

*Registry Copy*  
*(Director)*  
*(Affidavit)*

THE COMPETITION TRIBUNAL

COMPETITION TRIBUNAL TRIBUNAL DE LA CONCURRENCE	
FILED	CT-89/4
	APR 24 1990 <i>sdB</i>
REGISTRAR	REGISTRARE
OTTAWA, ONT.	#34

IN THE MATTER OF an Application by the  
Director of Investigation and Research  
for an order pursuant to section 75 of  
the Competition Act, R.S. 1985, c. C-34,  
as amended, requiring that the Respondent  
accept the Exdos Corporation as a customer  
for the supply of a product

BETWEEN:

THE DIRECTOR OF INVESTIGATION AND RESEARCH

Applicant

- and -

XEROX CANADA INC.

Respondent

AFFIDAVIT OF DAVID GILLEN, Ph.D.

I, DAVID GILLEN, of the City of Kitchener in the  
Judicial District of Waterloo, make oath and say as follows:

1. I am a Professor of Economics in the School of  
Business & Economics at Wilfrid Laurier University and was  
retained by counsel for the Director of Investigation and  
Research to provide a report on the economic issues  
surrounding the definition of the relevant market in the  
Director's application in this matter.


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

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

4. I make this affidavit pursuant to Rule 42(1) of the Competition Tribunal Rules.

SWORN before me at the City of )  
Hull, in the Judicial District )  
of Hull, this 23<sup>rd</sup> day of )  
April, 1990 )

  
\_\_\_\_\_  
David W. Gillen

  
\_\_\_\_\_  
A Commissioner of  
Oaths in and for Canada


This is Exhibit "A"

to the affidavit of

DAVID GILLEN

sworn before me this

23rd day of APRIL

1990 

A Commissioner  
Notary Public etc.

Report prepared by

David W. Gillen, Ph. D.

Professor of Economics  
School of Business & Economics  
Wilfrid Laurier University  
Waterloo, Canada

for

The Director of Investigation & Research

## I. Introduction

1. I have been requested by Counsel for the Director of Investigation and Research to provide a written assessment of economic issues surrounding the definition of the relevant market in the application brought forward by the Director of Investigation & Research under Section 75 of the Competition Act relating to the refusal by Xerox Canada Inc to supply Exdos Corporation with repair parts for "new technology copiers" (also termed post-1983 copiers).

2. My report and opinions are based on my professional training as an economist, my review of relevant learned literature and my review of documents provided by the Director. I was provided pleadings, documents produced on discovery, correspondence between the parties, a report on Exdos and Nezron prepared by Deloitte & Touche and a case summary (minus conclusions) prepared by the Bureau of Competition Policy. My professional qualifications are contained in my curriculum vitae, which is appended to the report.

3. Section II of the report contains a summary of the essential facts. My opinions, reasons and reasoning are contained in Section III. Section IV contains an application of the market analysis to elements of Section 75 of the Competition Act.

## II. Essential Facts

4. Xerox Canada Inc. of North York, Ontario (hereafter referred to as XCI) is controlled by Xerox Corporation of Stamford, Connecticut. XCI is a vertically integrated supplier of equipment and systems used in the processing, reproduction and distribution of information. It also provides financing for the purchase or lease of equipment through a subsidiary. Xerox copiers are sourced primarily from Xerox Corporation and are

distributed through branch or sales offices across Canada. XCI services its products through a number of service branches throughout Canada. It sources for copier parts include Xerox Corporation in the United States, its other affiliates and licensed third party suppliers.

5. XCI revenue from its copier equipment (sales and service) can be divided between two categories of products. 'Old technology' or pre-1983 copiers and 'new technology' or post-1983 copiers. Copiers can be segmented into 3 types; low , medium and high volume. <sup>1</sup>

6. Exdos Corporation ("Exdos") of North York, Ontario is in the business of purchasing, used Xerox equipment, particularly copiers, from a variety of sources and marketing them to customers in Canada and elsewhere. It sells equipment and prior to the refusal to supply, sold parts to other ISOs (Independent Service Organizations). Neutron's main business was to sell, rent or lease used Xerox copiers, refurbished by Exdos, to end users along with service contracts. The parts required for performance of these contracts came from Exdos. Approximately 90% of the revenue of the two firms, which share the same business premises, is accounted for by Xerox copiers. The two firms, Exdos and Neutron, have recently amalgamated.

