Record - Public

THE COMPETITION TRIBUNAL

File No. CT-94/01

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

AND IN THE MATTER OF certain practices by The D & B Companies of Canada Ltd.

BETWEEN:

THE DIRECTOR OF INVESTIGATION AND RESEARCH

Applicant

- and -

THE D & B COMPANIES OF CANADA LTD.

Respondent

- and -

INFORMATION RESOURCES INC.

Intervenor

AFFIDAVIT OF DR. RALPH A. WINTER
SWORN SEPTEMBER 20, 1994

I, DR. RALPH A. WINTER, of the City of Toronto, in the Municipality of Metropolitan Toronto, MAKE OATH AND SAY AS FOLLOWS:

1. I hold the position of Professor of Economics at the University of Toronto. I have been retained by counsel for the Director of Investigation and Research to undertake an economic analysis of the competitive * effects ~~efforts~~ of the supplier and customer contracts entered into by The D & B Companies of Canada Ltd., on issues pertaining to the Director's application in this matter. Attached hereto as Exhibit "A" is a true copy of the Report prepared by * me ~~the Applicant~~ pursuant to the aforesaid request.

2. I have written extensively on the economics of contracts, including the competitive impact of contractual restrictions and competition policy more generally. Included as Appendix 2 to the aforesaid Report is a true copy of the Curriculum Vitae.

SWORN BEFORE ME at the City of Toronto, in the Municipality of Metropolitan Toronto, this 20th day of September, 1994.

DR. RALPH A. WINTER

A Commissioner, etc.

B. Caughill

* AMENDED AT HEARING THIS 28 th DAY OF October 1994 at 9:50 am
PURSUANT TO THE DIRECTION OF THE PRESIDING MEMBER
REGISTRY OFFICER

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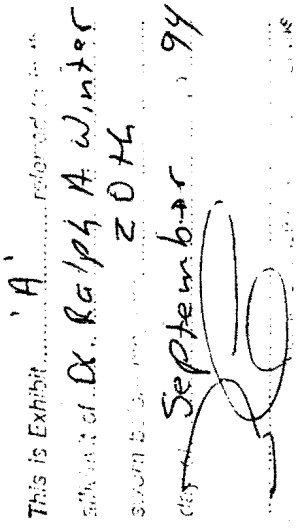

REPORT OF DR. RALPH A. WINTER

TABLE OF CONTENTS

EXECUTIVE SUMMARY

Introduction

I have been requested by counsel for the Director of Investigation and Research to provide a written analysis of the effects of the supplier and customer contracts entered into by The D & B Companies of Canada Limited ("Nielsen") on issues pertaining to the Director's application in this matter. My report and opinions are based on my professional training and experience as an economist and my review of documents provided by the Bureau of Competition Policy. These include discovery transcripts, documents produced in the discovery process, summaries of interviews with market participants, and documents of a general nature. I also participated in some interviews with market participants. As of this date, September 20, not all of Nielsen's documents have been received. New documents may require further comment.

Nielsen offers a number of products in the area of marketing information services. One service offered is market tracking of consumer packaged goods, based mainly on data obtained from retail store scanners. Nielsen's market tracking product, and potential competing products, allow a manufacturer or retailer to track market shares and other variables. When the service is purchased with other products offered by Nielsen, the user can estimate the effects on demand of price changes and promotion decisions. This type of information is vital in manufacturer and retailer distribution decisions.

An essential input into the scanner-based market-tracking service is the raw data itself. Nielsen's contracts with the suppliers of the raw data, grocery distributors, call for exclusive supply of the data to Nielsen. Nielsen has successfully entered into exclusive supply contracts with all major grocery retailers in Canada. Nielsen has also entered into exclusive supply contracts with at least one drug retailer but has not yet incorporated these data into a tracking product.

The first issue in the Application is whether the exclusivity restrictions violate Sections 78 and 79 of the Competition Act. These sections allow the Competition Tribunal to prohibit anti-competitive acts, including "requiring or inducing a supplier to ... refrain from selling to a competitor, with the object of preventing a competitor's entry into, or expansion in, a market" where these acts prevent or substantially lessen competition in a market, and are engaged in by a party having substantial control over a class of business in Canada.

On the customer side, Nielsen has recently increased the length of its contracts with particular customers, with disincentives for early termination. These increases in contract

length are also being challenged as anticompetitive in this application.

This executive summary lists the conclusions of my report, then outlines the analytic framework that supports the conclusions.

Conclusions

1 For the application of Sections 78 and 79 of the Competition Act, scanner-based market tracking of consumer packaged goods constitutes a product market or class of business. The product in this market has no close substitutes outside the market.

2 In particular, market tracking based only on other sources of data would be inferior in the dimensions of timeliness, comprehensiveness and accuracy. A firm offering a tracking product based only on store audits, warehouse withdrawal audits and household panel data could not provide a competitive substitute for Nielsen's product.

3 Nielsen states in its response to the Application that scanner data are not the only source of tracking data, and market tracking is not the only product offered by Nielsen. These facts are irrelevant in assessing whether scanner-based tracking constitutes a market for the purpose of applying Sections 78 and 79.

4 The geographical market includes Canada, because most of the purchasers of market tracking services in Canada value a common format for tracking the national market and for comparing various regional markets.

5 The geographical market does not extend beyond Canada, because U.S. data tells us little about the potential response of Canadians to price changes, promotions and other market variables. For census data applications, the substitutability of U.S. and Canadian data is zero.

6 This leaves the Canadian market for scanner-based market tracking as the relevant market. Nielsen has control of this market because its position as the only supplier in the market together with barriers to entry give it the power to set prices above competitive levels.

7 Within this market the two types of contractual practices by Nielsen prevent or lessen competition substantially in violation of Section 79.

8 Exclusivity restrictions on suppliers scanner data prevent competition by their very

nature. Scanner data are an essential input, and if these contracts are adhered to by all suppliers of the essential input, as they have been, no competition is possible in the relevant market.

9 Competition "for the market", i.e. bidding for the rights to the suppliers' essential input, occurred in 1986 and may well occur in the future. In a market with the characteristics of scanner-based tracking in Canada, however, the inevitable outcome of the bidding for rights is that one firm will secure all of the rights exclusively, when exclusivity is allowed. This leads to a monopoly within the market.

10 Competition for the market is not a meaningful substitute for competition in the market, as it simply determines which firm succeeds in achieving the monopoly position in the market. Neither the historical fact of competition for the market nor the prospect of such competition in the future has any impact on pricing in the market. "Competition" has many meanings in economics, and only those types of competition that are socially beneficial should matter in interpreting Section 79.

11 Competition for the market shifts the profits or rents derived from the preventing competition within the market to the upstream suppliers of raw data. The suppliers capture a significant share of the rents, while playing no active or purposeful role in lessening competition. Nielsen might not be the primary beneficiary of the prevention of competition. The distribution of monopoly profits has no economic or legal relevance in applying Section 79, however.

12 Even if the conclusion (9), on the inevitability of monopoly under exclusivity, is incorrect the exclusivity restrictions are nonetheless anticompetitive. If used by two competing firms in a market like the relevant one in this application, the restrictions serve to differentiate the two firms products, in an artificial and costly way. This lessens competition, leading to higher prices, and leaves each product less valuable.

13 Like all information, scanner data is a public good in that its use by one firm does not increase the cost of its use by another. Market efficiency requires in this case that the full set of scanner data be available to any competitor.

14 The staggering of supplier contracts is, as indicated in internal Nielsen memos, a deliberate attempt to protect Nielsen against the "competition for the market" at the time of contract renewal by all suppliers. The staggering raises the cost of entry by

IRI, by requiring IRI to outbid Nielsen for exclusivity rights to various suppliers over a period where the number of IRI suppliers is accumulating but too low to offer a competitive product.

15 The staggering of supplier contracts is not in itself anticompetitive, rather it exacerbates the anticompetitive effects of exclusivity. With staggered contracts, an incumbent may sustain a monopoly position even with products or costs inherently inferior to those of a potential entrant.

16 The lengthening of Nielsen's contracts with buyers will have the effect of making entry by IRI more difficult. This effect is anticompetitive. Shorter contracts are in customers' collective interest because they facilitate entry and improve the prospects for a more competitive market structure, but it is in the individual interest of each buyer to accept a lower price for a longer contract. Nielsen's strategy of increasing contract length with buyers is an instrument that prevents competition, in violation of Section 79.

The Market Definition

The application of Sections 78 and 79 of the Competition Act requires the determination of a market or class of business. For the law to apply, it is enough to find one market that Nielsen substantially controls and in which the exclusive supply contracts have the objective or effect of preventing competition. Such a product market must (a) contain a product sold by Nielsen; and (b) contain all close substitutes to this product.

"Scanner-based market tracking" satisfies the first criterion. It is recognized by Nielsen as a distinct product. Scanner-based market-tracking also satisfies the second criterion: scanner data are not necessarily the only data input into a market-tracking service, but they are an essential input into a scanner-based service. No other data source can provide with equal efficiency the same functions for the final user of a market-tracking service, and scanning has replaced other data sources where it is available in useable form.

A number of factors that might appear relevant to the market definition are not. The first is the fact that data sources such as store audits and household panels may provide information that cannot be recorded by store scanners. Each data source has some advantages, and the issue of substitutability is not about whether scanner data alone are a sufficient source for all tracking purposes. The market definition issue hinges on whether scanner data are a necessary input for some functions, not whether they are sufficient.

Second, the fact that Nielsen operates in the broad area of business decision support

services, offering many products in that area, is not relevant. The market definition issue is not about describing the business in which Nielsen operates.

The Director's application defines a product market more narrowly, in fact, than the provision of all marketing information services that use scanner data as an input. Market tracking is one such service, higher-level expert systems based on scanner data and other information are another. Sections 78 and 79 require only the determination of one market satisfying the criteria that I have discussed. They do not require the identification of the largest possible market or the entire set of transactions affected by the anticompetitive practice.

The Exclusive Supply Contracts

Nielsen's contracts for the exclusive supply of grocery scanner data were established originally in 1986. Information Resources Incorporated (IRI) had sought exclusive supply agreements for scanner data with major Canadian grocery distributors, but Nielsen was able to attract all of these suppliers to exclusive contracts. The initial competition for the exclusive rights to the data appears to have been close, and IRI remains Nielsen Canada's main potential competitor. IRI and Nielsen's parent company compete in the U.S. as the only two major providers of market tracking services.

Nielsen argues in its response that its success in the market is the outcome of vigorous "competition" for exclusive rights to the data. Nielsen also states that their "arrangements with Retailers are open to competition at the conclusion of the term of each of the Retailer Agreements or earlier, depending on the termination provisions negotiated as part of each agreement. Such competition has occurred and continues to occur."

"Competition", unfortunately, has many meanings. I suggest that one should consider only forms of competition that are socially beneficial or efficient in leading to lower prices. Competition "for the market", i.e. bidding for the rights to data, does not lead to lower prices in the relevant market.

The outcome of such bidding, in the market setting of this case, is inevitably the purchase of all rights exclusively by a single firm. This follows from the inherent similarity of the final tracking products offered by IRI and Nielsen (if both were to incorporate the same scanner data). A split of exclusive rights to various sources of scanner data is not a sustainable market outcome: one firm would always be willing to out-bid the other for the other's rights by an amount that reflected the gains from monopolization. The bidding competition for all firms will be won by the firm that can profit the most from a monopoly.

Even if the products were not very similar, the use of exclusivity in the market setting of this case would lead to monopoly because of another market condition. Manufacturers value very highly a tracking service based on data from a nationally representative sample. Because grocery distributors are regionally concentrated, this means that to compete in the market for scanner-based tracking services, a firm must purchase scanner data from all or substantially all of the distributors. This leaves as possible market outcomes monopoly, with exclusivity, or a more competitive market without exclusivity. That is, under this market condition, if exclusivity is used it leads to monopoly.

Once the exclusive rights are contracted for in a single firm, monopoly pricing results. Neither the historical fact of competition for the exclusive rights, nor the prospect of competition for the same rights when contracts come up for renewal, affects Neilsen's ability or incentive to charge monopoly prices.

The suppliers of raw data gain a large share of the rents from the prevention of competition not because they purposefully organize a monopoly but because they own the scarce resource that allows the creation of the rents. Nielsen may not be the primary beneficiary of the monopoly in the relevant market. The market power from the anticompetitive acts, however, can be exercised in the output market which is the relevant one here.

The analysis of exclusivity offered here emphasizes its anticompetitive impact in the relevant market setting even under the supposition that Nielsen and IRI are on a level playing field, with equal ability to offer input supply contracts initially or on contemporaneous renewal of contracts. The competition for the market under this supposition does offer one (modest) efficiency property: that the "right" monopolist wins the market. Where an incumbent firm is able to stagger contract renewals, however, even this modest efficiency is lost. Staggering protects Nielsen's position by creating an entry barrier. Staggering also increases Nielsen's share of rents. Statements by the President of Nielsen contained in internal documents support this interpretation of the timing of Nielsen's contract renewals.

The Lengthening of Customer Contracts

Finally, the lengthening of customer contracts, with penalties for early termination, serves to extend Nielsen's monopoly position in the relevant market in the face of an increasing threat of entry by IRI. Buyers collectively would benefit from shorter contracts, but each buyer in negotiating a contract does not consider fully the consequences of its contract length on the market structure. An internal Nielsen document shows that Canadian subsidiaries of IRI customers in the U.S. have been targeted for longer term contracts.

