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FATS and Globalisation survey in Israel

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Introduction

The Israel economy is heavily involved in international trade of goods and services, as well as in international capital markets. Therefore, the compilation of FATS and economic globalization indicators, may have an important role in the understanding and analysis of global real and financial flows and their link with domestic and foreign enterprises' activities, mainly of multinationals operating in Israel.

A first survey on FATS and Globalization was launched by CBS-Israel at February 2004, for years 2002-2003. The survey was aimed at compiling data on international trade in goods and services of multinational enterprises operating in Israel and on their foreign and domestic activities, measured by sales, output, value added and employment.

A second survey was launched this year, for 2004-2005, covering similar data. However, an expansion of the data collection including an additional questionnaire related to R&D is planned to be launched next year. FDI data have been compiled by the Bank of Israel since the mid-1990's. A recent agreement between the Bank of Israel and CBS will allow the transfer of these data to CBS and their incorporation to the FATS statistics.

The FATS statistics developed and based on the above mentioned survey, follows the main recommendations outlined in the "*Manual on Statistics of International Trade in Services*" (MSITS) and in the "*Handbook of Economic Globalization Indicators*" (HEGI). Regarding the main statistics recommended for compilation, the current survey covers: (1) International Trade Globalization and (2) Activities of Multinational Enterprises.

A description of the survey and the experience gained so far with the collection of data are outlined below. Although the survey has yielded a wide range of important information, some important parts of data on globalisation are still lacking. Consequently, some recommendations for an expansion of the survey are given in the second part of the paper.

I. Description of the experience with the current survey

1. Structure of the survey

1.1. Groups of multinational companies

Three major groups of multinational companies were defined and data were compiled according to these groups:

Inward companies – Domestic companies controlled by foreign parents.

Outward companies – Domestic companies controlling foreign affiliates.

Inward-Outward companies – Domestic companies controlled by foreign parents and having subsidiaries abroad. All companies in this group are also

included in either Inward or Outward companies. It was defined separately, in order to have estimations on variables related to all possible groups of companies in the globalization population, without incurring in duplication of figures. Separate tables on each subject are available regarding this group of companies, allowing deduction of their figures.

1.2. Statistical units

The survey was based mainly on enterprises. Breakdown of enterprises in other units, as establishments, was sometimes needed in order to compile data from some administrative sources.

1.3. Majority ownership criterion

The criterion of majority ownership has been used in defining Inward, as well as Outward investing companies.

Accordingly, Outward and Inward companies are defined here only for domestic companies having control on affiliates abroad or for domestic companies controlled by foreign affiliates.

1.4. Parent groups and foreign CAs groups

The principle of majority ownership has also been used in relation with the configuration of Parent Groups – in the case of domestic Outward companies – and of the complete group of companies controlled by foreign residents – in the case of Inward companies. In principle, domestic companies having a direct or indirect ownership link of +50% with the immediate Inward/Outward company, were taken also into account for the computation of the different variables.

1.5. Classification by industries and countries

All relevant FATS variables have been attributed by countries. Also, all variables have been classified by industries, according to ISIC, at the two digits level.

1.6. Non-surveyed industries

Companies belonging to financial sectors, as well as industries related to manufacturing and marketing of diamonds, have not yet been included in the survey.

2. Target Population of the survey

2.1. The Multinational Business Register

2.1.1. With the launching of the first survey for years 2002-2003, a Multinational Business Register (MBR) of multinational enterprises operating

in Israel was created, and the survey was based on the population covered in the register. This alternative was estimated as the best one, due to the following reasons:

- Business surveys in Israel are mainly based on administrative sources (Income Tax reports), which don't include all relevant FATS data. Only a relative small group of companies are directly surveyed by questionnaires, so there was no possibility of joining an already running survey by adding questions relevant to FATS and statistics of globalization. Moreover, a sample related to business' surveys may not be representative of the FATS population and results can be misleading.
- FDI statistics is currently compiled by the Bank of Israel and is based on ITRS and on direct reporting by a relative small group of enterprises. An agreement was recently reached between CBS and the Bank of Israel, in order to allow the transfer of identified FDI data from the Bank to the CBS. Should the transfer take place, these data will be integrated and classified, so also FDI statistics and FATS could be improved.

