

January 2020

**BYRON GRANT SPENCER**

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McMaster University  
Hamilton, Ontario L8S 4M4

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Dundas, Ontario L9H 7S7

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PERSONAL: Born: Rosetown, Saskatchewan  
Canadian citizen

AREAS OF SPECIALIZATION:

Economic Demography  
Health Economics  
Energy Economics  
Applied Econometrics

DEGREES: B.A. Queen's University, 1963  
Ph.D. Rice University, 1967

UNIVERSITY APPOINTMENTS:

Assistant Professor, McMaster University, 1966-71  
Associate Professor, McMaster University, 1971-77  
Senior Visitor, University of Cambridge, 1973-74  
Professor of Economics, McMaster University, 1977-2017  
Research Associate, Research formerly Program  
for Quantitative Studies in Economics and Population,  
McMaster University, 1981-  
Director, Research Program in Quantitative Studies in  
Economics and Population, McMaster University, 1996-  
Associate Member in Gerontology, 1996-2017  
Academic Director, Statistics Canada Research Data  
Centre at McMaster University, 2000-2017  
University Bedel, 2004-2007  
Professor Emeritus, 2017-

OTHER APPOINTMENTS:

Member, Research Management Team, Social Services and Transfers, Ontario Economic Council, 1974-80

Member, Adjudication Committee, Population Aging Strategic Grant Area, Social Sciences and Humanities Research Council of Canada, 1985-87

Member, Canadian Commonwealth Scholarship and Fellowship Committee, Association of Universities and Colleges of Canada, 1986-87

Councillor, Canadian Population Society, 1988-90

Member, Adjudication Committee, Integration of Persons with Disabilities, Social Sciences and Humanities Research Council of Canada, 1994-95

Elected Member, International Union for the Scientific Study of Population

Member, Canadian Research Data Centre Network, 2000-

Chair, Executive Committee, Canadian Research Data Centre Network, 2005-

Member, Editorial Board, *Canadian Studies in Population*, 2007-

Member, Advisory Council on Pensions and Retirement Income, appointed by the Ontario Ministry of Finance, August 2009-March 2011

Member, The Population Issues Working Group, Social Security Committee, International Actuarial Association, April 2010-

Member, John Charles Polanyi Prizes Selection Committee, Council of Ontario Universities, 2011-2014

Research Program Director, Canadian Research Data Centre Network, 2017-2020

HONOURS:

John Vanderkamp Prize, 2011, for the best paper in *Canadian Public Policy/Analyse de politiques*. With Frank T. Denton

Mike McCracken Award for Economic Statistics, 2013; awarded by the Canadian Economic Association “in recognition of both theoretical and applied contributions...to the development or use of official economic statistics”. With Michael C. Wolfson

UNIVERSITY PARTICIPATION, VARIOUS TIMES:

Academic Steering Committee, Canadian Commercial Energy End-use Data and Analysis Centre, Member

Gerontological Studies Committee of Instruction, Member

McMaster Institute for Energy Studies, Member

Tenure and Promotion Appeals Nominating Committee of Senate, Chair

McMaster University Research Institute for Quantitative Studies in Economics and Population, Director

Undergraduate Studies Committee, Department of Economics, Member

Faculty Discipline Board, Member

Labarge Scientific Advisory Committee, Member

SGS Masters Scholarship Committee

Faculty Discipline Board, McMaster University Senate, 2004-

Member, Distinguished University Professor Selection Committee, 2016

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**RESEARCH FUNDING WITH END DATES SINCE 1990**
**SSHRC**

1991-92	\$ 25,116	Economic-demographic analysis and modelling
1992-93	23,579	(Frank T. Denton*, Dean C. Mountain and
1993-94	15,305	Byron G. Spencer)
Total	\$ 64,000	

**National Health Research and Development Program**

1988-89	\$ 15,709	Analysis and modelling of smoking patterns
1989-90	62,322	(Frank T. Denton and Byron G. Spencer*)
1990-91	46,692	
Total	\$ 124,723	

**Premier's Council on Health Strategy Health Innovation Fund**

1989-90	\$ 49,368	Development of SHARP system of
1990-91	134,136	models of Ontario health care system
1991-92	152,637	(Frank T. Denton, Amiram Gafni and
1992-93	37,940	Byron G. Spencer*)
Total	\$ 374,081	

**Ontario Ministry of Colleges and Universities**

1990-92	\$ 198,447	Study of Ontario postsecondary enrolment and development of econometric forecasting system (Frank T. Denton, Peter J. George, Peter Pineo, and Byron G. Spencer*)
Total	\$ 198,447	

**Institute for Clinical Evaluative Sciences**

1993	\$ 21,000	Additional work on SHARP system of models (Frank T. Denton, Amiram Gafni and Byron G. Spencer*)
Total	\$ 21,000	

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**McMaster Institute for Energy Studies**

1994-95	\$ 50,000	Analysis of energy use in the commercial sector (Frank T. Denton, Dean C. Mountain and Byron G. Spencer)
1995-96	20,000	
1996-97	33,000	
1997-98	37,000	
1998-99	37,000	
Total	\$ 177,000	

**Health Canada, Seniors' Independence Research Program**

1995-96	\$ 174,403	The independence and economic security of the elderly population (Byron G. Spencer* and 18 others)
1996-97	210,739	
1997-98	134,363	
Total	\$ 519,505	

**SSHRC, Major Collaborative Research Initiatives Program**

1999	\$ 415,828	Social and economic dimensions of an aging population – the SEDAP Research Program (Byron G. Spencer* and 27 others; an additional \$1.4 million of institutional support has been committed)
2000	380,654	
2001	384,086	
2002	376,557	
2003	367,853	
Total	\$1,924,978	

**SSHRC, Major Collaborative Research Initiatives Program**

2004/05	\$ 124,986	Social and economic dimensions of an aging population – the SEDAP Research Program (Byron G. Spencer* and 45 others; an additional \$2.5 million of institutional support has been committed)
2005/06	499,359	
2006/07	499,360	
2007/08	499,925	
2008/09	374,960	
2009/10		
Total	\$2,498,047	

**CIHR-SSHRC**

2005-09 \$1,600,000 On-going support for the operation of the Canadian Research Data Centre Network (Co-investigator in my role as Academic Director of the McMaster RDC)

**Ontario Ministry of Health and Long Term Care**

2005-10 \$ 414,000 The McMaster Pilot: Exploring the Benefits of Research Access to Ontario Administrative Health Records (Co-Principal Investigator, with Jeremiah Hurley)

**Canadian Foundation for Innovation**

2009-13 \$3,634,560 The National Research Data Centre Network: A Quantum Leap Forward in Social Science Research (Co-investigator in my role as Academic Director of the McMaster RDC)

**Human Resources and Skills Development Canada**

2006-09 \$ 231,000 Transitions to Retirement and Income Security in Old Age: a Series of Investigations (Principal Investigator)

**SSHRC, Strategic Knowledge Cluster**

2007-14 \$2,100,000 Life Course and Population Change (Co-Investigator and Member of Leadership Group)

**CIHR-SSHRC, Canadian Initiative on Social Statistics**

2010-16 \$11,500,000 Canadian Research Data Centre Network: Integrating new initiatives for a stronger future (Principal Investigator in my role as chair of the executive committee of the CRDCN)

**Canadian Foundation for Innovation (CFI)**

2009-13 \$3,634,560 The National Research Data Centre Network: A Quantum Leap Forward in Social Science Research (Principal Investigator in my role as chair of the executive committee of the CRDCN)

**Ontario Ministry of Energy, Smart Grid Fund**

2014-16 \$1,357,966 Integrating Dynamic Pricing and Customer Feedback on Electricity Usage to Stimulate Residential Conservation and Demand Response (PI: Dean Mountain)

