

doc
CA1
EA533
98P02
ENG

DOCS
CA1 EA533 98P02 ENG
Roy, Christine
An overview : understanding the
service sector and trade in
services
62745406
.b3556852(E)

CA 2.1179-2440
2.2

TRADE AND ECONOMIC POLICY PAPER

No. 98/02

Dept. of Foreign Affairs
Min. des Affaires étrangères

NOV 3 0 2001

Return to Departmental Library
Retourner à la bibliothèque du Ministère

Department of Foreign Affairs
and International Trade



Ministère des Affaires étrangères
et du Commerce international

CANADA

6278746
S876A

AN OVERVIEW: UNDERSTANDING THE SERVICE SECTOR AND TRADE IN SERVICES

by

Christine Roy
The Trade and Economic Analysis Division
(EET)

(November 1998)

S876A

*Department of Foreign Affairs
And International Trade*

TRADE AND ECONOMIC POLICY PAPER

No. 98/02

**AN OVERVIEW : UNDERSTANDING
THE SERVICE SECTOR AND TRADE IN SERVICES**

by

Christine Roy

Trade and Economic Analysis Division (EET)

(November 1998)

S876A

Trade and Economic Policy Commentaries and Studies are intended to foster discussion of international trends and issues by trade and foreign policy officials more generally. The opinions discussed are not necessarily those of the Government of Canada.

TABLE OF CONTENTS

INTRODUCTION.....	3
SECTION 1: THE SERVICE SECTOR	5
1.1 DEFINITION AND NATURE OF SERVICES	5
1.2 THE ROLE AND IMPORTANCE OF THE SERVICE SECTOR.....	6
1.2.1 <i>Employment</i>	6
1.2.2 <i>Output</i>	10
1.2.3 <i>Productivity</i>	13
SECTION TWO: PERFORMANCE OF THE SERVICE SECTOR.....	14
2.1 A GLOBAL VIEW OF THE SERVICE SECTOR.....	14
2.1.1 <i>Employment in services industries</i>	14
2.1.2 <i>Service output in OECD countries</i>	15
2.1.3 <i>R&D in services</i>	16
2.1.4 <i>Investment in information and communication technologies</i>	16
2.2 PERFORMANCE OF CANADIAN SERVICES INDUSTRIES	17
2.2.1 <i>Employment</i>	17
2.2.2 <i>Output</i>	18
2.2.3 <i>Productivity</i>	20
2.2.4 <i>Contribution of service industries in R&D</i>	20
SECTION 3: TRADE IN SERVICES: A CONCEPTUAL APPROACH.....	21
3.1 TRADE IN SERVICES	21
3.1.1 <i>Why trade in services is important?</i>	22
3.1.2 <i>Trade in services issues</i>	22
SECTION 4: TRADE PERFORMANCE OF SERVICES INDUSTRIES.....	25
SECTION 5: CANADIAN TRADE IN SERVICES.....	30
SECTION 6: CONCLUDING OBSERVATIONS.....	42
BIBLIOGRAPHY	45
ANNEX	48

**AN OVERVIEW: UNDERSTANDING
THE CANADIAN SERVICE SECTOR
AND TRADE IN SERVICES**

INTRODUCTION

“The globalization of services is poised to transform the world economy as dramatically as the growth of the services sector has transformed our domestic economies in recent decades”.¹

This paper attempts to provide some insights into understanding the dynamics of the service sector and trade in services in an increasingly globalized and open world economy, particularly in a Canadian perspective.² The study has two main objectives:

- i) To briefly review the literature addressing some key domestic services and trade in service issues;
- ii) To provide a statistical review of services (domestic and trade data) for Canada, and in some cases the other G-7 countries.

A secondary objective, based on the analysis of the main objectives is to make a contribution towards providing a basis for understanding and approaching future negotiations in trade in services.

Services are important to the economy and to trade. Services account for more than two-thirds of total employment and GDP in most of the OECD countries. In Canada, services represented 73 % of employment and 67% of GDP in 1997.³ Globally, trade in services represents 19% of world trade. The share of trade in services in Canada was about 15% during the 1987-1997 period. Services, however, also have an indirect effect on trade, as domestic service inputs are important for the production of goods destined for export. Thus, services play a more important role in international trade, than what is indicated simply by trade in services statistics.

Recognizing the importance of services to the world economy and the need for a more predictable set of rights and obligations for trade in services, the GATT Contracting Parties engaged in negotiations on trade in services during the Uruguay Round (1986-1994). With the entry into force of the World Trade Organization (WTO) in 1995, the General Agreement for Trade in Services (GATS), one of the basic components and also

¹ Extract of an address by Warren Lavorel at the Coalition of Service Industries Conference, Geneva, June 24, 1997.

² It is important to note that the results of this study, as well as any findings on services overall, should be used with great caution due to limitations in service data.

³ Based on EET calculations, see reference in Section 2.

legal texts of the WTO, also came into effect. Aside from the trade liberalizing features of this agreement, the GATS requires that WTO Members enter into successive rounds of negotiations to further liberalize trade in services. The first of these rounds is to begin no later than in the year 2000.

With this multilateral negotiation soon upon us, Canada and the WTO Members more generally need to consider the characteristics of services and trade in services. The growing importance and leading role of services in the Canadian economy, in conjunction with the upcoming WTO negotiations, raise several key questions: i) How rich and comprehensive is the literature on the service sector? ii) To what extent do services account for Canadian domestic activities? iii) Does the pattern of domestic activities translate into a similar pattern in respect to Canadian trade in services? and iv) How do Canadian services trends compare to other industrialized countries?

This paper is divided in two main parts: the significance of services in general (Section 1 and 2) and the significance of trade in services (Section 3, 4 and 5). Section 1 examines briefly the literature on some services indicators for the OECD countries, including Canada. Section 2 presents empirical findings for these indicators for Canada and the other G-7 countries. In Section 3, a review of the literature on key issues in trade in services is presented. Section 4 provides trade trends of services industries on a global basis, while Section 5 presents Canadian trade in services trends over the past ten years. Section 6 summarizes the main findings of the study and identifies some key service issues to be considered in the context of the upcoming WTO negotiations on services.

SECTION 1

THE SERVICE SECTOR

1.1 DEFINITION AND NATURE OF SERVICES⁴

Allan Fisher and Colin Clark in the 1930's and 1940's were the first to propose a breakdown of the economy into three sectors: primary, secondary and tertiary. Clark defined the tertiary sector as "all forms of economic activity not included under primary and secondary".⁵ This definition reflects the fact that for a long time the tertiary sector of services were considered as "residuals", whereas manufacturing was understood to be a solid structural basis on which the rest of the economy would lie.

T.P Hill (1977) was one of the first modern writers to focus on the definition of services as opposed to simply identifying the residuals as tertiary. He defined services as "a change in the condition of a person, or a good belonging to some economic unit, with the prior agreement of the former person or economic unit".⁶ Although the definition of services has evolved over time, as more analytical research was undertaken and new characteristics of services were discovered, there is still no internationally agreed definition, and the economic literature uses the term in various ways. The difficulty of defining, and also classifying, services have led many authors to make an explicit reference in their studies as to what they considered services meant. This definitional problem reflects the difficulty of adopting a standard definition that will meet all the different characteristics of services (e.g., a haircut as opposed to transportation services).

Today, it is generally acknowledged that services can be as diversified as goods and can be labour intensive (domestic works) or capital intensive (communications), perishable (cleaning) or durable (education), simultaneous (live concert) or decoupled (computer-aided instruction).⁷ Andrew Wyckoff (1996) has reinforced the argument on the diversity of services by saying that the spread of information technology (IT) through the service sector will encourage a blurring of the distinction between services and manufacturing.⁸ He noted that services are becoming more storable, like goods, due to the codification of knowledge used by IT, and that services would also become more capital

⁴ Domestic services statistics in recent years have been used extensively to illustrate the growing size of the service sector. Statistics collected for this section come from OECD publications on services transactions and are aimed at comparing domestic performance between Canada and other G-7, as well as other OECD countries. More detailed Canadian domestic services data will be presented in the next section. Sections 1 and 2 will present the most current data on employment, output, productivity and R&D expenditures.

⁵ Bhagwati, J., « International Trade in Services and its Relevance for Economic Development » in Giardini, O., 1987, p. 9.

⁶ T.P Hill, "On goods and services", *The Review of Income and Wealth*, 1977, extract from Melvin (1989)

⁷ Riddle (1986).

⁸ OECD Observer (1996).

intensive as IT equipment will likely continue to be sold mainly to service producers.⁹ Information-based services supported by equivalent technologies thus provide a good picture of what a large number of services may be like in the near future.

1.2 THE ROLE AND IMPORTANCE OF THE SERVICE SECTOR

Services have always represented a large share in domestic production, either on the production side such as transportation, communications or business services, or for final consumption such as dry cleaning, theatre, etc. In the past, many people believed that services were labour intensive and not very productive. This view is now fading.

A considerable number of studies have been published since the 1960s addressing the relationship between services and domestic economic indicators, such as productivity, output measurement, employment, etc.¹⁰ This interest in services was mainly due to the emergence of a new phenomenon in industrialized countries referred to as "structural shift", characterized by a gradual shift in employment and output from the manufacturing to the service sector. Several factors might have contributed to this shift in employment and output; among others, a growing mutual interdependency between the service and the goods sectors in conjunction with differences in productivity levels.¹¹

In order to develop an empirically based understanding of the importance of the service sector, recent research findings and issues in the areas of employment, output and productivity are presented below.¹² This review, and the review in Section 3 on trade in services, do not attempt to provide a comprehensive review of the literature, but rather attempt to provide the reader with an overview of recent trends and discussions about services.

1.2.1 Employment

-Impact of the growth in services on employment

A pervasive theme in the services literature has been the impact of growth of services on employment. Employment figures have been used to illustrate the growth in the services sector and the corresponding decline in manufacturing and agriculture in

⁹ According to Wyckoff, four-fifths of the IT sold in the United States is now purchased by services providers.

¹⁰ As mentioned above, one of the most crucial elements to consider when elaborating an analytical framework for services is to determine precisely how to define them. This specific problem of measurement has been the main factor responsible for the bias in analytical results. It has also rendered difficult the application of some models for services that were used traditionally for goods.

¹¹ EEC report (1991).

¹² Due to the close relationship between employment and output in services, there might be some crosswalks of evidence and issues between these two categories.

domestic economies.¹³ Employment in services covers a broad range of professions, demanding vastly different skills, from fast-food activities to telecommunications engineering jobs. It can, however, be divided in two broad groups: (a) services provided to consumers and (b) to producers. As will be discussed in the following sections, services provided to producers tend to produce more growth and employment opportunities for the whole economy than those provided to consumers. R. McKenzie (1987) suggested that "the growing complexity and sophistication of goods and services has induced greater specialization of production in goods and services".¹⁴ The emergence of new products, characterized by a high information content, and technologies¹⁵ has given rise to a new set of jobs which in turn will create its own demand for other types of jobs and products.

A comprehensive report prepared by the Economic Council of Canada (ECC) in 1991 summarized the major developments in the Canadian labour market as the service economy was expanding.¹⁶ The ECC report showed that the structural shift to services carried important implications in terms of the reallocation of workers and jobs from the manufacturing to the services sector in Canada. The study also showed that some groups, such as older and less-educated employees, experienced special difficulties in adapting to structural changes.

-Contracting-out (or vertical disintegration)

The contracting-out, or the vertical disintegration, of services has proved to be a challenge for their measurement and classification. Two factors have been pointed as possible causes for the shift in employment from manufacturing to services: a shift from in-house services work to outside suppliers (contracting-out where only a change in location occurred); and an overall increased demand for services by manufacturing firms (increased contracting-out)¹⁷ This illustrates that a firm can alter its purchase of services

¹³ In most developed countries, especially in the US, some people associated the growth in services employment with emerging surpluses of labour in manufacturing industries at a time where the manufacturing sector was facing downturns.

¹⁴ McKenzie, R.B., "The Emergence of the "Service Economy": Fact or Artifact?" in Grubel, G., 1987, p. 75.

¹⁵ For example, a large number of cross-border electronic transactions have increased employment opportunities.

¹⁶ Between 1967-1989, the rate of growth in employment in services in Canada was more than three times on an average annual than that of the manufacturing sector. This rise in employment in terms of growth rate was fairly evenly distributed between the more dynamic sector of commercial services (finance, communications, etc.), traditional services (retail, personal services, etc.) and the "non-market" services (education, health, etc.)

¹⁷ This also creates a statistical issue. Firms that used to have in-house accounting and marketing operations will now prefer contracting outside if it is less costly. As a result, statistics on employment in these two sectors are now recorded in the service industries classification whereas they were not in the first instance. More details contracting-out are provided in section 1.2.2.

in many ways from in-house work to outside supplier (unbundling), or purchase additional services, or engage in both practices.¹⁸

The question here is thus whether growth in employment in the service sector was due to a shift in inputs of services or due to an increase in the demand for services. Kutscher (1988) and others in the US¹⁹ generally found that employment shifts due to contracting-out accounted for only a small proportion of the total employment growth in services producers. More importantly, J.F. Rada (1987) citing Gershuny and Miles, emphasized that "changes in the occupational distribution of employment have resulted more from changes in occupational structure within economic sectors than from changes in demand patterns between them".²⁰

A Canadian study by Postner and Wesa (1987), which was supported by subsequent studies by different authors²¹ showed an above average use of contracting-out by manufacturing companies for services sectors such as banking and management, whereas contracting-out for services such as wholesale grew at a lower-than-average rate. They also came to the conclusion that while contracting-out does occur, it accounts for only a small proportion of growth in services.

-Role of technological changes

Although there is no certainty about how new technologies will affect the division of labour in the economy, it appears that "information handling activities will generate more jobs in services than in any other sector".²² Moreover, information will tend to create more jobs as it becomes raw material for many sectors in the economy. In respect to services, technology can affect the quantity and quality of jobs in two ways. Technology has a direct effect via the impact on jobs of introducing new processes and creating new products and, indirectly, via the rise in productivity which leads to an increase in wages and incomes.²³

Moreover, in order to foster economic growth and employment, the OECD (1996b) stressed that to realize the full potential of new technologies, and the services and the applications that they can generate, it is essential to introduce market structures that will allow this to occur. "Only if the supply chain for new services is allowed to develop will new jobs opportunities arise".²⁴ Thus the actual impact of any given technology is dependent upon a range of non-technical factors.

¹⁸ Kutscher, R., «Growth of Services Employment in the United States» in Guile (1988).

¹⁹ Tschetter, J., "Producer services industries: Why are they growing so rapidly?" *Monthly Labor Review* (December 1987) in Guile (1988).

²⁰ Rada, J.F., "Information Technology and Services" in Giarini (1987), p. 129.

²¹ McFetridge and Smith (1989), Postner and Wesa (1987) and Grubel and Walker (1989).

²² Rada, J.F. in Giarini (1987), p.130

²³ OECD (1996b), p.73.

²⁴ OECD (1996b) p.103.

The distribution of services is also a factor for consideration. The impact of technological changes on employment in services could have regional development as well as social implications. In particular, technological change could allow service providers, including government service, to be decentralized.

-Composition of employment

Not unrelated to technological change, an important change occurring in the labour market has been the composition of employment where, as Kutscher suggested, "the economy is expected to continue generating jobs with higher educational requirements".²⁵ This reflects the great expectation that growth in employment will occur in sectors requiring high skill education. On the specific issue of skills and technologies, the OECD (1996b) reviewed the rationale as to why highly-skilled labour, complementing new technologies, is crucial for economic development, in particular for services. The great interdependencies between skills and technologies can be explained by the fact that skilled workers are better able to incorporate new technologies and thus they are most likely to be chosen to use them.²⁶ Nevertheless, lower-paid jobs in some services sectors will not cease to exist as they reflect a demand for certain category of jobs filled by some specific groups (youth, women, etc.) and have a role to play in putting upward pressure on other workers' wages.²⁷

The growth of commercial services sectors in Canada can in large part be explained by the increase in the level of knowledge and human capital in the work force. Grubel (1987) asserted that "this application of human and knowledge capital may be due to diminishing returns to physical capital deepening".²⁸ For their part, Easton and West (1988) and the ECC report explored the impact of education systems on Canadian employment. The ECC suggested that human capital is increasingly important as the Canadian economy moves towards an information-based economy. The ECC also explored the belief that services jobs are not well paid. The report indicated that there are some highly-paid and some low-paid service sectors. Overall wages are comparable with the average manufacturing sector, and in some cases, higher.

-Impact on unemployment rate

Jaewoo Lee (1996) raised the issue of how the expanding service sector has affected the volatility of unemployment rates. He found that as the share of total employment represented by the service sector increases, the response to cyclical shocks of both unemployment and personal incomes diminishes. This result attests to the importance of the service sector for the aggregate dynamics of the economy. It also has important policy considerations since the unemployment rate will tend to fluctuate less

²⁵ Kutscher (1988) in Guile, p. 54.

²⁶ OECD (1996)

²⁷ McKenzie in Grubel (1987)

²⁸ Grubel (1987), p. 13.

without explicit policy intervention to stabilize the economy when the service share increases.²⁹

In Canada, the EEC study considered whether services were more or less sensitive to cyclical shocks than the manufacturing sector. The study examined changes in employment during and after three recession periods. It found that there was a considerable difference between the goods and service sectors, and indeed within the service sector itself. Employment in services decreased only in the first recession period 1981-1982 while, in the other two periods 1974-1975 and 1979-1980, employment in services increased.³⁰ Statistics Canada (1993) complemented the ECC study by examining the cyclical sensitivity of services during the 1991 recession. It found that non-market services payrolls are less sensitive to cyclical shocks than commercial services payrolls which tend to behave like goods producing industries. The overall services employment was thus less affected by economic fluctuations than the manufacturing sector.³¹

1.2.2 Output

-Measurement problems

Before addressing output per se, it is useful to take note of the measurement problem. Accurate measurement of services has been a burden for those attempting to assess output and productivity. The methodology used for collecting data as well as the broader problem of "we do not know exactly what is being transacted, what is the output and what services correspond to the payments made to their providers"³² are mainly responsible for the measurement problems.