7. XCI sells/leases/rents and services both new and reconditioned equipment sold as "new". ISOs (including Exdos) are involved exclusively in used equipment and deal in

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<sup>1</sup> One possible way of classifying these segments is: low volume is less than 20 cpm (copies per minute), medium volume is between 20 and 50 cpm and high volume is greater than 50 cpm.

both pre-1983 and post-1983 copiers. XCI leases the majority of its units while ISOs split their business more evenly between selling and renting or leasing.

8. XCI and ISOs provide similar equipment/service programs. In the majority (approximately 90% for Exdos) of cases the agency supplying the machine will also service it. XCI offers three types of service agreements. A 'full service maintenance agreement' (FSMA) which is based on a cost/copy, a 'service maintenance agreement' (SMA) which is more expensive than a FSMA, and time and materials (parts & labour) contracts. ISOs offer full service maintenance agreements and time and materials contracts.

9. Exdos Corporation was formed in 1983 to deal with the management, disposal and servicing of pre-1983 Xerox copiers. It contracted with XCI to purchase these copiers as well as parts and supplies. Exdos established Nezron in August of 1983 to market and service used Xerox copiers. The contract between Exdos and XCI was replaced in May of 1985 and cancelled April 1, 1987. After the cancellation of the contract between Exdos and XCI, XCI continued to supply Exdos pre-1983 equipment and parts for pre-1983 and post-1983 copiers.

10. Exdos was receiving a discount of 50% on pre-1983 Xerox copier parts when it first contracted with XCI. Over the period 1983 to 1987 this discount was reduced until Exdos was paying full retail price. This full retail price itself generally rose substantially for both pre-1983 and post-1983 parts over this period and subsequently.

11. On August 26, 1988, Exdos was advised that XCI had "determined that continuation of a used equipment sales and support channel would conflict with other market initiatives presently underway" and that XCI would thereafter cease to supply Exdos with all used Xerox equipment, effective September 26, 1988 and with all parts, effective October 26, 1988. XCI viewed that Exdos and other ISOs were their competitors. XCI subsequently advised Canadian ISOs including Exdos that in accordance with a June 1, 1988 ISO policy, it would cease supplying them with post-1983 copier parts for resale as of November, 1988. XCI's ISO policy followed a similar ISO policy established in the United States by Xerox Corporation several years earlier.

12. Xerox copiers have a unique product design and a substantial group of parts for repair are available only through XCI. Some new Xerox-sourced parts were available in the past through the United States but these sources have been foreclosed.

13. There are some parts such as rollers and drums which can be obtained from other sources but these sources are limited or have other qualitative differences which are discussed in more detail below. For example, such parts available from United States ISOs and sources developed by them are limited both in terms of the selection and available quantity. The United States ISO network has available from non-Xerox sources about 1000 of the approximately 18,000 parts in the Xerox parts catalogue, and in limited supply and availability.

14. A small group of post-1983 parts form a critical set of consumable (high use) parts available only from XCI.

15. While parts for pre-1983 series of Xerox copiers are available from XCI as well as a number of other sources, they are not compatible with post-1983 copiers.

### **III. Market Analysis**

#### **(a) Opinion**

16. Post-1983 Xerox copier parts in Canada which are used by XCI, Exdos and other ISOs in conjunction with their technical knowledge to service Xerox copiers constitute a relevant product market. The supply side of the market is XCI and the demand side of the market is XCI, Exdos and other ISOs. XCI and these firms are competitors in the servicing of Xerox copiers and this servicing requires Xerox copier parts and technical knowledge, jointly.

