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*Special Issue
on the
Service
Sector*

In this issue ...

FEATURES

- **Expert Roundtable on: The New Economy and Services: Policy Research Issues**
- **A call for research proposals for a conference on services in early 2003**
- **Documents from the Roundtable, including summary papers by the expert panelists, will be available on Industry Canada's website at: www.strategis.gc.ca**

Creating a Forward-Looking Policy Research Agenda on Services

The service sector continues to grow in importance in the Canadian economy. It now accounts for more than two-thirds of real Gross Domestic Product (GDP) and three-quarters of total employment, some 11 million jobs. Like the economy, the service sector is becoming more innovative and knowledge-intensive — two key elements of the new economy. This sector encompasses many high-tech industries, particularly in the Information and Communications Technology (ICT) group. Fast-growing services include producer, business and professional services — like management consulting, architectural, engineering, legal and accounting services. Some 18% of service sector workers have a university degree, compared to 6% in manufacturing.

The rapid shift to the new, knowledge-driven economy, and the vital role played by services in this transformation have underscored, across the economic policy research community, the need to increase our awareness and understanding of service activities. On February 26, 2002, Industry Canada convened a one-day expert roundtable to focus attention on the service

sector in order to help the Department and others formulate a forward-looking, policy research agenda in this area. The event, entitled *The New Economy and Services: Policy Research Issues*, was held at the Chateau Laurier Hotel, in Ottawa. Leading economists, statisticians and experts from academia, research centres, government, statistical agencies, international institutions, and the business sector were on hand to present and discuss topics ranging from the evolving and dominant role of services in the economy, to the growing importance of services in international trade, and to statistical and measurement issues.

The event generated a very positive response and, with over 200 participants, it can certainly be deemed a success. The Roundtable accomplished what it was intended to do — help Industry Canada formulate a research agenda on services. The Department, among others, is now firmly committed to placing renewed policy research emphasis on this key sector of the economy. Accordingly, it will host a conference, early next year, to showcase some new research work on services.

A Call for Research Proposals on Services

Industry Canada will be holding a conference on services early in 2003. The conference will be devoted exclusively to new research work on the service sector. Research presented at the conference will be published under Industry Canada's Research Publications Program, giving full credit to individual authors. The Department will be calling on the broad research community for research proposals on services in the Spring of 2002. For further information, please contact Dr. Someshwar Rao, Director, Strategic Investment Analysis, Micro-Economic Policy Branch, by e-mail at rao.someshwar@ic.gc.ca, or by fax at 613-991-1261.

Winter 2001

Canada

INDUSTRY CANADA RESEARCH AND PUBLICATIONS

TO BE RELEASED

Electronic Commerce and Productivity Growth: Defining and Assessing the Linkages, by Steven Globerman.

Foreign Direct Investment and Domestic Capital Formation, by Walid Hejazi and Peter Pauly.

Social Policy and Productivity Growth: What are the Linkages? by Richard Harris.

The Irish Economic Boom: Facts, Causes and Lessons, by Pierre Fortin.

FORTHCOMING

WORKING PAPER SERIES

No: 35: *Welfare and Competitiveness Implications for Canada of Compliance to the Kyoto Protocol, A Dynamic General Equilibrium Sectoral Analysis*, by Yazid Dissou, Carolyn MacLeod and Mokhtar Souissi.

No: 37: *National Political Infrastructure and Foreign Direct Investment*, by Steven Globerman and Daniel Shapiro.

INDUSTRY CANADA RESEARCH SERIES

Vol: 10: *Productivity Issues in Canada*,
General Editors: Someshwar Rao and Andrew Sharpe.

THE NEW ECONOMY AND SERVICES: POLICY RESEARCH ISSUES INDUSTRY CANADA'S EXPERT ROUNDTABLE

OVERVIEW OF RESEARCH

Brian Copeland, University of British Columbia

TRADE AND INVESTMENT

Serge Coulombe, University of Ottawa
Keith Head, University of British Columbia
Dorothy Riddle, Service Growth Consultants
Robert Stern, University of Michigan

INDUSTRY STUDIES

Zhiqi Chen, Carleton University
Erwin Diewert, University of British Columbia
Ron Jarmin, U.S. Census Bureau
Edwin Neave, Queen's University

