or 3-Digits, 4-Digits where available	OECD	
2.3.0 3	Country share of exports to the Japanese market	x	2 or 3-Digits, 4-Digits where available	OECD	
2.3.0 4	Country share of exports to the NICs1 market (original four tigers)	x	2 or 3-Digits, 4-Digits where available	OECD	
2.3.0 5	Country share of exports to the NICs2 market (second wave, SE Asia)	x	2 or 3-Digits, 4-Digits where available	OECD	
2.3.0 6	Country share of exports to the Eastern European market	x	2 or 3-Digits, 4-Digits where available	OECD	
2.3.0 7	Country share of exports to the NICs3 market (Latin America)	x	2 or 3-Digits, 4-Digits where available	OECD	
2.3.0 8	Country share of exports to the Chinese market	x	2 or 3-Digits, 4-Digits where available	OECD	
2.3.0 9	Country share of exports to the Australasian market	x	2 or 3-Digits, 4-Digits where available	OECD	
2.3.1 0	Country share of exports to the Indian sub-continental market	x	2 or 3-Digits, 4-Digits where available	OECD	
2.3.1 1	Country share of exports to the Maghreb market	x	2 or 3-Digits, 4-Digits where available	OECD	

EU: EU countries

TRIAD: EU countries, USA and Japan

TRIAD+: TRIAD plus some other countries

OECD: OECD countries

FULL: OECD countries plus other major trading partners

2.3.1 2	Country share of exports to the CIS market	x	2 or 3-Digits, 4-Digits where available	OECD	
2.3.1 3	Country share of exports to the OECD market	x	2 or 3-Digits, 4-Digits where available	OECD	

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EU: EU countries  
 TRIAD: EU countries, USA and Japan  
 TRIAD+: TRIAD plus some other countries

OECD: OECD countries  
 FULL: OECD countries plus other major trading partners

## DOMAIN 2: Performance indicators by industrial activity

Indicators in this domain have 4 dimensions: country (c), indicator (i), branch by nace rev.1 (n) and year (y)

### Sub-domain 2.4: Profitability indicators

Code	Description		Nace coverage	Country coverage	Year coverage
2.4.0 1	Gross operating rate (gross operating surplus/turnover)		2-Digits	OECD	not available
2.4.0 2	Return on assets (ROA - net income divided by total assets)		2-Digits	TRIAD	not available
2.4.0 3	Cash flow to sales ratio (cash flow divided by net income)		2-Digits	TRIAD	not available
2.4.0 4	Number of M&A's by origin of bidde (units)r		3-Digits	All	1985-1995
2.4.0 5	Number of M&A's by origin of target (units)		3-Digits	All	1985-1995
2.4.0 6	Value of M&A's by origin of bidder (million ECU)		3-Digits	All	1985-1995
2.4.0 7	Value of M&A's by origin of target (million ECU)		3-Digits	All	1985-1995

EU: EU countries

TRIAD: EU countries, USA and Japan

TRIAD+: TRIAD plus some other countries

OECD: OECD countries

FULL: OECD countries plus other major trading partners

**DOMAIN 2: Performance indicators by industrial activity**

Indicators in this domain have 4 dimensions: country (c), indicator (i), branch by nace rev.1 (n) and year (y)

**Sub-domain 2.5: "Picking winners" indicators**

Code	Description		Nace coverage	Country coverage	Year coverage
2.5.0 1	Ability to specialise production in fast growth industrial sectors		2 or 3-Digits, 4-Digits where available	OECD	
2.5.0 2	Ability to invest in fast growth industrial sectors		2 or 3-Digits, 4-Digits where available	OECD	
2.5.0 3	Ability to specialise in fast growth geographic markets	x	2 or 3-Digits, 4-Digits where available	OECD	

EU: EU countries

TRIAD: EU countries, USA and Japan

TRIAD+: TRIAD plus some other countries

OECD: OECD countries

FULL: OECD countries plus other major trading partners

**DOMAIN 3: Cost, price and productivity indicators by industrial activity**

Indicators in this domain have 4 dimensions: country (c), indicator (i), nace rev.1 (n) and year (y)