**CIHR-SSHRC, Canadian Initiative on Social Statistics**

2016-21 \$14,500,000 The Canadian Research Data Centre Network: Evolving to Meet New Research Data Needs and Policy Priorities (Principal Investigator)

**Canadian Institute of Actuaries & Society of Actuaries**

2016-17 \$ 110,000 Canadian Long-Term Healthcare Trend Model (with Michel Grignon and Thomas Getzen)

**SSHRC, Partnership Grant**

2016-21 \$ 2,500,000 Productivity, Firms and Incomes (PI: Michael Veall; member of Steering Committee)

**Canadian Foundation for Innovation (CFI)**

2017-22 \$ 2,687,869 The CRDCN Transition to High Performance Computing: Liberating Data for Research and Policy (Principal Investigator; award transferred to Michael Veall, August 2017)

**INVITED PRESENTATIONS (selection)**

Congress 2011 Signature Session, Symposium for New Users for Government Data  
Federal/Provincial/Territorial Deputy Ministers of Health Mini-Retreat on Aging  
Health Canada Science and Policy Roundtable  
Retreat of Deputy Ministers of the Federal Government  
Annual Meeting of the Canadian Association on Gerontology  
Ontario Ministry of Finance  
Policy Research Secretariat, Government of Canada  
Citizenship and Immigration Canada  
International Union for the Scientific Study of Population  
Social Inclusion Committee, which consists of 15 Deputy Ministers of the  
Government of Canada  
Various conferences and seminars organized by the CD Howe Institute  
Citizenship and Immigration Canada  
Canadian Employment Research Forum Conference  
Ninth Meeting of Federal/Provincial/Territorial Ministers Responsible for Seniors  
Queen's International Institute on Social Policy, Queen's University  
The Special Senate Committee on Aging  
AHEAD (Ageing, Health Status and Determinants of Health Expenditure) Project,  
Discussant at Final Conference, Centre for European Policy Studies, Brussels  
Policy Research Initiative  
The Expert Panel on Older Workers  
PWFC Pre-symposium on Data Development and Modelling  
Annual Symposium of the Population, Work and Family Policy Research  
Collaboration  
Newfoundland & Labrador Centre for Applied Health Research  
Special Senate Committee on Aging  
Aboriginal Experiences in Aging Symposium: Setting Research and Policy Priorities  
Retirement Income Research Buffet, Human Resources and Social Development  
Canada. Centre interuniversitaire québécois de statistiques sociales. Quebec  
Inter-University Centre for Social Statistics (QICCS)  
Employment and Social Development Canada



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DOCTORAL THESIS SUPERVISION (McMASTER UNIVERSITY)

(1) Chair, Thesis Supervisory Committee:

Chan, Luke, "A Model of the Canadian Beef and Dairy Cattle Industry Based on Markov Chain Techniques" (1975)

Kim, Sang Yoong, "An Econometric Model of the Canadian Clothing and Textile Industry" (1975)

Mujeri, Mustafa, "The World Market for Jute: An Econometric Analysis" (1975)

Agheyisi, Rachel U., "Education, Fertility and Remittances in the Traditional Sector of a Developing Economy" (1985)

Oshikoya, Waheed T., "An Integrated Macroeconometric and Input-Output Model of Nigeria" (1989)

Waples, Mary Jane, "A Multiproduct Approach to Physician Output Mix" (1989)

Nguyen-Dinh, Huan, "An Econometric Analysis of the Number and Timing of Births: The Case of Vietnam" (1996)

Zelmer, Jennifer, "The Economic Burden of End Stage Renal Disease in Canada: Today and Tomorrow" (2005)

deOliveira, Claire, "The Income-Health Gradient in Childhood" (2009)

Rana, Saeed, "Three Essays on the Dynamics of Disability Benefit Receipt in the Ontario Disability Support Program" (2018)

(2) Member, Thesis Supervisory Committee:

Kwon, On Yul, "Optimal Fiscal Strategies for Economic Stabilization: An Econometric Study with Illustrative Application to Canada" (1972)

Hardy, Helen M., "The Effect of Federal Grants on Provincial Expenditure and Revenue Decisions: Ontario and New Brunswick Compared" (1973)

Brox, James, "A Simulation Study of a Disequilibrium Model" (1975)

Poon, Ngok-Pang, "The Economics of International Migration - A

Simulation Analysis" (1980)

Belessiotis-Kalliris, Anastassios, "Essays on Labour Mobility in Eastern Europe" (1982)

Ghaeli, Reza, "A Macroeconometric Analysis of the Incidence and Economic Effects of the Corporation Income Tax in Canada" (1982)

Khilji, Nasir M., "Growth Prospects of a Developing Economy: A Macroeconometric Study of Pakistan" (1982)

Thamrongvech, Suchart, "A Macro-Econometric Model of Thailand" (1982)

Abrar, Mohammed-Burhan, "Simulation Analysis of the Implications of the Alternative Life-Cycle Models" (1985)

Zhang, Junsen, "Two Essays on the Economics of Marriage and Fertility" (1989)

Sharif, Najma R., "Farmer Efficiency: The Frontier Approach Applied to Rice Farming in Bangladesh" (1992)

Rahman, Saleem ur, "Alternative Representations of Technological Change, Learning by Use, and Energy Substitution in Canadian Manufacturing Industries" (1993)

Newbold, Bruce, "Characterization and Explanation of Primary, Return and Onward Interprovincial Migration" (1994)

Souare, Malick, "Three Essays in the Economic Consequences of Population Aging" (2003)

Goshev, Simo, "Microeconometric Analyses of Health and Labour Issues: A Canadian Perspective" (2008)

Bonnar, Stephen, "Consumption Patterns of the Elderly" (2016)

Zhang, Xue (Helen), "Three Essays on Health and Pension Economics" (2017)

Truong, Khuong, "Essays on Skills Distribution and Labour Market Outcomes of Immigrants in Canada" (2019)

PUBLICATIONS

1. Books, Monographs, and Chapters in Books

Married Women in the Labour Force: The Influence of Age, Education, Child-Bearing Status and Residence (Queen's Printer, 1968). With John D. Allingham.

Married Female Labour Force Participation: A Micro Study (Queen's Printer, 1970). With Dennis C. Featherstone.

"The Supply of Labour in Canada," in Canadian Perspectives in Economics (Collier-Macmillan Canada Ltd., 1972). With Frank T. Denton.

"Population and Its Economic Aspects," in Canadian Perspectives in Economics (Collier-Macmillan Canada Ltd., 1972). With Frank T. Denton.

"The Increase in Female Labour Force Participation in Canada: A Survey of Some Causes and Consequences," in Contemporary Issues in Canadian Personnel Administration, Harish C. Jain, Editor (Prentice-Hall of Canada Ltd., 1974).

"Married Women in Canada's Labour Force," in Marriage, Family and Society, S. Parvez Wakil, Editor (Butterworth & Co., 1975). With Dennis C. Featherstone.

Population and the Economy (D.C. Heath Ltd., 1975). With Frank T. Denton.

The Consumption of Bread and Fluid Milk in Canada (Ottawa: Food Prices Review Board, 1975). With Christine H. Feaver.

"Education: Enrolment and Attainment," in Gail C. A. Cook, editor, Opportunity for Choice: A Goal for Women in Canada (Statistics Canada in association with C.D. Howe Research Institute, Ottawa, 1976). With A. Leslie Robb.

Family Food Expenditure in Canada: An Analysis of the 1974 Survey (Ottawa, Food Prices Review Board, 1976).

"The Canadian Labour Force: Patterns, Prospects, and Policy Issues," in Ronald G. Wirick and Douglas D. Purvis (eds.), Issues in Canadian Public Policy II, Proceedings of a Conference held at Queen's University, Kingston, Ontario, April-May 1979. With Frank T. Denton.

"Population Change and Public Expenditures," in Conference on Economic and Demographic Change: Issues for the 1980's, Solicited Papers, International Union for the Scientific Study of Population, (Liege: 1979). With Frank T. Denton.

