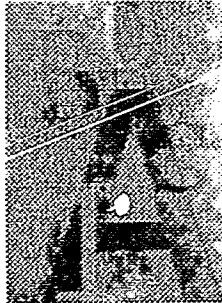


THE SERVICE ECONOMY AT A GLANCE

Service Industries



Overview of Canada's Service Economy

March 2001



Industry
Canada

Industrie
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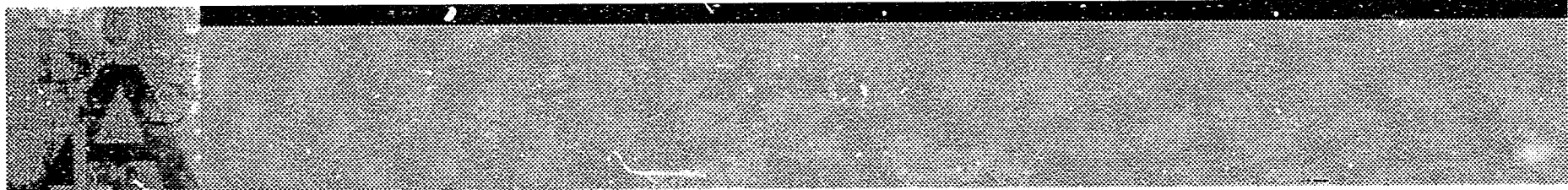
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Service Economy at a Glance

- 1. Overview**
- 2. Human Resources**
- 3. Technology, Innovation and R&D**
- 4. Investment**
- 5. Trade in Services**



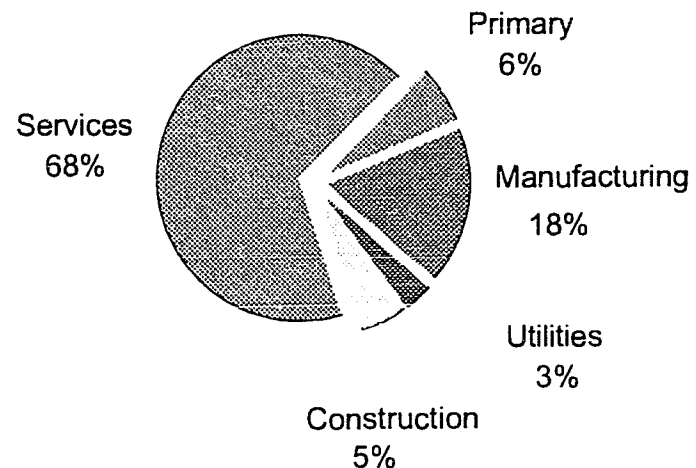


1. Overview

Service industries account for more than two thirds of Canada's Gross Domestic Product (GDP)...

- In 1999, the service and construction sectors accounted for \$507 billion and \$41 billion of GDP respectively (in 1992 constant dollars).
- Services represented about two-thirds of total GDP and construction 5%.

Gross Domestic Product, 1999
(Percent share of real GDP)
GDP = \$718 billion (at 1992 prices)



Source: Statistics Canada, Matrix 4677



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The Canadian economy today is more service-oriented than in the past...

- The share of services in GDP is increasing, due to the convergence of forces such as demographics and the expansion of technical knowledge.
- The share of construction has declined, as a result of Canadian firms' greater propensity to invest in machinery and equipment as opposed to buildings as well as more emphasis on retrofit and repair work as opposed to new construction.

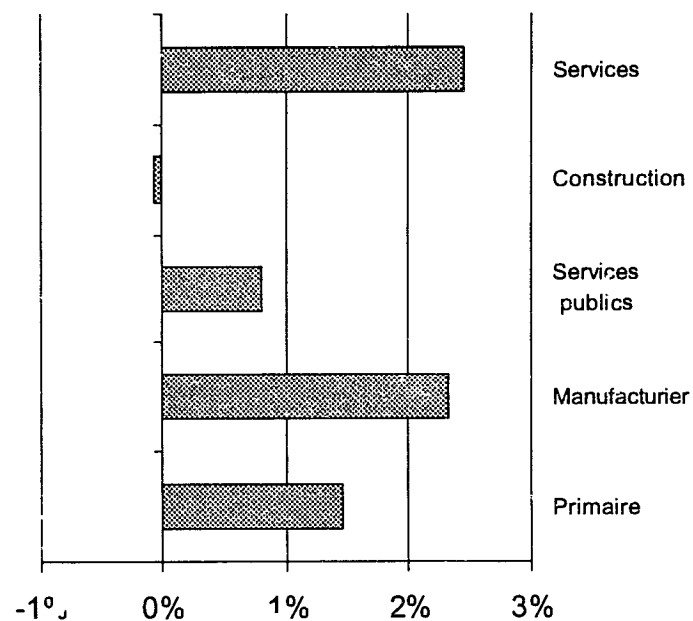


Source: Statistics Canada, Matrix 4677

The service sector exhibited stronger growth than the rest of the economy over the 1990s...

- The general shift to services reflects rapid growth in a variety of individual service industries and the genesis and expansion of entirely new industries.
- The overall shift also reflects less dramatic but steady output growth in other service industries.

Real GDP Annual Growth, 1988-1999



Source: Statistics Canada, Matrix 4677.



Key service industries have exhibited sustained strong growth over the last few decades...

- Almost all service industries exhibited stronger than average growth in recent years.
- Industries such as business services, communications and wholesale trade have been enjoying strong growth since the 1960s.

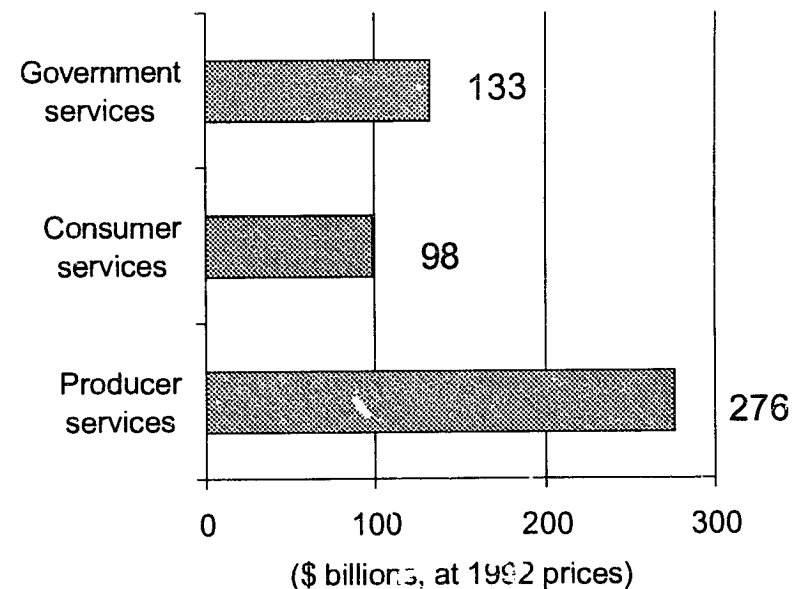
Real Gross Domestic Product, Annual Growth Rate					
	60's	70's	80's	90's	Share of Total GDP 1999
<i>Transportation & Storage</i>	6,0 %	4,3 %	2,6 %	3,2 %	4,6%
<i>Communications</i>	8,3 %	9,6 %	5,5 %	4,5 %	3,0%
<i>Wholesale</i>	7,3 %	4,3 %	6,3 %	5,4 %	5,4%
Retail	5,4 %	5,7 %	3,2 %	2,9 %	6,4%
<i>Finance, Insurance, Real Estate</i>	3,3 %	3,6 %	2,4 %	3,2 %	16,1%
<i>Business Services</i>	8,2 %	10,2 %	6,5 %	4,9 %	6,0%
Accommodation, Food, Beverage	2,4 %	4,7 %	1,3 %	1,1 %	2,7%
Other Services	5,0 %	3,7 %	2,3 %	0,7 %	3,9%
MANUFACTURING	6,6%	4,3%	2,9%	3,4%	18,0%
TOTAL ECONOMY	5,6 %	4,3 %	2,9 %	2,4 %	
Legend:	Growth is 25%-50% higher than that of total economy				
	Growth is more than 50% higher than that of total economy				

Source: Statistics Canada, Matrix 4677.

