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ARTICLES

ESTIMATING DAMAGES TO DIRECT AND INDIRECT PURCHASERS IN PRICE-FIXING ACTIONS

James A. Brander and Thomas W. Ross*

This paper considers the measurement of damages, due to price-fixing, to both direct and indirect purchasers, focusing in particular on the importance of pass-through – the extent to which price overcharges at the level of producer cartels are passed through to final consumers. We critically review theoretical principles and applied techniques for measuring damages, emphasizing the leading techniques: reduced-form regression analysis and the use of comparator benchmarks. The most common approaches to the assessment of pass-through and measurement of the consequent harm to indirect purchasers are also considered. Several important considerations associated with the use of regression techniques are explored, including issues related to the interpretation of diagnostic statistics, issues of model specification, and the potential for specification search or data-mining bias.

Cet exposé porte sur l'évaluation des dommages causés par la fixation de prix aux acheteurs directs et indirects, mettant l'accent sur l'importance du transfert – soit la mesure dans laquelle les majorations de prix au niveau des cartels de producteurs sont transférées aux consommateurs finaux. Nous examinons d'un œil critique les principes théoriques et les techniques appliquées d'évaluation des dommages, en insistant sur les principales techniques : l'analyse de régression de forme réduite et l'usage de points de référence comparatifs. Les méthodes les plus courantes d'évaluation du transfert et de l'évaluation du préjudice subséquent aux acheteurs indirects sont aussi passées en revue. Plusieurs considérations importantes liées à l'usage des techniques de régression sont analysées, y compris les questions relatives à l'interprétation des statistiques diagnostiques, les questions de spécification de modèles et le potentiel de recherche de spécifications ou de biais de forage de données.

I. Introduction

Dealing with price-fixing and related anti-competitive practices is a central activity for competition policy authorities such as Canada's Competition Bureau. However, private enforcement of competition law (i.e. private lawsuits), particularly through class actions, has become very significant in both Canada and United

States, and is taking on increased significance in Europe.[1] In price-fixing class actions, plaintiffs normally make a claim for damages based on the economic harm done to buyers of the products at issue. Therefore, estimating these damages is a central part of such cases. And, even in cases pursued by competition policy authorities, damage estimation is often undertaken, for example to provide guidance with respect to the appropriate level of fines.

One important aspect of price-fixing class actions concerns whether only direct purchasers can bring an action or whether indirect purchasers also have legal standing. In Canada, this question was settled by a trilogy of 2013 Supreme Court of Canada decisions dealing with class actions, referred to as *Sun-Rype, Microsoft*, and *Infineon*.[2]

In all three of these cases, indirect purchasers were included in the proposed class of injured parties when plaintiffs sought legal certification of the class. For example, in *Infineon*, the defendants consisted of producers of dynamic random access memory (DRAM), most of whom had been fined for price-fixing in the United States and/or Europe. Defendants sold DRAM to buyers including computer manufacturers such as Apple, Dell, and IBM for use in computers and other electronic devices. These *direct purchasers* sold computers and other devices incorporating DRAM to their customers, who are therefore *indirect purchasers* of DRAM. The logic of the indirect purchaser case is that when defendants fixed prices and overcharged for DRAM used in electronic devices, those overcharges were at least partially passed on in the form of higher prices for those electronic devices, resulting in harm to final consumers.

Under federal law in the United States, indirect purchasers are not able to bring class action cases for price-fixing and related anti-competitive practices, but many states do allow indirect purchaser actions.[3] In Canada, conflicting decisions had arisen at the provincial appeal court level, creating uncertainty over the status of indirect purchasers until the Supreme Court decided in 2013 that indirect purchasers could make damage claims.

In Brander and Ross (2006)[4] we provided an overview of some aspects of damage estimation for price-fixing cases. In this paper we review recent developments in damage estimation focusing particularly but not exclusively on indirect purchasers. We pay significant attention to the estimation of *pass-through* – the extent to which prices charged by defendants to direct purchasers are passed through to indirect purchasers.

We also focus on some econometric issues that we believe are important for the estimation of damages, for both direct and indirect purchasers, but that have received relatively little attention in this context.

In Section II we derive a framework for damage estimation, showing explicitly how damage depends on overcharges, pass-through, and at-issue revenues. Section III reviews the major methods for estimating the overcharge and Section IV discusses estimation of pass-through. Section V identifies a method of dealing with pass-through that incorporates estimation of the combined or net effect of the direct overcharge and pass-through into a single step. One important statistical tool used in estimating overcharges and in estimating pass-through is regression analysis. Section VI provides an overview of some principles of regression analysis that are important in damage estimation, focusing on issues that often cause regression analysis to be confusing or possibly even misleading. Section VII contains concluding remarks.

II. A Framework for Damage Estimation

In Canadian law, price-fixing and related anticompetitive actions are based on Section 45 of the *Competition Act*, which states that "Every person commits an offence who, with a competitor of that person with respect to a product, conspires, agrees or arranges (a) to fix, maintain, increase or control the price for the supply of the product; (b) to allocate sales, territories, customers or markets for the production or supply of the product; or (c) to fix, maintain, control, prevent, lessen or eliminate the production or supply of the product." We often describe price-fixing and related anticompetitive actions as arising from a "conspiracy" but, as the Act indicates, any agreement or arrangement that violates Section 45 might be the basis for legal action. However, for convenience, we will often refer to a price-fixing agreement or arrangement as a conspiracy or cartel.

The *but-for* approach is the foundation for most analysis seeking to estimate damages arising from price-fixing or other anticompetitive actions. Using this approach, damages are normally taken to be the difference between what the injured parties actually paid for the products at issue and what they would have paid in the absence of ("but for") the anticompetitive action. And we often use the term "but-for" as an adjective to identify the value that some variable would have taken on in the absence of anticompetitive actions, such as the but-for price.

What the injured parties actually paid is a matter of fact. However, the but-for situation does not occur in actual fact. Therefore, the but-for outcome is sometimes called the "counterfactual" outcome. In price-fixing cases the main difference between the actual outcome and the but-for or counterfactual outcome is usually that prices are, as a result of price fixing, higher in the actual situation – higher than they would have been but for price-fixing.

A. Direct Purchasers

We first consider the case in which all final consumers are direct purchasers, so there are no indirect purchasers. In a direct purchaser case, the price paid by the purchasers is the same as the price received by the cartel members (apart from any sales taxes).[5] The overcharge is defined as the difference between the actual price and the but-for price. The primary measure of damage is taken to be the overcharge multiplied by the actual quantity purchased. In mathematical terms, if we let the actual price of a product be p^A and the but-for price be p^B, then the overcharge per unit is $p^A - p^B$. If the actual quantity sold to injured parties is q^A then the damage, D, is

$$D = (p^A - p^B)q^A. \tag{1}$$

As has been described in many sources, equation (1) understates the actual harm to purchasers as it ignores the loss due to "quantity effects" that arise when, due to higher prices, purchasers buy less than they otherwise would.[6] Any benefit they would have received from that additional consumption is lost. It is, however, much more difficult to estimate this additional loss than to estimate the loss shown by equation (1). Furthermore, some potential consumers who would have bought the product at the but-for price might not buy anything at all at the actual price and therefore are not identifiable. As a practical matter, equation (1) is normally the basis of damage estimation and that is what we focus on here.[7]

An economist using equation (1) to measure damage has three variables to estimate: the actual price, the but-for price, and the actual quantity. The but-for price is the most challenging of these three variables to estimate given that the but-for outcome cannot be directly observed. And even measuring the actual price and the actual quantity may be difficult. It is sometimes convenient to reorganize equation (1) in the following

way. If we multiply (1) through by p^A/p^A (which equals 1), the equation can be rewritten as $D = ((p^A - p^B)/p^A)(p^A q^A)$, which simplifies to

$$D = vR \tag{2}$$

where v is the proportional overcharge, $(p^A - p^B)/p^A$, and $R = p^A q^A$ is the revenue received by the cartel for sales of the product at issue (the "at-issue revenues"). We have defined the proportional overcharge relative to the actual price. It shows the share of the actual price that is due to the overcharge and it must lie between 0 and 1.[8]

Frequently, the same product will sell for different prices to different consumers, even within the same time period, possibly due to quantity discounts, pre-existing contracts or other factors. In addition, there are often multiple variants of at-issue products commanding different prices. For example, DRAM, the at-issue product in *Infineon*, was sold in a wide variety of forms. One advantage of equation (2) is that if there are multiple at-issue product variants and/or if there are multiple price categories for a single product variant, then equation (2) applies to the entire group of products. This claim is relatively easy to see if each product has the same proportional overcharge. However, it is also true even if the different at-issue product variants and/or price categories have different proportional price overcharges provided that the proportional overcharge, v, is taken to be the weighted average overcharge (weighted by revenue) over the various different product categories.[9]

As equation (2) can be applied to a full price schedule for a variety of product types, it follows that neither different product varieties nor different price categories create difficult conceptual or practical problems, provided the necessary data can be obtained. For example, suppose that some buyers pay standard prices and some pay discount prices. If both standard buyers and discount buyers would have paid, for example, 25% less in the but-for world than they actually paid, then the overall proportional overcharge would be 25% and the fact that some buyers pay different prices from others poses no particular difficulty in estimating aggregate damages. Furthermore, even if standard buyers paid a different proportional overcharge than discount buyers, we can still apply equation (2). The damage is often calculated on a period-by-period basis, such as a year-by-year basis, with different prices and different overcharges for different years within the overall class period.

B. Indirect Purchasers

We now consider indirect purchasers. To be as clear as possible, we focus on a case in which there are only direct purchasers and indirect purchaser final consumers. For example, in the *Infineon* case this would mean focusing only on direct purchasers of DRAM such as Dell and final consumers who purchased computers and other devices containing DRAM from Dell and other direct purchasers. A central question in such cases concerns the extent to which overcharges initiated by the defendants are passed through to final consumers. If overcharges are passed through on a one-for-one basis throughout the distribution process, then pass-through is 100% and equation (2) applies to indirect purchaser final consumers. Specifically, indirect purchaser final consumers suffer overcharge damages equal to the overpayments received by the cartel. These overpayments can be measured as the proportional overcharge imposed by the cartel multiplied by revenues received by the cartel.[10]

In its 2013 judgments on price-fixing class actions, the Supreme Court of Canada specified that damages cannot include double counting. Thus we cannot apply equations (1) or (2) to direct purchasers in the class and simultaneously to indirect purchasers: the overall damage claim cannot, for example, include 100% of the initial overcharge at the direct purchaser level and an additional 100% of the same overcharge at the final consumer level, adding up to 200% in total!

To see the importance of considering harm to indirect purchasers, note that in some Canadian class actions, for example *Infineon* again, a large fraction of the Canadian harm might be indirect. It is even theoretically possible that, in an extreme case, there would be no direct harm in Canada at all. These are cases in which most direct purchasers are not resident in Canada and are therefore not part of the class.

To determine the damage to indirect purchasers, estimating the extent of pass-through is therefore an important part of the process. We can express the damage suffered by indirect purchaser final consumers using the following modified version of (2):

$$D = tvR_I \tag{3}$$

where t represents the pass-through rate, v is the proportional overcharge, and R_I is the at-issue revenue received by the cartel that is attributable to these indirect purchasers. Comparing equation (2) with equation (3)

shows that the effect of pass-through is to include an additional factor, the pass through rate, in the damage equation. Using equation (3) to estimate damage to final consumers requires three distinct elements – the estimated pass-through rate, the estimated proportional overcharge, and estimated at-issue revenues.

Suppose that direct purchasers in the class pass on 90% of price overcharges to indirect purchaser final consumers. These indirect purchasers would then have a pass-through rate of t = 90% applied to cartel revenues attributable to their purchases. But direct purchasers in the class would also suffer damage as they pass on only 90% of the overcharge and absorb the other 10%.

More generally, using D_D to represent the damage to direct purchasers and D_I to represent the damage to indirect purchasers, the following formula would apply: $D = D_D + D_I = (1 - t)\, vR_D + tvR_I$. In this formula R_D is the amount of revenue received by the cartel arising from payments made by those direct purchasers in the class. Thus vR_D is the total overpayment by the direct purchasers. However, only share $(1-t)$ of this overpayment is actual damage to direct purchasers as the rest of the overpayment is passed on to indirect purchasers. R_I is the revenue received by the cartel that is attributable to purchases made by the indirect purchasers. If all direct purchasers and all indirect purchasers are in the class, then $R_D = R_I$. However, in Canada, R_D would often be much less than R_I as many direct purchasers would be outside Canada and not in the class. If there are no direct purchasers in Canada then the first term drops out entirely and the damage is just tvR_I, as in equation (3) – the pure indirect purchaser case. Similarly, if t = 1 (i.e. 100%) then we get back to equation (3) as all damage is passed through to indirect purchasers. It is also possible that R_D will be larger than R_I as direct Canadian purchasers may export their products to indirect consumers in other countries.

In addition to direct purchasers and indirect purchaser final consumers, there may also be indirect purchasers who are not final consumers. In the *Infineon* case, for example, there may be small scale computer assemblers in Canada who purchased DRAM from distributors or other intermediaries and sold assembled computers incorporating DRAM to retailers or to final consumers. We can incorporate class members in this category in much the same way that we deal with direct purchasers and final consumer indirect purchasers, focusing on the share of the overcharge that they pay.[11]

Keeping track of different categories within the class is conceptually straightforward but may be challenging in practice. However, if pass-through is 100% throughout the distribution system, the situation is greatly simplified as we need consider only the damage to final consumers as given by equation (2) , which is $D = vR_1$ in this case.[12]

If equation (2) or (3) is used, it is necessary to estimate at-issue revenue. Typically the starting point is cartel revenue obtained from quarterly or annual financial statements. However, it is likely that financial statements from cartel firms will contain consolidated revenue covering worldwide or North American revenue, although the class action might be restricted to Canada or to one or a few provinces in Canada. Possibly the cartel members will have data on revenue derived from Canada, but province-level revenue is much less likely to be available. Therefore it may be necessary to estimate the revenue for the province on a pro-rated basis. If no other information is available, using relative gross domestic product (GDP) may be a reasonable basis for making provincial allocations. Sometimes, however, a better indicator of relative importance is available. For example, if the product at issue is used mainly in animal feed, then the relative size of the relevant agricultural industries might be a suitable basis for estimating province-by-province at-issue revenue.

We now discuss the other two components in the damage equation.

III. Estimating Overcharges

The proportional overcharge is needed in both direct purchaser cases and in indirect purchaser cases. Much of the economic literature on price-fixing focuses on estimating overcharges. In a series of papers, Professor John M. Connor has carefully reviewed and analyzed studies of price-fixing overcharges.[13]

A variety of methods have been used to estimate overcharges. In Brander and Ross (2006) we provided a list of such methods. A slightly reorganized version of that list is as follows:

a) Older Methods

i. Simple Before and After Studies
ii. Using Marginal or Average Cost as a Proxy for Price

b) Econometric Estimation of Prices

i. Structural Econometric Estimation
ii. Reduced Form Econometric Estimation

c) Comparator Benchmarks – Using Alternative Markets as Benchmarks

A. Older Methods

The simple before and after method is the longest-standing method and its use pre-dates the use of regression and other formal statistical methods in damage estimation. The idea is straightforward. Assuming there is a single product with a single price at any given time, the pre-conspiracy price is taken to be the but-for price. Thus the pre-conspiracy price is compared with the price prevailing during the alleged price-fixing period (the *class period*). If the pre-conspiracy price is, for example, $10 per unit and the cartel price is $20 per unit, then the overcharge is $10 per unit and the proportional overage is 10⁄20 = 50%. If there is information on a post-conspiracy period, that information can also be used.

In this simple form, the before-after method raises several issues. First, it is often unclear when price-fixing actually begins. A starting date for legal purposes may be determined as the date at which some evidentiary threshold is met, or it may be determined by some technical legal consideration. In either case it is quite possible that the cartel may have operated and raised prices prior to this date. If so, the before-after test will understate the overcharge because the period immediately prior to the class period might also contain overcharges. To be clear, the problem of correctly dating the price-fixing period arises with other approaches as well, but is particularly pronounced here where there is so little other information used.[14]

A second issue to consider is that other factors may cause prices to change. For example, in Canadian cases involving domestic consumers and foreign-based cartels, exchange rate changes may cause price changes. Other relevant factors may include business cycle variables such as GDP or other measures of income and may also include cost-related variables such as the prices of key inputs or technological progress. In other words, it is possible that a simple before-after approach might attribute a price increase to a cartel when it is actually caused mainly by other factors. It is also possible that a before-after test might fail to identify cartel effects.

For example, technological progress may cause sharp declines in cost that would, in the but-for world, cause prices to fall. In a case such as *Infineon*, where the product is DRAM, a cartel might achieve success by keeping prices stable or allowing a slower price decline than would otherwise occur.[15] Thus the cartel might impose overcharges and economic damage on consumers relative to the but-for world, but the before-after approach would not identify any overcharge. The before-after approach is also difficult to apply if new product varieties are introduced after the start of the class period.

For these reasons, simple before-after comparisons are rarely used if methods that address these issues are feasible. In particular, more sophisticated approaches using price information from before, during and possibly after the class period in regression analysis are important and are discussed under the *Structural and Reduced-Form Econometric Estimation* heading below. Even so, simple before-after tests may in some cases be valuable, particularly if more sophisticated methods are not feasible due to data limitations or for other reasons.

Use of marginal cost or average cost (as alternative measures of unit cost) as the but-for price is another long-standing idea, though one rarely applied in practice. In principle, looking at financial statements or other information recorded by cartel members might allow average cost or marginal cost to be estimated. The logic of using marginal cost or average cost is that, under perfect competition with identical firms in the long run, price, average cost and marginal cost will all come to the same level. Therefore, if the appropriate market structure in the but-for world is perfect competition, then using marginal or average cost as the but-for price is reasonable.

However, one important consideration is that the but-for market structure is often not perfect competition. In industries subject to price-fixing, it is more common that the but-for market structure is some form of oligopoly, where price would not necessarily equal average cost or marginal cost (which would normally differ from each other as well). A second major problem is that it is often difficult to accurately measure marginal or average cost. Conceptually, this cost should be the full cost needed to pay for all factors of production, including paying a competitive rate of return to the owners of the firm. Simply looking at out-of-pocket accounting costs will typically understate actual costs.

As with simple before-after tests, using accounting-based estimates

of marginal or average cost as the but-for price is now rare.[16] However, cost information can be used as an important component in more sophisticated methods, as described below.

B. Structural and Reduced-Form Econometric Estimation

An important issue in econometrics that comes up in many areas of economics is the distinction between *structural* and *reduced form* estimation. Both of these methods can be used to estimate the but-for price to be used in damage calculations.

Structural estimation starts by specifying an underlying (and usually well-established) theory that explains how some variable of interest is determined. For purposes of damage estimation the variable of interest is normally price. Suppose, for example, that we believe that the but-for market structure would be perfect competition. If so, we could use the supply-demand model, consisting of a supply function and a demand function, to specify the underlying structure of the industry. The supply function shows how quantity supplied depends on price and other factors (such as cost or exchange rates) and the demand function shows how quantity demanded depends on price and other factors (such as income or other business cycle effects).

The supply and demand functions are the structural equations in this example. One approach to structural estimation would be to estimate both these functions. The price and quantity variables are called endogenous variables as they are determined within the system. That is, given any particular values of the other variables, we use the demand and supply functions to determine the values of price and quantity such that the market is in equilibrium, where the quantity supplied equals the quantity demanded. This equilibrium price would be the estimated but-for price. The other factors affecting supply and demand such as cost, exchange rates, and consumer income are called exogenous variables because they are determined outside the model. We treat their values as externally determined data. If we have data on the values of the exogenous variables during the class period (or for various sub-periods, such as years, within the class period), we can then use the model to estimate the but-for prices during the class period.

Structural estimation of prices does not have to be based on a perfectly competitive model of supply and demand. It can also be based on models of imperfect competition, such as the Cournot model or the

Bertrand model.[17] In Brander and Ross (2006) we distinguished between structural models based on perfect competition and structural models based on imperfect competition. Here we put them in the same general category.

In reduced form estimation we do not start by specifying an underlying theory and corresponding structural equations. Instead we simply specify the variable of interest – price in this case – as a function of exogenous variables, such as cost, income, exchange rates, etc. The advantage of reduced form estimation is that it requires less prior knowledge. We do not need to specify a particular theoretical model of market interactions (perfect competition, Cournot oligopoly, etc). Also, less data is required as we do not need to separately estimate multiple structural regression equations.

However, reduced-form estimation also has disadvantages. First, the reduced-form model conveys less understanding about the economic mechanisms at work. In addition, although writing down a reduced form regression equation does not require explicit assumptions about underlying structure, it does of course rely on implicit assumptions that are not clearly specified and that may be poor approximations to reality. In effect, writing down a structural model requires the analyst to be explicit about the underlying economic assumptions being made and imposes consistency requirements on those assumptions. Reduced form estimation does not impose equivalent restrictions.[18]

There is a very large literature in economics regarding whether structural or reduced form estimation is preferred in a given context and we will not attempt to review that literature here.[19] It is, however, important to emphasize that both structural and reduced form modelling are valuable tools and should be viewed a complements rather than as substitutes.

In practice, reduced-form estimation of but-for prices or price overcharges is more likely to be feasible than structural estimation due to less extensive data requirements. In a specific case in which exchange rate issues are not important, a reduced form estimation equation might be as follows:

$$p = a_0 + a_1 PF + a_2 I + a_3 C \tag{4}$$

where p is the price of the good at issue, PF is an indicator (or "dummy") variable that takes on the value 1 during the class period and zero

otherwise, *I* stands for some variable related to demand such as household income or GDP, and *C* stands for some variable related to costs (possibly wages or productivity or some cost index).[20] This equation could be estimated using time series data covering time periods before, during, and possibly after the cartel was operating to raise prices. The estimated but-for price for a given time period within the class period would be the value p takes on if *PF* is set to 0 and the other variables take on their actual values during the cartel period. The difference between the actual price and the estimated but-for price would then be a_1. Therefore, a_1 would be an estimate of the overcharge and the proportional overcharge could be easily calculated.

Equation (4) can be viewed as an extension of the traditional before-after analysis in which we address the possible role of other factors by including them in the regression equation. The overcharge parameter a_1 shows us the estimated overcharge after adjusting for changes in other variables.

The problem that we might not know precisely when price-fixing starts still applies and we do need some information regarding when *PF* takes on the value 0 and when it takes on the value 1. However, one possibility is to allow *PF* to take on the value 1 during the price-fixing period, to take on the value 0 for periods that we are confident are not in the price-fixing period, and either drop observations from periods we are not sure about or use intermediate values estimated in some way.

C. Comparator Benchmarks

The fifth category, which we now call *comparator benchmarks*, is another valuable method. This method uses some alternative market or alternative group of firms that is comparable to the market at issue, or the cartel, except that price-fixing is absent. We refer to this alternative as a *benchmark*. This benchmark situation is used to determine the but-for price or price-cost margin that is used to calculate the overcharge. In Brander and Ross (2006) we used the term *analogy methods* to refer to this category. Some U.S. authors have used the term *yardstick* to describe this method although that term is not ideal for non-U.S. jurisdictions that use the metric system.[21]

McCrary and Rubinfeld (2014)[22] distinguish between yardstick and benchmark methods, defining yardstick methods as methods that use alternative markets, and defining benchmark methods as methods that "evaluate prices only in the market at issue, comparing price in the

impact period to available prices in the prices before/or after the alleged period of impact…" However, in what is more common usage, Connor (2014) uses the term benchmark method to refer to any method that can be used to estimate a but-for price or overcharge. That is consistent with Brander and Ross (2006) and with our usage here. Thus an alternative or comparator market is one possible benchmark. This comparator market is similar to what in scientific studies would be called a control. Such a comparator should be as similar as possible to the market at issue apart from the presence of price-fixing (or other anticompetitive actions under consideration).

The comparator benchmark market might involve the same product sold in a different geographic market. An example is provided by the British Columbia credit card case, *Watson v. Bank of America Corporation et al.*[23]. The class in this case consists of merchants who claim that both MasterCard and Visa conspired with banks who issue credit cards to raise the fees that merchants pay when they make credit card transactions. The at-issue product in this case is credit card services. At certification, plaintiffs proposed, among other methods, the possibility of using credit card services in other countries as benchmarks.

The comparator benchmark market might also refer to a similar product in the same geographic market. For example, a conspiracy might exist over one industrial chemical but not over other industrial chemicals produced under similar conditions and subject to similar demand conditions. Different chemicals have very different prices in general. However, the proportional price-cost margins could be compared and used to estimate overcharges.

It would also be possible to compare the price trajectories for comparable products. This would be a form of "difference-in-difference" analysis in which we compare the difference between the prices for the cartel's product inside and outside the cartel period with the difference between the prices of the comparator benchmark inside and outside that period. If we observe pre-conspiracy prices and class period prices, the percentage increase in the benchmark prices can be taken as the but-for percentage price increase for the product at issue. If the actual price for the product at issue during the cartel period exceeds the implied but-for price, then the difference is the estimated overcharge. In effect, using the alternative market in this way solves the problem of dealing with other factors that arises when using the before-after method. The underlying

rationale is that prices for the product at issue are affected by the same things that affect the prices of benchmark products, including such things as cost changes, exchange rate changes, and business cycle effects.

Even if prices are not available outside the conspiracy period, it may be useful to compare the prices or margins of a defendant firm with those of producers of comparator benchmark products. One interesting use of a comparator benchmark market arises in *Microsoft*, one of the cases considered by the Supreme Court of Canada. In this case Microsoft is accused by plaintiffs of forming agreements with other relevant firms in the supply chain that reduced competition in certain software markets and allowed it to raise prices above but-for levels. This case illustrates several of the points mentioned in this paper previously. First, there are multiple products at issue including Word, Excel, Office, and Windows, and there are many variants of each of these products that were introduced after the beginning of the class period in 1998. Furthermore, different customers may have paid different prices for the same product based on volume discounts, student status, and for various other reasons.

The primary comparator benchmark in this case consists of other software companies producing (primarily) other types of software. As quoted in the Reasons for Judgment of Justice Myers at the certification stage of this case, Dr. Janet Netz, an expert witness for plaintiffs, proposed the following approach (among others):

"I based a second method on a comparison between Microsoft's profit margins to the profit margins of a benchmark group of successful software firms. To obtain Microsoft's prices on the products at issue in the counterfactual world, I calculate the amount by which these prices would have been lower than Microsoft's actual prices in order to generate the profit margin earned by the benchmark firms. The overcharge was then the percentage by which the actual price was above the counterfactual price."[24]

This method, referred to by Dr. Netz as the margin method, uses other software producers as a comparator benchmark and proposes that in the but-for world (i.e. in the absence of Microsoft's anticompetitive actions) Microsoft would have earned the same profit margin, defined as revenue minus cost divided by revenue, as a comparable set of other publicly traded software producers. Using simple algebra it is possible to calculate the proportional price overcharge from the profit margins for Microsoft and for the benchmark firms. As consistent cost and revenue data on

U.S.-based publicly traded companies is available from well-established sources such as Standard & Poor's Compustat database, such calculations are feasible in this case and in many others.

It is also possible to combine reduced-form econometric estimation with information from comparator markets. A potential example is provided by *Steele v. Toyota*[25]. In this case, brought in British Columbia, Toyota was accused of conspiring with its dealers through its "Access" program to fix the price of Toyota automobiles.[26] Without admitting to any fault, Toyota agreed to a settlement in 2015. If the case had gone to trial, reduced-form estimation of price effects and a comparator benchmark market could have been used in combination. The Access program had a specific starting date and a specific end date, so it is possible to identify the alleged conspiracy period. Also, while the program was implemented in B.C. it was never implemented in, for example, Ontario. Therefore Ontario would be a good comparator benchmark.

