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**INTERDEPARTMENTAL DISCUSSION PAPER**

**THE SERVICE SECTOR  
IN THE CANADIAN ECONOMY**

**Industry, Science and Technology Canada  
JULY, 1989**

SERVICE INDUSTRIES

Canada

**INTERDEPARTMENTAL DISCUSSION PAPER**

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## THE SERVICE SECTOR IN THE CANADIAN ECONOMY

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## THE SERVICE SECTOR IN THE CANADIAN ECONOMY

### I. BACKGROUND

1. The most significant change in Canada's industrial structure in the post-war period has been the phenomenally rapid growth of the service industries to the point where they now account for around 70% of the output and employment in the economy. Parallel changes are taking place in the economies of the other advanced industrial nations.
2. Once the significance of this shift in industrial structure came to be appreciated, it became a focus for concern. A number of old prejudices and misconceptions about services came to the fore - e.g. services did not create wealth the way goods production did, services were not tradeable, and the growth of services was being fuelled by consumer services such as fast-food outlets. At the same time, a view developed that the growth of the service sector was not contributing to the overall real growth of the economy but was simply the result of "contracting out", that is, a belief that the locus of production was simply shifting from the goods sector to the service sector (or in the case of consumer services from the household to the service sector).
3. In addition, the relative growth of the service sector was taken as evidence of the deindustrialization of the Canadian and other advanced economies. On the labour market side, there was concern that the movement toward a service economy was resulting in the creation of very large numbers of low and high paying jobs - with very little in-between. Paradoxically, a concern also developed that if the service industries stopped growing, high levels of structural unemployment would result.
4. In light of all these issues and concerns, the federal government called for a fundamental analysis and policy review of the role of the service sector in the Canadian economy. The government recognized that the concerns outlined above were very fundamental, even though possibly ill-conceived. The result was the establishment in 1986 of the Service Industries Studies Program (SISP).
5. The SISP was designed and implemented by Industry, Science and Technology Canada over the 1986-88 period. Under this \$2.4 million program, over 80 studies were carried out dealing with the role of the service industries in the domestic and international economies (see Annex II). The specific studies were designed and carried out under the aegis of the Fraser Institute, the Institute for Research on Public Policy (IRPP), and Statistics Canada. The Fraser Institute focused on the role of the service sector in the economy and the factors affecting its growth and development. The IRPP focused on issues relating to international trade in services and regional development. Statistics Canada focused on the issue of the adequacy, and prospects for improving, the statistical data base on services. The three institutions also produced overviews of the results of the studies in their specific areas of responsibility.

6. The research was designed to develop a greatly improved fundamental understanding of the role of the service industries in the economy. In this respect the program was very successful. The research demonstrates that most of the common perceptions of the service sector, and the concerns over its relatively rapid growth, are in fact misconceived.
7. This paper draws together, in one document, the major research findings and their policy implications of the various studies and overviews which were produced under the SISP. .

## II. THE ROLE OF THE SERVICE SECTOR IN THE CANADIAN ECONOMY

### a) Growth and Diversity of the Sector

8. The prime reason for the strong current interest in the service sector is its phenomenally rapid post war growth. The results of the research confirm this rapid relative growth and determine that it represents an evolutionary process occurring since at least the beginning of the 20th century. In the post-war years, the share of total employment in Canada accounted for by service sector employment increased from 40% in 1946 to over 70% in the 1980's. The service sector's share of output also increased sharply, though less so than in employment terms, rising from about one half of total output to about two-thirds of the total since 1946.
9. Despite the longstanding use of the term 'services', it is virtually impossible to come up with an a priori definition of services that clearly distinguishes them from goods. The best approach remains the pragmatic one of defining the sector as including all industries not primarily engaged in the production of goods. The goods producing sector is usually defined to include the agriculture, resource processing and extraction, manufacturing and construction industries; while the service sector is comprised of the utilities, transportation, communication, wholesale and retail trade, finance, insurance and real estate, business services, personal and community services, and government services.
10. The extreme diversity of the service industries, including as they do consumer services, business services, regulated services, and government services, makes it very difficult to generalize about the service sector. But one common characteristic of the service industries is their relatively rapid growth, a characteristic which is extraordinarily broadly based (see Annex I). Further characteristics of service firms are their dynamism, flexibility, and ability to respond quickly to changing market demands. The role of small firms in the service sector is significantly greater than is the case with the goods-producing sector. Service firms operate in highly competitive environments characterized by: ease of entry and exit; entrepreneurship; human resource intensity; the importance of reputation and credibility owing to the intangible nature of their



assets and outputs; and, high degrees of specialization. On the other hand, some service industries are highly concentrated and many regulated service industries are also very capital-intensive, indicating the difficulties in generalizing about the service sector.

11. The extraordinary dynamism of the service sector is also reflected in the blurring of traditional boundaries among industries, firms, products and markets which has accompanied the growth and development of the service sector.
12. A primary objective of the SISP was to better explain the rapid growth of the service sector and the key determinants of that growth. It is in this respect that some of the most significant progress has been made.
13. To better understand the service sector, three sub-sectors were identified and analyzed separately - consumer services, producer (intermediate) services and government services. When this approach was taken two very fundamental and surprising results were obtained.
  - i) During the last 25 years the share of producer services in real GDP has risen by 20%, while consumer services share in real output remained constant and the share of government services rose only marginally.
  - ii) As a result, producer services now dominate the service sector and represent almost one half of current dollar services output, with consumer and government services representing one quarter each.
14. The finding that producer services have been the engine of growth for the service sector throws an entirely different light on service sector perspectives. In the past, it was believed that service sector growth was being fuelled by growth in consumer services demands. As it turns out, the growth in services is being fuelled by the demand for new and improved services on the part of Canada's corporations in both the goods and services producing industries.
15. The growth of the service sector is an integral part of the Canadian industrial and economic development process. The growth of the producer services industries is explained as a vital part of the ongoing process of capital deepening in the Canadian economy which has given rise to increased productivity and living standards in Canada. The process has also been accompanied by increased specialization of which the growth of the producer services industries is an important manifestation. Although statistics are not available, it is generally accepted that production in both the goods and services industries is becoming more "service activities" intensive as production and distribution processes become more complex and more highly automated and integrated.

