Session Number 5
Globalization

# EXAMINING BUSINESS SERVICES IN A GLOBAL ECONOMY

Voorburg Group Meeting
September 11-15, 1995
Voorburg, The Netherlands

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## 1. Introduction

The services sector is an important and growing segment of most developed market economies. Services represent more than two thirds of GDP and an even larger share of total employment, two facts which attest to their vital role in these economies. They are now receiving much attention by policy makers in the design of economic and social policy.

In response to the growing need for information on services, firms operating in one part of this sector -- business services -- are now being included in the Statistics Canada globalization database.

The paper first describes the Globalization initiative in Statistics Canada. This section presents the kinds of information that can be created by linking data at the firm level from a variety of surveys and examples of issues that can be addressed using these data. Data from individual surveys are then used to provide a brief overview of two aspects of cross border activity in business services -- foreign control and external services trade -- in order to illustrate that business services activity has many, and growing, cross-border linkages.

The particular difficulties faced in this exercise are then discussed. These are the technical problems of linking enterprise level data with producing units and their production-related data and the analytical difficulties in interpreting the two types of data together. This is thus a "work-in-progress" report and advice is welcomed with regard to how to appropriately interpret the dataset created once the technical part of the linkage is completed.

## 2. The Globalization Initiative

In the past two decades, a phenomenon known as "globalization" has become prominent in the world economy. The distinctive feature of globalization is the increasing cross-national spread of products, markets, firms and factors of production, resulting in the emergence of globally integrated production networks controlled by multinational corporations. Firms make decisions on where to locate the various functions -- both goods-related and services-related -- which are part of their production process based upon where these functions can be performed most efficiently. In order to begin to understand the globalization phenomenon, Statistics Canada undertook the "globalization initiative".

The important first step was to recognize that the key feature of this phenomenon is the decision making which is occurring at the firm level and the associated implications it has for firm behavior. Thus the information required to understand globalization is micro level data on the activities of firms. Since much micro data is available in Statistics Canada, collected and organized on a subject matter basis, the approach taken was to make better use of this existing information through the linkage of each firm to a large range of its micro data.

The information linked, or in the process of being linked, includes all cross-border activity of firms (goods and services trade, inbound and outbound foreign investment) and an indication of the relationship of the firms involved in each activity (affiliated trade or arms length trade). This

information is supplemented with characteristics information (industry, country of control), a range of geographic information ( both national and international) and indicators of performance of the firm, provided principally by financial data.

The analysis carried out thus far using the globalization database has focused on foreign investment and trade and the resulting integrated international production. It has related the country of control of firms to geographic regions of their import and export trade and to indicators of intra-firm or arms length trade. Stage of production data also provided an indication of how Canadian firms and their parent firms work together in global production networks.

The next stage of the globalization activity is to focus on services, specifically business services. The intent is to relate production data arising from surveys of business service firms to the range of cross-border activity information to better understand the characteristics and performance of business service firms in a globalized environment. What is unique to this stage of the project is the need to match data from very different firm units -- the large enterprise unit and the smaller production units which are the basis of the production surveys. As we shall see, this is what provides the challenge for this project.

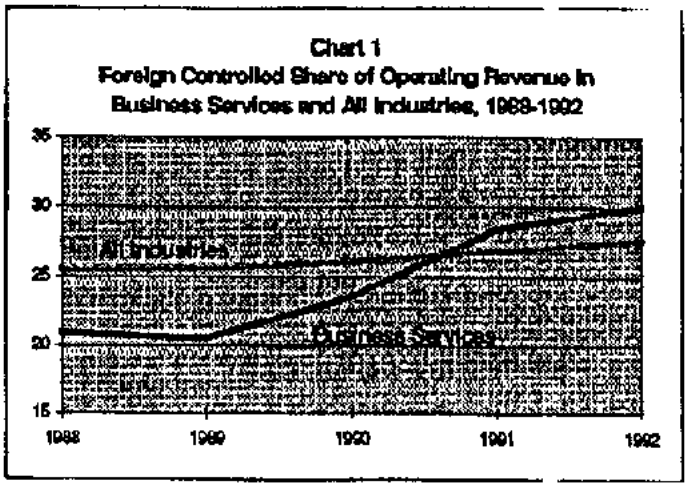
## 3. Business Services: The Domestic Situation - 1988 to 1992

Before any data linkage is undertaken, we can examine the importance of foreign linkages through the degree of foreign control of the business service firms. This information comes from a financial survey of enterprises engaged in the provision of business services. In general, firms which generate the majority of their revenues through the direct sale of services to other businesses are classified to the business services sector. However, the industrial classification system used by this survey is based on the primary activity of the enterprises. Since in some cases a enterprise will consist of many companies or producing establishments, parts of the enterprise may carry out activities other than the provision of business services.