-Various output issues³³

Measurement problems, however, have not prevented researchers from studying service output. Some like Kravis, Heston and Summers (1982) have examined the correlation between final-expenditure services prices and income levels.³⁴ Their main findings were that the price of services generally rises with per capita GDP, instead of the quantity of services purchased. More generally, Katouzian (1970) and Greenfield (1966) found that the demand for services was expected to rise with an increase in economic

²⁹ Lee, J. (1996)

³⁰ A similar experience was found in regard to output, the service sector output declining only in the 1982 recession.

³¹ Statistics Canada, Labour perspective (1993)

³² Griliches (1992), p.7

³³ Over the years, we have thus made progress in analytical research from a global understanding of the functioning of the services pricing system, measurement and definition to the impact of services on the structure of production. A growing literature has also begun to emerge on the performance or the growing share of specific service sectors such as financial services, but it will not be covered here.³³

³⁴ Balassa (1964), Samuelson (1964), Bhagwati (1984, 1985) and Panagariya (1988)

development. This particular finding suggests that "services are closely interlinked with the rest of the economy and that they play an active role in the production of goods."³⁵

Bhagwati (1984) made a substantial contribution to the discussion about changes affecting the service output by introducing the concepts of "disembodiment effect" and "splintering process". His idea was to explore the structure and technical changes that may result in services "splintering off" from goods and goods "splintering off" from services.³⁶ The process involving the latter is associated with a "disembodiment effect" where services that were initially embodied in a person or in a product can be disembodied from the service into a good. Due to technical progress, services will be more and more disembodied through an exchange that will not require a physical presence by the provider. It is the splintering of services from goods, not the opposite, which yields capital-intensive and progressive activities.³⁷

-Impact of the growth of services

There has also been a lot of attention devoted to the impact of the growth in services. Growth in the service market has been seen both in large and in small firms. The former usually takes advantage of economies of scale. In both cases, a higher degree of specialization will be enhanced by continuing cost reductions in transportation and communication.

In order to determine what factor could explain the above average GDP growth in some services sectors, Kutscher (1988) calculated for the US which of the following two changes, composition of final demand³⁸ or business practices (changes in inputs to produce outputs), had the greater impact on the growth of output in services industries. He found that the changing composition of final demand was responsible for only 0.1 % of GDP per year for the 1972-1985 period whereas changes in business practices accounted for 3.3% per year. "Changes in business practices, mainly influenced by technological changes, have been driven mainly by increased contracting out of additional and new services rather than a shift in labour".³⁹

-Contracting-out

McKenzie (1987) suggested that "reductions in the cost of communication could be expected to lead to an increased reliance on outsourcing of intermediates production, including services. The reduced transaction costs implied by the lower cost and improved

³⁵Rada, J.F. in Giarini, p. 129

³⁶ For example, a service like a singer's performance can be recorded and transformed into a good (compact discs).

³⁷ Bhagwati (1984)

³⁸ Changes in the composition of final demand refers to a situation where consumers would buy more services than goods during a certain period of time.

³⁹ Kutscher in Guile (1988), p.59-68

quality of communication would undercut the "raison d'être" of integrated firms".⁴⁰ He also asserted that "the expansion of the service economy is due in part to the fact that goods-producing industries firms have begun to switch from internally to externally supplied services. The growth of the service economy is a sign of growing efficiency."

-Services and changes to the structure of production

There has also been a growing interest in understanding the phenomenon of a rising share of services inputs into manufacturing. It is apparent that for goods producing industries to become more competitive, they must increase their value-added. In the past, this has been done by using more services as inputs, which in turn increases the demand for these service inputs. François and Reinert (1996) conducted a study on the role of services in the structure of production and trade for 15 OECD countries. They noted that the expansion of services is related to both increased production of intermediate services by the private sector, and increased demand in manufacturing for services inputs. They concluded that the growth in demand for services was more closely related to changes in the structure of production rather than to contracting out or to the splintering process.⁴¹

In Canada, the ECC study came to similar conclusion highlighting the importance of fundamental changes in the structure of production. "...the goods industries are the source of a substantial part of the demand for the output of the service industries and likewise, the service industries are the source of a substantial part of the inputs required by goods producers."⁴² In particular, the manufacturing sector, which has more industrial linkages than the service sector, has a greater stimulative power on output of services than that of services production on goods; a significant part of the service-sector growth derives from growth in the level of activity of resources and manufacturing in Canada. According to the ECC, there has been an increase in services used as intermediates in manufacturing, but this aspect along with contracting out and change in final demand partly explain the overall growth in services.

The issue, raised above, about the destination of services, either for final demand or as inputs, is an important one for understanding the significance of the service sector. Final demand expenditures for services account for a small share of total service output, the remaining being accounted by intermediate inputs.⁴³ For more traditional services, such as the public sector, however, the share of final expenditure will be higher than for commercial services, which sell more services as inputs to manufacturing industries. According to the ECC, commercial service sectors sell over 50% of their service output as intermediates.

⁴⁰ McKenzie in Grubel (1987), p. 89

⁴¹ François and Reinert (1996)

⁴² ECC report (1991), p.53

⁴³ However, we will see in Section 2 that demand for final consumption still has a role to play as determinants of growth in some countries.

1.2.3 Productivity⁴⁴

The service sector has often been perceived as less productive than manufacturing. Many authors⁴⁵ have suggested that productivity in the service sector was lower than for goods, while some others⁴⁶ have challenged this finding. Authors such as Griliches (1992), recalls that slow productivity growth in services is not evenly spread. In growing sectors such as financial services and retail trade, he found that these sectors contributed largely to the relatively low productivity performance of services in general.

A major problem with measuring productivity in services is measurement difficulties. Baily and Gordon (1988) found that "there is a lot of evidence of egregious errors in the data, and many of these errors suggest that productivity growth in the service sector is understated. However, it is very difficult to make the case that measurement errors account for a major part of the slowdown, either in service-sector productivity or in aggregate growth".⁴⁷ Quality versus quantity also plays a big role in understanding and measuring productivity. Quality is closely linked to the effectiveness and usefulness of a service and hence a quantitative measurement only is not sufficient to ascertain the productivity of services. Consequently, applying productivity figures to services can often be misleading. The issue must be approached cautiously.

Research on the Canadian economy indicates that the commercial service sector had on average a much slower growth rate of productivity than the goods producing sectors. However, there are some service sectors, such as communications, which showed higher productivity growth than goods.⁴⁸ Generally non-market services, such as public administration and social services, are characterized by lower productivity.⁴⁹ The ECC study using Fuch's model (1968) demonstrated how the shift in employment affected Canadian labour productivity in services. Labour productivity growth was on average 1.8% for goods compared to 1.4% for services during the 1967-1989 period. Non-market services showed a lower productivity rate than commercial services, and employment in the former also increased less rapidly than the latter during that same period.⁵⁰

⁴⁴ Here we refer to labour productivity.

⁴⁵ Baumol (1967), Fuchs (1968), Kutznets (1972) and more recently Summer (1985) and Saxonhouse (1985)

⁴⁶ Nordhaus (1972), Thurow (1979) and Wolff (1981)

⁴⁷ Baily in Griliches (1992), p. 69

⁴⁸ It is also worth repeating the observation that productivity in the goods sector, is influenced by the services inputs.

⁴⁹ Grubel & Walker (1989)

⁵⁰ Consequently, it was impossible to demonstrate a strong correlation between the growth in employment and low productivity for all categories of services. Moreover, the bias in the price used to deflate output would underestimate labour productivity for services and overestimate that for goods.

SECTION TWO

PERFORMANCE OF THE SERVICE SECTOR

In this section, we compare Canada's service industries performance with those of its main trading partners in terms of the output, employment and R&D using OECD data from 1980 to 1994.⁵¹

2.1 A GLOBAL VIEW OF THE SERVICE SECTOR

2.1.1 Employment in services industries

The predominance of services activities is illustrated in countries' employment patterns. The average share of services in total employment in G-7 countries is around 60%, while that of the US and Canada was 73% in 1992 (see Table A in the Annex). The share of employment in services in most OECD countries varies between 50 and 70% this share has increased steadily since 1970. Services have been the main explanatory factor of the rise in total OECD employment (manufacturing and services) between 1980 and 1994.

-Changes in the share of employment in services

Between 1980 and 1995, services accounted for the largest share of the growth in total OECD employment, increasing by 40% during that period. Between 1960 and 1984, Canada and other countries saw the share in goods employment decrease, but that decline was less drastic for Canada and the US.⁵² In the last decade, Canada and the US saw their average annual growth rate of manufacturing and services employment decline from 2.5% and 2.8% during 1985-1990 to 1.8% and 1% respectively, during 1990-1995

Between 1980-1995, growth in employment in services industries in most OECD countries came largely from services provided to businesses, mainly by the insurance and finance, and social, personal and community services categories.⁵³ Both insurance and financial sectors increased by 60% over that period even though the nature of their activities differs completely. The transportation and communication sectors were those sectors showing the smallest increase in employment, an increase of about 10%.⁵⁴

⁵¹ Data are provided in OECD Industry, Science and Technology- 1997 Indicators.

⁵² During the eighties, there was a global shift in the composition of the labour force, a shift from the manufacturing to the service sector.

⁵³ Education and health, which have traditionally occupied a large share of services employment in most OECD countries, have experienced the least growth.

⁵⁴ Since 1980, employment in manufacturing in OECD countries has decreased by 8% mainly in industries using low technologies.

Between the end of the 1970's and the beginning of the 1990's, the employment increase in services can be attributed to two groups of skilled workers: administrative staff (clerks) and professionals and technicians.⁵⁵ Between 1981 and 1991, Canada's 3.2% average annual growth of non-manual and highly-qualified workers was greater than any other categories of workers. In particular, employment in services to businesses represented an average annual growth of 4.8% for that same category of worker. This result was comparable with the US and Japan, but considerably less than that of the UK with 9.4%.

2.1.2 Service output in OECD countries

-Services in terms of GDP

In 1993, the latest year where data were available for all G-7 countries (see Table B in the Annex), the share of services in the G-7 countries was about 62%. Canada ranked second, just behind the US (69%) with 66%. Between 1980-1995, there has been a relative increase of services production in GDP at the expense of manufacturing in most OECD countries.

During this same period, services contributed between 60% and 80% of total output growth in OECD countries. This service growth was mainly concentrated in the financial, insurance and business services. On a sectoral basis, between 1980 and 1994, business services (financial, insurance services, etc.) as well as social, personal and community services grew the fastest, especially in the US and Canada.⁵⁶

-Interaction between goods and services

The OECD has estimated the interaction between manufacturing and services. By determining the share of inputs (for both services and manufacturing) in total production⁵⁷ (both manufacturing and services), the OECD was able to determine that between 1980-1990, inputs of services that countries used in the production of both goods and services grew faster than inputs of manufacturing in most OECD countries. The exceptions were the US and Canada. These two countries had a greater growth in manufacturing inputs into the production of manufacturing goods. They also showed the smallest growth rate in the share of services inputs in the production of manufactured products among other countries.

France demonstrated the highest annual growth rate of the share of services inputs in manufacturing with a 0.5 percent annual growth during 1980 to 1990. The UK,

⁵⁵ Berman and al. (1995) examined the change in shares of production workers and non-production workers in the manufacturing sector and found that most upskilling occurs within industries and not as a result of employment shifts between industries. OECD (1996b), p. 87

⁵⁶ Business services represented more than one-third of domestic activities in Canada and the US.

⁵⁷ This is done by using an input-output model.

in turn, maintained a 1.2 percent annual growth rate in the share of services in the production of services during that same period.

Data are also available concerning the determinants of growth in services output between 1980-1990 among OECD countries. Canada and the US have a similar pattern of distribution of services used as intermediates and in final demand. During that period, almost 75% of the growth in services for these two countries were used for final consumption compared with about 50% on average for other OECD countries. These results contradict the results for other OECD developed countries where the largest share of growth in services output came from an increase in the use of service intermediates rather than for final consumption.

2.1.3 R&D in services⁵⁸

R&D, technology and growth in productivity are closely linked with developments in some service sectors. Those sectors are mainly computer services and communication. Investment in R&D is a central element of most services activities and has had a significant impact on productivity growth in these R&D intensive sectors.⁵⁹

Overall, service firms in OECD countries performed up to 40% of all R&D, with the highest level in Canada and the US. Between 1991-1995, Canada's average annual growth in gross domestic expenditures on R&D (GERD) was 3.7% which was the highest among G-7 countries. In 1995, Canada's average annual growth of GERD was 1.3% compared to 3.7% in 1994. Since the beginning of the nineties, there has been a decrease in both the GERD and GERD as a percentage of GDP for most OECD countries.

2.1.4 Investment in information and communication technologies⁶⁰

Many services such as banking, telecommunication, retail trade and others are dependent on the accumulation of equipment for information and communication technologies (ICT) to grow. It is through the imports of services and manufacturing products intensive in ICT that businesses improve their products and their productivity. Investment in ICT in percentage of total investment for services and goods producing industries provide an indicator of the importance these two sectors give to the accumulation of information technologies. Investment in ICT as a percentage of total investment in the service sector in OECD countries has increased between 1980 and 1990, in particular in Canada and in the US. In Canada, the ratio of ICT on total investment in services increased from 13% to 15% while that same ratio for goods remain stable at about 3.5% between 1980-1990.

⁵⁸ It should be noted that there are serious limitations on R&D data which can not allow for a good assessment of the role of R&D in services industries.

⁵⁹ One of the best channel to obtain financial support to perform R&D is through trade with foreign affiliates.

⁶⁰ It is defined as the gross fix capital formation in information technologies and communication.

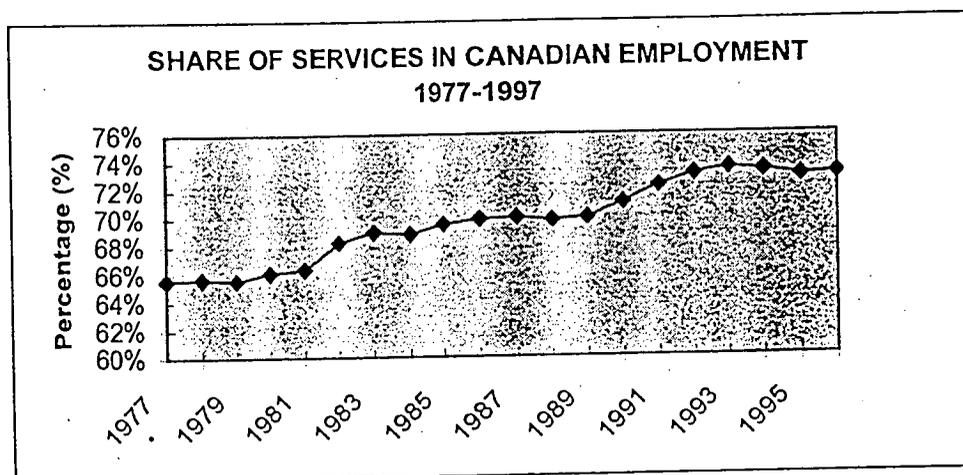
2.2 PERFORMANCE OF CANADIAN SERVICES INDUSTRIES⁶¹

The following provides a review of the performance of Canadian services industries in terms of employment, output, productivity, R&D and interprovincial data.⁶²

2.2.1 Employment

Services have dominated employment in Canada since the beginning of the sixties when a shift in employment patterns occurred from the goods to service sector. The goods sector's share of employment decreased from 60% in 1946 to 26 % in 1996.⁶³ Chart 1 shows that since 1977, the share of services trade reached 73% in 1997 compared to 66% in 1977.

CHART 1



Source: Statistics Canada matrix # 72-201

Chart A on the evolution of employment in Canada between 1977 and 1997 is presented in the Annex and shows that the annual growth rate of employment in services declined from 1985 to 1992. The growth in services producing industries occurred mainly in the business and personal services as well as in the community, business and personal services categories over the 1977-1997 period (see Chart B in the Annex).

⁶¹ In this section, all service data used come from Statistics Canada publications from 1986 to 1997. The value added services data are taken from the 15-001 publication on GDP at factor costs by industry. It is calculated in constant dollars of 1992 to remove the effects of inflation. For employment, data come from the Labour Force Survey and are seasonally adjusted from 1977 to 1996. Labour productivity of the service sector are also available using real GDP per person-hour. R&D and interprovincial data are taken from the Statistics Canada's publications *Research and Development in a Service Economy (1997)* and *Economic Benefits of Interprovincial Trade in Canada (1996)*.

⁶² Data may cover a maximum of thirty years or according to the availability of data.

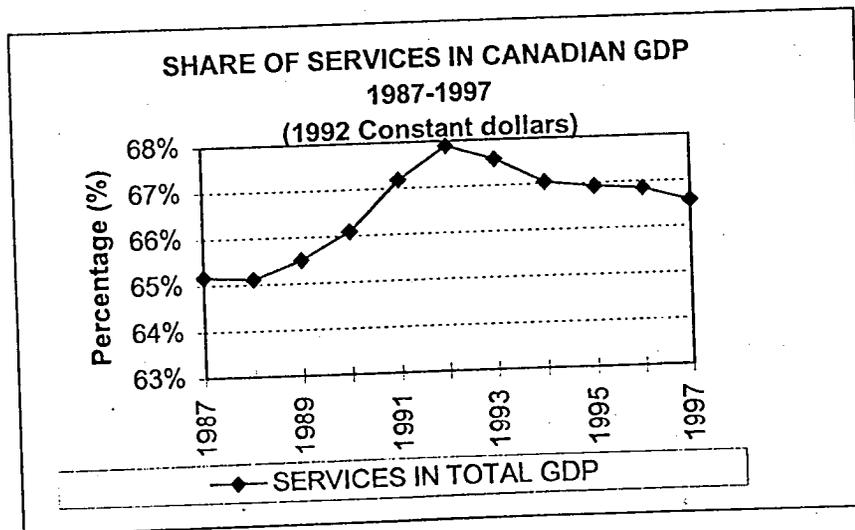
⁶³ ECC report (1991)

2.2.2 Output

Chart C in the Annex provides a portrait of how real GDP has evolved based on annual changes for goods and services industries from 1987 to 1997. The end of the eighties was marked by a gradual slowdown of the economy and by a recession in 1991. During the slowdown, annual changes in services output did not diminish considerably compared to goods, thus supporting the observation that services are less sensitive to shocks than goods producing industries. Although the growth of services industries decreased during the last recession, their growth rate continued to exceed that of the manufacturing industries. This permitted services to increase their share in total Canadian real GDP during that same period. However, since 1993, the real annual growth rate of services has been lower than for goods. Overall, between 1987 and 1997, services producing industries grew by 2.3% on an average annual basis compared to 2.1% for the economy as a whole and 1.8% for goods.