16. Consumer and public services have also grown relatively rapidly in terms of employment and nominal GDP in the post-war period. Their failure to expand their shares of real output reflects, to a significant degree, a relatively weak measured productivity performance. Because many of these services are customized and often require direct contact between service producers and customers, securing productivity advances is often extremely difficult. In addition, we have failed to develop appropriate output measures, particularly for our public services such as health and education, so the lack of measured productivity growth and GDP share growth may to some extent reflect our inability to measure service outputs and quality improvements.
17. The growth in consumer services employment and nominal GDP which did occur in the post-war period is shown to have been influenced significantly by the rising participation rate on the part of women in the workforce. Thus growth in consumer services will likely moderate further in the future as participation rates level off. In recent years, significant pressures to reduce government spending have fallen disproportionately on government services, as opposed to transfer payments related to social programs. If this continues to be the case, the prospect for government services real output is to remain stable or decline in relative terms. Thus the role of producer services as the engine of real growth in the service sector is likely to be of increasing importance in the future.

b) Human and Information Capital and Technology

18. Another significant focus of the SISP research was on the critical importance of human capital to the development of strong and competitive service industries. Human capital refers both to the knowledge derived from education and the skills acquired from training and industrial experience as embodied in the Canadian labour force. In terms of industrial competitiveness, given the nature of the service industries, human capital is to the service industries as physical capital is to the goods producing industries.
19. These findings by no means underestimate the importance of human capital to the goods producing industries but rather point to the producer services sector as the source of much of this knowledge embodied in both human and information capital. It is expected that the trend toward the relative growth of human and knowledge capital will continue and will encourage the further growth of the producer services industries. Developments with respect to producer services output and employment growth are being paralleled by developments in the information economy as information workers have increased their share of total employment in the economy from 42 per cent to 52 per cent over the 1960-1980 period.

20. Information generated on the educational attainment of workers in Canadian service industries tends to confirm the above-noted findings on the importance of human capital. The service industries employ proportionately fewer people with the lowest, and proportionately more with the highest, levels of education. The research reveals a tendency for low-wage, low-skill employment in services to be replaced gradually by high-skill, high-wage employment, with not much change in middle skills employment.
21. Technological advances have had profound effects on the service industries. Significant advances in the domain of information technology have a particular relevance to service sector applications given the information intensive nature of service firms. Information plays a critically important role for service firms as both an input and output. In addition, advances in information technology have made it more feasible and efficient for service firms to access information, to process it, and to distribute it widely. The applications of information technology in areas such as banking, communications, wholesaling retailing, transportation and a broad range of business services are manifest. Information technology has also led to the development of new and improved services and increased the tradeability of services and the capability of service firms to engage in international trade in services. Finally, the application of information technologies which combine advances in computer and telecommunications technologies to link the office and the factory, to link disparate parts of MNE's, and to link suppliers and manufacturers and manufacturers and customers gives rise to demands for a broadening range of sophisticated support services.
22. Thus the prospects for a healthy and internationally competitive services economy will turn not only on endowments of human capital but also on information capital endowments including both process and product technologies and distribution and marketing technologies.
23. Technological advance in the service sector appears to be reducing labour requirements of a low-skill, repetitive clerical nature when applied to production processes in such industries as telecommunications and financial services for example, but increasing labour requirements of a highly skilled nature when applied to the expansion of service sector output, the development of new services, and the expansion of markets being served. Surprisingly, for the service sector as a whole, the increased use of capital appears to have been positively related to an expansion in the labour force in the service sector.
24. Conceptual and data problems inherent in attempts to measure service industries' outputs, prices and products or lines of business has made it difficult to focus on issues relating to the role of economies of scale and scope, specialization and productivity. In general, it was concluded that economies of scale were not an important constraint given the size of Canadian markets for services and the nature of many services. The role of economies of scope and the role of specialization in different service industries



are, however, considered to be significant. It is suggested that the middle ground in terms of the size distribution of service firms and corporate strategies is competitively less viable - the two corporate strategies of standardization and scale on the one hand, customization and niche-filling on the other, lead toward the two extremes of the size distribution of service firms. On the global scene, a number of service firms are now among the largest firms in the world.

25. Evidence on the productivity performance of specific service industries or groups demonstrate that some were able to attain significant labour productivity gains. For example, over the 1971-84 period, the transportation, communication and utilities industries experienced productivity gains significantly above those of manufacturing. Trade and financial services also increased their productivity but at a rate about two-thirds of that in manufacturing. On the other hand, community, business and personal services and the government services sector actually experienced negative measured productivity growth over the same period. The more one disaggregates, the more one discovers extremely wide variations in productivity performance among individual service industries.
26. Nevertheless, despite heavy investments in a range of new technologies, particularly information technologies, the overall productivity performance of the service sector appears disappointing. It remains a puzzle why these technological investments are not showing up more strongly in productivity advances. On the other hand, there is good reason to believe the measured productivity performance of the service sector is seriously understating real productivity gains in the sector for a variety of reasons. This is particularly true in the case of government services.
27. Moreover, the productivity performance of the service industries cannot be judged only with reference to their own measured productivity record. Producer services are used in the further production and distribution of goods and services. These producer services introduce scientific, organizational and engineering innovations into the overall production system which raise the productivity of user firms and industries. In addition, many government services are in reality producer services, contributing to raising productivity in the industrial sectors. The research points out that even if knowledge production may not be subject to large productivity gains itself, knowledge workers and their outputs, contribute strongly to productivity gains in the industries where they are used.

c) Linkages Among the Services and Goods Producing Industries

28. The paramount role played by the producer services industries in the development of the economy is a direct reflection of the vital linkages between the services and goods producing industries in both domestic and international markets. The growth and quality of producer services have profound effects

on the competitiveness of the agriculture, mining, manufacturing and service industries because the use of these producer services substitutes for labour and increases the productivity of the user industries.

29. The producer services in question include business services (accounting, legal services, engineering consulting, industrial design, management consulting, computer services, scientific services, architectural services, personnel services, security services, training services, maintenance and repair services, etc.) Also included are communication services, financial services, and transportation and distribution services supplied to businesses - all of which are critically important to the competitiveness of Canadian firms. The research points out that in most cases these producer services are also the most "tradeable" services internationally.
30. Goods are increasingly being sold in conjunction with services based on corporate strategies to put together packages of goods and services to meet the individual needs of given clients. Increasingly competitiveness is being influenced by the ability to engage in what has come to be characterized as "solution selling". Considerable evidence of this phenomenon can be found in a broad range of service and goods industries. Increasingly sophisticated technological products are requiring streams of supportive services over the lifetime of the products.
31. These growing linkages and the extraordinary dynamism of the service industries is in turn contributing to a marked blurring of traditional industrial boundaries in the economy. Boundaries among the service industries themselves are becoming blurred owing to market pressures, technological advances and deregulation. Goods producing firms are beginning to offer commercial services in response to the growing markets for these services. Alliances between service and goods producing firms are forming in order to meet new market demands.
32. Because services activities are becoming increasingly important components of the production and sale of goods, the competitiveness of service inputs strongly influences the domestic and international competitiveness of Canadian goods. Estimates of the costs of services inputs (own account and purchased) in the total costs of producing and marketing goods run as high as 75%. The value of services purchased in the market by goods producing firms has been increasing as a proportion of the total value of goods being produced. For example, it is estimated that every dollar of goods exports contains 39 cents of service industries outputs including particularly distributive, financial and business services.
33. Goods manufacturers clearly have a vital interest in open access to competitive, world class services and in a healthy and innovative producer services sector in Canada. The following are just some of the reasons why goods producing firms need to focus on the range of issues relating to producer services:

- i) service inputs are becoming increasingly important cost factors in goods production;
- ii) the quality and cost of services inputs are increasingly critical to the competitiveness of goods;
- iii) goods producers will be making critically important make or buy decisions in respect of services inputs;
- iv) service firms are often the most important class of customers for goods producers;
- v) opportunities for improving the global competitiveness of Canadian goods sold in conjunction with services are very great; and
- vi) the success of Canadian goods in penetrating foreign markets (including the U.S. market under the FTA) will turn critically on access to world class services such as transportation, distribution and communications services, advertising and marketing services and effective access to foreign distribution networks.