#### **(b) Reasons and Reasoning**

17. An economic market is defined as an area in which prices of qualitatively similar goods tend to equality with allowance for transportation or transactions cost. In essence a market defined in this classical economic sense is the set of products within which prices are closely linked to one another by supply and demand and whose prices are relatively independent of prices of goods not in the market. The extent of the market can be measured by the degree of product substitution in the presence of relative price changes. A measure used by economists of such substitution is the cross elasticity, which is defined as the proportionate change in demand (or supply) for one product in response to changes in the price of another. Products which are close substitutes will exhibit a high cross elasticity of demand or supply and would be included in the same market. If quantitative



estimates of these elasticities are not available, economists have generally relied upon more qualitative measures of substitutability. These would include the observed extent to which products are substituted for one another either through inter-product substitution or by obtaining the required product from some other location, and the comparison of specific characteristics of various products.

18. Section 75 of the Competition Act requires that a customer be unable to obtain "adequate supplies of a product anywhere in a market". One possible market definition here is the product refused in this case, which is Xerox copier parts for post-1983 Xerox copiers.

19. In order to define the "relevant product " and therefore the relevant market, four issues must be investigated: (1) whether a market can be defined separately for parts used by ISOs as opposed to end users as part of a service package; (2) whether parts and service are distinct and separable products; (3) whether other companies' copier parts should be included in the market along with Xerox copier parts; and, (4) whether XCI-sourced parts alone form the supply side of the market rather than all other sources.

20. A market has both a demand and a supply side. On the demand side here, the customers for Xerox copier parts, ISOs such as Exdos, demand parts to satisfy the requirements of their customers. Therefore, the starting point for the definition of 'product market' are the customers of Exdos. They may be categorized into two groups; the installed customer base of Xerox copier users including new (potential) customers who will rent/lease Xerox copiers with a service contract and non-end-use buyers of used Xerox copiers, such as firms who broker machines.

21. The end use copier customers demand the flow of copying services from their Xerox copiers whether purchased, rented or leased. This is a derived demand for an intermediate input which is the service required to keep the machine running. In the case of Exdos, 90% of its customer base is on service contracts. This appears to be in part the result of the higher cost of the SMA, which is offered by XCI to owners of used machines. These customers, therefore, demand from Exdos and other ISOs, service in the form of Xerox copier parts, technical knowledge of Xerox copiers, labour and other factors which produce copying services. These other factors include warehousing, administration and transportation. Copier servicing is an intermediate product.

22. A market defined in this way can be viewed as an intermediate market, not an end user market. End users should not be considered part of this market because they are not in the same business as an ISO. An ISO produces an output, copier servicing, whereas an end user demands copier servicing as an input. The nature and character of these markets from both a supply and demand standpoint is quite different and distinct.

23. Parts are used in different ways by Exdos with respect to its other customer segment, non-end-use buyers of used copiers. Exdos is known to these customers as a specialized Xerox copier service and brokerage dealer. Parts are used to refurbish used Xerox copiers for customers who wanted to buy them from Exdos in operating order. Again an intermediate market for Xerox copier parts sales can be established on the basis of the customers' derived demand in this segment.

24. The next question is whether a separate market for parts can be identified distinct from service as a whole. As discussed above, copier parts are an input into the supply of copier servicing by Exdos and other ISOs. ISOs and some customers who do their own servicing require only the parts and not the service technician from XCI. Parts, therefore, represent a separate market from service.

25. The third issue identified above was whether Xerox copier parts can be viewed as a product market distinct from that for other companies copier parts. Xerox copier parts represent a class of products because other copier parts are not substitutable with Xerox copiers parts, Xerox copier parts are not substitutable between pre-1983 Xerox copiers and post-1983 Xerox copiers, and within the different models of copiers either pre-1983 or post-1983 Xerox copiers, parts are not fully substitutable between machines. It might be argued that other copier parts are substitutes for Exdos because it can easily shift to another line of copiers if Xerox parts are not available. This is not so because Exdos has invested in a client base, developed and maintained a sizable inventory of Xerox copier parts and equipment and has dedicated technical knowledge which is only partially mobile. It would only be over the longer term as contracts ran out, machines depreciated and inventory ran down that substitution to other activities would take place. Furthermore, even faced with substantial increases in price for Xerox copier parts, Exdos has searched within the Xerox brand of copier rather than by shifting its client base to other machines. The inelasticity ( or lack of responsiveness to price) arose from the above factors as well as the fact that copier parts form only a part of the total cost of servicing a customer.