**Sub-domain 3.1: Indicators regarding the use of labour**

Code	Description		Nace coverage	Country coverage	Year coverage
3.1.0 1	Growth rate of employment		2 or 3-Digits, 4-Digits where available	FULL	
3.1.0 2	Labour productivity, level (at market exchange rate)		2 or 3-Digits, 4-Digits where available	FULL	
3.1.0 3	Labour productivity, level (at PPS exchange rate)		2 or 3-Digits, 4-Digits where available	FULL	
3.1.0 4	Labour productivity competitiveness (trade weighted)	x	2 or 3-Digits, 4-Digits where available	FULL	
3.1.0 5	Unit labour cost competitiveness (trade weighted)	x	2 or 3-Digits, 4-Digits where available	FULL	
3.1.0 6	Wage competitiveness (trade weighted)	x	2 or 3-Digits, 4-Digits where available	FULL	
3.1.0 7	Average hourly wages		2 or 3-Digits, 4-Digits where available	FULL	
3.1.0 8	Social charges as a percentage of wages and salaries		2 or 3-Digits, 4-Digits where available	FULL	
3.1.0 9	Share of labour costs in production		2 or 3-Digits, 4-Digits where available	FULL	
3.1.1 0	Number of hours worked per year per employee		2 or 3-Digits, 4-Digits where available	FULL	

EU: EU countries

TRIAD: EU countries, USA and Japan

TRIAD+: TRIAD plus some other countries

OECD: OECD countries

FULL: OECD countries plus other major trading partners

### DOMAIN 3: Cost, price and productivity indicators by industrial activity

Indicators in this domain have 4 dimensions: country (c), indicator (i), nace rev.1 (n) and year (y)

#### Sub-domain 3.2: Indicators regarding the quality of labour

Code	Description		Nace coverage	Country coverage	Year coverage
3.2.0 1	Share of the labour force with a primary education or less		2-Digits	TRIAD	
3.2.0 2	Share of the labour force with a secondary education		2-Digits	TRIAD	
3.2.0 3	Share of the labour force with a higher education		2-Digits	TRIAD	
3.2.0 4	Average number of years of education completed by employees		2-Digits	OECD	
3.2.0 5	Average number of years of further or vocational education completed by employees		2-Digits	OECD	
3.2.0 6	Share of employees having participated in job-related training during the previous year		2-Digits	OECD	
3.2.0 7	Female share of the labour force		2-Digits	FULL	various
3.2.0 8	Share of the labour force unemployed for more than one year		2-Digits	OECD	
3.2.0 9	Share of manual workers in total workforce		4-Digits / 3-Digits	some EU / FULL	1990-94 / various
3.2.1 0	Share of female manual workers in total manual workforce		4-Digits / 3-Digits	some EU / FULL	1990-94 / various
3.2.1 1	Share of non-manual workers in total workforce		4-Digits / 3-Digits	some EU / FULL	1990-94 / various
3.2.1	Share of female non-manual workers in total non-manual		4-Digits / 3-Digits	some EU / FULL	1990-94 /

EU: EU countries

TRIAD: EU countries, USA and Japan

TRIAD+: TRIAD plus some other countries

OECD: OECD countries

FULL: OECD countries plus other major trading partners

2	workforce				various
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EU: EU countries  
 TRIAD: EU countries, USA and Japan  
 TRIAD+: TRIAD plus some other countries

OECD: OECD countries  
 FULL: OECD countries plus other major trading partners



**DOMAIN 3: Cost, price and productivity indicators by industrial activity**

Indicators in this domain have 4 dimensions: country (c), indicator (i), nace rev.1 (n) and year (y)

**Sub-domain 3.3: Indicators regarding the use of capital**

Code	Description		Nace coverage	Country coverage	Year coverage
3.3.0 1	Capacity utilisation rate	X	2-Digits	EUR15	1985-1996
3.3.0 2	Ratio of stocks of finished and semi-finished goods to production	X	4-Digits	Some EU	1990-1994
3.3.0 3	Foreign direct investment - inflows as a share of value-added		2-Digits	OECD	1992-1994
3.3.0 4	Foreign direct investment - outflows as a share of value-added		2-Digits	OECD	1992-1994
3.3.0 5	F.D.I. outflows (million ECU)		2-Digits	OECD	1985-1994
3.3.0 6	F.D.I. stocks (outflows - million ECU)		2-Digits	OECD	1985-1994
3.3.0 7	F.D.I. inflows (million ECU)		2-Digits	OECD	1985-1994
3.3.0 8	F.D.I. stocks (inflows - million ECU)		2-Digits	OECD	1985-1994
3.3.0 9	F.D.I. outflows to the USA (million ECU)		2-Digits	TRIAD	1992-1994
3.3.1 0	F.D.I. outflows to Japan (million ECU)		2-Digits	TRIAD	1992-1994
3.3.1 1	F.D.I. outflows to EUR12 (million ECU)		2-Digits	TRIAD	1992-1994