The scope for obtaining significant competitive advantages through greater cooperation and alliances between goods and service firms appears, therefore, to be considerable.

d) **The Role of the Service Sector in Regional Development**

- 34. The increasingly important role of the service sector in industrial development generated considerable optimism over the potential for service industries to stimulate industrial development in Canada's less advantaged regions. This was based on a perception that service industries were relatively "footloose". However, no evidence was found that the structural shift towards services production and employment was accompanied by or incited a reduction in regional disparities. The small convergence which did occur in provincial per capita incomes appears to have been attained primarily by policy measures - transfer payments to the provinces.
- 35. On balance it was found that rather than promoting the decentralization of economic activity, the growth of the service industries was playing a centralizing role, encouraged particularly by developments in telecommunications and information technologies. In particular, "front office" services (higher order management activities) were increasingly being centralized in a small number of large metropolitan centres. Growth in employment in such activities is increasing at the same time as employment growth in the more routinized service functions is slowing.

36. Although it is concluded that service-based economic development programs can not be the answer to the economic development problems of the lagging regions, it is pointed out that service industries can be engines of growth and can contribute to regional economic development. A particular emphasis is placed on the prospects for the development of exportable producer services related to comparative advantages residing in local resource and manufacturing industries. It is also stressed that publicly provided services - education, transportation and communications play a fundamental role in regional development by providing the essential infrastructures for the development of both services and goods export activities.

e) Dispelling the Myths About Services

37. The SISP results confirm that most of the concerns over the relatively rapid growth of the service sector in the post-war period are basically misconceived. Rather than offering evidence of the "deindustrialization" of the economy, it turns out the growth of the service sector is a vital part of the industrial development process. The Canadian economy consists of highly interdependent productive systems - services, agriculture, resources and manufacturing. Each of the sectors depends critically on the others and on the international sector for its productivity and competitiveness. The importance of this in the case of services is reinforced by the finding that producer services have been the engine of growth of the service sector and now dominate the sector. In addition, many government services also represent critically important producer services.
38. The SISP results contradict the views that services were not wealth generating, could not be an engine of growth for the economy, and were growing rapidly due to a proliferation of consumer services. Services can and do create wealth and can be engines of growth in the same way as goods.
39. The "contracting out" hypothesis also appears to be untenable as the major explanation of the growth of the service sector in light of the SISP conclusions which focus on a more fundamental explanation of the real growth of the service sector over time. Contracting out, in a static sense, refers to the substitution of service activities performed in goods producing firms by services purchased in the marketplace from specialized service providers. The data necessary to test directly the extent of contracting out are not available but data from which inferences about the extent of contracting out can be drawn are developed and analyzed. The evidence is that, while significant contracting out has taken place in respect of certain activities/occupations in specific industries and time periods, the opposite is true in other cases. Much of the evidence simply demonstrates that firms are increasingly purchasing services from the marketplace rather than performing these services in-house while they are also adding new 'in house' service functions. To the extent such evidence



does demonstrate increased vertical specialization in the production of services inputs in the economy, it is of course consistent with the major SISP findings concerning the rapid real growth of producer services industries. U.S. research has also reported finding only a minor role for contracting out in explaining the growth of the U.S. service sector.

40. The SISP findings also contradict the view that the growth of the service sector is contributing to a bi-modal income and job-skills distribution in Canada. For the service sector, the research identifies a tendency for low-wage, low skill employment to be replaced gradually by high-skill, high-wage employment and not much change in middle-skill employment. This finding is reinforced by the general finding that the real growth in the service sector has come from the human and knowledge capital intensive producer services sector. Human capital arises from formal education and on-the-job training, the major determinants of high personal wage rates and incomes. The research also found that in all occupational groups a minimum norm of education (high school graduation) is rewarded but that post secondary and post graduate education is only strongly rewarded in the information occupations which are the rapidly growing occupations and now dominate our occupational structure. Industries with the highest proportions of employees with high levels of educational attainment, and the lowest proportion of employees with the lowest level of educational attainment, tend to be concentrated in the service sector.
41. There is still considerable controversy over whether or not there is a trend in Canada toward a bi-modal income distribution. A recent study found some evidence to support this view but ascribed it to a relative expansion of low-paying jobs held by youth in both the goods and services producing industries. In any event, the body of research under the SISP concludes that on the basis of the growth, technological dynamics and trends in the service sector, the relatively rapid growth of the service sector is not leading to the development of a bi-modal income distribution in Canada.

### **III. THE ROLE OF SERVICES IN INTERNATIONAL TRADE**

#### **a) Defining Trade in Services**

42. Trade in services is considerably more difficult to conceptualize (let alone measure) than trade in goods owing to the nature of services and service transactions. Most international trade in services, to be fully effective and competitive in foreign markets, requires either that the service provider in the home country has a commercial presence in the foreign market (a subsidiary, joint venture, agency, office etc.) and/or that the service provider has temporary access to foreign markets for its personnel to assist in the delivery of the service. In such situations it becomes difficult to distinguish pure trade in services from payments for factor services (labour and capital).



43. Services trade, in other cases, may require the customer for the service (rather than the service provider) to have temporary access to the foreign country, as is the case with tourism trade and most trade in medical services, for examples.
44. Defining services trade can be difficult for other reasons as well. Services are increasingly sold as within an export package including both goods and services and it is very difficult to separate out the services and goods components of the value of the transaction. In addition, a great deal of international trade in services takes place between companies which are parts of a multinational enterprise, raising the difficult valuation and measurement problems inherent in non arms-length transactions.
45. International trade in services is also increasingly based on the international transfer of information, knowledge and skills made possible by the accelerated introduction and innovative use of information technology. Transborder flows of electronically transmitted data and information are believed to be a growing component of international services trade but are difficult to identify and measure. Technological advances are also increasing the storability of services and their capability to be traded internationally in tangible forms - e.g. software, film, tapes, videos, etc. Again such products make it more difficult to distinguish goods and services trade and to value the services being traded.
46. Finally, because services are usually not subject to border measures such as tariffs and quotas, the great part of international services trade is not measured as it crosses borders and as pointed out above, owing to the intangible nature of services, it would not be possible to measure most services trade as it does cross international boundaries.
47. Thus there remain serious conceptual as well as practical problems which inhibit attempts to measure services trade in the same manner and to the same extent as goods trade. The trend towards increased intra-MNE trade, increased trade in electronically transmitted information based services, and increased trade in packages of goods and services, as well as the blurring of industrial boundaries all indicate that attempts to measure international trade in services will likely become even more difficult in the future.

b) Measured Trade in Services: Canada in the Global Context

48. Canada's Balance of Payments Accounts, which record receipts from and payments to non-residents by Canadians for a number of classes of service transactions, is the primary source of information on patterns and trends in Canada's trade in services. Despite significant conceptual and measurement problems, the accounts do allow for insights into the pattern and growth of Canada's payments and receipts for services, although it is difficult to relate these data to the range of service industries and products analyzed under the

SISP or to interpret these receipts and payment data as exports and imports in a parallel fashion to the goods export and import statistics.