It would be possible to estimate a regression of the form given by equation (4) for each of the major Toyota models. We could run regressions for British Columbia including the price-fixing indicator variable as the only explanatory variable: $p = a_0 + a_1 PF$. If the coefficient a_1 is positive (and statistically significant) that would indicate that prices during the class period were higher than in other periods. However, as discussed in the section on before-after studies, it is quite possible that this higher price might be due to other factors. For example, exchange rates have a significant impact on car prices, as does the state of the business cycle and the price of related products, such as the price of gasoline.

One possibility would be include these other variables in the regression — exchange rates, business cycle variables, the price of gasoline, etc. But an even better way to control for these other effects is to run the same regressions for Ontario, where the Access program was never introduced. The *PF* variable would take on the value 1 in the Ontario regression just as in the BC regression, even though the Access program did not operate in Ontario. To the extent that higher (or lower) prices during the Access period were due to exchange rate changes, changes in gasoline prices, or changes in the business cycle, that would show up in both regressions. Changes due to the Access program would show up only in the BC regression. Therefore, comparing coefficient a_1 in the two regressions would indicate if the Access program affected prices.

If the coefficient was approximately the same in both regressions, that would suggest that Access had little or no effect.

A slight variation on this method would be to form a variable equal to the price difference between BC and Ontario for a given model and use this variable as the dependent variable in equation (4). As another use of the "difference in difference" approach, we would be estimating whether the difference in price between BC and Ontario was different in the Access period than in other periods. If BC prices exceeded Ontario prices by more during the Access period than in other periods, this would indicate an overcharge.

These examples illustrate three types of comparator benchmarks: other geographic markets, other similar product markets, and other producers operating in the same or closely related markets.[27]

IV. Estimating Pass-Through

The overcharges described in the previous section refer to the amount by which the defendant increases the price above the but-for level for direct sales. For indirect purchaser actions it is then necessary to determine how much of that overcharge is passed through to class members . There are at least two types of firms involved in the pass-through process. Some are pure intermediaries such as distributors, who purchase a product, such as DRAM, from cartel members, and re-sell that product to others. In addition there are firms that use the product at issue, such as DRAM, as one of many inputs in producing another product, such as computers. We refer to both types of firms as "downstream firms" or sometimes as "intermediaries". There are at least four types of evidence that are relevant to pass-through estimation.

A) information on the market structure of downstream firms and the nature of competition in their output markets
B) statements of industry participants
C) transaction data
D) regression analysis of pass-through relationships

The market structure of intermediaries and other downstream firms and how they compete is particularly important in one specific case. If the intermediary industry is perfectly competitive and if intermediaries as a group have "constant costs" so that the supply curve is horizontal,

and the demand curve slopes downward, then pass-through must be 100%.[28]

Even if the downstream industries do not meet the strict textbook criteria for perfect competition, it is common for pure intermediaries (such as major retail chains) to be highly competitive, in which case we expect pass-through to be close to 100%.

If intermediaries are not highly competitive and instead have significant market power, then pass-through may still be 100%. However, it is also possible that pass-through could be less than 100% or more than 100%.

In this context, pass-through of more than 100% means that an overcharge of $1 at the cartel level leads to an overcharge exceeding $1 at the final consumer level. For example, if a retailer experiences a $10 increase in the price of some product and raises its retail price by $11, then the pass-through would be 110%.

More generally, pass-through rates can range from zero to rates far exceeding 100%. For example:

(a) As noted above, if the downstream market is perfectly competitive and producers there have roughly constant average or unit costs, the direct purchasers will already be selling at close to those average cost. This means that any price increase imposed on them by the cartel must be fully (100%) passed on or they will actually be suffering losses. Competition will keep them from passing on more than 100% of the original overcharge.

(b) If the downstream market is a profit-maximizing monopoly with constant unit costs and facing a demand curve with a constant elasticity with absolute value ε, the pass-through rate will equal: ε/(ε-1); which will be greater than 100%.[29] A similar situation arises when downstream firms use simple mark-up rules of thumb when determining the prices they charge their customers.

(c) If the downstream market is highly competitive for price increases – perhaps because any higher prices would lead to entry of products from other markets – but the existing downstream firms are making profits at current prices, those firms may not be able to pass on any cost increases and the pass-through rate will be 0%.

(d) If the downstream firm is a profit-maximizing monopoly with constant unit costs and facing a linear demand curve, the pass-through rate will be 50%.[30]

In addition to using the market structure and competitor behavior of the intermediary sector to shed light on pass-through, it is often possible to obtain statements from representatives of intermediaries indicating how they handle price changes or from cartel executives indicating their understanding of the extent of pass-through.

Economists seeking to estimate pass-through will typically use regression analysis if suitable data is available. The pass-through question can be viewed as asking how a one dollar increase in the price paid by a downstream firm affects the price charged by that firm to its own customers. For example, we might ask how the retail price of software carried by Best Buy changes when the price paid by Best Buy for software changes by one dollar.

It might be possible to get data on multiple transactions for a single product, and observe variations in the downstream firm's cost of buying that product and corresponding variations in the price charged by the downstream firm. If so, then pass-through can be estimated using a regression equation of the form:

$$p = a + tc \tag{5}$$

where p is the selling price of the downstream product and c is the downstream firm's cost of acquiring that product from a distributor or from a cartel member. The coefficient t is the estimated pass-through coefficient. An estimate of $t = 1$ corresponds to pass-through of 100%. From equation (5) it is clear that if $t = 1$, then a one dollar increase in acquisition cost, c, would cause the retail price p to also rise by one dollar. However, the overall price would exceed the acquisition cost provided that a is positive, as would normally be the case.

If the downstream firm sells many different products there is no need to restrict the analysis to a single product. For example, suppose that a downstream firm sells many different types of software. If, for each product, we have its acquisition cost and its selling price, then the regression will show us how higher costs translate into higher prices for software generally. It is even possible to include products in different product categories, such as computer software products, computer

hardware products, and bundled (combined) hardware and software products. However, we would suggest considering use of indicator variables in the regression when using different product categories if possible. The indicator variable for a particular product would take on the value one for transactions involving that product and zero otherwise. In this context these indicator variables are often called *fixed effects*. Including fixed effects helps to control or adjust for variation across products in the fixed component of the price-cost margin.

The above method can work well for intermediaries such as distributors who are essentially just re-selling a product. In such cases, the acquisition cost of the item represents most of the selling price of the item so it is relatively easy to identify the effect of changes in the acquisition cost.

However, some intermediaries use the at-issue product as an input to produce a more complicated final product. The at-issue input might play only a small role in the final product as, for example, with DRAM included in a computer or television set. If so, other factors might make it more difficult to identify the pass-through coefficient. In such a case it might be preferable to use *all* input costs as the explanatory variable for price, not just the input cost of the at-issue product. And it might be helpful to explicitly include other variables that might affect the price of the final product, such as income. Therefore we might estimate an equation like:

$$p = b_0 + b_1 I + tc \tag{6}$$

in which p represents the prices charged by intermediaries, I captures variables that affect the demand for the downstream firm's product and c is a measure of all unit costs of the downstream firm. We can estimate this equation using data from inside or outside the price-fixing period. The estimate of the coefficient t will then measure the normal relationship between the downstream firm's costs and its prices. It may be reasonable to assume that cost increases due to the price-fixing of inputs will lead to price adjustments in the same way as any other kind of cost increase. We can then determine the effect on downstream prices by multiplying the change in unit costs caused by the price-fixing by the estimated value for t to get the change in downstream price attributable to the price-fixing upstream.[31] An estimated value for t less than one would then indicate less than 100% pass-through.

In practice, it is often the case that reliable individual transaction level

data is not available. A useful alternative might involve using monthly averages. Thus the cost variable would be the average cost across all units of a particular product sold in a given month and the price variable would be the average retail price across those units of the product.

V. One-step Estimation of Multi-Level Price Effects

Application of equation (3) (the damage equation) for indirect purchasers requires two important steps: estimation of the overcharge imposed by the cartel for sales to direct purchasers and estimation of the extent to which that overcharge is passed through to indirect purchasers, particularly final consumers. However, it is possible in principle to estimate the effect of cartel overcharges on final consumers in a single step. This single-step estimation incorporates multi-level effects of the overcharge.

This one-step estimation is based on an equation like (4). However, in this case the price to be explained is the final consumer price. The *PF* variable again identifies the dates of the class period while the *I* and *C* variables represent other factors that affect the demand and costs of the downstream product. A statistically significant coefficient on the *PF* variable would indicate that the upstream price fixing had an effect on prices further downstream. This coefficient estimates the net effect of price-fixing on final consumer prices incorporating the effect of pass-through.

This one-step approach is rarely used, however. Two key problems are easy to see. First, if there are multiple levels in the supply chain between the price-fixed product and the consumer product, it is likely that the price-fixed product may represent a small fraction of the total cost of producing the downstream product, as with DRAM in a large computer or television set. We discussed this situation in connection with pass-through but, provided that intermediaries adopt similar pass-through practices for all inputs, this situation does not necessarily create problems in estimating pass-through, as we can use all costs to estimate pass-through. However, it is a major problem for one-step estimation of price effects as it may be very difficult to see in the data how formation of a cartel for one small product, such as DRAM, affects the overall price for a product like a television as there are too many other factors affecting the final price of televisions.[32] A second difficulty with one-step estimation is that the timing of price adjustment decisions of, for example, retailers of products like computers and TV sets might not coincide with the dates of the price-fixing conspiracy. Retailers might adjust prices with a lag

and their prices may stay higher for some period of time after the conspiracy has ended. These lags could be due to contractual commitments to their own customers, the need to honour recently advertised prices for some period or even a general desire to revise prices infrequently.[33]

VI. Principles and Pitfalls in Regression Analysis for Damage Estimation

In both pass-through estimation and estimation of overcharges, regression analysis is an important tool. There is a very large literature on regression analysis and other areas of econometrics addressing many issues that are relevant in damage estimation.[34] In addition, there are several useful surveys dealing with the use of econometrics in competition-policy-related litigation support.[35] We do not review that material here, but we address three specific issues that we believe are important in understanding the role of regression analysis in damage estimation.

A. Reporting Regression Results

When regression results are reported in litigation support or in competition policy proceedings it is normal to present an estimated regression equation along with various statistics sometimes called *regression diagnostics*. These statistics may include standard errors, t-statistics, p-values, R-squared statistics, and confidence intervals.[36] We illustrate the use of estimated regression equations and regression diagnostics using a hypothetical example of pass-through estimation based on DRAM.

We consider two hypothetical intermediaries in the distribution chain for DRAM. One downstream firm, Firm 1, is a distributor that purchases DRAM from DRAM producers and resells it to computer assemblers and retail sellers of DRAM. The other downstream firm, Firm 2, is a seller of custom security camera systems. It buys DRAM from DRAM producers and uses it in security cameras that are sold to final consumers. The pass-through question for each of these firms is: How much does their output price change when the price of DRAM changes?

We focus on just one particular DRAM product type, which is the same for both firms. Suppose we have 16 months of data for each firm. For Firm 1 we have data for each month on the average acquisition price and the average selling price of DRAM it sells to its customers that month. For Firm 2 we have monthly data on the average acquisition price for

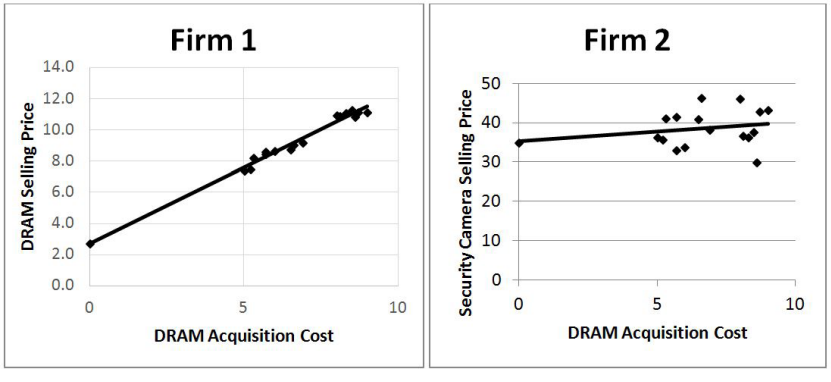
DRAM and on the average sale price of security cameras sold. (This is the kind of data that may be available under discovery.)

For each firm we use a linear regression, which means that we assume that the selling price of that firm's product is determined in the following way.

$$p = a + tc + e \tag{7}$$

where p is the selling price of the firm's product, a is a constant, t is the pass-through coefficient, c is the acquisition price of DRAM, and e is random error term whose expected value is 0. For our purposes here, any factors aside from the acquisition cost are assumed to be incorporated in the random error, e.

We generated simulated data using MS Excel for each firm. For Firm 1, which is simply re-selling DRAM, the acquisition cost of the DRAM accounts for most of the selling price. For Firm 2, the cost of DRAM is only a small part of the total cost of the security camera and is therefore much smaller than the price of the camera. The resulting data and estimated regression lines are shown in the following diagram.



For Firm 1, the estimated regression line is p = \$2.71 + 0.98c. This means that the estimated pass-through coefficient is 98%. The standard error for this coefficient is 0.05, the t-statistic for the coefficient is 18.9, and the p-value is less than 0.001. The reported 95% confidence interval for the pass-through coefficient is 86.6% to 108.7%. The t-statistic, standard error, p-value and 95% confidence interval are all tools to measure the precision with which a coefficient is measured and the likelihood that the true value is greater than zero. Even very small estimated coefficients

can be statistically significantly different from zero if they are estimated precisely enough. In this case the small standard error and the fairly tight 95% confidence interval indicate that the pass-through coefficient is estimated with considerable precision. The t-statistic and the p-value indicate that we can be very confident that the pass-through coefficient differs from zero. Similarly, because the 95% confidence interval does not contain the value zero we would say that the pass-through coefficient is significantly different from zero at the 100% – 95% = 5% significance level. The R-squared statistic – a diagnostic that tells us what fraction of the variance in the price the model can explain -- for this regression is 0.96, which is a very high value as R-squared statistics must lie between 0 and 1.

The regression for Firm 1 is a highly informative regression, indicating that the point estimate for pass-through of 98% is likely to provide a good estimate of what is actually happening — of the underlying true situation. The fact that the standard error is small compared to the coefficient estimate, while the t-statistic is relatively large and p-value is relatively small indicates that this is a useful regression, as does the statement that the coefficient is significant at the 5% level. The confidence interval suggests that the true value of the pass-through coefficient is likely not far from the point estimate of 98%. The regression diagnostics are consistent with the figure , which shows that the observed values are very close to the estimated regression line.

For Firm 2, the estimated regression line is p = \$35.5 + 0.44c. This means that the estimated pass-through coefficient is 44%. However, the standard error for this coefficient is large, 0.87, the t-statistic for the coefficient is 0.51, which is small, and the p-value is about 0.62, which is large. These values indicate that this coefficient is not significantly different from zero at the standard 5% significance level, and the reported 95% confidence interval for the pass-through coefficient is very wide, covering the range -142% to 231%. The R-squared statistic 0.02, which is very low.

The regression for Firm 2 is very uninformative. It provides a point estimate for the regression coefficient of 0.44 but this is not statistically significantly different from zero, and the confidence interval is so wide as to provide no helpful information at all as it includes both 0% and 100% and a lot more besides. The very low R-squared statistic tells us the regression explains very little of the overall variation in price and that

omitted variables (implicitly in the error term) explain almost all of the variation.

An economist would be justified in saying that the regression for Firm 1 is strongly supportive of pass-through being close to 100%. The correct statement about the regression for Firm 2 is that it provides virtually no information about pass-through. However, it is important to understand that the regression for Firm 2 does not provide strong evidence *against* the existence of pass-through. It is uninformative rather than rejecting the presence of pass-through.

As noted above, the data shown here was simulated. In fact it was generated using equation (7) in Excel with particular values for the constant and for the pass-through coefficient, and using the Excel random number generator to generate values for the error term. The main difference is that the error term for Firm 2 was specified to have a much higher variance than the error term for Firm 1. The "true" underlying pass-through coefficient in both regressions is, however, 100% – that is the number we used to generate the data.

The first regression does a very good job in estimating the correct level of pass-through, especially considering that we have only 16 observations. If we had more data, such as 50 or 60 observations, or perhaps hundreds of observations, we would very likely estimate a pass-through coefficient of almost exactly 100%. This is what we would expect in a situation of the type we are trying to represent with this example. Firm 1 is simply reselling DRAM. By far the most important determinant of the price it charges for DRAM is the cost it must pay for DRAM, so the error term (reflecting other variables) would not have much impact on the numbers. The industry is highly competitive so the firm cannot charge much more than the underlying cost and it cannot charge less without going out of business. It would be no surprise that the firm passes through almost exactly 100% of its costs.

For Firm 2, however, DRAM represents only a small part of the overall cost of the camera. This firm produces custom cameras, so every camera is different. Two cameras with the same DRAM might have very different lenses and other different features and therefore have very different prices The error term, reflecting these other influences, is large and important. Most of the difference in price will reflect these other features. To stress an important point – the fact that the regression for Firm 2 did not work well in terms of finding a statistically significant

relationship does not mean that the cost increases were not passed on. As indicated, the underlying true relationship that generated the data involves exactly 100% pass-through. A larger sample of relevant data points or a more complete specification of the other contributors to the downstream firm's costs would improve our chances of detecting and measuring that relationship. As previously discussed, an often preferred approach to estimating pass-through for Firm 2 would be to include all costs as the explanatory variable in equation (7) rather than just the cost of DRAM.

The regression for Firm 2 did not find meaningful evidence of pass-through because the error term was large in magnitude for most observations, implying that unobserved factors explain most of the variation in the price of cameras. The regression for Firm 1 did estimate pass-through effectively because the error term was small in magnitude for most observations, as would arise if the main source of variation for Firm 1's DRAM selling price was the acquisition cost of DRAM.

We could also consider cases in which the actual pass-through is small. In such cases we might have good enough data to estimate the low pass-through rate with a high level of precision. For example, we might estimate a pass-through rate of 10% with a 95% confidence interval going from 5% to 15%. Such a case would be a positive finding of low pass-through. That is very different from the situation with Firm 2, where the regression tells us little about pass-through one way or the other.

What happens if the pass-through coefficient is literally zero? How would we distinguish between that case and the case of Firm 2. In both cases we would fail to observe a statistically significant pass-through coefficient. We need to apply some judgement. If we have a very large sample (say 1600 observations instead of just 16) and still fail to find a significant pass-through effect, that would be more suggestive of little or no pass-through, especially if we are able to include in the regression the variables that do explain most of the variation in product price.

This discussion is related to Type I error ("false positives") and Type II error ("false negatives"). In the case of Firm 2, we are making a Type II error. Using standard statistical tests we fail to find statistically significant pass-through even though the "true model" is based on pass-through of 100%. That is a Type II error. A Type I error would arise if there were no pass-through in the "true model" but random variation in the data led us to conclude that statistically significant pass-through is present. Ideally,

we would like to reduce the likelihood of both types of error if possible. Having more data and having better data are important in reducing the likelihood of these errors.

If we have limited data so that the likelihood of Type II error is high, then failure to find statistically significant pass-through is not very meaningful. If we have a carefully designed experiment and have a lot of data so that the likelihood of Type II error is low, then failure to find statistically significant pass-through is very significant.

B. Regression Specification

Regression specification refers primarily to the functional form of the regression and to the set of included explanatory variables. In the previous subsection, we have specifications that we know are correct because they are based on the process we used to generate the data. In that example, the main question concerns how accurately we can estimate the pass-through coefficient given the random variability in the data. For Firm 1 we can estimate the coefficient very accurately even with only a small amount of data because the random variability is low but for Firm 2 the regression analysis is essentially useless given the small amount of data because the random variability is high. However, even with firm 2, the specification is correct.

Incorrect specification is another possible source of problems in regression analysis. To illustrate this point we consider another example that often comes up in damage estimation, especially in Canada. The issue is the relationship between Canadian and U.S. prices. Defendant firms in price-fixing cases are often large multinationals that produce for worldwide markets. For example, in *Sun-Rype*, one of the class action cases considered by the Supreme Court in 2013, the defendants included Archer, Daniels, Midland (ADM); Unilever; Cargill and other large producers of various food items, including the at-issue product, high fructose corn syrup (HFCS). Before being litigated in Canada, this case was litigated in the United States.

In *Sun-Rype* and in many other price-fixing cases, significant legal findings and other analysis of prices for the U.S. market is undertaken. To what extent can such information be used in Canada? Plaintiffs may argue that the prices are essentially North American prices with no meaningful difference between Canada and the United States apart from straightforward exchange rate adjustments. Defendants might make the

opposite claim – that Canada is a different country with, possibly, very different pricing. Defendants might argue that plaintiffs should start all over in generating price evidence rather than relying in part on U.S. findings. This issue is particularly important in indirect purchaser cases where it is the retail prices that matter and it is perhaps plausible that Canadian retail prices might differ meaningfully from U.S. retail prices in some cases.

Evidence on this issue might include statements from industry participants about the nature of pricing in the industry. In addition, the relationship between U.S. prices and Canadian prices can be investigated using regression analysis. The basic regression question is whether Canadian prices in Canadian dollars can be explained by U.S. prices in U.S. dollars. If the markets are perfectly integrated then the exchange-rate adjusted price would be the same in both markets. This relationship is called the *Law of One Price* (LOP). If this law holds for high-fructose corn syrup (HFCS), for example, then the Canadian dollar price would equal the U.S. dollar price multiplied by the exchange rate, expressed in Canadian dollars per U.S. dollar. For example, if the U.S. price in U.S. dollars is US$100 and the exchange rate is C$1.40 per U.S. dollar then, if LOP holds, the Canadian dollar price would be $100 \times 1.40 = C\$140$. Thus a Canadian indirect purchaser could pay $140 in Canada or could take that C$140, convert it to US$100, and buy the same amount of the product in the United States.

To test whether the Law of One Price holds, the correct regression equation is based on $p^C = xp^U$ where p^C is the Canadian price, x is the exchange rate, and p^U is the U.S. price. It is convenient to take the natural logarithm of both sides, and include a constant term to obtain:

$$\ln(p^C) = a_0 + a_1 \ln(x) + a_2 \ln(p^U). \tag{8}$$

This functional form is sometimes called the *log-linear* form because it is linear in the logarithms of the variables, not in nominal levels of the variables themselves. If the law of one price holds exactly, then a_0 would be zero, and a_1 and a_2 would equal one.[37] However, it would be possible to run a regression using a specification that is linear in the nominal levels of the variables: $p^C = b_0 + b_1 x + b_2 p^U$. On the surface this appears to regress the Canadian price on the U.S. price while correcting for the exchange rate. However, this specification is incorrect. Therefore, even if the markets were closely integrated such that equation (8) provided a good fit to the data and the regression coefficients were close to the values

implied by the law of one price, it is quite possible that the regression in nominal levels would not fit the data well and that the coefficients might not be statistically significant. The problem in this case is that the nominal linear functional form does not reflect the correct relationship between the variables if the Law of One Price holds. An economist employed by plaintiffs might estimate equation (8) and argue that the Canadian and U.S. markets were highly integrated and that the prices in the two countries tended to move together. However, an economist employed by defendants might run the nominal linear regression, find little relationship, and argue that prices in the two countries are not closely related.

The key point here is that it is important to use a suitable functional form for regression analysis. In practice we do not expect to often have specifications that are exactly correct. But they do need to be good approximations. Typically it is not clear what the best functional form is, but regression diagnostics can often be used to help select the best functional form. However, trying different functional forms runs the risk of causing specification search bias, as described in the next subsection.

C. Specification Search Bias

If we do not know the correct functional form it is normal to try several different possibilities and pick the one that fits the data best. It is also normal to try different explanatory variables in the regression and pick the ones that seem to "work best". And other variations in specification can also be tried. For example, in a regression seeking to determine whether the Toyota Access program affected the prices of cars sold, we might try including the price of gasoline, business cycle variables, interest rates, and other variables in the regression. We might also try different ways of organizing the data. We might, for example, try to put all Toyota vehicles in the same regression or we might run a separate regression for each model and emphasize the models that give the "best" results. We might also try using lagged values of certain variables and many other variations.

This process is sometimes called *data-mining* or *data-snooping* or *specification-searching*. However, the term data-mining is also used in computer science to refer to methods for uncovering patterns in large data sets, and the term data-snooping is far from self-explanatory, so we prefer the term specification searching. The advantage of specification searching is that, properly done, it will normally lead to a specification that

is a better approximation to reality than the initial proposed specification. However, there are two main disadvantages. First, even when properly done, the process of specification searching can lead us to overstate the confidence we should have in our results. Second, specification searching is prone to misuse – using it to search for results that the analyst wants to get rather than to search for the most accurate specification. Bias in coefficient estimates and significance levels arises when a data set is used for two distinct purposes – first to select a specification, and then to perform estimation and hypothesis tests on the same data set. If this two-step process is used (as is very common and often unavoidable) then some adjustment or reinterpretation may be called for.

These points can be illustrated using the Toyota example. Suppose we have data on Toyota Corolla transactions from before and during the class period (the alleged price-fixing period) for BC . There are many different varieties of Corollas, however, including four-door sedans, coupes, sport models, etc. and there are various options as cars may come with or without air conditioning, with or without a special trim package, etc. We could estimate a regression of the form $p = a_0 + a_1PF + a_2I + a_3C + b_1FE_1 + b_2FE_2 + \ldots$

This regression is very similar to equation (4) except that we have added terms of the form b_iFE_i as fixed effects (indicator variables) that can be used to control for different model varieties and options. This regression could be estimated for the entire set of BC transactions and the coefficient a_1 provides an estimate of the size of any overcharge due to price-fixing. When asking whether this is a statistically significant overcharge we normally use the 5% significance level. If we find an overcharge due to price-fixing at the 5% significance level, this means it is unlikely that we would conclude there was a price-fixing effect if it was not present. It could happen by chance – if we happened to get a lot of prices in the class period that were high for random reasons unrelated to price-fixing. However, the chance of that happening (a Type I error) would be less than 5%. If we find that a_1 is not significantly different from zero, this means that the regression does not support the existence of an overcharge at the 5% significance level.

An alternative procedure would be to estimate a separate regression for each major model variety. Suppose there are 10 major model varieties. In this case we simply estimate equation (4) on ten different subsets of the data, dropping the model variety fixed effects. We would now be

quite likely to find an apparently significant price overcharge at the 5% significance level for at least one model variety even if no price-fixing effect exists, just by chance. In fact, if we keep trying different subsets of the data we are virtually certain to find an apparently significant effect sooner or later.

The situation is like tossing a coin. If, for example, we toss a fair coin 5 times, it is unlikely that we would toss heads 5 times in a row. In fact, the probability is less than 5%. So if we do pick up the coin and proceed to toss heads five times in a row we can reject the hypothesis that the coin is a fair coin at the 5% significance level. However, even if the coin is a fair coin, if we keep the tossing the coin, sooner or later we are virtually certain to toss heads five times in a row. We cannot focus on just those five tosses and claim the coin is biased. If we do 10 different trials, tossing the coin 5 times in each trial, we are actually quite likely to get 5 heads in a row in at least one of those trials.

It would be an error to conclude that the coin is biased just because one of those trials generated five heads in a row. Similarly, it would an error to conclude that the Access program led to higher prices just because one out of several models exhibited an apparently significant effect at the 5% significance level. Suppose the model with this effect was Toyota Corolla 4-door sedans with air conditioning. We would not even be justified in concluding that this model variety was subject to overcharges at the 5% significance level just because this regression, taken in isolation, generated an apparently significant effect at the 5% level. The problem is that if we try enough different versions of the regressions we are very likely to find one with apparently significant effects just by chance, just as we are likely to toss five heads in a row if we do enough trials.