DATA NEEDS AND CHALLENGES

Olivier Cattaneo, OECD
Janice McMechan, Statistics Canada
Robert Yuskavage, U.S. Bureau of Economic Analysis

INNOVATION AND PRODUCTIVITY

Fred Gault, Statistics Canada
Andrew Sharpe, Centre for the Study of Living
Standards
Steven Globerman, Western Washington University
John Baldwin, Statistics Canada

LABOUR MARKET AND SKILLS

Gilles Grenier, University of Ottawa
Alice Nakamura, University of Alberta
Garnett Picot, Statistics Canada
Richard Shearmur, Université du Québec

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Services in the New Sector

V. Peter Harder, DEPUTY MINISTER OF INDUSTRY CANADA opened the one-day event by stressing the need to undertake more policy research work on the important service sector. He indicated that the Roundtable had brought together

Mr. Harder noted the importance of services for the Canadian economy and, especially, its continued transformation in the context of the global, knowledge-based, *new economy*.

He also underlined some of the most challenging issues that lie

ahead for researchers, statisticians and others involved in improving our understanding of the service sector. Some of the issues mentioned, dealing for example with measurement, productivity and trade, have been squarely in the research community for a long time. Others — like outsourcing, investment in innovation, and the impact of the Internet on business, the marketplace and the delivery of services — are more recent and growing in importance for policy makers. Mr. Harder concluded his remarks by stating that the Roundtable was a positive step forward, and that he was confident it would stimulate much-needed research in this area.

To set the stage for the Roundtable, Brian Copeland, of the University of British Columbia, gave an overview of relevant research issues. His background paper — *Services in the New Economy* — is available on Industry Canada’s website, at www.strategis.gc.ca

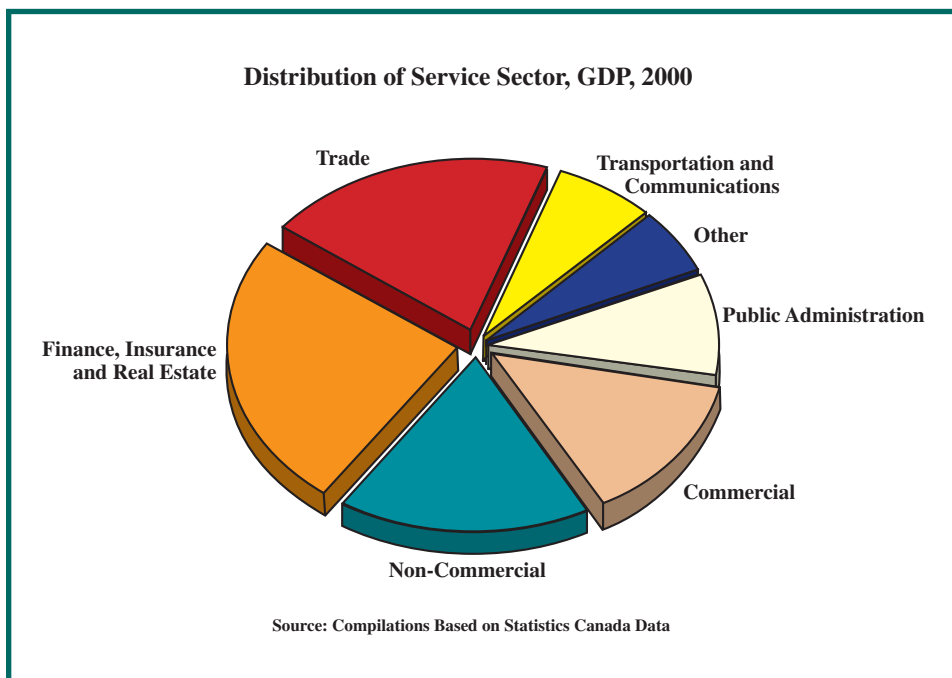
Professor Copeland highlighted some 25 research topics. He underscored the need to set priorities in trying to improve data collection and measurement, and specifically, to undertake studies aimed at developing more accurate measurement in some service industries. The data issue was a recurring theme among panelists throughout the day. Many of the topics described by Professor Copeland touched on the dramatic transformations occurring in the economy as a result of technological progress and, in particular, ICTs. The speaker mentioned changing markets, outsourcing, e-commerce and the impacts felt at the local level, to highlight a few, and he insisted on the need to look carefully at public policy and regulation, especially in newer, emerging service areas. Professor Copeland also addressed issues dealing with international trade and foreign direct investment, including barriers, shrinking transportation

“The new economy is about people transforming ideas into economic activity. And the service sector is a people sector — a key area in the economy where this happens.”