2.1.2. The MBR includes data on the following companies:

- Direct Inward and Outward companies: Domestic companies directly controlled by foreign residents and domestic companies directly controlling companies abroad.
- Domestic companies linked upward or downward to direct Outward companies by more than 50% ownership percentage (Parent Group) and domestic companies linked downward to direct Inward companies in the same way (subsidiaries of direct Inward companies).
There is not a full coverage of these companies in the MBR.
- Affiliates abroad, directly controlled by domestic Outward companies and foreign parents of domestic Inward companies.

MBR data comprise Inward and Outward direct companies' details, including ISIC economic activity, as well as details of domestic parents and or subsidiaries of these companies (which were requested to be reported in the survey), type of ownership link, and ownership percentage.

Data on foreign subsidiaries or parents include company name, residence country, type of ownership link and ownership percentage.

2.2. Sources of data of the population

2.2.1. Several sources of data are used in order to build and maintain the MBR as defined above:

- The Business Registry Office, where companies must register their names, main occupation and details on owners of shares.
- CBS Central Business Register
- Israel Securities Authority
- Tel-Aviv Stock Exchange

- Companies engaged in business information and data bases, as D&B, BDI, etc.
- Press information

There are several shortcomings associated with these sources, which can be summarized as follows:

- Reports to the Business Registry Office related to the composition of the ownership of shares and changes in this composition over time, are compulsive. However, reporting of updates are not enforced in practice and ownership changes or drawing up of companies are not always reported on a timely basis. Also, the quality of data may be poor and reporting of information on domestic subsidiaries held by companies is not compulsory.
- The CBS Business Register includes very little information related to ownership links.
- Data from the Israel Securities Authority and the Tel-Aviv Stock Exchange refer only to companies traded publicly.
- Data from business information companies may be influenced by commercial considerations and don't cover the all companies.
- Finally, press information is partial, scattered and not systematic.

2.2.2. In order to further improve the coverage of data, a pre-test was launched in November 2003 - before the launching of the main survey – in order to test the coverage in industries that are not covered in the regular CBS industry surveys. The companies tested in this pre-test were chosen from VAT files.

As the response rate to this pre-test - till the programmed launching date of the final survey - wasn't very high, only partial results from the pre-test - related mainly to Outward companies - could be incorporated in the survey, and it contributed only marginally to the survey.

Finally, configurations of Inward and Outward population of the survey were determined in the following way:

2.2.3. Configuration of Inward companies population

- All Inward companies from the above mentioned sources, excluding the Business Registry Office.
- From all Inward companies of the Business Registry Office, companies from other sources were deducted. From all the remaining companies, only those that have been found in administrative sources, as VAT, Income Tax and Customs files, have been included as part of the total Inward population. These companies have been treated separately. The majority of these

companies were small and their contribution to the values of the different FATS variables was relatively marginal.

2.2.4. Configuration of Outward companies population

- All available companies from all sources. The Business Registry Office was not a source for Outward companies, as only foreign ownership on domestic companies could be inferred from these data. As mentioned above, results from the pre-test couldn't be used to improve the survey. Consequently, estimations related to Outward companies are possibly reflecting a lack of coverage and we hope to correct this situation after the second survey.

3. FATS variables

3.1. General

The main variables selected for the 2002-2003 survey are in line with the recommendation in the MSITS, but not all the variables recommended have been included. Part of the variables requested, have been reported at a low level of response, so they have not been included in the final results. Part of them, have not been requested at all in this first survey, in order to avoid an excessive burden on companies. The questionnaire is a new one and is already including a considerable amount of difficult data to report, so it seems preferable to defer the inclusion of additional variables. With the launching of the second questionnaire (2004-2005) some changes have been introduced, including the omission of some variables requested in the first questionnaire and the addition of some new ones.