"Canada's Population and Labour Force: Past, Present, and Future," in Victor W. Marshall (ed.) Aging in Canada (Fitzhenry and Whiteside, 1980). With Frank T. Denton.

Food Demand and Nutritional Requirements in Canada: An Econometric-Demographic Model with Projections for the Period 1976-2001 (Agriculture Canada, 1980). With Frank T. Denton.

The Future Population and Labour Force of Canada: Projections to the Year 2051 (Economic Council of Canada, 1980). With Frank T. Denton and Christine H. Feaver.

Unemployment and Labour Force Behaviour of Young People: Evidence from Canada and Ontario (University of Toronto Press, 1980). With Frank T. Denton and A. Leslie Robb.

The Future Financing of the Canada and Quebec Pension Plans: Some Alternative Possibilities (Economic Council of Canada, 1980). With Frank T. Denton and A. Leslie Robb.

"OASI and the United States Economy: A Model and Some Long-Run Projections," in Social Security and Pensions: Programs of Equity and Security (Joint Economic Committee of the United States Congress, Special Study on Economic Change, Vol. 8, 1980). With Frank T. Denton and Christine H. Feaver.

Pensions and the Economic Security of the Elderly (C.D. Howe Institute, 1981). With Frank T. Denton and Melvin L. Kliman.

The Economics of Manpower Policy in the Ontario Context (Ontario Economic Council, 1982). With Donald A. Dawson and Frank T. Denton.

"The Sensitivity of Health-Care Costs to Changes in Population Age Structure," in Christopher Garbacz (ed.) Economic Resources for the Elderly: Prospects for the Future (Westview Press, 1983). With Frank T. Denton.

"Macroeconomic Aspects of the Transition to Zero Population Growth," in Christopher Garbacz (ed.) Economic Resources for the Elderly: Prospects for the Future (Westview Press, 1983). With Frank T. Denton.

"The Time Path of the Economy as the Population Moves Towards a Stationary State," in Gunter Steinmann (ed.) Economic Consequences of Population Change in Industrialized Countries (Springer-Verlag, 1984). With Frank T. Denton.

"Prospective Changes in the Population and Their Implications for Government Expenditures," in Thomas J. Courchene, David W. Conklin, and Gail C.A. Cook, eds., Ottawa and the Provinces: The Distribution of Money and Power (Toronto: Ontario Economic Council, 1985). With Frank T. Denton.

"Age Structure and Rate of Promotion in the Canadian Working Population," in Frank Travato and P. Krishnan (eds.), Contributions to Demography: Methodological and Substantive: Essays in Honour of Dr. Karol J. Krotki (University of Alberta, Edmonton, Alberta, October 1987). With Frank T. Denton.

"Population Change and the Canadian Economy: A Survey of the Issues," (Institute for Research on Public Policy Discussion Paper series, 1987). With Frank T. Denton.

"Population Change and the Future Labour Force: A Discussion Paper," (Institute for Research on Public Policy Discussion Paper series, 1987). With Frank T. Denton.

"Inflation Protection and Economic Security in Retirement" in Task Force on Inflation Protection for Employment Pension Plans: Research Studies, Vol. 1 (Toronto: Queen's Printer for Ontario, 1988) pp. 203-300. With Frank T. Denton.

"The Canadian Population and Labour Force: Retrospect and Prospect," in Victor W. Marshall, ed., Aging in Canada (Fitzhenry and Whiteside, second edition, 1987). With Frank T. Denton and Christine H. Feaver.

"How Will Population Aging Affect the Future Costs of Maintaining Health Care Standards?" in Victor W. Marshall, ed., Aging in Canada (Fitzhenry and Whiteside, second edition, 1987). With Frank T. Denton and S. Neno Li.

"Endogenous versus Exogenous Fertility: What Difference for the Macroeconomy?" in Ronald D. Lee, W. Brian Arthur and Gerry Rodgers, eds., Economics of Changing Age Distributions in Developed Countries (Oxford University Press, 1988). With Frank T. Denton.

"Population Aging and the Economy: Some Issues in Resource Allocation," in James E. Thornton and Earl Winkler, eds., Ethics and Aging (University of British Columbia Press, 1988). With Frank T. Denton.

"Some Economic and Demographic Implications of Canadian Life Cycle Changes," in Ernest J. McCullough and Robert L. Calder, eds., Time as a Human Resource (University of Calgary Press, 1991). With Frank T. Denton.

"The Demographics of Employment," Institute for Research on Public Policy Discussion Paper 91.A.1, June 1991. With Frank T. Denton and Peter C. Pineo.

"Resource Requirements and Availability: An Integrated System of Models for Health Care Planning," in M.K. Chytil, G. Duru, W. van Eimeren, and Ch. D. Flagle, eds., Health Systems: The Challenge of Change (Omnipress, 1992). With Frank T. Denton and Amiram Gafni.

"The SHARP Computer System: A Tool for Resource Planning in the Health Care Sector," in M. Malek, J. Rasquinha, and P. Vacani, eds., Strategic Issues in Health Care Management (John Wiley and Sons, 1993). With Frank T. Denton and Amiram Gafni.

"Economic-Demographic Projection and Simulation: A Description of the MEDS System of Models," in K. Vaninadha Rao and Jerry W. Wicks, eds., Studies in Applied Demography: Proceedings of the International Conference on Applied Demography (Population and Society Research Center, Bowling Green State University, 1994). With Frank T. Denton and Christine H. Feaver.

"Demographic Trends, Labour Force Participation, and Long-Term Growth," in Thomas J. Courchene and Thomas A. Wilson (eds.), Fiscal Targets and Economic Growth, (Queen's University John Deutsch Institute, 1998). With Frank T. Denton.

Population Change in Atlantic Canada: Looking at the Past, Thinking About the Future, (Atlantic Institute for Market Studies, Research Report Series, 1998). With Frank T. Denton and Christine H. Feaver.

"The Changing Economic Circumstances of the Older Population: A Cohort Analysis," in Cohort Flow and the Consequences of Population Ageing: An International Analysis and Review Leroy Stone (ed.): CD-ROM version, Statistics Canada 89-569-XCB (ISBN 0-660-60592-9), 1999. With Frank T. Denton.

"How Old Is Old? Revising the Definition Based on Life Table Criteria," Mathematical Population Studies, Vol. 7, No. 2, pp. 147-159, 1999. With Frank T. Denton. Reprinted in Frank T. Denton, Deborah A. Fretz, and Byron G. Spencer (eds.) Independence and Economic Security in Old Age, University of British Columbia Press, 2000.

Independence and Economic Security in Old Age. University of British Columbia Press, 2000. Editor, with Frank T. Denton and Deborah A. Fretz.

"How Well Does the CPI Serve as an Index of Inflation for Older Age groups?" in Frank T. Denton, Deborah A. Fretz, and Byron G. Spencer (eds.), Independence and Economic Security in Old Age, University of British Columbia Press, 2000. With Frank T. Denton.

The Double Cohort and the Shortage of Faculty: How Big Are the Problems? Toronto: CD Howe, 2002.

An Economic Future with Smaller Numbers: The Population and Labour Force Outlook for the Atlantic Region. Atlantic Institute for Market Studies, November 2009. With Frank T. Denton and Christine H. Feaver.

Demographic Developments in Canada. The Berlin Institute's Online-Handbook Demography, December 2010.  
<http://www.berlin-institut.org/online-handbookdemography/canada.html>

“L’âge du patient influence-t-il le choix du traitement d’un infarctus du myocarde aigu?”  
In Rheault, Sylvie et Jean Poirier. Le vieillissement démographique: de nombreux enjeux à déchiffrer. Québec, Institut de la statistique du Québec, 2012, pp. 207-221.  
With Michel Grignon and Li Wang.

*Models of Long-Term Health Care Cost Trends in Canada*, published by the Society of Actuaries and the Canadian Institute of Actuaries, 2018. With Michel Grignon and Li Wang.