V. Peter Harder

experts from across the country and around the world with the key objective of charting a realistic and meaningful research agenda, not only for Industry Canada but for the broader community of interested researchers. He emphasized that all participants at the event had a part to play in shaping this much-needed and collective research action plan.

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costs, and the interplay between goods and services. Finally, he indicated that more work is needed to determine how far along Canada is in its conversion to a knowledge-based economy, and how it compares to other countries in this regard.

Following Professor Copeland's overview, the Roundtable focused on specific areas of interest.

“It is important that the policy debate and policy formulation be based on a good understanding of the issues and the underlying economic forces at work. Although research in this area is on the increase, there is much that we still need to learn.”

Brian Copeland

Trade and Investment

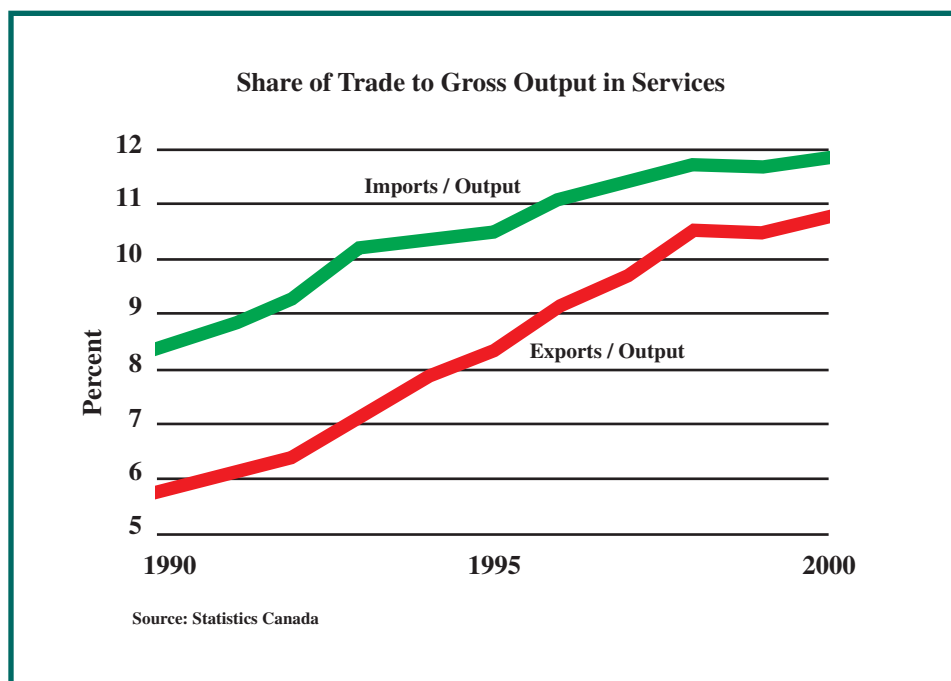
Serge Coulombe, from the University of Ottawa, focused his presentation on a comparison of interprovincial trade in services *versus* goods, and on the need to better understand the factors behind the growing importance of interprovincial trade in services. He noted that while services still play a modest role in Canada's international trade, they comprise a significant share of in interprovincial trade. Professor Coulombe suggested that additional work be undertaken on this issue, in the context of Canada's regional economic integration.

Keith Head, of the University of British Columbia, described how the image of services is changing — from McDonald's to *dot.com* activities. He touched on the issue of the treatment and classification of services by those responsible for data collection. Professor Head suggested two explanations — which he felt require further investigation — for the fact that trade in services is not growing as a share of exports: i) the cost of trading goods is falling at a more rapid rate; and ii) improvements in communication technologies cannot generate trade in services

without complementary improvements in legal, regulatory, and other framework systems governing international transactions.

