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National Accounts and Economic Statistics - International Trade Statistics

OECDS TRADE INDICATORS PROJECT (TIP)

-AN OVERVIEW-

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4TH INTERNATIONAL TRADE STATISTICS EXPERT MEETING
Château de la Muette, Paris
7 April 2003 - 9 April 2003 (morning)

Beginning at 10:00 a.m. on the first day

English - Or. English

OECDS TRADE INDICATORS PROJECT (TIP)

-AN OVERVIEW-

Introduction

1. The OECD has a rich experience in trade analysis and trade data collection, processing and dissemination.

2. Trade issues have been analysed from a variety of angles: globally as part of OECD's ongoing work on monitoring and outlook of OECD economies, sectoral (for instance agricultural trade issues) or by other characteristics, such as technology content.

3. One of the main driving forces of increased interest in trade issues is the need to get a better understanding of the size, characteristics and effects of international transactions in a context of globalization, growing interconnectivity of economies and changing nature of international transactions.

4. The Trade Indicators Project (TIP) is a statistical project. It aims at pulling together in a meaningful way various statistics to elaborate indicators, using accepted concepts and definitions and consistent, internationally comparable data.

5. The TIP could prove to be a very useful tool for economic and policy analysis by the pertinence of the selection of indicators, agreed and transparent calculation and derivation routines as well as the scope for better international comparability and harmonization.

1 The process

6. At the last Trade Statistics Expert meeting 5-7 December 2001, OECD presented an outline of a project aiming at pulling together a relevant and consistent set of indicators for the analysis of international trade and production[1].

7. Given the complexity if the issue and the richness and diversity of approaches, the following sequence of steps has been decided:

- Drawing up of a first (summary) **inventory of available databases at OECD** which could be used for the purposes of the TIP (**Annex 1**)
- Establishing a first selection of **possible indicators** from OECD and WTO to trigger discussion (**Annex2**)

[1] OECD Trade Indicators Project, Paper STD/NAES/ITS(2001)19, presented at the 3rd OECD Meeting on International Trade Statistics, 5 – 7 December 2001.

- First discussion on possible ways forward at a **special "Roundtable" meeting** involving besides OECD experts, external national experts and experts from International Organisations. This meeting has taken place the 30 September 2002 at OECD (**Annex 3**).
- First proposal of a "**Taxonomy**"of possible indicators to be discussed at the 4th OECD Trade Expert meeting.

2 Outcome so far and next steps

8. The **Roundtable meeting** , organised and hosted by OECDs Statistics Directorate, brought together key players in the field of quantitative trade work.

9. Representatives from the World Trade Organisation (**WTO**), the International Trade Centre (**ITC**), the Italian Institute for Foreign Trade (**ICE**) and the University of L Águila participated as external experts and presented their views.

OECD brought together representatives from the

- Economic Department
- Science, Technology and Industry Directorate
- Directorate for Financial and Fiscal Affairs
- Trade Directorate

3 Outcome:

- Participants strongly agreed that there is growing demand for trade indicators and that the OECD could play a very useful role in this context.
- A statistical project, such as the TIP, with a solid methodological underpinning, combining different data sources and which could help to further advance the research agenda was recognized as a major possible tool for the international research community.
- OECDs richness of available international databases, ready to be used, was recognised as well as its competence and expertise in methodological questions
- There was agreement that OECDs Roundtable approach should be continued and lead to a 2nd stocktaking meeting of progress end 2003.

Suggested directions of research included:

(1) Generally speaking, trade "plus" indicators were needed (ITC), that is trade plus production (e.g. trade orientation measures), trade plus employment (e.g. correlation of trade and employment indicators, trade plus FDI/trade by foreign-affiliated firms (e.g. globalisation strategies). More Trade in Services data is needed containing cross tabulations by products and partner countries.

(2) Better integration desirable of Merchandise Trade, trade in services and foreign direct investment.

(3) Analytical Nomenclatures need to be developed, e.g. by technology and factor intensity.

(4) Link of customs sources with enterprise structural statistics(such as the Italian "SYSTAN Yearbook") allows to build up micro data on enterprise-related trade.

(5) A first list of indicators should be developed.

