



Director

CT-94/03

THE COMPETITION TRIBUNAL

IN THE MATTER OF an Application by the
Director of Investigation and Research under
sections 77 and 79 of the Competition Act
R.S.C. 1985 c. C-34 as amended

COMPETITION TRIBUNAL TRIBUNAL DE LA CONCURRENCE		P R O D U I T	
AUG AOUT	31 1995		<i>RA</i>
REGISTRAR - REGISTRAIRE			
OTTAWA, ONT.		# 164	

Between:

THE DIRECTOR OF INVESTIGATION AND RESEARCH

Applicant

File No. *CT-94/3*
 No. du dossier *File-Direct*
Dil

- and -

Exhibit No. *[Redacted]* **TELE-DIRECT (PUBLICATIONS) INC.,**
 No. de la pièce **TELE-DIRECT (SERVICES) INC.**
 Filed on *Oct 27/95 - 10h44*

Respondents

Déposée le *Shagace*
 Registrar
 Greffier

REBUTTAL AFFIDAVIT OF THOMAS A. WILSON

I, Thomas A. Wilson, of the City of Toronto, in the Province of Ontario,

MAKE OATH AND SAY:

1. I am a Professor of Economics and Director of the Policy and Economic Analysis Program at the University of Toronto and was retained by counsel for the Director of Investigation and Research to provide expert economic evidence in rebuttal to certain aspects of the report of Professor Trebilcock in this matter.

2. Attached hereto and marked as Exhibit "a" is a true copy of my evidence. The contents of Exhibit "A" and the findings and opinions expressed therein are true to the best of my knowledge, information and belief.

(PW)

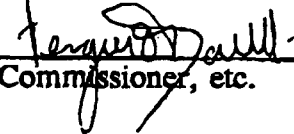
T.W.

3. Attached hereto and marked as Exhibit "B" is a true copy of my curriculum vitae.

4. I make this affidavit pursuant to Rule 47(2) of the Competition Tribunal Rules.

SWORN before me, at the City of Toronto, in the Province of Ontario, this 29th day of August, 1995


Thomas A. Wilson


A Commissioner, etc.

This is Exhibit "A"
to the Affidavit of
Thomas A. Wilson
sworn on the 29th day of
August, 1995


A commissioner, etc.

Thomas A. Wilson
Professor of Economics
University of Toronto
Toronto, Ontario

THE DIRECTOR OF INVESTIGATION AND RESEARCH

and

TELE-DIRECT (PUBLICATIONS) INC.
TELE-DIRECT (SERVICES) INC.

AUGUST 29, 1995

REBUTTAL REPORT OF THOMAS A. WILSON

I was asked by counsel for the Director of Investigation and Research to prepare a report in rebuttal to the expert evidence filed by the Respondents, focussing on the following issues:

- (a) the statement at p. 7 of Professor Trebilcock's report that
"there is no reason to suppose that firms generally will be motivated by considerations other than cost minimization considerations (subject to well-recognized exceptions such as foreclosure to competitors of access to essential facilities - discussed further below under "barriers to entry")".
- (b) the "externalities" arguments presented by Professor Trebilcock as an explanation for Tele-Direct's tying practice.
- (c) the comment by Professor Trebilcock to the effect that the commission remedy proposed by the Director would place the Tribunal "in the role of a permanent price regulator". (p.19)

I was provided the documents exchanged in discovery and transcripts of oral examination for discovery as well as the pleadings, and the expert reports filed by both parties. I have also relied upon relevant academic literature.

The evidence presented by Professor Trebilcock is based on the following premises:

1. Tele-Direct has no market power.

2. There are significant positive externalities from increased directory advertising, which are internalized through vertical integration.
3. The business practices of Tele-Direct - in particular, restrictions on commission sales and refusals to deal with agents designated by advertisers - are justified on efficiency grounds.

The question of market power has been addressed in the reports filed by Professors Schwindt and Slade, which I have reviewed and with which I agree.

a. Effects of Regulation

Another well recognized exception to cost minimization is a firm subject to rate of return regulation. Professor Trebilock's report ignores the key role of the ownership linkages between Tele-Direct and Bell Canada, and the impact of CRTC regulations in this area.

Tele-Direct's revenues are included with Bell Canada's net revenues for regulatory purposes. What this means is that any increase in Tele-Direct's profits would lead to an equivalent reduction in profits elsewhere within Bell Canada when Bell Canada is at the regulated rate of return constraint under return on investment "ROI" regulation. Under this regulatory regime, neither profit maximization nor, in particular, cost minimization, may be presumed.

Business practices within this environment may reflect other objectives, such as rate base maximization. Furthermore, in the absence of effective competition, and with regulatory constraints on profits, managerial slack ('X'-inefficiencies) may also occur.