1. INTRODUCTION

The A.C. Nielsen Company of Canada (Nielsen) is the sole supplier in Canada of a marketing information service that can be labelled "scanner-based market tracking". The essential input in the production of this service is the data obtained from scanning the universal product codes on consumer packaged goods when these goods are purchased. Major grocery retailers in Canada collect these data, essentially as a by-product of scanning at check-out counters. Nielsen purchases the raw transactions data from grocery distributors then transforms the data into a "reader-friendly" form. The transformed data, which can be packaged with data from other sources, enable manufacturers of consumer packaged goods to track the historical sales of their own products, to track the sales of competing products within the same product category, to estimate the impact on demand of changes in prices or promotion strategies, and so on. Software can be provided with the tracking service that enhances the value of the service by allowing direct estimation of these marketing variables. Nielsen has recently purchased scanner data from the drugstore sector, but has not as yet offered a product incorporating these data.

Manufacturers use the market tracking service, along with other marketing information such as that obtained in consumer surveys, in making decisions about advertising, pricing, product variety and market expansion or withdrawal. Retailers use the service for similar decisions. Nielsen's customers typically purchase a number of products from Nielsen. Nielsen identifies market tracking as a distinct product, and it is in fact their main product.[1]

Manufacturers value most highly a market tracking service that is based on a wide, nationally representative sample of stores. Aggregate information about product sales based on a narrower sample would be biased for use in national marketing decisions because of regional differences in buying patterns. In addition, a tracking service based on a nation-wide set of stores allows comparison of regional buying patterns. Consequently, to compete successfully with Nielsen any new supplier of a scanner-based market tracking service would have to purchase data from a representative set of stores across the country. Because most grocery chains in Canada are regionally concentrated, this would mean purchasing data from all or substantially of the major chains.

The contracts between Nielsen and the grocers forbid the sale of retailer scanner data by grocers to other parties. Since 1986, Nielsen has contracted with every major grocery chain in Canada to purchase the exclusive right to the grocery transactions data over the length of the contract.

These exclusive contracts are being challenged in this application on the grounds that the contracts have prevented competition, in violation of sections 78 and 79 of the Competition Act, by preventing entry into the Canadian market for scanner-based services, in particular the entry of Information Resources Incorporated (IRI). IRI and Nielsen compete in the U.S. market for scanner-based tracking services, and are the only major suppliers in that market.

Nielsen's contracts with grocery retailers are for data input. On the output side, Nielsen has recently increased the length of its contracts with particular customers, providing its

services on a longer term basis, with disincentives for early termination. These new contracts are also being challenged as anticompetitive in this application, on the grounds that they inhibit or delay entry into the market.

This report offers economic analysis to assist in the determination of whether the exclusivity contracts with suppliers of raw data and the long term contracts with buyers constitute violations of sections 78 and 79 of the Competition Act of Canada. The relevant subsections of the Competition Act state:

> **78.** For the purposes of section 79, "anticompetitive act", without restricting the generality of the term, includes any of the following acts:
> ...
> (e) pre-emption of scarce facilities or resources required by a competitor for the operation of a business, with the object of withholding the facilities or resources from a market;
> ...
> (h) requiring or inducing a supplier to sell only or primarily to certain customers, or to refrain from selling to a competitor, with the object of preventing a competitor's entry into, or expansion in, a market;...
>
> **79.** (1) Where, on application by the Director, the Tribunal finds that
> (a) one or more persons substantially or completely control, throughout Canada or any area thereof, a class or species of business,
> (b) that person or those persons have engaged in a practice of anti-competitive acts, and
> (c) the practice has had, is having or is likely to have the effect of preventing or lessening competition substantially in a market, the Tribunal may make an order prohibiting all or any of those persons from engaging in that practice.
>
> (2) Where, on an application under subsection (1), the Tribunal finds that a practice of anti-competitive acts has had or is having the effect of preventing or lessening competition substantially in a market and that an order under subsection (1) is not likely to restore competition in that market, the Tribunal may, in addition to or in lieu of making an order under subsection (1), make an order directing ... such actions... as are reasonable and ... necessary to overcome the effects of the practice in that market.

This report addresses three specific issues:

(1) the determination of a "market" or "class of business" that is relevant for application

of these sections. Whether Nielsen substantially or completely controls the market depends on how the market is defined. Whether the exclusivity contracts have prevented or substantially lessened competition depends on the proportion of the market affected by the contracts and this depends in turn on how the market is defined.

(2) whether the exclusive contracts have the effect of preventing or substantially lessening competition in the market.

(3) whether the lengthening of Nielsen's contracts with buyers, together with the disincentives for early termination, has the effect of preventing or substantially lessening competition in the market.

Section 2 of this report addresses the relevant market definition. It concludes that scanner-based market tracking in Canada constitutes a market for the application of section 79. Section 3 offers an economic analysis of the direct competitive impact of Nielsen's exclusivity restrictions on this market. The exclusivity restrictions by their very nature limit the number of firms offering scanner-based market tracking to one. The restrictions leave Nielsen with complete control of the market for scanner-based tracking services. Since Nielsen has entered into exclusivity agreements with all suppliers of the essential data, the agreements prevent competition in the market. In this sense the restrictions are anticompetitive. Economic analysis leads to this conclusion, notwithstanding the competition that Nielsen faces in signing contracts with the data suppliers. Section 3 provides the economic basis for the conclusion, and the appendix to this report develops the relevant economic principles in more detail. For purposes of comparison, Section 3 also outlines the economics of exclusivity restrictions in other contexts.

Section 4 analyses the impact of Nielsen's switch to longer term contracts with some of

its buyers. The principal change in market conditions that could lead Nielsen and its buyers to increase the length of their contracts is, in my judgement, the increased likelihood of IRI's entry into the market. The customers targeted by Nielsen for longer contracts in Canada are the subsidiaries of firms purchasing from IRI in the U.S.; for these customers the potential threat of competition from IRI is strongest. I discuss at a general level the impact of potential competition on contract length, and then apply the analysis to assess the competitive impact of the lengthening of buyer contracts in this case.

Section 5 lists the principal conclusions of this report.

2. THE RELEVANT MARKET

2.1 Introduction

As background, in this section I first describe the general range of marketing information services and sources available to a manufacturer of consumer packaged goods, including information services based on scanner data. I then discuss the principles of relevant market definition, and apply them to the determination of the relevant market for this application.

It is useful to state the central points at the outset. Nielsen states in its response to the Director's application that it operates in the broad market for business decision support services and faces some competition in this broad market; that scanner data are but one of

many sources of data input into market tracking and market tracking is but one of many components of the market for business decision support services; and that Nielsen's typical purchase involves a number of services based on a number of distinct data collection methodologies.

The goal of defining the relevant market, however, is not to describe the broad market that Nielsen operates in. Nor is it to describe the typical package of distinct products or services that Nielsen supplies to a customer.

The market for scanner-based tracking services such as MarketTrack offered by Nielsen constitutes *a market* irrespective of the fact that these services are often provided with complementary services such as other types of market measurement, software, systems programming or decision support generally. The applicable legal and economic principles require that all close substitutes be included in a relevant market definition, not that complements be included. The question of relevant market definition in this case hinges on whether close substitutes exist for scanner-based market tracking services. I conclude below that for manufacturers market tracking services based on alternative data sources -- sources such as surveys or audits -- are not close substitutes for scanner-based tracking. The market for scanner-based tracking is therefore a market for the purposes of applying Sections 78 and 79.

2.2 Marketing Information Services in General

2.2.1 The Demand for Marketing Information

A manufacturer of consumer packaged goods can obtain from its internal accounting the most basic data about the sales of its product: the quantity of product shipped from the factory. These data provide the manufacturer with some information about the sales of its product, but are not sufficient for running a business. A manufacturer must assess the current sales of its product varieties at the retail level to estimate current demand; it must project future demand to make production decisions and financing decisions; it must make marketing decisions related to product variety, pricing, advertising; and it must negotiate with retailers for shelf location, feature pricing and promotion, and so on.

For these decisions, the manufacturer needs to know what happens to its product along the distribution path from the factory gate to the purchase by consumers. The manufacturer requires information such as:

- The aggregate sales of its products. The manufacturer must determine whether the output shipped from the factory is actually selling or simply accumulating in warehouses or stores.
- The sales of each of its product varieties, over time and in each retail market.
- The sales of competing products, over time and in each local retail market, to track its market share.
- The actual retail prices, shelf space and display allocation, adequacy of inventories and local advertising by the retailers of its product.
- The sensitivity of the demand for each of its products to price, local advertising,

national advertising, prominent shelf space allocation, feature pricing and coupons.

- The characteristics of the consumers making up the basic or steady demand for its product, as well as the characteristics of those consumers who are sensitive to price discounts, promotions and advertising.

The information on these variables is used by executives across a number of functional areas in a manufacturing company. Marketing executives must decide on product promotion and sales staff must negotiate with retailers about pricing, advertising, features, and shelf-space. Production managers must plan output over the short and medium terms. Management at various levels must decide on product variety changes, and new product introductions. And financial managers must be aware of demand in order to project working capital needs and other financing requirements.

A second role that detailed market information can play is not as an input in decision-making but in expanding the set of feasible distribution strategies or contracts. Consider for example the common pricing policy of offering discounts for large quantities purchased by a retailer or distributor. Retailers have historically responded to these discounts as economics would predict: they purchase less often but in larger quantities, storing the product in warehouses until it can be sold. The manufacturers' intent of these policies, to lower retailer prices and raise retailer volume, is frustrated by the retailers ability to "arbitrage" the quantity discounts by forward purchasing in this way. Moreover the costs incurred by the entire distribution network increase with this arbitrage, as inventory accumulates and inventory costs rise. With the emergence in the U.S., and the potential emergence in Canada, of pricing and quantity data on the *complete* set of transactions in a retail market -- referred to as census data in the industry -- the problem

is resolved. A manufacturer of consumer packaged goods can offer pricing discounts based on the amount that is actually sold each week by the retailer, not the amount purchased by the retailer in the wholesale market. This allows the negotiation with retailers of a pricing and promotion policy that is much more precise.

Greater precision and flexibility in contracts among retailers, distributors and manufacturers is part of the movement toward increased efficiency in grocery distribution that can result from increased information flow through the distribution system. This movement has been labelled Efficient Consumer Response (ECR).[2] At the heart of ECR is the constant flow of information up the vertical chain of grocery distribution; and an essential form of this information flow involves product codes and data from retail transactions. The benefits from ECR are projected to come from the following areas[3]:

- More efficient selection of products in each store.
- More efficient inventory management. This would include automated retail and warehouse ordering, reduced inventories at all stages - retail. distributor and supplier and reduced retail shortages.
- More efficient promotion. This would follow from more accurate prediction of demand and inventory requirements during promotions, leading to further inventory and manufacturing efficiencies.
- More efficient product development. Increased and more rapid information on sales of products at retail stores would enable manufacturers more efficiently to

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[2] See *Efficient Consumer Response: Enhancing Consumer Value in the Grocery Industry*. Report produced by Kurt Salmon Associates, Inc., published by Food Marketing Institute, Washington, D.C. January 1993 (Kurt Salmon Associates 1993).

[3] Kurt Salmon Associates 1993, p.4

develop products that match demand.

ECR involves no entirely new strategies, i.e. no strategies that are not being undertaken by some firms at each stage of distribution. The value of new electronic data strategies to any one firm, however, depend on the coordination of strategies -- whether that firm's suppliers or buyers have adopted the compatible strategies. The need to promote ECR stems from the resulting benefit of coordination across the entire grocery distribution system. (The parallel with the coordination of "just-in-time" strategies in the manufacture of goods such as automobiles is clear.) The potential benefit of ECR to the U.S. has been projected at eleven percent of the total cost of dry grocery items.[4] Considering the less advanced state of current information technology in product distribution in Canada, the corresponding estimate for Canada could be higher than this figure. As a proportion of grocery distribution costs, the percentage would of course be much higher.

For our purposes, whatever the projected speed of adoption of ECR, the specific elements of ECR represent the current and future trends in distribution of consumer packaged goods. Future developments in the demand for marketing information are relevant background for the relevant market determination in this application, even if these developments are not yet in place. This is because a potential entrant into scanner-based tracking, such as IRI, would have to undertake substantial initial investment to enter and become well-established in the market. The economic viability of entry today depends upon the entrant's ability to meet the requirements of tracking service customers today and in the future. In the determination of the relevant market, therefore, the

[4] Kurt Salmon Associates 1993.

criterion of substitutability between scanner data and other inputs into market tracking, should be applied not just to current technology and products but to the trend in products and data inputs.

Consumer packaged goods markets are generally very competitive, so manufacturers are forced to adopt the most efficient technologies available. If the potential savings from greater efficiency in distribution represent eleven percent of the product price, a manufacturer that lagged behind in adopting the most efficient information technology would simply not survive.

The demand for marketing information is not just a demand for the data, but for the data in useable form. An increasingly large part of the services provided by IRI and Nielsen in the U.S., and Nielsen in Canada, are the software and data processing. Within a firm that has purchased information services, depending on the particular user's needs and computer familiarity, he or she can ask for information at various levels of processing. For example, the user can ask for basic, summary statistics of the market such as market shares; for data plots such as a graph depicting the market share of a product variety over time; sensitivity or elasticity estimates such as the effect on demand of a drop in the price or the allocation of more prominent shelf-space. With the development of the higher-level expert systems or artificial intelligence dimensions of the software, users can even request suggestions from the computer for more efficient promotion and pricing of a product. A request for any of these types of information that would have taken hours or days for a middle-level manager to compile ten years ago, can often be met in seconds on a computer screen or printer.

Retailers, who supply the raw scanner data, also demand the processed data and software services. The retailer uses the service for similar purposes as a manufacturer, i.e. for pricing, stocking, shelving and product promotion decisions, as well as for basic processing of the scanner data for inventory purposes. Retailers sometimes receive these services as payment or partial payment for the raw scanner data.