2. Articles, Notes and Comments in Refereed Journals

"Why Married Women Are in the Labour Force: A Microeconomic Study," Canadian Statistical Review, April 1970. With Dennis C. Featherstone.

"The Shifting of the Corporation Income Tax in Canada," Canadian Journal of Economics, February 1969. Reprinted in A.J. Robinson and James Cutt, Public Finance in Canada (Methuen, 2nd Edition, 1973).

"The Shifting of the Corporation Income Tax in Canada: Reply" Canadian Journal of Economics. February 1970.

"Career Attainment in Bureaucratic Organizations: Unscrambling the Effects of Ethnolinguistic Factors on Salary," American Journal of Sociology, November 1971. With Christopher Beattie.

"Analysis of the Intertemporal Behaviour of Parameter Estimates from a Model of the United States Economy," Weltwirtschaftliches Archiv, 1972. With Ernest E. Oksanen.

"Testing an Aggregate Consumption Model for Canada," Canadian Journal of Economics, February 1972. With Ernest H. Oksanen.

"A Simulation Analysis of the Effects of Population Change on a Neoclassical Economy," Journal of Political Economy, Vol. 81, No. 2, Part 1, pp.356-375, March/April, 1973. With Frank T. Denton.

"Determinants of the Labour Force Participation of Married Women: A Micro-Study of Toronto Households," Canadian Journal of Economics, May, 1973.

"International Consumption Behaviour: Tests of Alternative Consumption Hypotheses Using National Accounting Data for Twelve Countries," International Statistical Review, 1973. With Ernest H. Oksanen.

"On the Small-Model Estimation of Multiplier, Accelerator, and Liquidity Preference Relationships," Journal of Economic Studies, 1974. With Ernest H. Oksanen.

"Some Demographic Consequences of Changing Cohort Fertility Patterns: An Investigation Using the Gompertz Function," Population Studies, Vol. 28, No. 2, pp. 309-318, 1974. With Frank T. Denton.

"Some Aspects of Economic Adjustments through Migration Flows," Economic Journal, December, 1974. With Frank T. Denton.



"Health-Care Costs When the Population Changes," Canadian Journal of Economics, Vol. 8, No. 1, pp. 34-48, February, 1975. With Frank T. Denton.

"On the Determinants of Student Performance in Introductory Courses in the Social Sciences," The American Sociologist, May 1975. With Ernest H. Oksanen.

"The Small Sample Bias of Durbin's Tests for Serial Correlation When One of the Regressors is the Lagged Dependent Variable and the Null Hypothesis is True," Journal of Econometrics, Vol. 3, 1975.

"Household and Population Effects on Aggregate Consumption," Review of Economics and Statistics, Vol. LVIII, No. 1, 1976. With Frank T. Denton.

"On the Prospect of a Labour Shortage," Canadian Public Policy, Vol. IV, No. 1, 1978. With Frank T. Denton.

"Some Economic and Demographic Implications of Future Population Change," Journal of Canadian Studies, Vol. 14, No. 1, 1979. With Frank T. Denton.

"Labour Hoarding and the Wage Share: Test of a Hypothesis," Industrial Relations, Vol. 34, No. 1, 1979. With Gerald Marion.

"A Macroeconomic Analysis of the Effects of a Public Pension Plan," Canadian Journal of Economics, Vol. 14, No. 4, pp. 609-634, November, 1981. With Frank T. Denton.

"Population Aging and Future Health Costs in Canada," Canadian Public Policy, Vol. IX, No. 2, pp. 155-163, 1983. With Frank T. Denton.

"Potential Savings from the Adoption of Nurse Practitioner Technology in the Canadian Health Care System," Socio-Economic Planning Sciences, Vol. 17, No. 4, 1983. With Frank T. Denton, Amiram Gafni, and Greg L. Stoddart.

"Shelter Allowances in a General Equilibrium Setting: A Model and Some Simulations," Journal of Urban Economics, 1985. With Frank T. Denton and A. Leslie Robb.

"Prospective Aging of the Population and Its Implications for the Labour Force and Government Expenditures," Canadian Journal on Aging, Vol. 5, No. 2, pp. 75-98, 1986. With Frank T. Denton and Christine H. Feaver.

"Changes in the Canadian Population and Labour Force: Prospects and Implications," Canadian Studies in Population, Vol. 14, No. 2, 1987. With Frank T. Denton.

"The Response of An Industrial Firm to Alternative Electricity Rate Structures: An Optimization Model for Simulation Applications," Resources and Energy, Vol. 9, 1987. With Frank T. Denton, Kevan L. Jefferies, Dean C. Mountain, and A. Leslie Robb.

"Health Care in the Economic-Demographic System: Macro-Effects of Market Control, Government Intervention, and Population Change," Southern Economic Journal, July, 1988. With Frank T. Denton and S. Neno Li.

"Participation in Adult Education by the Elderly: A Multivariate Analysis and Some Implications for the Future," Canadian Journal on Aging, Vol. 7, No. 1, 1988. With Frank T. Denton and Peter C. Pineo.

"Macro-Effects of Changes in Household Preferences for Children: Simulated History and Future Time Paths," Journal of Population Economics, Vol. 2, No. 3, pp. 165-88, 1989. With Frank T. Denton.

"The Constituencies of Adult Education Programs: Similarities and Differences Among Age Groups and Other Components of the Population," Canadian Journal of Education, Vol. 15, No. 1, 1990. With Frank T. Denton and Peter C. Pineo.

"A Multivariate Analysis of Mortality in Rural Africa," African Studies Review, Vol. 34, No. 2, Sept. 1991. With Irena Winkowska.

"Resampling a Time Series Process: A Method of Estimating the Probabilities Associated with Alternative Plans for Protecting Pensions Against Inflation," Journal of Applied Econometrics, Vol. 6, No. 3, pp. 303-314, July-September, 1991. With Frank T. Denton. Also "Erratum," Vol. 7, No. 2, pp. 211-213, April-June, 1992.

"Labor Supply and Investment in Child Quality: A Study of Jewish and Non-Jewish Women: A Comment," Review of Economics and Statistics, Vol. 74, No. 4, pp. 721-725, November, 1992.

"Who Signs China's One-Child Certificate, and Why?" Journal of Population Economics, Vol. 5, pp. 203-215, 1992. With Junsen Zhang.

"An Econometric Analysis of Housing as Both a Consumption Good and a Risky Asset," Empirical Economics, Vol. 18, No. 2, pp. 215-231, 1993. With Frank T. Denton and A. Leslie Robb.

"Lifetime Smoking Patterns: A Transition Probability Analysis," Socio-Economic Planning Sciences, Vol. 27, No. 3, pp. 181-198, 1993. With Frank T. Denton and Deborah A. Welland.

"Teachers and the Birth Rate: The Demographic Dynamics of a Service Population," Journal of Population Economics, Vol. 7, No. 3, pp. 307-329, 1994. With Frank T. Denton and Christine H. Feaver.

"System for Health Area Resource Planning (SHARP): An Application to Ontario Medical School Enrolment," Canadian Medical Association Journal, Vol. 151, No. 1, pp. 39-45, July 1, 1994. With Frank T. Denton and Amiram Gafni.

"Demographic Change and the Cost of Publicly Funded Health Care," Canadian Journal on Aging, Vol. 14, No. 2, pp. 174-192, Summer, 1995. With Frank T. Denton.

"Physician Supply in Ontario: Further Observations on SHARP and the SHARP Projections," Canadian Medical Association Journal, Vol.152, No. 9, pp. 1389-1391, May 1, 1995. With Frank T. Denton and Amiram Gafni.

"The SHARP Way to Plan Health Care Services: A Description of the System and Some Illustrative Applications in Nursing Human Resource Planning," Socio-Economic Planning Sciences, Vol. 29, No. 2, pp.125-137, 1995. With Frank T. Denton and Amiram Gafni.