26. The fourth and final issue raised above is whether or not Xerox parts sourced from anywhere, as opposed to XCI alone, constitutes the appropriate supply side of the market.

This is primarily a question of fact on the availability of alternative sources but a number of observations from an economic perspective can be made about these sources. A broad market featuring any source therein might be feasible if parts were available at prices which made them competitive or equivalently, if prices of qualitatively similar goods tend to equality with allowance for transportation or transactions cost. As demonstrated below other sources of these parts, located within Canada or without, have qualitative differences which do not appear to make full allowance for transactions and transportation costs.

27. First, cannibalization of used machines yields parts which are not physically identical to XCI parts because they are used. As a result they will not offer the same level of service when installed in a XCI copier. These parts create greater cost for Exdos because resources must be used in service and cannibalization, as well as search and transacting for used machines. The parts are also available with less certainty due to the uncertain supply of machines for cannibalization.

28. In contrast, Exdos purchased a 'bundle of characteristics' from XCI in the form of service and parts. The parts were new Xerox copier parts. They were available immediately or, at most, in a few days. There was less uncertainty of the availability of supply of parts and when back-ordered, parts were likely to be received. Thus, not only were the physical characteristics of the parts not the same for sources other than XCI but the conditions of supply were also quite different.

29. Sourcing directly or indirectly from Xerox affiliates outside Canada such as Rank Xerox involves added cost, risks and uncertainty. In any event, it appears that Xerox has

eliminated or intends to eliminate this alternative with the enforcement of the ISO policy in the United States and other actions.

30. Alternative parts manufacturers and reconditioners in Canada and the United States provide only a subset of the required products. Reliability, quality, transportation costs and transactions cost are all elements which distinguish these sources from XCI. Exdos would not be indifferent between the single source of parts at XCI and a potential for having to transact with hundreds of different sources of parts supply each with their own uncertainties, limited volumes and varying quality. The sum of all these costs of transacting, search and risk would tend to raise Exdos costs until, eventually, its operation became unviable.

31. Even if all of the qualitative factors identified above could be ignored in assessing the extent of the supply side of the market, there is still the fact that a significant set of high use parts are available only from XCI. These parts are absolutely necessary for Exdos to service its customers and therefore be a vigorous business competitor. The conclusion is that XCI appears to be the only viable source for a substantial group of parts and the only source for numerous high-use (critical) parts. Post-1983 copier parts sourced from XCI is therefore a definable product market.

#### IV. Elements of the Competition Act, Section 75.

32. The discussion above has dealt with whether post-1983 Xerox copiers parts, the subject matter of the refusal, may be considered a relevant product market. Section 75 requires that the complainant, Exdos, has been "substantially affected in its business due to his inability to obtain adequate supplies of the product". It also requires that this inability

"to obtain adequate supplies of the product is due to insufficient competition among suppliers of the product in the market". What follows examines the impact of the foregoing discussion on the other elements of the section.

33. The discussions above concerning the definition of the relevant product market are applicable to the issue of "adequate supply". There is not an adequate supply of alternative parts available to Exdos in Canada from sources which have the reliability, quality, transportation costs and transactions cost of those available from XCI.

34. With respect to the question of "substantially effect on his business", the first question is, "what business is Exdos in"? As discussed above Exdos is a firm which operates in an intermediate market. Xerox copier parts are used jointly, by it, with dedicated knowledge of Xerox copiers and other inputs to produce a service output. This service includes the sale/lease/rental and servicing of used Xerox copiers and either wholesaling these machines to other ISOs in North America or refurbishing them and selling, leasing or renting and servicing the machines. It has one other copier line and does handle other equipment besides copiers. Approximately 90% of its revenue is accounted for by Xerox copiers and currently 55% of the units installed are post 83 Xerox copiers and 58% of service revenue are from post-83 Xerox copiers. Xerox copier parts are included in the complete set of business activities which Exdos is involved in. These activities include: (1) selling used pre-1983 and post-1983 Xerox copiers; (2) servicing used pre-1983 and post-1983 and new Xerox copiers; and, (3) refurbishing used pre-1983 and post-1983 copiers. The refusal to supply post-1983 copier parts is the refusal to supply an input into a subset of all of these activities, namely - (1) the sale of post-1983 copiers to end users of Xerox copiers (because most customers demand service contracts); (2) the service of post-1983 Xerox

copiers; and, (3) the refurbishing of post-1983 Xerox copiers. The information provided suggests these areas constitute a major and, in the future, increasing part of the business.