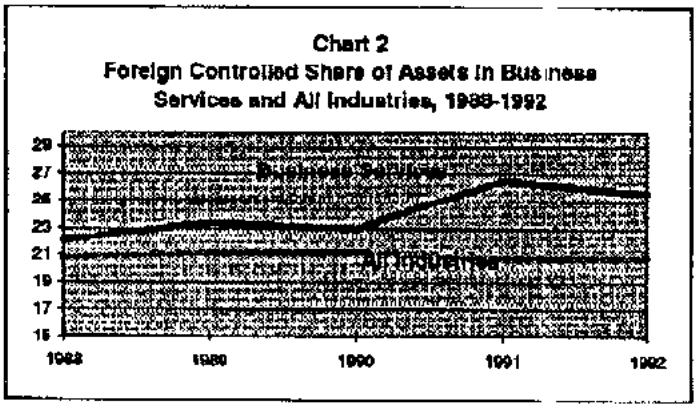
### The Growing Importance of Foreign Controlled Enterprises

During the period, firms in the business services have experienced a significant increase in their operating revenues. From 1988 to 1992, operating revenues of firms engaged in the provision of business services have increased at an annual rate of 8.3%. In comparison, the average annual increase in nominal GDP was 3.4% during the same period. This suggests that business services are a growing component of GDP.

Within the business services sector, one of the most distinguishing trends is the growing importance of foreign controlled firms. From 1988 to 1992, the revenues of foreign controlled firms increased by over 90%, while the revenues of Canadian controlled firms increased only by 18%. One consequence of the large difference in the growth rate between foreign and Canadian controlled firms is that the share of revenues accounted for by foreign controlled firms has increased. From 1988 to 1992, the foreign controlled share of revenues in business services has increased dramatically, rising from 20.9% of total operating revenues in 1988 to 30.0% of revenues in 1992 (see Chart 1). The increase in the foreign presence in business services has been much more pronounced than for the economy as a whole. Whereas in 1988, the share of foreign controlled revenue was lower for business services than for the aggregate economy, by 1992, it was above.




The foreign controlled share of assets in business services has also increased, rising from 22.1% in 1988 to 25.6% by 1992 (see Chart 2). This rising share of assets is much different from the trend in the economy as a whole, where the foreign controlled share of assets has been relatively constant over the period.




The increase in the share of revenues accounted for by foreign enterprises in businesses services at the aggregate level, is reflected in five out of the seven industries which comprise the business services sector (see Table 1). Within the five industries in which foreign controlled revenues increased their share, foreign controlled firms in engineering services and computer services and software developers more than doubled their revenues during the period from 1988 to 1992, indicating that these firms are some of the most dynamic firms in the business services sector.

While foreign controlled firms have increased their share of revenues in many of the business services industries, they are dominant in only one industry, the computer services and software development industry. In 1992, the foreign controlled firms accounted for almost 70%

of the industry's operating revenues. In the remaining six industries, foreign controlled firms tend to play a much more limited role.

**Table 1**

**Foreign Controlled Share of Operating Revenue in Business Services, 1988-1992**

| Industry | 1988 | 1989 | 1990 | 1991 | 1992 |
|---|---|---|---|---|---|
| | | | (%) | | |
| Advertising Services | 9.6 | 7.7 | 10.3 | 10.6 | 9.4 |
| Architectural Services | 0.0 | 0.0 | 0.0 | 5.6 | 12.2 |
| Computer Services and Software Developers | 56.8 | 60.7 | 61.6 | 65.5 | 68.8 |
| Employment Agencies and Personnel Suppliers | 17.3 | 16.7 | 16.2 | 13.5 | 14.2 |
| Engineering Services | 7.7 | 7.1 | 10.8 | 12.2 | 16.5 |
| Other Business Services | 13.6 | 9.9 | 14.0 | 16.0 | 14.9 |
| Scientific and Technical Services | 7.7 | 9.9 | 12.9 | 11.9 | 11.0 |
| Total | 20.9 | 20.5 | 23.5 | 28.4 | 30.0 |