EU: EU countries

TRIAD: EU countries, USA and Japan

TRIAD+: TRIAD plus some other countries

OECD: OECD countries

FULL: OECD countries plus other major trading partners

3.3.1 2	F.D.I. inflows from the USA (million ECU)		2-Digits	TRIAD	1992-1994
3.3.1 3	F.D.I. inflows from Japan (million ECU)		2-Digits	TRIAD	1992-1994
3.3.1 4	F.D.I. inflows from EUR12 (million ECU)		2-Digits	TRIAD	1992-1994
3.3.1 5	VAT payable as a share of production		4-Digits	some EU	1990-1994
3.3.1 6	Operating subsidies as a share of production		4-Digits	some EU	1990-1994

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EU: EU countries  
 TRIAD: EU countries, USA and Japan  
 TRIAD+: TRIAD plus some other countries

OECD: OECD countries  
 FULL: OECD countries plus other major trading partners

**DOMAIN 3: Cost, price and productivity indicators by industrial activity**

Indicators in this domain have 4 dimensions: country (c), indicator (i), nace rev.1 (n) and year (y)

**Sub-domain 3.4: Indicators regarding the use of intermediate goods and services**

Code	Description		Nace coverage	Country coverage	Year coverage
3.4.0 1	Ratio of stocks of raw materials and intermediate goods to purchases	x	4-Digits	Some EU	1990-1994
3.4.0 2	Intermediate cost competitiveness (trade weighted)	x	3-Digits	TRIAD	
3.4.0 3	Cost of industrial services as share of purchases of goods and services	x	4-Digits	Some EU	1990-1994

EU: EU countries

TRIAD: EU countries, USA and Japan

TRIAD+: TRIAD plus some other countries

OECD: OECD countries

FULL: OECD countries plus other major trading partners

**DOMAIN 3: Cost, price and productivity indicators by industrial activity**

Indicators in this domain have 4 dimensions: country (c), indicator (i), nace rev.1 (n) and year (y)

**Sub-domain 3.5: Other cost, price and productivity indicators**

Code	Description		Nace coverage	Country coverage	Year coverage
3.5.0 1	Price competitiveness on domestic markets (trade weighted)	x	3-Digits	OECD	
3.5.0 2	Price competitiveness on export markets (trade weighted)	x	3-Digits	OECD	
3.5.0 3	Total unit cost competitiveness (trade weighted)	x	3-Digits	OECD	
3.5.0 4	Total factor productivity		3-Digits	OECD	

EU: EU countries

TRIAD: EU countries, USA and Japan

TRIAD+: TRIAD plus some other countries

OECD: OECD countries

FULL: OECD countries plus other major trading partners

**DOMAIN 3: Cost, price and productivity indicators by industrial activity**

Indicators in this domain have 4 dimensions: country (c), indicator (i), nace rev.1 (n) and year (y)

**Sub-domain 3.6: Indicators regarding investment in intangibles**

Code	Description		Nace coverage	Country coverage	Year coverage
3.6.0 1	R&D intensity (R&D expenditure / production)		2-Digits	OECD	
3.6.0 2	R&D expenditure as a share of net investment		2-Digits	OECD	
3.6.0 3	Share of employees involved in R&D		2-Digits	OECD	
3.6.0 4	Share of patent applications made at the EPO		2-Digits	OECD	
3.6.0 5	Patent applications at EPO / R&D expenditure		2-Digits	EUR15	

EU: EU countries

TRIAD: EU countries, USA and Japan

TRIAD+: TRIAD plus some other countries

OECD: OECD countries

FULL: OECD countries plus other major trading partners