Chart 2 shows that services reached a peak in terms of its importance in GDP at almost 68% in 1992 and then declined to 66.5% in 1997.

CHART 2



Source: Statistics Canada #15-001

Since the term services is very general, it is helpful to consider services by breaking it down into business and non-business activities. Table 1 shows that business services were valued at 319.1 billion in 1997, a rise of 65.5 billion since 1987. They now account for 72 percent of total services producing output, an increase of 4 percent since 1987.⁶⁴ This evidence suggests that the growing share of business sector services makes it more sensitive to shocks than non-commercial service activities. This is supported by

⁶⁴ In 1997, services producing industries, including both business and non-business sectors, represented twice the value of goods producing industries.

Canadian data, which revealed that the business services declined along with goods from 1990 to 1992 while non-business services remained stable.

TABLE 1

SHARE OF BUSINESS AND NON-BUSINESS SERVICES ACTIVITIES⁶⁵
(1992 billion CANS)

	1987	1992	1997
Business sector services	253.6 (68%)	282.2 (69%)	319.1 (72%)
Non-business sector services	117.8 (32%)	128.0 (31%)	125.6 (28%)
Total services industries	371.4 (100%)	410.2 (100%)	444.7 (100%)

Source: Statistics Canada #15-001

In order to assess the services industries growing the fastest in the Canadian economy, we calculated the average annual growth rate between 1987-1997, and for 1997. The results (Table 2) indicate that the computer and related services sector grew more rapidly at 16.4% annually, followed by other business services with 8.6%, and telecommunication carriers with 7.6% between 1987-1997. This pattern was also seen in 1997. Computer and related services remained the fastest growing sector with 18% followed by other business services with 11.5%. The overall trend in recent years is thus one of rapid growth in business oriented services.

TABLE 2

FASTEST GROWING SERVICE SECTOR IN CANADA
1987-1997 (%)

	Avg. annual growth 87-97	Annual change 1997
Computer and related services	16.4%	18.0%
Other business services industries	8.6%	11.5%
Telecommunication carriers	7.6%	9.6%
Pipeline transport	7.4%	1.0%
Motion picture/ audio	7.3%	10.8%

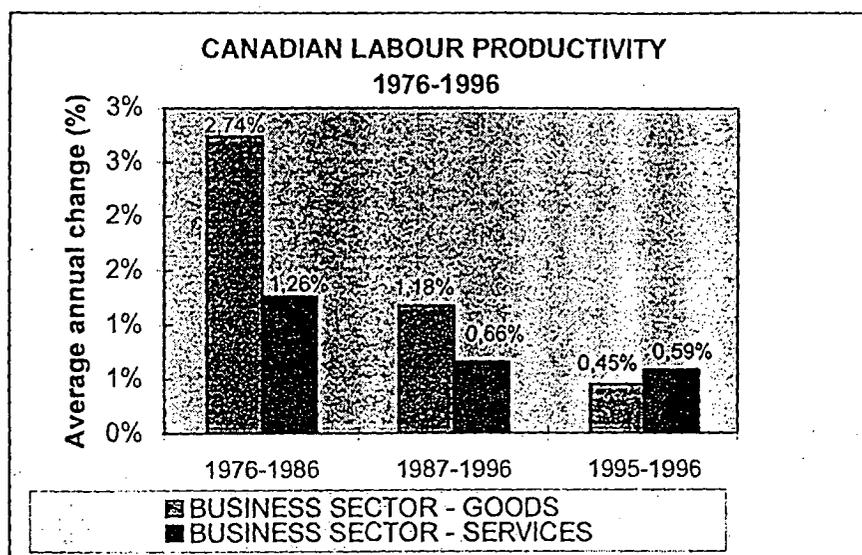
Source: Statistics Canada # 15-001

⁶⁵ Here "business sector services" do not refer to the breakdowns than those used for trade transactions.

2.2.3 Productivity

Chart 3 illustrates two trends. It indicates that labour productivity for the goods and services business sectors have declined during two sub-periods between 1976-1996. The second trend is that the service sector has showed a lower level of productivity growth than the goods sector, even though in 1996 the opposite situation occurred. This is in keeping with the discussion in Section 1 above.

CHART 3



Source: Statistics Canada matrix # 7921

2.2.4 Contribution of service industries in R&D

Between 1986-96, gross domestic expenditures on R&D (GERD) has been a stable share of GDP in Canada with an average of 1.6%.⁶⁶ In 1996, 62% of the GERD was performed by the business sector (both goods and services) of which 33% was performed by services industries. When expenditures from the public sector are excluded, the share of R&D performed by services is close to 60%. From 1987 to 1994, R&D in services sectors grew by 10% on an annual average basis compared to 5.3% for the non-service sectors, which resulted in an increase in the share of R&D for service industries.⁶⁷

⁶⁶ Numbers come from Statistics Canada #12 series on Science and Technology Redesign Project and Services Division

⁶⁷ In key research sectors such as software and biotechnology, services represented more than half of the R&D in the former and one-third for the latter. In 1991, a survey sent to Canadian companies about their alliances with other firms to perform R&D activities showed that service industries played a key role in promoting R&D and the diffusion of new ideas.

SECTION 3

TRADE IN SERVICES: A CONCEPTUAL APPROACH

3.1 TRADE IN SERVICES

Understanding what "trade in services" means is not straightforward. A criterion to determine if trade has occurred is whether or not the majority of value added is exchanged between residents and nonresidents or, "if there is a possibility that domestic providers of services are being exposed to foreign competition".⁶⁸ Using the definition of services provided in Section 1 as defined by the WTO, there are basically four ways to trade services: a consumer (client), the service (product), or the supplier (provider) may cross the border, or through the presence of foreign affiliates.⁶⁹

To assist in understanding trade in services, it is useful to think in terms of who is being billed for the supply of a service. For example, a Canadian may export (yielding a receipt) educational services by sending a teacher directly to the EU, or it could also take the form of a training provided to employees of its EU affiliate at a site in Canada. Services have different characteristics and this influences how they are traded. It also makes the concept of trade in services somewhat more complex than trade when thought of in relation to goods.

Traditionally, economic theory recognized two basic characteristics of services which supported the belief that services were less tradable than goods: non-storability and intangibility.⁷⁰ The former implies that some services have to be consumed and produced at the same location and at the same point in time. The latter implies that because services are intangible, a closer interaction between the producer and the consumer is most of the time necessary.

Both the intangibility and non-storability factors have been influenced by technological changes. Producers and consumers can now exchange services products at a distance through advanced telecommunication networks.⁷¹

⁶⁸ Richardson J., "A Sub-sectoral Approach to Services' Trade Theory" in Giarini (1987), p.61

⁶⁹ Services transactions are often presented in four categories: travel, transportation, government services and other services (business services). The breakdowns are based upon the IMF Fifth Manual of Balance-of-Payments which serves as a reference for classifying services transactions by national statistical agencies such as Statistics Canada. The four modes of delivery for services of the WTO that are embodied in the IMF definitions. The OECD and the WTO use the IMF methodology to produce their annual statistical reports. In this section, we will use mainly statistics derived from the WTO Annual Report which are based on the IMF classification for the period of 1986-1996.

⁷⁰ Sapir A., Comments in Giarini (1987)

⁷¹ The number of data transmissions reflect the growing number of services transactions.

3.1.1 Why trade in services is important?

Literature about trade liberalization in services surged during the Uruguay Round negotiations. Many Canadian and foreign academics explored various aspects of services. However, there has been a limited number of contributions regarding the importance of trade in services. Now the question is not “whether trade is applicable to services but whether services have particular empirical characteristics that warrants attention”.⁷² From Rada’s perspective, services play an increasingly important role in international trade due to their enhanced transportability, the increasing service content as input in manufacturing and services (without appearing in statistical books).⁷³ With the coming round of WTO GATS negotiations in the year 2000, it is prudent to give some attention to the overall dynamics of trade in services.

3.1.2 Trade in services issues

-Comparative advantage

There is a consensus in conventional trade theory that the Hecksher-Ohlin-Samuelson (HOS) model based on relative abundance of factors inputs (comparative advantage) can be applied to services.⁷⁴ In this sense, services are not fundamentally different than goods. Sapir and Lutz (1981) found that the main factors shaping comparative advantage in services trade are the availability of physical and human capital. Scale economies may also represent an important asset for certain sectors such as insurance.⁷⁵

Canadian authors like Melvin (1989) argued that comparative advantage in services is seen to depend on human capital, which is more ephemeral than factors considered in traditional theory. That means that service producers that are “human capital” intensive are very mobile and can make a country lose its comparative advantage by moving to another country. Consequently, he suggested that Canada should invest in education and R&D in order to retain and develop skilled labour. Moreover, he argued that a large size country like Canada would benefit internationally by improving its domestic transportation facilities. Overall, he found that a small economy like Canada would benefit more from trade in services than a larger economy. Conklin and St-Hilaire (1987) have a similar finding and suggested that the importance of some information technologies industries will influence a nation’s comparative advantage.⁷⁶

⁷² Norman and al. in Giarini (1987), p.44

⁷³Rada, J.F. in Giarini (1987)

⁷⁴ Hindley and Smith (1984), Sandmo (1984), Sapir and Lutz (1981) and Krommenacker (1984)

⁷⁵ Sapir and Lutz (1981)

⁷⁶ Conklin and St-Hilaire in Grubel (1987)

-Embodied services in trade in goods

This factor, along with measurement problems, is one of the most important factors contributing to the relatively small size of international trade in services. François and Reinert (1997) examined the importance of commercial services as intermediates in embodied manufacturing exports. They found that services are a major aspect of production, including for exportables. For high and middle-income countries, including Canada, the significance of the service sector for overall exports and imports is much greater than the direct trade balance suggests.⁷⁷

For Canada, Grubel (1986) examined the role of direct and embodied services in trade. He found that during the study period, 1973 to 1983, services in embodied goods had grown more rapidly than merchandise trade. The combined final and embodied service trade grew at just about the same rate as merchandise trade. As will be shown later in the paper, trade in services has recently grown faster than merchandise trade. Furthermore, the value added of intermediate services is becoming a larger proportion of the value of goods produced and traded for domestic markets. Grubel concluded that this process is likely to continue as long as there is further accumulation of human and knowledge capital per worker and a growth in specialization.⁷⁸

Estimates from an input-output model by Harris and Cox (1989) showed that one dollar of Canadian exports in 1981 contained an average of about 25 cents worth of services. The embodied services in a marginal dollar's increase in export, however, were 40 cents. Embodied services are also important in our bilateral trade with the US. The same authors found that 30% of the Canada-US bilateral trade were embodied services and that represented 9.3% of Canadian GDP in 1981.⁷⁹ For goods producing industries to become competitive worldwide, their development is directly linked to the performance of its service inputs.

-Role of new technologies

As with the service sector output in general, technology plays an important role in trade in services. For example, certain services (e.g., medical services) that have traditionally been considered non-tradable because they required the simultaneous presence of the provider and consumer, can now be exchanged electronically. In that regard, it has been observed that where personal contact between buyer and seller is required, the cost of mobility limits tradability.⁸⁰ Changes in technologies can also lead to a "substitution effect" as a good may become a service when provided electronically (e.g., a book published on the Internet). Rada (1987) has provided a useful list showing the main impact of information technology on internationally traded services. These are: an

⁷⁷ François and Reinert (1997), p.12-13

⁷⁸ Grubel (1986)

⁷⁹ Grubel and Walker (1989)

⁸⁰ Bhagwati (1984)

increase in productivity of service production; greater transparency of markets; blurring of the borders between sectors; changes in the barriers to entry; and further internationalization of services. He suggested that the enhanced transportability of many services has become the major achievement of information technologies on trade in services.

-Trade with foreign affiliates and intra-industry trade

Trade in services with foreign affiliates is at the heart of many policy and academic debates. In the early 1990's, about 50% of the global stocks of FDI was in service activities.⁸¹ Trade with foreign affiliates is important for services industries because it constitutes an important means by which they can participate in foreign markets, especially when a presence is required to implement commercial activities.

Firms competing in a more globalized and deregulated world seek low-cost and quality combination of services and goods inputs to maximize their profits. Intra-industry trade is largely conducted worldwide by multinationals producing both goods and services to enter in the production of other products. The theory of intra-industry trade is relevant to services trade. The theory is based on the understanding that trade occurs when economies of scale internal to a firm are so large that they go beyond the capacity of their domestic market or because of product differentiation. In the case of services, it seems that the latter is more relevant than the former due to the importance of the quality component of services. Regarding the first assumption on economies of scale, the case is not significantly different for goods than for services. Consequently, due to the product differentiation postulate, the theory of intra-industry trade in services might be more appropriate than that of comparative advantage that assumes a single homogeneous good.⁸²

⁸¹ UNCTAD and World Bank (1994)

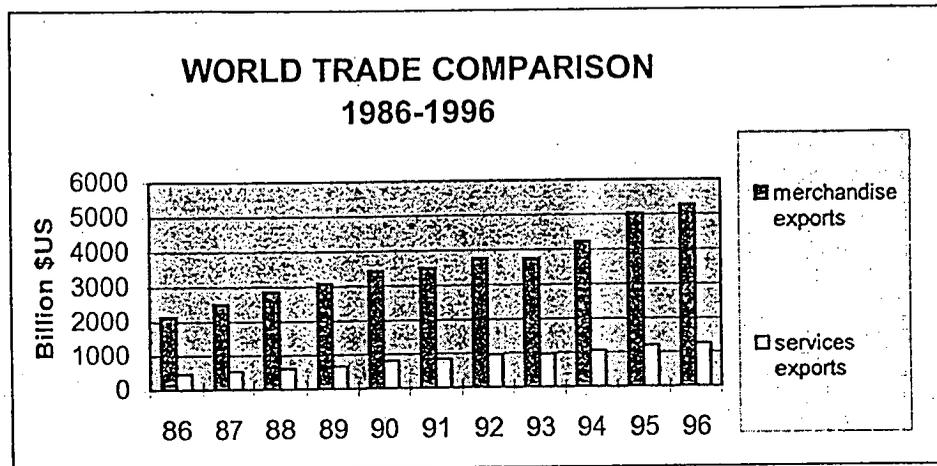
⁸² Richardson in Giarini (1987)

SECTION 4

TRADE PERFORMANCE OF SERVICES INDUSTRIES

This section provides a review of trends in international trade in services from 1986 to 1996. As Chart 4 illustrates, world trade in services⁸³ has risen substantially from 1986-1996, but is still small relative to trade in goods. In 1986, world exports and imports of services represented 381 and 402 billion in current US dollar value terms compared to 1.26 and 1.27 trillion respectively in 1996⁸⁴. For goods, exports and imports represented around 2.2 billion each in 1985, and were 5.3 and 5.4 trillion respectively in 1996.

CHART 4



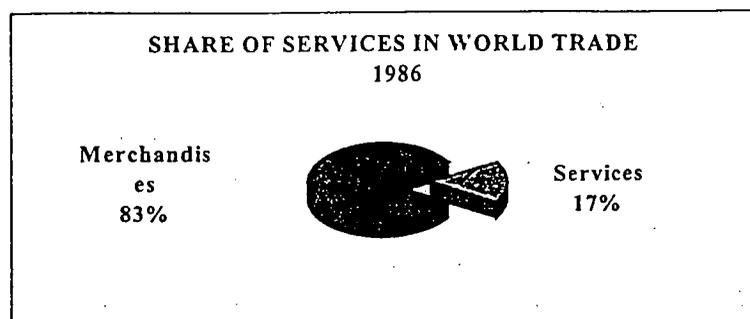
Source: WTO Annual report 1997

From 1986 to 1996, the share of world trade in services (exports and imports) in total world trade increased from 17% in 1985 to 19% in 1996 (see Chart 5). It is important to recognize, however, that services cannot always be captured or registered in trade in services statistics.

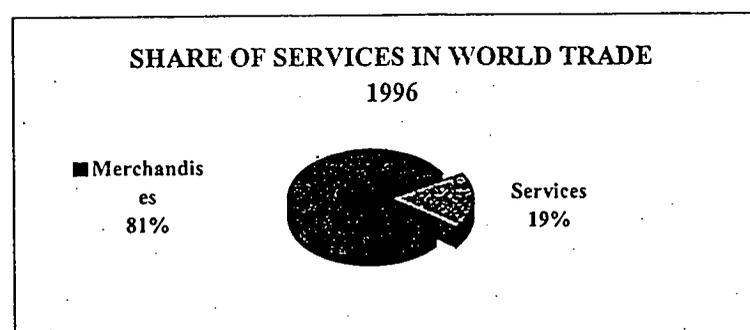
⁸³ For the purpose of this sub-section on world trade, the term "services" will be used instead of "commercial services" used by the WTO. It includes "all services except government".

⁸⁴ WTO 1996 data are still provisional, i.e., all trade figures are not compiled yet. However, data for most developed countries have been collected and reflected here.

CHART 5



Source: WTO Annual Report 1997



The average annual growth of world exports of services exceeded the growth of trade in goods by 2 percentage points between 1986-1996 (see Table C in the Annex). In 1996, services exports grew at 5% compared to 4.7% for merchandise exports.⁸⁵

A closer look at annual changes (see Chart D in the Annex) gives an appreciation of the evolution of world trade and GDP.⁸⁶ World trade of both goods and services (exports plus imports) has outpaced GDP⁸⁷ except in 1993 during the economic slowdown.⁸⁸ Moreover, the share of services trade in world GDP has continuously increased from 6.3 in 1985 to 8.7% in 1995.⁸⁹ Trade in services thus represents a larger share of world GDP than ten years ago.

⁸⁵ Exports and imports of services, and world trade in general, experienced a significant 9% and 10% drop from 1995. This can be partly explained by the rapid appreciation of the US dollar and price changes.

⁸⁶ To compare trade with GDP, we had to use the best available data for GDP, which was 1995 instead of 1996.

⁸⁷ GDP data used are defined as world GDP at market prices in current \$US.