The service sector is divided into three categories...

- Producer services include transportation & storage, communications, wholesale trade, finance, insurance & real estate, and business services.
- Consumer services include retail trade, accommodation, food & beverage service industries and “other” service industries.
- Government or non-market services include government services, education and health & social services.

GDP by type of service, 1999
(\$ billions, at 1992 prices)



Source: Statistics Canada, matrix 4677.



Industry
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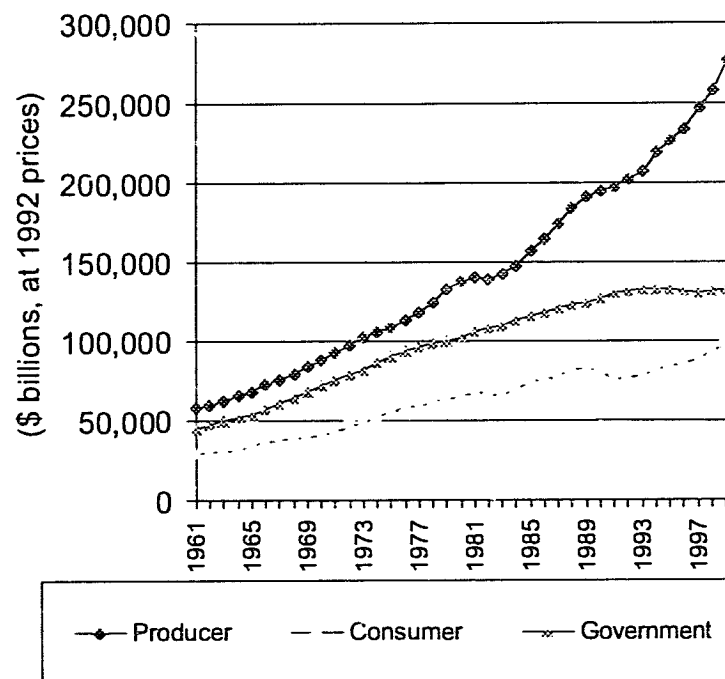
Industrie
Canada

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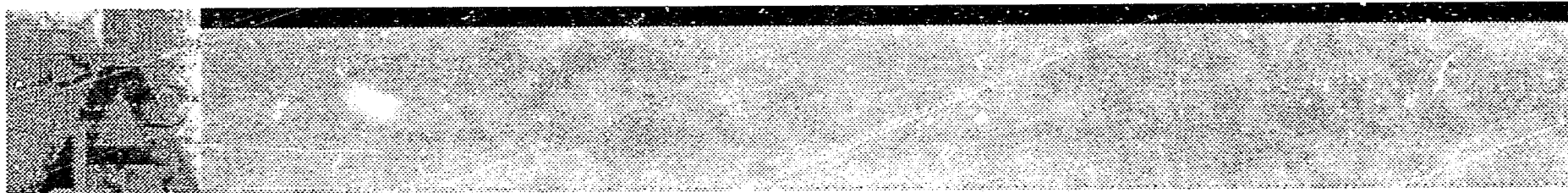
Producer services are playing a larger and larger role in the Canadian service economy...

- Producer services are growing at a much faster rate than other services.
- The share of consumer services in the overall amount of services has remained constant over the past thirty years.
- The share of government services decreased, due to rapid growth in other types of services.

GDP, by type of service
(\$ billions, at 1992 prices)



Source: Statistics Canada, Matrix 4677.

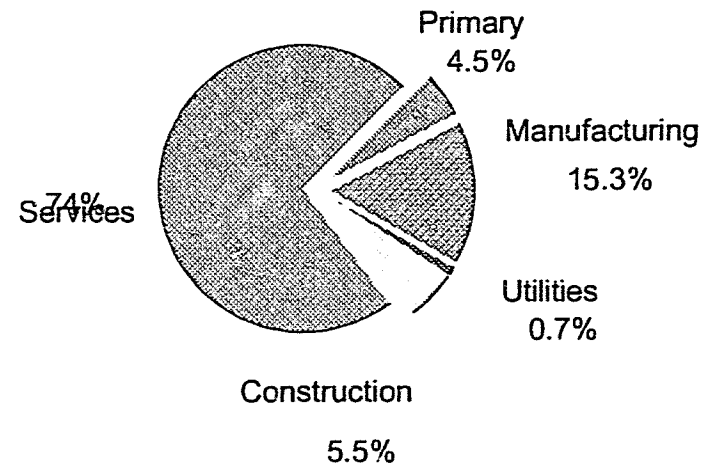


2. Human Resources

Services account for about three quarters of total employment...

- In general, service producing industries are more labour intensive than their goods producing counterparts.
- There are 10.7 million service sector jobs, accounting for 74% of total employment.
- More than two-thirds of the self-employed work in the service sector.
- The incidence of self-employment is notably high in business services, with self-employment accounting for 32% of employment (compared to a 16.6% average).

Employment, 1999
(Percent share of employment)
Employment = 14,532,675



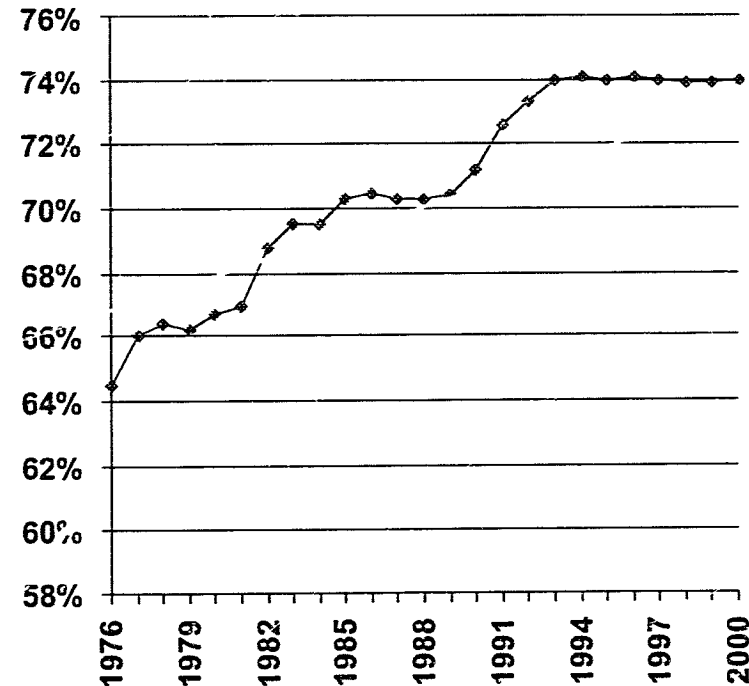
Note: includes self-employment

Source: Statistics Canada, Matrix 3450

Most new jobs are being created in the service sector...

- Since 1976, job gains and losses resulted in a net gain of 5.1 million jobs - a 52.2% increase.
- 4.7 million of these net new jobs were in the service producing industries.
- The share of services in employment is increasing.
- These numbers do not include the many workers in non-service industries who are engaged in service occupations.

Share of Services in Total Employment
(Percent)



Source: Statistics Canada, Matrix 3450

Service producing industries comprise some of the most dynamic sectors of the Canadian economy...

- The service sector exhibited stronger employment growth than the rest of the economy in recent years.
- This trend is particularly noticeable in self-employment - the service sector accounted for 84% of self-employment growth in the 1984-97 period.
- Employment growth was led by knowledge driven business services.