The main variables requested, were the following:

3.2. International Trade

- Total exports and imports of goods and services, by Inward and Outward domestic companies, classified by countries and industries.
- International trade of Inward companies, distributed according to trade partners abroad, as follows:
 - Foreign parent group
 - Other affiliates abroad
 - Other (non-affiliates) foreign residents.
- International trade of Outward companies, distributed according to trade partners, as follows:
 - CAs abroad
 - Other affiliates abroad

- Other (non-affiliates) foreign residents
- Sales of goods and services by subsidiaries abroad of domestic Outward companies, classified by country of sales. In the questionnaire, companies were asked to report according to the countries where sales of foreign subsidiaries actually took place and not according to the country of residence of subsidiaries. Residence countries of subsidiaries are also reported, but as a separate item.

3.3. Activities of Multinational Enterprises

- Value added
- Output
- Employment

All these variables related to Inward and Outward companies and classified by industries.

Output and Value Added have been computed on the basis of data reported by companies and on data from other sources, as detailed below.

Also employment data were based on companies' reports and on other sources.

3.4. Additional requested data

- Inward companies have been asked to report also on the "Ultimate Beneficial Owner" (UBO), but the response rate was low, so no final results could be summarized on this item.
- A question on assets and liabilities related to trade credit to/from foreign residents, was also included in the questionnaire, in order to assist BOP needs with these data.

3.5. Share of Multinational Enterprises' activities in the whole economy

The major part of FATS variables related to Multinational Enterprises, have been compared with those of the whole economy. In order to base this comparison on compatible data, two main problems have been confronted:

- Industry classification related to FATS, has to be in accordance with the domestic UBO classification, in the case of Outward companies: as FATS are based on the control principle, the industry classification of the Parent Group must be that of the domestic company standing in the top of the ownership chain of +50%. In order to bring data to a common basis, industry classification of major companies in the whole economy has been changed to that of their parent companies, in cases where this was not the classification used.
- Mutual sales between affiliates have not to be taken into account within a domestic parent group or a group of domestic affiliates controlled by a foreign resident. On the other hand, data related to the whole economy may include all sales, including intra-firm.

4. The sample

4.1. General

In several cases, FATS variables have been computed according to reports of companies and complementary data from administrative files. In these cases, the sample was not used for the computing of estimates. This was the case, for example, for exports and imports of goods, employment, turnover, etc. In other cases, estimates have been computed according to the sample and the grossing-up factors calculated for each industry and size group, as for the intra-firm international trade, sales of subsidiaries abroad and value added.

4.2. Survey population and frame

The population of the survey is defined as all direct Inward and Outward domestic companies, including their domestic affiliates linked by a 50%+ direct or indirect ownership percentage to them.

All companies included in the MBR, excluding additional companies from the Business Registry Office, have been included in the population frame of the survey (see item 3.2.1 above).

4.3. Sampling groups

As FATS variables are defined separately for Inward and Outward companies, the sample was also designed for these groups. Within each group, companies have been classified by ISIC industries (two digits) and by size, according to total revenues.

5. Computation of estimates

5.1. International Trade

5.1.1. Exports and imports of goods (Inward and Outward companies) –

The companies participating in the survey were asked to report on exports and imports of goods and services, together with information on countries of trade. In addition to these reports, annual data on a company basis of exports and imports of goods, were available from the customs office. These data were adjusted to BOP requirements.

In the case of exports, customs' data were used as a complementary source for all non-reporting companies.

In the case of imports, it was decided to use customs' data in every case, due to the inferior reliability of reported data - compared to customs' records – and in order to have uniform BOP adjusted data.