Under ROI regulation, a firm's profits are limited to an upper bound determined by its allowed return on equity. The CRTC determines a range which is appropriate for Bell Canada's return on equity. If Bell Canada's ROI were to rise above the upper bound the CRTC would require rate reductions. If Bell Canada's profit rate were to fall below the lower bound, the firm could request an appropriate increase in rates to restore its ROI to within the range.

If the allowed ROI is above the firm's cost of capital, a regulated firm has an incentive to expand its rate base, since this policy would improve the total return to its shareholders. This is the well known Averch-Johnson effect.

The firm's attempts to expand the rate base may entail a number of inefficiencies, including:

- . capital may be used excessively relative to other inputs
- . innovations may be biased in favour of capital-using innovations
- . vertical restraints which expand the rate base may be adopted
- . excessive selling effort may occur.

In the case of Tele-Direct, the objective of rate base expansion could lead to higher marketing efforts for yellow page advertisements in order to generate increased telecommunications activity by firms which advertise.

ROI regulation may also blunt incentives for cost minimization. When a rise in costs may be in effect recouped by an increase in regulated rates for monopoly services, there is less pressure on the firm to minimize its costs. This effect may be greatest when the higher costs can be recouped by raising the price of a service whose price elasticity of demand is very low.

In the case of telecommunications, the price elasticity of the demand for local access is extremely low.

Of course this does not mean that there are no incentives to reduce costs - there are regulatory lags, there are costs involved in rate hearings, and the rate of return may fluctuate within the bounds. Rather, under this type of regulation the managers of a regulated enterprise will be less likely to pursue cost minimization to the point that their counterparts in more competitive industries do. In a number of areas economists have come to recognize that the elimination of such 'X' inefficiencies is a major benefit from increased competition.

I conclude that it is inappropriate to assume that Tele-Direct's business practices are necessarily cost-minimizing practices.

Even if Tele-Direct were maximizing its profits, there is no reason to presume that the observed amount of advertising in the directory is socially optimal. The directory is provided to consumers at a regulated price of zero. With the end product provided to consumers at a constrained price of zero, a profit maximizing firm would increase advertising beyond the socially optimal point¹ - i.e. an increase in net advertising revenues will be pursued, even if the value of the directory to consumers were reduced somewhat.²

¹ If the constraint were not binding - i.e., if the market price in the absence of the constraint were zero, this effect would not occur.

² The volume of use of the directory by consumers affects its value to advertisers. Any reduction in its value to consumers is therefore limited by the indirect effects on advertising exposures.

b. Externalities

The case for network externalities is asserted rather than proved. Clearly the comprehensiveness of a telephone directory is of key importance. But this comprehensiveness is assured by CRTC regulations requiring free listings of all subscribers (and dual free listings in white and yellow pages of business subscribers). The elimination of a business listing would have a negative external effect - by reducing the comprehensiveness of the directory. But would the reduction or elimination of advertising by a business have a net negative external effect?

Obviously the addition of useful information in advertising adds value to consumers and increases the likelihood that they will consult the directory. However some advertising is directed towards catching the attention of consumers, rather than adding additional information. This type of advertising provides no extra information, but rather attempts to dominate the smaller advertisements of competitors. It may provoke a response by competitors to increase the profile of their advertisements - an effect akin to crowds standing up at a ball game - after everyone has stood up no one has a better view!

Two negative externalities of increased advertising may be identified for consumers: the clutter effect of space occupied by competing attention-attracting advertisements - and the reduced geographic scope of directories whose size is increased by such advertising. In many instances, the geographic scope of a yellow pages directory is less than that of the corresponding white pages directory. The Toronto Yellow Pages, for example, are now partitioned into East and West volumes, whereas the corresponding white pages are in a single volume. A recipient of the Toronto West yellow pages does not obtain information on businesses listed only in the Toronto East directory. If the size of the typical advertisement were reduced sufficiently, all

Toronto residents and advertisers could share the benefits of a single comprehensive yellow pages directory. In this case, Tele-Direct has sacrificed completeness for other objectives.

For advertisers there are negative as well as positive externalities. The positive externalities arise from information advertising by non-competitors which increases the value of the directory to consumers. The negative externalities are generated by:

1. negative externalities affecting consumers (see above) and
2. the negative effects of increased advertising by competitors.

No evidence has been provided regarding the relative strengths of positive and negative externalities, either on average or at the margin. We therefore cannot conclude that there would be a net positive externality from an increase in advertising.

c. Remedies

Professor Trebilock claims that the remedy of increased commissionability would cast the Tribunal "in the role of a permanent price regulator". I believe, to the contrary, that this remedy needs to be transitional only, as market conditions will likely become more conducive to competition in the future, primarily as a result of recent and prospective changes in CRTC regulations, but reenforced by the effects of the remedies requested by the Director in this case.