⁸⁸ Between 1986 and 1995, annual changes in growth of world trade in services have generally exceeded growth for trade in goods.

⁸⁹ EET's calculation. Source: WTO and World Development Bank.

-Leading services exporters and importers

Whereas trade in manufacturing products is geographically diversified with many Asian countries in the top twelve largest traders, services trade continue to be dominated by developed countries, mainly by the G-7 countries. Between 1985 and 1996 (Table 3), the largest exporter remained the US, with France second. The US share of world services exports represented 16.2 per cent in 1996, an increase of 0.3 percent from 1995. France and Germany's market shares declined substantially in 1996 from 1995 due to the overall reduction in services trade by EU countries. As for importers, the US, Germany and Japan were the largest in 1996. France, and more recently Italy, were also in the top five importers. In 1996, the top six leading exporters and importers represented more than 50 per cent of the total value of world trade in services. Canada's position remained relatively constant throughout the period for both exports and imports ranking 15th and 9th respectively in 1996. Canada's share of both imports and exports decreased gradually between 1985 and 1990 and between 1990 and 1996.

TABLE 3

**WORLD LEADING EXPORTERS AND IMPORTERS OF SERVICES
1985-1990-1996 (share in percentage)**

Leading exporters			Leading importers		
1985	1990	1996	1985	1990	1996
1.US (16.7)	1.US (15.5)	1.US (16.2)	1.US (14.2)	1.JAP (11.2)	1.US (10.8)
2.FRA (9.1)	2.FRA (10.7)	2.FRA (7.0)	2.JAP (8.5)	2.US (11.1)	2.GER (10.5)
3.U.K (7.7)	3.U.K (7.2)	3.GER (6.4)	3.GER (8.2)	3.GER (10.4)	3.JAP (10.2)
4.GER (6.0)	4.GER (6.7)	4.U.K (6.0)	4.FRA (6.2)	4.FRA (8.3)	4.FRA (5.6)
5.JAP (5.4)	5.JAP (5.4)	5.ITA (5.6)	5.UK (5.6)	5.UK (5.6)	5.ITA (5.3)
12.CAN (2.3)	12.CAN (2.0)	15.CAN (1.9)	8.CAN (3.1)	9. CAN (2.9)	9.CAN (2.5)

Source: WTO Annual Report 1996, 1997

Although the US and EU countries dominate the export and import in share and value terms, services exports in Latin America and Asia grew by an annual growth of over 8 percent in 1996. In comparison, the EU experienced a 3 percent growth in services trade compared to 6 percent for the US for the same year. The slowdown in the EU contributed significantly to the decline in world services trade for that same year. The appreciation of the US dollar played a role, especially for trade in goods, for the sharp decline of the EU and other regions' trade performance, which saw the impressive growth results of the two previous years fade in 1996.

Although the G-7 countries dominate the ranking of the largest services traders, other countries have shown remarkable increases in services trade since 1986. Table 4 presents the results of a compilation of the growth in exports and imports of services by countries that had at least 1% of world trade in services in 1996. Calculations were made for a ten-year period and for the year 1996 only. On the export side, Thailand, Malaysia and China showed the highest average annual change in the last ten years. On the import side, China, Thailand and Korea had the highest average growth during that same period. More generally, Latin America and Asia have experienced the greatest growth in trade in services.

TABLE 4

OTHER SIGNIFICANT EXPORTERS AND IMPORTERS
(in percentage)

<i>EXPORTS</i>	Average annual change (86-96)	1996/95	<i>IMPORTS</i>	Average annual change (86-96)	1996/95
Thailand	22.8 %	18%	China	29,5%	7%
Malaysia	21 %	27%	Thailand	25,9%	12%
China	20.1 %	11%	Korea	21,1%	15%
Singapore	18.9 %	0.5%	Spain	18,2%	11%
Chinese Taipei	18.5 %	7%	Singapore	16,7%	13%
Turkey	17.1 %	4%	Austria	15,9%	7%
Korea	16.3 %	1%	Chinese Taipei	15,9%	3%
Australia	15.1 %	17%	Brazil	15,5%	15%
Hong Kong	15 %	9%	Italy	15,4%	15%
Belgium-Luxembourg	13.5 %	2%	Hong Kong	15,3%	4%

Source: WTO Annual report 1997

-Classification of trade in services

In recent years, it has been observed that what the WTO characterizes as "other commercial services" are becoming increasingly important in trade. In 1996, total trade of commercial services⁹⁰ represented more than 40% of trade in services with 1 trillion US dollars. Between 1990 and 1996, the share of commercial services (exports and imports) in total trade in services increased by approximately 2.6 percent. Table 5 illustrates that exports and imports of commercial services grew more rapidly than any other sector in 1996, i.e., by 7 and 8 percent respectively. The transportation sector experienced the least growth.

⁹⁰ Here commercial services will be used instead of "other commercial services" by the WTO, i.e., finance, insurance, etc.

TABLE 5

World trade in services by category, 1990-96
(Billion dollars and percentage)

	Value	Share		Annual percentage change			
	1996	1990	1996	1993	1994	1995	1996
Exports							
All services	1,260	100.0	100.0	1	9	14	5
Transportation	315	28.2	25.0	0	10	13	2
Travel	415	32.5	32.9	1	8	14	6
Commercial services	530	39.4	42.1	1	10	15	7
Imports							
All services	1,265	100.0	100.0	1	9	15	5
Transportation	375	31.7	29.7	0	10	15	1
Travel	390	31.3	30.8	-2	8	14	4
Commercial services	500	37.0	39.5	4	8	16	8

Source: WTO Annual Report 1997

In 1995, the US held the largest share of world exports of services in all three categories as well as in transportation imports whereas Germany led as largest importer in commercial services and more recently in travel. Canada's world shares in all three categories of exports and imports of services decreased between 1985 and 1995, including the dynamic commercial service sector.⁹¹ In 1995, Canada was the 13th largest exporter of commercial services and 12th in travel. Since Canada did not figure in the top 15 largest exporters and importers of transportation services, Canada's fifteen overall position for services exports can be attributed to the lower position of the transportation sector.

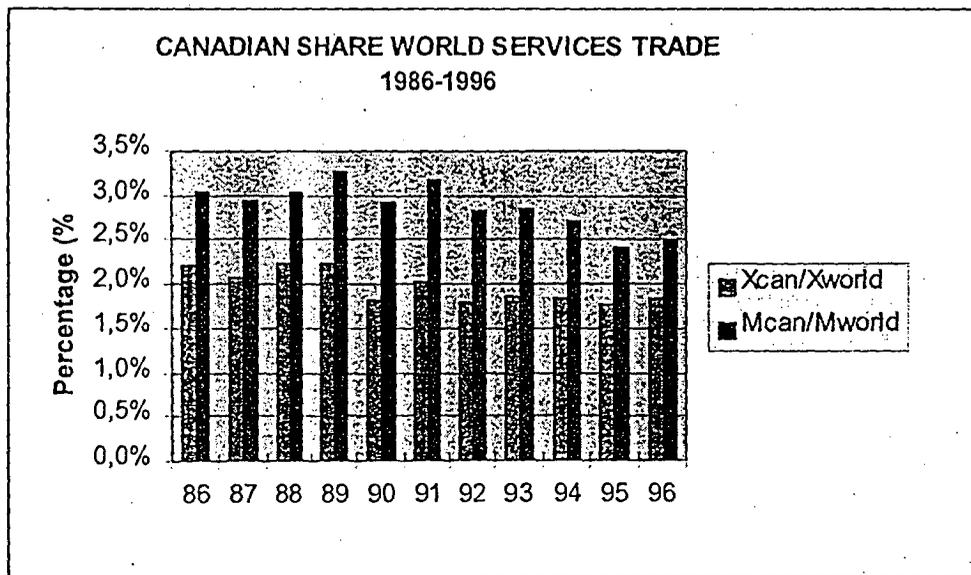
⁹¹ WTO annual report (1997)

SECTION 5

CANADIAN TRADE IN SERVICES

This next section focuses on the trends and characteristics of Canadian trade in services.⁹² Chart 6 illustrates that Canada's share of world exports of services has been relatively steady since 1991 whereas the share of imports began to increase in 1996 after three years of decline. Canada's share of global services exports was 1.8% while its share of imports was 2.5% in 1996.

CHART 6



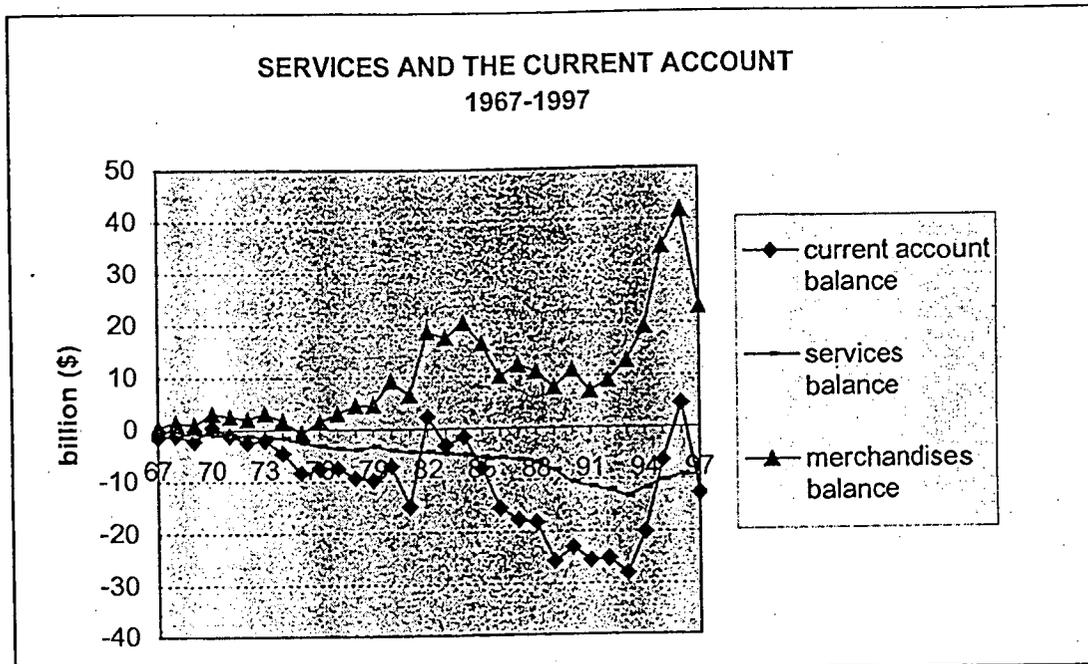
Source: WTO Annual Report 1997

⁹² Statistics Canada compiles services data based upon information provided in surveys by Canadian companies (the coverage of services statistics obtained from surveys is supplemented by administrative sources. The remaining services are estimated by benchmark studies and/or derived from other indicators.) Statistics collected are processed and reported in various categories of services transactions, exports (receipts) and imports (payments). Statistics Canada data published in *Canada's International Transactions in Services* are based on the IMF Fifth Balance of Payments Manual (BPM5). It has adopted the BPM5 classification and reorganized and reclassified services data to conform to those of the IMF. This new system is aimed at facilitating international comparison of services transactions.

In recent years, Statistics Canada has made huge efforts to improve the measurement of services statistics, especially for commercial services. An extended statistical coverage of sectors such as insurance and legal services has permitted to the Agency to obtain more accurate information on services sectors. Efforts will continue to be made to improve statistics of the current thirty-six breakouts of services sectors to further include sectors such as accounting, commercial education, etc. Their next major challenge will be to attempt to measure sales of Canadian foreign affiliates that are not currently measured in balance of payments statistics.

The current account allows comparison of Canada's services trade and merchandise goods balance to be made. Chart 7 illustrates a deterioration of Canada's balance of service trade at the end of the eighties, reaching its greatest deficit in 1993 with a trade deficit of 13.4 billion. The deficit in the investment income component has contributed the most to the overall deficit of the current account. This is in part attributable to the reimbursement of interests on our foreign debt.⁹³

CHART 7



Source: Statistics Canada #67-001

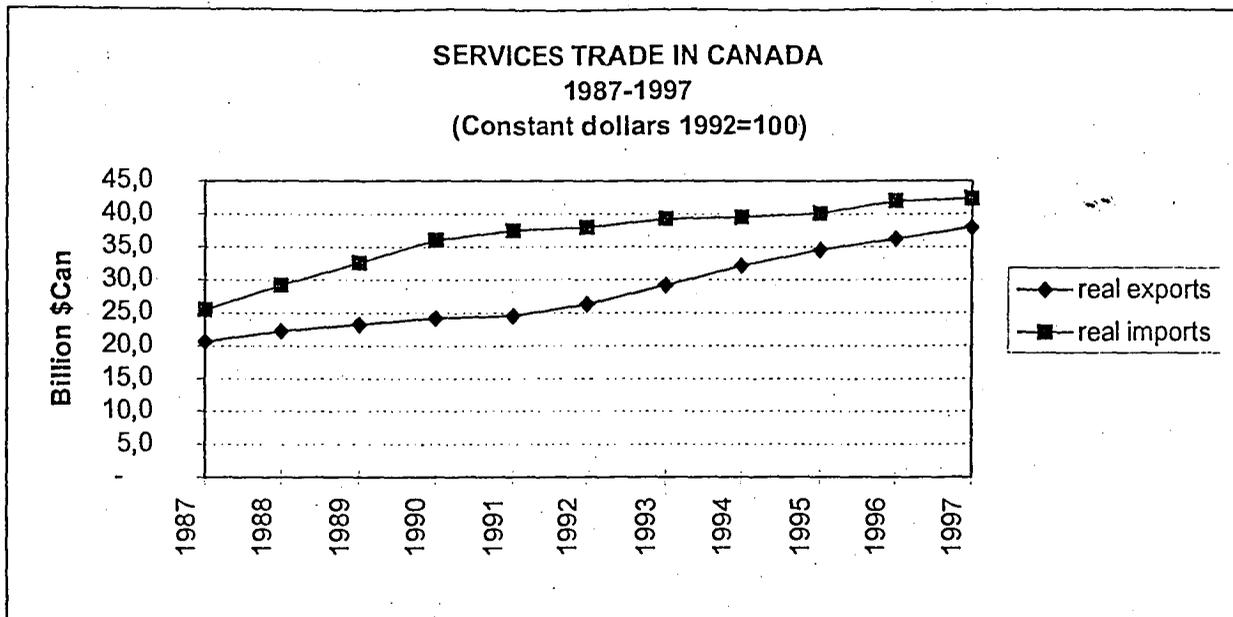
Trends in trade in services in constant dollar terms⁹⁴ on Chart 8 show that a trade deficit started to grow progressively at the end of the eighties reaching a peak in 1991 before decreasing in the period following the recession. This can be explained by a higher growth of imports before 1991, and by a higher growth of exports after 1991. In 1997, Canada's real services trade deficit reached a low of 4.3 billion, which compares with the 1987 level of 4.8 billion. Exports and imports of services in constant prices represented 38 billion and 42 billion in 1997.⁹⁵

⁹³ There are three components in the current account: balance in goods and services, balance in investment income and balance of current transfer.

⁹⁴ Real services figures were calculated by using a price index of non-merchandise and include investment income. By far, this is the best deflator that could be used to divide current dollar figures by a services price index.

⁹⁵ In current prices, exports and imports represented \$41.6 and \$50.3 billion in 1997.

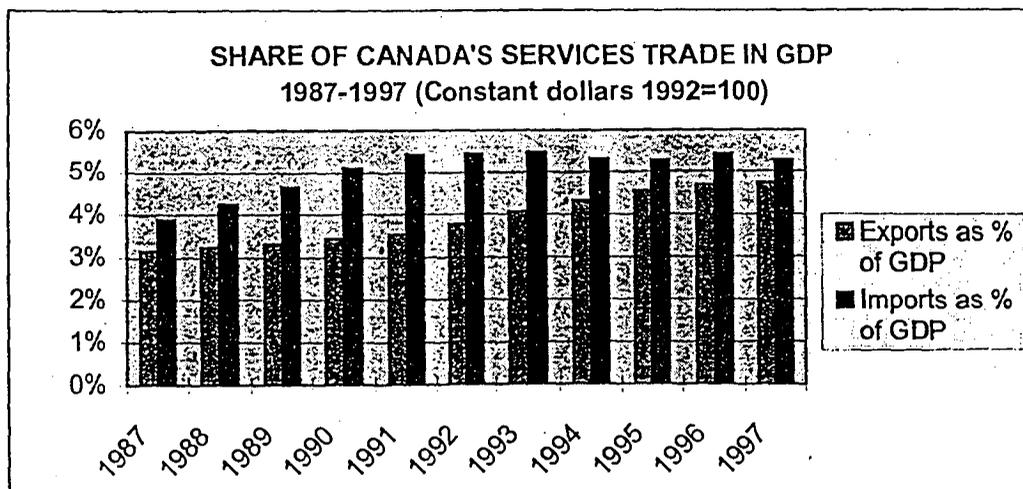
CHART 8



Source: Statistics Canada catalogue # 13-001

One of the best indicators to illustrate changes in trade in services is the share of trade in services in GDP⁹⁶. Chart 9 reveals that real export of services have represented an increasing share of real GDP since 1987. Real imports in GDP terms have also risen since 1987, but have been more stable than exports since 1991. Services exports in GDP terms represented 3.1% in 1987 and 4.9% in 1997. Services imports in GDP terms represented 4% in 1987 and 5.2% in 1997.