49. Services trade as measured in the Balance of Payments Account (excluding investment receipts and payments) made up only 13.3% of total trade in 1987, whereas services GDP accounted for around 70% of total GDP in 1987. Services are thus nowhere near as tradeable as goods in respect of the full range of services produced in Canada. In addition, although in the domestic economy services have been growing extremely rapidly, international services trade has decreased in relative terms, from 16% of receipts and 20% of payments in 1961 to 12% and 15% respectively in 1987. On a global basis, world services trade has been growing at almost the same rate as goods trade.
50. Overall, Canada has a persistent and growing deficit on services trade which rose from \$456 million in 1961 to \$5.2 billion in 1986 and \$6.8 billion in 1988, with deficits on travel and business services trade (see Annex I). The United States is Canada's major trading partner for services, as it is for goods trade, though our services trade is slightly less dependent on U.S. markets.
51. Focusing on services at the aggregate level in the payments statistics, however, masks significant shifts in the composition of Canada's international services transactions over the past 25 years. Although travel continues to account for around one third of total services transactions, trade in business services has risen dramatically, growing at an annual average rate of 15% between 1961 and 1986. Canada's receipts for business services accounted for 33% of services receipts in 1987, up from 14% in 1961. Similarly payments for business services totalled 40% in 1987 versus 22% in 1961. Furthermore, over the 1961-86 period, international business services receipts increased at an average annual rate of 15%, as compared to 13% for services payments.
52. Canada tends to run a surplus in the services balance of payments for such items as consulting and other professional services and resource based services, but records large deficits for royalty payments and trademarks which can be viewed as payments for intellectual property and for management and administration services. These payments are largely payments by subsidiaries for high order services being purchased from their parent or affiliated firms. While such service imports represent an enormously important source of expertise and human capital for the economy, they also impact significantly on services trade patterns.
53. In summary, Canada's overall trade in services as measured in the Balance of Payments Accounts is declining in relation to overall trade, despite rapid growth in trade in business services. However, the conceptual and practical problems in measuring services trade are staggering and there is a strong presumption that official trade data systematically underestimate Canada's trade in services, a situation which exists in other countries as well. Given that the momentum for continued growth in Canada's services trade is

expected to continue to be in the new information-based services, this problem will become increasingly difficult in the future.

c) **The Role of MNE's in International Service Trade**

54. The SISP results indicate that the application of information technology and the resulting capacity to transport a whole range of services have added a new dimension to international trade in services by greatly increasing the scope of operations and the competitiveness of multinational enterprises. As a result, MNE's play a very significant role in international services trade as significant amounts of services are provided across national borders between and among parent and affiliated firms. Foreign investment often offers the best prospects for maximizing the return on a firm's unique intangible assets - a complicated package of capital, management skills, production techniques, and skills in marketing, financing, distributing, etc. Technical advances are making it increasingly possible to transfer these firm specific service assets across international borders effectively and efficiently. In addition, the expanding global operations of MNE's have played a role in explaining the growth of multinational service firms who were induced into global markets to serve their multinational goods-producing customers.
55. The pattern of industrial ownership in Canada and the presence of subsidiaries of MNE's have heavily influenced the pattern of Canada's trade in services. Significant differences are found between the international services transactions carried out by Canadian-owned corporations and foreign owned subsidiaries in Canada. The research points to the striking extent to which Canada's deficits in services trade are associated with ownership patterns, multinational enterprises, and flows within corporation. Within business services, over 60% of Canadian international receipts are accounted for by Canadian owned companies dealing at arms length. Particularly notable among these exports were exports of consulting and professional services, transportation services and commissions. In contrast, almost two-thirds of Canada's total payments for business services were made by foreign controlled Canadian enterprises, primarily for services being provided by foreign parents and affiliates. The bulk of these payments were for intellectual property and technological and management expertise which contribute strongly to the competitiveness of these enterprises in Canada.
56. The purchase of head office services by subsidiaries and intellectual property flows among affiliated companies are central features of the international links between services trade and the goods producing sectors. But in contrast to our imports, for the most part Canada's service producers sell into tough international markets, dealing at arms length with foreign customers while, as shown above, the majority of Canada's service payments (imports) are by subsidiaries in international transactions with their parent or affiliated firms abroad.

d) Canada's Comparative Advantages in Services

57. The SISP research concluded that the main ideas from traditional trade theory generally apply to trade in services and that the underlying logic of international specialization interregionally and internationally should be the same for services as for goods. Based on available information and measures of services trade, as outlined above, it appears that Canada does not have an overall comparative advantage in commercial services. An important reason for this is that in terms of manufacturing, services and resource industries broadly defined, Canada clearly has a strong comparative advantage in its resource industries and this is likely to continue to be the case for the foreseeable future.
58. Although Canada does not have an overall comparative advantage in services, the research finds that Canada does have, or is capable of developing, comparative advantages in a range of commercial services. As in the domestic economy, producer services represent the most dynamic element of international trade and international activity in terms of growth and future prospects. The research results place a heavy emphasis on the prospects for the further development of information based services trade relying on informatics (computer and telecommunications) technologies. Related to this potential is the need to continue to promote the development of these facilitating technologies and infrastructures in Canada.
59. Information technologies have made possible dramatically different approaches to competition in international trade. In place of strategies based on standardized products exploiting economies of scale in a settled organization of production, service intensive flexible production systems are opening up possibilities for competition on the basis of customized services offered by flexible and adaptive firms exploiting economies of scope in the utilization of their knowledge base and management skills. These trends significantly expand the scope for trade in related knowledge-based services.
60. An important conclusion of the research on services trade regionally and internationally is that small service firms are just as active in non-local (export) markets as are the larger service firms. Size and age of establishment are by no means barriers to entering into non-local and export markets. These findings point to an energy level among small service firms that represents a vital source of present and future international strengths.
61. Based on the full range of research findings, the IRPP has proposed a broad approach to assessing Canada's comparative advantage in services. The factor endowments relevant to determining Canada's services comparative advantages are: a) labour - relatively unskilled; b) natural resources (relatively plentiful in Canada); c) physical capital - standard plant and equipment requiring standard skills; d) human capital - mainly skilled labour requiring standard skills such as first engineering degrees; and e) technology - product, process, distribution and marketing technologies necessary to innovate in these fields.



62. The IRPP concludes that Canada's potential as a leader in services, in line with the above formulation of relevant factor endowments, could be summarized as follows:

- 1) a possible net exporter of services related to resource based industries - e.g. exploration services, engineering services, resource based scientific services, land transport and early stage processing;
- 2) a net importer of labour intensive services such as standard ocean transport and construction services;
- 3) a net importer of marketing services;
- 4) a net exporter of services relating to overland transportation and communications services, particularly for sparsely populated regions; and
- 5) a net exporter of selective producer services in the high technology fields - e.g. most likely in areas such as biotechnology, computer communications, software and related training and after sales services packages.