4 Next steps:

10. Following the idea of "lead country approach", the representatives of Italy accepted to draw up a first "Taxonomy" for discussion at the 4th OECD Trade Expert Meeting. This list would be revised in the light of

- Comments received by meeting delegates
- Analytical relevance
- Feasibility considerations (ranking by degree of complexity)

11. During 2003, OECD would begin developing a database storage model and start pulling together available data, compute and derive selected indicators and document sources, methods and definitions.

12. During 2003, the members of the Roundtable group would continue to act as adviser and help OECD in the product design. End 2003, the Group would meet again to review progress made, formulate recommendations for future action and would prepare with OECD a report to be submitted at the next Joint meeting of Trade Statistics Experts in 2004. Such a report could also made to other OECD Working Groups or Committees.

13. The project is conceived as a co-operative, non-duplicative research effort, carried out together with the WTO, ITC and ICE and with colleagues from OECD. The Secretariat will ensure that the High Level Group for Statistics at the OECD is fully informed about progress and will seek recommendations from this group for future steps.

- *Delegates are invited to express their views about this initiative and also to flag possible interest in co-operating with the OECD in the further development of TIP. Different means of communication can be envisaged, including the creation of an Electronic Discussion Grou.p*

Annex 1: Inventory of "TIP – related "databases held at OECD

TRADE INDICATORS PROJECT
MEETING 30th September 2002

LIST OF RELATED DATABASES in OECD

The references and data for this paper have been taken from two main Web links. The first is the OECD's internal Statistical (STD) Intranet page, which gives a list of all the OECD databases.
http://asap2.oecd.org/statistics/dataset/index.htm

The OECD Internet site, under the Statistics Portal heading.
http://www.oecd.org

The second is the OECD Web Data Server (WDS), which give access to actual statistics published by database, where relevant data is available in Beyond 20/20 format.
http://cs4-hq.oecd.org/oecd/

Activity of Foreign Affiliates - 2002

Purpose: To measure globalisation, and the contribution of foreign direct investment and multinationals to the economic activity of countries.

Objectives: The database on Activities of Foreign Affiliates (AFA) covers variables such as employment, production or R&D in conjunction with foreign direct inward investment. This data bank has been extended to the activity of affiliates of national firms abroad (outward investment) and to the activities of parent companies in the origin countries.
Database: Name: AFA.DB Data Link Type: PC-Express Server: ASAP2

Foreign Affiliates Trade in Services – 2002

Purpose: To give detailed data on the role played by multinationals in the services sectors of the OECD countries, which concerns inward and outward investment.

Objectives: The database on Foreign Affiliates of Trade in Services covers five variables: turnover value added, employment, exports and imports, for inward and outward activities of multinational firms. As from the year 2000 data on the activity of parent companies in the origin countries are also requested.
Database: Name: FATS.DB Data Link Type: PC-Express Server: ASAP2

Foreign Direct Investment – 2002

Purpose: To provide guidelines to national compilers of foreign direct investment data, based on international standards and to compile and disseminate regularly reliable and up-to-date historical series which are essential for a meaningful interpretation of investment trends for the purpose of policy analysis and decision.

Objectives: The OECD "Benchmark Definition of Foreign Direct Investment" provides operational guidance on how foreign direct investment data should be compiled to meet international standards. Internationally comparable data, based on these concepts, makes it possible to measure the degree of economic integration and competitiveness of markets. As a complement to the methodological work, the "Survey of Implementation of Methodological Standards for Direct Investment" (SIMSDI- a joint exercise with the IMF) provides a practical tool to measure the extent of the implementation of international standards in OECD countries as well as data collection and dissemination methods. The Survey is regularly updated to keep the information current, as well as the report which analysis the results as a comparative study to measure the progress in Member countries (and non-member countries)recorded over time. "International Investmet Statiscal Yearbook" provides detailed information on FDI flows and stocks to and from OECD countries by all partner countries and by economic activity. Comparative cross-country tables and charts complement the detailed information by country. These series provide the basis for periodical analysis of direct investment trends and for regular examinations of policies towards international direct investment in OECD Member countries.
Database: Name: FDI Data Link Type: PC-Express Server: s:/data/daf

Market Access Database – 2002

Purpose: Provide trade negotiators and analysts with detailed information on tariffs and corresponding trade in OECD countries and major non-member countries.