"The Response of Aggregate Production to Fertility-Induced Changes in Population Age Distribution," Southern Economic Journal, Vol. 62, No. 3, pp. 606-619, 1996. With Frank T. Denton and Dean C. Mountain.

"Industry-Region Load Profiles: Econometric Estimation Based on Marginal Totals," Annals of Regional Science, Vol. 30, 1996. With Frank T. Denton, Christine H. Feaver, Dean C. Mountain, and A. Leslie Robb.

"Population Aging and the Maintenance of Social Support Systems," Canadian Journal on Aging, Vol. 16, No. 3, pp. 485-498, 1997. With Frank T. Denton.

"The Future Population of Canada: Its Age Distribution and Dependency Relations," Canadian Journal on Aging, Vol. 17, No. 1, pp. 83-109, 1998. With Frank T. Denton and Christine H. Feaver. Reprinted in Frank T. Denton, Deborah A. Fretz, and Byron G. Spencer (eds.) Independence and Economic Security in Old Age, University of British Columbia Press, 2000.

"Student Enrollment and Faculty Renewal: The Response of a Tenure-Based University System to Demographic and Budgetary Shocks," Journal of Economic Behavior and Organization, Vol. 34, No. 1, pp. 101-127, 1998. With Frank T. Denton and Christine H. Feaver.

"Population, Labour Force and Long-term Economic Growth," Policy Options, Vol. 19, No. 1, pp. 3-9, 1998. With Frank T. Denton.

"Immigration and Population Aging," Canadian Business Economics, Vol. 7, No. 1, pp. 39-57, 1999. With Frank T. Denton and Christine H. Feaver.

"Age, Trend, and Cohort Effects in a Macro Model of Canadian Expenditure Patterns," Journal of Business and Economic Statistics, Vol. 17, No. 4, pp. 430-443, 1999. With Frank T. Denton and Dean C. Mountain.

"Energy Use in the Commercial Sector: Estimated Intensities and Costs for Canada Based on US Survey Data," Energy Studies Review, Vol. 9, Issue 1, pp. 23-45, 1999. With Frank T. Denton and Dean C. Mountain.

"Population Aging and Its Economic Costs: A Survey of the Issues and Evidence," Canadian Journal on Aging, Vol. 19, Supplement 1, pp. 1-32, Summer 2000. With Frank T. Denton.

"Population Change and the Requirements for Physicians: The Case of Ontario," Canadian Public Policy, Vol. 27, No. 4, pp. 469-485, 2001. With Frank T. Denton and Amiram Gafni.

"Exploring the Effects of Population Change on the Costs of Physician Services," Journal of Health Economics, Vol. 21, 2002. With Frank T. Denton and Amiram Gafni.

"Alternative Pasts, Possible Futures: A "What If" Study of the Effects of Fertility on the Canadian Population and Labour Force," Canadian Public Policy, Vol. 28, No. 3, pp. 443-459, 2002. With Frank T. Denton and Christine H. Feaver.

"Some Demographic Consequences of Revising the Definition of 'Old Age' to Reflect Future Changes in Life Table Probabilities," Canadian Journal on Aging, Vol. 21, No. 3, pp. 349-356, 2002. With Frank T. Denton.

"Energy Demand with Declining Rate Schedules: An Econometric Model for the U.S. Commercial Sector," Land Economics, Vol. 79, No. 1, pp. 86-105, 2003. With Frank T. Denton and Dean C. Mountain.

"Requirements for Physicians in 2030: Why Population Aging Matters Less than You May Think," Canadian Medical Association Journal, Vol. 168, No. 12, pp. 1545-1547, 2003. With Frank T. Denton and Amiram Gafni.

"The Authors Respond," Canadian Medical Association Journal, Vol. 169, No. 8, pp. 752-753, 2003. With Frank T. Denton and Amiram Gafni.

"The Transition from Good to Poor Health: An Econometric Study of the Older Population," Journal of Health Economics, Vol. 23, pp. 1013-1034, 2004. With Neil J. Buckley, Frank T. Denton, and A. Leslie Robb.

"Healthy Aging at Older Ages: Are Income and Education Important?" Canadian Journal on Aging, Vol. 23, Supplement 1, pp. S155-S169, 2004. With Neil J. Buckley, Frank T. Denton, and A. Leslie Robb.

“Time Series Analysis and Stochastic Forecasting: An Econometric Study of Mortality and Life Expectancy,” Journal of Population Economics, Vol. 18, No. 2, pp. 203-227, 2005. With Frank T. Denton and Christine H. Feaver.

“Socioeconomic Influences on the Health of Older Canadians: Estimates Based on Two Longitudinal Surveys,” Canadian Public Policy, Vol. 32, No. 1, pp. 59-83, 2006. With Neil J. Buckley, Frank T. Denton, and A. Leslie Robb.

“Age, Retirement, and Expenditure Patterns: An Economic Study of Older Canadian Households,” Atlantic Economic Journal, Vol. 34, No. 4, pp. 421-434, December 2006. With Frank T. Denton, and Dean C. Mountain.

“Private Pensions and Income Security in Old Age: An Uncertain Future – Introduction,” Canadian Public Policy, Vol. 34, No. 4, pp. Siii-Svi, November 2008. Co-editor with Thomas Crossley.

“Users and Suppliers of Physicians Services: A Tale of Two Populations,” International Journal of Health Services, Vol. 39, No. 1, pp. 189-218, 2009. With Frank T. Denton, and Amiram Gafni.

“What is Retirement? A Review and Assessment of Alternative Concepts and Measures,” Canadian Journal on Aging, Vol. 28, No. 1, pp. 63-76, 2009. With Frank T. Denton.

“Population Aging, Older Workers, and Canada’s Labour Force”, Canadian Public Policy, Vol. 35, No. 4, pp. 481-492, December 2009. With Frank T. Denton.

“Chronic Health Conditions: Changing Prevalence in an Aging Population and Some Implications for the Delivery of Health Care Services”, Canadian Journal on Aging, Vol. 29, No. 1, pp. 11-22, 2010. With Frank T. Denton.

“Cohort Working Life Tables for Older Canadians”, Canadian Studies in Population, Vol. 37, No. 1-2, pp. 175-206, Spring/Summer 2010. With Frank T. Denton and Christine H. Feaver.

“The Private Cost of Long-Term Care in Canada: Where You Live Matters”, Canadian Journal on Aging, Vol. 29, No. 3, pp. 307-316, 2010. With Natasha Fernandes.

“Is There an Age Pattern in the Treatment of AMI? Evidence from Ontario”, Canadian Journal on Aging, Vol. 29, No. 3, pp. 317-332, 2010. With Michel Grignon and Li Wang. Also, Corrigendum, Canadian Journal on Aging, Vol. 29, No. 4, pp. 593-594.

"Income Replacement in Retirement: Longitudinal Evidence from Income Tax Records", Canadian Journal on Aging, Vol. 30, No. 4, pp. 523-539, 2011. With Frank T. Denton and Ross Finnie.

"Age of Pension Eligibility, Gains in Life Expectancy, and Social Policy", Canadian Public Policy, Vol. 37, No 2, pp. 183-200, 2011. With Frank T. Denton.

"A Dynamic Extension of the Period Life Tables", Demographic Research, Vol. 24, No. 34, pp. 831-854, June 2011. With Frank T. Denton.

"The age pattern of retirement: comparisons of longitudinal, pseudo-cohort, and period measures", *Canadian Studies in Population*, Vol 40, Issue 3-4, pp 193-203, 2013. With Frank T Denton and Ross Finnie.

"The Impact of Technological Intensity of Service Provision on Physician Expenditures: An Exploratory Investigation", Health Economics. Vol 23: 1224-1241, 2014. Published online in Wiley Online Library (wileyonlinelibrary.com). DOI: 10.1002/hec.2979. With Mehrdad Roham, Anait R. Gabrielyan, Norman P. Archer, and Michel Grignon.