Dorothy Riddle, of Service Growth Consultants, outlined four key areas for research and policy work: i) the impact of trade liberalization agreements for services; ii) the effectiveness of initiatives aimed at developing services trade; iii) the factors that increase global competitiveness

of services firms; and iv) the factors that impede the growth of services. She focused on the difficulties of doing research on services and strongly suggested that we need to collect data on services along the international standard four modes of supply — cross-border supply, consumption abroad, commercial presence, and movement of people — groupings that are increasingly used by the international community.



Ms. Riddle expressed her support for the work of Statistics Canada's Advisory Committee on Services Statistics.

Robert Stern, of the University of Michigan, talked about the importance of researching barriers to services. He identified several areas that need to be examined: quantitative-restriction policies (quotas, local content rules, trade prohibitions); price-based instruments (visa fees, entry/exit taxes,

“It has become painfully clear that we lack comparable methodologies and adequate data to answer even basic questions like how many services firms export.”

Dorothy Riddle

discriminatory airline landing fees, and port taxes); tariffs on goods that embody service inputs; government-sanctioned or

-monitored price controls; standards, licensing and procurement rules; and discriminatory access to distribution networks.

Industry Studies

Zhiqi Chen, of Carleton University, centred his comments on the telecommunication services industry. In his view, this industry is important to the Canadian economy because of its direct and substantial contribution to GDP (among the top-five contributors since 1971) and because of its key role as an input to the production processes of other industries in the context of the *new economy*. Professor Chen indicated that, despite its pivotal

contribution of the telecommunications industry to the economy, and should examine the factors behind its rapid growth, including deregulation, investment and technological change. Finally, he suggested that research efforts encompass international comparisons as well as an assessment of the impacts of trade liberalization in services.

Edwin Neave, of Queen's University, focused on the broad financial sector, which includes

matter in these industries, and that competition is important. Professor Neave noted that the financial sector is undergoing a transformation that goes beyond traditional suppliers and financial services. To illustrate, software companies now provide financial services. This transformation makes output measurement extremely difficult. He added that Canada is one of a few developed countries still without a national securities commission. Research should be undertaken on the costs and benefits of such a body.

Erwin Diewert, of the University of British Columbia, strongly argued that the lack of industry-level empirical studies measuring productivity is a direct consequence of the present paucity of data.

The speaker underlined other data problems. In particular, he pointed to the difficulty of classifying services due to heterogeneity (some services are truly one-of-a-kind). Conceptual problems must also be overcome. For example, what should we do when new services, such as e-mail, replace existing ones, like postal

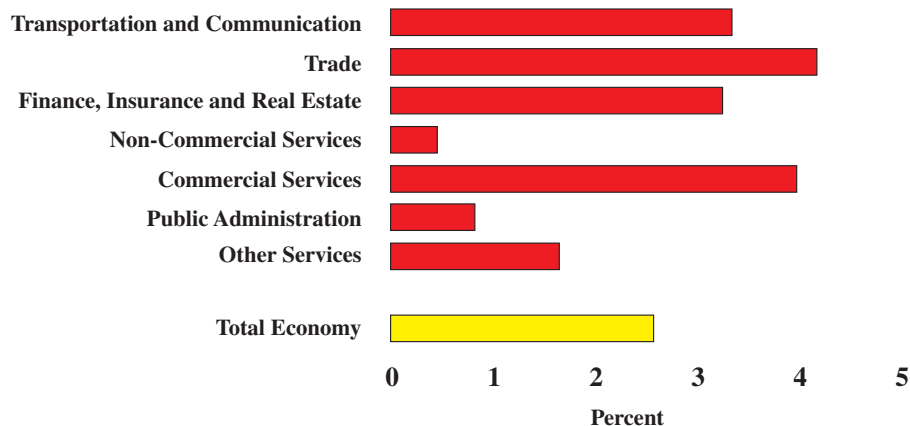
“To illustrate the point that services have been relatively neglected, consider the situation of Canada. In 1996, Statistics Canada published basic data on the productivity performance of 154 industries. Of these 154 industries, only 37 are service-sector industries.”

Erwin Diewert

role in the transformation toward the *new economy*, this industry has received little attention in empirical works. He felt that policy research should attempt to quantify the

banking, insurance, leasing, credit unions, the stock market, and trading derivatives. This sector is characterized by economies of scale and scope. He indicated that size does

Average Annual Growth Rate of Service Industries, GDP, 1990-2000



Source: Compilations Based on Statistics Canada Data

mail? Finally, he noted that output is simply difficult to measure for many services.