The CRTC plans major changes to the regulatory regime within the next few years. Basically, regulation will be limited to the core monopoly utility elements of the telephone companies' services, and regulation will take the form of price caps rather than allowable ROI. Furthermore, recent CRTC Decisions have lowered entry barriers into the market for telephone directories. The market may be radically transformed if competition develops within local as well as long distance telephone markets.

Tele-Direct's behaviour will be conditioned by these regulatory changes as well as by the development of actual and potential competition in the markets it serves. The speed with which competition develops within these markets may be strongly affected by Tele-Direct's future business practices, particularly in the early years of the transition to the new regulatory regime.

The remedies that the Director is seeking will assist in facilitating the transition to a more competitive market. In particular, an order pursuant to s. 77 of the Competition Act would enhance competition in the advertising services market and reduce entry barriers into the telephone directory market. Such an order need not be permanent, however, since there would be less concern about any restrictions on commission sales when a competitive market develops. The order may therefore be limited to a period sufficient for the transition to a more competitive market to be completed.

This is Exhibit "B"
of the Affidavit of
Thomas A. Wilson
sworn on the 29th
day of August, 1995


A commissioner, etc.

CURRICULUM VITAE

Thomas Arthur Wilson

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University Address

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University of Toronto
140 St. George Street
Toronto, Ontario
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Education

Attended Public Schools in Vancouver, British Columbia, Canada.

Entered University of British Columbia, September 1953. Graduated with Honours B.A. in Economics in May 1957.

Entered Harvard Graduate School, September 1957. Received A.M. degree in June 1959, Ph.D. degree in June 1961.

Academic Honours

Grandview Legion University Entrance Scholarship, 1953.

Jonathan Rogers Award, 1954.

Alaska Pine Company Scholarship in Economics, 1956.

Woodrow Wilson Fellowship, 1957.

Harvard University Scholarship, 1958.

Ford Foundation pre-doctoral Fellowship, 1959.

SSRC Faculty Research Grant, 1966.

Isaak Walton Killam Award, 1969.

McKenzie-King Visiting Professor, Harvard University, 1972-73.

Visiting Ford Rotating Research Professor, University of California at Berkeley, 1975-76.
 Elected Fellow of the Royal Society of Canada, 1980.
 President, Canadian Economics Association, 1984-85.
 Visiting Senior Fellow, Center for Business and Government,
 John F. Kennedy School of Government, Harvard University, 1986.
 Visiting Fellow, Wolfson College, University of Cambridge, 1987.

Teaching Experience

Part-time Teaching Assistant in Economics at the University of British Columbia,
 September 1955 - May 1957.
 Teaching Fellow at Harvard University, September 1960 - June 1961.
 Instructor at Harvard University, 1961-62.
 Assistant Professor at Harvard University, 1962-1967.
 Visiting Professor, University of Western Ontario, Spring 1966.
 Associate Professor, University of Toronto, 1967-1968.
 Visiting Professor, Harvard University, 1972-1973.
 Member, University College, University of Toronto, 1987-
 Professor of Economics, University of Toronto, June 1968-

University Administrative Experience

Director, Institute for Policy Analysis, University of Toronto, June 1969 - June 1975.
 Coordinator, Econometric Forecasting Program, Institute for Policy Analysis, University of
 Toronto, 1976-77.
 Director of Economics, Department of Political Economy, University of Toronto, July 1979 -
 August 1982.
 Acting Chairman, Department of Economics, University of Toronto,
 September 1982 - December 1982.
 Chairman, Department of Economics, University of Toronto, January 1983 - June 1985.
 Member, Academic Board, University of Toronto, 1988-93.
 Vice-Chairman, Budget Committee of Academic Board, 1990 - 92.
 Director, Policy and Economic Analysis Program, Institute for Policy Analysis,
 University of Toronto 1987 -
 Area Coordinator for Business Economics, Faculty of Management, 1989 -

Other Professional Experience

Research Assistant at Bank of Canada, Ottawa, Summer 1957.
 Research Assistant for Professor Guy Orcutt, Harvard University, Summer 1958.
 Part-time Research Assistant at Littauer Statistical Laboratory, Harvard University
 September 1958 - May 1959.