**Foreign Controlled Firms are Concentrated Largely in the Computer Services and Software Development Industry**

The dominance of the computer services and software development industry by foreign controlled firms is also reflected in the industrial distribution of their revenues. In 1992, almost 70% of the revenues generated by foreign controlled firms in business services were in this industry (see Chart 3). In comparison, the Canadian distribution of revenues is much more widely distributed over the seven industries. A recent study on foreign direct investment in services has suggested several factors which influence the pattern of foreign direct investment in services.[1] Although it is not possible to draw direct parallels between this study and the work at hand, it is possible to use the factors presented to suggest possible explanations as to why foreign controlled revenues are concentrated in the computer services industry. One reason foreign firms are concentrated in this industry is that it may be easier for foreign-based firms to enter this industry as compared to the other fields. In some of the business services fields such as architects and engineers, there are requirements that employees have federal or provincial accreditation or official certification, making entry more difficult for foreign firms. A further factor which may contribute to entry of foreign controlled firms in the computer services and software development industry is that they may have followed home country client firms to Canada. Another factor may be the size of the domestic market and its growth rate. Of the seven industries, the computer services and software development industry is largest in terms of operating revenue and it has experienced a faster rate of growth than any of the other six industries during the period from 1988 to 1992. The large size of the domestic market and its remarkable rate of growth may have both facilitated the entry of foreign firms.

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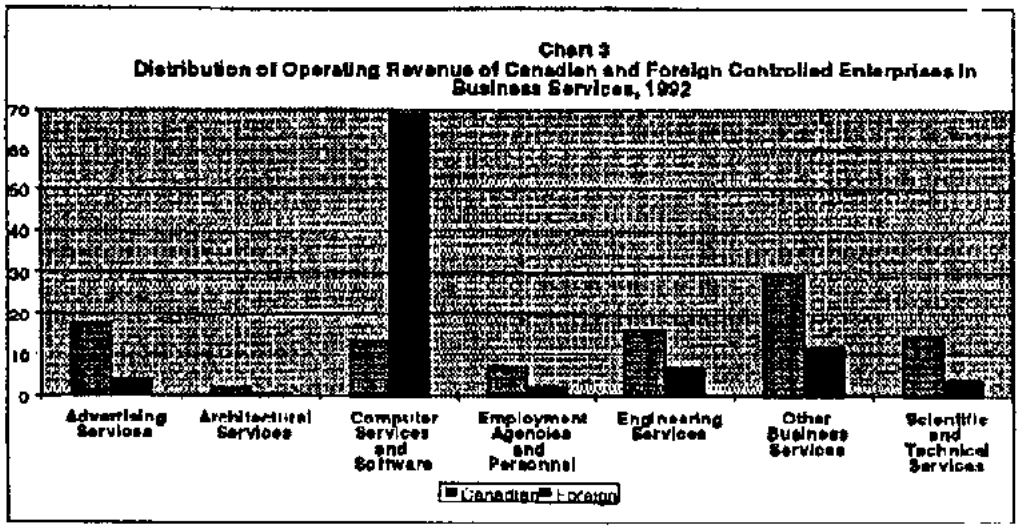
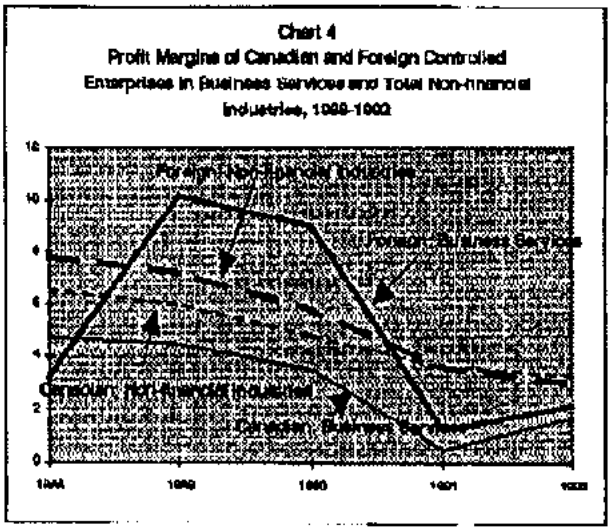
[1] United Nations, *The Transnationalization of Service Industries: An Empirical Analysis of the Determinants of Foreign Direct Investment by Transnational Service Corporations*, United Nations, New York, 1993.