In sum, the value of marketing information to a manufacturer derives from its use in almost any decision that the manufacturer takes, as well as in expanding the possible range of contracts that comprise the distribution policy of the manufacturer. The value to the retailer is in decision-making as well as basic inventory accounting.

2.2.2 The Supply of Marketing Information Services

The Canadian supply of marketing information services is most directly relevant for this application. A description of the U.S. supply is incorporated as well, however, as an indicator of the potential market structure and products that could be available in a more competitive market for scanner-based services in Canada.

Inputs

The description of the supply of marketing information services starts with a delineation of the sources of raw data, the basic input into the services. The sources of raw data include:

- **scanner data** are transactions data obtained from scanners in retail grocery stores. Scanners serve mainly to facilitate the purchase of goods at the check-out counter

and for internal store use. This was their original purpose. The availability of the data for market tracking services such as Nielsen is a by-product of the use of scanners for internal store use.

Scanner data are collected passively, or automatically, once the technology is in place. The data are collected on every transaction, not on the average product flow over a period of time. The transfer of data may be through the exchange of the physical data tapes, but is increasingly done electronically.

The scanners provide the number of units sold of each product or individual UPC, which also provides the product description, as well as the transaction price. Scanning allows measurement of the responsiveness of quantities to temporary price changes or promotions, even those lasting less than one week.

- **store audits** which measure the movement of product from store shelves and in-store stockrooms. These are accomplished by visiting the individual stores, examining the stores accounts and include actual counting of the number of units remaining on the shelf. Store audits, where they have been used, take place on a monthly or bi-monthly basis. The audits allow measurement of the current stocks of products, which are used to plan orders for example. The audits also allow measurement of the average daily flow of the product between the audit dates. But the audits do not allow measurement of the daily changes in sales in response to promotions or price changes. Furthermore, audits measure the total flow off the shelf; this flow equals sales plus pilferage plus breakage. Sales alone cannot be estimated precisely. Store inspections also record the product displays, shelf space

locations and promotions, data which cannot be obtained from scanners. Store audits were prior to scanners the basic input into market tracking services. In the U.S., store audits have been replaced almost entirely by scanner data.

Thus store audits and inspections have a number of potential functions. Store audits and inspections are increasingly used only where scanner data are unavailable, however, or for functions such as recording promotions or displays that cannot be tracked by scanner data. The increasing use of scanners has narrowed the range of functions for which these alternatives are useful.

- **direct delivery audits** which measure the product delivered directly from the factory to stores.

- **warehouse withdrawal audits** which measure the movement of product from distributor warehouses to individual retail outlets. These data can be taken from computerized invoices and transferred electronically.

- **household panel surveys**, on cross-sections of individual households, calibrating variables such as quantities purchased of various products, the characteristics of the households, the expressed reasons why the households were led to purchase particular goods (price, promotion, advertising, prominent shelf space, in-store sampling, etc.).

Households in the survey record their purchases in diaries. Alternatively, they may be provided with scanner cards for use at the check-out counter, or with

hand-held input devices that the households use on returning home with groceries. Both diaries and the hand-held devices require active input by households, which leads to reduced accuracy of the results and increased cost to the household of recording the data compared to the scanner cards.

Household surveys are an expensive method of data collection; the use of the survey data requires inference based on a limited sample of households within the population demanding the products; and the surveys involve active participation of the buyers, relying on buyers to record their purchases and sometimes to remember their purchase quantities. A recurrent problem with household panel data is that samples are biased, e.g. older consumers are over-represented. Household surveys collect some types of information (such as demographics) that are not available through scanners or audits. The panels allow the possibility of using household characteristics in conjunction with store data.

- **other sources**. Obviously a myriad of sources of information, beyond those listed here, are used in predicting the success of product varieties and in estimating the future demand of existing products. But general methodologies of scanning, auditing and panel surveys have been the major means of measuring actual product movement and demand responsiveness.

These inputs or data sources are differentiated in five dimensions: the variables that are measured, the cost of measurement, the frequency of the sampling, the comprehensiveness of the sample relative to the underlying population of potential demand for the product, and more generally the accuracy of the information obtained. I

shall discuss the differences between scanner data and other methodologies in arriving at the relevant market definition in the next subsection.

Outputs

The Suppliers and Products in the U.S.

A.C. Nielsen and IRI are the two major suppliers of marketing information services in the U.S. A.C. Nielsen is wholly-owned by The Dun & Bradstreet Corporation. It has two divisions: Nielsen Media Research, which measures television audiences and provides information to advertisers and their agencies, television stations and networks and others; and Nielsen Marketing Research.

IRI is a publicly-held corporation, founded in 1979, which had sales of U.S. $276 million in 1992.

Descriptions of the products offered by both U.S. firms categorize the products into (1) market tracking or measurement services and (2) decision support and software services.

Market Tracking Services

Dun & Bradstreet's 1992 Form 10-K describes the two principal products of Nielsen Marketing Research. The first is as follows:

> "Nielsen provides a measurement of the consumer response at the actual point of sale -- the final result of the manufacturer's production and marketing efforts. From a national sample of retail stores, Nielsen collects point-of-sale information via store visits by both professional auditors and

> electronic means such as scanning of universal product codes (UPC). In the audit environment, store purchases are combined with change-of-stock-on-hand data to produce data on sales to consumers, retail inventories, brand distribution, out-of-stock items, prices and displays. In the U.S. and several other countries where electronic point-of-sale data are available, weekly reporting of product sales and related marketing information is the primary product offered along with value-added analysis, such as market-response modelling and promotion effectiveness studies."

The competing product offered by IRI has been InfoScan. InfoScan uses scanner information from a sample of 2700 stores in various markets located across the United States, and tracks every purchase transaction in these stores, in addition to related information, including the presence of end-of-aisle displays, newspaper feature advertisements, and the distribution and usage of coupons. In addition, InfoScan incorporates panel data in several mini-markets and in major metropolitan markets and maintains a consumer panel of an average of 60,000 households across those markets. InfoScan compiles and packages this data. Tracking data are available by: 1) UPC, brand, segment, or category; 2) retailer, market, region, or country; and 3) day, week or month.

The information provided by either market tracking service can be used by manufacturers to monitor the sales of a particular product variety, a flavour, a brand, a product segment or a category of products - for a particular store, a chain, a city, a region or the entire United States. The information can be accessed immediately by manufacturers electronically, and can include information up to the previous week.

Software and Decision Support Services

The second principal product of Nielsen Marketing Research is described in the Dun and

Bradstreet's 1992 Form 10-K as decision support and software services that are intended to assist customers in making more productive and efficient use of Nielsen's information.

IRI also offers complementary Decision Support Software products, which enable customers to analyze data from InfoScan and other sources in making marketing decisions. IRI's Decision Support Software products are written in a proprietary data-base management language.

The Canadian Suppliers and Products

In Canada only Nielsen offers a scanner-based market tracking service. Nielsen's market tracking product is MarketTrack. Market tracking is recognized by Nielsen as a distinct product or component of its business, in Nielsen's response to the Director's application (paragraph 6). According to Nielsen, market tracking

> "involves using a database to measure, over time, the movement of specified products at some point in the distribution chain from factory to consumer to produce an estimate of market size and direction as well as the relative performance of individual brands and stock keeping units ('SKUs'). The database may also contain information on demographics or 'causal' factors which may influence the size or direction of the market and the performance of individual brands or SKU's. Market tracking enables manufacturers and retailers to plan more effectively the marketing and merchandising of their products based on previous trends."

Nielsen's tracking service to this point incorporates scanner data from grocery stores. Nielsen has entered into an exclusive contract with a major drugstore retailer for the purchase of scanner data, but has not yet offered a product based on these data. Nielsen offers software and decision support services as well, including some of the specific products offered in the U.S. by Nielsen Marketing Research, as well as the INF*ACT workstation. MarketTrack and other Nielsen products are recognized as distinct in

customers' Purchase Agreements with Nielsen.

The following table, based from Nielsen's undertaking # 19, shows the revenue of selected Nielsen services.

Another firm, ISL, offers a marketing information service based on a panel data set. ISL offers no tracking service based on scanner data in grocery stores. IRI offers only software products and decision support generally in Canada, but has announced the intention of entering the Canadian market if the exclusivity restrictions in Nielsen's contracts are removed.

2.3 Relevant Market Determination: The Economic Principles

The applicability of Section 79 of the Competition Act in this case requires that Nielsen control substantially or completely a "class or species of business". A relevant class of business or market must satisfy two economic criteria:

(1) The defined market must contain a product or products offered by Nielsen.

With respect to this criterion, the goal in determining the market is not to define the broad business in which Nielsen operates. The fact that Nielsen offers many specific products in the area of Decision Support Services, and even the fact that a typical user may purchase many such products, do not dictate that the relevant market is the business of supplying Decision Support Services.[5]

(2) The class of products must contain all close substitutes for the product or products offered by Nielsen.

Courts and the Competition Tribunal have consistently held that the determination of whether a particular class of products can constitute a relevant market, turns on the degree to which the products are sufficiently distinct from other products. The issue is whether other products may be good substitutes for the product in question.

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[5] Thus the fact that market tracking is but one component of Nielsen's business, the provision of Decision Supply Services (Nielsen's Response to the Director's Application, paragraphs 5, 6, and 7), is irrelevant.

Note that the second criterion is the inclusion of product *substitutes*, not product *complements*. The fact that a particular type of product, market tracking services, may be sold with complementary products, software and decision support services that enhance the value of the tracking service, does not dictate that the latter must be included in the market. If two types of products were *perfect* complements - goods always used in the same proportion - then as a practical matter they would both be included in the same market for purposes of competition policy. Separate cases would never be brought for the monopolization of left shoes and right shoes. But where the complementarity is not perfect, neither legal nor economic principles require that the market definition be broadened to include complements.

As an aside, I note here that the conclusions that I will reach regarding the lessening of competition from exclusivity restrictions would extend to the broader business of scanner-based decision support services, which includes the complementary products. Even in the context of this broader business, scanner data are a critical input without close substitutes. But the application of Section 79 (a) requires only that *a* class of business or market be identified as substantially controlled by Nielsen. I will show that the market for scanner-based market tracking is one such market. It is not necessary in applying Section 79 to identify the entire set of all markets controlled or the set of all transactions affected by the contractual restrictions at issue.

A feature of the market definition in the Director's Application is that the product is defined in terms of an input. The market is *scanner-based* tracking services, not tracking services in general. Defining a market in terms of an input used is justified when the nature of the product is inherently dependent on the particular input used. Again, the

issue is one of substitutability: whether market tracking services based on alternative data sources are sufficiently distinct in functionality or cost from those based on scanner data to be excluded from the market.

In short, whether the provision of scanner-based market tracking can be defined as a product market for the application of Section 79 hinges on whether there exist good substitutes for this product that are based on alternative data sources.

We turn now to the application of these economic principles to the product market definition and the geographic market definition.

2.4 The Product Market Definition

A key feature of market-tracking services is that the final product in this market depends on the data inputs used. Market-tracking that is based only on audit and panel survey data is not the same as a service that includes as an input UPC-scanner data as well. For a product B to be a close substitute for a product A in the relevant market, two conditions are necessary: (1) that B be produced at similar or lower cost to A; and (2) that B be a good substitute for purchasers.

In considering the second condition, the substitutability in demand, relevant market determinations sometimes turn to data on the behaviour of prices. That two products be close substitutes requires, as a necessary condition, that the prices of the products move closely together. This approach is in general difficult to apply and in the current

application quantitative evidence comparing prices cannot be produced because of the highly customized nature of the product exchanged in each transaction. Therefore, as in most relevant market determinations, to assess substitutability in demand we must consider the specific uses to which the services are put by purchasers, and the functional substitutability of products in uses.

I conclude that there is no close substitute for scanner-based market tracking. This conclusion is based on the following observations:

1 For making decisions, no other data source is as *comprehensive.* Scanners record the UPC data on every transaction, without averaging over time.

Store audits record the change in stock only between two dates, generally one or two months apart. Only the average of the product flow per day during the interim can be inferred. Household surveys record the purchases of only a subset of households in the market. Warehouse withdrawal audits cannot distinguish product sales from accumulation of product on store shelves or stockrooms.

We can illustrate the need for this comprehensiveness in business decisions with two examples. First, one of the most common pieces of marketing information required is the sensitivity of demand for a particular product variety to temporary promotions, or weekly specials in newspapers, or temporary price changes. Information that is collected only monthly does not allow accurate estimation of the response of demand to weekly promotions. Compared to scanner data, which can be transmitted electronically on a daily basis, the window of observation over which the change in product stocks is

measured is simply very long and the estimation of market variables very crude.[6] As a 1986 Nielsen news release states,

> "Scanning data can cover product movement on a weekly basis allowing marketers to see the direct result of a specific promotion period, or the effect of featured pricing. Identification of sales rates at various price points will sharpen pricing decisions."[7]

Second, as I discussed earlier in the context of "Efficient Consumer Response", information on market transactions is not only an input into business decisions but also has potential value in expanding the feasible set of manufacturer-retailer contracts. Contracts in which compensation to the retailer is a function of retail transaction quantities, require transaction-by-transaction data. Monthly averages of sales are not enough. The increased precision and efficiency of distribution networks -- which one study has estimated to have potential cost savings of more than ten percent of product prices -- requires a constant flow of data up the distribution network. Periodic audits are simply insufficient. Transaction data can be provided only through scanners.

