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Citizenship : Canadian

Language : English and French

AREAS OF EXPERTISE

APPLIED ECONOMIST/MANAGER OF RESEARCH PROGRAMS Productivity • Growth • Capital Formation Environment • Natural Resources

EDUCATION

Ph. D., Economics, University of Montreal, 1993. M.A., Economics, University of Montreal, 1988.

VARIOUS POSITIONS HELD

2010-	Research associate, Groningen Growth and Development Centre, University of
	Groningen, The Netherlands.
2004-2010	Assistant Director, Statistics Canada.
2000-2004	Chief, Statistics Canada.
1997-1999	Senior Analyst and Survey Manager, Statistics Canada.
1992-1997	Economist, Statistics Canada.

PROFILE

Twenty years of experience in a variety of research activities ranging from the conduct of research projects published in peer-reviewed journals to the management of research programs featuring creative thinking, partnerships and policy-relevant research.

- Published independently or in collaboration a variety of research output in peer-reviewed journals such as *The International Journal of Industrial Organizations, The OECD Economic Studies, The Canadian Public Policy* and *The Review of Income and Wealth.*
- Established expertise in concepts, methods and data development related that enhanced official economic statistics in areas such as productivity, the financial sector and consumer prices.
- Skilled in translating complex research results into key messages for senior management, drafting media friendly reports and interfacing with the media.
- Skilled in the application of econometric and statistical techniques to the solution of practical problems and applying economic theories to concrete issues.

Professional experience

2010- Present

Research Associate

Groningen Growth and Development Centre University of Groningen, The Netherlands

MANDATE

As part of the INDICSER project, a € 2.3 million European Union initiative meant to develop indicators for evaluating international performance in the services sector, the objective is to assess the sources of the European-Union/United States productivity gap along two main themes :

- The role of structural differences and market rigidities and
- The role of differences in the measurement methods in the services sector.

ACCOMPLISHMENTS Mid-year progress included:

- The revision of the E.U. KLEMS version of the U.S. data to reflect the 2010 Comprehensive Revision of the Annual Industry Accounts, its update through 2009 and the maintenance of its historical continuity all the way back to 1977.
- Presentation on the EU-US productivity gap given at the INDICSER Mid-term Conference 6 8 April 2011, Valencia.
- The preparation of a report that outlined the nature of the data revisions and the recent structural changes experienced by the U.S. economy.

2006-2010

Assistant Director Statistics Canada, Consumer Prices Program

MANDATE

Implement various transformation initiatives featuring the development of a new analytical capacity and a reorganization of the workforce with the goal to make the program sustainable and relevant.

ACCOMPLISHMENTS

- Conducted a thorough review of the program that identified potential risks and provided options for restoring its sustainability. The review led to an increase of the funding to the program, part of which was devoted to the increase in the analytical capacity.
- Built a research capacity through the hiring of a dozen of economists from some of Canada's best economic departments. Reorganized the program to challenge the status quo and promote a creative analytical thinking. These transformation initiatives led to a significant increase in the research output making it possible to illustrate the way in which consumer prices series can be exploited to shed light on policy issues and to enhance the measurement framework of the program (e.g. housing, banking and insurance).
- Managed the Experts Seminar Series, an initiative designed to bring leading economists for the purpose of staying abreast of current economic conditions, new developments relevant to official statistics and emerging issues. The initiative has attracted top-notch economists on international trade, productivity and prices measurement.

 Represented Statistics Canada as a technical expert at the Inter-Secretariat Working Group on Price Statistics, a United Nation body meant to coordinate international work on price statistics and support the development and the implementation of internationally accepted standards and methods. Acted as the secretary for the Statistics Canada-The Bank of Canada bilateral committee on consumer prices issues.

2000-2006

Assistant Director and Chief Statistics Canada, Productivity Program

MANDATE

Provide intellectual leadership to a multidisciplinary group of professionals; develop and oversee the implantation of a broad and relevant research agenda, including the evaluation of policy options; contribute to horizontal projects and joint work with stakeholders.