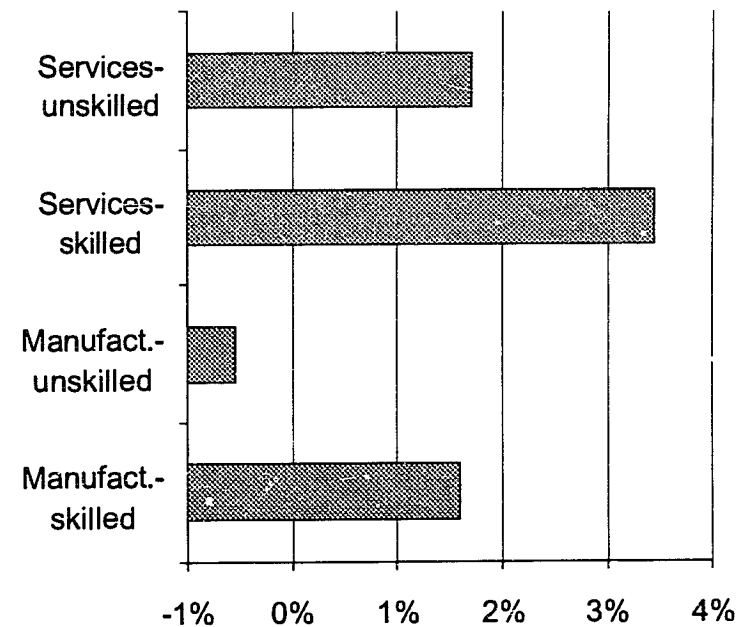
Employment, Annualized Growth Rates (NAICS based)		
	1999 Level	1988-1999 (Growth)
<i>Transportation & Storage</i>	744,383	1.1 %
Trade (Retail & Wholesale)	2,248,300	0.9 %
<i>FIRE</i>	862,000	0.8 %
<i>Professional, Scientific & Technical Services</i>	905,000	5.0 %
Accommodation & Food Services	924,000	2.2 %
Information & Cultural Industries	615,625	2.1 %
Non-commercial Services	3,268,440	1.2 %
MANUFACTURING	1,913,729	-0.4
TOTAL EMPLOYMENT	14,532,675	1.2 %
Legend :		
Growth is 25%-50% higher than that of total employment		
Growth is more than 50% higher than that of total employment		

Source: Statistics Canada, Matrix 3450

The service sector is home of the knowledge-based workers...

- The service sector is leading the transformation of the Canadian economy into a knowledge-based economy.
- Skill intensity has risen, which translates in a shift in demand away from unskilled toward skilled labour.
- Since 1990, 1.8 million jobs have been created for higher educated workers and over one million jobs have been lost by those that had a high-school degree or less.

Annualized Employment Growth 1981-1994

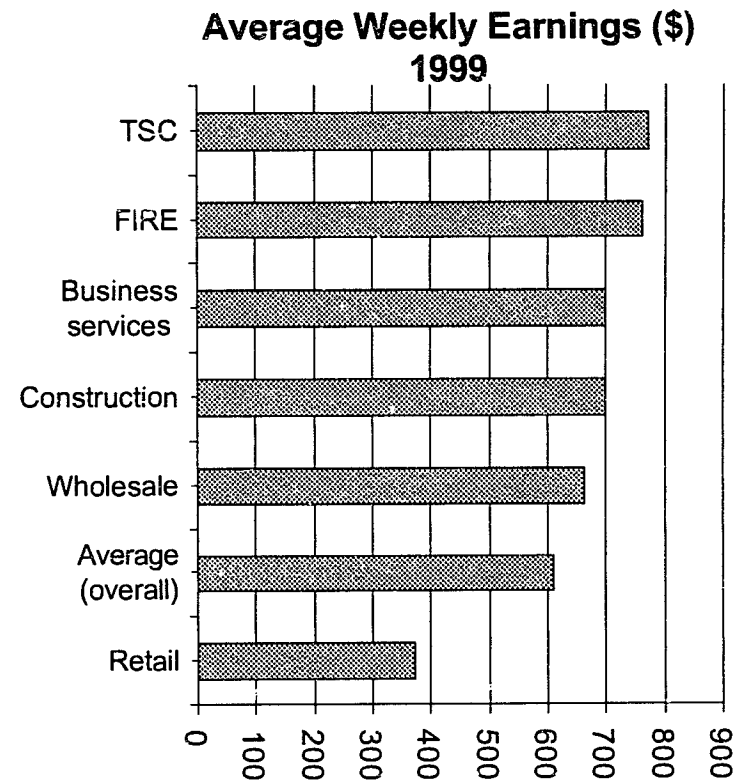


Source: Industry Canada, "Technology and the Demand for Skills: An Industry-Level Analysis", January 1999

Skilled workers=managers, professionals, and skilled technical workers.

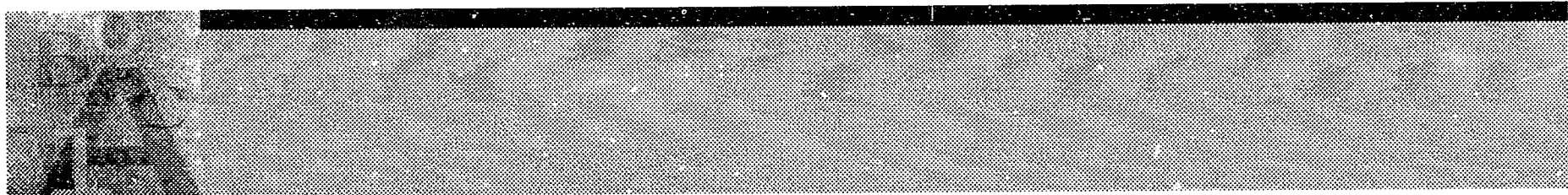
Many Canadians employed in the service sector enjoy weekly earnings well above average...

- Most service industries exhibit average weekly earnings greater than the overall average.
- Average weekly earnings are substantially higher in transportation, storage and communication industries and in the finance, insurance and real estate industries.
- Business services posted 3.7% average annual earnings growth over the past 5 years while this rate is 1.6% for total earnings.



TSC=Transportation, Storage, and Communications
FIRE=Finance, Insurance and Real Estate

Source: Statistics Canada, Matrix 4291



3. Technology, Innovation and R&D

Service industries play an important role in Canada's national system of innovation...

- Service industries have become "...major users, originators and agents for transfer of technological and non-technological innovations, playing a major role in creating, gathering and diffusing organizational, institutional and social knowledge..." (Hauknes, J. and I. Miles, "Services in European Innovation Systems", p. 10)
- Service industries play a dual role:
 1. they contribute to technology diffusion by making use of new technologies, and
 2. they develop new technologies through their R&D activities.

Innovation in the service sector has many unique characteristics...

- rarely organized through R&D departments
- very frequently conducted on a project-specific basis
- often involves close collaboration with clients or other firms
- highly influenced by issues such as rules and regulations
- newly created intellectual property often immaterial in nature and therefore difficult to protect
- close interrelationship between the development of new services and the processes to produce them
- organizational change often the main component of innovation
- relies relatively heavily on copyrights, trademarks and non-formal means of intellectual property protection



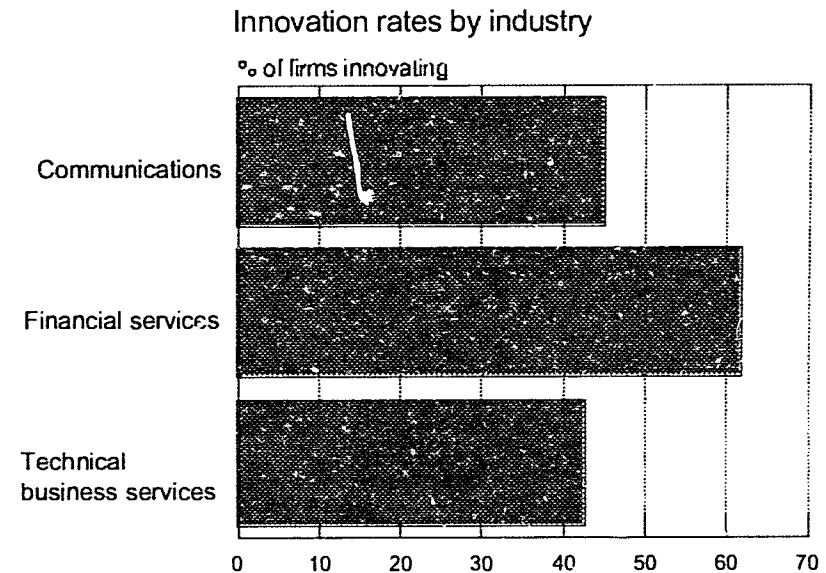
Industry
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Services are at the heart of Canada's innovation system...