Objectives: Allow trade negotiators to examine their trading interests and define their negotiating strategies in the area of tariffs. Allows trade analysts to compute impact of changes on tariffs on the patterns of trade.
Database: Name: Market Access Database Type: MS Access Server:

STAN Database for Industrial Analysis – 2002

Purpose: To provide a comprehensive database tool for cross-country analyses of industrial performance and structural change at a relatively detailed level of activity.

Objectives: The STAN (Structural Analysis) database, based on detailed national accounts by economic activity. This database is now based on ISIC Rev. 3 and has been expanded to include non-manufacturing activities (particularly services). It has effectively been merged with OECD's International Sectoral Database (ISDB), which will no longer be updated. Additional variables have been introduced to enhance productivity measurement. The database includes estimates compatible with national accounts for measures such as production, value added, gross fixed capital formation, employment, hours worked, labour compensation, exports, imports and capital stock.
Database: Name: STAN99X.DB Data Link Type: PC-Express Server: ASAP2

Science, Technology and Industry Scoreboard - 2002

P**urpose:** To provide a comprehensive mosaic of a country's performance across a wide range of indicators relating to science, technology, industry, globalisation, and information society and to provide an easy to access reference for indicators in high-demand.

Objectives: The Science, Technology and Industry (STI) Scoreboard uses over 160 indicators to provide a comprehensive picture of countries' performance in the areas of science, technology and industry. It is a biennial flagship publication of the OECD. It aims to combine statistical rigour with easy access and

readability: the essential findings are presented in bullet points, there are boxes with methodological notes on indicators and data sources.
Database: Name: Type: Server:

Statistics on Enterprises By Size Class – 2002

Purpose: To provide structural statistics on industry and services broken down by size class, consistent and relevant for international comparisons in order to meet the needs of policy-makers and economists. To offer new possibilities for analysis in the areas of small and medium-sized enterprises at a disagregated level of the economy.

Objectives: The statistical database on enterprises by size class (previously named Small- and Medium-sized Enterprises) contains detailed structural information on core economic variables relating to industry and service sectors, broken down by size class of enterprises. They are classified according to ISIC revision 3 (up to the 4th digit level) and are mainly derived from annual business surveys and business registers. Methodological information is collected as well.
Database: Name: -- Type: SQL Server Server:

Structural Statistics for Industry and Services - 2002

Purpose: To provide official annual data for detailed industrial and service sectors, consistent and relevant for international comparison in order to meet policy-makers' and analysts' needs of structural business statistics for detailed economic sectors.

Objectives: The database on structural business statistics (SSIS), updated through a joint questionnaire with UNIDO, contains annual data on core economic variables, relating to both industry and services, at a very detailed level of ISIC revision 3 (up to the 4th digit level). It covers such variables as production, value added, investment, number of enterprises, employment, wages and salaries, hours worked. Statistics are derived mainly from structural business surveys, censuses and administrative sources. To help users when analysing structural data on business activities, the OECD is collecting and updating methodological information on the sources, classifications, surveys, methods of sampling, definitions of variables, coverage, processing of data, treatment of confidentiality and dissemination. Detailed ISIC revision 3 data as well as sources and definitions are published annually in Structural Statistics for Industry and Services. This database is a key source for STAN, the OECD structural analysis industrial database.
Database: Name: ISISR3E.DB Type: PC-Express Server: ASAP2

International Trade in Services – 2002

Purpose: To provide detailed, relevant and internationally comparable data for trade policy and economic analysis. The information needs stemming from international trade negotiations including the General Agreement on Trade in Services is driving new developments.

Objectives: An annual joint publication with Eurostat and database: "OECD Statistics on International Trade in Services". This covers the 30 Member countries. Data are based on the concepts of the IMF's 5th Balance of Payments Manual and are broken down according to the detailed OECD-Eurostat Classification of Trade in Services. The data feed into the STAN database. Completion and publication with other sponsoring agencies of "The Manual on Statistics of International Trade in Services" (MSITS). The implementation of its recommendations in OECD countries will be discussed with Eurostat and OECD experts. A first OECD publication of international trade in service statistics by partner country is planned in 2002.
Database: Name: -- Data Link Type: Excel Server:

Annual International Trade by Commodity - 2002

Purpose: To provide OECD analysts and the public, including other international organisations, with complete, detailed and timely trade flow data.