CHART 9



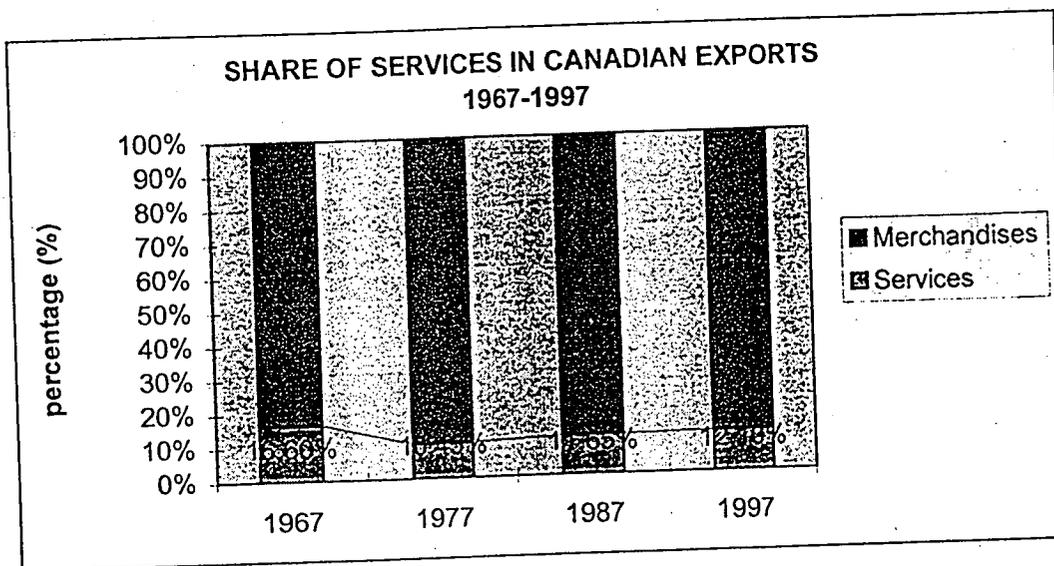
Source: Statistics Canada # 13-001

⁹⁶ We use GDP at market prices for the whole economy rather than for services only.

Table D in the Annex presents a portrait of thirty years of trade in Canada from 1967 to 1997.⁹⁷ Generally, merchandise trade has run surpluses whereas services trade has run deficits. The average annual growth rate of both services and goods in current dollars over a longer period are comparable at about 11 percent.

As shown on Chart 10, the share of trade in services in total Canadian trade remained relatively stable between 1967 and 1997. In 1997, services exports represented 12.1% of Canadian exports whereas imports represented 15.4%. It is important to note that the shares of services exports and imports were higher thirty years ago, meaning that services trade in 1997 is not relatively more important in terms of total Canadian trade.⁹⁸ However, the composition of services is significantly different. For example, the emergence of technological and information changes has increased the level of trade in commercial services (computer, management consulting, etc.)

CHART 10

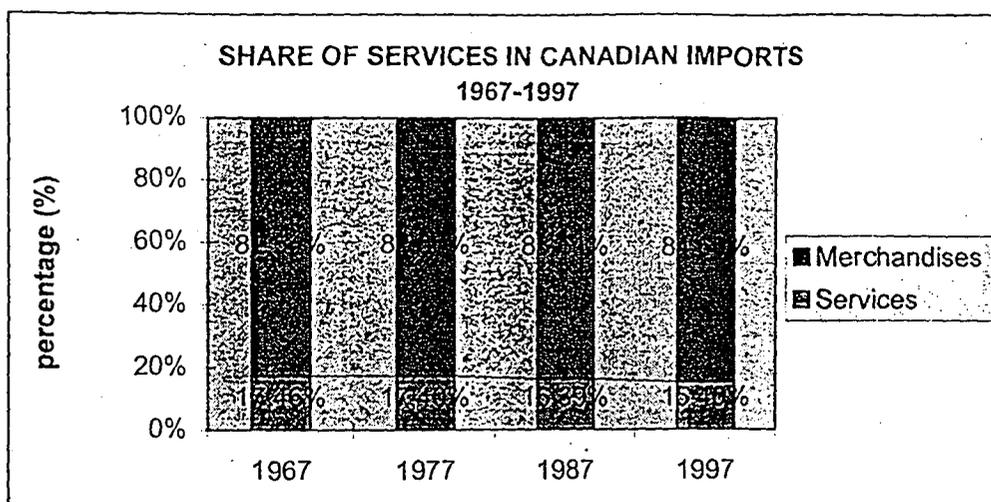


Source: Statistics Canada catalogue # 67-001

⁹⁷ In this case only, it is possible to compare goods versus services in Canada since all statistics come from the balance-of-payments of Statistics Canada.

⁹⁸ Pending the availability and quality of data collected.

CHART 10 (Continued)



A sectoral⁹⁹ analysis of services traded in Canada (see Chart E in the Annex) indicates that between 1967 and 1997, the relative share of exports of commercial services increased, while that of transportation, travel and government services declined. On the import side, a similar but less pronounced trend is seen on Chart F in the Annex. In 1997, commercial services had the largest share of services imports with 48% followed by travel at 29% and transportation at 20%. It is also interesting to point out the share that the exports of transportation and of commercial services had thirty years ago. In 1967, 54% of exports were of transportation versus 13% for commercial services.

Overall, for all service sectors, the annual growth in 1997 was dominated by sectors from commercial services. Exports of non-financial commissions grew by 25%, followed by "other financial services" with 19.5%. On the import side, construction services led with 46.2%¹⁰⁰, followed by computer and information services with 17.5% (see Table 6).¹⁰¹

The reduction in the service trade deficit in 1997 was due to a lower deficit in the transportation segment induced mainly by lower deficits in air and water sea-borne transportation services.

⁹⁹ Data by Statistics Canada on trade in services is divided into four broad sectors: travel, transportation, commercial and government.

¹⁰⁰ Construction services data are subject to the size of construction contracts. Hence, it may lead to large annual fluctuations in the results.

¹⁰¹ Given the nature of their activities, sectors such as management, computer, legal services and others contribute in a substantial matter to the production of goods and services. These services, when used as inputs, do not appear in services statistics. The efficiency of these service sectors influence the trade performance of goods.

TABLE 6

**TRADING SECTORS IN CANADA
-ANNUAL CHANGE (%) IN 1997-**

Exports	(%)	Imports	(%)
Non-financial commissions	25.0	Construction services	46.2
Other financial services	19.5	Computer and information services-	17.5
Management services	16.7	Non-financial commissions	9.9
Land and other transportation	10.9	Land and other transportation	7.2
Air transport	7.3	Air transportation	5.6

Source: Statistics Canada, #67-203

-Commercial services

In 1997, commercial services exports and imports totaled 20.1 and 22.6 billion in current dollar terms. Chart G in the Annex breaks down Canada's importing and exporting in the commercial service sectors.¹⁰² Between 1992 and 1997, exports of commercial services grew by 12.8% and imports grew by 9.5% in current Canadian dollars. Exports of royalties and license fees rose the most, showing an average growth of 22.5 % a year followed by architectural and engineering services with 20%. However, insurance comprised the highest exports and imports "product" in value terms, accounting for 3.8 billion each in 1997. Within that same sector, reinsurance life (both exports and imports) represented 2 billion.

On the import side, as set out in Chart H in the Annex, the growth in construction soared during that same period to reach an average of 46.4% a year. The second greatest increase was in advertising and related services, recording an increase of 15%.

A breakdown by country in 1996 revealed that more than 60% of Canada's exports of commercial services went to the US with the exception of architectural and engineering services, which were mainly exported to the "other market" category (Chart I in the Annex). Canadian imports came mainly from the US, especially management services, miscellaneous services to business¹⁰³ and royalties and license fees. Canada also imported "other financial services" from the EU and architectural and engineering services in "other countries" (see Chart J in the Annex).

¹⁰² The breakdown is built by broad commercial services sectors (ex insurance) which include sub-categories (ex: life insurance).

¹⁰³ It includes tooling and other services, real estate services for hotels and resorts, medical and dental laboratories, etc.

One of the most important components related to commercial services is trade with foreign affiliates. Table 7 shows the relationship between Canadian trade of commercial services by percentage of trade with foreign affiliates and by country of control. There are several interesting features to be noticed in the table. First, for the years 1993 and 1996, Canada ran a global trade deficit with affiliated companies for commercial services (i.e. there are more trade from foreign affiliates in Canada than from Canadian affiliates abroad) as shown by the numbers in brackets.

Second, since 1993 there has been a marginal decrease of Canadian exports and imports of commercial services with affiliates. The share of Canadian exports to all affiliates abroad remained fairly steady at 35% between 1993 and 1996 while imports declined from 51.2% to 50%. Since 1993, there have been generally more arms' length transactions by Canada with its trading partners, i.e., more exports and imports are being traded with non-affiliated enterprises, except for exports with the US.

TABLE 7

COMMERCIAL SERVICES TRADE WITH AFFILIATES BY COUNTRY OF CONTROL
AND MAIN TRADING PARTNERS
(Billion of Can \$ and percentage)

	1993		1996	
	Exports 13.1\$B	Imports 16.9\$B	Exports 19.5\$B	Imports 22.5\$B
Share of commercial services trade by main trading partners				
-All countries	100% (35.6)	100% (51.2)	100% (35.4)	100% (49.7)
-United States	63.5% (39.9)	71.4% (59.0)	62.2% (41.6)	72.7% (56.2)
-European Union	11.7% (37.6)	12.3% (41.2)	13.7% (35.5)	11.8% (36.8)
-Other countries	24.8% (23.8)	16.3% (24.4)	24.1% (19.2)	15.5% (28.7)
Share of commercial services trade by country of control				
-Canada	68.8% (21.4)	45.6% (14.3)	67.7% (23.2)	44.7% (12.6)
-United States	21.2% (66.8)	43.7% (85.0)	22.1% (60.0)	42.3% (84.7)
-Other countries	10.0% (67.0)	10.7% (70.7)	10.2% (63.2)	13.0% (63.0)

Source: Statistics Canada # 67-203

N.B.: Numbers in brackets represent the percentage of foreign affiliates.

Third, the US remains our main trading partner in terms of trade with affiliates, followed by the EU. The US share of Canadian trade with affiliates increased over the 1993-1996 period.¹⁰⁴ In 1996, 41.6 % of our exports of services went to Canadian affiliates in the US, compared to 40% in 1993. However, imports of commercial services of US affiliates in Canada accounted for 56.2%, a decrease of 2.8% from 1993.

Fourth, foreign-controlled companies traded more services through their affiliated companies than the Canadian-controlled companies. Canadian controlled companies dominated exports with 67.7% in 1996 compared to 44.7% for imports. Out of the 67.7% of exports, only about a quarter of such exports was conducted through Canadian affiliates. Foreign controlled firms in Canada, however, exported almost two-thirds of services through their affiliates. On the import side, the US-controlled firms imported more, up to 85%, than exported services from its affiliates abroad.

Most activities with Canadian affiliates abroad are concentrated in the "miscellaneous services to business" and research and development categories while activities of foreign affiliates in Canada are also concentrated in "miscellaneous services to business" as well as in management services and royalties and license fees. For arm's length trade, Canadian exports came mainly from insurance activities and architectural and engineering services. Imports came from insurance and computer services.

-Provincial services trade

Although service exports as a share of total Canadian exports accounted for about 15% of that total, they represented 44% of interprovincial exports in 1996, a substantial increase of 12% since 1984. Interprovincial exports in Canada are dominated by service industries such as wholesale, transportation, and financial services, which accounted for 17, 14 and 14 billion respectively in 1996.

Services also play an important role domestically through the jobs and output generated by interprovincial and international trade.¹⁰⁵ A review by sector indicates that the top five sectors contributing the most to GDP generated by interprovincial exports were the following services sectors: wholesale, finance and real estate, transportation, business services and communications services. Ontario represented half of Canadian interprovincial services exports with almost two-third of its exports concentrated in financial services.

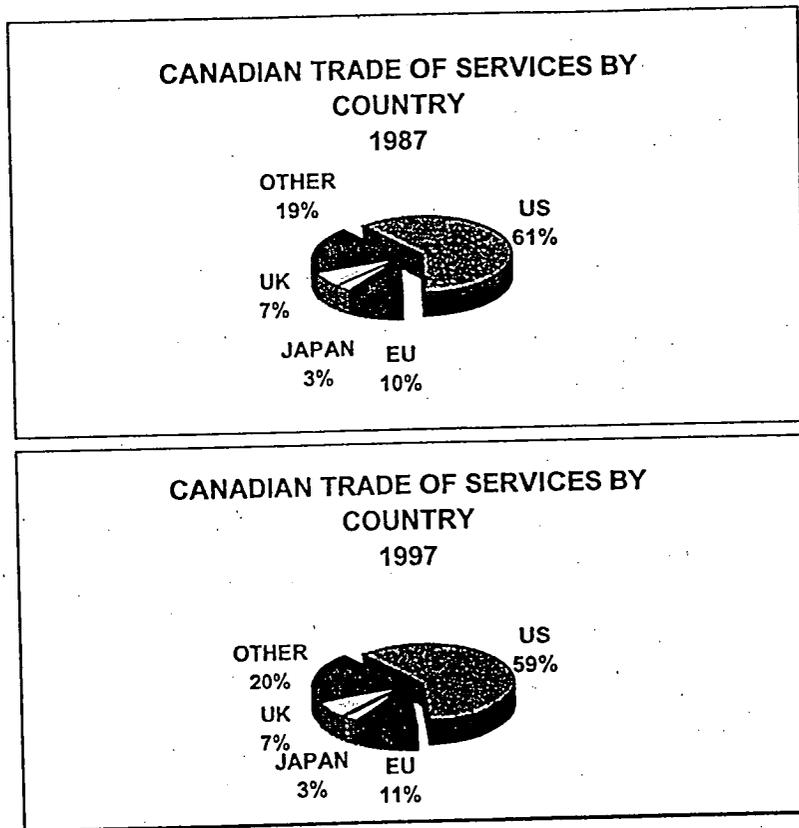
¹⁰⁴ Services can also be provided through foreign branches or with associates.

¹⁰⁵ In 1990, interprovincial exports generated by service industries had a larger impact, about 60%, in terms of GDP and employment than exports generated by manufacturing industries which are responsible for 60% of interprovincial flows of exports.

-Service trade by main trading partners

While Canadian merchandise trade (exports and imports) with the US represents 84% of total Canadian merchandise trade, trade in services is slightly more diversified. Chart 11 shows that between 1987 and 1997, the share of services (exports and imports) shifted from the US to "other" countries by 2 percent from 61% and 59%. Canadian trade with the EU, UK and Japan has remained the same over the period.¹⁰⁶The US has been Canada's main trading partner for services since the beginning of the sixties. Canada has always run a deficit of its services account with the US (except in 1966); and in 1997, the deficit was 6 billion.

CHART 11



Source: Statistics Canada, catalogue # 67-203

Table 8 presents a portrait of Canada's main trading partners. From 1987 to 1997, the table indicates that Canada had the largest growth of services with "other countries", mainly due to an increased trade with South Korea, Brazil and other Asian countries. In 1997, Canada had the largest annual growth of exports with the US and the largest growth of imports from the EU. Our main trading partner, the US, accounted for an average of

¹⁰⁶ Services statistics collected do not permit to get a detailed breakdown by country. However, a breakdown for commercial services is available.

about 8% growth during 1987-1997, and remains by far Canada's most important trading partner in absolute terms.

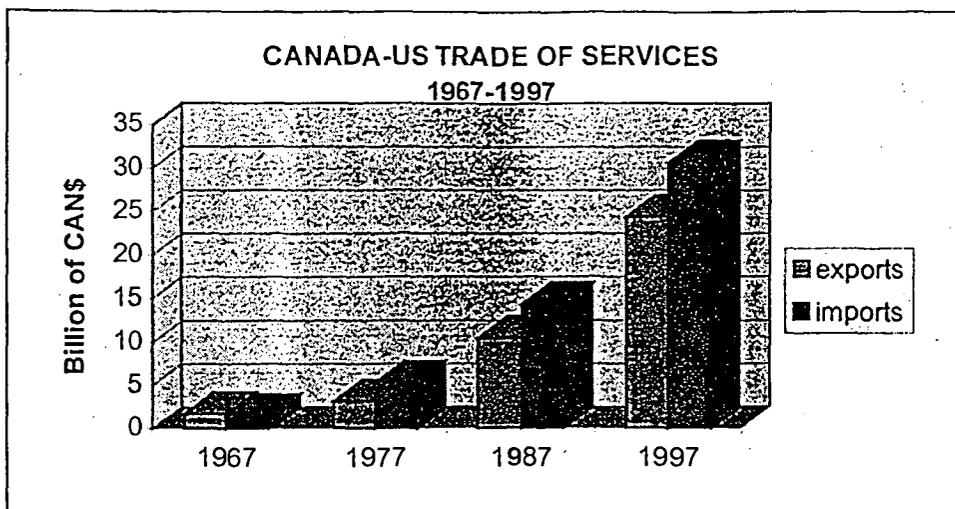
TABLE 8
CANADIAN SERVICES TRADE BY MAIN TRADING PARTNERS
(billion of CANS)

Country/ Period	1987		1997		Average annual growth (87-97) (%)		Growth rate (1997-96) (%)	
	Exports	Imports	Exports	Imports	Exports	Imports	Exports	Imports
United States	10.5	14.3	24.4	30.7	8.2	7.7	6.9	-0.6
European Union (ex:UK)	1.6	2.6	4.5	5.5	11.6	8.3	0.3	4.8
United Kingdom	1.0	1.8	2.6	3.6	10.4	6.7	10.6	21.0
Japan	0.6	0.6	1.5	1.0	10.4	5.7	-1.8	4.6
Other countries	3.6	4.1	8.6	9.5	9.4	9.6	-3.0	3.4

Source: Statistics Canada #67-203

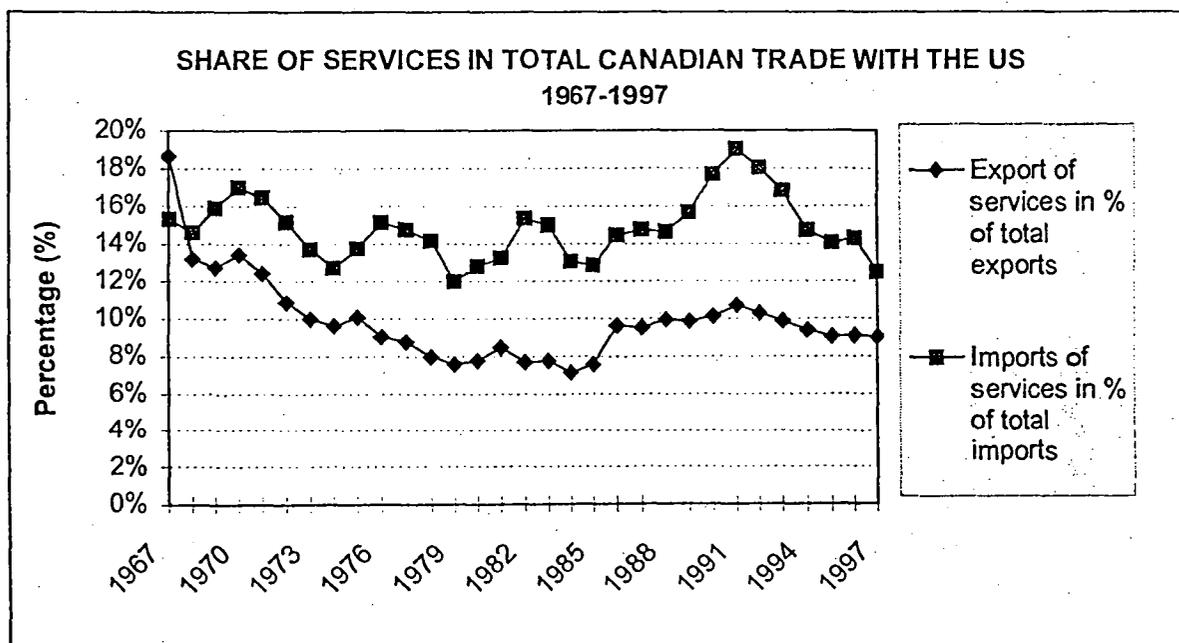
The US has been Canada's main trading partner both for services and goods for many decades. Service exports as a share of total Canadian exports to the US, as shown on Chart 13, have been around 10% since 1987. In 1997, Canada's exports of services to the US represented \$24.4 billion, with imports at \$30.7 billion (see Chart 12). Canada's deficit in services was \$6.2 billion in 1997, a decrease of 22 percent from 1996 (see Chart K in the Annex). This change was due mainly to a reduction in the commercial services with the US. The services trade deficit with the US is a part of Canada's overall trade balance. Overall, Canada in 1997 had a merchandise trade surplus with the US of \$32.6 billion. The net Canadian trade surplus (goods and services) with the US was therefore about \$26 billion in 1997.