ACCOMPLISHMENTS — Led on a timely fashion the implementation of the OECD productivity manual's recommendations. The initiative translated into:

- A significant upgrade in the measurement of capital and labour inputs in a way that reflect the structural shifts experienced by the Canadian economy.
- The production of comparable productivity statistics with the United States that facilitate the assessment of Canada's relative performance.
- Completed several studies that documented and explained the main stylized facts about Canada's productivity and contributed to 'push the envelope' in hard-to-measure areas such as eco-efficiency. This led to findings largely covered by media and, ultimately, shaped policy-decisions.
- Gave several presentations to a wide variety of audiences and represented Statistics Canada on matter of importance in area of expertise such as productivity. Examples include the NBER-CRIW conferences, interdepartmental meetings and various conferences on economic measurement in Stockholm, Washington and London.
- Fostered relationships with stakeholders for the purpose of staying abreast of current economic conditions and emerging issues, sharing intelligence, conducting joint research or integrating research agendas and facilitating access to data. This translated into:
- The completion of joint-research projects with staff from major economic departments such as The Bank of Canada and Industry Canada on investment and the exchange rate, economic growth and information technology.
- The coordination of the activities related to Statistics Canada and Infrastructure Canada partnership. With a 1.3 million dollar budget and an interdepartmental working group, I oversaw the data development on public infrastructure and research activities on the role of public infrastructure in the economy.
- Managed Statistics Canada's program on access to microdata by outside researchers. Key accomplishments included the initiation of a consultation, the development of formal process to review research proposals and a rapid turnaround in the review of research applications.

- Assessed policy effectiveness at the international level illustrated by the conduct of consultation work for the World Bank as part of 'Tunisia's Global Integration' project, an initiative aimed at defining ways to enhance Tunisia's performance in terms of productivity. As part of this project, I have conducted several missions to Tunisia that led to:
- The development of an integrated data set for the 1987-2004 period that supports analysis of structural changes and economic performance and
- The completion of a report that provided recommendations to the World Bank's senior officials on the role of foreign direct investment and imports of technology from the European Union on Tunisia's productivity.

1992-2000

Senior Economist Statistics Canada, Various Economic Statistics Programs

SCOPE

Contribute to the upgrade of the statistical infrastructure represented by the industrial classification, an enhancement of the data for the financial sector to address important gaps and a better understanding of the structure, conduct and performance of Canadian businesses, with a focus on the financial sector.

- ACCOMPLISHMENTS Led the working group responsible of the new delineation of the financial sector. The method underlying the proposed delineation was based on my own research published in a high profile economic journal.
 - Managed all the steps required by the implementation of the new annual surveys of the financial sector (e.g. consultation with respondents, questionnaire design, etc.) and published various analytical papers on the structures, conduct and performance of this sector. Devised a statistical method meant to enhance the accuracy of the quarterly statistics for small business.
 - Collaborated to the development of the Financial Performance Indicators of Corporations. This Statistics Canada's information product, which provides a wide range of financial indicators by corporations' characteristics (e.g. size, industry, etc.), gained over the years a substantial popularity.

Publication record by research theme¹

STRUCTURAL CHANGES

- 'A Long-Term Retrospective Look at the U.S. Economic Growth and Its Productivity Performance,' Manuscript 49 p., July 2011.
- 'The EU-US Relative Productivity Performance Revisited,' In process

ENVIRONMENT, ENERGY AND NATURAL RESOURCES SECTORS

"The sources of growth of the Canadian Business Sector's CO₂ Emissions, 1990-1996," Energy Economics, 28(2), 2006.

¹ Available at http://ideas.repec.org/f/pha216.html and/or http://www.statcan.gc.ca/stcsr/query.html?qt=harchaoui&GO%21=Search&col=alle&ht=0&qp=%2Bto pic % 3A113113165 & qs = & pw = 100 % 25 & ws = 0 & la = en & qm = 1 & st = 1 & oq = & rq = 0 & si = 0 & rf = 0 & style = emp.

- 'Water Use, Shadow Prices, and the Productivity Performance of the Business Sector,' Economic Analysis Series No. 26. Ottawa: Analytical Studies Branch, Statistics Canada, 2004.
- "Greenhouse Gas Emissions in the Canadian Economy, 1981-2000" <u>Insights on the Canadian Economy</u>, May 2003, Ottawa: Analytical Studies Branch, Statistics Canada.
- "Assessing the Impact of Greenhouse Gas Emissions on Canada's Productivity Growth, 1981-1996: An Experimental Approach" Economic Analysis Series No. 9. Ottawa: Analytical Studies Branch, Statistics Canada, 2002.
- "Accounting for Exhaustible Resources in the Canadian System of National Accounts: Flows, Stock and Productivity Measures," Review of Income and Wealth 43 (4), 1997.