The research also suggests that the growing worldwide concern over protection of the environment could provide an edge to Canadian industries exploiting Canada's existing strengths in environmental monitoring and related services (marine emergency response capabilities based on remote controlled submersibles, as one example).

63. In terms of export potential for services, the focus is clearly on knowledge based producer services of a specialized nature which build upon strengths derived from strong domestic service industries such as communications, distribution and certain transportation services as well as Canada's particular strengths in its agriculture, resource and manufacturing industries. Recognizing that many government services are also producer services, expertise in areas such as public health care and education and training as well as expertise based on government research and development also represent potential springboards for knowledge based services exports.

#### IV. THE ROLE OF GOVERNMENT IN THE SERVICE SECTOR

64. Governments play a large role in the service sector of the economy. Government services account for about one quarter of the output of the service sector and provide critically important services to the economy, such as health and education services. The bulk of non-transfer expenditures by government are considered to be services though their character differs from that of commercial services. Even in the commercial services sector governments play



a large role as regulators in the utilities, financial, communications, transportation and professional services subsectors. These subsectors account for about one third of the output of the service sector.

65. Governments regulate service industries for a broad variety of reasons which are analyzed in some detail in the research. However, virtually all of the relevant studies noted that government regulation has introduced rigidities which have reduced industrial capacities to innovate and respond quickly and strongly to new developments in technology, demographics and consumer tastes. An additional cause for concern is that a number of these industries have been identified as potential sources for the development of new specialized producer services with significant export potential. The Fraser Institute is of the view that governments have tended to over-estimate the degree of market failure in the economy and their abilities to correct these failures. They argue that technological advances have allowed competition to take on new and different forms and have reduced the need for cross subsidization of services (a principal rationale for many regulatory regimes). The research studies, at the same time, give examples of significant movements toward deregulation of services in Canada and in other countries.
66. Governments also play important roles in the services sector as purchasers of a broad variety of services, including advertising services, communications services, professional services, construction and related services, a broad variety of specialized consulting services etc. Government procurement of goods, and procurement of goods and services for major projects, has been used to promote industrial development in Canada and its regions. The research suggests that there is potential to use government procurement in support of highly targeted regional development initiatives designed to develop producer services which would be exportable from the region. Because so many purchases of services by government are for relatively small amounts individually, even though very large in the aggregate, it is difficult to obtain the information required to analyze government services procurement trends and pattern by type of service.
67. The research also points to recent trends toward increased contracting out of services formerly provided internally by government and the related trend toward privatization of government owned commercial corporations. The contracting out of the design, engineering and development of major hydro projects in Quebec and the impetus this gave to the development of world class consulting engineering firms is an example of the former, while the recent privatizations of Teleglobe and Air Canada are examples of the latter. Trends toward deregulation and privatization are impacting service industries not only in Canada but in other countries as well.

## V. THE POLICY IMPLICATIONS OF MAJOR SISP FINDINGS

68. The Service Industries Studies Program was a fundamental research program designed to improve significantly our understanding of the role of the service sector in the domestic and international economy, the factors explaining the very rapid growth of the sector, and the industrial and economic implications of that growth. The research was not policy research per se, so the policy implications of the findings have to be drawn from the underlying research. Nevertheless, the findings and conclusions of the research are extremely significant and fundamentally alter previous perceptions of the role of the service sector in the economy. At a minimum, the research results place us in a position to identify the major policy issues which need to be addressed and, as it turns out, the policy implications of the findings are extremely far-reaching.
  
- a) Horizontal Policy Issues
  
69. There is a broad consensus in the research that the programs and policies of governments have been designed with a view to promoting the industrial development of the goods producing industries - Canada's agricultural, resources and manufacturing industries. However, the research is unable to support any conclusion on the extent to which the result has been the relative encouragement of the goods sectors at the expense of the service sector. Nevertheless, the significant progress achieved in better understanding the role of the service sector and its vital linkages to the rest of the economy, clearly makes the case that all relevant government policies and programs should be reassessed in terms of their impact on, and applicability to, the services industries and the linkages between services and goods industries.
  
70. The important findings on the role of producer services as the engine of growth in the services sector and their role in the industrialization process itself, leads to the rejection of the deindustrialization hypothesis and the related rationale for an interventionist industrial strategy designed to promote the growth of one or another large sector of the economy at the expense of the other sectors. The extreme degree of interrelatedness discovered among the service and goods producing sectors of the economy indicates that such a strategy would be counter-productive.
  
71. At the macro level, the research suggests that the growth of the service sector has not only been very rapid and broadly based, but has also been a source of relative stability for the economy as a whole. For example, the variance of employment growth is smallest in the service industries, followed by agriculture, with the largest variances being found among the goods producing industries. There is similar evidence of this in the United States where studies are suggesting that the growing share of the service sector may be making the U.S. economy less vulnerable to downturns. Further research into this issue

for Canada may be merited. It is also suggested that the different characteristics of service industries may mean that monetary and fiscal stances will differentially impact the services and goods producing sectors.

72. The macro policy issue most often raised in the research relates to the impact of the tax system on the growth of the service sector relative to the goods producing sectors. There is a fairly widespread view that the tax system is biased toward promoting the goods industries. The broadest question relates to whether the accelerated depreciation, depletion and similar provisions in the present tax structure favour the physical capital intensive good producers over the human capital intensive service producers. On the other hand, service firms lease (and thus expense) their human capital while goods firms often must undertake large investments which can only be depreciated over time. In addition, human capital intensive firms benefit from large government subsidies to education. Although it will be difficult to sort out these very complex issues, a better understanding of the service sector helps to identify specific policy issues which require further investigation and hold promise for more sophisticated macro economic policy development.
73. The research also focuses attention on the question of whether the tax treatment of R&D expenditures in service firms might better recognize the contribution such activities make to the knowledge base and competitiveness of firms in the broad range of Canadian industries. It is suggested that the tax treatment of R&D in service firms should not be less favourable than that of goods producing firms. However, further research into the process of innovation and technological development in specific service industries, and the ways in which technology is transmitted by service firms to the rest of industry, will be required before practical proposals could be formulated on appropriate means of stimulating the development and diffusion of service sector technologies. In addition, attempts to promote R & D and technological advance in Canadian industries need to be consciously linked to the promotion of related human capital development.

b) Regional Policy Approaches

74. The research results suggest that government policies for regional development might benefit from a greater attention to the potential for the development of producer services. Strong and innovative producer services firms will also contribute to the competitiveness of the goods producing firms through the many linkages discussed in the research. However, the research stresses that regional policies must be highly targeted and take into account the actual or potential linkages between producer services and the local base of goods producing and other service firms. A particular focus on specialized and tradeable producer services is also recommended, in conjunction with an analysis of both the supply and demand side requirements for success - e.g. availability of skilled labour on the supply side, potential for government procurement to offer an early market on the demand side.