In the Toyota case, suppose that the one model variety that generates an apparently significant result yields a 95% confidence interval for a_1 that goes from $150 to $250. A statement that the 95% confidence interval goes from $150 to $250 can be easily misinterpreted. It may sound as though the probability that the true value of the overcharge is between $150 and $250 is 95%. However, that is incorrect. If we are using multiple tests (i.e. with many different models) and picking the "most significant" one, the true 95% confidence interval is much broader. Much of the regression output, such as p-values and confidence intervals, is conditional on having the correct specification in advance, not on selecting the specification (or the model variety we want to look at) on the basis

of a first stage process. But we rarely know the correct specification in advance and must try different possibilities.

The more variations that we try, the more likely it is that we will observe apparently significant effects by chance. If we try many different specifications and pick the one that fits the expected or desired outcome most closely, we will overstate the significance of those results. This is specification search bias (or data-mining bias or data-snooping bias). To correct this bias, when we try different regression specifications and pick the "best" one, we should, in principle, adjust significance levels and possibly coefficient estimates. For this particular example an appropriate correction, the Bonferroni correction, is known.[38]

However, for most types of specification searching the appropriate correction to significance levels is not known. For example, different explanatory variables could be tried. Maybe interest rates could be included in the regression, maybe we could use provincial GDP as an explanatory variable, maybe we could use land rent (a cost for dealers), etc. Another type of specification searching involves trying different time periods in the analysis, using or not using observations from after the class period, or possibly using lagged variables. Or we might try different functional forms. These are often important steps in finding the best specification but, unfortunately, for these and most other types of specification searching, the appropriate correction to significance levels is either very difficult or impossible to determine in precise form.

A standard recommendation is to divide the data into two parts – one part used to select the best specification and the other used for actual estimation. Then the results from the second estimation are sometimes thought to be free of specification search (data-mining) bias. However, dividing the sample into two parts may not be feasible in price-overcharge situations. Even if it is feasible, because only part of the data is used for estimation, the estimated parameters are estimated less precisely than if the full sample is used (i.e. the significance level may be correctly identified but the coefficient is inaccurately estimated). This process is also subject to other problems.[39]

The other standard recommendation, which is highly relevant for price-overcharge estimation, is to do sensitivity analysis, which means trying and reporting different specifications to see how much the results are changed by various changes in specification or procedure. If we use many reasonable but different specifications and consistently find

similar results, that greatly strengthens our confidence in those results. Sensitivity analysis has the opposite effect of specification search bias.

In addition, if the apparent p-values and standard errors are very low and the confidence intervals are very tight then, even if we did some specification searching, it is still likely that the coefficient estimates are meaningful. In such a case, even if we knew the proper adjustments to account for specification searching and made them, we would likely still find significant and meaningful results, although not quite as significant as they might seem at face value.

We believe that there are two lessons to be learned from consideration of specification search bias. The first is that the stated confidence intervals and significance levels produced by statistical software should not be taken literally. A 95% confidence interval does not really mean that there is a 95% chance that a coefficient lies in that interval. If the stated result is the outcome of even modest amounts of specification searching, then the stated confidence level is too high.[40] The second lesson is that statistical analysis is very valuable, but assessing its value is an art as well as a science and requires judgment.

In assessing statistical work, one important characteristic to look for is consistency. For example, in pass-through estimation, if the results of statistical analysis from many different vendors are consistent with each other and are consistent with market structure evidence and with statements of industry participants and with prior analysis of pass-through in similar situations, then the result should be taken very seriously. However, an isolated and surprising result should be regarded with much more caution.

VII. Concluding Remarks

This article identifies what we view as important principles in estimating damages arising from price-fixing and related anti-competitive actions. We focus particularly on damage estimation for indirect purchasers, although much of the material we cover is relevant to direct purchasers as well.

With respect to indirect purchasers we recognize that the damages they face depend on three components: the at-issue revenues of cartel members, the proportional overcharge imposed by the cartel and the degree of pass-through from direct to indirect purchasers.

In the paper we review estimation of all three of these components, although our discussion of revenue is brief. We have an extensive discussion of estimating overcharges. Sometimes we estimate the nominal overcharge, which is the actual price minus the but-for price, and sometimes we estimate the proportional overcharge – the fraction of the actual price that is an overcharge. We present five general methods, although only two are now widely used in our experience – reduced form estimation of prices and use of comparator benchmarks. It is also possible to use these two methods in combination.

We also provide a detailed discussion of pass-through, which is very important for indirect purchaser cases. We point out a pass-through rate of 100% is of particular interest as it is what we expect if the downstream sector is highly competitive and has constant average cost at the industry level.

The other major part of the paper tries to open up the black box of econometrics, at least to some extent. Regression analysis is a particularly important econometric tool. We provide a brief overview of how regression results are normally reported, emphasizing the role of statistical significance and related concepts. We also discuss the interpretation of regression results, placing particular emphasis on the role of specification searching (sometimes called *data-mining*).

Overall, we believe that a great deal of progress in damage estimation and related topics has been made in the past two decades. In addition, data availability has significantly improved and computing power has increased greatly. Therefore, good estimates of damages from price-fixing and related anticompetitive practices can often be obtained.

ENDNOTES

* Brander: Asia Pacific Professor in International Business and Public Policy, Sauder School of Business, University of British Columbia. Ross: UPS Foundation Professor of Regulation and Competition Policy, Sauder School of Business, University of British Columbia. We thank Jennifer Ng for very valuable comments and other help on this paper. In addition, we would like to acknowledge the important contributions made by several of our colleagues to our understanding of the issues discussed in this paper, including J. J. Camp, Tom Davidoff, David Jones, Reidar Mogerman, Janet Netz, Dov Rothman and Kevin Wright, though the views expressed here are our own and may not reflect their views. Financial support was provided by the Phelps Centre for the Study of Government and Business at the Sauder School of Business.

[1] A list of private actions in price-fixing cases is provided in John M Connor, "Private Recoveries in International Cartel Cases Worldwide: What Do the Data Show?" (2012) American Antitrust Institute Working Paper No 12-03, online: <http://ssrn.com/abstract=2165431>. The Canadian Bar Association maintains a database on class actions (including those related to price-fixing) ["Class Action Database", online: The Canadian Bar Association <http://www.cba.org/Publications-Resources/Class-Action-Database>].

[2] *Sun-Rype Products Ltd v Archer Daniels Midland Company*, 2013 SCC 58, [2013] 3 SCR 545; *Pro-Sys Consultants Ltd v Microsoft Corporation*, 2013 SCC 57, [2013] 3 SCR 477; *Infineon Technologies AG v Option Consommateurs*, 2013 SCC 59, [2013] 3 SCR 600.

[3] The landmark U.S. Supreme Court case establishing the direct purchaser rule for U.S. federal cases is *Illinois Brick Co v Illinois*, 431 US 720 (1977).

[4] James A Brander & Thomas W Ross, "Estimating Damages from Price-Fixing" (2006) 3:1 *Can Class Action Rev* 335.

[5] Sales taxes paid by purchasers are not normally included in damages. So the relevant price paid by the purchasers is the pre-tax price, which is the same price received by the seller in direct purchaser actions.

[6] See, for example, Brander & Ross, *supra* note 4 and Leonardo J Basso & Thomas W Ross, "Measuring the True Harm from Price-Fixing to Both Direct and Indirect Purchasers" (2010) 58:4 *J Ind Econ* 895.

[7] We are not taking the position that we should never try to measure harm not captured by the overcharges on units still purchased – rather here we are choosing to focus our discussion on the measure of damages most commonly applied in practice. It is important to acknowledge, however, that under some circumstances this measure can significantly understate the real harm caused to direct and indirect purchasers by price-fixing. On this see, for example, Basso & Ross, *supra* note 6.

[8] Sometimes the proportional overcharge is defined relative to the but-for price so it is $(p^A - p^B)/p^B$. This has the disadvantage that the proportional overcharge can be a very large number, approaching infinity as the actual price becomes large relative to the but-for price and it is often less convenient for damage calculations.

[9] The algebra with two product categories is as follows. We denote product categories using the subscripts 1 and 2. $D=(p_1^A - p_1^B)\, q_1^A + (p_2^A - p_2^B)\, q_2^A = v_1R_1 + v_2R_2 = (v_1R_1 + v_2R_2)[(R_1 + R_2)/(R_1 + R_2)] = (v_1w_1 + v_2 w_2)R = vR$, where $v = v_1w_1 + v_2w_2$ and $w_i = R_i/(R_1 + R_2)$ for $i = 1, 2$. Also, $R = R_1 + R_2 = p_1^Aq_1^A + p_2^Aq_2^A$. Adding more terms (more product categories) works in exactly the same way.

[10] This analysis focuses only on damages arising from sales made by cartel members. It is possible that other sellers (non-members of the cartel) may exist and may sell at higher prices than they otherwise would due to the actions of the cartel (the "umbrella" theory). Buyers of those products may also suffer damage. We do not comment on the status of such buyers or such damages.

[11] In its 2013 decisions on class actions, the Supreme Court of Canada

recognized the possible conflict between different categories of class members over the distribution of aggregate damages. However, the Court ruled that this conflict is not an impediment to certification and is properly dealt with as distribution issue later in the process.

[12] We note in passing that plaintiffs in indirect purchaser actions may choose to make a claim based on "unjust enrichment" in addition to (or instead of) a claim based on economic harm to plaintiffs. Unjust enrichment can be estimated as $D = vR$, where R is the at-issue revenue received by the cartel. This formula would apply regardless of the extent of pass-through as it shows the extra revenue obtained by defendants arising from overcharges on the quantity sold. In its 2013 decisions on class actions, the Supreme Court did not rule out unjust enrichment claims.

[13] See, in particular, John M Connor, "Cartel Overcharges" (2014) 26, ed by James Langenfeld, *L Econ Class Actions* (*Research in Law and Economics*) 249. This paper surveys over 700 studies, providing over 2000 overcharge estimates.

[14] In addition, post-conspiracy prices might be higher than in the but-for world if the cartel firms are able to achieve some form of tacit collusion based on their cartel experience. And pre-conspiracy "price-war" periods might have lower prices than would be observed in a normal but-for situation.

[15] From the Hynix plea agreement in the U.S. DRAM action: *United States of America v Hynix Semiconductor Inc*, (ND Cal 2005), online: <http://www.usdoj.gov/atr/cases/f209200/209231.pdf> "At certain times during the relevant period, DRAM prices decreased significantly. Nevertheless, the Defendant and its coconspirators reached agreements to limit the rate of price declines, which were achieved with varying levels of effectiveness."

[16] White (2001) suggests that this was John Connor's approach in his work for plaintiffs in the U.S. lysine damages case, but Connor might not see it that way. Connor (2001) characterizes his approach as employing the "before and after" method. In fact, in this case is hard to distinguish the approaches here because the price before approached levels consistent with reasonable estimates of average cost. See Lawrence J White, "Lysine and Price Fixing: How Long? How Severe?" (2001) 18:1 *Rev Ind Org*, 23 and John M Connor, " 'Our Customers are Our Enemies': The Lysine Cartel of 1992-1995" (2001) 18:1 *Rev Ind Org* 5. Hastings and Williams (2016) describe a similar approach, from a tied-selling case in which a competitive but-for price for cable television set-top boxes (that the defendant had tied to its sale of premium television services) was constructed from data on the defendant's direct costs and an assessment of its opportunity cost of capital. Adding in the opportunity cost of capital generates a but-for price that allows for a competitive rate of return. Justine S Hastings & Michael W Williams, "What is a 'But-For' World" (2016) 31:1 *Antitrust* 102.

[17] These economic models are described in standard textbooks on industrial organization such as Dennis W Carlton & Jeffrey M Perloff, *Modern Industrial Organization*, 4th ed (Boston: Pearson, 2005).

[18] For example, since prices will depend on the nature of competition between

firms (as well as cost and demand factors) a structural approach will require the analyst to adopt a specific model of competition.

[19] For a good discussion of the issues see the following articles: Joshua D Angrist & Jörn-Steffen Pischke, "The Credibility Revolution in Empirical Economics: How Better Research Design is Taking the Con out of Econometrics" (2010) 24:2 *J Econ Perspect* 3; James F Nieberding, "Estimating Overcharges in Antitrust Cases Using a Reduced-Form Approach: Methods and Issues" (2006) 9:2 *J Appl Econ* 361, and Douglas J Zona, "Structural Approaches to Estimating Overcharges in Price-Fixing Cases" (2011) 77:2 *Antitrust LJ* 473.

[20] To be precise, equation (4) is meant to hold at any given point in time – so that, for example, the price at some particular point in time will be explained by the function with the right-hand side variables' values also taken at that same point in time. It is common for economists to put subscripts on the variables indicating which period the data is drawn from, but we omit them here to reduce clutter.

[21] The term we prefer here, comparator benchmarks, was used in Oxera Consulting Ltd et al, *Quantifying antitrust damages: Towards non-binding guidance for courts* (Luxembourg: Publications Office of the European Union, 2009), online: <http://www.oxera.com/Oxera/media/Oxera/Quantifying-antitrust-damages.pdf?ext=.pdf>.

[22] Justin McCrary & Daniel L Rubinfeld, "Measuring benchmark damages in antitrust litigation" (2014) 3:1 *J Econ Methods* 63.

[23] See 2014 BCSC 532, varied 2015 BCCA 363.

[24] *Pro-Sys Consultants v Microsoft Corporation*, 2010 BCSC 285, [2010] BCJ No 380 (QL) at 25.

[25] A basic description of this case is set out in *Steele v Toyota Canada Inc*, 2008 BCSC 1063, 295 DLR (4th) 653 . Approval of the Settlement Agreement can be found at Steele v Toyota Canada Inc, 2015 BCSC 1014.

[26] Under the Access program, Toyota organized a system under which individual dealers would suggest a reasonable "firm price", normally below the list price and, after collating the suggestions, Toyota would inform the dealers of the "Access price". Dealers were expected (but not strictly required) to charge this price as a firm price. The system was advertised to consumers as providing a "no hassle" price under which everyone would get a fair price instead of the final price being dependent on bargaining effort and skills.

[27] If we use as a benchmark prices from other producers who are not part of the cartel but are nevertheless in the market, we should consider the possibility that the prices of non-cartel firms might be influenced upward by the higher cartel prices. This is the so-called umbrella effect. In such a case, these benchmark firms' prices would be expected to be above true but-for prices and using them could lead to an underestimate of the real overcharge.

[28] See, for example, Basso & Ross, *supra* note 6.

[29] The elasticity of demand measures the sensitivity of quantity demanded to price changes. Specifically, it is the percentage change in quantity demanded

caused by a 1% increase in price. When the demand elasticity itself does not change as price changes, firms will set constant margins. For example, if the monopolist direct purchaser has a constant demand elasticity equal to 5, it will set a profit margin of 20% to maximize its profits. To maintain that 20% margin, any cost increase of, say, $1 must lead to a downstream price increase of $1.20

[30] For proofs of these statements and a more complete treatment of pass-through rates in the context of oligopolies, see Basso & Ross, *supra* note 6.

[31] This approach can still require adjustments necessitated by delays in price adjustments downstream.

[32] To be clear, this is not to say that an effect is absent, it can simply be hard to measure with precision. Theoretically this can be overcome if we have enough high quality data.

[33] Changing prices carries a cost, for example, in terms of adjusting price lists, labels and advertising and the risk of customer annoyance and resistance. When the price-fixed component is a relatively small part of the total costs of the downstream firm, it will make sense to delay adjusting prices until other cost or demand changes have made a non-trivial adjustment profitable. When the price adjustment is made, however, it should be expected to take into consideration all the firm's costs including those subject to price-fixing.

[34] One very good general introductory textbook on econometrics containing many applied examples (although no damage estimation examples) is Jeffrey M Wooldridge, *Introductory Econometrics: A Modern Approach*, 6th ed (Boston: Cengage Learning, 2015).

[35] See, e.g. Daniel L Rubinfeld, "Econometric Issues in Antitrust Analysis" (2010) 166:1 *J Inst Theor Econ* 62; Jonathan B Baker & Daniel L Rubinfeld, "Empirical Methods in Antitrust: Review and Evidence" (1999) 1:1 *Am L Econ Rev*, 386; Rober E Hall & Victoria A Lazear, "Reference Guide on Estimation of Economic Losses in Damages Awards" (2000) *Reference Manual on Scientific Evidence*, online: <http://www.fjc.gov/public/pdf.nsf/lookup/12.econ_loss.pdf/$File/12.econ_loss.pdf>; and Oxera Consulting Ltd et al, *supra* note 21.

[36] These measures relate to classical or frequentist methods. It is also possible to report related measures based on Bayesian methods, but that is rare in our experience of damage estimation and related areas and we will not discuss Bayesian methods here.

[37] It is rare that the law of one price holds exactly, More generally, significant positive estimates for a_1 and a_2 imply some level of integration between the markets.

[38] See, for example, Wolfram MathWorld, "Bonferroni Correction", online: <http://mathworld.wolfram.com/BonferroniCorrection.html>.

[39] Atsushi Inoue & Lutz Kilian, "In-Sample or Out-of-Sample Tests of Predictability: Which One Should We Use?" (2005) 23:4 Economet Rev 371.

[40] Even if we are confident that we have the correct specification without doing any specification searching, the statement just made is not quite right. Strictly

speaking, we should say that if we did repeated sampling, the 95% confidence interval would include the true value 95% of the time.

EDITOR'S NOTES FOR SCHOLARS PANEL 2016

SCHOLARS PANEL ON LOYALTY PROGRAMS: INTRODUCTION

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Beginning with the annual fall meetings of the CBA Competition Law Section in 2015, the *Canadian Competition Law Review* has collaborated with the Section and meeting organizers to produce a different kind of session for the meetings that we have called the "Scholars Panel". Panelists recruited for these sessions are experts in a particular current and important area of competition policy (in Canada or beyond). They are asked to prepare academic-style papers that provide deeper analyses of aspects of a particular topic – papers that will provide both thought-provoking ideas for the audience at the meetings and a set of high quality articles for the *Review*.

At the 2015 meetings, the topic was "Disruptive Business Models: Is Canadian Competition Law Keeping Up with Technological Change? Can It?" and the panel included Professors Joshua Gans and Mihkel Tombak (both of the University of Toronto) and David Rosner representing a joint effort from Blake, Cassels & Graydon LLP. The papers from Professors Gans and Tombak were then published in the Spring 2016 issue of the *Review*.

The 2016 Scholars Panel, addressing the topic "Loyalty Programs – Risks & Rewards" was composed of Neil Campbell of McMillan LLP, Professor Guofu Tan of the University of Southern California and Professor Roger Ware of Queen's University. All three have (in two cases with coauthors) provided the interesting papers we are pleased to publish here in the *Canadian Competition Law Review*.

The issue

Loyalty programs involve arrangements under which a seller rewards a buyer, often with rebates, when the buyer acquires a defined quantity or share of its purchases from the seller. These purchases typically need not be made at a single point in time – they may accumulate over some period, for example a year. Familiar examples would include "coffee

cards" that promise a tenth free coffee after the holder has purchased nine, and airline frequent flier programs that provide benefits such as free flights after the member has accumulated a threshold number of "miles" on his or her account. As all three of the papers here report, despite their ubiquity loyalty programs have come under increased scrutiny by competition regulators in a number of jurisdictions over the last several years.[1] They raise competition issues when they are used by firms with market power to block the entry or expansion of rivals through the creation of what are effectively exclusive (or nearly so) dealing or tying.

Loyalty discounts are sometimes seen as a subset of a broader category referred to as "conditional pricing practices" which can also include payments for exclusivity and bundled discounts. Many of the concerns associated with loyalty discounts can also be relevant under other forms of conditional pricing practices.[2]

Most problematic from a competition policy perspective are "all units discounts" (AUD) arrangements in which a lower price offered by the seller to a buyer reaching some threshold applies to all units purchased to reach that threshold, not just to additional units purchased beyond the threshold. Under such arrangements, there can be a very strong incentive for the buyer to reach that threshold with effective marginal prices at the threshold being negative.[3] The thresholds can be stated in terms of quantities of units purchased or in terms of shares of the buyer's total purchases of the product in question. When the discount or rebate under an AUD is substantial and the threshold demands 100% of the buyer's business, we can have *de facto* exclusive dealing.

Professor Tan and his coauthor study AUD-type loyalty discount plans on a single product. However, loyalty agreements (even of the AUD sort) can involve multiple products where they can serve as a sort of anti-competitive tying device when the seller has strong market power with respect to some products but not others. Professor Ware explores some of the implications of loyalty plans in this multi-product setting.

An important feature of many economic models that demonstrate the potential for competitive harm with loyalty discounts involves a distinction between contestable and non-contestable segments of a market. This is emphasized in both of the papers by Professors Tan and Ware. If a potential entrant does not have the capacity or range of products to offer a complete alternative to a dominant firm we say that the part of the market the entrant could serve is the contestable part. When the

non-contestable part of the market is large enough, the dominant firm has considerable leverage with which it can make entry extremely difficult – effectively by tying the contestable market to the non-contestable market. As Professor Tan and his coauthor show, the dominant firm may not necessarily use this to completely exclude the rival, but it can certainly limit the rival's market share.

Neil Campbell and his coauthor explain that the Competition Bureau can examine loyalty plans under two different sections of the *Competition Act* depending on the facts of a particular case: as exclusive dealing under Section 77 or as an abuse of dominance under Section 79. While the different sections require different approaches with somewhat different standards, they also have much in common – principally in the value of showing economic effects on competition.

The competition economics literature has suggested two general approaches to evaluating the potential for harm from loyalty plans, by analogizing them to other practices. Both are described in the papers here. Loyalty plans can, particularly if of the AUD variety, be treated as predatory pricing given that marginal prices at (and for a quantity beyond) the threshold can very low and even negative as explained above. As a result, those marginal prices would fail any of the standard price-cost tests – though an issue to be addressed relates to the quantity over which price is to be calculated for the purposes of the test. That is, should we consider the marginal price right at the threshold, incremental prices from the threshold level to the quantity actually purchased or an average price over all units?

While this approach has been advocated by some experts and applied in some cases, it has its weaknesses stemming from the fact that the general problem of predation is not what we see in loyalty cases. In a typical predation case, the seller is setting prices very low temporarily for the purpose of eliminating, marginalizing or disciplining a rival. The seller loses money during this period. After accomplishing this goal, prices are increased and the temporary losses recouped. Loyalty plans do not have this time path of prices – in principle they can be permanent as average prices (across all units) will typically remain above average costs. Importantly, an equally efficient rival could mimic the incumbent seller and also be profitable. Under classical predatory pricing, everyone loses money during the predation period.[4]

The second approach is to treat loyalty plans — when they raise

competitive concerns — as means to build exclusivity (with single products) or mechanisms for tying (with multiple products) and to use the kinds of economic and legal approaches familiar from such cases.[5] These are the approaches outlined by Mr. Campbell and Ms. Chan in their paper.

Not to be lost in all this is the idea that loyalty programs can have many beneficial effects and will most often be at least competitively neutral. They may serve as a point of value-added differentiation between competing sellers, as with frequent flier programs.[6] By subsidizing repeat purchases, they can help build brand attachment in environments that demand that. Some programs, like the coffee card example, can serve as price discrimination mechanisms: for example, local customers, who know the market and alternative sellers well, can effectively pay less for their coffee (using the cards) than non-locals who are unaware of competitive alternatives and are therefore willing to pay more to avoid costly search. Loyalty programs of the AUD variety can even be used by monopoly firms as "forcing contracts", encouraging buyers to purchase more than they would (in order to get to the threshold) under simple monopoly pricing – and reducing deadweight loss in the process.

To the extent that loyalty programs do create exclusivity or serve as tying devices we also have the various kinds of efficiencies we have come to recognize as potentially flowing from those types of arrangements. For example, buyers and sellers will be more willing to undertake valuable relationship-specific investments under the protection of an exclusive arrangement. Tying arrangements can take advantage of economies of scope in distribution (e.g. common delivery) and can reduce the problems of incompatibility if the tied and tying goods need to be used together in some way.

Finally, as the papers from our panelists point out, concerns about loyalty discounts are generally absent when there are multiple equally efficient rivals available to serve buyers.[7] Some would push this point further to argue that if a particular loyalty discount plan could not exclude an equally efficient rival – even if none exists currently – it should not be condemned. This is a more difficult argument, however, for at least two reasons.

First, we recognize that even somewhat less efficient rivals can have a strong pro-competitive effect in a market – their higher costs of production being balanced by the extra output and reduced deadweight losses

they generate. Second, it is hard to imagine a case in which an entrant would instantly be an equally efficient rival. It will take time and some learning by doing before the new rival can achieve competitive levels of costs. And it may take time for buyers to learn about the availability and quality of the rival's products or services. These costs – effectively sunk costs of entry — can be overcome over time but they are costs that the incumbent is not incurring, so it has an advantage. As a result, even firms that can eventually become equally efficient rivals will not be so at the beginning. It would therefore make sense, if we are committed to an "equally efficient rival" test, to apply it by assessing a rival's ability to be equally efficient after some period of time. To allow a practice that could only be successfully challenged by a rival that is equally efficient from day one is, short of the arrival of a disruptive innovation, likely to prevent some pro-competitive entry.

We turn now to our Scholars' papers. The *Canadian Competition Law Review* looks forward to receiving feedback on this Scholars Panel in particular and on the value of the Scholars Panel project in general. Ideas for future Panel topics are always welcome at: cancomplrev@cba.org.

Endnotes

[1] Most famously recently in Canada in the Canada Pipe case, as discussed in the paper by Professor Ware: *Commissioner of Competition v Canada Pipe*, 2005 Comp Trib 3.

[2] See, for example, Steven C. Salop,"The Raising Rivals' Cost Foreclosure Paradigm, Conditional Pricing Practices and the Flawed Incremental Price-Cost Test" (2016) *Georgetown Law Faculty Publications and Other Works* 1620, online: <http://scholarship.law.georgetown.edu/facpub/1620>.

[3] A simple example. Suppose a particular seller's plan called for a per-unit price of $50 which would be reduced to $45 if the buyer purchased 100 units or more. This is an AUD so the lower price will apply to all units purchased, not just the 100th and beyond. Purchasing 99 units would cost the buyer $4,950 (99 units @ $50) while buying 100 would cost $4,500 (100 units @ $45) implying that the 100th unit cost carried a large negative price: - $450. In fact, in this example, it would be less expensive to buy 100 units than to buy 91 units.

[4] Salop, *supra* note 2, is also critical of predatory pricing approaches.

[5] Essentially this is the "raising rivals' costs" approach championed by Salop, *supra* note 2.

[6] Though this differentiation can also raise barriers to entry and increase switching costs with implications for competition. This has been an issue with frequent flier programs.

[7] Though to the extent that such plans could serve as practices that facilitate tacit coordination in oligopoly, there may still be issues to consider.

GROUPE D'EXPERTS SUR LES PROGRAMMES DE FIDÉLISATION : INTRODUCTION, PAR THOMAS W. ROSS

Depuis la conférence d'automne annuelle de la section du droit de la concurrence de l'ABC en 2015, la *Revue canadienne du droit de la concurrence* a collaboré avec la section et les organisateurs de la conférence pour produire un genre différent de séance que nous avons appelé le « groupe d'experts ». Les experts recrutés pour ces séances sont spécialisés dans un secteur actuel et important de la politique sur la concurrence (au Canada ou à l'étranger). On leur demande de préparer des exposés de style magistral qui procurent des analyses approfondies d'aspects d'un sujet donné – des exposés qui fournissent des idées stimulantes pour l'auditoire à la conférence ainsi qu'un ensemble d'articles de qualité supérieure pour la *Revue*.