Assistant Economist with the U.S. Congress, Joint Economic Committee project on Employment, Growth and Price Levels, June 1959 - January 1960.
 Consultant to the Commission on Money and Credit, September 1960 - February 1961.
 Consultant to the United States Treasury, 1961-1963.
 Research Supervisor (October 1963 - September 1964) and Consultant (1964-1967), Royal Commission on Taxation, Ottawa.
 Director, National Bureau of Economic Research, 1969 - 1974.
 Consultant to Department of Consumer and Corporate Affairs, Ottawa, Canada, 1969-1974.
 Senior Research Associate, NBER, 1972-77.
 Associate Editor, Review of Economics and Statistics, 1973-81.
 Member of Editorial Board, Canadian Public Policy/Analyse de Politiques, 1974-80.
 Advisor to the Minister of Finance, 1982-84.
 Member of Research Advisory Group (Macro-economics) for the Royal Commission on the Economic Union and Development Prospects for Canada, 1983-1985.
 Member of Executive Council, Canadian Economics Association, 1983-86.
 Member of Council of Advisors, C.D. Howe Research Institute, April 1983 - 1990.
 Associate Editor Review of Economics and Statistics, 1986 - 1992.
 Adviser to Thailand Development Research Institute, Bangkok, Thailand 1987.
 Adviser to Harvard Institute of International Development, Jakarta, Indonesia, 1987.
 Member, Working Group on Sales Taxes, Ontario Fair Tax Commission, 1991-92.
 Member of Advisory Council, John Deutsch Institute of Economic Policy (Queen's University), 1985 -
 Member, 1990-95, Chair 1995- National Accounts Advisory Committee, Statistics Canada.
 Member of Editorial Board, Canadian Business Economics, 1992-

Qualifications as an Expert Witness:

I have been qualified as an expert economics witness before the Canadian Radio-Television and Telecommunications Commission, the Ontario Joint Board (Ontario Municipal Board and Environmental Board), and the Competition Tribunal.

Publications

1. "An Analysis of the Inflation of Machinery Prices," Study Paper No. 3, Study of Employment Growth and Price Levels, U.S. Congress, Joint Economic Committee, 1959.
2. Contributor to: Staff Report on Employment Growth and Price Levels, U.S. Congress, Joint Economic Committee, 1959.

3. "Productivity and Output in the Postwar Period," Technical Note No. 2, Study of Employment Growth and Price Levels, U.S. Congress, Joint Economic Committee, 1960.
4. (With Otto Eckstein) "The Determination of Money Wages in American Industry," Quarterly Journal of Economics, August 1962.
5. (With Otto Eckstein) "Short-run Productivity Behavior in U.S. Manufacturing," Review of Economics and Statistics, February 1964.
6. (With Lester Taylor) "Three Pass Least Squares: A Method for Estimating Models with a Lagged Dependent Variable," Review of Economics and Statistics, November 1964.
7. A Review of A Study of Cost and Demand Inflation by J.D. Pitchford, American Economic Review, December 1964.
8. (With Lawrence Officer) "Econometrics and Public Policy," a discussion paper published in Conference on Stabilization Policy, Economic Council of Canada, 1966.
9. "Comment" on "Postwar Production Relationships in Canada" by N.H. Lithwick, George Post and T.K. Rymes in Conference on Income and Wealth, National Bureau of Economic Research, October 1965.
10. Capital Investment and the Cost of Capital: A Dynamic Analysis, Royal Commission on Taxation, Study No. 30, Queen's Printer, 1967.
11. (With William S. Comanor) "Advertising, Market Structure and Performance," Review of Economics and Statistics, November 1967.
12. "Reply" to a "Comment" by McGuire and Rapping on "The Determination of Money Wages in American Industry," Quarterly Journal of Economics, November 1967.
13. (With N.H. Lithwick) The Sources of Economic Growth, Royal Commission on Taxation, Study No. 24, Ottawa, Queen's Printer, 1968.
14. (With William S. Comanor) "Advertising and the Advantages of Size," American Economic Review, May 1969.
15. (With A.R. Dobell) "The Effects of the White Paper on Saving, Investment and Economic Growth," Canadian Tax Foundation, Report of the Proceedings of the Twenty-Second Tax Conference, 1970.