75. Because of the potential for small, relatively new, indigenous producer services firms to play an important role in the export of services from a region, policies to encourage entrepreneurship and the start up of new firms would be appropriate. This puts a strong focus on the establishment of seedbed and incubator type programs, technology transfer, development of the needed labour supplies and skills, and promotion of an environment in which creativity and risk-taking is encouraged. The research suggests that although a broad services industries based approach to regional development is unlikely to be the answer to the economic development problems of the lagging regions, there is scope for targeted services based regional development initiatives undertaken in the context of a sophisticated strategy or framework.

c) Opportunities for Deregulation

76. Because of the large regulated sub-sector in services, a number of the specific service industries studies dealt with regulated services. The Fraser Institute points out that recommendations for the deregulation of industries dominate the studies of the transportation, telecommunication, banking and insurance industries. In addition, recommendations for reductions in legislatively protected powers of self-regulation are found in the studies of medical, legal, teaching, accounting, real estate and other professional services. Finally, privatization proposals are contained in several of the studies of government services in respect of mail, education and medical services.
77. In many of these studies, regulation was found to be an obstacle to the innovativeness and further dynamic development of these industries, particularly since technological advances are permitting competition to take on many new and different forms. The growing importance of services to the competitiveness of all firms in the economy underlines the extreme importance of the availability of innovative and cost competitive services in areas such as communications. It is also pointed out that technological change is reducing the need for the cross-subsidization of many regulated services which in the past had been considered necessary for social policy reasons. It is recognized that the issues relating to decisions on privatization and deregulation are very complex and have to be decided on the basis of in-depth analyses of specific regulatory situations. However, the research does demonstrate that significant scope still remains for obtaining industrial benefits from further deregulation in the service industries. In addition, regulation has come to be recognized as a significant factor affecting services trade performance and the trade policies of nations. These issues are, in any event, on the policy agendas of government in Canada, as well as in other countries.



d) **Education and Training Policies**

78. An important finding of the research was that human capital plays the same vital role in the service sector that physical capital plays in the goods sector. The level of knowledge, skills, and innovativeness of the services labour force is the critical factor in competitiveness. A related observation on the relative treatment of human and physical capital in the tax system, points out the apparent bias against investing in human capital - which works particularly against services. Given the demonstrated linkages between goods and services, especially in international trade, this bias could have serious implications for Canada's longer term competitive prospects. The IRPP points out that programs that serve the educational base for international competitiveness in the technology- intensive goods and services sectors must be developed, and regularly re-evaluated and improved. More generally, they believe that education and training policies are key to the longer term success of the service sector in a highly competitive, increasingly specialized and integrated global economy.
79. The research concludes that neither the education system nor Canada's training and skills development programs have been responsive to the changing education and skills requirements arising from the shift in employment towards services. The shift toward services employment is judged to be having dramatic effects on the educational and skills requirements of the current and future Canadian labour force. The research suggests that institutional responses to these developments in respect of both educational and training institutions have been generally disappointing, though it is also suggested that the community colleges have been the more responsive due to their closer relationship with industry.
80. The SISP research focuses on the following areas as requiring close policy attention on the part of the federal and provincial governments:
- a) the need to improve significantly the basic skills of the labour force by achieving significantly higher standards of basic education;
  - b) at the secondary and post-secondary level of education, the need to upgrade quality and ensure the educational system is producing the right mix of graduates with the required professional qualifications and skills necessary to meet the needs of the growing human capital intensive service industries;
  - c) in respect of government training programs, the need for a similar shift in training emphasis is identified; and
  - d) in respect of training and apprenticeship supported by industry, the need for a significant expansion of training and retraining efforts and initiatives on the part of Canadian firms is identified.



These considerations raise specific policy issues related to the need to ensure better cooperation between industry, the educational system and governments; the need to develop better systems for assessing and forecasting skills requirements and developing more flexible and responsive institutions and systems; and the need to identify incentives to encourage greater efforts on the part of industry to train and retrain its employees. In many ways, the need to ensure longer term investments in human capital parallels and complements the often cited need to encourage longer term investments in R & D.

e) **Information and Intellectual Property Policies**

81. The SISP research identified information capital as one of the key social endowments necessary for a healthy domestic service sector and for success in international trade in services. This leads to a strong emphasis on information and intellectual property policies that in a sense parallels the similar emphasis on human capital and education and training policies.
82. The studies of specific service industries illustrate the importance of information and information technologies to all aspects of the business of service firms - in respect of their inputs, their production processes, their outputs and their marketing and distribution functions. In addition, the extreme importance of information and information technologies in international services trade and activities is extensively highlighted. In respect of the balance of payments measures of services trade, it is pointed out that the rapidly growing trade in business services is overwhelmingly associated with information and expertise, intellectual property payments and receipts, and the international operations of MNE's.
83. The research points to the growing willingness to strengthen protection of intellectual property in the international trading and negotiating context, particularly on the part of the advanced industrial nations. In the case of Canada, it is not difficult to identify opportunities for creating intellectual property and selling technology and technology intensive products and services in specialized areas, some of which are identified in the research. On the other hand, as a continuing large net importer of such products and services, Canada has an interest in optimum, not maximum, protection for intellectual property. It is suggested that, in this respect, Canada has a negotiating interest somewhere between that of the Asian NIC's and the existing U.S. positions.
84. On the broader question of information policy, major issues remain to be further pursued, including policies toward intellectual property and cultural industries, public investment in communications systems, the rules and prices governing access to databases and information retrieval systems, costs of communications services to user industries, the scope for further deregulation,

and the nature and importance of international barriers to trade in information services. Also identified, is the need for more in-depth studies of the impact of information technologies on the services industries and the labour force.

f) Liberalization of International Trade in Services

85. As a relatively open economy for services, Canada stands to benefit from encouraging potential trading partners to pursue similarly liberal policies. Whereas the FTA provides freer access to Canada's largest market for services, the MTN offers a significant opportunity for trade liberalization on a multilateral basis - an important consideration in view of the European Community's objective of a single market by 1992. A strong contribution to the Uruguay Round negotiations on trade in services is clearly a top policy priority in terms of public policy development in support of the service industries.
86. In order to have a well-articulated negotiating strategy, however, Canada must become still better informed on the specifics of how services trade, the specific interest of exporters and importers of services, the key barriers to trade Canada would benefit from negotiating down, the key traded services with the potential for success in international markets, linkages between services and goods in trade, as well as the interests of other countries, particularly the less-developed countries. The findings of the SISP offer considerable assistance on these issues by identifying some of the areas and issues worth focusing upon in terms of the interests of the Canadian service industries. The findings also contain specific proposals on negotiating stances in areas such as the need for sectoral approaches in some of the regulated sectors particularly and unfair trade practices and dispute settlement approaches tailored to service industries conditions. At the same time, efforts to improve our trade statistics need to continue and be expanded along with our efforts to accelerate international cooperation on the development of services trade classifications and data.

g) ISTC's Role in the Service Sector

87. The research makes it clear that service firms are capable of benefitting significantly from a broad range of government industrial programs in areas such as trade development, procurement, domestic and international financing, and labour market development and adjustment. There is also evidence that program administrators are becoming more sensitized to the needs of service firms as well as the benefits to be derived from the application of programs to service firms in terms of program objectives. The dissemination of the research and findings of the SISP should further encourage program administrators and designers to focus on service industries issues and interests.