- For example, communications, financial services and technical business services* are among the most innovative industries in the Canada.
- These industries have been undergoing rapid transformation driven by innovative products, advanced technologies and increased competition.
- "Innovation in these industries is widely felt and is an impetus for innovation and change in other sectors of the economy."



Source: Statistics Canada, Innovation in Dynamic Service Industries. Catalogue no 88-516-XPB, 1999

*Technical business services include computer services, computer equipment servicing firms, engineering and other scientific and technical service firms.



Service firms innovate for many different reasons and face many impediments...

- Ultimately, all firms innovate to increase their profitability-differences arise in how they choose to do so.
- Service firms innovate for many of the same reasons manufacturing firms do.
- Perhaps the most important driver of innovation in services is the desire to protect and expand market shares followed by the desire to improve the effectiveness and efficiency of services delivery.
- Service firms face a number of financial and non-financial risks; and market and technical impediments to innovation.
- The high cost of innovation and a lack of skilled personnel have a substantial impact on services innovation.
- The size of a firm seems to play a more significant role in innovation than does the industry in which the firm operates.



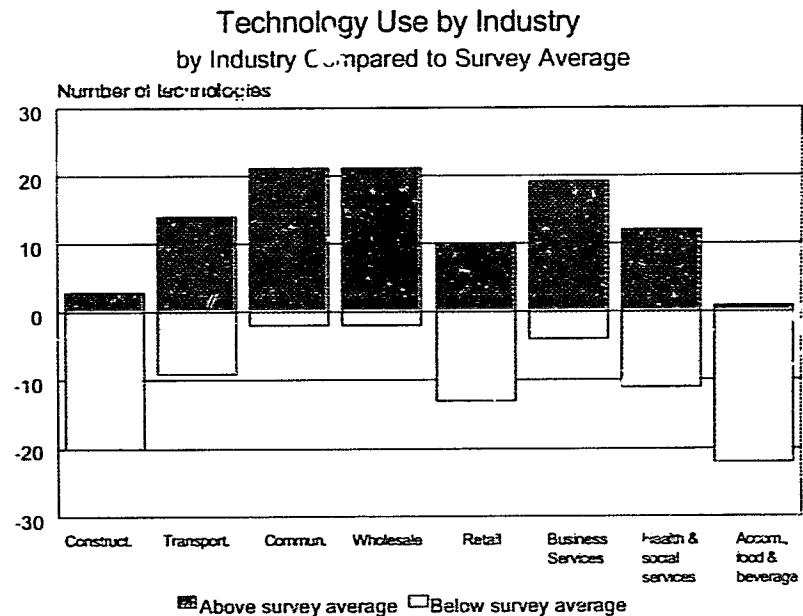
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Information and communication technologies (ICTs) are among the most important technologies driving innovation in services...

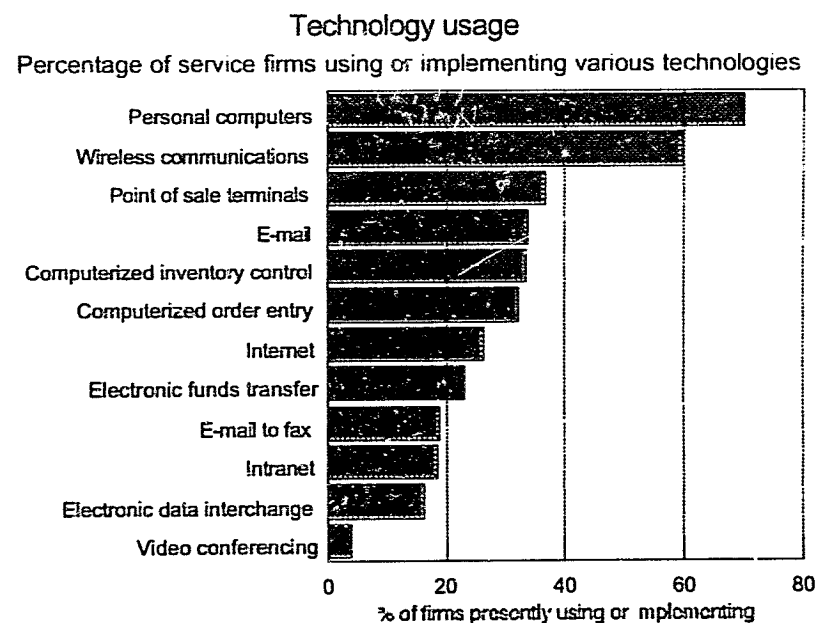
- “ICTs change the tradability of services and expand the potential of fields and forms of new markets”
- Over the last decade, service industries have increased their use of ICTs substantially.
- Transportation, communications and business services are some of the more technology intensive service industries.



Source: Industry Canada *Technologies in Services* (1997).

Some ICTs are used more extensively than others...

- ICTs are key to an increase in trade and commerce and represent the shift to a knowledge-based economy.
- Personal computers and wireless communications are used by the majority of service firms.
- ICT diffusion varies across regions and increases with the size of firm in terms of employees.
- If an industry has a relatively high usage rate of one ICT it usually has relatively high usage rates in others.

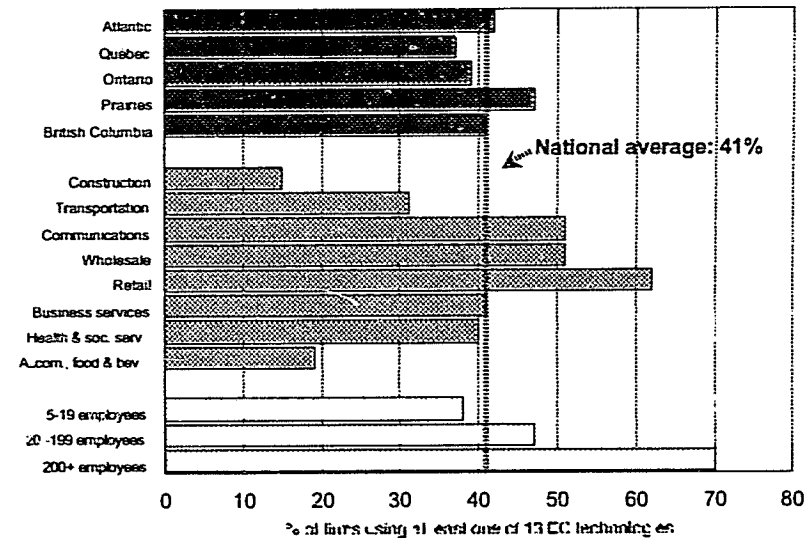


Source: Industry Canada, Survey of Technology Diffusion in Service Industries, 1997.

Electronic commerce (EC) is fundamentally changing the way services are delivered...

- EC is an innovative new way of conducting business and its related technologies are driving innovation in service industries.
- The innovative application of EC technologies help achieve efficiencies in terms of cost, time, value and service.
- These technologies redefine traditional functional boundaries and customer-supplier relationships, and global commerce
- E-commerce creates jobs and growth.

Electronic commerce technologies usage
By region, industry and firm size, 1996

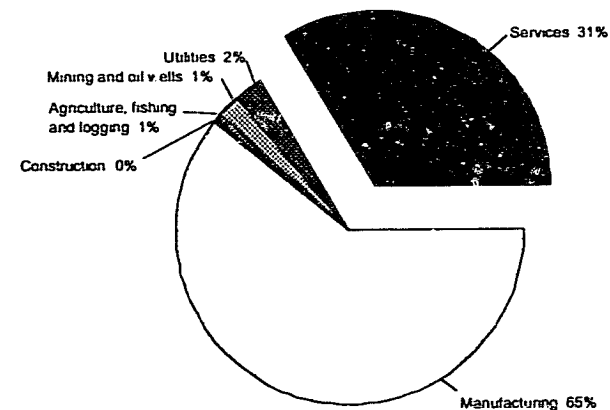


Source: Industry Canada, Survey of Technology Diffusion in Service Industries, 1997

Services account for a substantial portion of R&D activity in Canada...