À la conférence de 2015, le sujet était « Disruptive Business Models: Is Canadian Competition Law Keeping Up with Technological Change? Can It? », et le groupe était composé des professeurs Joshua Gans et Mihkel Tombak (tous deux de l'Université de Toronto) et de David Rosner, représentant un effort conjoint de Blake, Cassels & Graydon S.E.N.C.R.L., s.r.l. Les exposés des professeurs Gans et Tombak ont été publiés dans l'édition Printemps 2016 de la *Revue*.

Le Groupe d'experts 2016, se penchant sur le sujet « Loyalty Programs – Risks & Rewards », était composé de Neil Campbell de McMillan S.E.N.C.R.L., s.r.l., du professeur Guofu Tan de l'Université de la Californie du Sud et du professeur Roger Ware de l'Université Queen's. Les trois ont (dans deux cas avec des coauteurs) procuré les intéressants exposés que nous sommes heureux de publier ici dans la *Revue canadienne du droit de la concurrence*.

La question

Les programmes de fidélisation comportent des modalités suivant lesquelles le vendeur récompense l'acheteur, souvent au moyen de rabais, lorsque l'acheteur fait une quantité ou une part déterminée (ou davantage) de ses achats auprès du vendeur. Ces achats ne doivent pas nécessairement être effectués à un seul moment – ils peuvent s'accumuler sur une certaine période, par exemple un an. Mentionnons comme exemple

courant les « cartes-café », qui promettent que le dixième café est gratuit, ainsi que les programmes grand voyageur des sociétés aériennes qui offrent des avantages comme des vols gratuits une fois que le membre a accumulé un certain nombre de « milles » à son compte. Comme les trois exposés l'indiquent, malgré leur omniprésence, les programmes de fidélisation sont de plus en plus examinés par les organismes de réglementation de la concurrence dans plusieurs ressorts depuis quelques années[1]. Ils soulèvent des questions de concurrence lorsqu'ils sont utilisés par des sociétés ayant suffisamment de pouvoir de marché pour empêcher l'entrée ou l'expansion des rivaux au moyen de la création de relations ou de liens réellement exclusifs (ou presque).

Les escomptes de fidélité sont parfois considérés comme un sous-groupe d'une catégorie plus large appelée « les pratiques de prix conditionnels », qui peut aussi comprendre les paiements d'exclusivité et les escomptes groupés. Bon nombre des préoccupations liées aux escomptes de fidélité peuvent aussi être pertinentes sous d'autres formes de pratiques de prix conditionnels[2].

Du point de vue de la politique sur la concurrence, ce sont les « escomptes sur toutes les unités » (ETU) qui sont les plus problématiques. Il s'agit de modalités par lesquelles un prix plus bas offert par le vendeur à l'acheteur qui atteint un certain seuil s'applique à toutes les unités achetées pour l'atteinte de ce seuil, et non pas seulement aux unités supplémentaires achetées au-delà du seuil. De telles modalités peuvent donner à l'acheteur un très fort incitatif pour atteindre ce seuil, les prix marginaux effectifs au seuil étant négatifs[3]. Les seuils peuvent être établis sous forme de quantités d'unités achetées ou de parts des achats totaux de l'acheteur du produit en question. Lorsque l'escompte ou la remise en vertu d'un ETU est important et que le seuil exige la totalité des commandes de l'acheteur, il peut y avoir dans les faits exclusivité.

Le professeur Tan et son coauteur étudient les programmes d'escomptes de fidélisation de type ETU sur un produit unique. Toutefois, les ententes de fidélisation (même de type ETU) peuvent porter sur plusieurs produits, auquel cas elles peuvent servir de genre de mécanisme de ventes liées anticoncurrentiel lorsque le vendeur jouit d'un fort pouvoir de marché à l'égard de certains produits, mais non pas à l'égard d'autres produits. Le professeur Ware analyse certaines des incidences des programmes de fidélisation dans ce contexte multiproduits.

Une importante caractéristique de nombreux modèles économiques

qui démontrent le potentiel de préjudice concurrentiel en raison des escomptes de fidélité porte sur une distinction entre les secteurs disputables et non disputables d'un marché. C'est ce que soulignent les exposés des professeurs Tan et Ware. Si un entrant potentiel n'a pas la capacité ou la gamme de produits nécessaire pour offrir une solution de rechange complète à une société dominante, nous affirmons que la part du marché que l'entrant pourrait desservir est la partie disputable. Lorsque la partie non disputable du marché est suffisamment importante, la société dominante jouit d'un effet multiplicateur considérable dont elle peut se servir pour rendre l'entrée extrêmement difficile – concrètement en liant le marché disputable au marché non disputable. Comme le démontrent le professeur Tan et son coauteur, la société dominante n'utilise pas nécessairement cette méthode pour écarter complètement le rival, mais elle peut certainement limiter la part de marché du rival.

Neil Campbell et sa coauteure expliquent que le Bureau de la concurrence peut examiner les programmes de fidélisation suivant deux dispositions différentes de la *Loi sur la concurrence* selon les faits d'une affaire donnée. Sous l'angle de l'exclusivité en vertu de l'article 77 ou de l'abus de position dominante en vertu de l'article 79. Les différentes dispositions requièrent des méthodes différentes appliquant des normes quelque peu différentes, mais elles ont aussi beaucoup de choses en commun – principalement dans la valeur de démontrer les effets économiques sur la concurrence.

Les textes d'économie sur la concurrence indiquent deux approches générales d'évaluation du préjudice potentiel causé par les programmes de fidélisation en les comparant par analogie à d'autres pratiques. Les deux sont décrites dans les exposés. Les programmes de fidélisation peuvent, particulièrement ceux du genre ETU, être considérés comme prévoyant des prix d'éviction étant donné que les prix marginaux au seuil (et pour les unités supplémentaires) peuvent être très bas et même négatifs, comme il a été expliqué précédemment. Par conséquent, ces prix marginaux échoueraient tout critère standard prix-coût, quoiqu'une question à régler ait trait à la quantité sur laquelle le prix doit être calculé pour l'application du critère. C'est-à-dire, devrions-nous considérer le prix marginal dès le seuil, des prix graduels du seuil à la quantité achetée ou un prix moyen sur toutes les unités?

Cette approche a été favorisée par certains experts et appliquée dans certaines affaires, mais elle souffre de faiblesses découlant du fait que le

problème général de l'éviction n'est pas le même que ce que nous constatons dans les affaires de programmes de fidélisation. Dans une affaire typique de prix d'éviction, le vendeur établit ses prix temporairement à un niveau très bas en vue d'éliminer, de marginaliser ou de discipliner un rival. Le vendeur perd de l'argent pendant cette période. Après avoir réalisé cet objectif, il augmente ses prix et récupère ses pertes temporaires. Les programmes de fidélisation n'ont pas ce caractère temporel des prix – en principe, les prix peuvent être permanents car les prix moyens (sur toutes les unités) demeurent généralement supérieurs aux coûts moyens[4]. Fait important, un rival tout aussi efficace pourrait imiter le vendeur traditionnel et réaliser aussi des profits. Selon le scénario classique de prix d'éviction, tous perdent de l'argent pendant la période d'éviction.

La deuxième approche consiste à traiter tous les programmes de fidélisation – lorsqu'ils soulèvent des préoccupations en matière de concurrence – comme visant à établir une exclusivité (avec des produits uniques) ou des mécanismes de ventes liées (avec plusieurs produits) et à utiliser les genres d'approches économiques et juridiques appliqués traditionnellement dans de tels cas[5]. Il s'agit des approches présentées par M. Campbell et M^me^ Chan dans leur exposé.

Il ne faut pas perdre de vue dans tout cela l'idée que les programmes de fidélisation peuvent revêtir de nombreux effets bénéfiques et sont généralement au moins neutres sur le plan de la concurrence. Ils peuvent servir de point de distinction à valeur ajoutée entre des vendeurs concurrents, comme c'est le cas des programmes grand voyageur[6]. En subventionnant les achats répétitifs, ils peuvent établir un attachement à la marque dans des milieux qui l'exigent. Certains programmes, comme dans l'exemple de la carte-café, peuvent servir de mécanismes de discrimination par les prix : par exemple, les clients locaux, qui connaissent bien le marché et les autres vendeurs, peuvent concrètement payer moins pour leur café (en utilisant les cartes) que les clients non locaux qui ignorent l'identité des concurrents et sont donc prêts à payer davantage pour éviter des recherches coûteuses. Les programmes de fidélisation de type ETU peuvent même être utilisés par les sociétés jouissant d'un monopole pour « forcer les contrats », en encourageant les acheteurs à acheter davantage que prévu (afin d'atteindre le seuil) suivant un simple prix de monopole – et en réduisant la perte sèche par la même occasion.

Dans la mesure où les programmes de fidélisation créent de l'exclusivité

ou servent de mécanismes de ventes liées, nous constatons les divers genres d'efficience que nous en sommes venus à reconnaître comme découlant potentiellement de ces types de modalités. Par exemple, les acheteurs et les vendeurs seront plus prêts à effectuer des investissements précieux centrés sur la relation sous les auspices d'une entente exclusive. Les ententes prévoyant des liens peuvent bénéficier d'économies d'échelle dans la distribution (p. ex. livraison commune) et peuvent réduire les problèmes d'incompatibilité si les produits liés et liants doivent être utilisés ensemble de quelque façon.

Enfin, comme le soulignent les exposés de nos experts, les préoccupations relatives aux escomptes de fidélité n'existent généralement pas lorsqu'il y a plusieurs rivaux tout aussi efficaces disponibles pour desservir les acheteurs[7]. Certains iraient plus loin en ce sens pour affirmer que si un programme d'escompte de fidélisation particulier n'écarte pas un rival tout aussi efficace – même s'il n'y a aucun rival actuellement – il ne devrait pas être condamné. Il s'agit cependant d'un argument plus difficile à faire valoir, pour au moins deux raisons.

Premièrement, nous reconnaissons que même les rivaux un peu moins efficaces peuvent avoir un solide effet proconcurrentiel sur le marché – leurs coûts de production plus élevés étant pondérés par la production supplémentaire et la réduction des pertes sèches qu'ils génèrent. Deuxièmement, il est difficile d'imaginer un cas où un entrant deviendrait instantanément un rival tout aussi efficace. Il faut du temps et de l'apprentissage par l'expérience pour que le nouveau rival puisse atteindre des niveaux concurrentiels de coûts. Et il peut falloir du temps aux acheteurs pour apprendre à connaître la disponibilité et la qualité des produits ou services du rival. Ces coûts – en réalité des coûts irrécupérables d'entrée – peuvent être absorbés au fil du temps, mais il s'agit de coûts que la société en place n'engage pas, de sorte que cette dernière jouit d'un avantage. Par conséquent, même des sociétés qui pourraient devenir des rivaux tout aussi efficaces n'en seront pas au début. Si nous nous en tenons au critère du « rival tout aussi efficace », il serait donc logique de l'appliquer en évaluant la capacité du rival d'être tout aussi efficace après un certain temps. Permettre une pratique qui ne pourrait être mise à l'épreuve avec succès que par un rival qui est tout aussi efficace dès le début est de nature à empêcher les entrées proconcurrentielles, sauf dans le cas d'innovations perturbatrices.

Nous abordons maintenant les exposés de nos experts. *La Revue*

canadienne du droit de la concurrence espère recevoir des commentaires sur ce groupe d'experts en particulier et sur la valeur du projet du groupe d'experts en général. Les idées de sujets futurs pour le groupe sont toujours bien accueillies à : cancomplrev@cba.org.

notes

[1] L'affaire la plus récente au Canada étant l'affaire *Tuyauteries Canada*, comme le mentionne l'exposé du professeur Ware : *Commissaire de la concurrence c. Tuyauteries Canada*, 2005 Trib. Conc 3.

[2] Voir, par exemple, Steven C. Salop (2016), « The Raising Rivals' Cost Foreclosure Paradigm, Conditional Pricing Practices and the Flawed Incremental Price-Cost Test », disponible à <http://scholarship.law.georgetown.edu/facpub/1620>.

[3] En voici un exemple simple. Supposons que le plan d'un vendeur donné prévoit un prix unitaire de 50 $ qui est réduit à 45 $ si l'acheteur acquiert au moins 100 unités. Il s'agit d'un ETU conçu de manière à ce que le prix inférieur s'applique à toutes les unités achetées, et non pas seulement à la 100^{e} unité et aux unités supplémentaires. L'achat de 99 unités coûterait à l'acheteur 4 950 $ (99 unités x 50 $) tandis que l'achat de 100 unités coûterait 4 500 $ (100 unités x 45 $), ce qui signifie que le coût de la 100^{e} unité est très négatif : -450 $. En réalité, dans cet exemple, il en coûterait moins d'acheter 100 unités que d'en acheter 91.

[4] Salop, précité note 3, critique également les méthodes d'évaluation des prix d'éviction.

[5] Essentiellement, il s'agit de l'approche de type « élever les coûts des rivaux » défendue par Salop, précité note 3.

[6] Quoique cette distinction puisse aussi élever des barrières à l'entrée et augmenter les coûts de remplacement, ce qui a des incidences pour la concurrence. Cela s'est révélé être un problème avec les programmes grand voyageur.

[7] Quoique dans la mesure où de tels programmes peuvent servir de pratiques facilitant la coordination tacite dans le cadre d'un oligopole, il pourrait rester des questions à examiner.

LOYALTY IS USUALLY GOOD – THE TREATMENT OF LOYALTY PROGRAMS UNDER THE *COMPETITION ACT*

Neil Campbell & Florence (Sze Pui) Chan[1]

Loyalty programs are pervasive. They are a form of competition which usually lowers prices and benefits customers. They may also generate efficiencies, encourage the supplying firm to invest in the development and marketing of new products, and incentivize distributors to promote the supplier's products. However, in certain circumstances loyalty rebates may allow market power to be exercised through raising rivals' costs and/or strengthening barriers to entry. This article examines the application of the exclusive dealing and abuse of dominance provisions of the Competition Act[2] *to loyalty programs and suggests how the Commissioner of Competition may choose which enforcement track to pursue when anti-competitive concerns arise.*

On retrouve des programmes de fidélisation partout. Il s'agit d'une forme de concurrence qui, généralement, fait baisser les prix et avantage les clients. Ils peuvent aussi engendrer des efficiences, encourager le fournisseur à investir dans le développement et la commercialisation de nouveaux produits et inciter les distributeurs à promouvoir les produits du fournisseur. Toutefois, dans certains cas, les remises de fidélité peuvent permettre l'exercice d'un pouvoir de marché au moyen de la hausse des coûts des rivaux ou du renforcement des obstacles à l'entrée. Cet article examine l'application des dispositions sur l'exclusivité et l'abus de position dominante de la Loi sur la concurrence *aux programmes de fidélisation et suggère des façons dont le Commissaire de la concurrence peut choisir la voie d'exécution à suivre lorsque naissent des préoccupations relatives à la concurrence.*

1. Introduction

Loyalty (or "fidelity") discounts are in widespread use in both consumer and business markets. They include a diverse range of rebates, discounts, allowances or other price-related benefits offered by sellers to buyers in exchange for some form of loyalty in the purchases they make. The strongest form of loyalty programs offer price concessions in exchange for exclusivity or for a substantial portion of a customer's business. However, traditional volume rebates and frequent-purchasing reward programs also provide buyers with incentives to increase their purchases from a seller and may be subject to review under the Act.[3]

Loyalty programs are usually pro-competitive. They directly benefit customers through lowering prices and can be an important form of competition between suppliers. They may also generate efficiencies for customers and/or for the supplier offering the loyalty discount. For example, they may encourage the supplying firm to invest in development and/or marketing of additional products.[4] Similarly, they may incentivize distributors or other resellers to promote the supplier's products more vigorously. However, in certain circumstances loyalty rebates may create, preserve, or enhance market power – most notably by raising rivals' costs or strengthening barriers to expansion or entry.[5] Such situations may be subject to review under the exclusive dealing and/or abuse of dominance provisions of the Act.[6] The history of enforcement activity under both provisions has been sparse, which is consistent with a legal framework that limits intervention to situations where there is injury both to current or potential *competitors* and to *competition* in the market as a whole.

2. Overview of the Legal Framework

In 1975, the "Stage I Amendments" overhauled significant portions of the *Combines Investigation Act*.[7] The "archaic and ineffective" criminal monopolization offence was replaced by various "reviewable practices," including exclusive dealing. Such provisions treat conduct that is only occasionally anti-competitive as subject to review and remedial orders, rather than as violations.[8]

The "Stage II Amendments" completed the modernization of Canada's competition laws in 1986.[9] The changes included a new reviewable practice of abuse of dominant position and the establishment of a Competition Tribunal (the "Tribunal") to adjudicate reviewable practices applications brought by the Director of Investigation and Research (subsequently re-named the Commissioner of Competition (hereinafter "the Commissioner")) under the Act.

While loyalty rebates are not expressly referred to in the Act, they may be reviewable as exclusive dealing and/or as an abuse of dominant position.[10] There are substantial similarities but also a few important differences between these provisions.

(a) Exclusive dealing

Exclusive dealing is specifically dealt with in section 77 of the Act,

along with tied selling and market restriction. The policy consideration behind this provision has been described as addressing conduct that "deprives the market of products which are in demand and which would produce needed price competition in the market".[11]

The Act defines exclusive dealing as:

> (a) any practice whereby a supplier of a product, as a condition of supplying the product to a customer, requires that customer to
>
> > (i) **deal only or primarily** in products supplied by or designated by the supplier or the supplier's nominee, or
> >
> > (ii) refrain from dealing in a specified class or kind of product except as supplied by the supplier or the nominee, and
>
> (b) any **practice** whereby a supplier of a product **induces** a customer to meet a condition set out in subparagraph (a)(i) or (ii) by offering to supply the product to the customer on more favourable terms or conditions if the customer agrees to meet the condition set out in either of those subparagraphs;[12]

Subsection 77(2) sets out the elements that the Commissioner (or a private applicant[13]) is required to prove in an exclusive dealing case as well as the available remedies:

> 77.(2) Where, on application by the Commissioner or a person granted leave under section 103.1, the Tribunal finds that exclusive dealing or tied selling, because it is engaged in **by a major supplier** of a product in a market or because it is widespread in a market, is likely to
>
> > (a) **impede entry** into or **expansion** of a **firm** in a market,
> >
> > (b) **impede introduction** of a product into or **expansion** of sales of a **product** in a market, or
> >
> > (c) have any other **exclusionary effect** in a market,
>
> with the result that competition is or is **likely to be lessened substantially**, the Tribunal may make an order directed to all or any of the suppliers against whom an order is sought prohibiting them from continuing to engage in that exclusive dealing or tied selling and containing any other requirement that, in its opinion, is necessary to overcome the effects thereof in the market or to restore or stimulate competition in the market.[14]

(b) Abuse of dominance

Sections 78 and 79 were introduced to address anti-competitive unilateral conduct that was not specifically covered by other reviewable distribution practices in Part VIII of the Act. The Commissioner (but not private parties) may apply to the Tribunal for a remedial order where a firm (or group of firms) with a dominant position engages in anti-competitive conduct to preserve or enhance market power. More precisely, subsection 79(1) sets out three required elements that comprise an abuse of dominant position:

> 79 (1) Where, on application by the Commissioner, 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 or are engaging 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.[15]

(c) Analytical framework

There are significant parallels between subsections 77(2) and 79(1). As stated by the Federal Court of Appeal ("FCA") in *Canada Pipe*:[16]

> First, both provisions require an initial determination that the firm in question occupies a position of dominance: subsection 77(2) refers to a "major supplier of a product in a market", while paragraph 79(1)(a) requires that "one or more persons substantially or completely control... a class or species of business". Second, both provisions call for the identification of a particular type of conduct, namely a practice of exclusive dealing with an exclusionary effect in the case of ss.77(2), and a practice of anti-competitive acts in the case of ss.79(1). Third, both provisions require a finding of actual or likely substantial lessening of competition.[17]

The chart below provides a comparison of the required elements as well as the available remedies under the two provisions:

Element		Exclusive Dealing	Abuse of Dominant Position
Market Position of Supplier	**Single Firm**	Major supplier of a product in a market	Substantially controls a class or species of business anywhere in Canada (dominant position)
	Multiple Firms	The practice is widespread in a market	Multiple firms could collectively have substantial control of a class of business (joint dominance)
Loyalty-generating Conduct	**Supplier Action**	Requiring or inducing a customer to deal only or primarily in products supplied by the supplier[18]	Engaging in anti-competitive acts (including the non-exhaustive list in section 78)
	Frequency of Conduct	Practice	Practice
	Relationship between Conduct and Competitors	Likely to: (a) impede entry into or expansion of a firm in a market, (b) impede introduction of a product into or expansion of sales of a product in a market, or (c) have any other exclusionary effect in a market (Purpose is irrelevant)	Generally interpreted as acts which have an exclusionary, entry-deterring or predatory purpose targeted at competitors (Negative effects on a competitor are not required)
Harm to Competition		Competition is likely to be lessened substantially	Likely to have the effect of preventing or lessening competition substantially in a market

Remedies	**Primary Remedial Order**	Prohibition order	Prohibition order
	Additional Remedial Orders	Any other condition necessary to overcome the effects of the practice in the market or to restore or stimulate competition in the market	Any order to take such actions, including the divesture of assets or shares, as are reasonable and as are necessary to overcome the effects of the practice
	Penalties	Not available	Up to $10,000,000 (and for each subsequent order, up to $15,000,000)
	Private Right of Action	Private parties may apply for leave to make an application to the Tribunal if they are directly and substantially affected by exclusive dealing[19]	Not available

The remainder of this paper is organized around the parallel structure of the two provisions. We discuss the two key cases dealing with loyalty rebates (*Canada Pipe*[20] and *NutraSweet*[21]) in this framework since both were brought under sections 77 and 79 of the Act. While the exclusive dealing provision only applies to sellers, not buyers, buyer-side exclusivity practices may also be covered by the abuse of dominance provisions.[22] Accordingly, we discuss the treatment of such practices as an abuse of dominance in the *D&B Companies*[23] case. Before doing so, we provide a brief factual overview of the *NutraSweet*, *Canada Pipe* and *D&B Companies* cases.

(d) *NutraSweet*

NutraSweet was the first abuse of dominance case before the Tribunal. The conduct at issue involved supply contracts between NutraSweet and purchasers of aspartame. NutraSweet also offered trademark and logo display and marketing allowances to its customers. These practices were

challenged on the basis that they created exclusive supply relationships and impeded Tosoh, the only other aspartame supplier, from competing effectively. NutraSweet was also alleged to be selling below its acquisition cost.

The Tribunal found that NutraSweet substantially controlled, through its market power, the sale of aspartame in Canada. Further, NutraSweet engaged in a number of anti-competitive acts, including the logo display allowances and cooperative marketing allowances which induced exclusive supply relationships. As a result, competition was prevented or lessened substantially.[24] The Tribunal issued an order prohibiting NutraSweet from entering into or enforcing the contract terms in question with Canadian customers unless those terms also appeared in contracts between NutraSweet and any competitors of those Canadian customers.[25]

(e) *Canada Pipe*

Canada Pipe was the leading supplier of cast-iron drain, waste and vent ("DWV") products to distributors in Canada. These distributors in turn sold the DWV products to contractors for use in construction projects. Canada Pipe offered a Stocking Distributor Program (the "SDP") which provided quarterly and annual percentage rebates to distributors. In return, the SDP required that distributors must stock only cast-iron DWV products supplied by Canada Pipe. The SDP did not require a minimum purchase beyond a threshold amount, and the rebates were the same in value regardless of size of purchase. Distributors were permitted to opt out of the program without penalties other than foregoing the rebates.

The Commissioner filed an application to the Tribunal under the exclusive dealing and abuse of dominance provisions alleging that the SDP: (i) was anti-competitive, (ii) gave Canada Pipe the ability to set prices above competitive levels, (iii) deterred new entry and expansion of competitors in the relevant markets, and (iv) allowed Canada Pipe to exercise its market power.[26] The Tribunal concluded that Canada Pipe had a dominant position in six relevant geographic markets for the sale of DWV products.[27] However, it had not engaged in a practice of anti-competitive acts, and in any event, there had not been any substantial lessening or prevention of competition attributable to the SDP.[28]

The majority of the FCA upheld the Tribunal's conclusion with respect

to market power.[29] However, the FCA set aside the Tribunal's decision on the basis that it had erred in applying the legal tests under the exclusive dealing and abuse of dominance provisions. The FCA therefore sent the matter back to the Tribunal for redetermination.[30]

Prior to the redetermination hearing, the Commissioner and Canada Pipe negotiated a 5-year consent agreement settlement.[31] Canada Pipe agreed to offer a modified rebate program to distributors in Canada as an alternative to the SDP (which was permitted to continue). The modified option provided rebates and multiplier discounts to distributors meeting a minimum purchase requirement, but was not conditional on exclusive purchases of DWV products from Canada Pipe. The consent agreement also required that the rebates under the SDP not exceed those available under the modified rebate program.[32]

(f) *D&B Companies*

D&B Companies addressed loyalty-inducing practices in the context of buyer-side fidelity rebates. The case involved the supply of scanner-based market tracking services in Canada. D&B Companies, which carried on business as A.C. Nielsen, used contracts which offered retailers significant financial inducements for exclusive access to the scanner data. It also entered into long-term contracts with manufacturers of consumer packaged goods for the supply of scanner-based market tracking services.[33]

The Tribunal concluded that Nielsen had a dominant position. It determined that the long-term manufacturer contracts, along with the exclusive arrangements for access to scanner data, were intended to exclude potential competitors generally and one US-based competitor, Information Resources, Inc., specifically. These anti-competitive acts were found to have resulted in a substantial prevention or lessening of competition in the Canadian market for scanner-based market tracking services. Accordingly, the Tribunal issued an order prohibiting Nielsen from, among other things, entering into future contracts containing exclusivity clauses and enforcing exclusivity provisions in its existing contracts.[34]

3. Significance of Supplier's Market Position

Under both sections 77 and 79, loyalty-inducing conduct is only of concern if the supplier has a relatively significant market position. It is generally believed that the "major supplier" requirement for

exclusive dealing is a lower threshold than the holding of a dominant position. However, it is not clear whether some degree of market power is required.[35] In any event, both provisions require that a relevant market must be defined.[36]

(a) Market position of supplier

The definition of "major supplier" was considered by the Restrictive Trade Practices Commission ("RTPC") in *Director of Investigation and Research v. Bombardier Ltd*:[37]

> A major or important supplier is one whose actions are taken to have an appreciable or significant impact on the markets where it sells. Where available, a firm's market share is a good indication of its importance since its ability to gain market share summarizes its capabilities in a number of dimensions. Other characteristics of a supplier which might also be used in assessing its importance in an industry are its financial strength and its record as an innovator. However, the characteristics which are most relevant will vary from industry to industry.[38]

The RTPC referred to the share of sales of snowmobile products held by Bombardier in Quebec and the Maritimes (60%) and Ontario (40%). Further, the RTPC observed that Bombardier held a strong market position in a large number of local markets based on its successes in recruiting strong dealerships. It determined that Bombardier "is undoubtedly a major supplier at the distributor level".[39] Bombardier was also found to be a major supplier at the retail level of the geographic regions in question.[40] While the term "market power" was not used in this 1980 decision, we expect that under the modern approach to that concept, Bombardier might have been regarded as having market power because of its high market shares, subject to consideration of whether there were also material barriers to entry into these markets.