Ron Jarmin, of the U.S. Census Bureau, wondered whether there is a *new economy*. He argued that the manufacturing and wholesale sectors have been conducting business online for years, and that their sales have far outpaced *recent* online sales in the retail sector. In his view, the *new economy* is found in the broader information technology sector. Mr. Jarmin observed that studies on manufacturing productivity have shown positive effects, but that data are weakest for trade and services where information technologies are considered to have the greatest impact.

Data Needs and Challenges

Olivier Cattaneo, of the OECD, indicated that his organization continues to work at improving data on services and information on the *new economy*. To illustrate, he referred to the manual on services trade statistics produced by the OECD's Trade Directorate, where he works. By providing a conceptual framework for data collection, this manual helps to better understand services in the *new economy*. Under the methodology used, services trade data are classified along four modes of supply — cross-border supply, consumption abroad, commercial presence, and movement of people. The manual also disaggregates some service industries, like computer and telecommunication services. Mr. Cattaneo noted that the OECD has recently published two relevant papers on the movement of people (mode 4).

Janice McMechan, of Statistics Canada, described how the Project to Improve Provincial Economic Statistics (PIPES) has been beneficial in improving data on services in Canada. She noted that this initiative has produced new data, some of which relate to the *new economy* (ICT, scientific and technical, and professional business services).

The challenge now is to make researchers aware of the data and to find innovative ways to use it to further our understanding of services. She emphasized the importance of human resources in the service sector and indicated that the Voorburg Group on Service Statistics developed a proposal for an employment module, focusing

“...the experience of the last 40 years underscores a fundamental dilemma of business economics. Should we endeavor to continue to refine our techniques of deriving maximum information from an existing body of data? Or should we find ways to augment our data library to gain better insight into how our economy is functioning? Obviously, we should do both, but I suspect greater payoffs will come from more data than from more techniques.”

Alan Greenspan

on labour demand, for the conduct of surveys in this sector. In her view, further work is required on the nature of contracts between employers and employees. Ms. McMechan also noted that there are few business

surveys on the qualifications and skills of workers (at present, this information comes from household surveys). Finally, she pointed to the difficulties of linking services trade data with firms, saying that

increased use of administrative data would help fill the data gap.

Robert Yuskavage, of the U.S. Bureau of Economic Analysis, cited an apropos quote from Alan Greenspan on the data dilemma

Canada's Innovation Agenda

With the February 12, 2002 release of ***Achieving Excellence, Investing in People, Knowledge and Opportunity*** and of ***Knowledge Matters, Skills and Learning for Canadians*** (available at www.innovationstrategy.gc.ca and www.hrdc-drhc.gc.ca), Andrei Sulzenko, Senior Assistant Deputy Minister of Policy at Industry Canada, discussed Canada's innovation agenda at his luncheon address.

Mr. Sulzenko began by stressing that Canada will have to improve its innovative performance to ensure both a high standard of living and improved quality of life. He indicated that the significant difference in standard of living between Canada and the United States is due to a large gap in productivity levels. In order to close that gap, Canadians must become much more

innovative. Mr. Sulzenko reiterated the Government's commitment to making Canada one of the most innovative countries in the world.

He pointed out that the private sector is at the core of the strategy aimed at improving Canada's innovation performance. However,

“The elements of the national innovation system come together in communities. Innovation thrives in industrial clusters and around institutions devoted to R&D.”

Andrei Sulzenko

the public sector and academia also have important supporting roles to play. He presented the innovation agenda in terms of four key challenges.

Mr. Sulzenko underlined the importance of both large urban centres and smaller communities for the success of Canada's innovation strategy. He also emphasized that the sources of competitive advantage tend to be localized.

He concluded his presentation by stressing the need to achieve national consensus on an action plan to implement Canada's innovation agenda, adding that the active participation of all stakeholders will be required to meet the innovation challenges just described.