35. Exdos specialized in the Xerox brand because the principals and technicians of Exdos have specific knowledge of this brand of copier and because an opportunity became available to market used Xerox copiers in cooperation with XCI. At the time XCI refused to continue to supply Xerox copier parts for post-83 Xerox copiers, Exdos had established a broad customer base for used Xerox copiers in Canada and elsewhere, a customer base of ISOs in Canada for both Xerox copiers and Xerox parts and a customer base for renting, leasing and servicing Xerox copiers. The substantial effect occurs if the assets were to become unusable in the Xerox field due to a shortage of parts. An attempt to move to another copier business would not salvage these assets because the human capital is only partially transferable, the inventory is not transferable nor is the client base or the developed business acumen. There is, therefore, an investment in a (wholly or partially) dedicated asset which is not transferable. The asset is measured in terms of both physical and human capital dedicated almost exclusively to Xerox copiers; including technical knowledge, client base, reputation including client referrals, manuals, and inventory of parts and machines.

36. The issue of whether the inability to obtain adequate supplies of post-1983 copier parts is due to insufficient competition in the market has been dealt with at length. XCI is the only source for a key set of consumable post-1983 copier parts and the only source for the full range of post-1983 copier parts. By definition, there is insufficient competition for parts since they are unavailable from other sources.

37. In their response Xerox has argued that Exdos can continue in business by simply having the end user order the part from XCI and then installing it. This changes the fundamental product which Exdos provides to its customers. It in no way represents the product which was purchased by Exdos from XCI in the past and it places Exdos' competitive strategy in the hands of a competitor, namely XCI who can build in delays which are more difficult to deal with than if they were supplying directly to Exdos.



This is Exhibit " B " 

to the affidavit of

DAVID GILLEN

sworn before me this

23rd day of APRIL

1990 

A Commissioner  
Notary Public etc.

**CURRICULUM VITAE  
(April, 1990)**

**David W. Gillen**

**PERSONAL:**

Birthdate: September 4, 1947  
Citizenship: Canadian

**Home Address**

121 Stirling Avenue N.  
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**University Address**

School of Business & Economics  
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(519) 884-1970 ext. 2594  
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**Lecture Areas Include:**

Industrial Organization, Corporate and Management Strategies, Competition Policy  
Transportation and Regulatory Economics

**EDUCATION:**

Degree	University	Department	Year
Ph.D.	University of Toronto	Economics	1975
M.A.	University of New Brunswick	Economics	1971
B.A.	St. Thomas University	General	1969

**ACADEMIC AND OTHER RELEVANT APPOINTMENTS:**

From	To	Employer	Position
1988	present	Wilfrid Laurier University	Professor
1988	1989	University of California	Visiting Scholar
1986	(Spring)	University of British Columbia	Visiting Professor
1981	1988	Wilfrid Laurier University	Associate Professor
1978	1979	Queen's University	Visiting Associate Professor
1978	1981	University of Alberta	Associate Professor
1976	1979	University of Toronto	Research Associate
1974	1977	University of Alberta	Assistant Professor
1973	1974	University of Toronto	Part-time Lecturer

**HONOURS: ACADEMIC AND PROFESSIONAL:**

Best paper prize Transportation Research Forum Meetings 1988  
Best paper prize Transportation Research Forum Meetings 1986  
1981 SSHRC Leave Fellowship (declined)  
North Atlantic Treaty Organization Fellowship 1973-74  
Ontario Graduate Fellowship 1971-72, 1972-73, 1973-74

**Expert Witness Testimony:** qualified as an expert witness in the analysis of industry structure and market competition in Retail Pharmacy Industry

## **PROFESSIONAL ACTIVITY:**

Sometimes consultant to: City of Edmonton; Government of Alberta; Government of Ontario; Canadian Transport Commission; Ontario Economic Council; Economic Council of Canada; Transport Canada; Consumer and Corporate Affairs; Treasury Board; Department of Fisheries & Oceans; Restricted Trade Practices Commission; Department of Communications; Eastman Royal Commission; Canadian National Railways; Transport Development Agency; Office of the Auditor General; Federal Department of Public Works; as well as legal firms and other private sector clients.