## Foreign Controlled Firms Perform Better Financially

One indicator of competitiveness of firms is to look at the financial performance of firms. At the aggregate level, foreign controlled firms have tended to perform better financially than Canadian controlled firms. For every year from 1989 to 1992, foreign controlled firms have experienced higher profit margins, returns on assets and equity than Canadian controlled firms (see Charts 4, 5, and 6). As Chart 4 shows, this trend is also similar to the general pattern in the Canadian economy, where foreign controlled firms typically perform better than Canadian controlled firms.



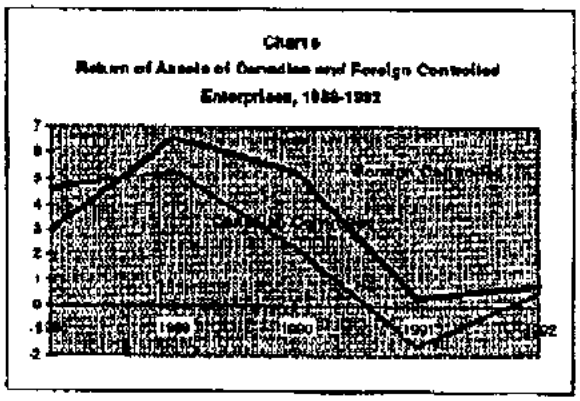


Chart 6
Return on Assets of Canadian and Foreign Controlled Enterprises, 1988-1992

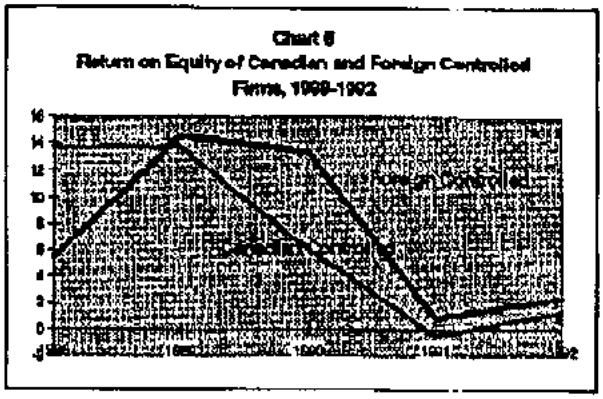


Chart 8
Return on Equity of Canadian and Foreign Controlled Firms, 1988-1992

The primary reason why the aggregate performance of foreign controlled is above that of Canadian controlled firms is due to the strong financial performance of foreign controlled firms in the computer services and software development industry. Since this industry is one of the most profitable of the seven industries and it is dominated by foreign controlled firms, the aggregate measure of profitability is skewed toward foreign controlled firms. There is no consistent pattern of better performance for foreign controlled firms amongst the other industries comprising the business services group (see Table 2).