2 No other data source is as *accurate* as scanner data, or scanner data in combination with audits.

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[6] One indicator of the crudeness of audit data in measuring price responsiveness of demand is in the difference between audit data and scanner data in the measurement of a basic variable, the revenue generated by a product. In the audit method revenue is calculated as the product of total quantity flow between audit dates and the prices at the audit dates. Because quantity demanded is a decreasing function of price, and price varies between audit dates (because of promotions and specials), this overstates the actual revenue. In U.S. studies, the average upward bias in this method was 6 - 7 %. (Nielsen Document # 291: Review of the Canadian Scanning Experience: August 1987.)

[7] Nielsen news release 10/09/86 re "The Addition of Scanning based Data to Change the Face of Nielsen's Marketing Research Services".

Because scanners track the data from a complete set of transactions, as input into market tracking, they offer a higher level of accuracy than other sources. This is in part because scanner data is collected passively or automatically: scanner data does not require the manual entry of data into a diary or accounts by an employee or household. Store audits cannot separate actual sales from theft or breakage, introducing an additional source of error in the use of the data for marketing analysis.[8] Household panels suffer from bias in the panel sample. Finally, because scanner data provide a number of observations into statistical estimation that is not feasible at reasonable cost for other methods, the estimation errors are small.

Scanner data are not free of problems. The reliability of the data is dependent on actions by retailers and manufacturers, i.e. not under direct control of Nielsen. The retailer may fail to separate flavours in scanning, for example, or the manufacturer may not separate the flavours in specifying UPC's. The manufacturer may change sizes of a product without changing the UPC. These problems and others have been recognized, however, and improvements have been implemented. The accuracy of scanner data continues to improve and even as early as 1987, a Nielsen document stated that

> "The Bain survey results rated scanning #1 as the most reliable data collection technology. All ACN International studies verify that as fact."[9]

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[8] An internal Nielsen document, "A Review of the Canadian Scanning Experience" (August 1987; document 291) noted that " studies in the US, have showed that averagely (sic) scanning sales on a physical basis were 4% less than audit sales." The variability or unpredictability of the difference between scanner sales and audit sales makes audit sales difficult to rely upon.

[9] Nielsen Document #210, Internal Presentation on Scanning; April 1987.

Accuracy is of course an advantage to any use of market tracking in business decisions. Accuracy is valuable whether in basic and traditional calculation of recent changes in market shares; estimation of the price-elasticity of demand in different regions, different neighbourhoods, different stores or as a function of consumer characteristics; or more sophisticated business decision support.

3 No other data source is as *cost-efficient.*

The relevant opportunity cost of scanner data in the market for informational services is the combined cost to grocers and suppliers of market-tracking services, *net* of the value the data provide in other uses, specifically in improving speed and accuracy of the transaction at the check-out stand. These other uses of scanners are the original and still most important use of scanners. The opportunity cost of scanners in informational services is surely near zero; that is, major grocery chains would use scanners even if they were not compensated for the information by Nielsen.

In contrast, store audits are a costly means of acquiring data on number of units sold, requiring visits and manual input at the stores. These methods are so costly, in fact, that they are no longer used in the U.S. where scanner data are available and useable.[10] Household surveys are also more costly than scanning data and are not used for the

[10] As early as 1981, "Nielsen executives ... generally regarded the possibility of technological obsolescence of the store audit system as an imminent and likely occurrence." ("Nielsen-Canada Scanning Long Range Plan": June 1981: Document 0004: page 37).

purposes served by scanner data.[11]

Scanner-based is not by itself a sufficient or complete informational input for all market tracking products, and the databases included in the market tracking services offered by both IRI (in the U.S.) and Nielsen incorporate data from other sources such as store inspections, newspaper advertisements and household panel surveys.

These other sources of data contain information that is not available through scanners. The scanner data do not, for example, contain information on the characteristics of the purchaser, the shelf location and so on. This additional information is useful in directing product promotion and advertising to the right consumer group. But the issue is not whether scanner-based data, as an input into market-tracking services, is superior in all respects to other data. Each data source has some advantages in some functions; store inspections and household panels have some specialized functions in causal analysis that cannot be provided by scanners. The question is whether the overall marketing information service provided by a supplier of this service could be as effective, or nearly as effective, without scanner data. The factors discussed above lead to the conclusion that it could not.

The product market issue has been formulated and addressed in terms of the current information technology in market tracking. The pace of development in information technology is very rapid. In assessing the competitive impact of Nielsen's contractual

[11] A 1985 internal memo [from J.E. Thorn] at Nielsen states that:
- " [The] major use of market tracking data: market share tracking, is not perceived to be met by household level data" (Document 0035, p.1.)

restrictions, one must consider the emerging or prospective state of technology. competition will be prevented if a firm is deterred from using the most advanced technology even if, in a rapidly changing market, the technology is not yet matured and has not yet completely displaced the previous technology. This strengthens the case that Nielsen's exclusivity restrictions violate Section 79, since the dominance of scanner technology in the near future is even more obvious than its dominance today.

The substantial fees paid and services offered by Nielsen to retailers for scanner data are in themselves additional evidence of the value of scanner data in the production of market tracking services, net of the costs of production incurred by retailers and Nielsen. If Nielsen could produce market tracking services of equal value and at no higher cost without scanner data, then Nielsen would not willingly pay these fees.

In sum, the relevant product market in this application need not extend beyond market-tracking services based on UPC-scanner data.

2.5 The Geographic Market Definition

Having identified the market for scanner-based tracking as a relevant product market for application of Section 79, we turn to the question of how far the geographical market definition should extend.

The relevant geographical market includes Canada, because most purchasers of market tracking services are organized on a national basis and value a common market tracking service for the entire national market. National market tracking under a single format

allows a manufacturer to calculate easily national market variables (e.g., market shares). As well, it allows direct analysis and comparison of regional markets under a common format. Purchasing market tracking from Nielsen for Eastern Canada and market tracking from IRI for the rest of Canada, for example, would involve two types of costs for manufacturers. First, to develop aggregate statistics by product type (size, flavour, etc.) the two sets of market information data would have to be integrated. Regional comparisons would also require integration of the two sets of data, or at least that the formats of the two services be similar. Second, employees across the company would have to be trained in two sets of software and programming languages, in order to use the decision support products that are complementary to the market tracking information. Both of these costs are avoided when the user of the services purchases a common product for the entire country. Purchasers of the service demand the same tracking service for all markets in Canada, therefore, and this means that the relevant geographical market must include Canada. The limited value of even a large regional service is reflected in the following statement, from a 1989 letter from the President of Nielsen to retailers:

> "We have ... launched an Ontario-only SCANTRACK service as a standalone product (as opposed to integrated with our mainline product). This regional product will of course have extremely limited utility because of the regionality and will have limited market acceptance." [12]

Is scanner data from U.S. grocery stores a good substitute for Canadian scanner data? Could IRI, for example, compete in the Canadian market for scanner-based services by tabulating market shares and estimating demand elasticities and advertising responses from U.S. data? I suggest that the answer is clearly no. The response of consumers in

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[12] Nielsen's Document 0475

Topeka, Kansas to product promotion or other changes in marketing variables tells us little about the response of consumers in Vancouver.

The willingness of Nielsen to incur substantial costs on Canadian data when it already has U.S. data is further evidence that the U.S. data are not a substitute.

For census data applications, the geographical market boundary is even clearer. U.S. data are of zero value to manufacturers requiring data for the implementation of particular contracts or distribution strategies in Canadian markets.

I conclude that the relevant geographical market is Canada. Therefore the market for scanner-based tracking in Canada constitutes a "market" or "class of business" as these terms are used in Section 79.

Nielsen is the only supplier of the product in Canada. Furthermore, the exclusivity restrictions discussed in the next section of the report represent a barrier to entry; and the need to collect a history of data prior to offering a scanner-based tracking service represents another cost of entry. These two conditions provide Nielsen with the clear power to set prices above the competitive level. The requirement, in this section of the Competition Act, that Nielsen *control* the class of business is clearly satisfied.

3. THE COMPETITIVE IMPACT OF EXCLUSIVITY RESTRAINTS IN NIELSEN'S CONTRACTS

3.1 Introduction: The Contracts

We have established that the relevant market for assessing the applicability of sections 78 and 79 of the Competition Act is the market for scanner-based market tracking services in Canada. This section of the report analyses the impact on competition in this market of the exclusivity provisions in Nielsen's contracts with grocery retailers, who supply the raw scanner data.

Nielsen's exclusive contracts have been struck with all major grocery suppliers of the data and at least one major drug retailer. The contracts forbid sale of the raw data to other parties. *

IRI in 1985 also attempted to secure the exclusive supply of grocery scanner data. IRI entered negotiations with 11 grocery distributors in connection with a project coordinated by the Retail Council of Canada, with the purpose of establishing a national marketing information service using scanner data. The profits from the enterprise were to be shared between IRI and the retailers. IRI sought exclusive access to the distributors' UPC data for a period of 5 years in an arrangement in which the contract with each distributor was

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contingent upon all 11 distributors being signed.

IRI signed agreements with 10 of the 11 distributors, agreements that were contingent on participation of all 11 distributors, but failed to secure a contract with Safeway. Safeway was attracted instead to an exclusive contract with Nielsen.

Having gained the exclusive supply, Nielsen established a monopoly in the Canadian market for scanner-based market tracking. This took substantial time. The exclusive contracts were signed in 1986; Nielsen's scanner-based tracking product, MarketTrack, was launched only in 1992.

3.2 The Competitive Impact of the Exclusivity Restrictions

Exclusive supplier restrictions are listed in Section 78 as one of the anticompetitive acts to which Section 79 applies:

> (h) requiring or inducing a supplier to sell only or primarily to certain customers, or to refrain from selling to a competitor, with the object of preventing a competitor's entry into, or expansion in, a market;...

In that scanner data are essential for producing scanner-based market tracking, the supply restrictions are also treated by subsection (e):

> (e) pre-emption of scarce facilities or resources required by a competitor for the operation of a business, with the object of withholding the facilities or resources from a market;

In interpreting Section 79, I proceed on the assumption that a practice by a firm *prevents* competition if (1) competition is rendered impossible by the practice; and (2) competition is possible without the practice. This follows from the meaning of the phrase "A prevents B".[14]

With respect to the first condition, Nielsen's restrictions are, *ipso facto*, anticompetitive in that if they are adhered to, competition within the market is impossible. Scanner data are necessary to offer the product, scanner-based market tracking, and competitors are precluded from competing without this input. The entire supply of scanner data from major grocery distributors in Canada is locked up by Nielsen's contracts.

By their very nature, therefore, the contracts render competition in the market for scanner-based tracking services impossible.

With respect to the condition (2), competition between Nielsen and IRI in the Canadian scanner-based market would be possible without the exclusivity restrictions.
This is demonstrated by the following observations:
(1) Nielsen and IRI compete actively in the U.S. market. IRI has already developed the product that would compete with Nielsen's scanner-based market tracking product in Canada.
(2) Nielsen's exclusivity restrictions themselves. Nielsen invoked these restrictions, at a cost, presumably because the restrictions might have an effect. If Nielsen's monopoly

[14] The second condition is included because if a condition B is impossible with or without A, one does not normally say that A prevents B.

position were guaranteed with certainty without the restrictions they would not be invoked.

(3) IRI's recent announcement that it would enter Canada if the exclusivity restrictions were struck down.

(4) Even if a Nielsen monopoly continued to prevail in the Canadian market, the presence and strength of IRI in the U.S. market would provide *potential competition* that would discipline the prices in the Canadian market. IRI's buyers in the U.S., familiar with IRI's service and reputation, would agree to contract with IRI for Canadian services if Canadian prices were too high. Despite the word "potential", this is a genuine form of competition that would, in the absence of the entry barrier imposed by the exclusivity restrictions, discipline prices in Canada.

In Laidlaw, the Competition Tribunal stated that

> "Substantial lessening can also be assessed by reference to the competitiveness of the market in the presence of the anti-competitive acts and its *likely* competitiveness in their absence." (Laidlaw Waste Systems, CT 91/2, #72 (1991h): 106) [Italics added]

The evidence discussed in the last paragraph shows that competition would be likely in the absence of Nielsen's exclusivity restrictions. To invoke the term "prevents" in Section 79, rather than "lessens", however, we need only demonstrate, along with the impossibility of competition with the acts, the weaker condition that competition would be *possible* without the acts. This is surely demonstrated by the facts outlined.

The possibility of competition without exclusivity restrictions, and the impossibility of competition with exclusivity, mean that Nielsen's restrictions prevent competition in the

market for scanner-based tracking in Canada.

3.3 Competition in the Market for Exclusive Rights

The Issues

The conclusion that Nielsen's contractual restrictions prevent competition requires elaboration. Nielsen notes in its response to the Director's Application that both Nielsen and IRI have attempted to secure exclusivity restrictions, and that Nielsen's success in the market is the *outcome* of "competition" in the market for these rights, specifically the result of Neilsen's ability to offer superior contracts to retailers.[15]

Here I address the relevance of this competition, and the following specific questions in particular:

- Since exclusivity restrictions have been not only used by Nielsen, but sought by IRI as well, is there a sense in which the restrictions are therefore an *instrument* of competition between the two rivals, rather than an instrument used by Nielsen to suppress competition by excluding IRI? Does the freedom of IRI to offer the same exclusivity restrictions or options as Nielsen not "level the playing field",

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[15] The statements in Nielsen's response are the following:
"21... the contractual terms of Nielsen's agreements with Retailers have been and continue to be the result of commercial negotiations in a vigorous, open and free competitive process. These terms do not constitute a practice of anti-competitive acts, nor the creation of any barriers to entry."
"23. Nielsen's arrangements with Retailers are open to competition at the conclusion of the term of each of the Retailer Agreements or earlier, depending on the termination provisions negotiated as part of each agreement. Such competition has occurred and continues to occur. "

allowing intense competition between Nielsen and IRI -- a competition for the market that Nielsen has to this point won simply because of superior products?