Research reports for these clients have included market structure and conduct analysis in the airline industry, assessments of public versus private firm efficiency, and investigations of industry structure and conduct in the pharmaceutical, petroleum and trucking industry. A partial list is contained elsewhere in the vita.

## **Refereed Publications (since 1981)**

"The Airline Cost Structure and Its Regulatory Policy Implications for Canada", Transportation Research Forum Proceedings, 1984, pp.649-652

"A Study of Interfareclass Competition in Airline Markets" Transportation Research Form Proceedings, Vol. 21, (1981), 599-609. (with T. Oum)

"Demands for Fareclasses and Pricing in Airline Markets" Logistics and Transportation Review, Vol. 23, (1986) (with T. Oum)

"Entry-Barriers and Anti-Competitive Behaviour in a Deregulated Canadian Airline Market" Transportation Research Forum Proceedings, (1986), 483-493 (with T. Oum and M. Tretheway)

"Entry Barriers and Contestable Canadian Airline Markets", International Journal of Transport Economics, Vol.15, No. 1 (February, 1988), 29-41

"Duopoly in Canada's Airline Industry: Consequences and Policy Issues", Canadian Public Policy, Vol. 14 (1), March, 1988, 15-31

"Airport Pricing Principles: An Application to Canadian Airports", Journal of the Transportation Research Forum, 1988

"The Cost Structure of the Canadian Airline Industry", Vol. 24, No. 1 Journal of Transport Economics and Policy, (January, 1990) 9-34

"Privatization of Air Canada; Why it is Necessary in a Deregulated Environment" Canadian Public Policy, Vol. XV, No.3, September 1989, pp. 285-299

"Airport Pricing and Capacity Expansion: Economic Evaluation of Alternatives" Transportation Review Spring 1990 (with T. Oum and M. Tretheway)

## **Books and Monographs**

Canadian Airline Deregulation and Privatization: Assessing Effects and Prospects. Vancouver, Centre for Transportation Studies, University of British Columbia, 1985 (with T. Oum and M. Tretheway)

Airline Cost and Performance: Implications for Public and Industry Policy Vancouver, Centre for Transportation Studies, University of British Columbia, 1986 (with T. Oum and M. Tretheway)

Cross-Ownership and the Canadian Communications Industry Institute for Research on Public Policy, Montreal, 1979 (with S. McFadyen and C. Hoskins)

Identifying and Measuring the Impact of Government Ownership and Regulation on Airline Performance, Economic Council of Canada, 1986 (with T. Oum and M. Tretheway).

### **Conference Presentations**

Papers have been presented at numerous conferences which have dealt with the structure and organization of airline markets, and competition and regulation in the airline as well as other transportation industries. Other conference material included analysis of the structure and conduct in the Canadian Pharmaceutical Industry and the relative efficiencies of public and private sector firms. Presentations have included the Canadian Economics Association Meetings, Transportation Research Forum Meetings, Econometric Society Meetings and meetings sponsored by the Economic Council of Canada and the Ontario Economic Council.

### **Invited Seminars**

University of British Columbia, University of Toronto, University of Western Ontario, Queen's University, Harvard University, Massachusetts Institute of Technology, Carnegie-Mellon University, University of California (Berkeley), University of Southern California, University of Calgary, University of Saskatchewan, Trent University, University of Guelph, York University, Canadian Transport Commission, Transport Canada, Economic Council of Canada, University of Montreal, Concordia University.