5.1.2. Exports and imports of services (Inward and Outward companies) –

The reliability of data reported in the survey on exports and imports of services was in doubt, due to the following considerations:

-In general, imports are difficult to report, because there is not a clear identification of imports in the financial statements of firms. In particular, imports of services are difficult to report, as the finding of relevant items related to services in the accounting system may be a difficult and time consuming task. Also, the definition of services – as opposed to goods - may not be clear enough for reporters.

- Reports on exports of services may also be influenced by the lack of discernment of reporting companies between goods and services. The finding of some items related to exports of services may also be difficult, so exports of goods may be reported instead of services.

- Reports on trade in services in the questionnaire, have not been perceived by reporters as one of the main targets of the survey.

In order to improve the reliability of data related to international trade in services, final estimations were based on the following procedures:

Exports of services – Until recently, the main source of data on international trade in business services (not including travel, transportation, government and insurance services), was the ITRS. Due to the poor and declining quality of these data with respect to exports of services, a decision was adopted in order to change methodology for the compilation of this item. Sources of the new data include now VAT reports on transactions exempted from VAT. These data are processed and adjusted in order to reflect total (goods and services) exports, from which exports of goods are deducted – according to customs files - on a company and industry level. The remaining figures are further analyzed and processed in a company level for amounts exceeding a defined threshold, in order to reflect services' exports. Figures below the said threshold, are considered final estimations.

With the completion of a recently launched EBOPS survey, results of the survey will be integrated with the above mentioned data.

The above methodology has also been applied for the compilation of FATS statistics, regarding exports of services. Exports of services for companies not included in the sample or companies that haven't reported, were computed according to this method. For reporting companies, final estimations were determined after confrontation

between data reported by companies and data resulting from the above mentioned method.

Imports of services – The only data available were based on direct reports of companies in the survey and on ITRS. For reporting companies, final estimations resulted from confrontation of these two sets of data. For non-reporting companies, the only source was ITRS.

5.1.3. Intra-firm trade and trade with unaffiliated foreigners – Regarding goods, data reported by companies on this subject were used to compute estimations of this item. Data of companies in the sample were grossed-up by economic activity and size.

Regarding services, the same procedure was adopted, but the reliability of data was lower than in goods due to the quality of reported data on services, as explained above.

5.1.4. Sales of goods and services by CAs abroad – Sales abroad by foreign subsidiaries of Outward companies, have been reported by countries where sales took place, and not by residence countries of subsidiaries. Part of the surveyed companies having CAs abroad, didn't include a response on this subject and complementary administrative data was not available in this case. In order to improve the coverage and to allow a reliable computation of this important variable, an additional questionnaire - related only to this item - was sent to companies that didn't response. As a result of this second request, a significant improve in coverage was achieved. Data related to this item in the sample, were grossed-up according to economic activity and turnover of parents.

5.2. Activities of Multinational Enterprises

5.2.1. Output – Estimations on output of Inward and Outward companies were based on companies' reports and on administrative data, as follows:

- VAT files
- Income Tax files

Income Tax files was the preferred administrative source, because VAT files include capital gains and also due to the characteristics of VAT files, regarding the joint reporting of groups of companies. Changes in stocks of finished goods and work-in-progress, were added to reported or administrative data on turnover, in order to compute output. These changes in stocks were included on an industry basis, from data of the Business Department of the CBS. Purchase of goods for resale, have been deducted from turnover in trade industries.

5.2.2. Value Added – Value added was computed as follows:

	A. Profits on ordinary activities before tax

+	Profits before tax
-	Capital gains
-	Other income
=	Profits on ordinary activities before tax

	B. Value added
+	Profits on ordinary activities before tax
+	Compensation of employees
+	Depreciation
+	Financing expenses
+	Royalties
+	Indirect taxes
=	Value added

The items in the Value Added calculation were computed by grossing-up reported data from the sample.

Indirect taxes have been incorporated on an industry basis, according to averages from the Business Department.

Data of the sample have been grossed-up according to industries and turnover.

5.2.3. Employment – Data reported by firms, have been complemented by files from the National Insurance Institution (Social Security).