- R&D in the service sector are estimated at \$3 billion, or 31% of total R&D expenditures in Canada in 1999.
- From 1995 to 1999, service sector R&D expenditures have increased 15% while manufacturing sector and total R&D expenditures increased by only 24% and 19% respectively.
- Service sector R&D expenditures are projected to grow more rapidly than total R&D expenditures.

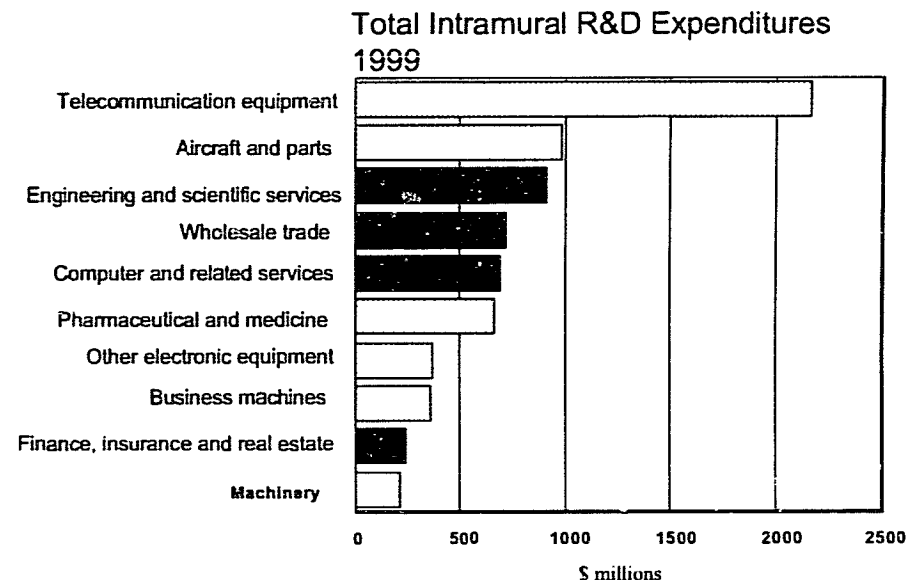
Total Intramural R&D Expenditures
By Major Industry Grouping, 1999



Source: Statistics Canada, Industrial Research and Development: 1999 Intentions, Catalogue No. 88-202, Ottawa, 2000, Table 1

Service providers fund a substantial amount of R&D activity...

- R&D activity in the service sector is diversified across a number of industries.
- Four of the top ten industries in terms of R&D expenditures are service industries.
- Engineering and scientific services; computer and related services, wholesale trade; and, finance, insurance and real estate services are among the most R&D active industries in the economy.

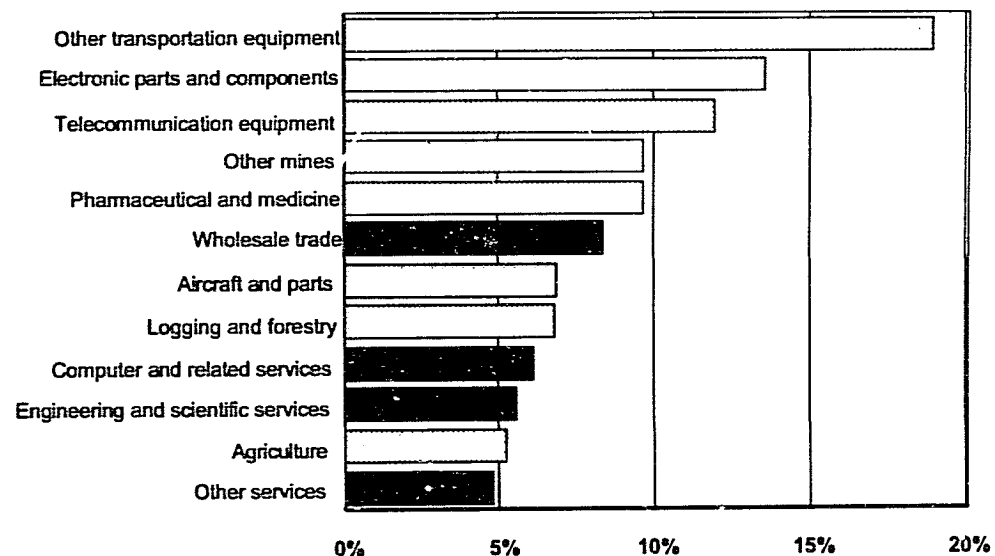


Source: Statistics Canada. Industrial Research and Development: 1997 Intentions, Catalogue No. 88-202, Ottawa, 1997, Table 1.

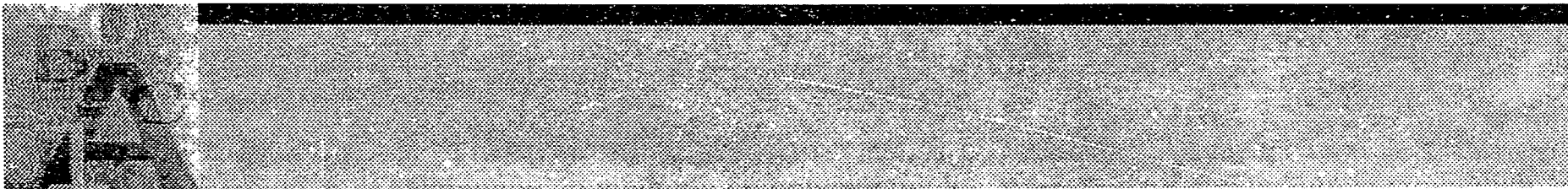
Service industries are among the fastest growing overall in terms of R&D expenditures...

- Between 1995 and 1999 these three industries' (computer and related services, wholesale trade, and "other" services) R&D expenditures grew by more than 4.4%, the economy wide average.
- R&D expenditures by engineering and scientific services also grew very quickly.

Total intramural R&D Expenditures
Growth by Industry, 1995-1999



Source: Statistics Canada. Industrial Research and Development: 1997 Intentions, Catalogue No. 88-202, Ottawa, 1997. Table 1.



4. Investment



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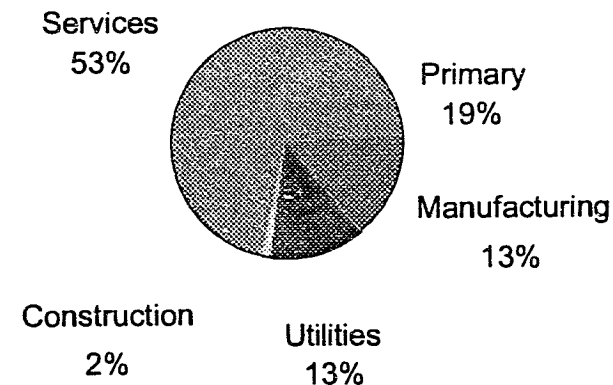
Industrie
Canada

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The share of services in total investment in fixed capital is increasing...

- In 1999, services accounted for 53% of investment in fixed capital while construction accounted for 2%.
- Fixed capital consists of investments in buildings, engineering work, and machinery and equipment.
- Capital investments increase the competitiveness of the Canadian economy.