16. "High Employment and Price Stability: Policy Options in an Open Economy," Proceedings of the Standing Senate Committee on National Finance, Senate of Canada, Third Session - Twenty-eighth Parliament, 1970-1971, June 8, 1971, pp. 17:5-17:23.
17. (With William S. Comanor) "On Advertising and Profitability," Review of Economics and Statistics, November 1971.
18. (With Gregory V. Jump) "Tax Policy Options for Increasing Employment Without Inflation," Canadian Tax Journal, March-April 1972.
19. (With A.R. Dobell) "The Impact of Taxation on Capital Flows and the Balance of Payments in Canada," in N.B.E.R., International Mobility and Movement of Capital, Columbia University Press, 1972.
20. (With William S. Comanor) "Advertising as a Source of Monopoly," in P.M. Chen (ed.), America's Changing Role in the 70's, Taipei, 1972, pp. 69-82.
21. "Taxes and Inflation," Canadian Tax Foundation, Proceedings of the Twenty-fourth Tax Conference, 1972.
22. (With John D. Bossons) "Adjusting Tax Rates for Inflation," Canadian Tax Journal, May-June 1973.
23. (With L.D. Taylor and S.J. Turnovsky) The Inflationary Process in North American Manufacturing, Ottawa, Information Canada, 1973.
24. (With G.V. Jump) "Canadian Fiscal Policy, 1973-74," Canadian Tax Journal, January/February, 1974.
25. (With W.S. Comanor) "Advertising and the Distribution of Consumer Demand," in S.F. Divita (ed.), Advertising and the Public Interest, American Marketing Association, Chicago, 1974, pp. 59-71.
26. (With W.S. Comanor) Advertising and Market Power, Harvard University Press, Cambridge, Mass., 1974.
27. (With G.V. Jump) "Macro-economic Effects of the Energy Crisis 1974-75," Canadian Public Policy/Analyse de Politiques, Winter 1975, pp. 30-38.
28. (With G.V. Jump) "Macro-economic Effects of Federal Fiscal Policies, 1974-75," Canadian Tax Journal, January/February 1975.
29. (With G.V. Jump) "Economic Effects of Provincial Fiscal Policies, 1975-76," Canadian Tax Journal, May/June 1975.

30. (With G.V. Jump) "Fiscal Policy in Recession and Recovery, 1975-76," Canadian Tax Journal, March/April, 1976.
31. "Commentary on Advertising and the Firm," in D.G. Tuerck (ed.), Issues in Advertising, American Enterprise Institute, 1978, pp. 124-30.
32. (With G.V. Jump) "Restrictive Fiscal Policies in Perspective, 1976-77," Canadian Tax Journal, May/June, 1977.
33. "The Province and Stabilization Policy," in Ontario Economic Council, Issues and Alternatives - 1977 Intergovernmental Relations, Toronto, 1977, pp. 123-136.
34. "Comments" on "Inflation in the United States" by Harold Shapiro, in L.B. Krause and W.S. Salant (Eds.) Worldwide Inflation, Washington, The Brookings Institution, 1977, pp. 294-97.
35. (With F.J. Reid) Wage and Price Behaviour in Canadian Manufacturing, Anti-Inflation Board, Ottawa, 1979.
36. (With W.S. Comanor) "The Effect of Advertising on Competition: A Survey," Journal of Economic Literature, June, 1979.
37. (With G.V. Jump) The Influence of the Anti-Inflation Program on Aggregate Wages and Prices: A Simulation Analysis, Anti-Inflation Board, Ottawa, 1979.
38. (With J.R.S. Prichard and W.S. Stanbury, co-editors) Canadian Competition Policy: Essays in Law and Economics, Butterworths, Toronto, 1979.
39. (With G.L. Reuber) "The Merger Provisions: An Evaluation," in Prichard, Stanbury, and Wilson, op. cit., pp. 255-267.
40. "Energy Policy: Overview and Macroeconomic Implications," in Energy Policies for the 1980's, Ontario Economic Council, Toronto, 1980, Vol. 1, pp. 1-13.
41. (With W.S. Comanor) "On the Economics of Advertising: A Reply to Bloch and Simon," Journal of Economic Literature, September 1980, pp. 1075-78.
42. "Macroeconomic Trends and International Trade: General Overview," in Developments Abroad and the Domestic Economy, Vol. 1, Ontario Economic Council, Toronto, 1980.
43. "Comment" on "The Scope for Short-Run Fiscal Stabilization Policy Within Confederation" (D.A.L. Auld) in R.M. Bird (ed.), Fiscal Dimensions of Canadian Federalism, Canadian Tax Foundation, 1980, pp. 112-117.