Objectives: The data is published by OECD country in a series of CD-ROMs and (less detailed) paper publications showing detailed annual data of exports and imports by commodities and by partner countries using three classifications (SITC, HS, ISIC). After successful testing, implementation of ISIC Revision 3 in 2001. OECD's detailed international trade database is available in full to all OECD staff through a special and user-friendly software as well as on Internet for external users. Methodological advances are realised through yearly trade expert meetings at OECD and participation in Inter-Agency Trade Task Force.
Database: Name: FTS Type: ORACLE/EXPRESS Server: ASAP2 Data Link

Monthly International Trade

Purpose: To produce consistent and timely international trade data for OECD Member countries, ensure methodological soundness and comparability of international trade data, conduct research to improve the quality of the concepts underlying international trade data and play an active role in the development of international standards.

Objectives: Collects and maintains database for analytical use: monthly data of exports and imports at current prices by partner countries and main categories of commodities, and volume and average value indices for selected countries and main categories. Continuous and close co-operation with key users at OECD. Updating cycles optimised to respond to needs of Economic Outlook. Online availability of OECD's detailed international trade data. OECD continues to actively participate and contribute to the International Trade Task Force (Inter-Agency TF)
Database: Name: MFTS Type: ORACLE/EXPRESS Server: ASAP2 Data Link

International Trade and Competitiveness Indicators

The International Trade and Competitiveness Indicators (ITCI) diskettes contain quarterly data beginning in 1975 for:
-- foreign trade for thirty OECD member countries;
-- export market growth and export performance for thirty OECD member countries;
-- international competitiveness for thirty OECD member countries.

The principal sources and methods are reported in the associated OECD Economics Department Working Paper No.120, "**OECD's Indicators of International Trade and Competitiveness**", which provides the technical documentation for the methods of calculation. The data are seasonally adjusted and on a quarterly frequency

- Foreign trade variables are expressed in millions of local currency with the base year in 1995. Indices and prices are in local currency with base year 1995.
- Export market growth and export performance indicators are expressed in US $ with indices and prices being in US $
- International competitiveness indicators. Expressed in indices with 1995 = 100.

Database: Name ITCI, Economics Department, OECD

Annex 2: A first list of indicators to trigger discussion

TRADE INDICATORS PROJECT
MEETING 30th September 2002

Introduction

Many indicators related to trade are available at OECD. Basic indicators are already available in a number of OECD databases. Care has to be taken when combining data from different data sources and to ensure consistent methodologies, definitions and use of terms. Below is an illustrative first list of indicators.

1. Basic trade indicators

- *Growth indicator*

➢ Percentage change

It is used for a comparison with the previous year.

$$PC = \left(\frac{X_t}{X_{t-1}} - 1 \right) * 100$$

➢ Geometric growth rate

These indicators assume that the growth process can be described by a constant annual growth rate.
It is a very good indicator if the observed annual growth rates do not vary much.

$$G = \sqrt[n-1]{\frac{X_t}{X_{t-n}}}$$

➢ Average of annual rates

It is better to use for a more volatile growth process the average of annual rates

$$A = \sum_{i=1}^{n} GR_{t0/t-n} + .GR_{t-n/t-i} .. + GR_{t-1/t}$$

- *Net trade*

A country's net exports are a reliable indicator of its position on the world market.

$$NT = X - M$$

- *Coverage ratio*

$$CR = \frac{X}{M} * 100$$

- *Import Penetration ratio*

$$IP = \frac{M_p}{M_P + P_p - X_p}$$

M_p = Import of product p

$M_P + P_p + X_p$ = Domestic supply, where X_p is export of the product p, and P_p is the production of the product p

2. Trade orientation

- *Trade per GDP*

The trade ratio also called trade per GDP is a major economic indicator used to express an economy's overall trade orientation. It enables to study the degree of openness of a country. An increase of this figure overtime is indicative of an economy's growing openness.

Shall we use foreign trade data of National accounts?

$$T_t = \frac{(M_t + X_t)}{GDP_t} * 100$$

- Trade per GDP exports :

$$Tx = \frac{X}{GDP} * 100$$

The indicator per gdp exports indicates the level outward looking's of a country and the extent to which a country's population produces for the world market.