FOUR KEY CHALLENGES

- 1. Promoting the creation, adoption and commercialization of knowledge**
Canadian firms are slow to adopt leading-edge innovations and Canada is ranked 14th among OECD countries in terms of the ratio of GDP devoted to R&D.
- 2. Ensuring the supply of people who create and use knowledge**
Full-time university enrolment has grown slowly, while part-time enrolment is declining. Only about a third of the workforce participates in formal job-related training sponsored by the employer.
- 3. Building an environment of trust and confidence, where the public interest is protected and marketplace policies provide incentives to innovate**
Rapidly emerging scientific developments require modern and forward-looking stewardship practices and marketplace framework policies.
- 4. Strengthening Communities**
Innovation needs to be supported at the local level so that our communities will continue to be magnets for investment and economic activity.

facing statistical agencies and researchers. (See page 6.)

Mr. Yuskavage talked about the prominent role of service industries as both producers and consumers of ICTs. He made the point that *new economy* service industries are those showing the fastest growth in labour productivity in the United States. The speaker reiterated the well-known fact that services are

not as well measured as goods in the economy, and he highlighted some of the measurement problems, including those related to methodology and the source of data. For example, real output measures seem to raise accuracy issues, as evidenced by the lack of stability of input-output ratios over time. Mr. Yuskavage stressed the need for more timely and comprehensive data on industry

sales, intermediate purchases and prices. He informed participants about an initiative underway in the United States to improve services data and quarterly sales data for ICTs and other high-tech industries. This should improve industry-level quarterly GDP estimates, including advanced GDP data. Finally, in his view, work could be done to better integrate industry accounts data.

Innovation and Productivity

Fred Gault, of Statistics Canada, noted that productivity measurement issues that plague services are not as prevalent in manufacturing. He stressed that the service sector is changing rapidly, with new services being created as older ones disappear. The statistical complexity is further compounded by the blurring of industry lines. Mr. Gault demonstrated this by pointing out that telecommunication firms offer video services, while cable firms provide telecommunication services. Moreover, satellite companies provide both. And, all of these firms sell Internet access services. The end point is that we must be able to adjust commodity classifications quickly if researchers are to analyze the rapid changes occurring in the service sector. Beyond this is the issue of quality measurement. The speaker observed that we need accurate measures to produce reliable productivity growth figures.

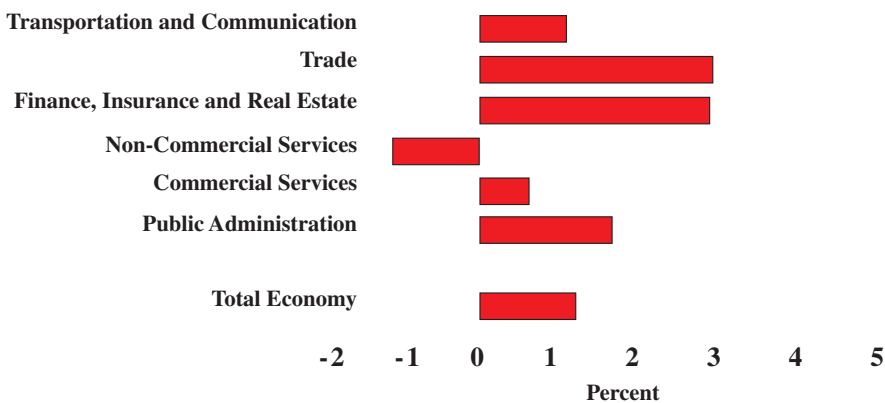
Andrew Sharpe, of the Centre for the Study of Living Standards, began by noting previous efforts aimed at addressing the issue of productivity in services.

He highlighted the difficulties in data collection and noted that Statistics Canada only produces official productivity estimates for four major service sectors. He stressed that measuring service productivity is much more than an issue of data collection and reallocation of resources at Statistics Canada. Like many other panelists at the Roundtable, he acknowledged that there are

significant conceptual issues to address as well.

Steven Globerman, of Western Washington University, argued that productivity growth in the service sector has been unbalanced. Industries such as transportation, communications, utilities, and finance, insurance and real estate have posted strong productivity gains, while business, personal services and public administration have shown only modest

Average Annual Growth in Labour Productivity, 1990-2000



Source: Compilations Based on Statistics Canada Data

growth. Many of the latter are non-commercial services with no market prices. The determinants of productivity growth in non-commercial

goods sector and it can be expected to be true for services. He also noted that some services previously thought to be untradable, like

productivity benefits for the firm, as well as positive spinoff effects elsewhere in the economy. He illustrated his point by drawing from the communications sector. He indicated that productivity improvements for customers were as large as the communications firms themselves.