"Exploring the Population Implications of Male Preference when Sex Probabilities at Birth Can Be Altered", Demographic Research, Vol 31, Article 28, 757-778. 2014. With Frank T. Denton.

"Modelling the Age Dynamics of Chronic Health Conditions: Life-Table-Consistent Transition Probabilities and Their Application", Canadian Journal on Aging, Vol 34, No. 2, 196-193, 2015. With Frank T. Denton.

"On Removing 'Age' and Especially 'Old Age' as a Criterion in Social Programs", Canadian Public Policy, Vol. 41, No. 3, pp 241-251, 2015. With Michel Grignon.

"A Simulation Analysis of the Longer-Term Effects of Immigration on Per Capita Income in an Aging Population", International Journal of Population Studies, Vol. 1, No. 1, 2015. With Frank T. Denton.

"How Does the Marriage Market Sex Ratio Affect Parental Sex Selection? Evidence from Chinese Census Data", Journal of Population Economics, Vol. 29, No. 4, pp 1063-1082, 2016. With Xing Li, M.W. Luke Chan, and Wei Yang.

"Immigration and the Rate of Population Mixing: Explorations with a Stylized Model", *IZA Journal of Migration*, 2017, pp 7-13 DOI 10.1186/s40176-017-0098-y. With Frank T Denton.

"Correction to: immigration and the rate of population mixing: explorations with a stylized model", *IZA Journal of Development and Migration*, 2017, DOI 10.1186/s40176-017-0113-3. With Frank T Denton.

“The funding of long-term care in Canada: What do we know, what should we know?”, *Canadian Journal on Aging/La Revue canadienne du vieillissement*, 37 (2) : 110–120 (2018) doi:10.1017/S0714980818000028. With Michel Grignon.

“What rates of productivity growth would be required to offset the effects of population aging? A study of twenty industrialized countries”, *Canadian Studies in Population*, Vol 45, No 3-4 (2018), pp 113-31. DOI: <https://doi.org/10.25336/csp29355>. With Frank T Denton.

“The Effects of Population Aging on GDP per Capita in the Canadian Provinces: Could Productivity Growth Provide an Offset?” *Canadian Public Policy*, Volume 45 Issue 1, March 2019, pp. 16-31. DOI: 10.3138/cpp.2018-003. With Frank T Denton.

3. McMaster University Department of Economics Working Papers

"Career Mobility of Middle-Level Anglophones and Francophones in the Federal Bureaucracy. Unscrambling the Effects of Age, Seniority, Education and Ethnolinguistic Factors." Number 70-08. With Christopher Beattie.

"Macroeconomic Effects of Population Change: Some Exploratory Simulations." Number 70-12. With Frank T. Denton.

"Tests of the Forecasting Accuracy of a Small Macromodel." Number 70-15. With Ernest H. Oksanen.

"Testing an Aggregate Consumption Model for Canada." Number 70-16. With Ernest H. Oksanen.

"On the Small-model Estimation of Multiplier Accelerator, and Liquidity Preference Relationships: A Comment." Number 70-18. With Ernest H. Oksanen.

"Analysis of the Intertemporal Behaviour of Parameter Estimates from a Model of the United States Economy." Number 70-19. With Ernest H. Oksanen.

"A Simulation Analysis of the Effects of Population Change On a Neoclassical Economy." Number 71-01. With Frank T. Denton.

"International Consumption Behaviour: Tests of Alternative Consumption Function Hypotheses Using National Accounting Data for Twelve Countries." Number 71-04. With Ernest H. Oksanen.

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"Determinants of the Labour Force Participation of Married Women: A Micro-Study of Toronto Households." Number 72-08.

"Economic-Demographic Interactions and Long Swings: Some Experimental Results." Number 72-15. With Frank T. Denton.

"The Small Sample Biases of Durbin's Tests for Serial Correlation When Some of the Regressors are Lagged Dependent Variables." Number 72-16.

"On the Use of the Gompertz Function in the Analysis and Projection of Fertility Trends." Number 73-02. With Frank T. Denton.

"Fertility, Income, and the Labour Force Participation of Married Women." Number 73-05. With Frank T. Denton.



"Analysing the Economic Effects of Changes in Fertility: A Simulation Approach." Number 73-06. With Frank T. Denton.

"Some Demographic Consequences of Changing Cohort Fertility Patterns: An Investigation Using the Gompertz Function." Number 73-10. With Frank T. Denton.

"A Consumption Function that Responds to Demographic Influences." Number 73-12. With Frank T. Denton.

"On the Determinants of Student Performance in Introductory Courses in the Social Sciences." Number 73-17. With Ernest H. Oksanen.

"Demographic Changes and the Costs of Education." Number 73-25. With Frank T. Denton.

"Health-Care Costs When the Population Changes." Number 73-26. With Frank T. Denton.

"Some Government Budget Consequences of Population Change." Number 74-01. With Frank T. Denton.

"Some Aspects of Economic Adjustments through Migration Flows." Number 74-05. With Frank T. Denton.

"Household and Population Effects on Aggregate Consumption." Number 74-08. With Frank T. Denton.

"The Demographic Element in the Burden of Government Old Age Pensions." Number 75-02. With Frank T. Denton.

"Student Performance in Introductory Courses in Economics and Other Social Sciences." Number 75-03. With Ernest H. Oksanen.

"The Effects of Demographic Variables on a Pension Scheme: A Macro-Analysis." Number 76-01. With Frank T. Denton.

"Does Canada Face a Labour Shortage in the 1980's?" Number 76-12. With Frank T. Denton.

"Some Economic and Demographic Implications of Future Population Change." Number 77-14. With Frank T. Denton.

"Demographic Change and Government Expenditure in Canada: An Analysis and Projections." Number 77-19. With Frank T. Denton.

"Population Change and Public Expenditures." Number 78-04. With Frank T. Denton.

"Interactions of a National Pension Plan with the Economic-Demographic System." Number 79-12. With Frank T. Denton.

"An Econometric Analysis of Fertility Differences Based on Canadian Census Micro-Data." Number 79-14. With Frank T. Denton.

"Public Pension Plans and the Macro-Economy." Number 80-08. With Frank T. Denton. (With the assistance of Christine H. Feaver.)

"Modelling the Age Dynamics of Chronic Health Conditions: Life-Table-Consistent Transition Probabilities and their Application." Number 2014-11. With Frank T Denton.

"A Simulation Analysis of the Longer-Term Effects of Immigration on Per Capita Income in an Aging Population". Number 2015-14. With Frank T Denton.

"Immigration and the Rate of Population Mixing: Explorations with a Stylized Model". Number 2016-13. With Frank T Denton.

"What Rates of Productivity Growth Would Be Required To Offset The Effects of Population Aging? A Study of Twenty Industrialised Countries". Number 2017-08. With Frank T. Denton.

The Differential Effects of Population Aging on Provincial GDP per capita and the Role of Productivity Growth as a Possible offset". Number 2018-04. With Frank T. Denton.

"Age-Income Dynamics Over the Life Course: Cohort Transition Patterns in Relative Income Based On Canadian Tax Returns". Number 2019-02. With Frank T Denton & Terry A Yip.

4. McMaster University Research Institute (formerly Program) for Quantitative Studies in Economics and Population (QSEP) Research Reports

"A Macroeconomic Analysis of the Effects of a Public Pension Plan." Number 1 (1981). With Frank T. Denton.

"The Consumption-Leisure-Fertility Nexus: Macroeconomic Consequences of Lifecycle Optimization." Number 15 (1981). With Frank T. Denton.

"Population Aging, Labour Force Change, and Promotion Prospects." Number 30 (1982). With Frank T. Denton.

"An Econometric Macromodel of Lifecycle Consumption, Fertility, and Leisure Choice." Number 33 (1982). With Frank T. Denton.