Capital Formation, 1999
(Total: \$123 billion)



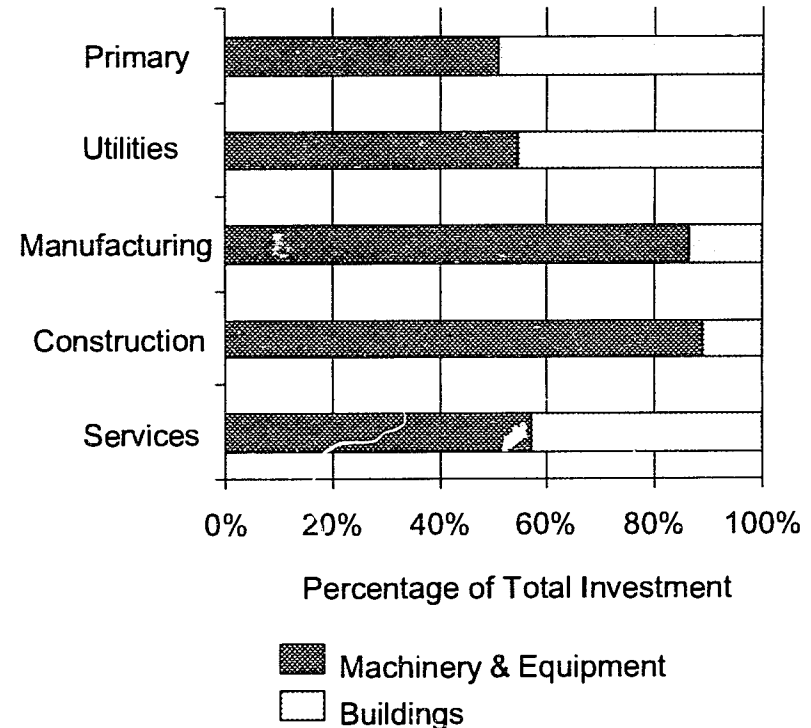
Source: Statistics Canada, Investment and Capital Stock Division.



The service sector tends to invest more in machinery and equipment (M&E) than other industries...

- More than three quarters (57%) of service sector investment is in machinery and equipment.
- This proportion is lower than the overall average of 60%.
- Investment in machinery and equipment has a positive impact on productivity.
- This is especially true for leading edge technology equipment.

Composition of Investment, 1999
(Machinery&Equipment vs Buildings)

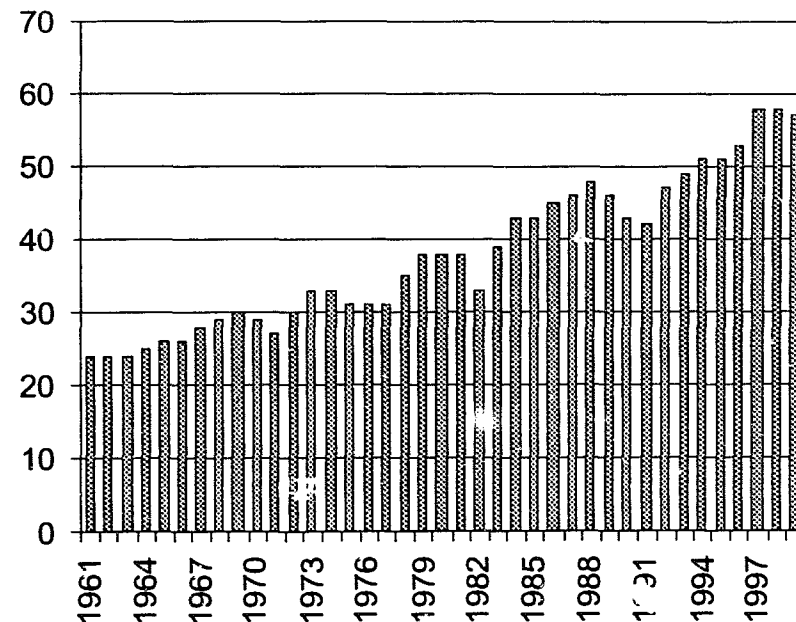


Source: Statistics Canada, Investment and Capital Stock Division.

Service sector's leading role in the knowledge-based economy changed its investment pattern...

- The proportion of service sector investment devoted to machinery and equipment is now 3 times higher than it was in the sixties.
- There has been a notable increase in recent years as service firms have substantially increased their use of information and communication technologies.
- Adoption of new technologies is increasing their competitiveness.

Investment in Machinery & Equipment as % of Total Investment, Service Sector

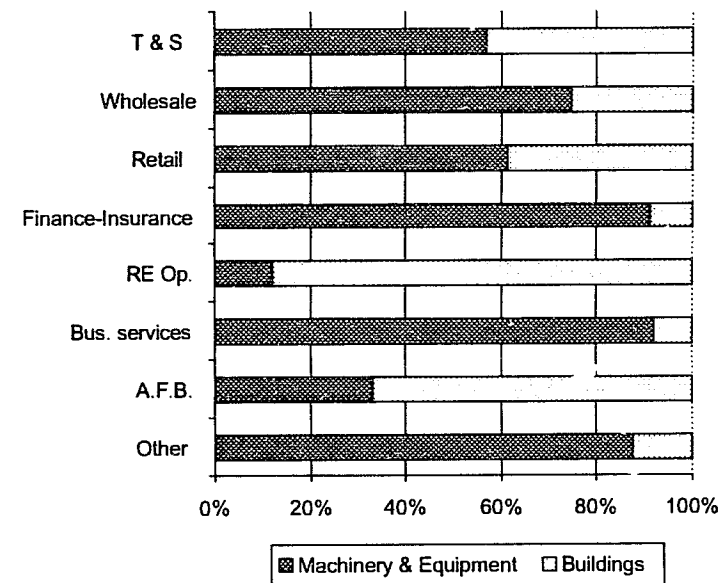


Source: Statistics Canada, Investment and Capital Stock Division.

Machinery & equipment investment is important in knowledge intensive service industries...

- The business services and financial sectors invest almost exclusively in machinery and equipment.
- The wholesale and retail sectors are also investing heavily in equipment - the proportions of investment devoted to equipment are 39% and 25% respectively.
- The larger share of buildings in real estate operators investment is due to the very nature of their business.

Composition of Investment, 1999
(Machinery & Equipment vs Buildings)



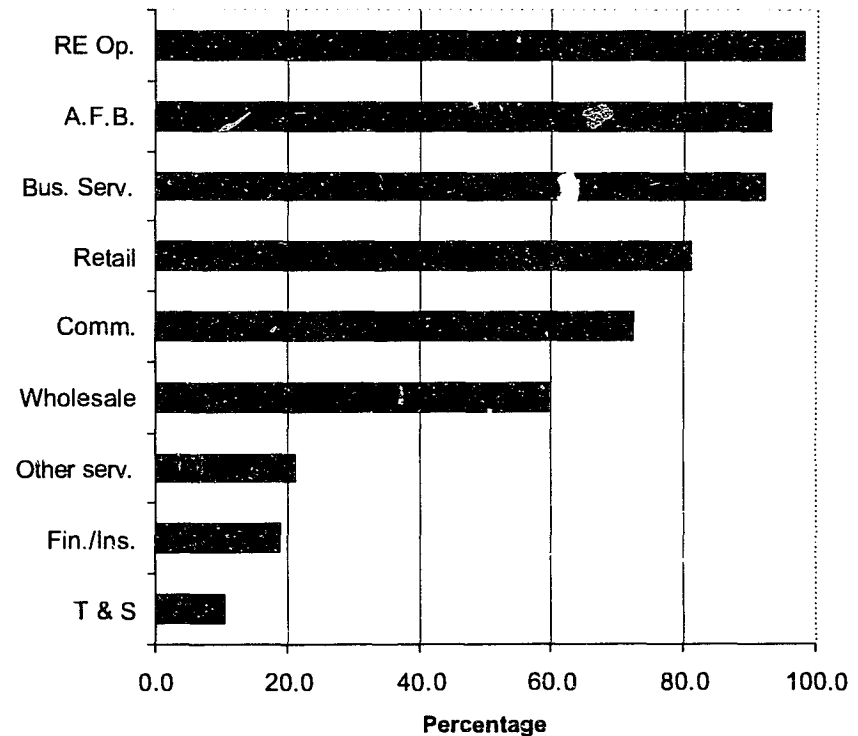
Source: Statistics Canada, Investment and Capital Stock Division.



Service firms invest heavily in computers and communications equipment...

- Most of the service investment in machinery and equipment is related to computers, communications and office equipment, compared to the overall average of 35.4%.
- This proportion is more than 90% in real estate operator.
- These investments increase the productivity of the service sector.