The *Bombardier* approach was endorsed by the Tribunal in *NutraSweet*.[41] Once the relevant product and geographic market were defined, the Tribunal found that it was not necessary to look beyond the respondent's extremely large market share (over 95%) and share of production capacity in order to conclude that The NutraSweet Company ("NSC") was obviously a major supplier in the Canadian aspartame market.[42] The Tribunal also concluded that NutraSweet had market power.[43]

The FCA in *Canada Pipe* did not discuss the definition of "major supplier" under subsection 77(2) in detail. However, it did note that market

definition and market power were integral elements in determining whether the respondent was a "major supplier".[44] We expect that the major supplier requirement will be interpreted as requiring some degree of market power, even if the level is not as significant as for a dominant position.[45]

(b) Relevant product market

The statutory language in subsection 77(2) explicitly requires that a "market" be defined. While the term is not used in the abuse of dominance provision, the phrase "class or species of business" in paragraph 79(1)(a) has been interpreted to mean the relevant product market.[46]

In determining the relevant product market, an assessment of "whether there exist sufficiently close substitutes to the product at issue, such that the market for that product includes those substitutes" must be undertaken.[47] The FCA in *Canada Pipe* agreed with the holding in *Southam*[48] that an assessment of substitutability should consider available direct and indirect evidence. Direct evidence may include statistical evidence of buyer price sensitivity and anecdotal evidence, as well as buyers' testimony on previous or hypothetical responses to price changes. Indirect evidence includes the extent of functional interchangeability and industry views or behavior.[49] The Tribunal in *D&B Companies* agreed that where direct evidence of switching behavior in response to small changes in relative price is unavailable, it is necessary to examine other evidence regarding both buyers' and suppliers' characteristics.[50]

The FCA in *Canada Pipe* ultimately found that the Tribunal's conclusions on the relevant product market were reasonable. They were based on indirect evidence such as "views, strategies, behaviors and identity of buyers" (evidence that cast iron offered advantages of meeting all requirements for fire and life safety purposes), "end-use and physical characteristics" (the durability and lower level noise of cast iron), and "price relationships and relative price levels" (evidence that Canada Pipe reacted to new entry by aggressively lowering its prices). Similarly, the Tribunal in *NutraSweet* defined the relevant product market narrowly as aspartame based on a lack of evidence of direct competition between aspartame and caloric sweeteners, as well as very weak evidence of indirect competition between diet and full-caloric products.[51] The Tribunal in *D&B Companies* examined evidence on the timeliness, detail, accuracy, reliability and cost of collection of retail sales data as well as the extent to which product movement data can be combined with casual

data and ultimately concluded that the relevant product market was scanner-based market tracking services.[52] In all three cases, the scope of the product market was generally consistent with the products covered by the loyalty-related conduct, although this need not always be the case.

(c) Geographic market

While the term "market" in the exclusive dealing provision does not specifically mention a geographic dimension, it is generally recognized that this is a fundamental aspect of defining a relevant market. Similarly, the phrase "throughout Canada or any area thereof" in the abuse of dominance provision has been interpreted as referring to the identification of a relevant geographic market.[53]

More specifically, the process of geographic market definition has been interpreted as "an attempt to determine the extent of the territory where there is competition and in which prices for a product tend to uniformity".[54] In considering whether an area should be included in the relevant geographic market, the primary analysis is whether it is "sufficiently insulated from price pressures emanating from other areas so that its unique characteristics can result in its prices differing significantly for any period of time from those in other areas."[55]

In *NutraSweet*, the Tribunal concluded that Canada was a separate geographic market for the purposes of evaluating the effects of the company's marketing practices based on country-specific clauses in multi-country contracts along with average price differences across multiple jurisdictions.[56] In *D&B Companies*, the Director alleged that the relevant market was Canada, which was not disputed by the respondent.[57] In *Canada Pipe*, the Tribunal concluded that there were six geographic markets within Canada, primarily based on significant price variations between regions and differences in the extent of effective competition in the various areas.[58] The SDP operated more broadly than the six problematic geographic markets, in contrast to *NutraSweet* and *D&B Companies* where the geographic scope of the market and the exclusivity were aligned.

(d) Market power

The concept of "control" of a class of business under paragraph 79(1)(a) has repeatedly been interpreted as being synonymous with market power.[59] Market power is generally interpreted to mean "an ability to set prices above competitive levels for a considerable period".[60]

The FCA in *Canada Pipe* recognized that "market power is not an easy concept to handle".[61] A direct approach, such as showing that prices or profits are actually above the competitive levels, is not always readily available. In those circumstances, the Tribunal must consider indirect approaches using indicia such as market share, barriers to entry and customer countervailing power in order to determine whether market power exists.[62]

The Tribunal made a determination of market power in *Tele-Direct* based in part on evidence of large accounting profits.[63] However, in *D&B Companies* and *NutraSweet*, among other cases, there was insufficient evidence to use the direct approach.[64] Similarly, the Tribunal found that evidence of high margins in *Canada Pipe* was incomplete (e.g. it only dealt with two of the three products in question). As a result, the Tribunal proceeded to consider evidence under the indirect approach: barriers to entry, large market share, range of products, national presence, the limited penetration of competitors and the fact that the market offered only limited growth potential. This led the Tribunal to conclude that the respondent did control a substantial part of (i.e. possess market power in) six cast-iron DWV geographic markets.[65]

The FCA in *Canada Pipe* stated that while "a large market share leads to a prima facie conclusion that the firm likely has market power", evidence of market share alone is not sufficient to support a finding of market power if barriers to entry are non-existent.[66] Evidence of significant entry into the market can demonstrate that barriers are not problematic, provided that "[e]ntry, of course, must be both effective and viable to be significant".[67]

In *Canada Pipe*, the Tribunal considered evidence of barriers to entry such as sunk costs, cost of entry, incumbent advantage and the SDP itself. The Tribunal found that while distributors and contractors maintained some leverage, countervailing power was weak because Canada Pipe had been able to maintain its SDP for an extended period of time despite large distributors' preferences for a volume-based rebate.[68] The evidence on barriers to entry was not conclusive. However, Canada Pipe's large market share, range of products and national presence, as well as the limited penetration of competitors, were the basis on which the Tribunal concluded that it did control a substantial part of the six cast iron DWV markets.[69] The majority of the FCA upheld these findings of the Tribunal as reasonable.[70]

In *NutraSweet*, the Tribunal found NutraSweet's very high market share (over 95% of sales in Canada) along with the entry conditions and certain constraints affecting its largest customers (i.e. that Coke and Pepsi would be critically dependent on NutraSweet after the United States use patent expired because they would have to rely on NutraSweet for significant volumes of a highly important input) as sufficiently compelling evidence that "control" was clearly substantial.[71]

Similarly, the Tribunal in *D&B Companies* found that Nielsen *prima facie* had market power after observing that "there is no dispute that Nielsen is the sole supplier in the relevant market and thus has a 100 percent market share".[72] The Tribunal also noted that entry possibilities had been affected by the anti-competitive acts of Nielsen. In addition, survey evidence from customers supported a conclusion of market power. The customers expressed concerns about their position vis-à-vis Nielsen, which the Tribunal would not have expected if the customers were confident that they could look after their own interests.[73]

The evidence relevant to control or market power under paragraph 79(1)(a) may overlap with the examination of the alleged anti-competitive acts and their effects under paragraph 79(1)(b) and the assessment of whether there is a substantial lessening of competition under paragraph 79(1)(c). As the FCA commented in *Canada Pipe*, the same evidence might be "potentially and unavoidably relied upon at several points in the analysis, in respect of different requisite elements".[74]

The Tribunal in *Canada Pipe* struggled with the tension between the requirement to consider whether the SDP, which was the alleged practice of anti-competitive acts, also constituted a barrier to entry contributing to control or market power. Ultimately, the Tribunal found that the evidence on the barriers to entry was not conclusive and was therefore not convinced that the SDP program impeded expansion by competitors in the absence of evidence from them in the form of business plans, financial forecasts or sales projections. While the Tribunal was satisfied that the SDP had an impact on the marketplace, it did not find direct evidence to support the conclusion that the SDP was a barrier to entry. Evidence of entry after the implementation of the SDP led the Tribunal to note that entry was possible, even though the possibilities were limited somewhat by the respondent's considerable market share.[75] Based on the foregoing analysis, the Tribunal concluded that the SDP was not a practice of anti-competitive acts. However, this finding was overturned by the FCA and

remanded for reconsideration on the basis that the Tribunal misapplied the legal test for paragraph 79(1)(b).[76]

4. Anti-competitive Conduct

The second element under either section 77 or 79 involves an analysis of whether the conduct is anti-competitive. For loyalty-generating conduct, the focus will be on whether the conduct induces (or requires) a customer to deal only or primarily in products supplied by the supplier. However, there is an important difference: anti-competitive conduct is assessed based on *effects* on a competitor for exclusive dealing but with reference to *purpose* or intent to injure a competitor for abuse of dominance.

(a) Loyalty-generating conduct

The reviewable practice of exclusive dealing covers both contractual (or what might be termed "coercive"[77]) exclusivity and inducements to exclusivity.[78] In general, loyalty rebates will be examined under the inducement branch since the customer will have the option of obtaining the rebates by choosing to meet the qualifying conditions.

The exclusive dealing provisions explicitly contemplate that partial exclusivity may be sufficient: reviewable conduct arises where a supplier requires or induces a customer "to deal only or primarily in products supplied by the supplier".[79] Full exclusivity will be readily identifiable, but it is not yet clear what "primarily" will be interpreted to mean in practice. It is important to note that the "primarily" requirement is part of the definition of exclusive dealing. It is therefore assessed at the level of the supplier's dealings with individual customers, and is a necessary prerequisite before reaching the broader issue of whether there is a sufficient degree of foreclosure of competitors or prospective entrants.[80]

In *NutraSweet*, the Tribunal accepted that the various financial incentives provided to customers (as well as the exclusivity clause in customer contracts[81]) constituted exclusive dealing within the meaning of paragraph 77(1)(b) because "the customers clearly agreed to deal only or primarily in the products of NSC and in return received various rebates whose existence depends on exclusive use of NutraSweet brand aspartame."[82] Similarly, trademark display or logo display allowances required customers to display the NutraSweet name and logo on their packaging and in print and television advertising featuring products containing

NutraSweet-branded aspartame in return for substantial discounts from the gross price of the aspartame. Cooperative marketing allowances provided a further per pound discount to customers for support of marketing programs that promoted products of the customer containing only NutraSweet-branded aspartame.[83] Since the conduct generally resulted in full exclusivity, the Tribunal did not need to interpret the meaning of "primarily".[84]

While there is no specific reference to loyalty-generating conduct by suppliers in the non-exhaustive list of anti-competitive acts enumerated in section 78, there is a reference to a purchaser obtaining exclusivity from suppliers:

> (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;[85]

Given the similarity between this paragraph and the definition of exclusive dealing, it is likely that loyalty-generating conduct by suppliers will be assessed similarly under section 79 as it is under section 77.

D&B Companies involved a purchaser requiring upstream sellers not to sell to any competing downstream purchasers. The Commissioner alleged that Nielsen's practice of signing exclusive contracts for scanner data with retailers and offering significant financial inducements for such exclusive access were exclusionary practices.[86] Again, it was not necessary to interpret the term "primarily" because there was full exclusivity.

In 2002, the Commissioner investigated IKO Industries Ltd. (at the time Canada's largest manufacturer of asphalt roofing products) in connection with its policy of giving distributors loyalty rebates on residential asphalt roofing shingles. The rebates were viewed as an abuse of IKO's dominant market position which impeded the entry and expansion of competitors. To address the Commissioner's concerns, IKO agreed to modify its rebate program to give customers a choice between the type of loyalty rebates it had been using and volume-based rebates, and that the level of rebates would vary in the modified loyalty program with the volume of percentage of shingles purchased from IKO. According to the Bureau, these modifications diminished the incentive to exclusivity inherent in the original loyalty rebates.[87] However, the summary of this case resolution (which was not memorialized in a consent agreement) does not provide any guidance on the "primarily" test.

In summary, there has not been any significant jurisprudence regarding the "only or primarily" element of section 77. Situations where a customer purchases all of its requirements from a supplier in exchange for a loyalty rebate will of course satisfy the "only" branch of this test – even though the result in the market at large may only be partial foreclosure, depending on the extent to which customers choose to participate in or forego the loyalty program. However, it is unclear whether primarily might mean "close to all" (e.g. perhaps 90% or more), "a majority" (i.e. any level above 50%) or somewhere in between (e.g. a substantial proportion such as ⅔ or ¾). Given that the degree of overall market foreclosure may be considerably less than the fraction of purchases of an individual customer that are captured through loyalty rebates, we would suggest that a relatively high volume threshold (e.g. at least 75%) should be employed for the "primarily" test. In the extreme case where the supplier is selling to 100% of the customers in the market, a supplier which does not induce those customers to obtain at least 75% of their purchases through its loyalty mechanism will have left rivals with at least a 25% plus market share. In the more likely scenario where the supplier is only selling to a portion (e.g. 80%) of customers in the market, failure to achieve at least 75% of individual customers' purchases through loyalty inducements will leave a correspondingly larger market share for rivals (e.g. 20% + (25% × 80%) = 40%).

(b) Relationship between the conduct and the supplier's rivals

The FCA in *Canada Pipe* did not find it necessary to assess the differences between the provisions in paragraphs 77(2)(a)-(c) and 79(1)(b) which require a link between the conduct of the supplier and its impact on current or potential future rivals.[88] Both contemplate that any type of exclusionary effect could be relevant, which would include the use of loyalty rebates to disadvantage rivals through complete or substantial foreclosure of customers. However, paragraphs 77(2)(a)-(c) require that the conduct must have an exclusionary *effect*[89] whereas the concept of an anti-competitive act under paragraph 79(1)(b) focuses on the *purpose* of the conduct.

(i) Exclusionary effects

The exclusionary *effects* element of the exclusive dealing provision is "clearly of a relative nature, as indicated by use of the word 'impede' in paragraphs 77(2)(a) and (b), rather than a more categorical verb, such as 'prevent'".[90] The FCA in *Canada Pipe* emphasized that the Tribunal must

not limit itself to considering barriers to entry and the effects of the loyalty program (as would be the focus from the perspective of prevention).[91] Rather, the proper analysis should be based on a broader perspective implied by the word "impede" or "lessening", which would involve a consideration of "whether, in each of the relevant markets, competitiveness was substantially lessened in the presence of the SDP, as compared to the likely state of competition in the absence of this practice."[92]

Evidence of exclusionary intent without any actual effect would not be sufficient to justify a remedial order under section 77. Conversely, lack of exclusionary intent is not a defense if loyalty rebates (or other forms of exclusive dealing) impede or exclude a rival. Unfortunately, the degree of impeding or excluding has not been clarified in the case law to date. In our view, a meaningful materiality standard must be implicit in these terms; otherwise, competitors would be able to use (or threaten to use) section 77 whenever facing even modest competitive pressure from loyalty rebates offered by a major supplier.

(ii) Exclusionary purpose

The purpose or character of the impugned conduct must be determined as part of the legal test under paragraph 79(1)(b). Section 78 provides a non-exhaustive list of anti-competitive acts which all focus on purpose, rather than effects. Moreover, as the FCA noted in *Canada Pipe*, all of the acts (with the exception of paragraph 78(f)), reference a purpose which involves an "intended negative effect on a competitor that is predatory, exclusionary or disciplinary".[93] More recently, the Tribunal in *TREB* has held that the word "competitor" is not restricted to competitors of the respondent allegedly engaging in an abuse of dominance.[94] This has emboldened the Commissioner to challenge conduct by the Vancouver Airport Authority (the "VAA") that allegedly affects competition between suppliers in a market in which the VAA does not compete.[95]

Some commentators have expressed concern that the approach adopted by the FCA places undue emphasis on the "protection of competitors" instead of the "protection of competition".[96] However, as the FCA made clear in *Canada Pipe*, there is a separate requirement to consider competition in paragraph 79(1)(c). In other words, what gives rise to "abuse" of a dominant position is conduct that is targeted at a competitor, but there must also be a substantial negative effect on competition in the market in order for the conduct to be actionable.[97]

Loyalty programs that are designed to create or strengthen barriers to expansion or entry may be viewed as having an exclusionary purpose. For example, if a loyalty program is established to discourage most of the buyers in a market from trading with a rival supplier, the rival may have difficulty making sales or its costs to acquire or retain sales may significantly increase. Loyalty programs may also be designed to increase customer switching costs and make it materially more difficult for rivals to compete for customers and thereby increase a rival's costs. However, loyalty programs could also have these effects when a supplier does not have these improper purposes and is simply pursuing the ordinary incentive that firms have (and that is normally pro-competitive) to increase sales.

Subjective intent is not required to establish an anti-competitive purpose under paragraph 79(1)(b).[98] As a result, proof of an intended negative effect on a competitor may be established either directly through evidence of subjective intent, or indirectly through reasonably foreseeable consequences of the acts themselves and the circumstances surrounding the acts.[99]

A finding of a link between the nature of the conduct and a decrease in competition is not necessary under paragraph 79(1)(b).[100] In considering whether the SDP was an anti-competitive act, the Tribunal had focused on four issues: the contractual nature and binding effect of the SDP, business justifications asserted by Canada Pipe, the impact of the SDP on competitors, and switching costs.[101] However, the FCA held that the Tribunal incorrectly focused on whether there was a decrease in competition in the market when assessing the SDP, instead of focusing on the act itself to discern its purpose. The relationship between the conduct and the competitor(s) under section 79(1)(b) is ultimately whether "the act displays the requisite intended effect on *competitors*; it is not directly concerned with the state of *competition* in the market or the general causes thereof."[102] While this approach has been prescribed by the FCA within the context of the "anti-competitive act" element of the analysis, it is important to recognize that there is also a causality requirement that must be established between this element and the separate requirement of a substantial lessening or prevention of competition.

In *NutraSweet*, the Tribunal found that exclusive supply agreements, including the trademark display allowances and cooperative marketing allowances, had an exclusionary purpose. In the Tribunal's view, these

allowances created an "all-or-nothing" choice: if customers did not want to commit to using the NutraSweet logo or sourcing all of their aspartame needs from NutraSweet, they were forced to go to another supplier for all of their supply needs because purchasing without the discounts would be too expensive. As a result, new suppliers would need to be sufficiently established in order for customers to entrust them with all of their supply needs.[103]

The meet-or-release clauses in the exclusive supply agreements involved a more complex analysis. The Tribunal found that such clauses were sought by the two largest customers, Coke and Pepsi, but that the clauses were helpful to NutraSweet in making exclusivity more acceptable and that they "serve as an inducement for customers to enter into exclusive agreements".[104] Tosoh claimed that the meet-or-release clauses effectively gave NutraSweet an advantage over its competitors, and the Tribunal ultimately found that the purpose of the clause was to discourage competitors from submitting bids since they knew that NutraSweet would be provided with an opportunity to meet any price submitted by its competitors.[105]

In *D&B Companies*, the Tribunal found that the exclusive scanner data contracts, which required that retailers not provide the data covered by the contract to anyone other than Nielsen, were intended to prevent potential competitors from obtaining the data needed to offer scanner-based market research that would compete with Nielsen's services. This finding was based on various evidence including Nielsen's strategy of staggering contract renewals. In the Tribunal's view, staggering increased Nielsen's bargaining position vis-à-vis retailers and demonstrated an intention to deter would-be competitors from entering the market because data from most of the major retail chains was essential to compile useful market research offerings for consumer products manufacturers. The Tribunal also considered "preferred supplier" clauses in some of Nielsen's contracts and determined that their purpose was the same as the contractual exclusivity provisions, namely to exclude potential competitors.[106]

In a submission to the OECD Competition Committee Roundtable on Airline Competition, the Bureau noted that frequent flyer loyalty programs in the airline industry may have anti-competitive implications. The Bureau cautioned that loyalty programs with predatory features might be considered anti-competitive. For example, an increase in frequent flyer miles beyond what a dominant carrier would normally offer in similar

circumstances may be viewed as having the intention and purpose of eliminating or disciplining smaller competitors or new entrants.[107]

In 2001, the Commissioner brought an abuse of dominance application, alleging that Air Canada engaged in predatory conduct on a number of passenger airline service routes.[108] The Commissioner alleged that Air Canada's frequent flyer program was a key feature that made Air Canada's services more attractive to consumers than those offered by its domestic competitors and contributed to barriers to sustainable entry.[109] According to the Commissioner, Air Canada's policy of matching the prices charged by low cost carriers (e.g. WestJet) coupled with other advantages such as the Aeroplan loyalty program forced WestJet to choose between losing a substantial portion of its passengers to Air Canada or further lowering its prices (essentially a "reducing rivals' revenues" theory of harm).[110] The application was bifurcated, with the first phase focusing on whether Air Canada's prices were predatory (i.e., below its avoidable cost). Although the Tribunal concluded that some fares were below avoidable cost, it did not specifically address the loyalty program in its analysis.[111] The Commissioner then discontinued the application before the phase two hearing on dominance and competitive effects as a result of Air Canada's filing for protection from bankruptcy.[112]

(c) Business justification

The FCA in *Canada Pipe* has stated that the business justification doctrine is not an absolute defence to an alleged abuse of dominant position.[113] Rather, it is a factor in determining whether the overriding purpose of the impugned conduct is an anti-competitive act or whether there is a non anti-competitive explanation as to why the practice was pursued.[114] A valid business justification must have "a credible efficiency or pro-competitive rationale for the conduct in question, attributable to the respondent, which relates to and counterbalances the anti-competitive effects and/or subjective intent of the acts".[115] In other words, proof of a business justification for the conduct from the respondent might rebut the "deemed intention" arising from the actual or foreseeable effects of conduct that is alleged to be anti-competitive.[116]

While there is no formal efficiencies defense for abuses of dominant position (or exclusive dealing),[117] efficiencies can provide a business justification if they are credible. The Tribunal will consider whether documentary and other available evidence demonstrate that the overall purpose of conduct such as a loyalty program is based on efficiency goals

or other legitimate business justifications. For example, Canada Pipe argued that its SDP effectively leveled the playing field between small and large distributors because the rebates were not based on volume of sales. It also argued that the SDP allowed customers to stock a variety of products, including those that would not otherwise be available but for the efficiencies generated by the SDP, which in turn allowed Canada Pipe to maintain a full line of such products. The Tribunal accepted the latter argument,[118] but was overturned on the point. The FCA held that a business justification must also be attributable to the respondent, because "it is the latter's allegedly anti-competitive conduct which is sought to be explained" and that the Tribunal's reasons did not establish the requisite efficiency-related link between the SDP and the respondent.[119] In doing so, it appears to have held that the consumer welfare benefits asserted by Canada Pipe were insufficient to establish a valid business justification on their own.

The FCA's approach to the business justification issue appears to be unnecessarily narrow. Businesses often strive to provide price and non-price benefits to their customers to encourage expanded or repeat business, and such activity is generally pro-competitive. There is no good reason why, as a matter of principle, actions must be shown to benefit the supplier in addition to its customers. Moreover, in applying this principle to the case at hand, the FCA gave short shrift to the Tribunal's finding that the SDP assisted Canada Pipe in ensuring that a full range of products were available to its customers, and that this was beneficial to distributors and their customers as well as to Canada Pipe.[120] As stated by Musgrove and Szentesi, "Canada Pipe was doing so to meet legitimate customer needs – which would appear to be more properly characterized as effective competition on the merits than inappropriate exclusionary conduct."[121]

The *NutraSweet* and *D&B Companies* decisions (which pre-date the FCA's decision in *Canada Pipe*) provide little additional insight into business justifications. The Tribunal disagreed with the respondent's submission in *NutraSweet* that exclusivity allowed for lower inventory costs than if each customer had to look after its own needs, as per-unit inventory costs are less when inventories are centrally managed. The Tribunal concluded that this claim was not an "efficiency defence" as it could always be claimed the risk and cost of holding plant and inventory are reduced if there is a single supplier rather than several.[122] Absent evidence that an industry has special characteristics that would make this

claimed source of cost savings important, the Tribunal did not see any reason to give the submission any weight.[123] In *D&B Companies*, the Tribunal considered the commercial interests of both parties to the conduct in question and the resulting restriction on competition. The Tribunal did not find any non-anti-competitive rationale for Nielsen's conduct.[124]

5. Effects on Competition

The language in paragraphs 77(2)(c) and 79(1)(c) is very similar although not identical. The Tribunal in *NutraSweet* viewed the legal test under these two provisions to be the same.[125] The FCA in *Canada Pipe* was generally receptive to this approach, but noted that there are differences that could be relevant in particular situations such as the time frame for the assessment.[126] There is also a surprising difference in the treatment of preventions of competition. However, the need for a "but-for" comparative analysis and the main contours of "substantiality" are common to both and have now been clarified significantly in the jurisprudence.

(a) Time frame

Paragraph 79(1)(c) of the Act requires that the "practice *has had, is having or is likely to have* the effect of preventing or lessening competition substantially in the market".[127] In contrast, paragraph 77(2)(c) states that "competition *is or is likely* to be lessened substantially".[128] As a result, the FCA held in *Canada Pipe* that the abuse of dominance provision encompasses past conduct, whereas the reviewable practice of exclusive dealing does not extend to conduct that is no longer occurring.[129] This is consistent with the possibility that administrative monetary remedies can be imposed for an abuse of dominant position, but not for exclusive dealing. In the absence of such a remedy, there would be little purpose to be served by bringing a case related to conduct which is no longer occurring.

(b) Prevention of competition

Paragraph 79(1)(c) references prevention and lessening of competition, whereas paragraph 77(2)(c) only mentions lessening of competition. In practice, this difference between the two provisions has not yet been of any significance. In cases that involve lessening of competition, the phrase "substantial lessening of competition" has been interpreted in the

same manner for both exclusive dealing and abuse of dominance (as well as in the merger provisions, which also use this test[130])[131].

"Prevention of competition" generally refers to situations where competition would be likely to increase in the future (e.g. as a result of expansion, entry of new firms or innovation).[132] It is certainly possible that anti-competitive acts which are exclusionary in nature (e.g. loyalty rebates which effectively lock up all or most of the customers in a market) can prevent expansion or entry or the introduction of improved products or technologies by current or potential competitors. Preventions of competition arising from these types of anti-competitive acts are covered by paragraph 79(1)(c).

There would be no logical reason to omit prevention scenarios from the exclusive dealing (or tied selling) provisions in the Act. While Parliament has done so in the literal wording of subsection 77(2), and it is generally presumed that differences in legislative wording are intentional,[133] in this situation it appears that there may simply have been a drafting slip. This is evident from the wording of paragraphs 77(2)(a) and (b), which explicitly refer to impeding the introduction of an entity or expansion of a firm, or the entry into or expansion of sales of a product in a market.[134]

In *NutraSweet*, the Tribunal adopted the approach employed by the RTPC in *Bombardier* in its analysis of how a substantial lessening of competition in the market would be assessed under subsection 77(2):

> Whether exclusive dealing by a supplier impedes expansion or entry of competitors in the market is most easily and meaningfully considered **as part of the determination** of whether there is or is likely to be a **substantial lessening of competition** as a result of the practice.[135]

The Tribunal in *NutraSweet* did not undertake a separate analysis under section 77(2) on the basis that "the fundamental test of substantial lessening of competition is the same in both sections 79 and 77 of the Act, the same conclusions apply".[136] This stretching of the concept of lessening is difficult to reconcile with the clear distinction between prevention and lessening subsequently set out by the Supreme Court in *Tervita*.[137] However, it avoids the nonsensical result that section 77 would otherwise be internally inconsistent.