"Population Aging and Future Health-Care Costs in Canada." Number 35 (1982). With Frank T. Denton.

"Potential Savings from the Adoption of Nurse Practitioner Technology in the Canadian Health Care System." Number 45 (1982). With Frank T. Denton, Amiram Gafni, and Greg L. Stoddart.

"The Economics of Shelter Allowances." Number 62 (1983). With Frank T. Denton and A. Leslie Robb.

"The Sensitivity of Health-Care Costs to Changes in Population Age Structure." Number 74 (1983). With Frank T. Denton.

"Macroeconomic Aspects of the Transition to Zero Population Growth." Number 75 (1983). With Frank T. Denton.

"The Time Path of the Economy as the Population Moves Towards a Stationary State." Number 79 (1983). With Frank T. Denton.

"Endogenous vs. Exogenous Fertility: What Difference for the Macroeconomy?" Number 90 (1984). With Frank T. Denton.

"Prospective Changes in the Population and Their Implications for Government Expenditures." Number 98 (1984). With Frank T. Denton.

"Population Aging and the Economy: Some Issues in Resource Allocation." Number 105 (1984). With Frank T. Denton.

"Indexation of Commodity Taxes: A Case Study of Alcoholic Beverages in Canada." Number 118 (1984). With Frank T. Denton.

"Some Economic and Demographic Implications of Canadian Life Cycle Changes." Number 127 (1985). With Frank T. Denton.

"Report on the Development of HELPS -- A Model Designed for Forecasting and Simulation of Load Patterns." Number 142 (1985). With Frank T. Denton, A. Leslie Robb, Tony Bessell, Kevan L. Jefferies, Dean C. Mountain, and Frank Trimnell.

"An Optimization Model for Simulating the Industrial Response to Alternative Electricity Rate Structures." Number 143 (1985). With Frank T. Denton, A. Leslie Robb, Tony Bessell, Kevan L. Jefferies, Dean C. Mountain, and Frank Trimnell.

"Prospective Aging of the Population and Its Implications for the Labour Force and Government Expenditures." Number 152 (1985). With Frank T. Denton and Christine H. Feaver.

"The Utilization of Adult Education Facilities by the Elderly: A Multivariate Analysis and Some Implications for the Future." Number 168 (1986). With Frank T. Denton and Peter C. Pineo.

"The Health Care Industry in a Macro-Economic-Demographic System: A Simulation Study of the Effects of Market Control, Government Intervention, and Population Change." Number 169 (1986). With Frank T. Denton and S. Neno Li.

"Population Aging and the Economics of the Health Care System: A Macro Analysis." Number 170 (1986). With Frank T. Denton and S. Neno Li.

"The Response of an Industrial Firm to Alternative Electricity Rate Structures: An Optimization Model for Simulation Applications." Number 176 (1986). With Frank T. Denton, Kevan L. Jefferies, Dean C. Mountain, and A. Leslie Robb.

"Population Change and the Canadian Economy: A Survey of the Issues." Number 186 (1987). With Frank T. Denton. Published under the same title also by The Institute for Research on Public Policy as Discussion Paper 87.A.2.

"Population Change and the Future Labour Force: A Discussion Paper." Number 187 (1987). With Frank T. Denton. Published under the same title also by The Institute for Research on Public Policy as Discussion Paper 87.A.3.

"Housing as Consumption and Investment." Number 197 (1987). With Frank T. Denton and A. Leslie Robb.

"Age Structure and Rate of Promotion in the Canadian Working Population." Number 210 (1987). With Frank T. Denton.

"Mortality in Rural Africa: A Multivariate Analysis of Death in Ethiopia." Number 217 (1988). With Irena Winkowska.

"Child Quality and Female Labour Supply: How Different Are Jewish Women?" Number 219 (1988).

"The Constituencies of Adult Education Programs: Similarities and Differences Among Age Groups and Other Components of the Population." Number 224 (1988). With Frank T. Denton and Peter C. Pineo.

"An Integrated Set of Models for Exploring the Possible Long-Term Futures of the Canadian Population and Economy: A Report on Work in Progress." Number 227 (1988). With Frank T. Denton and Christine H. Feaver.

"Fertility, Population, and the Economy: The Macro-Implications of Alternative Life Cycle Choices." Number 241 (1988). With Frank T. Denton.

"MEDS -- Models of the Economic-Demographic System: A Report on the Project and Some Preliminary Analysis." Number 246 (1989). With Frank T. Denton and Christine H. Feaver.

"Inflation Protection and the Future Real Value of a Pension: Estimating the Probabilities by Resampling a Time Series Process." Number 256 (1989). With Frank T. Denton.

"The MEDS Projection and Simulation System." Number 263 (1990). With Frank T. Denton and Christine H. Feaver.

"Daily Electricity Load Profiles for Industry-Region Cells: Econometric Estimation Based on Marginal Totals." Number 264 (1990). With Frank T. Denton, Christine H. Feaver, D.C. Mountain, and A.L. Robb.

"The MEDS System of Models: An Instrument for Economic-Demographic Simulation and Projection." Number 269 (1990). With Frank T. Denton and Christine H. Feaver.

"Consumption Good and Risky Asset: The Dual Role of Housing in the Household Expenditure System." Number 279 (1991). With Frank T. Denton and A. Leslie Robb.

"Changing Patterns of Employment in Canada: Demographic and Social Factors." Number 282 (1991). With Frank T. Denton and Peter C. Pineo.

"Teachers and the Birth Rate: The Demographic Dynamics of a Service Population." Number 301 (1993). With Frank T. Denton and Christine H. Feaver.

"The SHARP System for Health Care Planning: A Description and An Application Relating to the Reduction of Ontario Medical School Enrolment." Number 302 (1993). With Frank T. Denton and Amiram Gafni.

"The SHARP Way to Plan Health Care Services: A Description of the System and Some Illustrative Applications in Nursing Human Resource Planning." Number 303 (1993). With Frank T. Denton and Amiram Gafni.

"Demographic Change and the Cost of Publicly Funded Health Care." Number 309 (1994). With Frank T. Denton.

"Fertility, Age Distribution, and the Aggregate Production Function." Number 310 (1994). With Frank T. Denton and Dean C. Mountain.

"THRILS: The Hourly Regional Industrial Load Simulator User Manual (Version 1.4)." Number 311 (1996). With Frank T. Denton, Christine H. Feaver, Dean C. Mountain, and A. Leslie Robb.

"Industry-Region Load Profiles: Econometric Estimation Based on Marginal Totals." Number 312 (1996). With Frank T. Denton, Christine H. Feaver, Dean C. Mountain, and A. Leslie Robb.

"A Quadratic Almost Ideal Demand System Estimated with Pooled Regional Time Series: Approximate Aggregation with an Accounting for Age, Cohort, and Trend Effects." Number 315 (1996). With Frank T. Denton, and Dean C. Mountain.

"How Old is Old? Revising the Definition Based on Life Table Criteria." Number 316 (1996). With Frank T. Denton.

"The Future Population of Canada and Its Age Distribution." Number 317 (1996). With Frank T. Denton and Christine H. Feaver.

"Student Enrolment and Faculty Renewal: The Response of a Tenure-Based University System to Demographic and Budgetary Shocks." Number 318 (1996). With Frank T. Denton and Christine H. Feaver.

"The Changing Economic Circumstances of the Older Population: A Cohort Analysis." Number 319 (1996). With Frank T. Denton.

"Population Aging and the Maintenance of Social Support Systems." Number 320 (1996). With Frank T. Denton.

"PMEDS-D USERS' MANUAL." Number 326 (1997). With Frank T. Denton and Christine H. Feaver.

"MEDS-E USERS' MANUAL." Number 327 (1997). With Frank T. Denton and Christine H. Feaver.

"How Well Does the CPI Serve as an Index of Inflation for Older Age Groups?" Number 329 (1997). With Frank T. Denton.