Mr. Baldwin divided innovation into three groupings: i) innovations that allow for differentiation in time (speed of delivery and when consumed); ii) innovations that allow for differentiation in space (where consumed); and iii) innovation that adapt to or meet consumer requirements. Electronic delivery systems exemplify the first two types of innovation.

“This roundtable reminds me of the unfinished or never-ending nature of research issues.”

Andrew Sharpe

activities are clearly not well understood. Professor Globerman emphasized that it is through innovation (with continued improvement in technology) that productivity gains can be made on a sustained basis. This relationship holds for the

e-learning, have flourished with the advent of electronic delivery systems and the Internet.

John Baldwin, of Statistics Canada, focused his remarks on innovation in the service sector. He noted that innovations can have direct

Labour Market and Skills

Gilles Grenier, of the University of Ottawa, stated that numerous studies have shown the benefits of higher education, but they say little about the less-educated. Technical change has affected the demand for these workers as well. Professor Grenier sees immigration as a key policy tool to meet the skill requirements of the economy, but related problems, such as credential recognition, must be addressed. He also mentioned the brain drain issue. In his view, Canada has benefited overall, but should recognize that those leaving for the United States tend to work in health, education and high-tech industries — areas where our country has a labour shortage. He suggested that Canada seek ways to increase the compensation of its more productive elements, in order to avoid losing a highly qualified and sought-after workforce.

Alice Nakamura, of the University of Alberta, stated that market data show no clear evidence of skill shortages in most service industries. But she argued that labour demand might have been stronger if there had been more inventions, entrepreneurship and managerial excellence in Canada. She emphasized that a

new economy. In her opinion, the Internet has become a precious tool to source scarce talent around the world, and it has dramatically widened the search area at a very low cost. Foreign firms now have easy access to Canadian students and workers through e-recruiting. Professor Nakamura believes that

“There is a need for better skill measures at both micro and macro levels.”

Garnett Picot

few individuals with unusual creative or leadership abilities can have a significant impact on the economy. Professor Nakamura focused on head-hunting services. She sees these services as having a strategic role to play since high-calibre workers are so important to the

Statistics Canada must increase its data collection efforts, especially in service areas like online recruiting. Finally, she agreed with the idea of making data available at no cost or at their true marginal cost.

Garnett Picot, of Statistics Canada, noted that current data on

labour market outcomes are important signals of education shortages and surpluses. He stated that, in general, there are no shortages of science and technology workers. However, there may be specific labour needs to meet, particularly for people who combine technical, communication, teamwork and management skills. He indicated that measurement problems make it difficult to assess the interaction between IT-driven growth and skills.

Mr. Picot underlined the need for better measures of education and skills in micro business data, and for improvements in generic skills information. He claimed that better skill measures would improve the ability to conduct research at the

micro level. He also explained that the changing returns to different types of skills are an important signal for balancing supply and demand at the macro level.

Richard Shearmur, of the Université du Québec, examined high-order services and their distribution over geographic space — metropolitan centres and peripheral areas. High-order services include business and professional services, like accounting and legal services, and technical services such as management consulting and computer services. He noted that high-order services are the fastest-growing segment of the service sector, and that they generate exports directly and indirectly for communities through advisory and

financial services offered to other local firms. According to the speaker, the evidence shows that high-order service industries tend to locate in the largest metropolitan centres because they require access to information and to clients, with whom they must work closely and have direct contact. As such, metropolitan areas have a distinct advantage in attracting and retaining high-order service industries, and they provide needed skilled staff and transportation networks. Professor Shearmur concluded by stating that it is unlikely that high-order services will, through location, play a large role in the economic development of smaller communities.

The beginnings of a research agenda

Brian Copeland summarized the panel discussions and comments from the floor by indicating that the Roundtable had centered on three broad themes: i) data and measurement issues; ii) the impact of ICTs, particularly on services productivity; and iii) more generally, how the service sector is evolving.

Renée St-Jacques, Chief Economist for Industry Canada, closed the Roundtable by thanking the expert panelists and all participants for their valued contributions. She stated that the Department would use the outcome of the Roundtable to formulate its own research agenda on services, and

she expressed the hope that others would do the same. She also informed the audience that Industry Canada would showcase new research work on services at a conference to be held in early 2003.

Notes