- There was rivalry between the firms to secure places in the market in the mid-1980's period, even as the exclusivity restrictions were offered to grocers. Can the market not be described therefore as competitive, in a meaningful sense?
- Nielsen has had to offer the suppliers of data substantial fees for the exclusive rights to the data. Is it not possible that these fees represent a fair price paid for these rights, a price that is substantial enough to prevent any unreasonable profits by Nielsen. If so, is this relevant to the application of Sections 78 and 79?
- In the Application, the Director states that a successful marketing information service in Canada requires the participation of all or substantially all major grocery retailers. This statement was supported in Section 2 of this report. In its response, Nielsen disagrees, arguing that regionally-based suppliers of scanner information services are possible. What are the underlying market conditions that determine which is correct? If Nielsen's assumption is correct, has this any implications for the assessment of the competitive impact of the exclusivity restraint?

This section offers a discussion of economic principles that can shed light on these issues. Appendix 2 of this report elaborates on the economic principles using a simple model.

Economic Analysis

In the conventional "textbook" competitive market, and most real markets, exclusive supply agreements are not profitable. Inputs into the production of the product can be supplied by a large number of firms, and entry into the supply of inputs ensures that they are supplied at a price that reflects the social cost of the input. A firm competing in the

market can do no better than offer an input supplier the prevailing market price for an input. An agreement that an input supplier not provide its input to any rival of a producer has no effect on the market power of the producer, and no inherent value to the producer as an instrument to enhance market power.

Exclusive supply agreements are, however, apparently profitable in the Canadian market for scanner-based tracking services. The first step to addressing the issues outlined above is to delineate the features of the market that underlie this profitability and the impact of the agreements.

The important features of the relevant market in this regard are the following:

1) A limited number of firms, the major Canadian grocery chains, are capable of supplying an essential input into the product.

2) Two major firms, Nielsen and IRI, supply or potentially supply the relevant market. The demand in this market comes from a large number of buyers.

3) The buyers' valuation of the service provided by either firm depends on the number of input suppliers that the firm contracts with. A substantial number of buyers have a strong preference for buying from a firm that has contracted with the entire set of input suppliers, i.e. with all major national grocery distributors in Canada.[16]

4) If the two firms, IRI and Nielsen, were to offer market tracking services based on the same set of data supplied, then buyers would view their products, MarketTrack and InfoScan, as similar. Nielsen and IRI do not specialize in supplying tracking services to different segments of the market (eg., one to large manufacturers, the other to small

[16] Retailers may, as buyers of market-tracking service, demand a service that is specific to their regional market; manufacturers, however, typically require a nationally-based service.

manufacturers and retailers). The specific functions served by the two tracking services are very similar if not identical.

5) The contracts offered by the firm or firms to the suppliers of data involve an annual fee, not a fee each time the data are used.

6) Scanner data, the essential input, are a "public good". That is, the data have no inherent excludability in that their use by one firm does not preclude their use by another.[17]

In the Canadian market for scanner-based tracking services exclusive supply agreements are both profitable and anticompetitive, and would be even with equal ability of both IRI and Nielsen to offer any kind of supply agreements with input suppliers at the time of contract renewal.

I develop the basis for this conclusion below. I set aside initially any considerations of staggered contracting, and suppose instead that all contracts come up for renewal at the same time. In this framework both firms compete on a level playing field for rights to the data input.[18]

First, note that one can describe many hypothetical configurations of contractual relationships between the suppliers of the data, and the two firms. (For example, one configuration is that one third of the suppliers supply exclusively to each of the two

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[17] Apples, to illustrate the point, are not a public good because if I consume an apple you cannot consume the same apple. Information is a public good because the same piece of data can be purchased and used by many.

[18] The extension to staggered contracts is developed subsequently.

firms, and the remaining third supply to both firms.) But when buyers require, or value highly, a national service, then any firm that is to compete successfully in the market must sign up all or substantially all major input suppliers. This effectively reduces the possible supply configurations to three: all suppliers sell exclusively to Nielsen; all sell exclusively to IRI; all or substantially all sell to both Nielsen and IRI.

As an outcome of competition in the market for the rights to the inputs, exclusivity restrictions will be observed in this market when the supply of the market by a single firm maximizes the *sum* of profits to all participants (that is, suppliers of the inputs and the competing suppliers of the services) in the market. For if more profits are generated in the market through the supply by both firms, retailers will command a total compensation for their data that could not be profitably bid away by an exclusive contract offer by either firm.[19]

In terms of total profits, exclusivity has a private cost and a private benefit: the cost of having a single firm serve the entire market is the loss in demand from buyers who would be best matched with the other firm. The benefit is the increase in total profits through the suppression of competition. Exclusivity restrictions will be observed when the private benefit exceeds the private cost of the restrictions.

If MarketTrack and InfoScan were very different products, directed at different sets of buyers, then we would not observe exclusive contracts. With highly differentiated products, the cost of exclusivity exceeds the benefit. More total profits are generated in

[19] This principle is developed more precisely in the Appendix 1.

the market by having both firms contract with all input suppliers, with each selling the output to its particular sub-market. And since the pattern of contracts maximizes the total profits, nonexclusive contracts would be the outcome of competition in the market for the rights to supply.

The case of highly differentiated products and its logical implication, nonexclusive contracting, obviously do not describe reality. Nielsen's contracts are exclusive. Nielsen's and IRI's products are very similar: In the typical uses of the market tracking services, a user identifies trends in market shares, trends in total revenues, relative shares of product varieties, responsiveness of demand to product promotions, etc. The user requires estimation of the same variables whichever service is being used; to a large extent the two services offer identical functions. The case in reality is substantially similar products.

With substantially similar products, monopoly -- one firm or the other winning the right to the exclusive supply of *all* sellers -- is the inevitable outcome of competition for the right to each supplier's data when exclusivity is allowed. The maximum that either firm would bid for the *nonexclusive* use of the essential input in a (hypothetical) duopoly would be the revenue that the firm earns in the duopoly. (Label this revenue "A"). This is because the firm would not bid more for the input than the return it earns from the input. But the other firm, to gain *exclusive* use of the data would be willing to increase its payment by (B) the difference between the return it would earn as a monopolist and the return that it earns as a duopolist. It is a basic economic principle that B exceeds A.[20] A

[20] With similar products, a single seller always earns greater profits than two sellers. Therefore the increase in profits for one firm in moving from a duopoly to a monopoly must exceed the duopoly profits of the other firm. In other words, a single duopolist can profitably buy out its rival because the profits it earns by doing so equal the rival's profits plus the gain

duopoly will not emerge in the market because one of the firms will willingly bid higher for exclusive use of suppliers' data than the maximum possible sum of payments by both firms for nonexclusive use of the data.

The monopoly position will be won by the firm that can generate the most profits from the input, and this will generally be the firm offering the product that is more attractive to buyers.[21] But the outcome is nonetheless a monopoly, with associated inefficiencies in pricing. Competition for the rights to input supply, in the market for Canadian scanner-based tracking services, is simply competition for the right to secure a monopoly during the succeeding contract period. Whichever firm, Nielsen or IRI wins this right, competition in the relevant market is prevented.

The most competitive configuration, generating the maximum benefits from the market, is one in which all input suppliers provide the data to both firms and the two firms compete for buyers. This configuration yields higher efficiency than other configurations for two reasons. First, each buyer is purchasing a product that is of maximum value, because all input suppliers are represented in the product. Second, this configuration yields the highest degree of substitutability between the two products, resulting in the most intensive competition and therefore the lowest prices. This competitive

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from monopolization.

[21] This is the case providing that all contracts come up for renewal at the same time, so that both firms compete for new contracts on an equal basis. If contract renewals are staggered over time, then an incumbent supplier is favoured and may retain a monopoly position even with a somewhat inferior product. I set aside for now the complicating factor of staggered contracts, to make the point that even when an incumbent and potential entrant are on a "level playing field" in competing for the rights to supply, exclusivity is anticompetitive.

configuration will be an outcome only when exclusivity is prohibited. The configuration is close to the market structure in the United States, where Nielsen and IRI are active competitors.

Nielsen states in its response (at paragraph 21) that "the contractual terms of Nielsen's agreements with Retailers have been and continue to be the result of commercial negotiations in a vigorous, open and free competitive process." This raises the question: What impact has the *intensity* of competition for suppliers data on the market? The answer is that the more intense the competition for retailer inputs, the higher the annual fees paid to retailers. But the intensity of competition has no impact on the market structure, a monopoly. Intense competition for the exclusive rights to data input therefore does not mitigate in any way the prevention of competition through the exclusivity restrictions.

Prices paid to retailers for the data (beyond the small cost to the retailers of providing the data) represent simply a sharing of the profits from monopolization of the market. Because they share in the profits, retailers may be active in encouraging the most profitable configuration in the market through exclusivity; Nielsen states in its response (at paragraph 21) that

> "Nielsen has not imposed these arrangements on the Retailers, but rather the Retailers, which own and control the source data at issue, have determined that this is the basis on which they will provide access to their data."

Retailers gain a share of these monopoly profits, however, even if they passively accept whichever contract is most valuable to them. Because there is competition between IRI and Nielsen for the property right to monopolization of the market, only a small

proportion of the profits may remain with the winner of this competition. Most of the profits may well accrue to retailers, whether they actively seek out the exclusivity as an arrangement or simply accept the most profitable contract offered.

Thus, Nielsen may not be the primary beneficiary of the profits created by the prevention of competition through exclusivity restrictions, notwithstanding the fact that the prevention of competition allows the exercise of market power in the market monopolized by Nielsen. Much of the profit is transferred to retailers.

I suggest, however, that the division of profits from the prevention of competition through exclusivity restrictions is not a relevant issue in this case on either economic or legal grounds. Section 79 contains no exception based on profits being reasonable. Competition law in Canada or the United States has never accepted as a defense for anticompetitive practices the argument that competition would cause profits to be too low. Nor does the transfer of profits to upstream suppliers of the data mitigate the economic inefficiency of monopoly.

Nielsen argues in its response that "while Nielsen uses the scanner-based data to provide Decision Support Services in Canada on a national basis, such services may also be provided on a regional or on an account-specific basis, without data from all or substantially all Retailers." (paragraph 16). I have shown, consistent with the Director's Application, that a monopoly is inevitable in this market when exclusivity restrictions are allowed, even if Nielsen and IRI compete intensively and on a level playing field for the right to use suppliers' data. The data of all suppliers will be purchased exclusively by a single firm.

Even if Nielsen is correct in its statement that two firms could survive in the market when exclusivity restrictions are used , however, these restrictions are still anticompetitive. Two firms would survive if their products were sufficiently different, with each firm preferred by different types of buyers; for example large manufacturers might purchase from one, small firms from the other. The private benefit to the either firm from exclusivity restrictions with a particular set of suppliers is, in this case, to *further* reduce the similarity between its product and its rivals product. For example, one firm might specialize in supply information about markets in Central and Eastern Canada, the other firm about markets in Central and Western Canada. The role of exclusive supply restrictions in this case is to differentiate the products and therefore lessen the intensity of competition between the firms.[22] (This role of exclusivity restrictions is referred to in the economics literature as the "dampening-of-competition" effect of exclusivity restrictions.)

The most competitive configuration of input suppliers and firms would be one in which each firm has access to the data from all suppliers.. This configuration involves the highest-quality service by each firm, because each firm accesses all data. The configuration also leads to the most intensive price competition, as the products offered

[22] An analogy may be helpful. Suppose that the producers of two automobile models can sign exclusive contracts with all suppliers or potential suppliers of automobile options (air conditioning, sunroofs, safety features, etc.) and compete for buyers once the contracts with option suppliers are struck. The most competitive configuration of contracts is for all option suppliers to supply both models. This generates the best products for consumers and, because the models are then quite close substitutes, the market is competitive and prices are low. But the outcome of bargaining for exclusive rights to options may lead to a configuration in which the manufacturers specialize, eg. one in sporty options and the other in safety options. Greater profits are generated because the two models are no longer close competitors; bargaining for exclusive contracting leads to the most profitable configuration. The social costs of exclusivity in this hypothetical example are the higher prices and the inferior products because of the reduced set of options available to the buyer of either model.

by the firms are most similar. Exclusivity restrictions rule out this competitive, beneficial market configuration. A prohibition of exclusivity restrictions would allow it.

In sum, the evidence on market conditions does not support the emergence and survival of two firms in the market for scanner-based tracking services when exclusivity restrictions are allowed. Nor, obviously, does the direct observation that only one firm is currently selling in the market. Even if two firms could eventually emerge, however, exclusivity is anticompetitive. Competition is not *prevented* in this event, as it is in the "monopoly-is-inevitable" framework of the earlier analysis. But competition is lessened, and lessened substantially if -- as in reality -- exclusivity restrictions are widespread. This substantial lessening of competition violates Section 79.

Staggered Contracts

The discussion of the impact of exclusivity to this point focusses on the case where all contracts come up for renewal at about the same time. As I have shown, even in this situation, which would appear to be most favourable for competition, exclusivity restrictions prevent competition entirely in the relevant market.

More realistically, however, the terms of contracts with suppliers are not synchronous, but staggered. While Nielsen's original contracts in suppliers in 1986 were *initially* substantially all for five year periods, the expiry dates of the contracts on renewal and, in at least one important case on renegotiation, have varied.