### **Other Papers**

1. Analysis of the Takeover of Canadian Pacific Airlines by Pacific-Western Airlines, (1987) with W. T. Stanbury and M. W. Tretheway.
2. Duopoly in Canada's Airline Industry: Consequences and Policies, 1987 with W. T. Stanbury and M. W. Tretheway.
3. Privatization: Is it Necessary with Deregulation, 1987 with T. Oum and M. W. Tretheway.
4. Regulation, Market Segmentation and Industry Effects: Canada's Regional Air Carrier Policy, 1986 with T. Oum and M. W. Tretheway.
5. Economic Performance of Government vs. Private Ownership of Enterprise - The Case of Air Canada with T. Oum and M. W. Tretheway.
6. Duopoly in Canada's Airline Industry and the Prospects for Competition in the Canadian Airline Industry (working paper, Faculty of Commerce, University of British Columbia) with T. Oum and M. W. Tretheway.
7. Measuring the Effects of R & D on Structure and Performance in Canadian Industry (with C. Riddell and A. Jenkins).
8. "Canadian Airline Strategies Under a U.S.-Canadian Open Skies Policy" Journal of Airline Management, 1988

9. "Airport Pricing, Capacity Investment and Ownership: Focus on Economic Efficiency" with T. Oum and M.W. Tretheway (1989)

10. Assessing the Impact of Changes in the Bilateral between Canada and the U.S. Using a Hubbing Competition Model (with Mark Hansen)

### **Cases Written**

Air Canada in M. Baetz and P. Beamish (eds), Cases in Strategic Management, Irwin. Publ. 1987.

The Canadian Generic Drug Industry and Changes to the Patent Act. (with M. Baetz) in M. Baetz and P. Beamish (eds), Cases in Strategic Management, Irwin. Publ. 1987.

Purchase Decisions for Consumer Durables; Buying A VCR (with G. McDougall) in C. Weinberg and G. McDougall (1989) Canadian Marketing: Cases and Exercises

### **Research Reports**

1. The Effects of Federal Government Parking Policy on Model Choice Among Federal Government Employees in Ottawa, Research Report to Transport Development Agency, Federal Ministry of Transport, Montreal, 1975.

2. The Economic Issues of Trucking Regulation in Ontario, a Research Report prepared for the Joint Program in Transportation, University of Toronto/York University, for the Select Committee on the Highway Transport of Goods, 1976.

3. A Study of Ownership in the Broadcasting Industry, a Research Report to the Department of Communication, Ottawa, 1978 (with S. McFadyen and C. Hoskins).

4. The National Transportation Act, the Canadian Transport Commission and the Proposed Changes in Bill C-33, a Research Report to the Department of Transportation, Government of Alberta, June, 1978, (with T. Chambers, J. Dunn and G. Tyndall).

5. Costs and Benefits of the Canadian Patent System, Research Report to Bureau of Intellectual Property, Federal Department of Consumer and Corporate Affairs, June, 1980, 150 pages (with A. W. Jenkins, and W. C. Riddell).

6. Focus of the Petroleum Industry Inquiry, Report to Restricted Trade Practices Commission. (1982)

7. The Structure of the Canadian Pharmaceutical Industry, Research Report to the Eastman Royal Commission of Inquiry into the Impact of Patent Legislation on the Canadian Pharmaceutical Industry, 1985. (with T.J. Levesque)

8. Canadian Airline Deregulation, 3 volume study to Treasury Board of Canada, 1985 with T. Oum and M. W. Tretheway.

9. The Impact of Government Regulation and Ownership on Airline Performance, study submitted to Consumer and Corporate Affairs Canada and Economic Council of Canada, 1986, 210 pages with T. Oum and M. W. Tretheway.

10. The Impact of Generic Substitution on Research and Development and Innovation in the Canadian Pharmaceutical Industry, Research Report to the Ontario Economic Council, 1986. (with F. Tapon)
11. Predatory Behaviour in a Deregulated Canadian Airline Industry, study to Consumer and Corporate Affairs Canada, 1986, 85 pages with T. Oum and M. W. Tretheway.
12. Merger Activity in Canada's Airline Industry and the Prospects for Competition, study to Consumers Association of Canada 1987, 83 pages with W. T. Stanbury and M. W.. Tretheway
13. "Development of a Predictive Model of Airline Market Entry or Exit", Report to Transport Canada, 1989