Proportion of Computer, Office, and Communication Equipment in Equipment Investment (1992-97)



Source: Statistics Canada, Matrix 3152



5. Trade in Services



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Information and communication technologies increase the international tradeability of services...

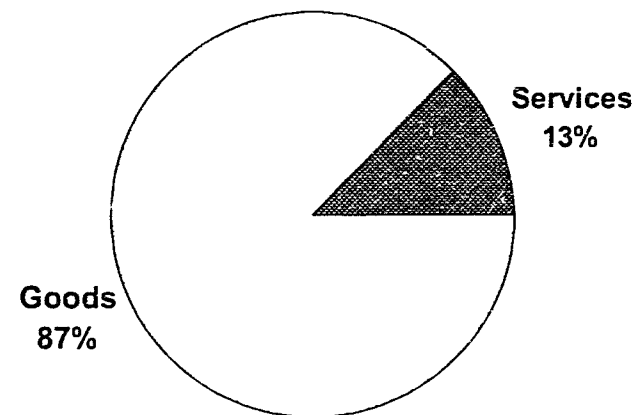
- Information and communications technologies facilitate trade in services in much the same way as transportation infrastructure supports goods trade.
- The growth in trade in services can be linked to enabling technologies that facilitate cross-border marketing, co-production of services with distant partners and distance delivery of services.
- The use of enabling technologies will continue to revolutionize trade in services, supporting a shift from “commercial presence” to “virtual presence”.



There is still potential for growth in Canadian services exports...

- Services account for 13% of total Canadian exports, less than the worldwide average of 19%.
- There is still considerable scope for further strong growth in services exports.
- New information and communications technologies are increasing the tradability of services.

Canadian Exports, Percent Share (1999)



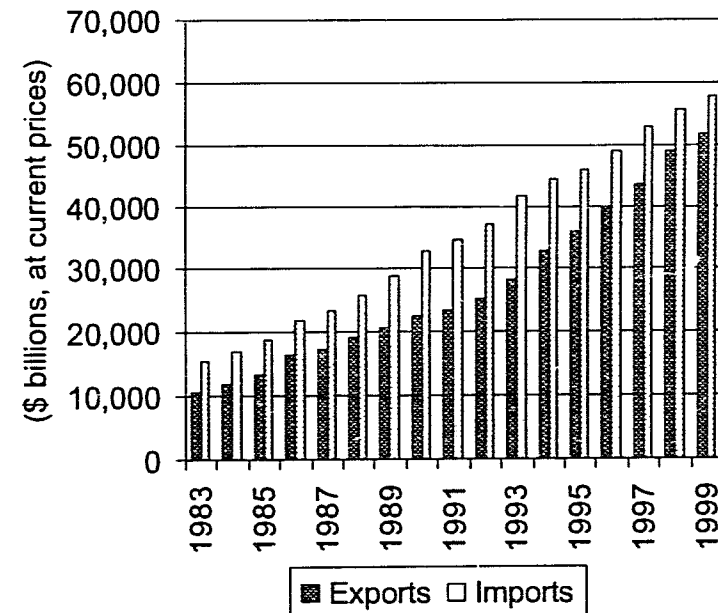
Source: Statistics Canada, Matrix 2360



Canadian services exports and imports reached record highs in 1999...

- In 1999, Canada exported \$51.8 billion worth of services while importing \$57.8 billion.
- Trade in services has enjoyed continuous growth since 1983.
- Services exports grew at an annual average rate of 10.3% during the 1983-1999 period while services imports grew at 8.6%.

Trade in Services, 1983-1999

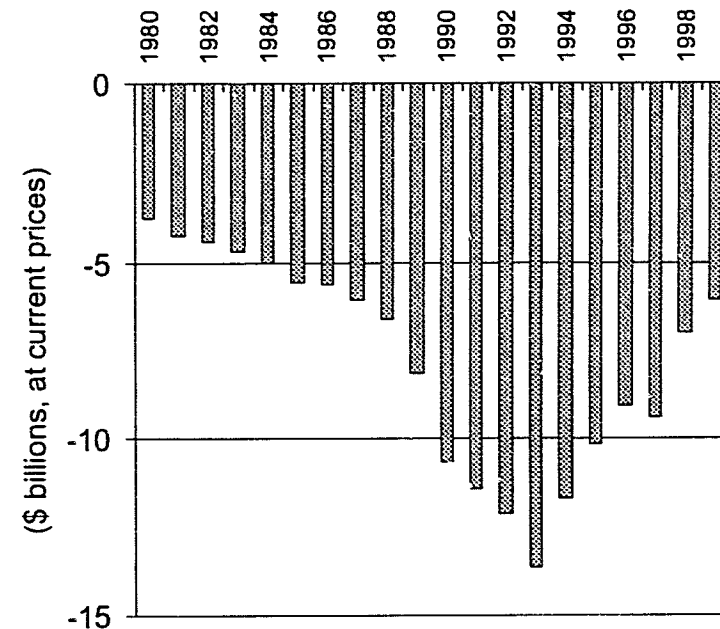


Source: Statistics Canada, Matrix 2360

Canada's services trade balance is improving...

- During the 1980-1993 period, Canada experienced an increasing deficit in trade in services.
- This trend reversed in 1993 and, since then, the trade balance in services has steadily been improving.
- In 1999, Canada experienced its smallest trade deficit in services since 1988.

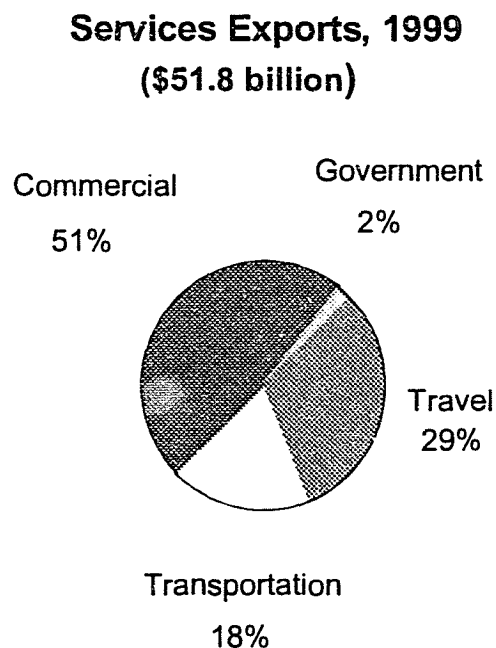
Services Trade Deficit
1980-1999



Source: Statistics Canada, Matrix 2360

Commercial services account for about half of Canada's services exports...

- Commercial services are leading services exports growth as they represent 51% of total services exports.
- This proportion is higher than that of the worldwide average of 43%.
- * Note: This figure is from the WTO and it refers to "other commercial services" as they roughly correspond to "commercial services" in Canada's trade numbers.

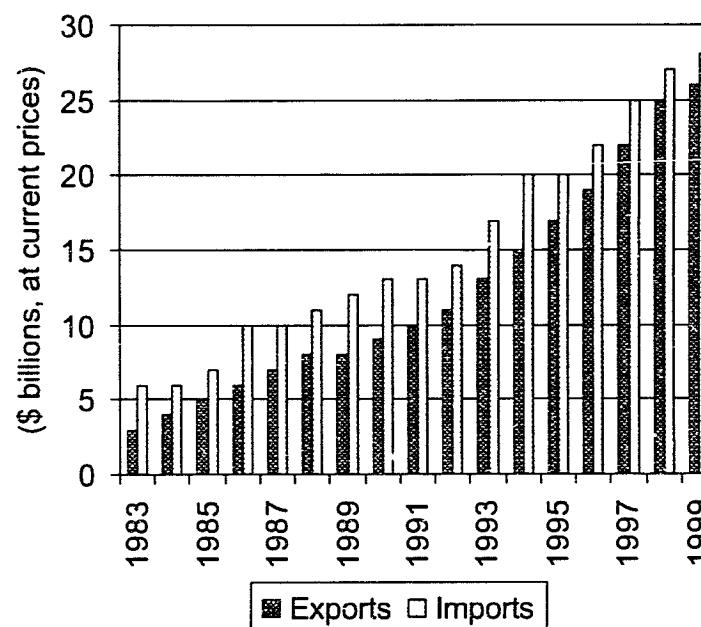


Source: Statistics Canada, Matrix 2360

Trade in commercial services has surged in recent years...