The staggering of contracts means that a rival has to bid for each contract as it comes up for renewal. Suppose that the inputs supplied by various upstream firms are

complementary - i.e. the value of input from any particular supplier is low if it is one of only a few upstream suppliers signed up to the rival. As I discussed in Section 2 of this report this property characterizes the supply of raw data to scanner-based market tracking; information services based on data from a single grocery retailer are less valuable alone than in conjunction with data from a larger number of other retailers, and in fact a national sample of retail transactions data is necessary for a valuable service.

The consequence is that a rival entrant would have to enlist substantially all input suppliers, in sequence, as the suppliers' contracts came up for renewal. But the entrant would not be able to offer a competitive product until all or nearly all were signed up. The entrant would be forced to offer a competitive fee to suppliers (which would reflect the value of the suppliers to the incumbent monopolist), during the "build-up" period while its share of input suppliers was too small to provide an attractive product. The difference between the fees it would have to pay and the low profit that it would earn from the inferior product during the period of growth, cumulated over time, represents an "entry fee": a cost that the rival would have to pay to achieve the market position that the incumbent occupies. It is possible for the incumbent to design strategically a pattern of contract renewal that deters entry by even a more efficient rival.

The *effect* of the staggered contracts -- in combination with the exclusivity -- is thus to protect a monopolist against competition. Internal documents filed by Nielsen suggest that this was also the *objective* of the strategy. All or almost all of the major distributors had been signed up for The merger of Safeway and Woodwards led to renegotiation of the Safeway contract, however. In reference to the renegotiated contract, the President of Nielsen stated in 1989 that

A memo from the President of Nielsen on September 1991,

, describes the competition for contracts between Nielsen and IRI and clearly shows the anticompetitive intent of the contracts - both the staggered timing of the contracts and the exclusivity restrictions:

> " Subject: OUR FRIENDS AT IRI ...
> The purpose of this memo is among other things to bring you up to date on the latest:
> 1. After we did our retailer deals five years ago, we recognized that we were vulnerable because virtually all of these agreements expired around the same time. We set ourselves a goal then to pursue a practice that would result in our retailer and distributor contracts expiring at different times. This would make it much more difficult for any competitor to set up a service unless he was prepared to invest in significant payments before he had a revenue stream.
> 2. Late last Fall we executed a couple of important renewals which, frankly, made it impossible for anyone else to produce a national tracking product for the next five years."[23]

Three points are worth noting about the entry deterrence achieved through staggered contracts. First, the advantages to the incumbent follow not just from maintaining its market position, but from a reduced fee that it must offer each input supplier to prevent the supplier from signing with the rival. The best fee that a rival would offer a single supplier - the competitive threat that an incumbent must meet in its negotiations over fees with suppliers - is lower with staggered contracts because of the reduced value to a rival of an initial supplier. This advantage to staggered contracts accrues to the incumbent

[23] Memo from G. Findlay to J. Costello, September 17, 1991 (Nielsen Document #639).

even if the rival is more efficient and would win the battle for monopoly rights with synchronous contract renewal.

This indicates the intent of the contracts as entry barriers, and indicates as well that the benefit to Nielsen from the barriers flows largely through the increased bargaining strength in negotiating with distributors.

Second, because of Nielsen's increased bargaining strength, input suppliers may be better off if all of them were to insist, in their negotiations with the incumbent, on short term contracts or contracts with easy termination. But if other input suppliers are not striking this kind of contract, then the advantages to any single input supplier may be small, because the single supplier will not be enough to attract the interest of the rival. In spite of the collective advantage to suppliers of flexibility in contracts, no single supplier will bargain hard for it, and as a consequence flexible contracts will not be struck. This "collective action problem" among suppliers works to the incumbent monopolist's advantage.

Third, it is often the case that an entrant must make an investment to secure a cost or market position competitive with an incumbent monopolist; and some economists refer to this kind of investment as a "barrier to entry" even if the same investment was historically necessary for the incumbent. In our context, by way of contrast, the entry fee described

as necessary for the rival's entry represents a genuine barrier to entry in the sense that it is not an investment in productive physical capital, but the consequence of being forced by the incumbents' prior contracts to offer for some time an inferior product. Semantics aside, the consequence of exclusivity, staggered contracts and complementarity among inputs is that a rival, even if more efficient than the incumbent, may be deterred from entering the market.

The staggering of contract expiry dates has thus both the intent and effect of preventing competition in this case. In the absence of exclusivity restrictions staggered expiry dates would not be anticompetitive. Staggered, or nonsynchronous contract renewal dates, are a common business practice. The conclusion of the analysis here is that the staggering of contracts increases the anticompetitive effect of the exclusivity restrictions.

This analysis of exclusivity under staggered contracts is an example of a "raising rivals' costs" argument. Raising rivals' costs is the most prominent recent approach to, or language for, analyzing particular anticompetitive conduct.[24] The focus of this approach is on actions taken by a dominant firm to raise the costs of its rivals in a market, thereby raising the price in the market even if rivals are not deterred completely. Exclusivity restrictions with suppliers have been described using this approach. Foreclosing suppliers from a rival forces the rival to use inferior or more costly inputs, thus raising the rival's cost of offering the same quality product.

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[24] Thomas G. Krattenmaker and Steven C. Salop, "Raising Rivals' Costs to Achieve Power over Price", *The Yale Law Journal* 96, No.2 (December 1986): 209-283. This article is discussed briefly in Section 3.4.

I emphasize, however, that the asymmetry between an incumbent and a rival in the power to strike exclusivity agreements that is often associated with the raising rival's costs approach, is not a necessary part of the argument here. Exclusivity in contracts would be anticompetitive in the market even if the incumbent and potential entrant had equal access to the entire market, without barriers to entry, because of synchronicity of contract renewal. Exclusivity is anticompetitive whichever firm uses it.

3.4 Contractual Exclusivity in Other Settings: A Comparison

I have concluded that exclusivity restraints are anticompetitive in the market for scanner-based tracking. In particular, the intensity of competition in the market for the exclusive rights to suppliers' data is irrelevant, affecting only the distribution of gains from monopolization. The understanding of an economic proposition such as this one is sharpened with a discussion of where the proposition would *not* apply. This section offers an example in which exclusivity restraints foreclose the market, as they do in this case, but in which the competition "for the market" does matter.

Exclusive Dealing and Market Foreclosure

Consider a buyer, B, purchasing for resale a product from one or more sellers. Suppose that the sellers charge the buyer per-unit prices for their products, which are then re-sold to consumers. A seller, S, is observed to offer B a contract that requires B to purchase only from S. Is the restriction anticompetitive?

The example differs from the current case in two ways. First, the exclusivity restrictions are placed not on sellers but on the buyer; i.e., the restriction is exclusive dealing.

Second, the payment for the wholesale good sold by S to B is per unit, not an annual fee for the rights to input as in the current case. This simple example is analyzed by Mathewson and Winter[25] , and motivated by the Standard Fashions[26] case in which the product was dress patterns sold to retail department stores. In this framework, if the supplier S is to induce B to accept its exclusivity restriction, it must *lower* its per-unit wholesale price by an amount that will compensate B for the loss of demand by consumers preferring other brands. Competition among suppliers for the right to be carried exclusively by the retailer B -- i.e. competition "for the market" leads to lower prices, and the more intensive this competition, the lower are the wholesale prices.

The competition for the market, which is possible only when exclusive dealing is permitted, thus leads to lower wholesale prices.[27] The savings in wholesale prices are passed on to final consumers by the retailer, with the result that the competition for the market may lead to lower final prices, even where a single seller is left with an apparent monopoly position. Potential competition, or competition for the market, replaces actual competition as a disciplining force on prices. The outcome may be that the discipline imposed by the competition for the market is so strong, with final prices falling to such a degree when exclusivity is permitted, that the total surplus or value generated by the

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[25] "Is Exclusive Dealing Anti-Competitive?", Hoover Institution Working Paper E-86-76, 1986; published as "The Competitive Effects of Vertical Agreements: Comment", *American Economic Review* 77 (December 1987): 1057-1062.

[26] Standard Fashion Co. v. Magrane-Houston Co. 42 S.Ct. 360 (1922). Professor Gregg Frasco, in *Exclusive Dealing: A Comprehensive Case Study*, (University Press of American, 1991) argues that Lorain Journal Co. v. U.S. 72 S.Ct. 181 (1951) matches the Mathewson-Winter model very closely, and lists (p.188) nine other cases in which the analysis is relevant.

[27] In the Standard Fashions case, Standard Fashions dropped its price by approximately 50% to induce retailers to carry it exclusively.

market is higher in spite of the drop in variety of products available within the market.

When exclusivity restrictions are not on the buyer but on sellers, competition for the market cannot lead to lower prices. Buyers must compensate upstream sellers with *higher* payments, not lower prices, for the exclusive right to their input. With per-unit prices, price increases, not decreases, will be passed onto final buyers. The market efficiency is harmed by exclusivity restrictions in two dimensions, the higher price and the drop in product variety under the restrictions.

The possibility of the pro-competitive effect of exclusivity restrictions as outlined above requires not just that the restrictions be on buyers, but that the prices be per-unit. When prices are not per-unit but fixed fees per annum, or a combination of both then, in terms of the competitive impact of the market foreclosure, the difference between exclusive selling and exclusive buying disappears. In either case, the fixed fees represent the purchase of the exclusive right to the entire market, the purchase of a monopoly position in the market.[28]

In short, for "competition for the market" to have a beneficial, disciplining effect on market prices under exclusionary restrictions, two conditions are necessary: that the exclusionary restrictions be on buyers, and that prices be per-unit of a product sold. Neither of these conditions holds in the case at hand.

[28] The model outlined in Appendix 1 of this report could equally be interpreted as a market with exclusivity restrictions on buyers.

Exclusivity Restrictions as Vertical Integration by Contract

Exclusivity restrictions, especially exclusive dealing, are sometimes described as representing a step towards vertical integration. The possible efficiencies of vertical integration can explain exclusivity as well in some settings. One of the potential efficiencies in other settings is the assurance of supply.[29]

The validity of this efficiency explanation for exclusivity restrictions is ruled out in the current case by three observations. First, the required conditions of uncertainty and fluctuations in supply of the input, raw scanner data, do not hold. Second and more fundamentally, the input that is being sold through exclusive contracts is a *public good*, that is a good with no inherent excludability. Scanner information can be copied and used many times; the supply of scanner data cannot be made more secure through exclusivity restrictions that ensure it is not "used up" by another buyer. On this point, it is important to note that if a public good such as information is valuable to two parties, efficiency requires that both parties use it; zero marginal cost is attached to the second user.

Third, even full vertical integration by a firm with every upstream supplier would be

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[29] For example, Herbert Hoovenkamp, *Economics and Federal Antitrust Law*, West Publishing Co., St. Paul, 1985, p.243 writes:

> "The exclusive dealing arrangement stands between the vertical merger and the individual sale as a device for facilitating distribution of a manufacturer's product to the ultimate consumer. Markets are uncertain, some much more uncertain than others. Long-term, flexible contracts can minimize the costs and risks to both parties of dealing with these uncertainties. For example, ... the retail gasoline dealer needs to know that it can obtain enough gasoline, and relying on the spot market.. can be risky... (¶)The refiner, on the other side, wants a steady outlet for its product...". O. Williamson, *Markets and Hierarchies* (1975) is the classic reference on the efficiencies of vertical integration to avoid market uncertainties.

anticompetitive because it collects all suppliers into a single decision-making firm. A single monopolist results, as it would if all suppliers integrated horizontally. The purchase of each source of supply is vertical integration, but the purchase of all sources of supply merges all horizontal units into a single entity. Vertical exclusionary contracts can be an instrument for horizontal monopolization.[30]

I have considered other possible efficiency reasons for exclusivity in the relevant market in this case, in addition to those discussed above, and found that they are not the basis for the observed contractual restrictions. My conclusion is that the role of the restrictions is to prevent competition in the Canadian market for scanner-based tracking.

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[30] The foreclosure of a market through exclusionary contracts has been analyzed in a comprehensive study by Professors Thomas Krattenmaker and Steven C. Salop. (Thomas G. Krattenmaker and Steven C. Salop, "Raising Rivals' Costs to Achieve Power over Price", *The Yale Law Journal* 96, No.2 (December 1986): 209-283.) These authors analyze the effects of exclusionary contracts in a taxonomy of possible cases. The categories of exclusion start with the simplest type of exclusion, "naked exclusion", which refers to cases in which a buyer (for example) pays particular sellers not to sell to the buyer's rivals but in which the buyer itself does not purchase from the seller. The categories include cases of "real foreclosure", which would include the present case, in which a buyer purchases the exclusive right to supply from a limited number of suppliers; and less extreme cases in which supply is still available to rivals but at higher cost than the excluded supply. In other cases, the foreclosure of part of the market through exclusionary contracts facilitates collusion among remaining suppliers, to the disadvantage of downstream rivals.

4. THE INCREASING LENGTH OF CUSTOMER CONTRACTS

The exclusivity restrictions discussed in the last section of this report are in contracts with input suppliers. Nielsen's contracts with buyers are also being challenged in the Application as anticompetitive. Nielsen has recently increased the length of some of its contracts, targeting in particular Canadian customers that are subsidiaries of firms which buy from IRI in the U.S.

In assessing the competitive effect of the increase in contract length, two questions must be addressed:

- Why would Nielsen have increased the length of its contracts? That is, what change in market conditions would induce Nielsen to increase the length of its contracts?
- Can the increase in contract length be regarded as anticompetitive in a meaningful sense? Alternatively, is the increase in contract length a pro-competitive, beneficial response to changing market conditions.