88. On the other hand, given the nature of the service industries, there is no case for the application of traditional industrial subsidy programs for establishment and modernization. Instead, the focus is placed on education and training and information policies, as discussed above and on targeted industrial policy and program approaches focused on promoting entrepreneurship, technology transfer and diffusion, management excellence, and the diffusion of information on domestic and international markets for services.
  89. Within the service sector, the focus is on producer services because of the unique role they play in support of the rest of Canadian industry and because they represent the most rapidly growing and tradeable services subsector. In this respect, government initiatives to promote greater cooperation and inter-action between service firms and goods producing firms both in respect of technological development and marketing would appear to have a particularly high pay-off in terms of industrial development and international competitiveness. A procurement policy focused on service industry development is also identified as one with potentially high pay-off in respect of certain business services such as consulting engineering because of the size of government procurement of these services and the characteristics of service firms.
  90. One implication which emerges clearly from the case studies and analyses of issues in the SISP is the necessity of dealing with many specific issues and measures on a sub-sector by sub-sector or industry by industry basis, reflecting the widely different circumstances and structures in the service sector.
  91. Finally, as noted throughout this exercise, the commercial service sector, as a sector with its own distinctive problems and opportunities and characteristics, has tended to be neglected in the past in terms of public policy development. The service industries are increasingly concerned to ensure that their interests are better served in terms of both horizontal and industrial policies development as reflected for example in the recent formation and activities of the Canadian Coalition of Service Industries. Industry, Science and Technology Canada needs to strengthen its role as a focal point and advocate for the service industries. The SISP represents an important step in that direction by developing an original information base on the service industries.
- h) A Statistical Development Policy and Program for Services
92. The research carried out under the SISP and, the important work which was not undertaken due to data problems, clearly makes the case for devoting more resources to the development of service sector statistics. These data will permit us to begin to deal more effectively with such matters as improved productivity and output measures, the study of inter-industry linkages, international services trade measurement and regional development issues - for a sector affecting three-quarters of the labour force.

93. Statistics Canada, under the SISP, has proposed a five year program leading, initially, to the development of a more complete product classification system for services, and, ultimately, to a more comprehensive survey of service industries, including better measures of services products and prices, and better estimates of real output, productivity change, and trade in services. The program to extend the coverage of the service sector will cost, according to Statistics Canada estimates, approximately \$17 million over 5 years.

Such an initiative would strengthen the entire statistical system for both goods and services and should be strongly supported. Over time, this effort will bring us closer to the creation of a statistical data base for services which parallels the existing base for goods and will open the way for more policy relevant research and policy development and implementation in all of the public policy areas discussed above for the services sector of the economy.

**Table 1****EMPLOYMENT BY INDUSTRY, CANADA, 1988**

INDUSTRY SECTOR	Employment (000's)	Annual % Change 1966-88
Total Employment	12,245	2.5
Goods Producing	3,568	0.8
Agriculture and Primary Sector	738	-0.1
Manufacturing Sector	2,104	0.9
Construction	726	1.7
Service Sector	8,677	3.4
Transportation	494	1.1
Communications	282	2.8
Utilities	129	2.4
Wholesale Trade	566	2.6
Retail Trade	1,602	2.9
Financial Services	728	4.1
Business Services	620	7.2
Community Services	1,967	3.7
Consumer Services	1,474	4.2
Public Administration	815	3.1

Source: Statistics Canada, Labour Force Survey, (unpublished data).



Table 2SERVICE SECTOREMPLOYMENT BY INDUSTRIES, CANADA, 1988

INDUSTRY SECTOR	Employment (000's)
<b>TRANSPORTATION</b>	
Air Transportation	60
Rail Transportation	80
Water Transportation	26
Trucking	123
Bus and Other Road Transportation	178
Storage and Warehousing	27
<b>COMMUNICATIONS</b>	
Radio and T.V. Broadcasting	58
Telephone Systems	124
Telegraph and Cable	8
Postal Services	92
<b>UTILITIES</b>	129
<b>WHOLESALE TRADE</b>	
Food Products	89
Coal, Coke and Petroleum	26
Paper Products and General	
Merchandise	96
Apparel and Dry Goods	20
Hardware, Furniture and Appliances	51
Motor Vehicles	53
Machinery and Equipment	167
Lumber and Building Supplies	64
<b>RETAIL TRADE</b>	
Food Stores	341
General Merchandise	283
Automotive	347
Apparel	181
Hardware, Furniture and Appliances	129
Drug Stores, Florists, Book Stores	321

Table 2 Cont'd)EMPLOYMENT BY INDUSTRY, CANADA, 1988

INDUSTRY SECTOR	Employment (000's)
<b>FINANCIAL SERVICES</b>	
Banks, Other Deposit Accepting Institutions	319
<b>BUSINESS SERVICES</b>	
Security Brokers and Dealers	29
Investment and Holding Companies	36
Insurance Carriers	106
Insurance and Real Estate Agencies	132
Real Estate Operators and Developers	106
Employment and Personnel Agencies	83
Computer Services	56
Security and Investigation Services	47
Accountants	47
Advertising Services	30
Architects	14
Engineering and Scientific Services	99
Lawyers and Notaries	74
Management Consulting, Design, etc.	170
<b>COMMUNITY SERVICES</b>	
Education	811
Health , Welfare and Religions	1,156
<b>CONSUMER SERVICES</b>	
Leisure and Recreation	146
Personal Services	326
Restaurants Caterers and other food services	415
Accommodation	303
Miscellaneous Services	284
<b>PUBLIC ADMINISTRATION</b>	
Federal Government	288
Provincial Government	265
Municipal Government	262

Source: Computed based on Statistics Canada, Employment Earnings and Hours, August 1988, (Cat. No. 72-002), November 1988. The exception is for Public Administration which is taken directly from Statistics Canada Labour Force Survey, unpublished data.

August 21, 1989

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ANNEX I

Table 3

Canada's International Trade in Services, 1961-1988

Balance of Payments (\$ Millions)

	<u>1961</u>	<u>1966</u>	<u>1971</u>	<u>1976</u>	<u>1981</u>	<u>1986</u>	<u>1988</u>
Travel	-160	-60	-202	-1,191	-1,116	-1,166	-2,828
Freight and Shipping	-81	-65	-11	-150	440	-16	61
Business Services	-204	-291	-637	-1,110	-2,277	-3,599	-3,743
Gov't Transactions	-36	-15	-32	-170	-507	-555	-572
Other Services	23	18	55	36	46	104	328
Total Balance	-458	-413	-827	-2,585	-3,414	-5,232	-6,754

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Source: Statistics Canada, Quarterly Estimates of the Canadian Balance of International Payments, First Quarter 1986 and Fourth Quarter 1988, Catalogue 67-001.