"Errors of Approximation and Errors of Aggregation in an Almost Ideal Demand System." Number 330 (1997). With Frank T. Denton and Dean C. Mountain.

"Demographic Trends, Labour Force Participation, and Long-Term Growth." Number 334 (1997). With Frank T. Denton.

"Immigration, Labour Force, and the Age Structure of the Population." Number 335 (1997). With Frank T. Denton and Christine H. Feaver.

"Population, Labour Force, and Long-Term Economic Growth." Number 336 (1997). With Frank T. Denton.

"Energy Use in the Commercial Sector: Estimated Intensities and Costs for Canada Based on US Survey Data." Number 337 (1997). With Frank T. Denton and Dean C. Mountain.

"Economic Costs of Population Aging." Number 339 (1998). With Frank T. Denton.

"Population Aging and Its Economic Costs: A Survey of the Issues and Evidence." Number 340 (1999). With Frank T. Denton.

"A Model of Energy Demand in the U.S. Commercial Sector with Declining Rate Schedules." Number 346 (2000). With Frank T. Denton and Dean C. Mountain.

"Projections of the Population and Labour Force to 2046: Canada." Number 347 (2000). With Frank T. Denton and Christine H. Feaver.

"Projections of the Population and Labour Force to 2046: The Provinces and Territories." Number 348 (2000). With Frank T. Denton and Christine H. Feaver.

"Some Demographic Consequences of Revising the Definition of 'Old' to Reflect Future Changes in Life Table Probabilities." Number 352 (2000). With Frank T. Denton.

"Population Change and the Requirements for Physicians: The Case of Ontario." Number 355 (2000). With Frank T. Denton and Amiram Gafni.

"Exploring the Effects of Population Change on the Costs of Physician Services." Number 358 (2001). With Frank T. Denton and Amiram Gafni.

"Time Series Properties and Stochastic Forecasts: Some Econometrics of Mortality from The Canadian Laboratory." Number 360 (2001). With Frank T. Denton and Christine H. Feaver.

"Student Enrolment and Faculty Recruitment in Ontario: The Double Cohort, the Baby Boom Echo, and the Aging of University Faculty." Number 365 (2001).

"Alternative Pasts, Possible Futures: A "What If" Study of the Effects of Fertility on the Canadian Population and Labour Force." Number 367 (2002). With Frank T. Denton and Christine H. Feaver.

"Student Enrolment and Faculty Recruitment in Ontario: The Double Cohort, the Baby Boom Echo, and the Aging of University Faculty." Number 373 (2002). A Revision of No. 365.

"Age, Retirement and Expenditure Patterns: An Econometric Study of Older Canadian Households." Number 375 (2002). With Frank T. Denton and Dean C. Mountain.

"The Transition from Good to Poor Health: An Econometric Study of the Older Population." Number 381 (2003). With Neil J. Buckley, Frank T. Denton, and A. Leslie Robb.

"Population Change and Economic Growth: The Long-Term Outlook." Number 383 (2003). With Frank T. Denton.

"Socioeconomic Influence on the Health of Older People: Estimates Based on Two Longitudinal Surveys." Number 387 (2003). With Neil J. Buckley, Frank T. Denton, and A. Leslie Robb.

"Healthy Aging at Older Ages: Are Income and Education Important?" Number 392 (2004). With Neil J. Buckley, Frank T. Denton, and A. Leslie Robb.

"Population Aging and the Macroeconomy: Explorations in the Use of Immigration as an Instrument of Control." Number 398 (2005). With Frank T. Denton.

"Users and Suppliers of Physician Services: A Tale of Two Populations." Number 399 (2005). With Frank T. Denton and Amiram Gafni.

"MEDS-D Users' Manual." Number 400 (2005). With Frank T. Denton and Christine H. Feaver.

"MEDS-E Users' Manual." Number 401 (2005). With Frank T. Denton and Christine H. Feaver.



"Socioeconomic Influences on the Health of Older Canadians: Estimates Based on Two Longitudinal Surveys." Number 402 (2005). With Neil J. Buckley, Frank T. Denton, and A. Leslie Robb.

"Population Aging in Canada: Software for Exploring the Implications for the Labour Force and the Productive Capacity of the Economy." Number 403 (2005). With Frank T. Denton and Christine H. Feaver.

"An Application of Price and Quantity Indexes in the Analysis of Changes in Expenditures on Physician Services". Number 426 (2008). With Frank T. Denton and Christine H. Feaver.

"What is Retirement? A Review and Assessment of Alternative Concepts and Measures". Number 427 (2008). With Frank T. Denton.

"Cohort Working Life Tables for Older Canadians". Number 432 (2009). With Frank T. Denton and Christine H. Feaver.

"Population Aging, Older Workers, and Canada's Labour Force". Number 433 (2009). With Frank T. Denton.

"Patterns of Retirement as Reflected in Income Tax Records for Older Workers". Number 434 (2009). With Frank T. Denton and Ross Finnie.

"Chronic Health Conditions": Changing Prevalence in an Aging Population and Some Implications for the Delivery of Health Care Services". Number 435 (2009). With Frank T. Denton.

"Income Replacement in Retirement: Longitudinal Evidence from Income Tax Records". Number 436 (2009). With Frank T. Denton and Ross Finnie.

"Age of Pension Eligibility, Gains in Life Expectancy, and Social Policy". Number 442 (2010). With Frank T. Denton.

"The Private Cost of Long-Term Care in Canada. Where You Live Matters". Number 443 (2010). With Natasha Fernandes.

"Is There an Age Pattern in the Treatment of AMI? Evidence from Ontario". Number 444 (2010). With Michel Grignon and Li Wang.

"The Age Pattern of Retirement: A Comparison of Cohort Measures". Number 446 (2011). With Frank T. Denton and Ross Finnie.

“Modelling the Age Dynamics of Chronic Health Conditions: Life-Table-Consistent Transition Probabilities and their Application”. Number 448 (2011). With Frank T. Denton.

”What Happens When Canadian Aggregate Rates of Employment and Unemployment Change? A Note on the Differences in Response Patterns Across Age and Sex Groups”, Number 450 (2012). With Frank T. Denton.

“Modelling the Age Dynamics of Chronic Health Conditions: Life-Table-Consistent Transition Probabilities and Their Application”, Number 454 (2014). With Frank T Denton.

“Exploring the Population Implications of Male Preference When the Sex Probabilities at Birth Can Be Altered”, Number 455 (2014). With Frank T Denton.

“Immigration as a Policy Instrument for an Economy with an Aging Population: A Longer-Run Perspective”, Number 456 (2014). With Frank T Denton.

“A Simulation Analysis of the Longer-Term Effects of Immigration on Per Capita Income in an Aging Population”, Number 459. With Frank T. Denton.

5. McMaster University Canadian Commercial Energy End-Use Database and Analysis Centre (CCEEDAC) Reports

"The Manitoba Audit Data Base: A Preliminary Report," Number 95:2 (June 1995). With Frank T. Denton and Dean C. Mountain.

"The Alberta Energy Audit Data Base: A Preliminary Report," Number 96:1 (March 1996). With Frank T. Denton and Dean C. Mountain.

"Energy Use in the US Commercial Sector: Comparisons with Manitoba and Alberta," Number 96:2 (May 1996). With Frank T. Denton and Dean C. Mountain.

"Energy Demand in the US Commercial Sector: An Exploratory Multivariate Analysis," Number 96:3 (May 1996). With Frank T. Denton and Dean C. Mountain.

"Energy Use in the Commercial Sector: Estimated Intensities and Costs for Canada Based on US Survey Data," Number 97:1 (1997). With Frank T. Denton and Dean C. Mountain.

"A Model of Energy Demand in the U.S. Commercial Sector with Declining Rate Schedules." Number 00:1 (2000). With Frank T. Denton and Dean C. Mountain.