The first of these questions (the "positive" question) must be answered before the second ("normative") question can be addressed.

The length of contracts, prior to any considerations of potential competition, balance at the margin the benefits and costs of a longer term. The benefits of a longer term in general include assurance of supply (for buyers) or demand (for sellers), the guarantee of the return to any investment that is specific to the relationship, and the savings in costs of frequent negotiation in renewal. The cost of a longer-term contract is primarily the loss of flexibility to each side in exiting or adapting the relationship.

The fact that Nielsen's customer contracts have often been for only one-year periods reflects the absence of large relationship-specific investment requirements by either Nielsen or customers.[31]

I suggest that the dominant change facing Nielsen in Canada, in the market for scanner-based tracking services is the increase in potential competition in this market, i.e. the increased possibility of entry into the market of IRI. This change is indicated by the rapid growth in the market share of IRI's InfoScan in the United States, to a share of roughly one-half in the U.S. market for scanner-based tracking. (Exact figures on market shares are unavailable.) In addition, a perceived threat of competition in Canada may have been due to the anticipation of a competition policy challenge to Nielsen's exclusivity restrictions such as this case.

The underlying economic question is, Why would an increased threat of potential competition facing an incumbent monopolist lead to an increase in the length of contracts? One might suppose that a monopolist, having the power to set contractual terms with buyers, can simply react to the threat of entry by insisting on a longer contract with a buyer, thus foreclosing entry. This theory is incomplete. Contracts, even those with a monopolist, are voluntary. Prior to the threat of entry, a monopolist is already charging the price that is most profitable, within the limits of its bargaining power with buyers. An insistence that contracts be extended must be accompanied by a price reduction to buyers. It must be explained why such the price reduction required by buyers is, for the monopolist, worth the benefit of protection against competition.

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[31] There are some: learning Nielsen's format and products by buyers, and learning the buyers' particular needs by Nielsen.

The extreme case of a change in competition is a market in which an incumbent monopolist anticipates a sudden change to perfect competition, with certainty, at a specific date in the future. In this extreme case, a monopolist will *not* increase the length of the contract, when payments to the monopolist take the form of (or include) fixed annual fees. It is a basic economic principle that the payment required by a buyer to accept monopoly provision of a product (for an extra year, for example) instead of a competitive supply, is greater than the profits that a firm can achieve through monopolization.[32] It would not pay the monopolist to increase contract length in this extreme situation.

In a more realistic situation, as in the relevant market in this application, (1) entry is uncertain and most likely to take the form of a single entrant and (2) the success of the entrant depends on its ability to attract buyers away from the incumbent. In this case, a dominant firm *will* profit from offering longer term contracts to buyers, contracts that buyers willingly accept, with the result that competition is forestalled.

The main basis for this conclusion is that the reduction in price that any buyer would accept to sign a longer contract depends on its expectation about the chance of successful entry of the second firm -- but this entry in turn requires that substantial buyers not commit themselves with long term contracts. In other words, buyers can be induced to sign long term contracts with only a modest reduction in price because each buyer - knowing that other buyers are signing long term contracts and therefore that the chance of entry is small - bears only a small cost of signing a long term contract. This

[32] This is because the conditions of competitive supply maximize the total surplus, i.e. the sum of economic profit plus consumers' surplus, in a market.

"coordination problem" among buyers can be exploited by an incumbent to extend its monopoly power, by preventing competition, to the buyers' disadvantage.[33]

In sum, the increased length of Nielsen's contracts can be explained as a profitable response to the rational anticipation of potential entry of IRI into the Canadian market. The benefits to Nielsen are two-fold: the delay or prevention of competition from IRI, as the barrier to entry created by staggering the contracts deters IRI from entering; and the increase in Nielsen's bargaining strength in their negotiations with input suppliers who are unable to use a strong threat of supplying IRI as a means of extracting higher compensation.

[33] In a recent but standard reference, Professors Phillipe Aghion and Patrick Boulton ("Contracts as a Barrier to Entry", *American Economic Review* 77 (1987): 388-401.) develop a second explanation of inefficiently high termination penalties (or liquidation damages), as a means of entry deterrence. Their argument applies directly to increased contract length. Put simply, the social benefits of the market include not just the surplus of the buyers and the profits of the incumbent, but also the potential profits of the entrant. The monopolist and (even a single) buyer ignore the profits of the entrant, with the possible result that entry is blocked where it would be socially efficient.

From the documents cited, and based on my own assessment of increasing potential competition as the dominant change in market structure over the relevant period, I conclude that the intent of the long-term contracts is to inhibit or prevent the entry of IRI into Canada. The effect on the market of the increased contract length is to delay competition, until IRI is a sufficiently strong competitor that it would be attracted to the market even having to incur the artificial cost of entry, or even to prevent IRI's entry indefinitely. The prevention of competition, whether temporary or indefinite, violates Section 79 of the Competition Act.

5. CONCLUSIONS

In this section, I sum up the specific conclusions of this report.

1 For the application of Sections 78 and 79 of the Competition Act, scanner-based market tracking of consumer packaged goods constitutes a product market or class of business. The product in this market has no close substitutes outside the market.

2 In particular, market tracking based only on other sources of data would be inferior in the dimensions of timeliness, comprehensiveness and accuracy. A firm offering a tracking product based only on store audits, warehouse withdrawal audits and household panel data could not provide a competitive substitute for Nielsen's product

3 Nielsen states in its response to the Application that scanner data are only one source of tracking data, and market tracking is not the only product offered by Nielsen. These facts are irrelevant in assessing whether scanner-based tracking constitutes a market for the purpose of applying Sections 78 and 79.

4 The geographical market includes Canada, because most of the purchasers of market tracking services in Canada value a common format for tracking the national market and for comparing various regional markets.

5 The geographical market does not extend beyond Canada, because U.S. data tells us little about the potential response of Canadians to price changes, promotions and other market variables. For census data applications, the substitutability of

U.S. and Canadian data is zero.

6 This leaves the Canadian market for scanner-based market tracking as the relevant market. Nielsen has control of this market because its position as the only supplier in the market together with barriers to entry give it the power to set prices above competitive levels.

7 Within this market the two types of contractual practices by Nielsen prevent or lessen competition substantially in violation of Section 79.

8 Exclusivity restrictions on suppliers scanner data prevent competition by their very nature. Scanner data are an essential input, and if these contracts are adhered to by all suppliers of the essential input, as they have been, no competition is possible in the relevant market.

9 Competition "for the market", i.e. bidding for the rights to the suppliers' essential input, occurred in 1986 and may well occur in the future. In a market with the characteristics of scanner-based tracking in Canada, however, the inevitable outcome of the bidding for rights is that one firm will secure all of the rights exclusively when exclusivity is allowed. This leads to a monopoly within the market.

10 Competition for the market is irrelevant, as it simply determines which firm succeeds in achieving the monopoly position in the market. Neither the historical fact of competition for the market nor the prospect of such competition in the

future has any impact on pricing in the market. "Competition" has many meanings in economics, and only those types of competition that are socially beneficial should matter in interpreting Section 79.

11 Competition for the market shifts the profits or rents derived from the preventing competition within the market to the upstream suppliers of raw data. The suppliers capture a significant share of the rents, while playing no active or purposeful role in lessening competition. Nielsen might not be the primary beneficiary of the prevention of competition. The distribution of monopoly profits has no economic or legal relevance in applying Section 79, however.

12 If the conclusion (9), on the inevitability of monopoly under exclusivity, is incorrect the exclusivity restrictions are nonetheless anticompetitive. If used by two competing firms in a market like the relevant one in this application, exclusivity restrictions serve to differentiate the two firm's products by allowing specialization in inputs. This lessens competition, leading to higher prices, and leaves each product less valuable.

13 Like all information, scanner data is a public good in that its use by one firm does not increase the cost of its use by another. Market efficiency requires in this case that the full set of scanner data be available to any competitor.

14 The staggering of supplier contracts is, as indicated in internal Nielsen memos, a deliberate attempt to protect Nielsen against the "competition for the market" at the time of contract renewal by all suppliers. The staggering raises the cost of entry by

IRI, by requiring IRI to outbid Nielsen for exclusivity rights to various suppliers over a period where the number of IRI suppliers is accumulating but too low to offer a competitive product.

15 The staggering of supplier contracts is not in itself anticompetitive, rather it exacerbates the anticompetitive effects of exclusivity. With staggered contracts, an incumbent may sustain a monopoly position even with products or costs inherently inferior to those of a potential entrant.

16 The lengthening of Nielsen's contracts with buyers will have the effect of making entry by IRI more difficult. This effect is anticompetitive. Shorter contracts are in customers' collective interest because they facilitate entry and improve the prospects for a more competitive market structure, but it is in the individual interest of each buyer to accept a lower price for a longer contract. Nielsen's strategy of increasing contract length with buyers is an instrument that prevents competition, in violation of Section 79.

Appendix 1: Further Economic Analysis of Exclusivity Restrictions

This appendix elaborates on the economics of exclusivity restrictions in a model representing the relevant market in this case, with the purpose of making more precise some of the points developed in the text of this report.

I consider a market in which two firms buy an essential input from a limited number of sellers, then produce a service or product that is purchased by a large number of buyers. Corresponding to the relevant market in this case, we assume that the firms pay a fixed, annual fee for the right to each supplier's input; or may offer a fee for the exclusive right to the supplier's input. We assume that all contracts are synchronous. (The effects of staggered contract expiry dates are discussed in the text.) Once each firm has signed up suppliers, then the two firms compete (if they have both secured some supply of the essential input) in the output market until the contract term is up.

Seven possible configurations or allocations of input suppliers to firms can be described:

1) All input suppliers sell exclusively to firm 1.
2) All input suppliers sell exclusively to firm 2.
3) All input suppliers deal exclusively, some with firm 1 and some with firm 2.
4) All input suppliers sell to both 1 and 2, i.e., none is exclusive.
5) Some input suppliers sell to 1 exclusively and the remaining suppliers sell to both firms.
6) Some input suppliers sell to 2 exclusively and the remaining suppliers sell to both firms.
7) Some input suppliers sell exclusively to firm 1, others sell exclusively to firm 2;

the remaining sell to both firms.[34]

Once this configuration is determined by bidding in contract offers by the firms (at the beginning of, say, each five years) the output is produced. The cases (1) and (2) represent monopolies: the firm capturing the monopoly will sell the product, obviously, at a monopoly price. (The fact that the monopoly position is won in a competitive bidding process has no effect on the subsequent market price.) In the remaining configurations, both firms are in the market and compete on the basis of price.

Given this a priori list of configurations, two questions arise. The *positive* economic question is, Which configuration will actually emerge in the market as a result of the competition between the firms for input suppliers upstream and for buyers downstream? The *normative* questions are, Which configuration best meets the goals of competition and efficiency, and does this coincide with the market configuration when exclusivity is allowed or when it is prohibited?

A useful economic principle, in addressing these questions, is the following: The intensity of price competition in a duopoly (a market with two firms) will be greater, the greater the substitutability of the products. Prices will be driven down close to marginal costs if the products are nearly identical; if the products sold by the duopolists are only slightly substitutable, the market prices will be close to monopoly prices.

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[34] I ignore an eighth configuration, that one firm can achieve a monopoly without exclusivity simply because of a superior product. This appears to be irrelevant for the current case. Note that if we described an allocation as an exact assignment of suppliers to firms, there are 3^n possible allocations, where n is the number of suppliers.

We can answer the normative question immediately. The socially optimal configuration is case (4): no exclusivity. This efficiency has three dimensions: First, this is the configuration in which the products being sold are closest substitutes, and therefore in which competition is most intense and prices closest to marginal cost, the efficient price level. Second, in this configuration each product sold is based on the entire set of input suppliers; assuming that input data suppliers can supply two firms as cheaply as one, any restriction in the sourcing of data is inefficient.[35] Finally, with both firms offering the full product, any consumer which has a preference for firm 1 or firm 2 can have that preference met. This latter efficiency is important to the extent that the products are inherently differentiated.

Regarding the positive economic question, if the products are inherently similar then the market will be monopolized via the successful offer of exclusivity agreements to all suppliers. The monopoly will be won by the firm that finds such a monopoly most profitable.

To develop this argument, label the firm for which hypothetical monopoly profits are higher (if these profits differ between firms) as firm 1, and label these profits π_{M1}. We will consider any group of input suppliers and any attempt by firm 2 to bid away the

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[35] This efficiency reflects the fact that the product being sold in the input market is information, which in economic terminology is a "public good". A public good is a product with no *inherent* excludability. (Apples, for example, are not public goods, because if I consume an apple you cannot consume the same apple; information is a public good because the same piece of data can be purchased and used by many.) Because there are benefits but no cost to multiple uses of information, first-best efficiency dictates that it be used by multiple demanders. The attachment of *contractual* excludability to a public good is *prima facie* inefficient.

exclusive rights to the supply of this group, or to offer a price that might induce joint supply by this group.

If -- hypothetically -- 2 were to bid away the exclusive rights to the potential "renegade" group, so that the configuration were (3) above, then label the profits accruing to the two firms in the resulting market configuration as π_{ED1} and π_{ED2} (for "exclusive duopoly").