The FCA in *Canada Pipe* did not assess this difference in wording between paragraph 79(1)(c) and subsection 77(2). The majority commented that the Tribunal's analysis of the evidence concerning

barriers to entry and the effects of the SDP was conducted from the narrow perspective of prevention (i.e. paragraph 79(1)(c)), and not the broader perspective as suggested by the word "impede" or "lessening".[138] In the majority's view, the appropriate test with respect to paragraph 79(1)(c) was whether the relevant market would be substantially more competitive without the SDP.[139] However, the absence of the term "prevention" was not noted.

(c) "But-for" analysis

Since "lessening" and "prevention" are relativistic terms, it is clear that they require a comparative assessment of competition with and without the conduct which is being challenged. The FCA held that the Tribunal erred in *Canada Pipe* by failing to consider whether "the evidence on record demonstrated that the SDP had the effect of substantially lessening competition in the past, present or future, as compared to the markets' *likely* competitiveness in the absence of the practice."[140] The Tribunal's conclusions under paragraphs 79(1)(c) and 77(2)(c) had been based on three main factors: the existence of competitive pricing, the increasing presence of imported cast iron DWV products, and the entry of a new cast iron DWV manufacturer. Instead of a broad, relative and comparative approach, the FCA observed that the Tribunal had focused on the narrow, absolute issues of whether there was entry and competition.[141]

The FCA has suggested that a comparative "but-for" assessment should generally consider factors such as:

(1) whether entry or expansion might be substantially faster, more frequent or more significant in the absence of the impinged conduct;

(2) whether switching between products and suppliers might be substantially more frequent;

(3) whether prices might be substantially lower;

(4) whether the quality of products might be substantially greater; or

(5) differences in product or supplier choice.[142]

In the context of loyalty rebates, the fourth[143] and fifth[144] factors may not be particularly significant, but the remaining three are all highly relevant:

(1) The assessment of entry or expansion is a central issue when considering whether loyalty rebates would have any exclusionary effects.

However, the issue is not just whether entry or expansion would occur "substantially faster" in the absence of the loyalty rebates. In our view, the magnitude of entry or expansion that would be expected to occur will be more relevant than any speed differential in most cases.

(2) The relative frequency of switching is an asymmetric factor. If there would be significantly more frequent switching of suppliers by customers but-for the loyalty program, this could indicate that the rebates have been lessening competition. However, the lack of material differences in switching frequency between the actual and but-for comparatives is not necessarily probative, since markets can be operating quite competitively where customer switching is easy, even if actual switching does not often occur.

(3) The relative difference in price levels is likely to be the most important factor in the analysis (where evidence is available) because it should largely encapsulate the effects of other factors such as entry and switching. Loyalty rebates generally provide customers with price reductions (unless the pre-rebate list price is artificially inflated). As in a predation analysis, the theory of harm to competition normally would need to be based on an expectation that the loyalty rebates will reduce or eliminate the ability of the rival to exert competitive discipline on the powerful supplier. This would be expected to materialize in the form of exercising market power by charging higher prices over the long term than in the but-for scenario. Thus the short term pro-competitive benefits of low prices must be balanced against expected long-term high prices to consumers.

(d) Substantiality

The concept of "substantial" lessening or prevention of competition has generally been interpreted in the abuse of dominance context, for purposes of the merger provisions and in respect of other reviewable practices under Part VIII of the Act to mean the ability to exercise market power by maintaining prices above competitive levels (or the level that would prevail in the absence of the relevant conduct or transaction) by a material amount for a significant period of time. The magnitude of a price differential that will be considered substantial has not been established definitively, although a range of 5-10% has been discussed in some cases.[145] The relevant time frame for such a determination also has not

been settled. Time frames of 1-2 years have been considered in earlier cases.[146] However, the Supreme Court of Canada suggested that it could be longer: "how far into the future the Tribunal can look when assessing whether, but for the merger, the merging party would have entered the market should normally be determined by the lead time required to enter a market due to barriers to entry, which he [referring to Justice Mainville of the FCA] referred to as the 'temporal dimension' of the barriers to entry: '... the timeframe for market entry should normally fall within the temporal dimension of the barriers to entry into the market at issue'".[147]

6. Efficiencies

The Act requires that the Commissioner and the Tribunal consider whether gains in efficiencies outweigh the anti-competitive effects of a merger or a competitor agreement.[148] However, no such defence exists for the other reviewable practices including exclusive dealing and abuse of dominance.

As discussed above, a respondent may make efficiency arguments as part of a business justification to demonstrate it is not engaging in a practice of anti-competitive acts under paragraph 79(1)(b).[149] However, this assessment relates to the purpose of the conduct that was engaged in and does not involve measuring the efficiencies or balancing them against the effects on competition.[150]

The Act requires the Tribunal to consider whether any lessening or prevention of competition is attributable to the "superior competitive performance" of the dominant firm.[151] If a lessening or prevention of competition is simply a result of a dominant firm's effectiveness as a competitor, the Tribunal should not issue an order because this type of activity is encouraged by the Act.[152]

This provision appears to be structured as a clarification to paragraph 79(1)(c) rather than as a defence. It is certainly possible that a firm may achieve a dominant position through superior competitive performance. However, superior competitive performance need not be invoked by a respondent unless it has also engaged in a practice of anti-competitive acts that is lessening or preventing competition. In such situations it may be more difficult to assess the relative contributions of the anti-competitive activity and the superior performance.

There is not yet any meaningful jurisprudence regarding this provision. NutraSweet argued that its large market share was due to its superior economic performance.[153] However, the Tribunal did not give any material weight to that submission. In *Canada Pipe*, the Tribunal recognized the company's ability to maintain a full line of products as a positive factor that was consistent with the notion of superior competitive performance, but did not ground its decision on this basis.[154]

In principle, purchaser loyalty may be the result of a supplier's superior competitive performance, both as a result of the incentives provided by price concessions and/or other dimensions of competition (e.g. customer service, innovation, etc.). Distinguishing between anti-competitive effects arising from the foreclosure or raising of costs of a rival, versus market outcomes which emerged from the superior competitive performance of the firm offering a loyalty program, may be quite difficult. Failure to give meaningful consideration to vigorous competition that includes loyalty rebates may result in over-enforcement errors and a chilling effect on pro-competitive conduct.

7. Remedies

In deciding whether to proceed under exclusive dealing, abuse of dominance, or both, the Commissioner has indicated that he will consider a number of factors – including the available remedies which is one of the key differences between the two provisions.[155] The primary remedies for both exclusive dealing and abuse of dominance are prohibition orders. Such orders can be supplemented, where necessary, by other mandatory remedial orders. However, there are also possible penalties under section 79 but not 77, and possible private rights of action in relation to section 77 but not 79.

(a) Remedial orders

An order that prohibits the continuation of a loyalty program usually would be expected to be a sufficient remedy for harms to competitors and customers arising from such conduct. However, where there is other inter-related conduct or where a rival has been substantially weakened by anti-competitive acts over an extended period of time, there may be a basis for a broader order to overcome the lessening or prevention of competition.

In *NutraSweet*, the Tribunal issued an order prohibiting NutraSweet

from entering into or enforcing certain contract terms with Canadian customers unless such terms also appeared in contracts between NutraSweet and any competitors of the Canadian customers.[156] The Tribunal's order in *D&B Companies* also required amendments to Nielsen's contracts to temper their exclusionary impact and included additional mandatory requirements to provide certain data to a new entrant competitor.[157] Affirmative obligations in addition to prohibition orders have also been included in other non-loyalty consent agreements[158] and we can expect this approach will continue to be used in future cases where the Commissioner believes some form of "reset" is needed in the market.

The consent agreement between Canada Pipe and the Commissioner illustrates a more tailored approach. Canada Pipe was allowed to continue its SDP provided it also offered a modified rebate program that had certain features in parallel with the continuation of its SDP but without the exclusivity inducements.[159] This was narrower than a standard prohibition order – and arguably beyond the jurisdiction of the Tribunal since the power to impose additional orders is structured as a supplement to, rather than an alternative to, the prohibition order remedy.

(b) Penalties

The Commissioner may seek administrative monetary penalties of up to $10 million (or $15 million for a subsequent occurrence) in addition to prohibition or other remedial orders.[160] Since the introduction of administrative monetary penalties ("AMPs") for abuse of dominance, a total of $6 million in AMPs have been imposed in two abuse of dominance cases, both in relation to the Canadian water heater industry. Reliance Comfort Limited Partnership agreed to pay an AMP of $5 million in November 2014 under the terms of a consent agreement to address the Bureau's concerns that its water heater return policies and procedures were aimed at preventing consumers from switching competitors.[161] Direct Energy Marketing Limited agreed to pay an AMP of $1 million under the terms of a consent agreement in October 2015 to resolve similar Bureau concerns that it had abused its dominance by restricting competition and limiting consumer choice in Ontario's residential water heater industry.[162]

(c) Private actions

Any person who is directly and substantially affected in their business by a practice referred to in section 77 may apply to the Tribunal for

leave to bring an application for a remedial order.[163] The private right of action was added in 2002 in order to allow private parties to pursue their own remedies in cases where the Commissioner has not taken action.[164] However, damages are not available as a remedy to a private applicant.[165] The requirement for private applicants to obtain leave before proceeding with a private action was included as a safeguard to reduce potentially unmeritorious litigation. The FCA has clarified the requirements for leave as follows:[166]

> The threshold for an applicant obtaining leave is not a difficult one to meet. It need only provide sufficient credible evidence of what is alleged to give rise to a bona fide belief by the Tribunal. This is a lower standard of proof than proof on a balance of probabilities which will be the standard applicable to the decision on the merits.[167]

There have been no applications for leave to bring private actions related to loyalty programs. There have been several leave applications in connection with other forms of exclusive dealing but none have been granted.[168] This reconfirms the importance of the leave prerequisite as a mechanism for screening out unmeritorious private actions.

8. Conclusion

We believe that the enforcement of the Act should follow a restrained approach in respect of loyalty programs. It can be difficult to differentiate between aggressive competition, which is enormously beneficial, and overly aggressive conduct that results in anti-competitive effects.[169] The greater the uncertainty and the greater the legal risks associated with potential enforcement of an "abuse of dominance" provision, the greater the likelihood that firms will pull their competitive punches, usually to the detriment of customers and overall economic welfare.[170]

The actual enforcement history in Canada and in most other sophisticated competition law jurisdictions indicates that problematic unilateral conduct is extremely rare and concerns arising from loyalty programs are even rarer. For example, the Bureau launched seven abuse of dominance investigations in 2015 and closed eight investigations without commencing any applications to the Tribunal (which is not dissimilar to its 2014 activity level).[171] There have only been seven contested abuse of dominance proceedings before the Tribunal since this provision was added in 1986, and only two involved loyalty rebates by suppliers.

The design of the reviewable practices in Part VIII of the Act, including

exclusive dealing and abuse of dominant position, is generally consistent with this principle of restraint:

- Market power can serve a gate-keeping function to avoid challenges of business conduct that could not possibly have welfare-reducing anti-competitive effects.[172] It would be desirable to get confirmation from the Tribunal that the "major supplier" element of section 77 will be interpreted in this manner.

- The parallel focus on *competitors* (current or potential) and *competition* provides an appropriate legal framework that addresses both harm to the market and the mechanism by which such harm occurs — while limiting the scope for the law to be used as a tool for protecting competitors from competition.

- The focus on prohibition and other remedial orders is appropriate to address the rare cases where there is a genuine harm, without over-deterring vigorous competition.

Loyalty rebates provide a good illustration of the importance of distinguishing opportunities and inducements from contractual or other "coercive" behavior. Customers are rarely harmed when given inducements such as price discounts, choices and other benefits.[173] As with predation, the theory of harm to competition for challenging a loyalty program (as either exclusive dealing and/or an abuse of dominance) normally would be based on an expectation of reduced competition from current rivals or potential entrants *and* an increase in prices arising from successful implementation of foreclosure using near-term price reductions to obtain loyalty from a substantial portion of the customers in a market:[174]

> In our view the more important reason [for cautious enforcement] relates to the time frame in which any market power becomes exercisable: coercive conduct seeks to achieve the exclusion contemporaneously, whereas incentivizing conduct generally will not allow market power to be exercised unless and until the other significant competitors have been eliminated from the market or disciplined. As a result, challenges to incentivizing conduct carry a much higher risk of over-enforcement through premature intervention blocking current benefits in situations where the potential longer-term anticompetitive effects may not materialize.[175]

In the specific context of loyalty programs, we therefore suggest

the following possible framework for enforcement action by the Commissioner (as summarized in the chart below):

(1) No enforcement action is warranted where a loyalty program does not have any material exclusionary effects or anti-competitive purpose.

(2) If there is only an exclusionary effect but no anti-competitive purpose, an action under the exclusive dealing provision is possible. However, having regard to scarce enforcement resources the Commissioner should consider whether the affected rival(s) may have the ability to address the issue through the private right of action in section 103.1.

(3) If there is an anti-competitive purpose but no exclusionary effects, an abuse of dominance application is theoretically possible – provided there is also a substantial lessening of competition. However, the Commissioner should carefully consider whether any enforcement action is warranted when no damage has been caused to rivals and whether the requisite effect on competition could be shown to be connected to the conduct in the absence of such an impact on rivals.

(4) If there is evidence of both anti-competitive purpose and exclusionary effects, but the respondent firm is a "major supplier" that does not have a dominant position in the relevant market, an exclusive dealing application would be appropriate (provided that the substantial lessening of competition element can also be established).

(5) If there is an anti-competitive purpose and exclusionary effects resulting from loyalty rebates offered by a dominant firm, the Commissioner would likely want to consider bringing an application jointly under sections 77 and 79. The Commissioner may also consider the possibility of seeking administrative monetary penalties under section 79, but we suggest that this extra remedial step generally should not be pursued against a supplier that has offered short-term price reductions (which benefit customers) in the absence of clear evidence of intent to eliminate an existing competitor from a market.

<table>
<tr><td colspan="2"></td><td colspan="2">ANTI-COMPETITIVE PURPOSE?</td></tr>
<tr><td colspan="2"></td><td>No</td><td>Yes</td></tr>
<tr><td rowspan="3">EXCLUSIONARY EFFECTS?</td><td>No</td><td>No case</td><td>Possible s. 79 application</td></tr>
<tr><td rowspan="2">Yes</td><td rowspan="2">Possible s. 77 application (or competitor may bring private action)</td><td>Dominant Firm: s. 79 (with possible AMP) and s. 77 applications</td></tr>
<tr><td>Major Supplier: s. 77 application only</td></tr>
</table>

In summary, loyalty programs are pervasive and in most cases they provide lower prices, which increase competition and benefit customers. The number of loyalty rebate (or other unilateral conduct) cases brought under the reviewable practices provisions of the Act suggests that problematic situations are extremely rare. When a firm with a significant market position does engage in loyalty-inducing conduct for the purpose, or with the effect, of foreclosing or impeding rivals to a serious degree, and there is a resulting prevention or lessening of competition that is substantial, the exclusive dealing and/or abuse of dominance provisions in the Act provide a workable framework for obtaining adequate remedies. In most cases, prohibition or other tailored remedial orders will be appropriate and sufficient.

Endnotes

[1] Neil Campbell is the Co-Chair of Competition and International Trade and Florence (Sze Pui) Chan is an Associate in the Competition Group in the Toronto office of McMillan LLP.

[2] *Competition Act*, RSC 1985, c C-34 (the "Act"), ss 77–79.

[3] Loyalty programs may be structured to cover a single product or multiple products. We do not attempt in this article to address tied selling or bundling issues specifically, although the legal framework for doing so is very similar to exclusive dealing: see s 77 of the Act.

[4] This was the case in *Commissioner of Competition v Canada Pipe Company Ltd,* 2005 Comp Trib 3 at 167 [*Canada Pipe – Tribunal*]; discussed below.

[5] Canada, Competition Bureau, "Competition Bureau Submission to the OECD Competition Committee Roundtable on Fidelity Rebates" (14 June 2016), online: <http://www.competitionbureau.gc.ca/eic/site/cb-bc.nsf/eng/04083.html> at III b [*Bureau OECD Submission*].

[6] Act, *supra* note 2, ss 77–79.

[7] See Bill C-2, *An Act to Amend the Combines Investigation Act and the Bank Act and to repeal an Act to amend the Combines Investigation Act and the*

Criminal Code, SC 1974-75-76, c 76; amending the *Combines Investigation Act*, RSC 1970 c C-23 [*Combines Act*].

[8] See generally A Neil Campbell & J William Rowley, "The Internationalization of Unilateral Conduct Laws—Conflict, Comity, Cooperation and/or Convergence?" (2008-2009) 75 Antitrust LJ 267 at p. 277.

[9] Bill C-91, *An Act to Establish the Competition Tribunal and to amend the Combines Investigation Act and the Bank Act and other Acts in consequence thereof* (assented to 17 June, 1986), RSC 1986, c 26.

[10] Loyalty rebates clearly fall into the definition of exclusive dealing in section 77, but are conspicuously absent from the long list of exclusionary conduct in section 78 that may constitute an "anti-competitive act" for purposes of the abuse of dominance provisions. This could give rise to a statutory interpretation argument that Parliament did not intend the abuse of dominance regime to be applied to the specific types of conduct addressed in section 77 (exclusive dealing, tied selling or market restriction). However, the section 78 list of anti-competitive acts is non-exhaustive and the Tribunal has now dealt with numerous parallel section 77 / section 79 cases (many of which are discussed below) without any suggestion that section 79 is unavailable for conduct covered by section 77.

[11] Canada, House of Commons, Standing Committee on Finance, Trade and Economic Affairs, "Minutes of Proceedings and Evidence" (3 December 1974) at 50; as cited by Calvin S Goldman, Navin Joneja & Elizabeth Yuh, "A Canadian Perspective on Tied Selling and Exclusive Dealing" in Claus-Dieter Ehlermann and Mel Marquis (eds), *European Competition Law Annual 2007: A Reformed Approach to Article 82 EC*, (Portland, Oregon, Hart Publishing, 2007) at p. 9.

[12] Act, *supra* note 2, s 77(1). [emphasis added]

[13] The availability of private rights of action is discussed in the Remedies section below.

[14] Act, *supra* note 2, s 77(2). [emphasis added] The Tribunal is prohibited from making an order if exclusive dealing will be engaged in only for a reasonable period to facilitate the entry of a new supplier or product into a market, see s 77(4)(a).

[15] Act, *supra* note 2, s 79(1). [emphasis added]

[16] *Commissioner of Competition v Canada Pipe Company Ltd.*, 2006 FCA 233, [2007] 2 FCR 3 [*Canada Pipe FCA – Commissioner's Appeal*].

[17] *Ibid* at 21.

[18] Alternatively, a supplier may require or induce a customer that purchases a product to refrain from dealing in a specific class or kind of product: see *Act, supra* note 2, s 77(1)(a)(ii), reproduced above.

[19] See Act, *supra* note 2, s 103.1(1), which also applies to various other reviewable practices, as discussed in the Remedies section below.

[20] *Canada Pipe – Tribunal, supra* note 4.

[21] *Canada (Director of Investigation & Research) v NutraSweet Co* (1990), 32 CPR (3d) 1 at 24 (Comp Trib) [*NutraSweet*].

[22] See the discussion of the Act, s 78(h) in the Loyalty–generating conduct section below.
[23] *Canada (Director of Investigation and Research) v D&B Companies of Canada* (1995) 64 CPR (3d) 216 (Comp Trib) [*D&B Companies*].
[24] *NutraSweet, supra* note 21 at 154–156.
[25] *Ibid* at 181.
[26] *Canada Pipe – Tribunal, supra* note 4 at 1–2.
[27] *Ibid* at 161.
[28] *Ibid* at 284–285.
[29] *Canada (Commissioner of Competition) v Canada Pipe Co*, 2006 FCA 236 at 53, 268 DLR (4th) 238 [*Canada Pipe FCA – Cross Appeal*].
[30] *Canada Pipe FCA – Commissioner's Appeal, supra* note 16 at 100.
[31] *Canada (Commissioner of Competition) v Canada Pipe Co* (12 December 2007), CT-2002-006, online: Competition Tribunal < http://www.ct-tc.gc.ca/CMFiles/CT-2002-006_130_45KOT-12202007-8411.pdf> [*Canada Pipe Consent Agreement*].
[32] *Ibid* at 8 and 10.
[33] *D&B Companies, supra* note 23 at 2.
[34] *Ibid* at 193–229.
[35] *Canada (Director of Investigation and Research) v Tele-Direct (Publications) Inc* (1997) 73 CPR (3d) 1 at 72, [1997] CCTD No 8 [*Tele-Direct*]; held that, if market power exists, the firm is a major supplier. However, it did not discuss the possibility that a firm without market power could constitute a major supplier.
[36] There is some support in economic theory for skipping the market definition step and examining market power directly where there is available information to do so (see, e.g., Carl Shapiro, "The 2010 Horizontal Merger Guidelines: From Hedgehog to Fox in Forty Years" (2010) 77:1 Antitrust LJ 49; and Joseph Farrell & Carl Shapiro, "Antitrust Evaluation of Horizontal Mergers: An Economic Alternative to Market Definition" (2010) 10:1 B.E. Journal of Theoretical Economics at p. 9. However, subsection 77(2) contains an explicit reference to a "product in a market", and paragraph 79(1)(a) contains references to "a class or species of business" and "throughout Canada or any area thereof" which have been interpreted as synonymous with product and geographic markets. Thus the Tribunal appears to be required to make findings regarding the relevant market as a pre-condition to making a remedial order under either provision. For example, the FCA in *Canada Pipe* agreed with the Tribunal's view that a determination of the relevant market, which identifies "existing competitors that are likely to constrain the ability of the firm or firms to profitably raise prices or otherwise restrict competition," is a precondition for assessing market power: *Canada Pipe FCA – Cross Appeal*, *supra* note 29 at 11. The Bureau has hedged slightly on this issue in its *Abuse of Dominance Guidelines*, noting that while defining relevant product markets is "a usual step in establishing market power, market definition is not an end in itself and may defy precision in all cases." See Canada, Competition Bureau,

"Enforcement Guidelines - The Abuse of Dominance Provisions"(Ottawa: Industry Canada, 2012), online: <www.competitionbureau.gc.ca/eic/site/cb-bc.nsf/vwapj/cb-abuse-of-dominance-provisions-e.pdf/$FILE/cb-abuse-of-dominance-provisions-e.pdf> at p. 3 [the "*Abuse of Dominance Guidelines*"].
[37] (1980) 53 CPR (2d) 4, 1980 CarswellNat 988 (WL Can) [*Bombardier*].
[38] *Ibid* at 27.
[39] *Ibid* at 29.
[40] *Ibid* at 31.
[41] *NutraSweet*, *supra* note 21 at 165.
[42] *Ibid* at 167.
[43] *Ibid* at 82.
[44] *Canada Pipe FCA – Cross Appeal, supra* note 29 at 5.
[45] A similar type of approach has been adopted in the interpretation of an "adverse effect on competition" (an element of the reviewable practices of refusal to supply and price maintenance – see Act*, supra* note 2, ss 75(1)(e) and 76(1)(b), respectively) to mean a degree of market power which is less than a "substantial lessening of competition": see *Nadeau Ferme Avicole Ltée / Nadeau Poultry Farm Ltd v Groupe Westco Inc*, 2009 Comp Trib 6 at 369, aff'd 2011 FCA 188 at 116 (in respect of s 75). This approach was also followed in *Commissioner of Competition v Visa Canada Corporation*, 2013 Comp Trib 10 at 350–353 (in respect of s 76).
[46] *D&B Companies, supra* note 23 at 38; *NutraSweet, supra* note 21 at 83. For more detail regarding the Bureau's approach on defining relevant product markets, see *Abuse of Dominance Guidelines, supra* note 36 at s 2.1.
[47] *Canada Pipe FCA – Cross Appeal, supra* note 29 at 12.
[48] *Canada (Director of Investigation & Research) v Southam Inc*, [1995] 3 FCR 557 at 163, 63 CPR (3d) 1 (CA) [*Southam*].
[49] *Canada Pipe FCA – Cross Appeal, supra* note 29 at 10-13.
[50] *D&B Companies supra* note 23 at 75.
[51] *NutraSweet , supra* note 21 at 44.
[52] *D&B Companies, supra* note 23 at 110.
[53] *Ibid* at 38; *NutraSweet*, *supra* note 21 at 83. For more detail regarding the Bureau's approach on defining relevant geographic markets, see *Abuse of Dominance Guidelines, supra* note 36 at s 2.2.
[54] *NutraSweet*, *supra* note 21 at 48.
[55] *Ibid* at 46.
[56] *Ibid* at 51.
[57] *D&B Companies, supra* note 23 at 111.
[58] *Canada Pipe – Tribunal, supra* note 4 at 112.
[59] *D&B Companies, supra* note 23 at 113; *Canada (Director of Investigation and Research) v Laidlaw Waste Systems Ltd* (1992) 40 CPR (3d) 289 at 96 [*Laidlaw*]; *NutraSweet, supra* note 21 at 47; *Tele-Direct, supra* note 35 at 71.
[60] *NutraSweet, supra* note 21 at 73. As the Competition Bureau notes, market power may also encompass an ability to maintain "other elements of competition such as quality, choice, service, or innovation below the

competition level, for a significant period of time". For more detail regarding the Bureau's approach to market power, see the *Abuse of Dominance Guidelines, supra* note 36 at s 2.3.1.

[61] *Canada Pipe FCA – Cross Appeal, supra* note 29 at 52.

[62] *Ibid* at 23. The Bureau has elaborated on its approach to assessing market share as an indication of market power in the *Abuse of Dominance Guidelines, supra* note 36 at s 2.3.1.

[63] *Tele-Direct, supra* note 35 at 286.

[64] *D&B Companies, supra* note 23 at 113; *NutraSweet, supra* note 21 at 73, 82.

[65] *Canada Pipe – Tribunal, supra* note 4 at 127–129, 138–144, 156, 161.

[66] *Canada Pipe FCA – Cross Appeal, supra* note 29 at 24, *Canada Pipe - Tribunal.*

[67] *Ibid*, *Canada Pipe - Tribunal.*

[68] *Canada Pipe – Tribunal , supra* note 4 at 157–159.

[69] *Ibid* at 161.

[70] *Canada Pipe FCA – Cross Appeal , supra* note 29 at 45–51.

[71] *NutraSweet, supra* note 21 at 82.

[72] *D&B Companies, supra* note 23 at 115.

[73] *Ibid* at 115–118.

[74] *Canada Pipe FCA – Commissioner's Appeal, supra* note 16 at 27.

[75] *Canada Pipe – Tribunal, supra* note 4 at 148–149, 156.

[76] *Ibid* at 261–262; *Canada Pipe FCA – Commissioner's Appeal, supra* note 16 at 92.

[77] Kenneth L Glazer & Brian R Henry, "Coercive vs Incentivizing Conduct: A Way Out of the Section 2 Impasse?", (2003) 18:1 Antitrust 45.

[78] The same alternative branches are applicable to the reviewable practice of tied selling: Act, *supra* note 2, s 77(1). The Tribunal in *Tele-Direct* found that the prohibition against tied selling not only addresses explicit contractual requirements to purchase the tied product, but also covers situations in which there is a discount or other advantage that effectively precludes a choice of supplier. Whether customers actually do have an effective choice or not is a question of fact to be determined by the Tribunal on the evidence, irrespective of the legal nature of the purchase arrangement: *Tele-Direct, supra* note 35 at 519.

[79] Act, *supra* note 2, s 77(1)(a)(i).

[80] See "Relationship Between the Conduct and the Supplier's Rivals" section, below.