6. Main problems in the reporting of data

6.1. Consolidated data without subsidiaries abroad

For most variables needed for FATS, separate data is required on domestic activities of Inward and Outward companies (including the complete chain of linked domestic companies by a +50% ownership). Usually, financial statements of companies are consolidated, including local as well as foreign subsidiaries. An additional "solo" statement, without any subsidiaries, is usually also available. In the questionnaire, companies have been asked to report according to consolidated statements without foreign subsidiaries.

If the company has only local subsidiaries, consolidated data are according to FATS needs (*).

If the company has only foreign subsidiaries, the "solo" statement is according to FATS needs (*).

But, where companies have local and foreign subsidiaries, a special report has to be prepared, in which case mutual transactions between affiliates must be

subtracted. The preparation of this report may turn to be a complex task and enterprises have complained on this point.

6.2. Imports classified by countries

For many companies this report is difficult, because it doesn't exist as part of the

() – In cases where there is a domestic parent company of a direct Outward company, which has not been included in the population, also data on this parent have to be reported.*

information that companies maintain currently. The main emphasis is on the name of the supplier, while classification by countries is an indirect information, which has to be specially compiled.

6.3. Sales of goods and services by foreign subsidiaries

In several cases, data on sales of foreign subsidiaries were not available at the parent company, or were not available at the detail requested (geographic distribution of sales).

There were also difficulties in the reporting of sales between affiliates, which companies have been asked to report separately.

7. Main findings

7.1. International trade

- Exports of Israeli Outward companies in 2003 were 42% of total exports in the country. From the total exports of Outward companies, 35% were to foreign affiliates, mainly to subsidiaries abroad.
- Exports of Israeli Inward companies in 2003 were 25% of total exports. Most of the exports of Inward companies were to their parents abroad (74%). Notably high were exports of services to parents abroad of Inward companies– 89% of the total exports of services of these corporations.
- Sales of goods and services by foreign subsidiaries of Outward companies were higher than total exports of Outward companies and almost half of total Israeli exports. These sales totalized 17.3 billion dollars in 2003.
- Imports of Outward companies in 2003 were 30% of total Israeli imports, from which 16% from foreign subsidiaries and other affiliates abroad.

- Imports of Inward companies were 12.5% of total Israeli imports, from which 40% from parent groups and other affiliates abroad.

7.2. Activities of Multinational Enterprises

- The value added of Outward companies was 15% of total 2003 domestic business product (excluding financial sector and diamonds industries). This relation changed in a wide range of values with respect to different industries and reached values of more than 60% in some of them.
- The value added of Inward companies was 10.4% of total 2003 domestic business product (excluding financial sector and diamonds industries). Also in this case, some industries were largely influenced by Inward companies.
- In general, employment in Outward and Inward companies with respect to employment in the economy was in a lower relation than the parallel relations in output and value added.

III. Plans and recommendations for expansion of future surveys

8. The experience so far with the surveys has revealed that some important parts of the information on globalisation are still lacking. The inclusion of additional data and variables in future surveys, would give a fuller picture of the extent of globalisation. The main additions to the surveys are explained below.

8.1. Complementary data to FDI

As CAs abroad develop and extend their activities, financing through domestic banks in the host country or through other foreign sources, can be an option to FDI financed by the parent company. The inclusion of this kind of financing as an additional variable related to globalization indicators, may give a further inside into the full extent of investments abroad of parent companies.

If expanding of CAs abroad turns out to be heavily financed by domestic credit in host countries, then perhaps the extent of globalization would be better measured by adding indicators based on the **full value of assets held abroad** by parent companies, instead of FDI only. In general, this last variable will be closer related to the level of activities of subsidiaries abroad, independently of the financing scheme adopted by the enterprise.

The use of the full value of assets held abroad by domestic parent companies, as an alternative indicator to FDI, is suggested here only for foreign subsidiaries (+50% ownership) and not for all companies in FDI. All other holdings included in FDI, which are in percentages of more than 10% and less than 50%, are being treated as part of FDI in the usual way.