With similar products, the maximum total profits in this market are achieved by configuration (1).[36] Expressed in symbols:

$$\pi_{M1} > \pi_{ED1} + \pi_{ED2} \qquad (1)$$

Similarly, let π_{PD1} and π_{PD2} (for Partially-exclusive Duopoly) be the profits that would accrue to the two firms (again, before subtracting the fees to input suppliers) if the renegade group were enticed to sell to both 1 and 2. Since the monopoly by 1 firm maximizes total profits, we also have

$$\pi_{M1} > \pi_{PD1} + \pi_{PD2} \qquad (2)$$

Now, the most that firm 2 would be willing to pay the renegade group of suppliers for their *exclusive* supply is π_{ED2}. Any higher payment would mean a net loss to firm 2. But firm 1, rather than earning π_{ED1} by tolerating firm 2's presence in the market, would if

[36] In any market in which two potential entrants produce similar products, monopoly by one firm yields higher total profits that duopoly competition by both firms.

necessary pay the renegade group an amount up to its private gain to monopolization, which is $\pi_{M1} - \pi_{ED1}$, to ensure their exclusive loyalty. The inequality (1) implies

$$\pi_{M1} - \pi_{ED1} > \pi_{ED2}$$

which means that firm 1 wins the negotiations for the potential renegade suppliers. This shows that the market configuration (1) cannot be broken by (2)'s bidding away exclusive supply from any group of suppliers.

Similarly, if the group of suppliers tried to negotiate a joint supply to both 1 and 2, the fees that they could possibly extract from the firm 2 in this configuration would be less than π_{PD2} . But Firm 1's gross gains to reestablishing exclusivity, and avoiding the joint supply, would be $\pi_{M1} - \pi_{PD1}$. The inequality (2) implies that

$$\pi_{M1} - \pi_{PD1} > \pi_{PD2}$$

i.e. that the gains to exclusivity are larger than the suppliers could extract from firm 2 in joint supply. Firm 1 and the suppliers can move to exclusive contracts and negotiate a price that leaves them all better off than with joint supply. The exclusive monopoly will not be displaced in the market.

In short, monopolization via exclusive supply to a single firm is the configuration that will emerge in the market when the products are inherently similar. Exclusive contracts offered to all upstream suppliers represent simply a purchase of the guarantee of monopoly in the market. When the products offered by the firms are inherently similar, monopoly by one of the firms is the most profitable market structure (we are ruling out

collusion on prices as a feasible alterative, so that monopoly pricing can be achieved only via exclusivity contracts).

If there is some uncertainty as to which firm is the most profitable, 1 or 2, then from the simple model, we would expect both to be competing in exclusivity contracts. This competition represents a competition for the right to be a monopolist in the market. The competition for the market will be more intense, the more closely matched are the potential profits that could be earned by the firms. But the impact of intense competition for the market is simply to shift the proportion of the monopoly rents, π_{M1}, to the suppliers of the essential input. This effect is simply a shift in the gains from monopolization, to the group which has the essential inputs into the production of the monopoly good. The competition for the exclusive *right* to be a monopoly does not change the fact that the winning firm will charge monopoly prices.

Thus, the observation that both firms are using exclusivity contracts does not in any way justify or rationalize the practice as competitive. Exclusivity is an instrument of competition for the market -- competition for the right to the monopoly. This is one kind of competition or rivalry. But it is not a form of competition that benefits buyers by leading to lower prices.

The assumption that the products offered by Nielsen and IRI are inherently very similar is in my view realistic, as I discuss in the text. Nonetheless, I extend the discussion here to allow for the case where the products are different - for example, where each firm tends to specialize in different forms of business decision support based on scanner data or

different aspects of business decision support. This is important because it shows that the economic implications of exclusivity do not depend on the assumption that products are close substitutes. Nor does the conclusion depend on a description or model of the market in which monopoly is the necessary outcome.

The allocation of any input supplier depends on which allocation will maximize the total profits in the market, given the allocation of other input suppliers. If, for example, the maximum profits are achieved through exclusive sale to firm 1, then firm 1 will be able and willing to bid an amount for the exclusive rights that will not be matched by firm 2. If the sum of profits to 1 and 2 is higher when the input supplier sells to both, then a pair of nonexclusive supply contracts can be struck with total fees to the supplier that cannot profitably be matched by a bid for the exclusive use of the input. In other words, the outcome of an exclusive sale to firm1 requires that the gain in 1's profits from this exclusivity exceed the loss in 2's profits when the supplier terminates its sale to 2. Competition for the right to the inputs from suppliers, leads to an allocation of each supplier - and therefore of all suppliers - that maximizes industry profits.[37]

When products are similar, as we have seen, the consequence will be that the industry is

[37] Thus, the entire configuration is *as if* both firms and all input suppliers met (clandestinely) and decided upon the configuration that maximized total industry profits, under the constraint that the two firms had to compete within the configuration for the contract period. Whatever the distribution of these total profits among the industry participants, the configuration would be chosen that maximized the sum of profits. In the market for rights to input suppliers, competition and collusion yield the same outcome. This property of bidding in the market for exclusionary rights is familiar. See Krattenmaker, T.G. and Salop, S.C. , "Competition and Cooperation in the Market for Exclusionary Rights", *American Economic Review*, May 1986, pp.109-113.

monopolized by one supplier. But with substantially differentiated inherent products, monopoly need not be the outcome. If the two firms' products are substantially different, then they each may attract a class of buyers that would not be attracted to the other firm operating alone. Total profits may be maximized by having the two firms compete in the market, rather than leave the market monopolized by one firm that would not be a good match for all buyers.

If two firms are to compete in the market, then in terms of total industry profits they face a tradeoff in allocating a group of input suppliers to joint supply versus dividing them somehow for exclusive supply. The private benefit of exclusive supply is that the two firms will compete as more differentiated firms - the more distinct the sets of input suppliers they draw upon the less similar the products then offer to the market during the contract period - and this will dampen competition and raise prices. This is recognized in the economic literature as the "dampening of competition" effect of exclusive contracting.[38] Given the level of demand for the products, higher prices will be extracted. The cost of exclusive supply option for the group is that each final product is worth less than if the entire group were included in the product. Total demand for each will be lower. The tradeoff is between dampening competition, and increasing demand.

The outcome of this private tradeoff in determining the allocation of a particular supplier depends on four characteristics of the market: (1) the inherent product differentiation; (2) the extent to which the joint use of the supplier makes the final products closer substitutes; (3) the marginal value of the supplier to the buyers of each product; (4) the

[38] See, for example, Besanko, D. and Perry, M.K. "Exclusive Dealing in a Spatial Model of Retail Competition," *International Journal of Industrial Organization*, 11, 1993.

complementarity of the input suppliers in the final products.

A hypothetical configuration, in the context of the present case, has one firm specializing in providing data on western Canada consumers, the other providing data on eastern Canada consumers and both sharing the supply from one or two central provinces. In theory, if this were the most profitable configuration, one would expect it to emerge from the competition for the rights to input suppliers. More realistically, all input suppliers are highly complementary in the sense that a comprehensive sample of all major data sources is necessary to attract demand for the product, then two configurations are possible. With very high product differentiation, both firms will enter and no exclusive contracts will be used. (The high product differentiation both reduces the dampening-of-competition benefit of exclusivity and increases the cost of lost demand from exclusivity.) With less differentiation, only one firm will emerge. In short, high complementarity and low differentiation - conditions realistic in this market - will lead to complete monopoly.

It is clear that the socially optimal, and most competitive configuration is still the configuration with both firms competing without exclusivity. The dimensions of optimality are as discussed above. In the differentiated case, there is a new potential dimension of inefficiency in the market configuration if exclusivity is allowed. Not only is the price higher than the competitive level, which has the standard inefficiency of dissuading consumers from the market whose value for the product exceeds the cost of providing it, but the product actually purchased by consumers will in general be inferior to the efficient product. The sample of input suppliers attached to the purchased product will be incomplete. This inefficiency is potentially more severe than the standard inefficiency from monopoly pricing, since high prices are largely a transfer (a "second-

order" inefficiency) whereas an inefficient product is a drop in the value of every unit purchased.[39]

Both firms may, in theory, profit from exclusivity under some market conditions. If the firms are relatively symmetric and outcome without exclusivity is very competitive, then the market configuration may be a mixed configuration where each firm has exclusive rights to some proportion of the outlets. The distance that this creates between the products may lead to a substantial lessening of competition and therefore higher profits. This possibility underscores the point that exclusivity is anticompetitive not because (or not only because) it is an instrument used by an incumbent to disadvantage a rival. Both firms may benefit from the restriction, because of the dampening-of-competition effect.

[39] The market outcome when exclusivity is allowed may even be inferior to allowing complete collusion on prices. In the latter case, at least the best products will be offered to the market. The inefficiency that comes essentially from the design of inferior products to avoid intense competition under exclusivity, is avoided.

Appendix 2: Professor Winter's Curriculum Vitae

September 1994

DEGREES

Degree	University	Department(s)	Year
B.Sc.(Hon.)	University of British Columbia	Mathematics Economics	1974
M.A.	University of California at Berkeley	Statistics	1978
Ph.D.	University of California at Berkeley	Economics	1979

EMPLOYMENT

1979 - 1985	Assistant Professor, Department of Economics and Faculty of Management, University of Toronto
1985 - 1988	Associate Professor, Department of Economics and Faculty of Management, University of Toronto
1986 - 87	National Fellow, Hoover Institution, Stanford University
1988	Olin Senior Research Fellow in Law and Economics, Yale Law School
1988 -	Professor of Economics and Finance, University of Toronto

1994-95 Visiting Professor, Centre de Recherche en Economie et Statistique, INSEE, Paris.

MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS

Member: American Economics Association, Canadian Economics Association, Executive Committee of the European Association for Research in Industrial Economics.

SCHOLASTIC HONOURS

Dean's Honours List, University of British Columbia, 1974

John H. Wheeler Scholarship, University of California at Berkeley, 1974-1975

Canada Council Doctoral Fellowship, 1975-1979

Harry Johnson Prize, Canadian Journal of Economics, for Best Article in the CJE, 1983 (with M. Peters)

National Fellowship, Hoover Institution, Stanford University

1986 - 87

Olin Senior Research Fellowship, Yale Law School, 1988

PUBLICATIONS

"Output Shares in Bilateral Agency Problems", with H. Neary, Journal of Economic Theory, forthcoming, 1994

"The Dynamics of Competitive Insurance Markets", Journal of Financial Intermediation, forthcoming, 1994.

"Territorial Restrictions in Franchise Contracts", with G.F. Mathewson, Economic Inquiry, 1994.

"Vertical Control and Price versus Non-Price Competition," Quarterly Journal of Economics, CVIII(1), February 1993: 61-78.

"Moral Hazard in Insurance Contracts", in G.Dionne, Ed., Insurance Economics, 1992

"The Liability Insurance Market," Journal of Economics Perspectives, Summer 1991: 115-136.

"Solvency Regulation and the Insurance Cycle," Economic Inquiry, XXIX(3), July 1991: 458-472.

"The Law and Economics of Vertical Restraints," in M. Trebilcock, ed., Competition Policy in Canada, Vancouver: The Fraser Institute, 1990. With G.F. Mathewson.

"The Economic Effects of Automobile Dealer Regulation," Annales d'Economie et de Statistique, 15/16, Juillet-Décembre 1989: 409-426. With G.F. Mathewson.

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"The Liability Crisis and the Dynamics of Competitive Insurance Markets," Yale Journal on Regulation, 1988: 455-500.

"Currency Options, Forward Markets and the Hedging of Foreign Exchange Risk," Journal of International Economics, 25, 1988: 291-302. With R. Ware.

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"The Role of Options in the Resolution of Agency Problems: Comment," Journal of Finance, December 1986: 1157-1174. With R. Farmer.

"R&D with Observable Outcomes," Journal of Economic Theory, December 1986: 1336-1351. With M. Peters.

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Review of Blair and Kaserman's " Law and Economics of Vertical Control", Journal of Economic Literature, 1986

Competition Policy and the Economics of Vertical Exchange, book published by The Royal Commission on Canada's Economic Prospects, 1986, 167pp. (with G.F. Mathewson)

"The Economics of Franchise Contracts," Journal of Law and Economics, October 1985: 503-526. With G.F. Mathewson.

"Licensing in the Theory of Innovation," Rand Journal of Economics, Summer 1985: 237-253. With N.T. Gallini.

"The Economics of Vertical Restraints on Distribution," in G.F. Mathewson and J.E. Stiglitz (eds.), New Developments in the Analysis of Market Structure, MIT Press, 1985. With G.F. Mathewson.

"An Economic Theory of Vertical Restraints," The Rand Journal of Economics, 1(1), Spring 1984: 27-38. With G.F. Mathewson.

Regulation of Canadian Markets for Life Insurance, Consumer and Corporate Affairs, Ottawa, 1984. (With G.F. Mathewson, T. Gussman and C. Campbell)

"The Incentives for Resale Price Maintenance under Imperfect Information," Economic Inquiry, XXXI(3), June 1983: 337-348. With G.F. Mathewson.

"Market Equilibrium and the Resolution of Uncertainty," Canadian Journal of Economics, XVI(3), August 1983: 381-390. With M. Peters.

"Vertical Integration by Contractual Restraints in Spatial Markets," Journal of Business, 56(4), October 1983: 497-519. With G.F. Mathewson.

"Vertical Control in Monopolistic Competition," International Journal of Industrial Organization, 1(3), 1983: 275-286. With N.T. Gallini.

"On the Choice of an Index for Disclosure in the Life Insurance Market: An Axiomatic Approach," Journal of Risk and Insurance, XLIX(4), December 1982: 513-549.

"An Alternative Test of the Capital Asset Pricing Model: Comment", American Economic Review, Vol. 72, No. 5, December 1982: 1194-96 (With S.M. Turnbull).

"Majority Voting and the Objective Function of the Firm under Uncertainty: Note," Bell Journal of Economics, 12(1), Autumn 1981: 335-337.

"On the Rate Structure of the American Life Insurance Industry", Journal of Finance, Vol. 36, No. 1, March 1981: 81-97