CHART 12



Source: Statistics Canada, matrix # 2369.

CHART 13



Source: Statistics Canada, matrix # 2369

Chart 13 shows that services has become generally less important in terms of total Canadian trade with the US in the last thirty years. Since 1992, there has been a decrease in both the shares of services in total exports to the US and imports from the US.

Some interesting trends are also seen in Table 9, which shows the share of US in Canadian trade in services. For example, the US share in Canadian services exports has declined from 74% in 1967 to 59% in 1997. The US share in Canada's imports of services decreased slightly from 63% in 1967 to 61% in 1997. This means Canada services exports have diversified. One reason for that may be technology, with the result that proximity of the market is now less a factor for Canadian services exports. Overall, Canada's average growth rate of exports and imports of services in nominal terms with the US was about the same, at 8 percent between 1987 and 1997. Canada's export growth rate to the US increased by 7% in 1997 while imports slightly decreased by 0.6% (see Table 10).

TABLE 9

CANADA-US TRADE SHARES

	1967	1977	1987	1997
Share of US in Canadian services exports	73.8%	57.8%	60.6%	58.8%
Share of US in Canadian services imports	63.1%	58.7%	61.2%	60.9%

Source: Statistics Canada #63-207, Matrix #2369

TABLE 10

**AVERAGE ANNUAL GROWTH RATES
1987-1997**

	Average annual growth 1987-97	Average annual growth 1997-96
Canadian services exports to the US	8.2%	6.9%
Canadian services imports from US	7.7%	-0.6%

Source: Statistics Canada #63-207, Matrix #2369

SECTION 6

CONCLUDING OBSERVATIONS

This paper has reviewed some key issues and trends in the service sector in Canada and in other developed countries. During the last few decades, there has been a shift in employment and output in the developed countries from the manufacturing and resources sectors to the service sector. This gradual shift has been referred to as the "structural shift". With respect to trade, it is important to recall the developments in information technologies and communication that have accompanied the structural shift. These developments have revolutionized the organizational structure of businesses and the mean by which some services could be traded without requiring the simultaneous presence of the producer and consumer.

The difficulty of measuring the output of service and the lack of detailed and reliable data on trade in services appears to be the main cause for the general misunderstanding about the role of services. Moreover, the study noted that trade in services is underestimated not only because of the quality of service data, but also because most services are indirectly traded through their embodiment in traded goods. The total contribution of services to trade is greater than figures on trade in services would indicate.

The paper concluded that growth in the service sector has a considerable bearing not only on the ability of Canadian service industries to trade directly with foreigners, or indirectly through foreign affiliates, but also on the overall competitiveness of goods producing industries which use services as inputs. There is a relationship between trade in goods and the domestic service sector. The growth in the output of service is likely to be generated by an increase in the output of goods.

It was also found that the structural shift that occurred in recent decades in favor of increased employment and GDP in services has neither resulted in the disappearance of the manufacturing sector nor led to any negative effects on the economy. On the contrary, a large share of domestic growth could be attributed to the output growth of services resulting from higher interdependencies between both manufacturing and services industries. More service production is expected to be generated by the increase in goods output than if service output increases. Service industries tend to generate spillover effects on the economy as they create a need for high-skilled labour force, a continuing development in information technologies and R&D, a low-cost and efficient transportation system, and modern telecommunication networks. These factors have a considerable bearing on a country's ability to increase its overall level of competitiveness.

Our empirical results have shown that Canada's economy, like those of most OECD countries, has performed well in terms of its share of services in total employment and GDP. Canadian service industries, as well as those in other developed countries, are

mainly concentrated in the growing sector of commercial services. With respect to trade, Canada was the 15th largest exporter of services and the 9th largest importer of services in 1996. The share of services represented 14% of total Canadian trade in 1997. Developed countries have largely dominated Canada's trade in services, in particular by the US. On a sectoral basis, commercial services, in particular insurance services, contributed to the reduction in the services deficit during the last two years in Canada.

In respect to the upcoming WTO negotiations on services, this paper provides a context for undertaking further analytical work. In particular the following issues are relevant:

- To take advantage of market opportunities internationally and compete domestically against foreigners in respect to services, a country must build an economic and social environment that will develop factors such as capital and labour;
- The cost structure of service providers and their overall competitiveness are influenced by a variety of factors, including the pace of domestic regulatory reforms as well as the reduction in the number of services monopolies. A reduction in these impediments would improve the efficiency of the service sector;
- The relationship of service inputs and goods must be kept in mind. Increased efficiency in the service sector implies positive effects for businesses using services as inputs. Hence, the potential for increased exports of goods rises;
- Trade in goods also influences services. Trade facilitation initiatives that result in an increase in the output of goods, will also influence the demand for services;
- Policies that impede the free movements of factors like capital and labour could have a considerable impact on our ability to produce more efficiently in Canada and on our overall competitiveness in trade in services;
- Sales through foreign affiliates are important. Since a large share of world services transactions are conducted through foreign affiliates, the choice of policies affecting these sales and foreign direct investment are important;
- Policy makers have tended to view the different WTO agreements in a rather distinct manner, except for general principles. However, as pointed out above, the impact of liberalization commitments undertaken for certain goods, e.g., the recent ITA, may have a significant impact on the development of some services products. Alternatively, a decision taken not to liberalize in one sector could have

a negative effect on service activities¹⁰⁷; and

- Although the potential WTO agreements could be negotiated separately, it would be prudent to recognize the mutual interdependencies of the policies influencing both the service and goods sectors, not only in respect to trade but also in respect to investment.

¹⁰⁷ For instance, agreements in the transportation industries could lead to decreased global transportation costs, thereby fuelling growth in trade (transportation cost significantly affect trade of most goods and services).

BIBLIOGRAPHY

- Bhagwati. "International Trade in Services and its Relevance for Economic Development", in Giarini, Orio. ed. *The Emerging Service Economy*. "International Trade in Services and its Relevance for Economic Development", Geneva: Services World Forum, 1987.
- Bhagwati, J.N. "Splintering and Disembodiment of Services and Developing Nations", *World Economy*, 7:2, 1984.
- Economic Council of Canada. *Employment in the Service Economy*. Ottawa: Canada Communication Group, 1991.
- The Economist. "The ups and downs of services". London: The Economist, 6 July 1996.
- Francois, Joseph F., and Kenneth A. Reinert. "The Role of Services in the Structure of Production and Trade: Stylized Facts from a Cross-Country Analysis". Staff Working Paper ERAD-96-002. Geneva: World Trade Organization, March 1996.
- Gault, F.D. *Research and Development in a Service Economy*. Analytical Paper Series No. 12. Ottawa: Statistics Canada, July 1997.
- Giarini, Orio. ed. *The Emerging Service Economy*. Geneva: Services World Forum, 1987.
- Griliches, Zvi. ed. *Output Measurement In The Service Sectors*. Studies in Income and Wealth, Vol. 56. National Bureau of Economic Research, 1992.
- Grubel, Herbert G. ed. *Conceptual Issues In Service Sector Research: A Symposium*. The Economics of the Service Sector in Canada Series. Vancouver: The Fraser Institute, 1987.
- Grubel, Hebert G., Michael A. Walker. eds. *Service Industry Growth, Causes and Effects*. The Economics of the Service Sector in Canada Series. Vancouver: The Fraser Institute, 1989.
- Guile, Bruce R., and James Brian Quinn. eds. *Technology in Services: Policies for Growth, Trade, and Employment*. Technology and Social Priorities Series. Washington, D.C.: National Academy Press, 1988.
- Krommenacker, Raymond J. *World-Traded Services: The Challenge for the Eighties*. Dedham: Artech House, Inc., 1984.

- Kutscher, Ronald E. "Growth of Services Employment in the United States", in Guile, Bruce R., and James Brian Quinn. eds. *Technology in Services: Policies for Growth, Trade, and Employment*. Technology and Social Priorities Series. Washington, D.C.: National Academy Press, 1988.
- Lee, Jaewoo. "Do Services Temper Business Cycles?: Implications of the Rising Service Sector". Irvine Economic Paper No. 95-96-3. University of California, February 1996.
- McKenzie R.B. "The Emergence Of The 'Service Economy': Fact or Artifact?" in Grubel, Herbert G. ed. *Conceptual Issues In Service Sector Research: A Symposium*. The Economics of the Service Sector in Canada Series. Vancouver: The Fraser Institute, 1987.
- McRae, James J. McRae and Martine M. Desbois. eds. *Traded and Non-traded Services: Theory, Measurement and Policy*. Proceedings of a Service Sector Roundtable June 2-4, 1987 Toronto, Ontario. Halifax: The Institute for Research on Public Policy, 1988.
- Melvin, James R. *Trade in Services: A Theoretical Analysis*. Halifax: The Institute for Research on Public Policy, 1989.
- Nusbaumer, Jacques. *Les Services. Nouvelle Donne De L'Économie*. Paris: Economica, 1984.
- OCDE. *Science, Technologie et Industrie*. Tableau De Bord D'Indicateurs 1997. Paris: OCDE, 1997.
- OECD. *Services Statistics on Value Added and Employment*. Paris: OECD, 1996a.
- OECD. *Technology, Productivity and Job Creation*. Vol. 2, Analytical Report. Paris: OECD, 1996b.
- Rada, Juan F. "Information Technology and Services" in Giarini, Orio. ed. *The Emerging Service Economy*. Geneva: Services World Forum, 1987.
- Riddle, Dorothy I. *Service-Led Growth*. The Role of the Service Sector in World Development. Westport: Praeger Publishers, 1986.
- Statistics Canada. *Gross Domestic Product, October 1997*. Ottawa: Statistics Canada, 1998.

Statistics Canada. *Canada's Information Technology Sector*. Industry Profile Series. Ottawa: Statistics Canada, 1996.

Statistics Canada. *Canada's International Transactions in Services 1961 to 1996*. Ottawa: Statistics Canada, June 1997.

Statistics Canada. *Implementation in Canada of the International Standards for Service Trade – On With the Fifth*. Ottawa: Statistics Canada, 1996.

Statistics Canada. *Perspectives On Labour and Income*. "A Recession for Whom?". Ottawa: Statistics Canada, Winter 1993.

Statistique Canada. *Les retombées économiques du commerce interprovincial au Canada*. Ottawa: Statistics Canada, 1996.

UNCTAD and World Bank. *Liberalizing International Transactions in Services: A Handbook*. Geneva: United Nations, 1994.

World Trade Organization. *WTO Annual Report 1997, Volume I & II*. Geneva: WTO, 1997.

ANNEX

TABLE A

**SHARE OF SERVICES IN TOTAL EMPLOYMENT
G-7 COUNTRIES, 1992**

	Share of services/total employment
Canada	73.23 %
US	73.46%
Japan	57.14%
France	67.1%
UK	72.03%*
Germany	58.46%
Italy	61.85%

Source: OECD 1996

Note: 1992 is the most recent year where common data were available for most countries.

(*): UK data is based on "employees" using the OECD Table B rather than "total employment" using OECD Table A.

TABLE B

**SHARE OF SERVICES IN TOTAL GDP
G-7 COUNTRIES, 1993**

	Share of services/total GDP
Canada	66,43 % (1986)
US	69,33 % (1987)
Japan	62,44 % (1990)
France	62,1 % (1980)
UK	71,46%*
Germany	60,77 % (1991)
Italy	54,38 % (1985)

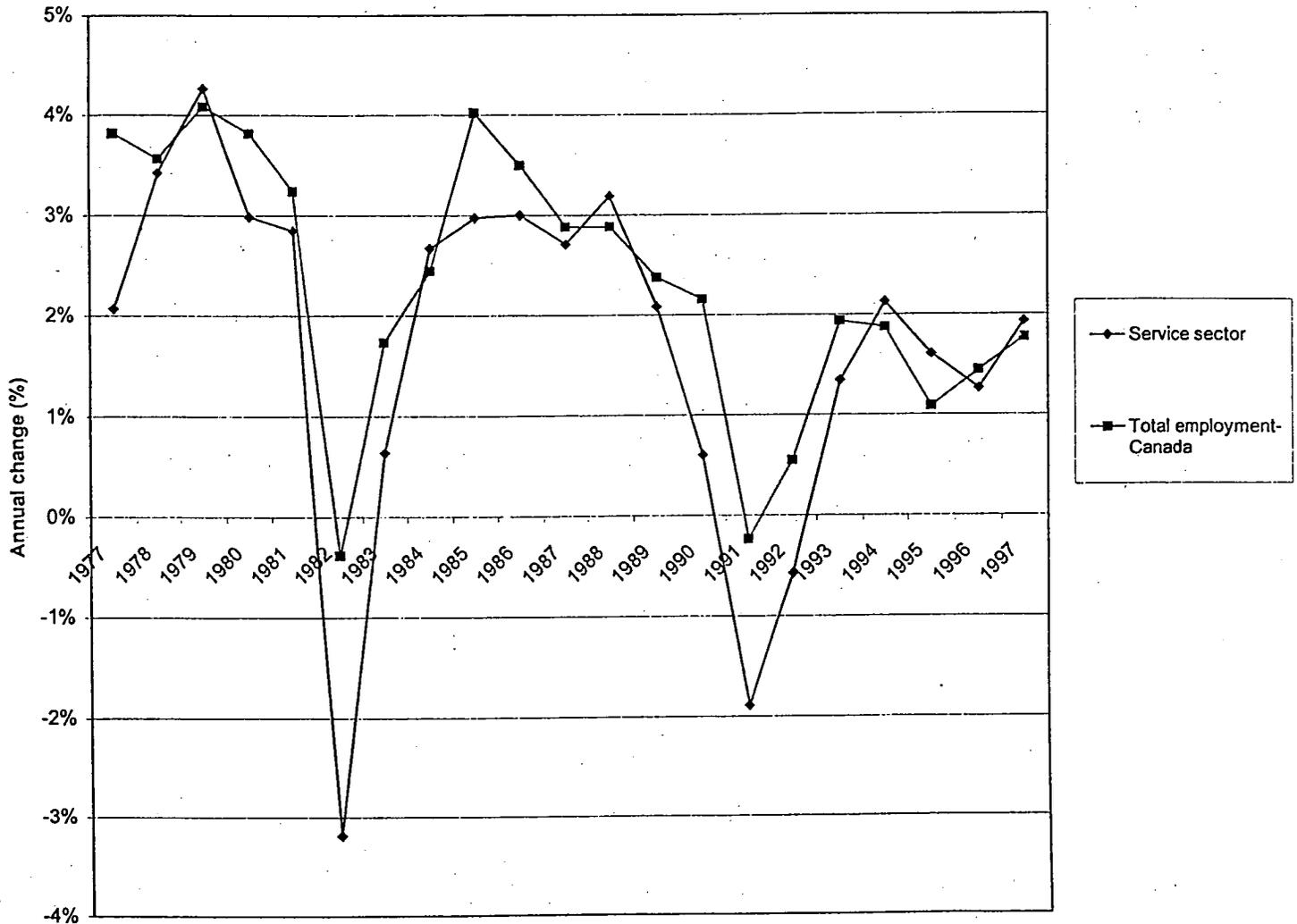
Source: OECD 1996

*: value represented in current prices

Values in brackets represent the year of constant prices

CHART A

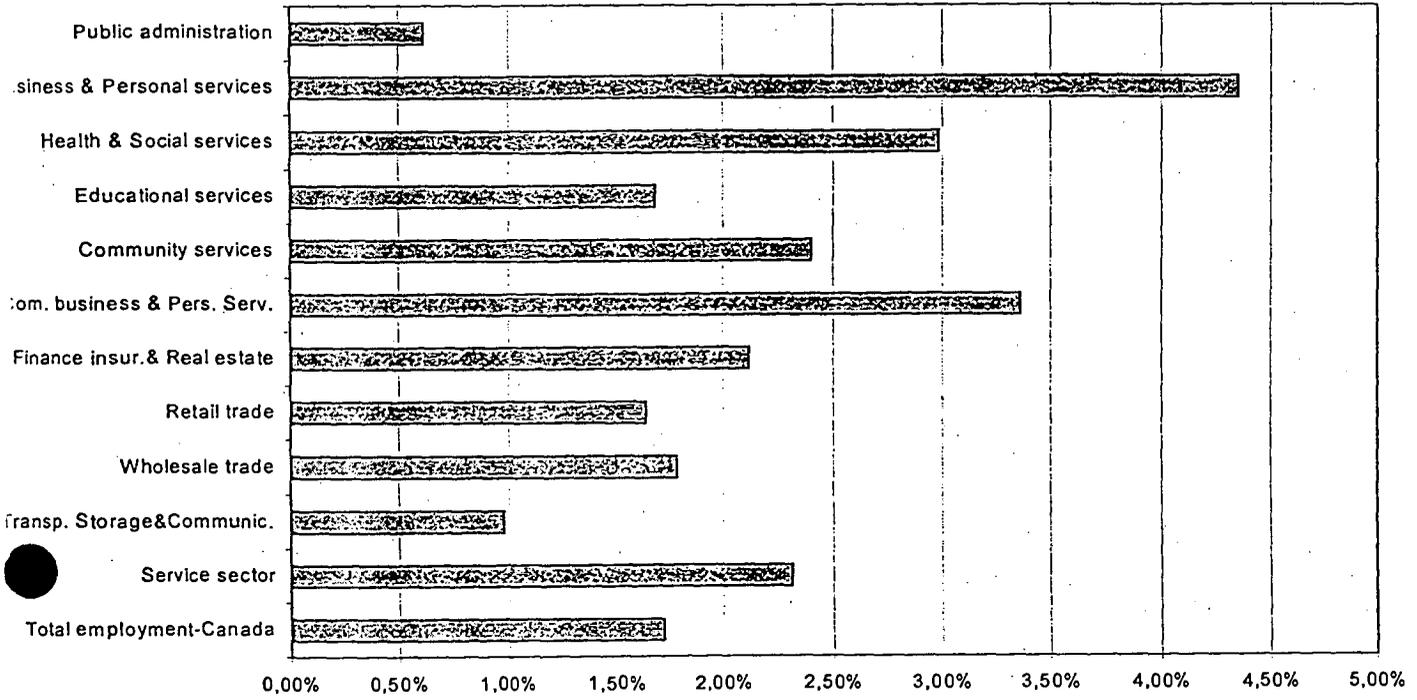
GROWTH IN EMPLOYMENT IN CANADA 1977-1997