- Trade per GDP import

$$Tm = \frac{M}{GDP} * 100$$

Where X = exports, M = imports, t = year

- *Trade per capita*

This indicator is used to measure a country's overall trade orientation Using population as point of reference. Indicator for assessing a country's imports demand.

$$Tc = \frac{(X + M)}{Ninhabi\tan ts}$$

Ninhabitants : Number of inhabitants

3. Concentration indicators

Concentration indicators are used in trade flow analysis to identify the concentration of country exports in terms of the number of products or the number of partner countries.

- *Share of top items in total*

The share of the most important export products (top 3 in national export) is often used as concentration indicator. Based on a list of SITC 3 digits, HS2 or HS 4.

- *Herfindahl index*

The Herfindahl index is an indicator of concentration and can be used for product data or country data. It represents the share in world market.

$$He = \sum \left(\frac{x_i}{X} \right)^2$$

x_i = value of country, products (i = 1, …n)
n : number of country, products
X: total value of all products, countries

The x/X ratio expresses the market share of each agent. The index ranges between 1/n at the minimum and 1 at the maximum. A value of 1/n indicates an equal distribution while a value of 1 shows absolute concentration.

- *Hirschmann index*

$$Hi = \frac{\sqrt{(x_i / X)^2} - \sqrt{1/n}}{1 - \sqrt{1/n}}$$

The Hirschmann index is quite similar to the Herfindale index. It varies between 0 for an equal distribution and 1 for the maximum concentration.

4. Export competitiveness

- *Market's position*

The identification of the market's position of a country c for a product p is based on his relative sold for a year t defined in percentage by

$$S_{c,p}^{t} = 100 * \frac{X_{c,p}^{t} - M_{c,p}^{t}}{W_{p}^{t}}$$

where:

$X_{c,p}^{t}, M_{c,p}^{t}$: Import and export of the country c for the product p for the year t

W_{p}^{t} ; World trade of the product p for the year t.

- *Changes in world market share*

Changes in world market shares provide a simple indicator to assess one country's export competitiveness. Changes in world market shares over time can also indicate long term comparative advantage. It can also be calculated in terms of imports as well as for country groupings.

$$\text{CWMS}_{c,p,t} = \frac{\frac{X^{t}_{c,p}}{WX^{t}_{p}}}{\frac{X^{t-1}_{c,p}}{WX^{t-1}_{p}}}$$

c = country
p = product
t = year under review
t-1 = previous year

- *Export performance*

It represents the growth in a country X in a particular product p in total trade compared with the growth of GDP of the partner country.

5. Specialisation

The specialisation of a country is an indication of how a given country allocates its resources to its various industries under the assumption of balanced total trade.

- *Balassa index : Revealed comparative advantage (RCA)*

The Balassa index could be considered as an index of specialisation. RCA tries to identify product group where the targeted country has obviously an advantage in international competition. The revealed comparative advantage of a country C in the trade of product p is measured by the item's share in the country's exports relative to its share in world trade.

$$RCA_{c,p} = \frac{\frac{x_{c,p}}{NX_{c}}}{\frac{wx_{p}}{WX}}$$

where :

$x_{c,p}$: Export of the country c for the product p

NX_{c} : Total (national) export of the country c

wx_{p} : Exports total for the world for the product p

WX : Total exports for the world

If it takes a value less than 1, this implies that the country is not specialised in exporting the product. The share of product p in country i exports is less than the corresponding world share. Similarly, if the index exceeds 1, this implies that the country is specialised in exporting the item.

In general practice, RCA indices should be only used in product categories where trade is not distorted by export incentives and trade barriers, because they are likely to obscure whether a country has a real comparative advantage or disadvantage in these goods.

- Contribution to the trade balance

This indicator compares in thousands of GDP, the balance of trade of a country for a selected product to a theoretical balance, corresponding to the absence of specialisation. It consists of sharing out the global balance between the different products and/or partners in proportion to their respective weight in total trade of a country. = Revealed comparative advantage on goods

$$CTB_p = \left(\frac{1000}{GDP}\right) * \left[\left(X_p - M_p\right) - \left(X - M\right) * \left(\frac{X_p + M_p}{X = M}\right)\right]$$

6. Diversification

Diversification, measured through exports, is a good indicator of production structures and industry's development level.