44. "Forecasting vs. Policy Analysis and the Art of Economic Forecasting: Some Observations," Economic Policy Review, vol. 3, No. 2, pp. 13-30, Institute for Policy Analysis, University of Toronto, 1981.
45. (With G.V. Jump) "Inflation and the Taxation of Personal Investment Income: An Appraisal," in D.W. Conklin (ed.), Inflation and the Taxation of Personal Investment Income, Ontario Economic Council, 1982, pp. 71-106.
46. (With D.P. Dungan) Potential GNP: Performance and Prospects, Institute for Policy Analysis, Report No. 10, 1982.
47. "Medium-Term Fiscal Planning for Recovery" (with D.P. Dungan), Canadian Public Policy/Analyse de Politiques, Vol. IX, No.3 (Sept. 1983), pp. 390-97.
48. "Deficits and the Economy to 1990: Projections and Alternatives (with D.P. Dungan) in Ontario Economic Council, Deficits: How Big and How Bad?, Toronto, Ontario, 1983, pp. 116-148.
49. "Comment" (pp. 60-64) and "Wrap-up Discussion" (pp. 200-203) in D.D. Purvis, (ed.), Declining Productivity and Growth, Kingston, Queen's University, John Deutsch Institute for the Study of Economic Policy, July 1984.
50. "Stabilization Policy Issues: An Appraisal of Possible Roles of Flexible Fiscal Policies in Ontario," in D.W. Conklin (ed.), A Separate Personal Income Tax for Ontario: Background Studies, Toronto, Ontario Economic Council, 1984.
51. "Otto Eckstein: Applied Economist Par Excellence," Review of Economics and Statistics, November 1984.
52. "Altering the Fiscal Policy Mix: Credible Policies to Reduce the Federal Deficit" (with Peter Dungan), Canadian Tax Journal, 33, No. 2 March/April 1985, pp. 309-19.
53. "The Fiscal Stance and the Economic Outlook: The Short-term Impact, in D.D. Purvis, (ed.), Report of the Policy Forum on the May 1985 Federal Budget, Kingston, John Deutsch Institute for the Study of Economic Policy, July, 1985, pp. 1-5.
54. "The 1985 Federal Budget: Macroeconomic and Fiscal Effects" (with M.E. MacGregor) Canadian Public Policy/Analyse de Politiques, Vol. XI, No. 3, (Sept. 1985) pp. 602-616.
55. "Lessons of the Recession," Presidential Address delivered to the 1985 meetings of the Canadian Economics Association, Canadian Journal of Economics, XVIII, No. 4, November 1985, pp. 693-722.

56. "Savings in Canada: Retrospective and Prospective" (with G.V. Jump) in John Sargent, (ed.), Economic Growth: Prospects and Determinants, Toronto, University of Toronto Press, 1986, pp. 129-91.
57. "Impact of Public Sector Wage Controls on Budget Deficits and Inflation" (with D.P. Dungan), in D.W. Conklin, T.J. Courchene, and W. Jones, (eds.), Public Sector Compensation, Toronto, Ontario Economic Council Conference Volume, 1985, pp. 193-232.
58. "Macroeconomic Effects of the Budget" (with M.E. MacGregor), in M.F.J. Prachowny (ed) Policy Forum on the February 1986 Federal Budget, Kingston, John Deutsch Institute for the Study of Economic Policy, April 1985, pp. 46-60.
59. "The Macroeconomic Effects of the 1986 Budget" (with M.E. MacGregor), Canadian Tax Journal, 34, No.2, May-June 1986, pp. 563-587.
60. "The Corporate Income Tax Proposals: Reform or Retrogression" in Jack M. Mintz and Douglas D. Purvis (Eds.) Report of the Policy Forum on the Corporate Income Tax System, Kingston, John Deutsch Institute, November 1985, pp. 15-30 (Publication released early in 1987).
61. "Modelling Anticipated and Temporary Fiscal Policy Shocks in a Macro-Econometric Model of Canada" (with D.P. Dungan). Canadian Journal of Economics, February 1988.
62. "Macroeconomic Effects of Tax Reform in Canada" (with Peter Dungan) Canadian Tax Journal, January/February 1988.
63. "Canada and the Pacific Rim: Trade and Growth Prospects: (with Jack Carr, and Gregory Jump, in Bernard T.K. Jooi, Canada in the Evolving Pacific Community Taipei, Tamkang University, 1988, pp. 197-262.
64. Co-editor (with L. Waverman) of a special issue of Canadian Public Policy - Analyse de Politiques on Macroeconomic Co-ordination and the Summit XV Supplement, February 1989 pp. 99.
65. "Introduction: Is the Process the Message?" (with L. Waverman) Ibid, pp. S1-S9.
66. "International Co-ordination of Macroeconomic Policies: A Review" (with M. Devereux, Ibid, pp. S20-S34.
67. "Canada's Economic Prospects Over the Medium Term", in K. Lorne Brownsey (Ed) Canada-Japan: Policy Issues for the Future, Halifax, Institute for Research on Public Policy 1989, pp. 85-120.