[81] The Tribunal has taken a very legalistic approach to the coercive branch of exclusive dealing. In *NutraSweet* it did not find evidence that customers were refused or threatened with a refusal to supply if they chose not to enter into exclusive contracts, and therefore held that they had not been "required" to deal with NutraSweet exclusively: *NutraSweet, supra* note 21 at 160.

[82] *Ibid* at 162.

[83] *Ibid* at 107.

[84] *Ibid* at 162. The *Canada Pipe* decisions also do not address the "primarily" requirement because the SDP rebates were based on full exclusivity.
[85] *Act, supra* note 2, s 78(1)(h). [emphasis added]
[86] *D&B Companies, supra* note 23 at 2, 120. The Commissioner also alleged that Nielsen's long-term contracts for the sale of its scanner-based market tracking services to manufacturers of consumer packaged goods were anti-competitive acts.
[87] Canada, Competition Bureau, "Annual Report of the Commissioner of Competition for the Year Ending March 31, 2003", online: <http://publications.gc.ca/collections/Collection/RG51-2003E.pdf> at p 55.
[88] *Canada Pipe FCA – Commissioner's Appeal, supra* note 16 at 98.
[89] *Act, supra* note 2, s 77(2).
[90] *Canada Pipe FCA – Commissioner's Appeal, supra* note 16 at 98.
[91] *Ibid*.
[92] *Ibid* at 58.
[93] *Ibid* at 64, 77. See also *NutraSweet*, *supra* note 21 at 40.
[94] In *Commissioner of Competition v Toronto Real Estate Board*, 2016 Comp Trib 7 [*TREB*], a trade association of real estate brokers was found to be engaging in anti-competitive acts related to the introduction of new technologies by certain brokers competing in the market, even though they were not competing against the association itself.
[95] The Commissioner's application alleged that the two relevant markets are the supply of galley handling at the Vancouver Airport and the airside access provided by the Vancouver Airport Authority for the supply of galley handling: *Commissioner of Competition v Vancouver Airport Authority* (29 September 2016), CT-2016-015 (Notice of Application) online: Competition Tribunal < http://www.ct-tc.gc.ca/CMFiles/CT-2016-015_Notice%20of%20Application_2_66_9-29-2016_5321.pdf>.
[96] See, e.g., Michael Trebilcock, "Abuse of Dominance: A Critique of *Canada Pipe*" (2007) Can Comp Rec 1 at p. 7.
[97] This appears to preclude the use of the abuse of dominance provision to address "excessive pricing" (regardless of whether engaged in unilaterally or by firms that collectively have a dominant position), unlike the regime in Europe which (controversially), can be used to challenge high pricing by dominant firms. For further discussion, see Campbell & Rowley, *supra* note 8 at p. 336.
[98] *Canada Pipe FCA – Commissioner's Appeal, supra* note 16 at 70.
[99] *Ibid* at 72. The FCA at 70 referred to the testimony before the House of Commons Legislative Committee on Bill C-91 (which eventually became the *Competition Act*) in emphasizing that subjective intent is not necessary to find that conduct is anti-competitive under paragraph 79(1)(b). The FCA concluded that the removal of the phrase "object of the practice" in the final version of paragraph 79(1)(b) was an indication that Parliament did not intend to require subjective intent for the abuse of dominance provision.
[100] *Ibid* at 77.
[101] *Canada Pipe – Tribunal, supra* note 4 at 203.

[102] *Canada Pipe FCA – Commissioner's Appeal, supra* note 16 at 78.
[103] *NutraSweet*, *supra* note 21 at 115.
[104] *Ibid* at 119.
[105] *Ibid* at 118–119.
[106] *D&B Companies, supra* note 23 at 131–134.
[107] Competition Bureau, "Competition Bureau Submission to the OECD Competition Committee Roundtable on Airline Competition" (16 June 2014), online: <http://www.competitionbureau.gc.ca/eic/site/cb-bc.nsf/eng/03746.html>.
[108] *Commissioner of Competition v Air Canada* (March 5 2001), CT-2001-002 at 1, 2 (Notice of Application) online: Competition Tribunal <http://www.ct-tc.gc.ca/CMFiles/CT-2001-002_0001_40MJO-4132004-1304.pdf>.
[109] *Ibid* at 45–46, 79.
[110] *Ibid* at 106–107.
[111] *Commissioner of Competition v Air Canada*, 2003 Comp Trib 13.
[112] *Commissioner of Competition v Air Canada* (October 29 2004) CT-2001-002 (Notice of Discontinuance) online: Competition Tribunal <http://www.ct-tc.gc.ca/CMFiles/CT-2001-002_0146_40OQC-1112004-9051.pdf>. Subsequently, in 2011, the Bureau filed an application alleging that an Air Canada and United Continental Holdings proposed joint venture would lead to the exercise of market power on several trans-border routes based on the parties' cooperation on pricing, capacity setting (route planning), frequent-flyer programs, revenue-sharing and cost-sharing. The Commissioner also took issue with three pre-existing "coordination agreements" that allowed the carriers to coordinate on other aspects of competition including through providing reciprocal access to Air Canada's and United Continental Holdings' respective frequent flyer programs. The Bureau challenged these arrangements under the competitor agreements reviewable practice (section 90.1). The Bureau considered that entry or expansion by rival air carriers was unlikely – partly due to significant barriers to entry including frequent flyer programs and incentives towards exclusivity in corporate customer contracts, which contributed to significant switching costs. The parties resolved the Commissioner's concerns in a Consent Agreement which prohibited the parties from coordination on certain aspects of competition on specific overlapping routes including: coordinating their prices, coordinating the number of seats available at each price, pooling revenue or costs, and sharing commercially sensitive information. However, the Consent Agreement did not address the frequent flyer programs or the loyalty-generating aspects of corporate or group contracts. See *Commissioner of Competition v Air Canada, United Continental Holdings Inc, United Airlines and Continental Airlines Inc* (October 24 2012) CT-2011-004 (Consent Agreement) online: Competition Tribunal <http://www.ct-tc.gc.ca/CMFiles/CT-2011-004_Consent%20Agreement_169_45_10-24-2012_2558.pdf>.
[113] The concept of business justification does not appear to have any explicit role under section 77, because the focus in the exclusive dealing reviewable

practice is on exclusionary effects rather than an anti-competitive purpose (see discussion above). Nevertheless, given that evidence regarding purpose may indirectly be informative as to effects, and vice versa, it can be expected that respondents will attempt to bring forward business justifications under section 77 where such evidence is available.

[114] *Canada Pipe FCA – Commissioner's Appeal, supra* note 16 at 73 and 88.
[115] *Ibid* at 73.
[116] *Ibid* at 73.
[117] In contrast, there is a complex efficiencies defence available in respect of mergers and competitive agreements: see *Act, supra* note 2, ss. 96 and 90.1(4)–(6).
[118] *Canada Pipe – Tribunal, supra* note 4 at 259.
[119] *Canada Pipe FCA – Commissioner's Appeal, supra* note 16 at 90-91.
[120] *Ibid* at 87, 90–91.
[121] James B Musgrove and Steve Szentesi, "Loyalty Programs and Abuse of Dominance: Canada Pipe" (Paper delivered at the Continuing Legal Education Society of British Columbia, December 2006) [unpublished] at 3.2.11.
[122] *NutraSweet, supra* note 21 at 152.
[123] *Ibid*.
[124] *D&B Companies, supra* note 23 at 122, 154.
[125] *NutraSweet, supra* note 21 at 168–169.
[126] *Canada Pipe FCA – Commissioner's Appeal, supra* note 16 at 93–95.
[127] *Act, supra* note 2, s 79(1)(c). [emphasis added]
[128] *Ibid*, s 77(2)(c). [emphasis added]
[129] *Canada Pipe FCA – Commissioner's Appeal, supra* note 16 at 94. The limitation period for challenging past conduct is three years after the practice has ceased: *Act, supra* note 2, s 79(6).
[130] In *Tervita Corp v Canada (Commissioner of Competition)*, 2015 SCC 3 at 54–55 [*Tervita*], the Supreme Court of Canada held that the "lessening" branch under section 92 of the *Act* focuses on whether the merged entity would *increase* its existing market power.
[131] *Canada Pipe FCA – Commissioner's Appeal, supra* note 16 at 95.
[132] *Tervita, supra* note 131 at 54–55; *TREB, supra* note 95 at 474.
[133] Ruth Sullivan, *Sullivan on the Construction of Statues*, 6th ed (Canada: LexisNexis Canada, 2014) at pp. 217–220.
[134] *Act, supra* note 2, s 77(2)(b).
[135] *NutraSweet, supra* note 21 at 168, citing *Bombardier, supra* note 37 at 55–56.
[136] *Ibid* at 169.
[137] *Tervita, supra* note 131 at 55.
[138] *Canada Pipe FCA– Commissioner's Appeal, supra* note 16 at 98.
[139] *Ibid* at 58.
[140] *Ibid* at 55.
[141] *Ibid* at 57.
[142] *Ibid* at 58.

[143] For example, potential quality differences were not a factor in the *NutraSweet*, *Canada Pipe* and *D&B Companies* cases.
[144] In *NutraSweet*, the Tribunal concluded that as long as NutraSweet remained the sole supplier of aspartame, it could set prices so that customers had little effective choice in supplier. Based on the foregoing and evidence that the strategy was introduced when its use patent was in force, the Tribunal concluded that the purpose of NutraSweet's branded ingredient strategy was to exclude future or existing competition. See *NutraSweet, supra* note 21 at 110–112.
[145] See, e.g. *Laidlaw, supra* note 60 at 66–67, 78, 96; *Commissioner of Competition v CCS Corp*, [2012] CCTD No 14 at 297, 2012 Comp Trib 14 and *Tervita, supra* note 131 at 44–46; *Canada (Director of Investigation and Research) v Hillsdown Holdings Canada Ltd*, (1992) 41 CPR (3d) 289 at 119 (Comp Trib) [*Hillsdown Holdings*]; and *Canada (Commissioner of Competition) v Superior Propane Inc*, (2000) 7 CPR (4th) 385 at 252, 311, 2000 Comp Trib 15. The *Abuse of Dominance Guidelines* do not specify a price threshold.
[146] *Laidlaw, supra* note 60 at 66-67, 78; *Tervita, supra* note 131 at 44-46; *Hillsdown Holdings, supra* note 146 at 119. The *Abuse of Dominance Guidelines* (*supra* note 36) confusingly refer to a one year standard time frame at part 2.3, fn. 17, but suggest a more vague frame of reference, based on what would constitute a reasonable period for competitors to challenge market power, at part 4, fn. 28.
[147] *Tervita, supra* note 131 at 70.
[148] *Act, supra* note 2, ss 96 and 90.1(4)–(6).
[149] There is no explicit counterpart in the exclusive dealing provision, although evidence related to the purpose of conduct may be indirectly relevant to the assessment of its effects: see *supra* note 114.
[150] See the discussion of *Canada Pipe FCA – Commissioner's Appeal, supra* note 16 at note 116.
[151] *Act, supra* note 2, s 79(4).
[152] Omar Wakil, *2016 Annotated Competition Act* (Toronto: Carswell, 2016) at p. 229.
[153] *NutraSweet, supra* note 21 at 140.
[154] *Canada Pipe – Tribunal, supra* note 4 at 269. The FCA did not directly consider this issue. It overturned the Tribunal's findings regarding the lack of a substantial lessening or prevention of competition without any assessment of whether there was superior competitive performance: see *Canada Pipe FCA – Commissioner's Appeal, supra* note 16 at 58.
[155] *Bureau OECD Submission, supra* note 5 at III.a.iii.
[156] *NutraSweet, supra* note 21 at 227.
[157] *Canada (Director of Investigation and Research) v D&B Companies of Canada* (30 August 1995), CT-1994-001 (Consolidated Order) online: Competition Tribunal <http://www.ct-tc.gc.ca/CMFiles/CT-1994-001_0143c_45QED-4152004-6360.pdf>.
[158] See, for example, the "*Interac*" case: *Director of Investigation and Research*

v Bank of Montreal et al (20 June 1996), CT-1995-002, online: Competition Tribunal <http://www.ct-tc.gc.ca/CMFiles/0092a38PEW-3102004-3532.pdf>.
[159] *Canada Pipe Consent Agreement, supra* note 31, at pp. 3-4.
[160] *Act, supra* note 2, s 79(3.1). The C.D. Howe Institute Competition Policy Council recently convened a session on the private rights of action under the *Act*. Some of the Council members supported expansion of the Act to allow for private rights of action under section 79 while others were concerned that this would have a chilling effect on vigorous competition and generate strategic or other unmeritorious litigation.
[161] *Canada (Commissioner of Competition) v Reliance Comfort Limited Partnership* (3 November 2014), CT-2012-002, online: Competition Tribunal <http://www.ct-tc.gc.ca/CMFiles/CT-2012-002_Registered%20Consent%20Agreement_170_38_11-5-2014_3504.pdf> ["*Reliance Comfort*"]. In addition to the prohibition order, Reliance Comfort agreed to take steps to make it easier for consumers to terminate their water heater rental agreement.
[162] *Canada (Commissioner of Competition) v Direct Energy Marketing Limited* (20 October 2015), CT-2012-003, online: Competition Tribunal <http://www.ct-tc.gc.ca/CMFiles/CT-2012-003_Registered%20Consent%20Agreement_127_38_10-30-2015_8295.pdf> ["*Direct Energy*"].
[163] *Act, supra* note 2, s 103.1(1). The private right of action also applies to refusal to supply (s 75) and price maintenance (s 76), but not abuse of a dominant position (ss 78–79).
[164] Bill C-23, *An Act to amend the Competition Act and the Competition Tribunal Act*, 1st Sess, 37th Parl, 2002 (assented to 4 June 2002) , SC 2002, c 16.
[165] Private plaintiffs made several attempts to use the reviewable practices in Part VIII of the *Act* as the illegal acts to ground claims for damages under torts such as civil conspiracy and interference with economic relations. Such claims have been consistently rejected on the basis that reviewable practices are lawful unless and until they are prohibited (which is the exclusive purview of the Tribunal): see, e.g., *Cellular Rental Systems Inc v Bell Mobility Cellular Inc* (1995), 61 CPR (3d) 204 (Ont Div Ct); *Polaroid Canada Inc v Continent-Wide Enterprises Ltd* (1994), 59 CPR (3d) 257 (Ont Gen Div); *Harbord Insurance Services Ltd v Insurance Corporation of British Columbia* (1993), BLR (2d) 91 (BCSC); *Procter & Gamble Co v Kimberly-Clark of Canada Ltd* (1990), 49 FTR 31, 40 CPR (3d) 1 (TD). The introduction of AMPs for abuse of dominance could support the opposite conclusion, but in the only reported case addressing this issue to date the Tribunal followed the historic line of jurisprudence: see *Novus Entertainment Inc v Shaw Cablesystems Ltd*, 2010 BCSC 1030, 191 ACWS (3d) 1103.
[166] See *B-Filer Inc v Bank of Nova Scotia*, 2006 FCA 232 [B-Filer], which confirmed the Tribunal's adoption of the test described by the FCA in *Barcode Systems Inc v Symbol Technologies Canada ULC*, 2004 FCA 339, at 17 [*Barcode Systems Inc*].
[167] *B-Filer, supra* note 166 at 1-3.
[168] See *CarGurus, Inc v Trader Corporation*, 2016 Comp Trib 15 [*CarGurus*];

B-Filer, supra note 166; and *Stargrove Entertainment Inc v Universal Music Publishing Group Canada*, 2015 Comp Trib 26 [*Stargrove*]. A notice of appeal has been filed to the FCA in the *CarGurus* matter.

[169] See Campbell & Rowley, *supra* note 8 at pp. 273–274.

[170] *Ibid* at p. 350.

[171] Global Competition Review, *2016 Rating Enforcement*, (London: Law Business Research, July 2016). [The Global Competition Review also reports similar enforcement data for numerous other jurisdictions including the US.]

[172] See Campbell & Rowley, *supra* note 8 at pp. 309, 324-325.

[173] *Ibid* at p. 269.

[174] A possible exception may arise if the loyalty program does not in fact lower prices, despite appearing to offer discounts. However, this may be primarily a theoretical consideration since it does not appear to be common in ordinary business practice.

[175] Campbell & Rowley, *supra* note 8 at p. 343, drawing upon Glazer & Henry, *supra* note 78.

ALL-UNITS DISCOUNTS: LEVERAGE AND PARTIAL FORECLOSURE IN SINGLE-PRODUCT MARKETS

Yong Chao and Guofu Tan*

We present an exclusionary theory of all-units discounts schemes. These schemes offer a per-unit discount to all units purchased if the customer's purchase reaches a pre-specified quantity threshold. We demonstrate that when a dominant firm competes with a capacity-constrained rival, it is possible for the dominant firm to use all-units discounts to leverage its market power in the non-contestable portion to influence the contestable portion of the demand in single-product markets and to partially foreclose the small rival. Our theory suggests that pricing below cost is not necessary for all-units discounts schemes to be exclusionary and that a standard price-cost test may not be useful in assessing the exclusionary effects of all-units discounts. We advocate a rule of reason approach based on a comprehensive analysis of market structure, the nature of discount programs, exclusionary effects, efficiency, and the welfare consequences of these practices.

Nous présentons une théorie d'exclusion concernant les programmes d'escompte sur toutes les unités. Ces programmes offrent un escompte par unité à toutes les unités achetées si l'achat du client atteint un seuil de quantité déterminé d'avance. Nous démontrons que lorsqu'une société dominante livre concurrence à un rival à capacité limitée, il lui est possible d'utiliser les escomptes sur toutes les unités pour multiplier son pouvoir de marché dans la part non disputable pour influencer la part disputable de la demande sur les marchés à produit unique et pour éliminer partiellement le petit rival. Selon notre théorie, la fixation d'un prix inférieur au coût n'est pas nécessaire pour que les programmes d'escompte sur toutes les unités aient un effet tendant à exclure et un critère standard prix-coût n'est pas nécessairement utile pour l'évaluation des effets tendant à exclure des escomptes sur toutes les unités. Nous militons en faveur d'une approche raisonnée fondée sur une analyse exhaustive de la structure du marché, de la nature des programmes d'escompte, des effets tendant à exclure, de l'efficience et des conséquences sur le bien-être de ces pratiques.

1. INTRODUCTION

How to evaluate loyalty rebates (or discounts) programs is an unsettled topic in antitrust policy debate and enforcement. Conditional discounts and rebates can arise for many different reasons. Discounts based solely on the volume of purchase could help

enhance economic efficiency since they tend to reflect cost savings from high volumes, eliminate double marginalization, and mitigate double moral hazard problems wherein the non-contractible decisions by two parties affect both parties' payoffs.[1] On the other hand, when dominant suppliers adopt conditional-pricing practices, including all-units discounts (AUDs), a form of retroactive rebate schemes, antitrust authorities are often concerned about the possible abuse of dominance and the potential exclusionary effects of these practices. Motivated by some recent antitrust cases, in this article we examine the economic effects of loyalty rebate schemes on competition and consumers, focusing on AUDs in single-product markets.

There have been a number of recent antitrust cases that share a common feature: A dominant supplier implemented discounts/rebates program conditional on volumes and other instruments to its downstream customers. It was argued that such practices might have had an exclusionary effect and harmed competition and consumer welfare. Examples include *Canada Pipe* in Canada,[2] *Post Danmark II* and *Tomra* in Europe,[3] *Tetra Pak* in China,[4] and several cases such as *Intel* and *LePage's* in the U.S.[5]

On November 16, 2016, the State Administration of Industry and Commerce (SAIC) of China released its official decision regarding Tetra Pak, the world's largest manufacturer of liquid food packaging. According to the decision, between 2009-2013, the company abused its dominance in three relevant product markets in China, namely, the carton-based aseptic packaging equipment market, the equipment maintenance and service market, and the aseptic packaging material market. The SAIC found that Tetra Pak (i) tied the sales of packaging materials to the sales of equipment, without justifiable reasons, (ii) restricted its upstream supplier to exclusively deal with Tetra Pak, without justifiable reasons, and (iii) *excluded and limited competition through complex loyalty discounts policies* in the sales of packaging materials, violating the Article 17 (4), (5) and (7) of the Anti-Monopoly Law. The SAIC ordered the company to cease these illegal practices and imposed a fine equal to 7% of its sales revenues in the relevant markets in 2011. According to the decision by the SAIC, the discount policies used by Tetra Pak during the period were based on a complex grid of volume thresholds and discount percentages: For each of the major packaging product categories, once the purchase volume of a customer exceeds a pre-specified threshold, the per-unit price is discounted with the discount applying to all the previous orders of this product within a given year; there were also multiple

volume thresholds with corresponding discounts; moreover, there were additional retrospective discounts based on the aggregate volumes across different types of packaging products.

In *Post Danmark II*, judged by the European Court of Justice, there were two suppliers providing postal services in Denmark: Post Danmark, a dominant state-controlled company, and a small rival, Bring Citymail. For a period of time, Post Danmark implemented a rebate scheme in the market for delivering direct advertising mail, involving the following three major features: (i) the rebates were based on the customer's aggregate purchases over an annual reference period; (ii) the rebates were conditional on a volume threshold estimated at the beginning of the year and adjusted at the end of the year; (iii) the rebates were retroactive in the sense that the rebate rate applied to all volumes purchased during the year, not only to the volumes exceeding the threshold. The Danish Competition Council first decided against the company in 2009, and the company appealed twice. The Danish national court referred this case to the European Court of Justice (Second Chamber), requesting for a preliminary ruling concerning the interpretation of Article 82 EC applying to exclusionary abuses. On October 6, 2015, the European Court of Justice made a preliminary judgment and clarified a number of important issues on assessing the impacts of rebate programs, which we will discuss in Section 5 of this article.

In another recent case, *Tomra*, decided by the European Commission, Tomra was a dominant supplier of reverse vending machines used by supermarket retailers to collect empty returnable drink containers and return deposit amounts to final consumers. Tomra had more than an 80% market share in many national markets in Europe. According to the European Competition Commission in 2006, Tomra implemented "an exclusionary strategy in several national markets, involving exclusivity agreements, individualized quantity commitments and individualized retroactive rebates, thus foreclosing competition on the markets." The company appealed twice, with both appeals dismissed.

The three cases above—and several others—have raised interesting economic questions. What possible economic justifications for the adoption of various conditional discounts/rebates might there be? Are they mechanisms for price discrimination? Do they constitute a competitive strategy to increase profits and market share? Do they produce any

efficiency gains? What are the welfare implications for competition and consumers?

These cases also raised questions on legal approaches. In the U.S. antitrust community, there have been debates about treating conditional pricing practices as predatory pricing or as exclusive dealing. In the context of the Canadian *Competition Act*, there are questions about whether S. 77 on exclusive dealing and tied selling and market restriction, or S. 78-79 on abuse of dominant position might be most properly applied to cases involving loyalty rebate practices.

In our analysis of the economic justifications and consequences of rebate schemes, we focus on a simple form of retroactive rebate schemes called "all-units discounts" ("AUDs") in single-product markets. This scheme refers to a pricing practice that lowers a customer's per-unit price on every unit of the product purchased when the customer's purchase exceeds or is equal to a pre-specified volume threshold. In other words, a simple AUDs scheme consists of three numbers: a list price, a volume threshold, and a discount price. It captures the main features of the retroactive rebate schemes observed in several of the recent antitrust cases. We provide a leverage theory of AUDs in single-product markets and show that AUDs adopted by a dominant firm can leverage its market power in the non-contestable portion of the demand to contestable portion, partially exclude its small rival, in the sense that the rival's profits, sales volume, and market share are reduced as compared to the but-for environment in which the dominant firm could only use per-unit prices.

One key feature of the AUDs is that the total payment from the customer to the supplier drops sharply once the customer's purchase reaches the threshold, resulting in negative marginal prices for the units near the threshold. This feature often leads analysts to treat AUDs as a practice of predatory pricing.[6] As we shall illustrate in this article, the dominant firm's list price and discount price under AUDs can both be well above its marginal cost, but the AUDs scheme can partially exclude the small rival. In other words, our leverage theory of AUDs does *not* need any profit sacrifice in one period and recoupment in another period, as predatory pricing does. This also implies that AUDs are more profitable and thus more likely to occur and post greater risk to consumers than predatory pricing.

A natural but imperfect analogy of AUDs is exclusive dealing.[7] The economic analysis on exclusive dealing can be generally categorized into

two strands. One strand studies contracts as the rent-shifting mechanism originated from Aghion and Bolton (1987) [2], in which an incumbent firm can sign an exclusive contract with a customer before its rival enters the market.[8] Through the exclusive contract, which includes a liquidated damages clause, the incumbent and the customer can form a coalition to extract some efficiency gains from the potential rival. However, in many antitrust cases, the small rivals are already present in the market and can make counteroffers to the customer. From the customer's point of view, it is better to solicit two competing offers than to sign one without seeing the other. Our analysis allows both the dominant firm and its small rival to compete in pricing offers, and the customer does *not* commit to either party before seeing both offers. We find a partial foreclosure mechanism different from that in Aghion and Bolton (1987) [2].

The other strand of the economic analysis on exclusive dealing concerns multiple customers: Examples include Rasmussen, Ramseyer, and Wiley (1991) [11] and Segal and Whinston (2000) [13]. The exclusion mechanism considered requires economies of scale, e.g., the small rival needs to serve a sufficient number of customers in order to be viable. As a result, getting one customer to sign with the incumbent imposes a negative externality on other customers, and thus the incumbent can induce exclusive dealing for free by exploiting the lack of coordination among customers. By focusing only on one customer, we find that, even without externality or lack of coordination among customers, AUDs can still be used to partially exclude the small rival.

The rest of the article is structured as follows. In Section 2, we use an example to show that AUDs can be implemented to leverage the dominant firm's market power from its non-contestable demand to contestable demand,[9] partially foreclosing a small rival with identical costs. Section 3 explains the partial foreclosure mechanism as a leverage theory. Section 4 further shows that such leverage theory can work, even when the small rival is more efficient than the dominant firm. Section 5 discusses alternative legal approaches to assessing conditional pricing practices, such as AUDs. Section 6 provides concluding remarks.

2. A SIMPLE EXAMPLE[10]

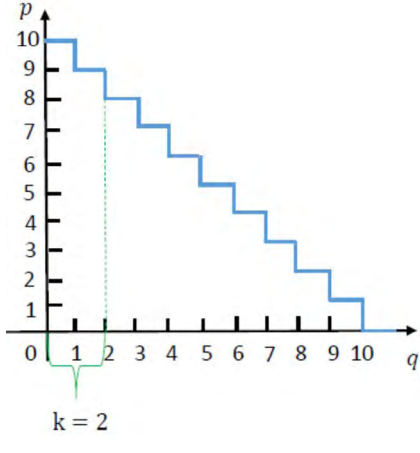
In this section, we use an example to illustrate how a dominant firm could use the AUDs to leverage its market power from its non-contestable portion to its contestable portion. Such leverage could yield higher profits for the dominant firm, partially exclude its small rival, and hurt

downstream customers, as compared to a benchmark case when AUDs are prohibited.

Consider the following stylized setting. A downstream customer demands at most 10 units, with stepwise willingness-to-pay (WTP): that is, the customer is willing to pay at most $10 for the first unit, $9 for the second unit, $8 for the third unit, and so on. The demand curve coming from these preferences is illustrated in Figure 1, where the horizontal axis represents units of quantity and the vertical axis represents WTP or price.