Source: Statistics Canada

CHART B

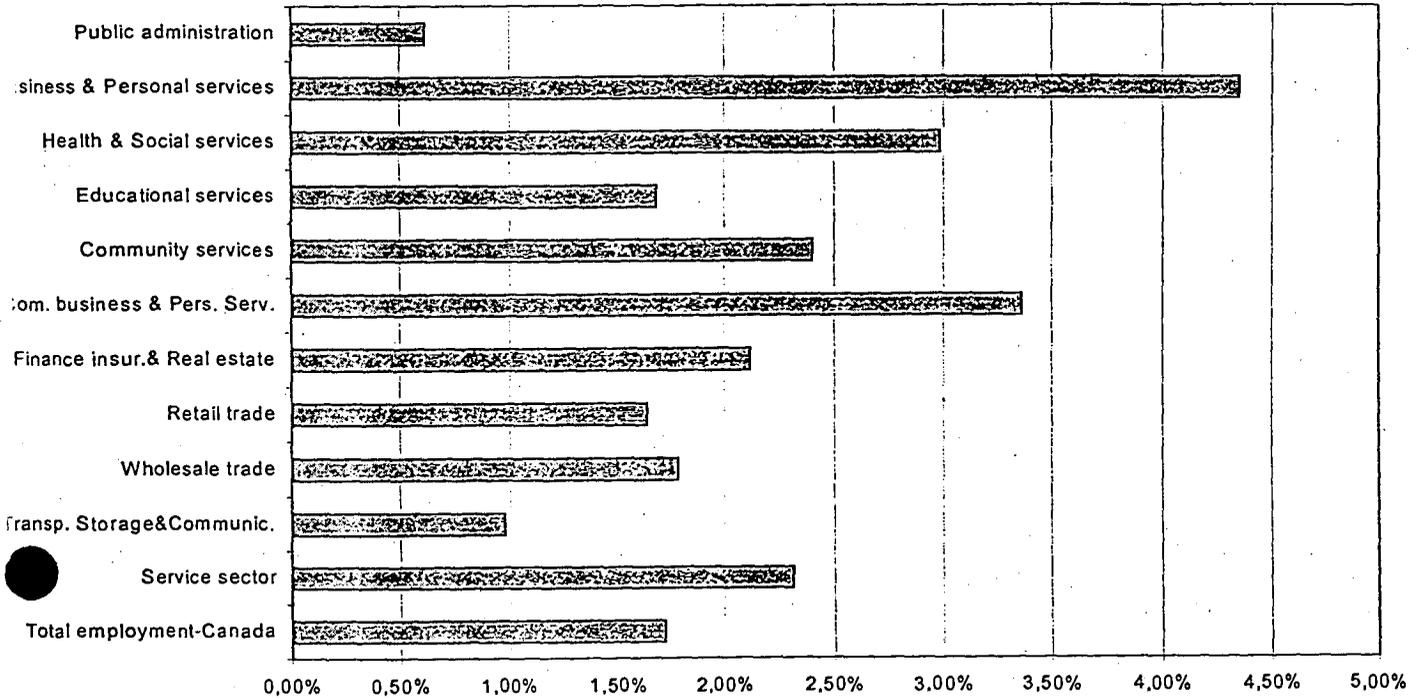
GROWTH IN EMPLOYMENT IN CANADIAN SERVICES INDUSTRIES
Average annual growth
1977-1997.



Source: Statistics Canada

CHART B

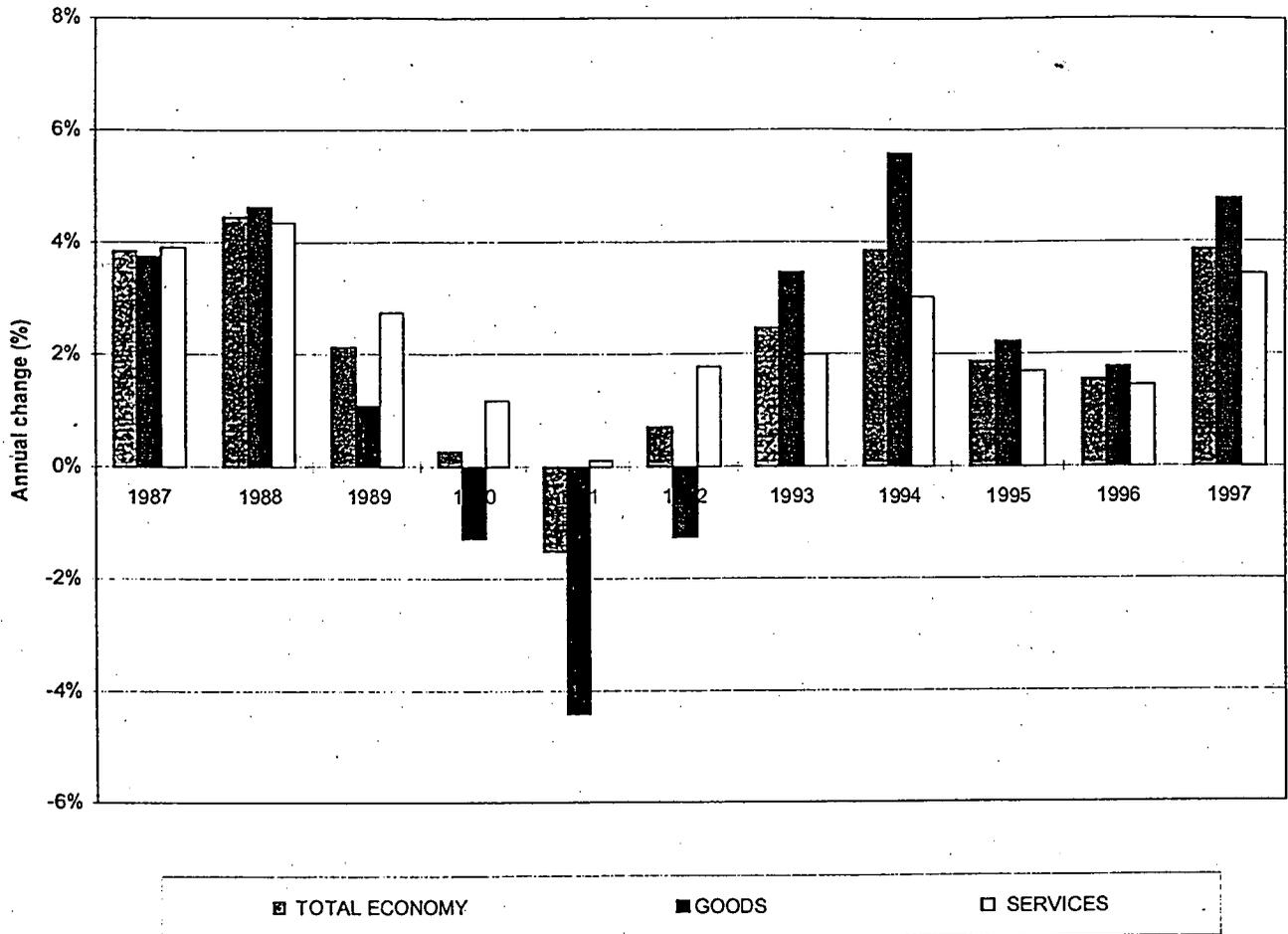
GROWTH IN EMPLOYMENT IN CANADIAN SERVICES INDUSTRIES
Average annual growth
1977-1997



Source: Statistics Canada

CHART C

GROWTH OF CANADIAN GDP
1987-1997
(1992 constant dollars)



Source: Statistics Canada

TABLE C

**WORLD COMPARISON
SERVICES-MERCHANDISES**
(billions \$US)
1985-1990-1996

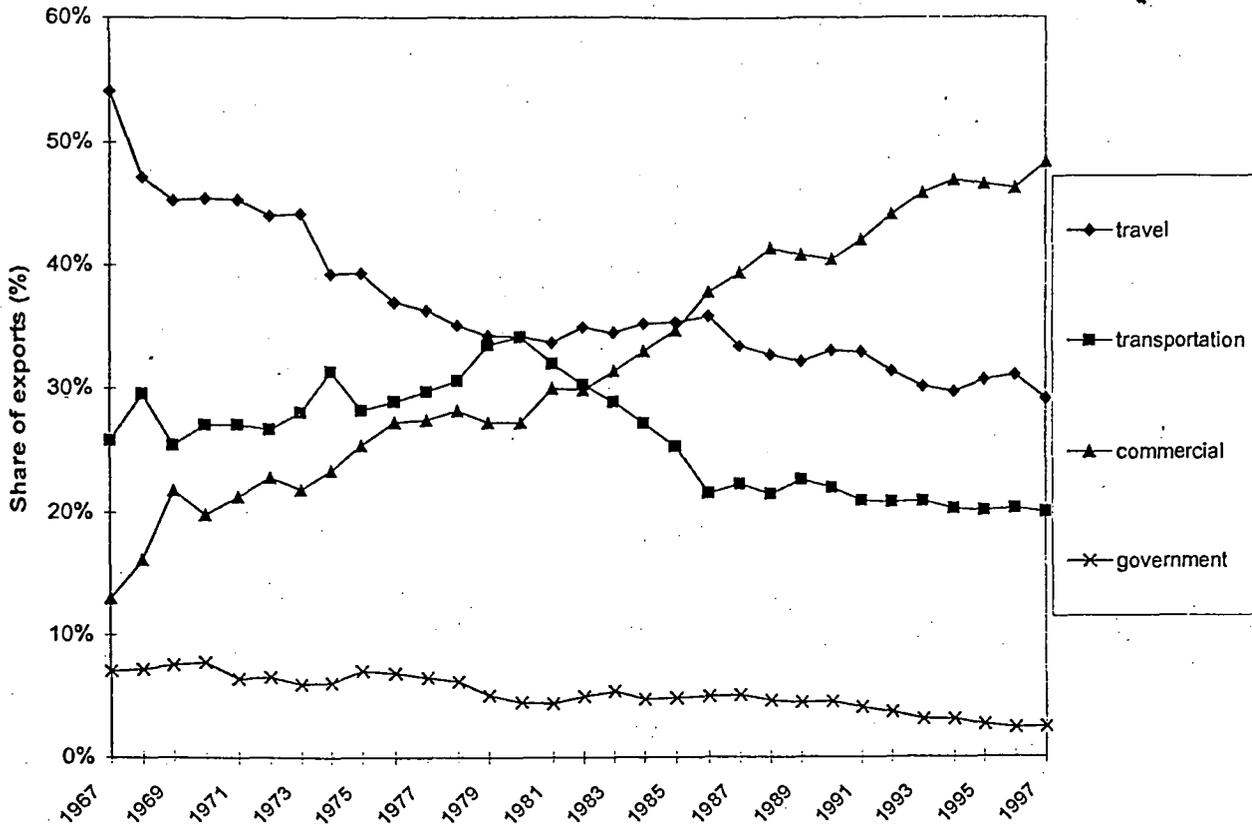
	1986	1990	1996	Annual change 96-95	Average annual change 1986-96
Services exports	449.6	802.2	1,258	5.0%	11.6%
Balance of services	(3.1)	(30.9)	(9.0)		
Merchandise exports	2,137	3,437	5,271	4.7%	9.6%
Balance of merchandises	(64.0)	(100.0)	(148.0)		
Total services (exports & imports)	902.3 (17.2%)	1,635.3 (18.9%)	2,252.1 (19.0%)	4.6%	11.4%
Total merchandises (exports & imports)	4,338 (82.8%)	6,974 (81.1%)	10,203.0 (81.0%)	4.8%	9.6%
Total	5,240.3	8,594.2	13215.1	6.8%	9.9%

Source: WTO Annual Report 1996 and 1997 Volume II

Note: Percentages in brackets represent shares of services and merchandises in world trade.

CHART E

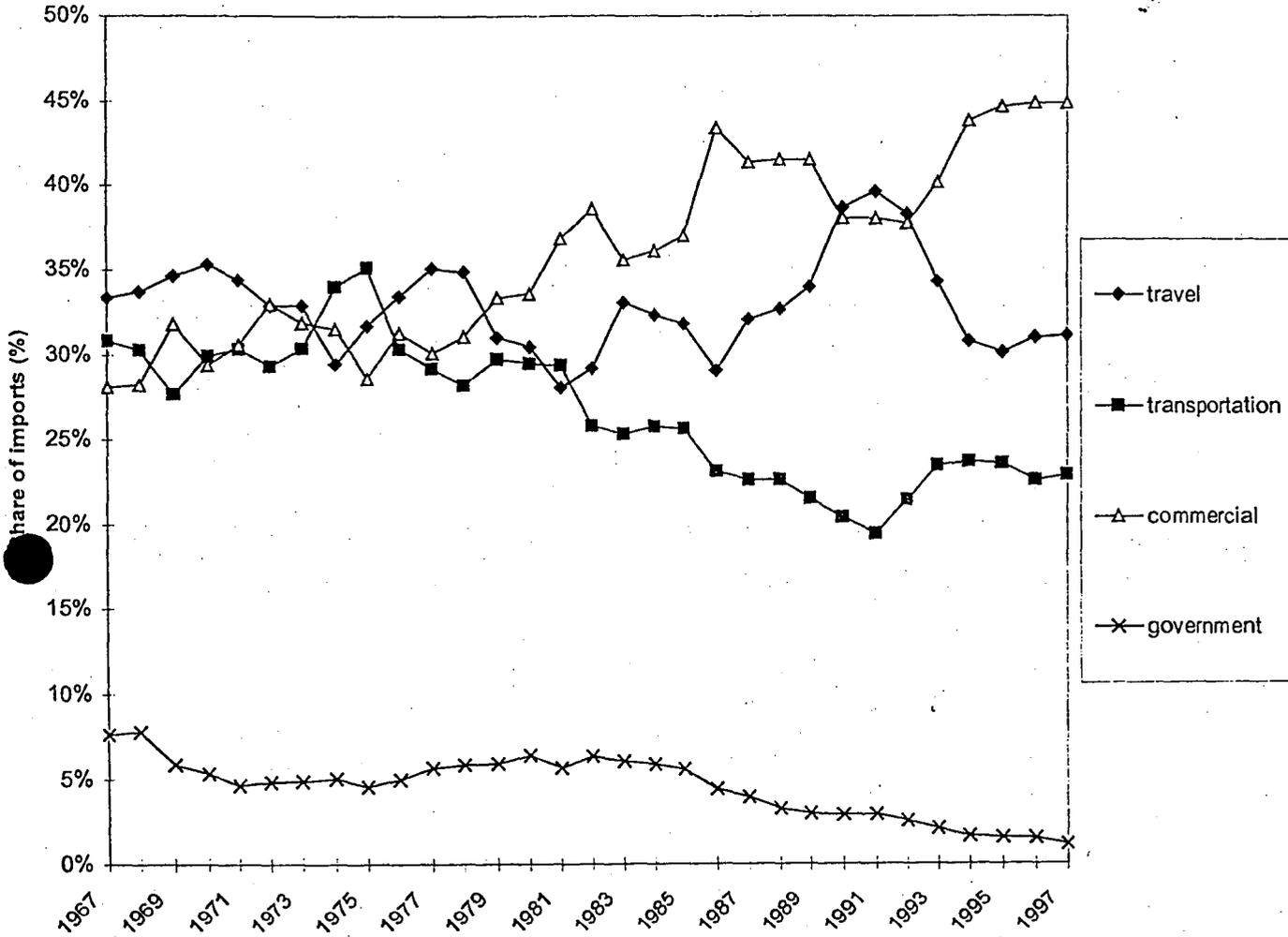
COMPOSITION OF CANADIAN SERVICES EXPORTS 1967-1997