68. "The Proposed Federal Goods and Services Tax: Its Economic Effects Under Alternative Labour Market and Monetary Policy Conditions" (with Peter Dungan) Canadian Tax Journal, March-April, 1989, pp. 341-367.
69. "Predictions of the Macroeconomic Effects of the Budget from the FOCUS Model", (with Peter Dungan), in Martin F.J. Prachowny (ed.), Policy Forum on the February 1990 Federal Budget, Queen's University, John Deutsch Institute for the Study of Economic Policy, April 1990, pp. 21-43.
70. "Cold Houses and Warm Climates Revisited: On Keeping Warm in Chicago, or Paradox Lost", (with D.N. Dewees), Journal of Political Economy, 98(3), June 1990, pp. 656-63.
71. "Alternatives to the Goods and Services Tax", (with P. Dungan and J. Mintz), Canadian Tax Journal, Vol. 38, No. 3 (1990) pp. 644-666
72. "Symposium - The Canada-U.S. FTA: Economic Modeling of the Canada-U.S. Free Trade Agreement: Introduction " (with D.P. Dungan and R.G. Harris) Journal of Policy Modeling 13 (3) pp. 417-19 (1991).
73. "The Canada-U.S. FTA: Macroeconomic Effects and Sensitivity Analysis" (with D.P. Dungan), Journal of Policy Modeling, 13 (3) pp. 435-457 (1991).
74. "A Note on the Macroeconomic Implications of the 1991 Federal Budget" (with D.P. Dungan), in M.F.J. Prachowny and D.D. Purvis (Eds.) The February 1991 Federal Budget, Queen's University, John Deutsch Institute for the Study of Economic Policy, April 1991 pp. 1-14.
75. "Implications of the North-American Free Trade for Canada-Taiwan Trade and Investment Flows" (with Hung-Yi Li and Peter Pauly). A paper presented to the Conference on Canada-Taiwan Relations, Taipei, December 5-9, 1991. [Forthcoming in conference volume].
76. "The Allocation of Tax Authority in the Canadian Federation" (with Jack Mintz) in R.W. Boadway, T.J. Courchene and D.D. Purvis (Eds.) Economic Dimensions of Constitutional Change, Vol 1, John Deutsch Institute for the study of Economic Policy, Kingston (1991) pp 169-188.
77. "Reflections on Canada-U.S. Tax Differences" John Shoven and John Whalley, Eds. Canada-U.S. Tax Comparisons, N.B.E.R. University of Chicago Press, 1992, pp 365-374.
78. "Analysis of the Macroeconomic Effects of the 1992 Federal Budget" (with Peter Dungan and Steve Murphy) in T.J. Courchene and M.F.J. Prachowny (Eds) The February 1992 Federal Budget, Queen's University, John Deutsch Institute for the Study of Economic Policy, 1992, pp. 1-11.

79. "An Analysis of the Profitability of Businesses of Diversified Companies", Review of Industrial Organization, Vol 7, 1992, pp 151-185.
80. "Productivity and Growth: Canada's Competitive Roots" (with M. Denny), in T.J. Courchene and D.D. Purvis, Eds, Productivity, Growth and Canada's International Competitiveness, Bell Canada Papers on Economic Policy, Vol. 1, 1993, pp 7-57.
81. Fiscal Policy in Canada: An Appraisal (with Peter Dungan), Canadian Tax Foundation, Toronto, 1993; pp. 224.
82. "Alternatives to the Goods and Services Tax", (with Jack Mintz) Policy Options, Vol 14, No. 8, pp. 40-43 (1993).
83. "Sales Tax Harmonization: The Key to Simplification", (with Jack Mintz and Pierre Pascal Gendron) Tax Notes International, 8(10) Mar 7, 1994 pp 661-678.
84. Public Debt and the Macro-Economy (with D. P. Dungan). A report for the Government and Competitiveness Project (94-02) School of Policy Studies, Queen's University, 1994, pp. 179.
85. "The Sources of the Recession in Canada: 1989-1992", (with P. Dungan and S. Murphy). Canadian Business Economics 2(2), 1994, pp. 3-15.
86. "Tax System of Canada" (with R. M. Bird and D. B. Perry), Tax Notes International, Jan 9, 1995 pp. 152-180 (Invited paper).
87. "Options for the Goods and Services Tax" (with Jack Mintz) Canadian Business Economics, 3(1), 1995, pp. 27-36.
88. The Future of Telecommunications Policy in Canada (co-edited with S. Globberman and W. T. Stanbury), Bureau of Applied Research Faculty of Commerce, University of British Columbia and Institute for Policy Analysis, University of Toronto, 1995, pp 521.