CAPITAL FORMATION AND PRODUCTIVITY

- "The Effects of the Exchange Rate on Investment: Evidence from Canadian Manufacturing Industries," Working Papers 05-22, 2005, Bank of Canada.
- "Whatever Happened to Canada-U.S. Economic Growth and Productivity Performance in the Information Age?" <u>OECD Economic Studies</u>, 40 (1) 2005.
- ''Productivité et croissance économique à l'ère de l'information: une comparaison internationale'', éditeur du numéro spécial de <u>l'Actualité Économique</u>, 81(1-2), 2005.
- "Public Infrastructure in Canada, 1961-2002," Canadian Public Policy, 30 (3), 2004.
- "Information Technology and Economic Growth in the Canadian and U.S. Private Economies," In Economic Growth in Canada and the United States in the Information Age. Edited by D. Jorgenson. Research Monograph, Ottawa: Industry Canada, 2004.
- "Public Capital and its Contribution to the Productivity Performance of the Canadian Business Sector," Economic Analysis Series No. 17. Ottawa: Analytical Studies Branch, Statistics Canada, 2003.
- "The Importance of Information Technology: A Canada-US Comparison,", pp. 49-53, <u>ISUMA</u> (Canadian Journal of Policy Research), April 2002.
- "A Comparison of Canada-U.S. Economic Growth in the Information Age, 1981-2000: The Importance of Investment in Information and Communication Technologies," <u>Monthly Labor</u> <u>Review</u>, 125 (10) 2002.
- "The Structure of Investment in Canada and Its Impact on Capital Accumulation," Productivity Growth in Canada, 2001, Statistics Canada, Catalogue 15-204, Ottawa.
- "Testing the Option Value of Irreversible Investment," <u>International Economic Review</u>, 42 (1), 2001
- ''Le capital public au Canada: évolution historique et externalités,'' dans Gouriéroux et Montmarquette (éds.): Économétrie appliquée, <u>l'Actualité économique</u> (numéro spécial) 73 (1-3), 1997.
- "Le choix de capacité comme l'exercice d'une option financière," Revue canadienne de science économique (<u>Canadian Journal of Economics</u>) 29 (2), 1996.
- "Testing the Impact of Taxation on Capacity Choice: A Putty-Clay Approach," <u>Journal of Public Economics</u>, 56 (3), 1995.

PRODUCTIVITY

- "Comparisons of Economic Performance: Canada versus Australia, 1983–2000," Monthly Labor Review, 128 (4), 2005.
- "Productivity and Prosperity in the Information Age," <u>Perspectives in Labour Income</u>, Autumn 2003.
- "A Frontier Approach to Canada-U.S. Multifactor Productivity Performance," Economic Analysis Series No. 10. Ottawa: Analytical Studies Branch, Statistics Canada, 2003.
- "Productivity Growth in Canada and the United States, Productivity Growth in Canada, 2001,"
 Statistics Canada, Catalogue 15-204, Ottawa.
- "Productivity Growth in the Canadian Manufacturing Sector: A Departure from the Standard Framework," Productivity Growth in Canada, 2001, Statistics Canada, Catalogue 15-204, Ottawa.

MEASUREMENT ISSUES

- "The Integration of the Canadian Productivity Accounts within the System of National Accounts: Current Status and Challenges Ahead' in Dale W. Jorgenson, J. Steven Landefeld and William D. Nordhaus, Editors: <u>A New Architecture for the U.S. National Accounts</u>, The University of Chicago Press, 2005.
- "The Banking Business in the 1997 North American Industrial Classification System: Delineation and Assessment," <u>Review of Income and Wealth</u>, Essays in Honor of Nancy and Richard Ruggles, 50 (2), 2004.
- "Dealing with the Insurance Business in the Economic Accounts," in Dionne, G. (Ed.): <u>Handbook of Insurance</u>, Kluwer Academic Publishers, 2001, pp. 831-66.

PRICES MEASUREMENT ISSUES

- "Accounting for the Difference between the CPI and Personal Expenditure Price Index in Canada," Presented at the Ottawa Group Meeting, 2007.
- "Measuring Hedonic Prices of Classical Music Recordings," <u>International Journal of Industrial Organization</u>, 18 (3), 2000.

CYCLICAL BEHAVIOUR

- "La persistance des chocs au Canada, 1870-1996," <u>l'Actualité Économique</u>, 80 (2-3), 2004.
- "The Cyclical Behaviour of the Canadian Industrial Labour Productivity Series,' Productivity Growth in Canada, 2001," Statistics Canada, Catalogue 15-204, Ottawa.