Source: Statistics Canada

CHART F

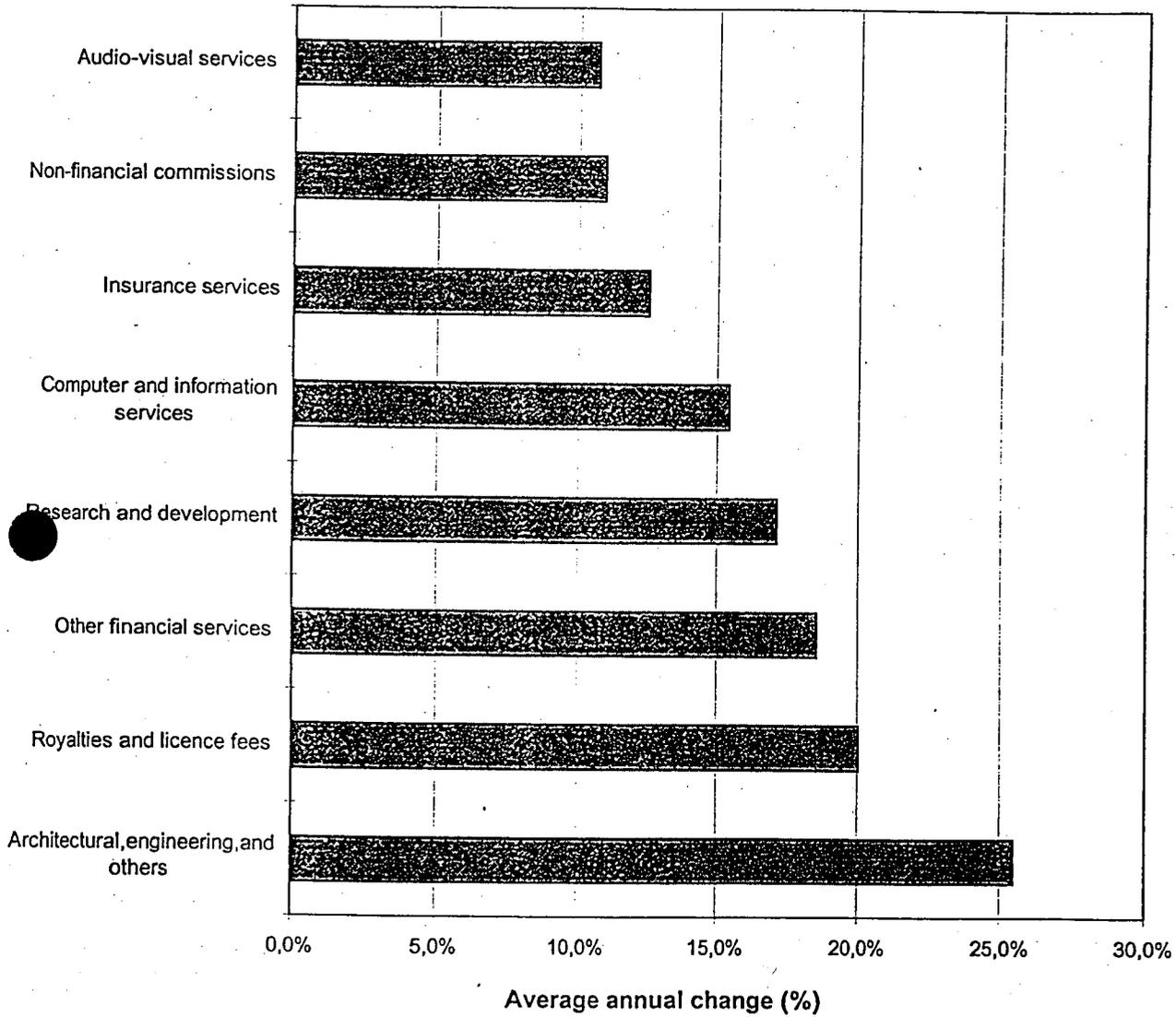
COMPOSITION OF CANADIAN SERVICES IMPORTS
1967-1997



Source: Statistics Canada

CHART G

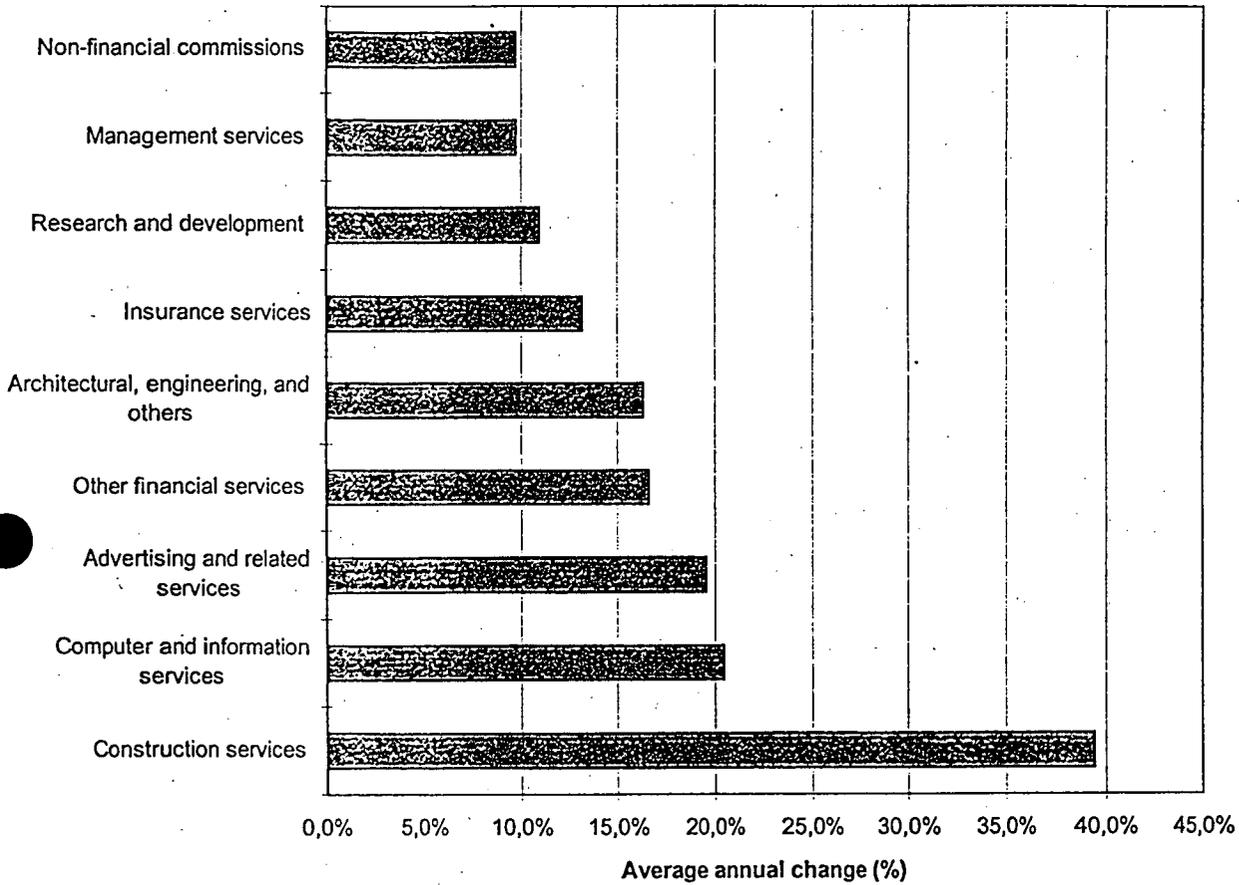
GROWTH OF CANADIAN COMMERCIAL SERVICES EXPORTS
1990-1996



Source: Statistics Canada

CHART H

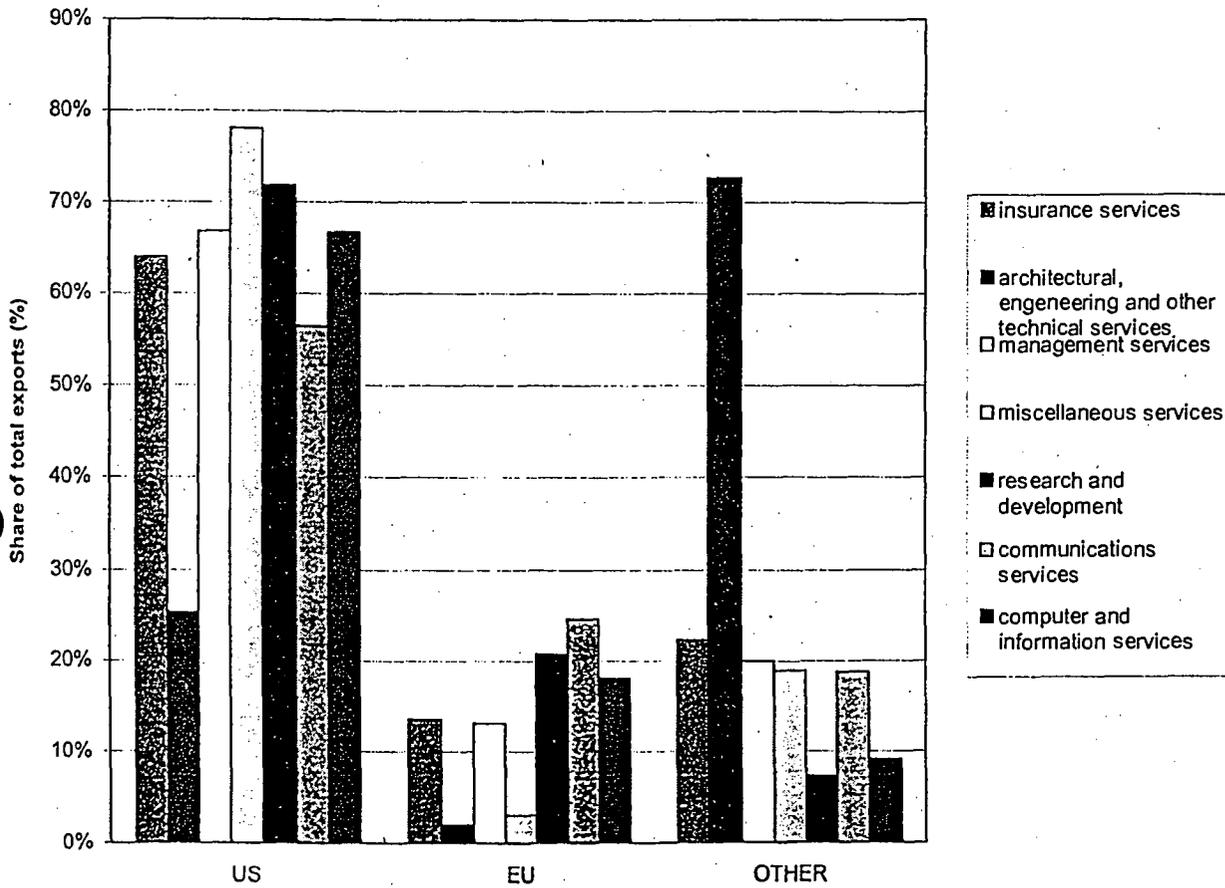
GROWTH OF CANADIAN COMMERCIAL SERVICES IMPORTS
1990-1996



Source: Statistics Canada

CHART I

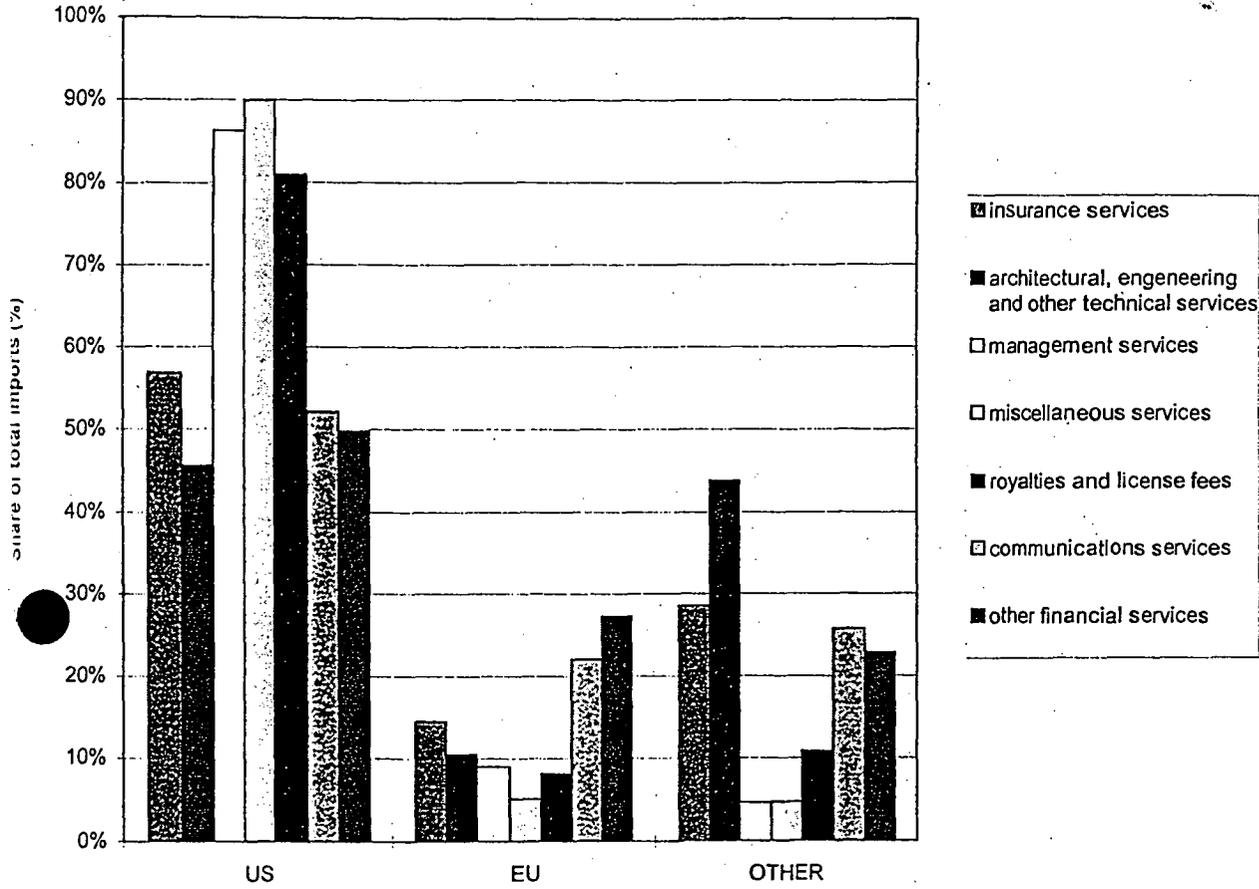
CANADIAN COMMERCIAL SERVICES EXPORTS BY REGIONS AND SECTORS
1996



Source: Statistics Canada

CHART J

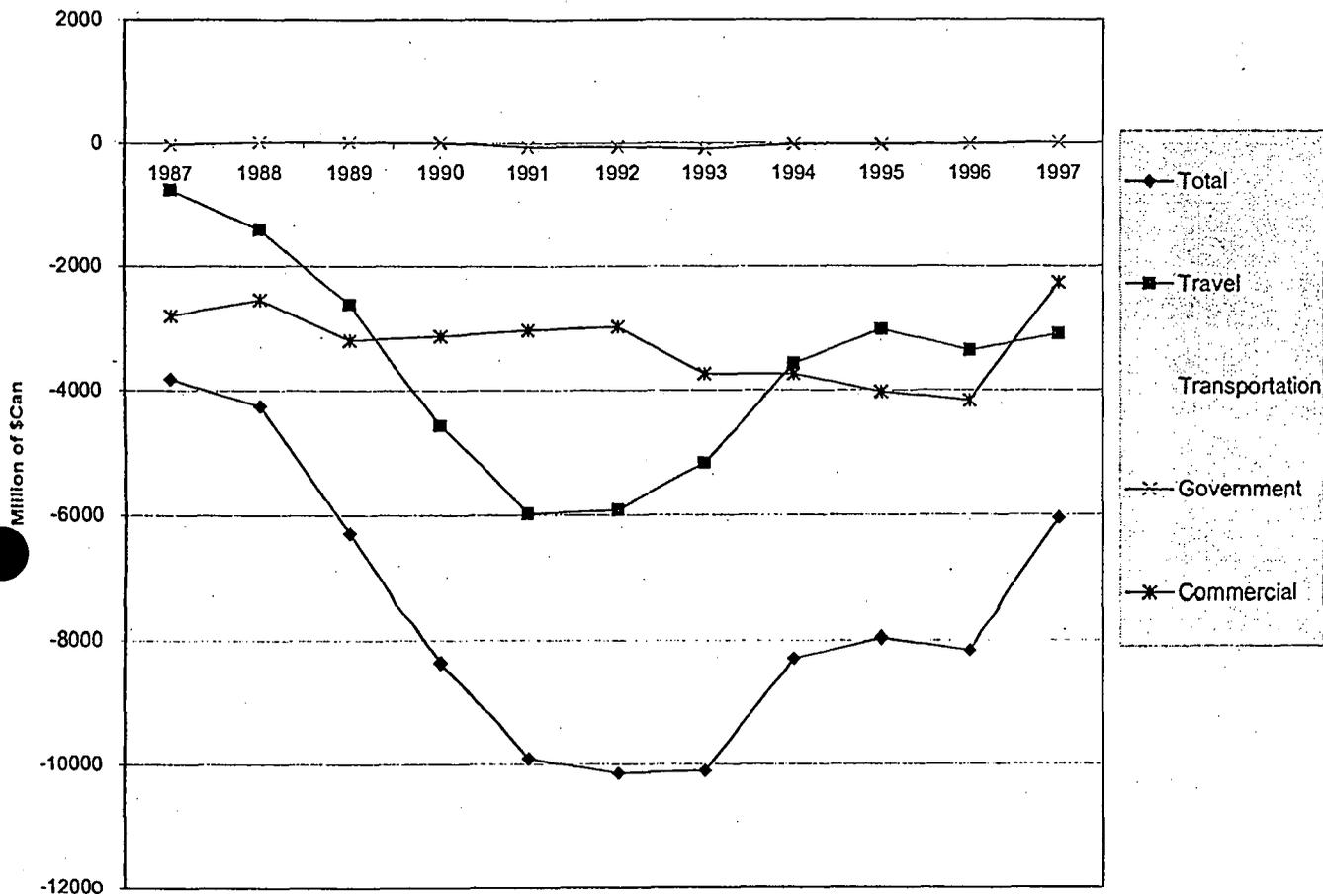
CANADIAN COMMERCIAL SERVICES IMPORTS BY REGIONS AND SECTORS
1996



Source: Statistics Canada

CHART K

CANADIAN BALANCE OF TRADE IN SERVICES WITH THE US 1987-1997



Source: Statistics Canada

LIBRARY E A/BIBLIOTHEQUE A E



3 5036 20097267 0

DOCS

CA1 EA533 98P02 ENG

Roy, Christine

An overview : understanding the
service sector and trade in
services

62745406