- *Equivalent number (EN)*
  - *Product diversification*

Diversification limits the dependence on a small number of products and hence reduces a country's vulnerability to industry-specific external shocks. It is the inverse of the Herfindahl index (index of concentration).

$$NE_{iz}^{t} = \frac{1}{\sum_{p=1}^{n}\left(\frac{x_{i,p}^{t}}{X_i^{t}}\right)^2}$$

Where:

$x_{i,p}^{t}$: the export of product p by country i at year t.

$X_{i,z}^{t}$: country i exports of all products belonging to the zone z at year t.

$\frac{x_{i,p}}{X_i}$: the share of product p in total exports of country I in zone z.

The equivalent number is a theoretical value, which represents the number of markets of identical size that would lead the degree of export concentration exactly equal to the observed one.

  - *Diversification market*

Diversifying partner countries reduces a country's dependence on a small number of export markets and hence the vulnerability to shocks within destination countries. The equivalent number used for calculating

market diversification distinguishes for each country, the number of partner countries weighted according to their importance. The bigger is the index value, the greater is the diversification of markets.

$$NE_i^t = \frac{1}{\sum_{j=1}^{n}\left(\frac{x_{i,jz}^t}{X_{i,z}^t}\right)^2}$$

With:

$x_{i,jz}^t$: Country I exports of all products belonging to the zone z to country j in year t.

$X_{i,z}^t$: country I total exports of all products belonging to zone z.

$\frac{x_{i,jz}^t}{X_{i,z}^t}$: the share of market j in country i total exports of products belonging to the zone z.

7. Content in technology

- Define categories of products on technology content of foreign trade products intensity or lower intensity in technology High tech -Medium tech - Low tech
- Problem of classification: some technological products are only available since 1996 for HS 1996.
- Problem of national currency : for 2000, US$ increased a lot, and values in US$ include depreciation of national currencies vis-à-vis US$
- Real effective exchange rates..

Contribution from the World Trade Organisation to the 1st OECD Roundtable Meeting on Trade Indicators

-WTO's need profile for trade indicators-

Trade indicators are considered second-level data combining two or more variables into one meaningful measure. The objective of trade indicators is to highlight characteristics of trade patterns and trade developments.

The WTO does currently not run a regular programme on trade indicators. This note takes therefore stock of trade indicators that are calculated on an ad hoc basis in the context of WTO's work on trade regulation and analysis. The considerations are split into two aspects:

(i) trade indicators required in the context of WTO agreements; and
(ii) trade indicators required for economic analysis and research.

(i) Trade indicators and WTO agreements

Examples for trade information in the context of WTO agreements can be found in the various WTO agreements: The Understanding on the Interpretation of Article XXIV of GATT 1994, Article XXIV:5 requires an assessment of the general incidence of customs duties through "weighted average tariff rates … based on import statistics for a previous representative period to be supplied by the customs union, on a tariff-line basis and in values and quantities, broken down by WTO country of origin." Other examples include the Agreement on Subsidies and Countervailing Measures: Article 27.5 which requires the calculation of the export competitiveness to determine the level of special and differential treatment applied to a country. Export competitiveness of a developing country exists if "that product [has] reached a share of at least 3.25 per cent in world trade of that product for two consecutive calendar years."

Other Agreements simply require calculation of 3 year averages of exports and/or imports or demand only the provision of import statistics (value and/or volume).

Even more generally, the General Agreement on Trade in Services calls in Article XIX for an "assessment of trade in services in overall terms and on a sectoral basis", however, it does not give further explanations as to how to implement this. An attempt to measure trade in services by mode of supplies was developed in the recently adopted Manual on Statistics of International Trade in Services.

These few references to WTO agreements show that statistics required in a legal context are either very elementary (import values and/or volumes at tariff line levels, average exports and/or imports in a certain product group for a number of years, share of a product group in world trade) or from a statistical point of view not adequately specified (GATS).

(ii) Trade indicators in economic analysis and research

Trade indicators used in this context stem from analytical requirements. Consequently, they do not differ from those of other organizations active in trade analysis. For a summary of the most commonly used trade indicators see the Appendix.