Unpublished Work and Working Papers

1. The Inflationary Process in the Machinery Sector (Ph.D. Thesis, Harvard University, 1961).
2. "Implications of the Carter Corporate Reforms for Corporate Savings Behaviour," Institute for Policy Analysis, University of Toronto, Working Paper No. 6803.
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4. Diversification and Profitability: An Analysis of Profit Rates of Businesses of Diversified Companies (Mimeo, July 1976).
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6. "Regulated Competition in The Canadian Telecommunications Industry", Working Paper series, Center for Business and Government, John F. Kennedy School of Government, Harvard University, 1987.
7. "National Projection Through 2001: Base Scenario and Short-term Alternatives" (with Peter Dungan and David Fujimagari) PEAP Policy Study No. 87-3, December 1987.
8. "The Macroeconomic Effects of the Canada-U.S. Free Trade Agreement" (with Peter Dungan) International Economics Program, Department of Economics, DP 88-18, November, 1988.
9. "The Impact of U.S. Policy Shocks on the Canadian Economy - An Analysis with the FOCUS Model" (with J. Nightingale and P. Dungan) International Economics Program, Department of Economics, DP 88-17, October, 1988.
10. "National Projection Through 2013" (with P. Dungan and D. Fujimagari) Policy and Economic Analysis Program, Institute for Policy Analysis, Policy Study No. 89-1, January, 1989.
11. "The Macro-Economic Effects of the Proposed Federal Goods and Services Tax", (with Peter Dungan), Policy and Economic Analysis Program, Institute for Policy Analysis, Policy Study #89-9, September, 1989.
12. "National Projection Through 2013", (with Peter Dungan), Policy and Economic Analysis Program, Institute for Policy Analysis, Policy Study #90-1, January, 1990.
13. "Regulated Competition in Telecommunications", Part 10 of Evidence filed with Unitel Communications Inc.'s Application to Provide Long Distance Service, August 1990.
14. "Price Impacts of the GST: Detailed Estimates From the Input-Output System", (with Peter Dungan), Policy and Economic Analysis Program, Institute for Policy Analysis, Policy Study #91-2, March, 1991.
15. "National Projections Through 2015", (with Peter Dungan and Steve Murphy), Policy and Economic Analysis Program, Institute for Policy Analysis, Policy Study #91-3, April, 1991.

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17. "National Projections Through 2015", (with Peter Dungan and Steve Murphy), Policy and Economic Analysis Program, Institute for Policy Analysis, Policy Study #92-3, August, 1992.
18. "Outlook for the Canadian Economy: National Projection Through 2015", (with Peter Dungan and Steve Murphy) Policy and Economic Analysis Program, Institute for Policy Analysis, Policy Study #93-1, January, 1993.
19. "Sources of the Recession in Canada: 1989-1992", (with Peter Dungan and Stephen Murphy) Policy and Economic Analysis Program, Institute for Policy Analysis, Policy Study #93-2, May, 1993.
20. "Sources of the Recession in Canada and Ontario: An Analysis of the Aggregate and Sectoral Levels" (with Peter Dungan and Steve Murphy) Policy and Economic Analysis Program, Institute for Policy Analysis, Policy Study #93-5, November, 1993.
21. "Revenue Effects of the Lifetime Capital Gains Deductions" (with J. Mintz). A paper presented to the Symposium on the Lifetime Capital Gains Deduction, Toronto, Institute for Policy Analysis, Jan 27, 1994.
22. "Outlook for the Canadian Economy: National Projection Through 2015" (with P. Dungan and S. Murphy). Policy and Economic Analysis Program, Study 94-1 (Jan 1994).
23. "Outlook for the Canadian Economy: National Projection Through 2015" (with P. Dungan and S. Murphy) Policy and Economic Analysis Program, Policy Study 94-4 (Aug 1994)
24. "Prices, Wages, Productivity and the Output Gap" (with P. Dungan) Policy and Economic Analysis Program, Policy Study 94-7 (Oct 1994).
25. "Outlook for the Canadian Economy: National Projection Through 2015" (with P. Dungan and S. Murphy) Policy and Economic Analysis Program, Policy Study 95-1 (Jan 1995).

Consulting and Contract Research Experience

Fields:

Economic Forecasting, Fiscal Policy Analysis, Wage-Price Models, Regulatory Proceedings, Competition Policy, Advertising, and Industrial Organization.

Federal Government Agencies:

Royal Commission on Taxation, Dept. of Industry, Dept. of Justice, Prices and Incomes Commission, Dept of Consumer and Corporate Affairs, Anti-Inflation Board, Economic Council of Canada, Dept. of Finance, Royal Commission on the Economic Union and Development Prospects for Canada, Director of Investigation and Research, Auditor General of Canada.

Other Government Agencies:

Alberta Government, Metro Toronto, Ontario Economic Council, U.S. Treasury, U.S. Bureau of the Census, U.S. Commission on Money and Credit, U.S. Congress Joint Economic Committee.

Private Firms and Non-Profit Institutions:

ARA Consultants, Association of Canadian Distillers, CNCP Telecommunications and Unitel Communications Inc., C.D. Howe Research Institute, Canadian Cable Systems Ltd., Canadian Daily Newspaper Association, Canadian Tax Foundation, Central Ontario Coalition, Data Resources Inc., Institute for Research on Public Policy, Harvard Institute for International Development, John Labatt Ltd., London and St. Thomas Real Estate Board, McCarthy Tetrault, National Bureau of Economic Research, Ontario Home Builders Association, Power DirectTV, Social Science Federation of Canada, Telesat Canada.