Table 4Canada's International Trade in Services, 1986(\$ Millions)

	<u>Receipts</u>	<u>Payments</u>	<u>Balance</u>
<u>Business Services</u>			
Consulting, other professional	765	324	441
Transportation related services	626	758	-132
Management & Administration	214	969	-755
Research & Development	503	932	-429
Commissions	701	544	157
Royalties, patents, trademarks	80	1,127	-1,047
Films & broadcasting	27	193	-166
Advertising, promotion	41	106	-65
Financial services			
Insurance	659	1,060	-401
Other financial services	180	810	-630
Computer services	139	106	33
Equipment rentals	236	454	-218
Franchises	1	38	- 37
Communications	394	380	14
Refining & processing services	113	-	113
Automotive tooling	767	887	-120
Other services	<u>232</u>	<u>590</u>	<u>-358</u>
BUSINESS SERVICES	5,678	9,278	-3,600
TRAVEL	6,333	7,499	-1,166
FREIGHT & SHIPPING	4,471	4,487	- 16
GOVERNMENT TRANSACTIONS	627	1,182	-555
OTHER SERVICES	<u>460</u>	<u>356</u>	<u>104</u>
Total	17,569	22,802	-5,233

Source: Statistics Canada, Canada's International Transactions in Services, 1986 and 1987, Catalogue 67-203, pages 17 & 21, 1988.

Government transactions include costs incurred by governments outside the country for their diplomatic and military personnel stationed abroad.



ANNEX IISERVICE INDUSTRIES STUDIES PROGRAM/LE PROGRAMME D'ETUDES SUR LESINDUSTRIES DE SERVICESTHE FRASER INSTITUTE**Service Industry Growth: Causes and Effects  
(Overview of Research)**Herbert G. Grubel and  
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EconomyRichard G. Harris  
David Cox<sup>1</sup>Knowledge Production in Manufacturing: Its Impact  
on Business ServicesDonald C. MacCharles<sup>1</sup>

Service Trade by the Multinational Enterprise

James R. Markusen<sup>1</sup>The Role of Franchising in the Development of the  
Service EconomyFrank Mathewson<sup>1</sup>

The Economics of Vertical Disintegration

Donald G. McFetridge and  
Douglas A. Smith

The Labour Market and the Service Sector

Klaus Weiermair

**B. Industry Studies/Etudes sur les industries**

Retail and Wholesale Trade Services in Canada

Keith Acheson and Stephen  
Ferris

The Post Office

Douglas K. Adie<sup>1</sup>

The Supply of Government Services

Douglas Auld and Harry  
Kitchen

The Insurance Industry in Canada

Jeffrey I. Bernstein and  
Randall R. Geehan

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The Evolution of the Service Sector: Major Conceptual Questions and Issues	Herbert G. Grubel

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Trade in Financial Services	Douglas Taylor

L'exportation de services par les firmes canadiennes  
de génie-conseil: Evolution récente et avantages  
concurrentiels

Roger Verreault and  
Mario Polèse<sup>3</sup>

D. Legal, Institutional, and Negotiating Issues/Questions de nature  
institutionnelle et juridique, et de négociation

Trade in Services: Legal, Institutional, and  
Negotiating Issues

Murray Smith and Dan  
Roseman<sup>1,2</sup>

Trade in Services and the Experience of the  
European Economic Community

Ivan Bernier

Labour Mobility and Trade in Services

Ivan Bernier, André Binette  
and Jean-Yves Grenon

Canada-United States Free Trade and Canadian  
Cultural Sovereignty

Duncan Cornell Card

GATT Uruguay Round Negotiations Relating to  
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The OECD Codes and Declarations and Trade in  
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Trade and Investment in Services: OECD  
Agreements and the GATT

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A Review of Considerations Relating to Dispute  
Resolution Mechanisms and Trade in Services

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New Rules for International Services

Rodney de C. Grey<sup>1,2</sup>

Services and Intellectual Property Rights

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Trade in Services: The Negotiating Interests,  
Objectives and Concerns of the European  
Economic Community

Henryk Kierzkowski

Canada's Negotiations for International  
Agreements on Trade in Services: Federal-  
Provincial Jurisdictional Issues

Mark Krasnick and  
Mark Chartrand

Trade in Services: The Negotiating Concerns of  
the Developing Countries

Janette Mark and Gerald K.  
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A Study of Foreign Financial and Legal Services  
in Japan

Brian W. Semkow

The Internationalization of Service  
Transactions: The Role of Foreign Direct  
Investment in International Trade in Services

Brenda Siegel

The International Trade in Services Agenda:  
Origins, Evolution and Agenda

Margaret L. Sims and  
Richard R. Rivers

Constitutional Implications of the  
Implementation of a Trade-in-Services Agreement

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National Treatment and Market Access: Issues in  
Trade in Services

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UNCTAD and Trade in Services

Douglas Taylor

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The Evolution of the Service Sector

IRPP

Traded and Non-Traded Services: Problems of  
Theory, Measurement and Policy (Workshop #2  
Proceedings)

James J. McRae and  
Martine Desbois

The Contribution of Service Attributes to Trade  
Performance

A.R. Dobell, et al

The Service Sector in the Canadian Economy:  
Government Policies for Future Development

A.R. Dobell, James J. McRae  
and Martine Desbois

**STATISTICS CANADA/STATISTIQUE CANADA****Overview of Statistics on Service Industries**

Statistics Canada

**A. Documentation of Services/Documentation sur les services**Introduction to Statistics Canada Documentation  
of Services (5 vols.)

Statistics Canada

Service Industries in the Business Sector

Volume I

Sources and Methods for Services Industries in the  
Canadian Input-Output Tables

Volume II

Statistical Profile of the Service-Producing  
Industries (Internal document only)

Volume III

Statistical Data Collection and Publication  
Program for Services Industries/Programme de  
collecte et de publication de données pour les  
industries de services

Volume IV

Canada's International Trade in Services: Overview  
of Statistical Developments

Volume V

**B. Research Reports/Rapports des recherches**Measuring the Real Output and Productivity of  
Chartered Banks and Trust Companies

Jeffrey I. Bernstein

Public Accounting and Management Consulting  
Industries: Report on Exploratory Research

Jocelyne Despatis

The Measurement of Output and Productivity in  
the Canadian Insurance IndustryRandall R. Geehan and  
Jeffrey I. BernsteinMeasuring the Real Output and Productivity of  
Investment Dealers and Brokers

Randall R. Geehan

International Trade in Services: Statistical  
Issues

A. Meguerditchian

Contracting Out: An Experimental Survey

Statistics Canada<sup>1</sup>



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DRIE/Statistics Canada Service Sector  
Symposium (Workshop #3 Proceedings)

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1. Forthcoming book
2. Book price is \$15.00
3. Available in French only.
4. Although this recent IRPP study is not part of the formal Service Industries Studies Program it is included because it was used extensively as a background piece to several SISP reports. Book price is \$19.95.
5. This chapter is an abstract of a full SISP study (see separate entry below).

1. En préparation
2. Le prix de cet ouvrage est 15 \$
3. Disponible en français seulement.
4. Bien que cette récente étude de l'IRP ne fasse pas partie du Programme d'études sur les industries de services, elle est incluse dans la liste car elle a servi comme un document de base à plusieurs rapports du PEIS. Le prix de cet ouvrage est 19,95 \$
5. Ce chapitre est un résumé d'une étude du PEIS (Voir la liste des titres).

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