Trade patterns

The analysis of trade patterns focuses on relative growth rates, shares of products in the country's total trade or regional/world trade to judge for example export dynamics (above-average growth rates) and identify comparative advantages. Major export destinations and origins of imports or major suppliers of a product are also frequently used in analyzing trade.

Indicators to identify a country's trade potential are the revealed comparative advantage index or the export specialization index.

Market access

Particularly important are indicators that allow an analysis of market access. This comprises for example openness indicators and trade-distorting or restrictive indices based on tariff information. Some examples:

- Trade to GDP ratios in both current and constant prices based on national accounts data (Exports/imports to GDP, trade (imports+exports) to GDP);
- Duty-free trade to total imports (dutiable imports) if possible further broken down by region, country grouping (eg. LDC) or sectors (eg. agriculture, manufactures, etc.)
- Customs duties collected to imports (dutiable imports).
- Applied (or bound) tariff averages by category.

Also, trade developments are often assessed in the context of a country's production. Relevant indicators are

- share of value added to GDP for a given industry;
- share of value added of foreign affiliates in total value added for a given and total industry;
- share of employment of foreign affiliates in total employment for a given and total industry;

For services, the Australian Productivity Commission has developed a so-called Trade Restrictiveness Index. The index's objective is to measure the extent to which economies have more or less restrictive trading regimes for services.[2]

Trade and investment

Countries are increasingly taking measures to encourage foreign direct investment. Indicators measuring this for both inward and outward flows are ratios of flows to GDP and of inward stocks to gross capital formation.

Grubel-Lloyd index

This index measures the degree of intra-industry trade. Calculations are typically based on 3-digit or 4-digit SITC levels.

[2] Greg McGuire, Economic Insights and C. Findlay, Australian National University, Measuring restrictions on trade in services, Ad hoc Expert Group meeting on NTMs, UNCTAD, 2001.

Appendix: Most commonly used indicators[3]

Relative growth rates of merchandise exports and imports

To compare trade growth rates (total or major product) with those of competitors and/or world.

Export product dynamics

To identify fast growing (dynamic) products in exports, e.g. through above-average growth rates.

Trade Intensity Index

To determine whether the trade between 2 countries is greater or smaller than expected.

Intra-industry trade

To determine exploitation of net gains from specialization and integration of a partner country into the world economy

Revealed comparative advantage index

To determine a country's trade potential with new partners

Export specialization index

To determine product specialization in the export sector of a country

Export diversification (or concentration) index

To determine dependency of a country on a certain number of products (e.g. commodities)

Export similarity index

To compare export patterns between countries

Trade complementarity index

To determine prospects for intraregional trade through matching a country's imports and exports structures

Changes in global demand for major exports

To determine export performance through a market share analysis

Changes in global market share for major exports

To determine whether the country's competitive position improved or worsened over time.

[3] Francis Ng, Trade indicators and indices, in: Development, Trade, and the WTO, A Handbook, World Bank, 2002.

Annex 3: Agenda and list of Participants of OECDs 1st Roundtable Meeting on Trade Indicators 30th September 2002

OECD Trade Indicators Project (TIP)
First Roundtable Meeting
OECD Headquarters

DRAFT AGENDA

The meeting will start at 9h30 in Room E

1. Introduction: A. Lindner (OECD/STD)

2. Globalization measurement and data in Italy: L. Iapadre, Mr. G. Bruno (ICE)

3. WTOs need profile for trade indicators: A. Maurer (WTO)

4. ITC work and indicator needs: F. Von Kirchbach (ITC)

5. OECDs trade database : A. Lindner (OECD/STD)

6. A first selection of trade indicators: H. Sellert (OECD/STD)

7. Trade-related databases at OECD: L. Hawe (OECD/STD)

8. Aspects of trade globalisation (Manual on Economic Globalisation Indicators): Th. Hatzichronoglou (OECD/STI)

9. Foreign Direct Investment : A. Bertrand (OECD/DAFFE)

10. Economics Department user point of view : (OECD/ECO: D. Turner, P. Eltvedt)

11. Trade Directorate's user point of view: M. Bagherzadeh (OECD/ECH)

12. Conclusion and Outlook: Roundtable discussion and summary