For instance, let's suppose that a subsidiary abroad of a domestic parent acquires an additional company abroad and finances the full amount through a loan from banks in the host country. The FDI of the parent may not change at all with the purchase, but foreign *holdings* of the parent company are not the same as before the acquisition. From the point of view of the CA's activities abroad, the new acquisition could be relevant: turnover, output, employment and value added may be much different after the acquisition. As the parent is controlling the two companies abroad, the total CAs' activities abroad must include those of both companies.

The use of FDI data only can be misleading, if one wants to analyze the total holdings of subsidiaries abroad of domestic companies:

- Comparing the relative size of FDI - stocks and flows - in economies where financing of subsidiaries abroad is based heavily on host countries' funds, with those of economies where this financing is mainly based on FDI of the parent company, may result in misleading conclusions. Economies with the same FDI may have a very different amount of CAs' holdings abroad, depending on their relative utilization of "external financing".
- Holdings of foreign subsidiaries may change over time, due to an increasing use of credits in host countries, for instance, while FDI may remain at a relatively similar level. These changes in holdings won't be registered, if only changes in FDI are registered.
- The relative size of Inward and Outward FDI of an economy, may be different from the relative holdings of subsidiaries in the reporting economy by non-residents and the holdings of subsidiaries abroad by residents of the compiling economy, depending upon the relative use of "external financing" by domestic and foreign investors. If foreign investors are basing their investments in the reporting economy mainly on local financing, for instance, while domestic investors abroad are basing investments mainly on FDI financing, comparison of these investments based only on FDI amounts (Inward and Outward FDI), may lead to confusing results.

To overcome such problems, the intention is to include additional data in future surveys, related to total assets held abroad by domestic parent companies or held in the compiling economy by foreign residents.

8.2. Outsourcing of production abroad

Companies' outsourcing of production abroad is expanding in Israel and the compilation of statistics on their activities is becoming more and more relevant. The extent to which these activities are taking place and their characteristics, seem to be important issues related to the globalization process.

In our view, it seems important to add an additional chapter on statistics of globalization that would include data on outsourcing abroad of domestic companies and on outsourcing by foreign companies in compiling economies.

These activities are still not fully included in the FATS survey. Companies engaging in global production, having subsidiaries abroad or being controlled by foreign residents, are included in Outward and Inward population. However, outsourcing that is not involving subsidiaries is not covered in the current framework.

Outsourcing of production abroad is partially covered in Israel, mainly by data on the so called “fables” companies. These are companies outsourcing partial or total production to subcontractors abroad. Products are not crossing Israeli borders and are sent directly from the manufacturer to customers abroad. As a consequence, exports have not been registered and a method of compilation was needed. By now, the current procedure is based on the difference between sales and expenditures on manufacturing imported services.

Sources of data on “fables” companies are currently based on lists of companies, supplied periodically by the Ministry of Industry, Commerce and Tourism, the Israeli Exports Institute and the Manufacturers Association of Israel. From these lists, companies summing up 85% from total revenues, are periodically surveyed in order to determine their belonging to the “fables” group.

The plan is to develop a method of compilation of data on outsourcing of production across borders in future surveys. Comparison between different data sets, such as customs data and enterprise data, could be a source for data on enterprises outsourcing production across borders.

9. Some final remarks

9.1. In order to avoid excessive burden on enterprises, variables that can be estimated by administrative files should be excluded from the surveys. This was for example the reason for the decision regarding collection of data on the geographic distribution of imports of goods. Collection of such data demands a considerable effort from respondents at the enterprises, and was excluded from the questionnaire in the second survey. The possible exclusion of other variables will be considered in the future.

9.2. On the other hand, important FATS variables – that are not available through administrative sources – could be further investigated in the survey. This is the case – for instance – of activities of subsidiaries abroad and UBO. Alternative sources and methodology regarding these variables may be also taken into account, including collaboration between countries related to crossing data between them.

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