Table 2
Profitability of Foreign and Canadian Controlled Enterprises, 1988-1992

| | 1988 | | 1989 | | 1990 | | 1991 | | 1992 | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Can. | Foreign | Can. | Foreign | Can. | Foreign | Can. | Foreign | Can. | Foreign |
| Advertising Services | 4.8 | 8.2 | 2.4 | 9.6 | 1.6 | 3.6 | 0.4 | 7.2 | 2.4 | 3.1 |
| Services of Architects | 8.6 | n.a. | 8.3 | n.a. | 3.6 | n.a. | 1.1 | 5.4 | 5.1 | 44.8 |
| Computer Services and Software Developers | 6.6 | 1.4 | 5.6 | 19.8 | 2.6 | 12.2 | 0.4 | 1.3 | 4.4 | 4.0 |
| Employment Agencies and Personnel Suppliers | 3.4 | 2.5 | 2.7 | 3.9 | 3.5 | 7.5 | 0.5 | -0.5 | 0.6 | -4.3 |
| Engineering Services | 5.9 | 1.2 | 6.3 | -1.9 | 5.3 | 1.4 | 2.3 | -3.8 | 0.6 | -6.3 |
| Other Business Services | 5.7 | 11.1 | 6.1 | 5.5 | 6.3 | 6.5 | 2.2 | 1.0 | 4.1 | -0.5 |
| Scientific and Technical Services | 0.9 | -2.6 | 1.8 | -6.2 | -2.6 | 1.2 | -4.5 | 2.2 | 5.1 | -0.9 |
| Total | 4.7 | 3.2 | 4.3 | 10.2 | 3.5 | 9.0 | 0.5 | 1.2 | 1.7 | 2.2 |

## 4. Business Services: International Trade

Another look at cross-border activity is provided by existing data on international trade in business services.

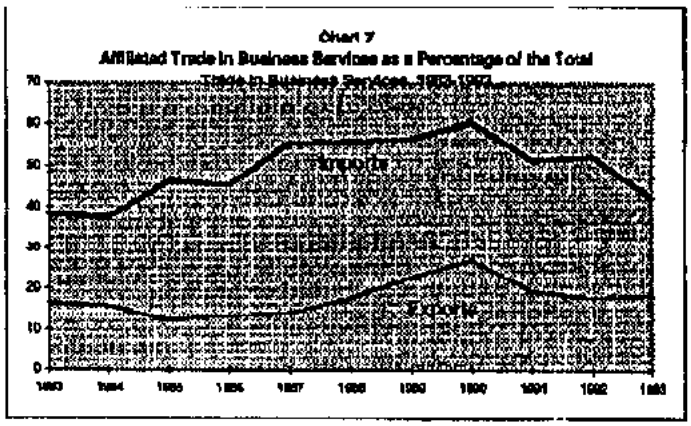
Statistics Canada does not specifically collect data on the imports and exports of firms operating in the business services sector. Information on trade in services is collected on the basis of commodities. Trade data are available for three select commodities which are: consulting and

professional services; advertising and promotional services; and computer services. Since these three commodities comprise the bulk of the trade in business services, they provide an overall picture of the trends that have been taking place in the trade in business services for the last ten years.

From 1983 to 1993, exports of these three commodities have increased at a slightly faster rate than that of service exports. During the period, exports of these commodities increased by 125% while total service exports increased by 118%. Although exports of these commodities have been growing faster than service exports, they represent a relatively small component of Canada' total service exports. In 1993, they represented 7.7% of total service exports.

Imports of consulting and professional services, advertising and promotional services, and computer services have grown much more rapidly than exports of these commodities and they are also increasing at a much faster rate than service imports. From 1983 to 1993, imports of these three commodities increased by 391%, while the imports of services increased by only 142%. In 1993, these three commodities represented 4.9% of total service imports.

One significant way in which exports and imports of these commodities differ is in terms of the ownership relationship between trading firms. Almost half of the imports of these commodities are attributable to firms which are affiliated with each other (see Chart 7). In addition, since foreign controlled firms account for over 80% of these affiliated imports, there exists a strong relationship between foreign direct investment and the import of business services. In comparison, exports of these services are mostly transactions between firms which do not share any ownership relationship.




These data suggest that although the exports of business services are growing rapidly, they are only growing slightly faster than the general trend in the growth rate of service exports. In comparison, imports of business services are growing twice as fast as the imports of services. While business services represent a relatively small portion of the total trade in services, it is interesting that in most years Canadian exports of these three commodities exceeded imports. This tends to suggest that firms operating in the business services sector of the Canadian economy are competitive in the international market for business services.

## 5. Methodology and Interpretation Issues

One of the key sets of data to be linked in this exercise is enterprise-level financial data. These income statement and balance sheet data provide a wide range of growth and performance information about the enterprise. They provide an assessment of decisions made at the enterprise level, such as decisions about vertical or horizontal integration in the enterprise or about how a range of activities - both goods and services - are provided on an intra-firm basis.