- In 1999, Canadian service firms exported \$26 billion worth of commercial services.
- Commercial services imports totaled \$28 billion.
- Commercial services exports and imports exhibited strong growth in the 1983-1999 period with average annual rates of 13.7% and 10.7% respectively.

Trade in Commercial Services,
1983-1999



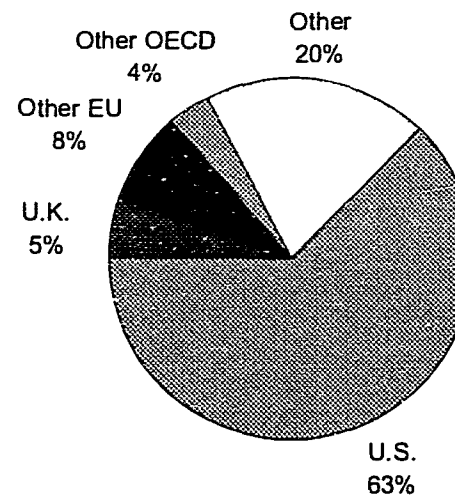
Source: Statistics Canada, Matrix 2360



Canada's trade in commercial services is more diversified by country than its trade in goods...

- About two thirds (63%) of commercial services exports are to the United States market while this proportion is 85% for goods exports.
- Major exports to the U.S. include: insurance, miscellaneous business services (including tooling), communications, research & development services, and computer services.

Commercial Services Exports
Trading Partners, 1999



Source: Statistics Canada, Matrices 2360 to 2367



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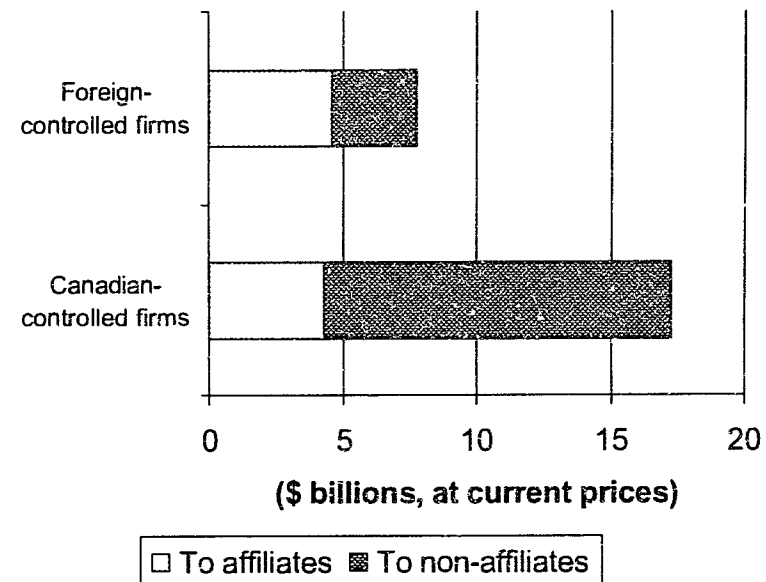
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Canadian-controlled service firms have successfully penetrated new markets...

- Canadian-controlled firms account for 69% of Canada's commercial services exports.
- They must aggressively pursue international markets due to the relatively small size of the Canadian domestic market.
- As a result, most of their international clients are non-affiliates (75%).
- An increasing number of export-ready Canadian service firms will contribute to further diversifying trading partners.

Commercial Services Exports,
by Country of Control and
Affiliation, 1998

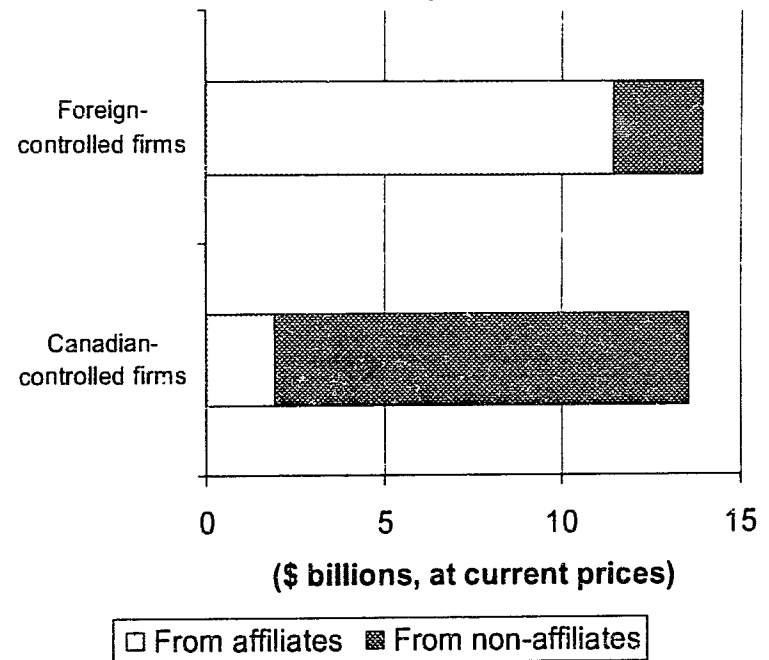


Source: Statistics Canada, Catalogue 67-203

Half of commercial services imports are from foreign-controlled firms importing from their affiliates...

- Foreign-controlled firms account for 51% of Canada's commercial services imports.
- Most of their imports (82%) are from affiliates or parent companies.
- They mainly consist of tooling charges, management services, and royalties and license fees.

Commercial Services Imports,
by Country of Control and
Affiliation, 1998

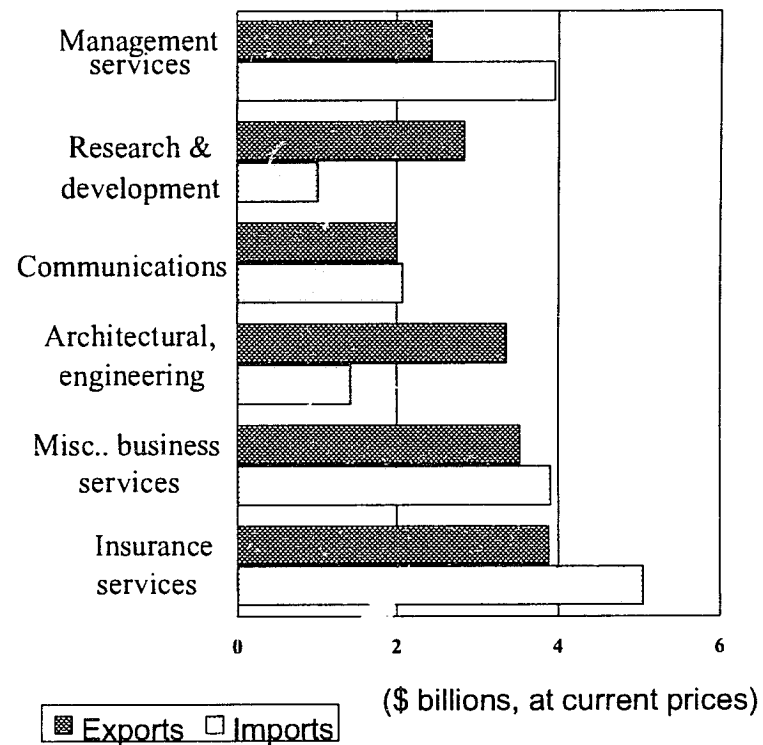


Source: Statistics Canada, Catalogue 67-203

Canada's openness to trade allows for large inflows and outflows of commercial services...

- The 6 leading commercial services in terms of exports account for 69% of total commercial service exports and 62% of imports.
- They also exhibit strong export growth: for example, the annual average growth in the 1990s is 22% for architectural and engineering services and 17% for R&D services.

Major Commercial Services Traders, 1999



Source: Statistics Canada, Catalogue 67-203