The SIC code used at the enterprise level of the Canadian SIC reflects the integrated operations of large enterprises. The classification of a particular business service (for example computer services) at the enterprise level may include computer services and manufacturing, wholesale, marketing and perhaps R+D activities of the enterprise, as long as the computer service activity was predominant. The classification is thus defined more broadly than the establishment-level notion of computer services and financial data from an enterprise classified to computer services will include data from the entire range of activities.

The data representing the production of business services comes from establishment-level surveys. By production data we mean revenue, expenses and operating margin, some information on number of employees and their salaries and some further breakdown of revenue by type of goods or services produced. The units surveyed are more homogeneous and the data represents the activity in question (in our example computer services) and does not include related activity to any great degree.

Because of the different nature of the units represented in the two surveys there are problems with the interpretation of the dataset created by the linkage of enterprise-based and establishment-based surveys.

If one starts with the list of enterprises (and their data) identified as, for example, computer services, and then link to units in the production survey, the resulting dataset (i) will not include those computer services producing units which are part of a larger enterprise not identified primarily as computer services and (ii) will include financial data for producing units which are part of a computer services enterprise but which carry out a related activity (eg. manufacturing of computers or parts, wholesaling).

If, on the other hand, one starts with a list of the computer services producing units and links them to their enterprises, one has enterprise-level financial data pertaining to more than computer service production statistics. Thus, performance measures and any data-based characteristics will be related to more than the production activity in question. Results pertaining to degree of foreign control in the industry, rates of growth etc. may be contradictory when the enterprise-based view is compared with the establishment view.

One must therefore use the resulting data set with care if linkages are established between different levels of the firm. If one starts with the list of the producing units and links to their enterprises, there are various ways to use the two sets of data together.

The simplest and most straightforward is to use the link only to attribute the characteristics of the enterprise to the establishment. For example, the country of control, the location of the enterprise head office or the industrial classification of the enterprise (if there is a link to an enterprise) might be information linked to the producing unit. The latter will help establish the existence of an enterprise link and the nature of the integration of activity in the enterprise (vertical, horizontal, widely dispersed activity).

One could then begin to use the actual data by creating data-based characteristics using enterprise data and attributing these characteristics of the enterprise to the establishment. One example of such a characteristic might be a performance measure based upon rate of return which would then be used to group the enterprises into high, medium and low rate of return groups. This measure would be based upon data pertaining to activities other than the narrowly defined activity under consideration, but the use would be simply to establish a success or performance measure for the whole enterprise within which the establishment operates. It would thus give some idea of the corporate family environment (dynamic? successful? low performer?) for the producing unit.

In addition to using characteristics in the above manner and to avoid inaccuracies associated with using incompatible data series together, we propose that the two types of data (enterprise and establishment) can be used to illustrate the two views of the activity. These could then be used to complement and challenge each other in order to provide a more complete view of the enterprise and its constituent parts.

The view presented of the activity (eg. computer services) at the enterprise level, in terms of the size of the activity in the economy, growth, financial performance etc. can be compared to the view of the activity at the establishment level. Both are legitimate representations of computer services and may show interesting contrasts. For example, a high rate of expansion of the activity at the establishment level compared to the enterprise level might suggest that the specific computer services activity was more dynamic than the associated activities in the enterprise and were perhaps the major source of growth in the enterprise. In contrast, slower growth or rates of return at the level of the establishment (if available) compared to the enterprise might lead to a hypothesis of a less dynamic activity or one which exists partly to serve the rest of the enterprise and not simply for the rate of return it generates for the enterprise.

Knowledge of the types of activities carried out in an enterprise, together with information on the type of intra-firm trade taking place could also shed light on the behavior of enterprises in terms of their production strategy in the Canadian market. For example, one may be able to discern if an enterprise is offering the full range of related goods or services in the Canadian market by producing them in that market or by producing some in the market and some elsewhere and exporting them to Canada.

By using the data in this manner, full advantage can be taken of the rich set of data available once the micro-data are linked, while at the same time not drawing faulty conclusions based on the erroneous use of incompatible data.

## 6. Conclusions

We have started the process of linking the globalization set of information for business services and have made good progress to date. When finished, the set of information will provide new insights to business services and the firms that provide them to the Canadian market. In the meantime, any suggestions on overcoming the problems of interpreting enterprise and establishment data together will be most welcome.