Suppose two firms producing identical products can serve the customer at constant marginal (per-unit) costs. For most of our discussion, we consider the two marginal costs as identical (i.e., the two firms are equally efficient) and, for simplicity, normalize them to be zero. Later on, we shall discuss the impacts of differential marginal costs on inefficient foreclosure using AUDs. Moreover, assume that Firm 1 (F1) can serve at least 10 units while Firm 2 (F2) can produce at most 2 units. In other words, F1 is not constrained in its ability to serve the customer, but F2 is capacity-constrained with capacity level k=2. The most efficient outcome for this market will involve producing output until the value that the customer places on the last unit no longer exceeds the marginal cost of producing it. Since marginal cost here is 0, this would involve producing 10 units generating total surplus value of 10+9+8+⋯+1=$55.

Figure 1: Stepwise demand and Firm 2's limited capacity k=2



We consider what is referred to as a sequential-move, complete information game with F1 offering its pricing scheme first and then F2 making its offer, followed by the customer's choices of where and how many units to purchase. Note that our timing is different from that of the seminal Aghion and Bolton (1987). That is, we allow the buyer to make her purchase decision *after seeing two competing offers*, instead of forcing the buyer to sign with F1 before F2 enters the market. Our modeling choice is intended to capture some of the main features of several recent antitrust cases discussed in the Introduction. Moreover, we focus on the case of complete information for the reason that we would like to isolate the strategic effect of AUDs from the second-degree price discrimination effect based on asymmetric information between the supplier and its customers.

Consider a benchmark in which F1 just offers a constant per-unit price (called linear pricing, LP) followed by F2 offering a per-unit price. Note that in this benchmark, F2 can always undercut F1's per-unit price and serve 2 units of the customer's demand. Anticipating this undercutting strategy, it is optimal for F1 to choose a monopoly per-unit price over the residual demand with WTPs, starting from 8 to 1. Simple calculations show that F1's optimal price is \$4.[11] Therefore, in equilibrium, F1 sells 5 units and earns a profit of \$20, while F2 sells 2 units and earns \$8. The customer receives a consumer surplus (difference between the value she placed on her purchases and what she actually had to pay) of \$21 and the total market surplus is \$49.

Now, suppose F1 uses a simple AUDs scheme, and then F2 offers a per-unit price, followed by the customer's choices. Consider the AUDs scheme with *a list price* p_0=\$10, *a volume threshold* Q=9 above which the discounted price p_1=\$36.5⁄9 w*ill be applied to all units*. Observing the AUDs scheme from F1 and p_2 from F2, the customer needs to choose between "meeting the threshold" and "not meeting the threshold." Meeting the threshold means that the customer purchases 9 units from F1, and possibly the last 1 unit from F2, which results in a surplus to the customer as

$$CS^{DS} = 55 - 36.5⁄9 \times 9 - p_2 = 18.5 - p_2$$

Not meeting the threshold implies that the customer has to rely on F2 only (since it is not worth buying at p_0=\$10 from F1), which yields a customer's surplus (from the purchase of only two units—F2's capacity)

$$CS^{SS} = (10+9) - 2p_2 = 19 - 2p_2$$

Here superscript DS is short for dual sourcing, and SS stands for single sourcing. Clearly, the customer will meet the volume threshold if and only if CS^{DS} is greater than CS^{SS} or

$$CS^{DS} = 18.5 - p_2 \geq 19 - 2p_2 = CS^{SS}$$

i.e., $p_2 \geq 0.5$. Thus, if F2 wants to sell at its full capacity $k = 2$, it has to undercut price below \$0.5. Thus, the maximal profit it can achieve when selling 2 units is 0.5×2=\$1. Nevertheless, if F2 sets p_2=\$1 it still can get 1×1=\$1, although it only sells 1 unit. The above logic implies that it is feasible for F1 to induce the customer to meet its quantity threshold.

It can be shown that in equilibrium, F1 will indeed use the above AUDs scheme and earn a profit of \$36.5, which exceeds what it could earn under LP in the benchmark, \$20. The best response that F2 can offer is to set its per-unit price p_2^{AUD}=\$1, in which case it will earn a profit of \$1, which is lower than what it could earn in the benchmark case, say \$8. However, the customer receives surplus \$17.5, which is lower than what she would receive in the benchmark case. Since all 10 units are supplied, the total surplus, \$55, remains intact.

This example illustrates that, as compared to LP, the AUDs scheme used by the dominant firm lowers the profits, sales volume and market share of its capacity-constrained rival, leading to partial foreclosure of competition in the market, reducing the surplus of the downstream customer.[12]

3. LEVERAGE AND PARTIAL FORECLOSURE MECHANISMS IN SINGLE-PRODUCT MARKETS

The insights from the above, simple example hold for a general downward-sloping demand curve, $D(p)$, and a rival with a relatively small capacity level, as formally shown in Chao, Tan and Wong (2016) [4]. Since the rival can compete with the dominant firm, up to its limited capacity level, the contestable portion of the demand is restricted to the size of the rival's capacity level while the remaining portion of the demand is considered to be non-contestable. The dominant firm is able to design AUDs in order to leverage its market power over the non-contestable demand and capture extra rents from the contestable demand.

First, note that the dominant firm F1 could have used two-part tariffs

to extract full surpluses from its non-contestable demand, see Chao and Tan (2014) [3]. However, the AUDs scheme enables F1 to go beyond its non-contestable demand, extracting an extra amount from the customer and shifting the rent from its rival. To prevent F2 from selling at its full capacity, F1 must induce the customer to purchase F2's product, only after buying a certain amount from F1, and commit to a minimum quantity requirement more than its non-contestable portion so that the residual demand for F2 is less than its capacity k. For such a quantity requirement to be accepted by the customer, *F1 must tie its contestable portion of the demand to its non-contestable portion and design its pricing scheme in such a way that the customer cannot afford to lose F1 as a supplier.*

There are two crucial features of the AUDs scheme: The first is its quantity threshold. Given that a customer has no choice but to purchase some, although not all, of her requirement from the dominant firm, the dominant firm can set its quantity threshold above its non-contestable portion and induce the customer to purchase a large chunk of its products and thus less of its rival's. Consequently, the capacity-constrained rival is forced to undersupply and earn lower profits than when the dominant firm could only use LP.

The second feature of the AUDs scheme is its quasi-fixed fee at the quantity threshold. Such a quasi-fixed fee (i.e., the list price multiplied by the quantity threshold), along with the quantity threshold, leads to two effects: quantity expansion effect and surplus extraction effect. First, since F1 can use a quasi-fixed fee to extract incremental surplus from the customer after deducting the one offered by F2, it has an incentive to push the equilibrium output towards a more efficient one than the one under the LP benchmark. Such a quantity expansion effect tends to increase the total surplus. Second, because of the featured quasi-fixed fee, F1 can extract a surplus from the customer more efficiently than using LP. Such a surplus extraction effect reduces the surplus of the customer. However, F1's surplus extraction is constrained by the competitive pressure from F2. When the rival's capacity level is relatively small, competition does not constrain F1 significantly and the quasi-fixed fee under the AUDs extracts most of the customer's surplus. On the balance, in such a circumstance, the surplus extraction effect dominates the quantity expansion effect, resulting in lower surplus to the customer, as compared to the LP benchmark.

As compared to the existing literature, our exclusionary mechanism

does *not* need: (i) asymmetric information, as in Kolay, Shaffer and Ordover (2004) [8], so that price discrimination cannot be a reason to offer AUDs; or (ii) a lack of buyer coordination in order for AUDs to be exclusionary as in Rasmusen, Ramseyer and Wiley (1991) [11] and Segal and Whinston (2000) [13], for there is only one buyer in our model; or (iii) the buyer to sign a contract with the dominant firm before the rival arrives, as in Aghion and Bolton (1987) [2] and Ide, Montero and Figueroa (2016) [5], because the customer in our model does not have to make any purchase commitment until seeing both competing offers. Moreover, in contrast to exclusive dealing, we find that the dominant firm prefers partial foreclosure to full foreclosure .

4. EXCLUSION OF MORE EFFICIENT BUT SMALL RIVALS

The above insights also apply when F2 has a lower marginal cost than F1, leading to an inefficient and partial foreclosure. To describe this finding more formally, suppose F2's marginal cost c_2 is no higher than F1's marginal cost c_1, i.e., $c_2 \leq c_1$. In addition, suppose $0< k < D(c_1)$, which means that F2 cannot serve the whole demand of the customer when F1 undercuts price to its marginal cost c_1. Denote F2's monopoly price as $p^m(c_2)$. Chao and Tan (2014) [3] have shown that in the same model as discussed in the last two sections, AUDs schemes lead to inefficient partial foreclosure, as long as the marginal cost differential is not too large, i.e., in formal terms when the following holds:

$$c_2 \leq c_1 < p^m(c_2) \text{ and } k + (c_1 - c_2) \cdot D'(c_1) > 0.$$

When facing a more efficient rival, up to its capacity limit, as long as the rival's cost advantage is within a certain range, the AUDs scheme is an effective instrument to shift rents from the rival, extract surplus from the customer, and improve the dominant firm's profit. As compared to LP, the AUDs adopted by the dominant firm may reduce total surpluses.

To illustrate the above findings, consider an example with a continuous, linear, and downward-sloping demand curve $D(p)$=10-p, and capacity k=4 for F2. Assume F2's marginal cost is zero and F1's is $2. The model is the same as that in the last two sections: F1 offers its pricing scheme (LP or AUDs) first and then F2 makes its offer of LP, followed by the customer's choices of where and how many units to purchase.

Table 1 lists the equilibrium outcomes for both cases. Consistent with the example in Section 2, as compared with the LP benchmark, the

AUDs scheme improves the dominant firm's profits, reducing the profit, sales volume and market share of the capacity-constrained competitor, although the downstream customer's surplus is improved. However, due to the shift of sales from F2 to F1 under the AUDs, higher volumes are produced using F1's less efficient technology. This production inefficiency can dominate the quantity expansion effect of the AUDs, resulting in lower total surpluses, as shown in Table 1.[13]

Table 1: Linear Demand and Differential Costs

$c_1 = 2 > c_2 = 0$ and $k = 4$

	Price for F1	Price for F2	Quantity for F1	Quantity for F2	Profit for F1	Profit for F2	Consumer Surplus	Total Surplus
LP	$4	$4	2	4	$4	$16	$18	$38
AUDs	$3.97	$2.97	4.07	2.97	$8.03	$8.79	$20.64	$37.46
% Change	-0.7	-26	+103	-26	+101	-45	+15	-1

Our analysis suggests that in the short run, the AUDs scheme adopted by the dominant (incumbent) firm can harm the more efficient but capacity-constrained competitor (new entrant) and even reduce the total surplus, as compared to the benchmark case of LP. In the long run, the more efficient but smaller rival might be induced to exit, depending on the magnitude of fixed costs involved, and the dominant firm would monopolize the market, leading to lower customer's surplus as well as lower total surplus.

Returning to the issue of economic efficiency, recall that retroactive all-units discounts have a quantity-expansion effect. Although the competitor's sales may decrease, the dominant firm's sales are likely to increase, and the total sales often increase due to such a quantity expansion effect of the AUDs. The total surplus (the sum of the profits of the two suppliers and the downstream customer's surplus) depends on the three primitives of the setting: (i) the cost structures of the dominant firm and its rival, (ii) the size of the capacity of the rival firm, and (iii) the demand of the downstream customer. If the rival firm and the dominant firm are equally efficient, at least up to a certain capacity level, and if the

dominant firm's technology exhibits economies of scale after a certain quantity level, then the AUDs with the quantity-expansion effect can be efficiency-enhancing and such efficiency gains should be recognized in enforcement.

On the other hand, if the rival is more efficient up to a certain capacity level, AUDs shift production and sales from the rival to the less-efficient dominant (incumbent) firm, causing inefficiency. This efficiency loss should also be recognized in enforcement. The above example illustrates that the efficiency loss resulting from partial foreclosure can outweigh the efficiency gains due to the quantity-expansion effect. To quantify the net effect of the AUDs, it would be helpful to have information and evidence on the market structure, the cost structures of the suppliers and the demand of the downstream customers.

It should be noted that in our analysis, we have tried to keep our model simple in order to illustrate the incentives of the firms and the effects of AUDs in the context of asymmetric competition. When applying our theory to specific cases, we should pay attention to the facts of the cases and examine the extent to which the rival firm's ability to compete is harmed due to the adoption of the AUDs by the dominant, incumbent firm, not just simply look at the loss of sales of the rival firm.

5. LEGAL APPROACHES AND ENFORCEMENT

In assessing competitive effects of loyalty rebate programs, two main legal approaches have been advocated: one treating cases as potentially involving predatory pricing and the other treating them as potentially representing exclusive dealing. For a summary of the discussions on the two approaches and more recent debates,[14] see Klein and Lerner (2016) [6], Moore and Wright (2015) [9], and Salop (2016) [12]. Part of this debate is concerned with whether a price-cost test based on an equally efficient competitor is appropriate and useful in assessing anti-competitive effects of rebate programs used by dominant firms. Loosely speaking, such a test requires a comparison between an effective price by allocating relevant rebates/discounts to the contestable product/portion and some measure of per-unit cost of an equally efficient competitor. If the effective price by the dominant firm is found to be below the cost, it provides an indication that the dominant firm might have engaged in predatory conduct. On the other hand, if the effective price is above the cost, does this imply an antitrust safe harbor and that there is no exclusion associated with the rebate program under consideration?

Based on their analysis of the *ZF Meritor v. Eaton Corp*., Klein and Lerner (2016) [6] state that "when price is 'the predominant incentive mechanism,' a price-cost test can be used to evaluate single product loyalty contracts." Salop (2016) [12] analyzes the two legal frameworks in the context of conditional pricing practices by dominant firms and concludes that the raising rivals costs (RRC) foreclosure paradigm is a better framework than the predation paradigm for assessing conditional pricing practices. Moore and Wright (2015) [9] argue that "price-cost tests applied to predatory pricing are not a good match for the economics of exclusion. A price below cost is neither necessary nor sufficient for exclusion. A firm with market power can raise rivals' costs without pricing its goods below cost." Their discussions also suggest that the RRC can be a good framework for assessing loyalty rebate programs.

In its preliminary judgment concerning the interpretation of Article 82 EC in the context of *Post Danmark II*, the European Court of Justice stated that "The application of the 'as-efficient-competitor' test does not constitute a necessary condition for a finding to the effect that a rebate scheme is abusive under Article 82 EC," and that "(i)n order to determine whether a rebate scheme … implemented by a dominant undertaking is capable of having an exclusionary effect on the market … it is necessary to examine all the circumstances of the case, in particular, the criteria and rules governing the grant of the rebates, the extent of the dominant position of the undertaking concerned and the particular conditions of competition prevailing on the relevant market." In this particular case, the Court of Justice concluded that the "as-efficient-competitor" test was of no relevance because the market structure with high barriers to entry made the mergence of an "as-efficient-competitor" almost impossible. The Court of Justice further noted that, in a market with high barriers to entry, a less-efficient competitor might contribute to intensifying competition.

We believe that price-cost tests motivated by predation theory are not appropriate for assessing the impacts of AUDs. Indeed, our theory suggests that AUDs can lead to partial foreclosure, yet prices are still above marginal costs . In other words, due to the leverage effect of AUDs, even if the competitor is willing to undercut prices, the customer may still find it optimal to purchase more units from the dominant firm at higher prices, and the capacity-constrained rival may be forced to under-supply at a low-profit margin. Hence, consistent with the ruling by the European

Court of Justice in *Post Danmark II*, our theory suggests that below-cost pricing is *not* necessary for AUDs to be exclusionary .

AUDs, according to our theory, can harm downstream customers' welfare and even reduce total surplus. Based on the evidence of a particular case, it might possibly be argued that the dominant supplier offers all-units discounts that partially foreclose a rival's ability to compete for customers, therefore forcing the rival to operate at higher costs (or reducing the rival's revenues), reducing the competitive constraint imposed by the rival, and allowing the dominant supplier to gain more market power in the contestable portion of the demand.

In the *Tetra Pak* case, while reviewing the competitive effects of the loyalty discounts adopted by Tetra Pak (TP), the SAIC's decision does not mention any applications of the "as-efficient-competitor" test, and does not discuss any predation argument either. Instead, the decision is based on the evidence that TP's discount policies have the effects of eliminating and restricting competition in the market of packaging materials. The SAIC identifies three types of discounts policies that TP adopted in the market of packaging materials between 2009 and 2013: (i) retroactively accumulative volume discount, (ii) customized volume target discount, and (iii) accumulative multi-products volume discount. The first two types are similar to the AUDs discussed in the previous sections of this paper.

The SAIC stresses the specific market conditions contributing to the case's outcome. One key aspect of the SAIC's analysis lies in the distinction between the contestable portion and non-contestable portion of the customer demand. Specifically, the SAIC finds that TP's discount policies have evident anticompetitive effects for the following reasons. First, TP offered a wide range of product categories and large-scale production capacity, leading to a "non-contestable portion of demand" for its products among certain customers, particularly those medium to large buyers. Second, TP tied certain volumes of packaging materials to the purchase of its machinery and technical services, and consequently, part of the contestable portion of demand was locked-in to become non-contestable. Third, the adoption of multiple types of discounts further enlarged the non-contestable portion through a loyalty-inducing effect, hence squeezed out the contestable spaces of rivaling packaging-materials suppliers. The logic behind the SAIC's analysis is consistent with the leverage theory discussed in this paper.

Based on the leverage theory, the SAIC further examines how TP's discount policies affected competition in the market of packaging materials, finding that in order to compete with TP, competitors had to overly match TP's discounted prices by providing bigger discounts. Such competitors' discounts not only had to be higher than the TP's for contestable portion of demand, but also had to compensate customers' loss of retroactive discounts for non-contestable portion of demand, due to their reduced purchase from TP. The SAIC claims that TP's discount policies made competitors more difficult to compete, and in the long run, market competition would be restricted or even eliminated. Therefore, the SAIC concludes that the discount policies constitute "other forms of abuse of dominant market position" as prohibited by the Article 17(1)(7) of China's Anti-Monopoly Law.

In the context of antitrust enforcement in Canada, there are two legal approaches to analyzing the loyalty rebate programs such as AUDs. Two provisions of the Competition Act are relevant. Section 77(2) states that "the practice is likely to (a) impede entry into or expansion of a firm in a market, (b) impede introduction of a product into or expansion of sales of a product in a market, or (c) have any other exclusionary effect." Section 79(1) (c) states that "the practice has had, is having or is likely to have the effect of preventing or lessening competition substantially in a market." Our theory suggests that the practice of AUDs is likely to have an exclusionary effect and possibly impede expansion of a small firm in a market, so that Section 77(2) can be applicable. Moreover, it can be argued that the practice of AUDs has had, is having or is likely to have the effect of preventing or lessening competition substantially, since our theory implies that the AUDs by the dominant firm reduces the small rival firm's profits and market share, restricts the growth of the competitor, and possibly reduces the welfare of the downstream customers. Thus, Section 79(1)(c) of the Competition Act may also be applied to assess the legality of the practice of loyalty rebate programs, such as all-units discounts.

Regarding enforcement, one may ask what types of evidence would support a finding that AUDs increase the dominant firm's market power and harm consumers, and what types of evidence would support a finding that AUDs increase efficiency and benefit consumers. These questions should be answered on a case-by-case basis. We suggest at least four types of information and evidence that we should be looking for: First, we should examine the nature of competition and dominance, which are

often induced by the nature of technological development in the industry and the timeline for entry. For instance, if we observe relative symmetry between competitors, loyalty programs are less likely to be exclusionary. If we observe extreme asymmetry between a dominant firm and its rivals, we then have to look at the case more carefully. The asymmetry here might be in terms of differences in capacity, product lines and distribution channels, and so on. Second, we should examine the nature of rebate programs—single-product volume threshold based discounts, market share based discounts, or multi-product bundled discounts, and so on. When we observe loyalty programs with extreme discounts and extreme conditions, but without obvious pro-competitive business justifications, it is worthy of further investigation. Extreme discounts with extreme conditions include those rebate and discount rates that are quite large, when the retroactive volumes thresholds are relatively large, and with relatively long contract periods. Third, based on the above information, along with information about downstream customers' demand, we might need to empirically identify whether there exists non-contestable demand/market and contestable demand/market and estimate the size of the dominant firm's products that customers must carry. Fourth, and equally important, economic theory could help us identify and organize the information and evidence necessary to apply relevant provisions of the antitrust laws.

6. CONCLUSION

In this paper, we present an exclusionary theory of all-units discounts (AUDs), in the context of a dominant firm competing with a capacity-constrained rival in a single-product market. Our theory demonstrates that it can be profitable for the dominant firm to use all-units discounts to extend its market power in its non-contestable portion of the single-product market to the contestable portion, thus reducing the rival's revenues (or raising the rival's costs), relaxing the competitive constraint imposed by the rival, and allowing the dominant firm to further gain market power in the relevant market. We also demonstrate that pricing below cost is not necessary for all-units discounts to be exclusionary and that all-units discounts can have an exclusionary effect, even though the prices might be above marginal costs. In our view, a price-cost test is not useful in many cases when assessing possible exclusionary effects of loyalty rebate programs, and instead we advocate a rule of reason approach based on a comprehensive analysis of market structure, the

nature of rebate programs, exclusionary effects of rebates, and overall efficiency.

REFERENCES

[1] *DG Competition discussion paper on the application of Article 82 of the Treaty to exclusionary abuses* (Brussels: European Commission, 2005).
[2] Philippe Aghion & Patrick Bolton, "Contracts as a Barrier to Entry" (1987) 77:3 Am Econ Rev 388.
[3] Yong Chao & Guofu Tan, "All-units discounts as a partial foreclosure device" (2014) USC Dornsife Working Paper No 14-01.
[4] Yong Chao, Guofu Tan & Adam Chi Leung Wong, " All-Units Discounts as a Partial Foreclosure Device" (2017), online: <papers.ssrn.com/sol3/papers.cfm?abstract_id=2842600>.
[5] Enrique Ide, Juan-Pablo Montero & Nicola´s Figueroa, "Discounts as a Barrier to Entry" (2016) 106:7 Am Econ Rev 1849.
[6] Benjamin Klein & Andres V Lerner, "Price-Cost Tests in Antitrust Analysis of Single Product Loyalty Contracts" (2016) 80:3Antitrust LJ 631.
[7] Bruce H Kobayashi, "The Economics of Loyalty Discounts and Antitrust Law in the United States" (2005) 1 Comp Pol'y Intl 115.
[8] Sreya Kolay, Greg Shaffer & Janusz Ordover, "All-Units Discounts in Retail Contracts" (2004) 13:3 J Econ & Mgmt Strat 429.
[9] Derek W Moore & Joshua D Wright, "Conditional Discounts and the Law of Exclusive Dealing" (2015) 22:5 George Mason L Rev 1205.
[10] Daniel P O'Brien, "All-units Discounts and Double Moral Hazard" (2014) Federal Trade Commission Working Paper No 316.
[11] Eric B Rasmusen, J Mark Ramseyer & John S Wiley Jr, "Naked exclusion" (1991) 81: 5 Am Econ Rev 1137.
[12] Steven C Salop, "The Raising Rivals' Cost Foreclosure Paradigm, Conditional Pricing Practices and the Flawed Incremental Price-Cost Test" (2017) 81 Antitrust LJ (forthcoming).
[13] Ilya R Segal & Michael D Whinston, "Naked exclusion: comment" (2000) 90:1 Am Econ Rev 296.
[14] David Spector, "Loyalty rebates: An assessment of competition concerns and a proposed rule of reason" (2005) 1:2 Comp Pol'y Intl 89.

Endnotes

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[1] See Sreya Kolay, Greg Shaffer & Janusz Ordover, "All-Units Discounts in Retail Contracts" (2004) 13:3 J Econ & Mgmt Strat 429; Bruce H Kobayashi, "The Economics of Loyalty Discounts and Antitrust Law in the United States" (2005) 1 Comp Pol'y Intl 115; David Spector, "Loyalty Rebates: An assessment of Competition Concerns and a Proposed Rule of Reason" (2005) 1:2 Comp Pol'y Intl 89; Daniel P O'Brien,"All-units Discounts and Double Moral Hazard" (2014) Federal Trade Commission Working Paper No 316; and references therein.

[2] *Canada (Commissioner of Competition) v Canada Pipe Co*, 2006 FCA 233, (2007) 2 FCR .

[3] *Post Danmark A/S v Konkurrencerådet*, C-23/14, [2015] 5 CMLR 25; EC, *Commission Decision of 29 March 2006 relating to proceedings under Article 82 [EC] and Article 54 of the EEA Agreement (Case COMP/E-1/38.113 – Prokent-Tomra)* [2006] OJ, C 734/07; *Tomra Systems and Others v Commission*, T-155/06 [2010] ECR II-4361; *Tomra Systems ASA and Others v Commission*, C-549/10 P, [2012] ECR I-0000.

[4] See <http://www.saic.gov.cn/zwgk/gggs/jzzf/201611/t20161116_172375.html?from=timeline&isappinstalled=0>.

[5] EC, *Commission Decision of 13 May 2009 relating to a proceeding under Article 82 of the EC Treaty and Article 54 of the EEA Agreement (Case COMP/C-3/37.990 — Intel)* [2009] OJ, C 227/07; *In the Matter of Intel Corporation* (2 November 2010), Docket No 9341, online: FTC <www.ftc.gov/sites/default/files/documents/cases/101102inteldo.pdf >; *LePage's Inc v 3M*, 324 F (3d) 141 (3d Cir 2003), cert denied, 542 US 953 (2004).

[6] See *LePage's v 3M, supra* note 5; *Eisai v Sanofi-Aventis US LLC* No 14-2017 (3d Cir 2016); *ZF Meritor LLC v Eaton Corporation*, 696 F 3d 254 (3d Cir 2012); Benjamin Klein & Andres V Lerner, "Price-Cost Tests in Antitrust Analysis of Single Product Loyalty Contracts" (2016) 80:3 Antitrust LJ 631.

[7] "A growing body of legal and economic scholarship and commentary agrees that loyalty rebates should be treated as a form of exclusive dealing", Comments of the American Antitrust Institute in Connection with Conditional Pricing Practices Workshop, (2014).

[8] Enrique Ide, Juan-Pablo Montero & Nicolás Figueroa, "Discounts as a Barrier to Entry" (2016) 106:7 Am Econ Rev 1849; revisited Aghion and Bolton's model and show that "*unlike exclusive dealing provisions, rebates do not contractually commit retailers to exclusivity when signing the contract*." Philippe Aghion & Patrick Bolton, "Contracts as a Barrier to Entry" (1987) 77:3 Am Econ Rev 388.

[9] According to European Commission's DG *Competition Discussion Paper on the Application of Article 82 of the Treaty to Exclusionary Abuses* (Brussels: EC, 2005) at para 152, "The rebate enables the dominant supplier to use the inelastic or 'non contestable' portion of demand of each buyer, i.e. the amount

that would anyhow be purchased by the buyer, as leverage to decrease the price for the elastic or 'contestable' portion of demand, i.e. the amount for which the buyer may prefer and be able to find substitutes." As we will see, in our example, the contestable demand versus non-contestable demand are determined by the rival firm's capacity size relative to the total demand size of the buyer.

[10] The continuous demand version of the example can be found in Section 3 in Yong Chao, Guofu Tan & Adam Chi Leung Wong, "All-Units Discounts as a Partial Foreclosure Device" (2017), online: <https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2842600>.

[11] In this example of a stepwise demand profile, there are two equilibria in the benchmark case in which F1 is indifferent between choosing $4 or $5. However, such multiplicity is a knife-edge result and it disappears when the demand is downward-sloping with continuous quantity, as shown in Chao, Yong, Guofu Tan & Adam Chi Leung Wong, *supra* note 10.

[12] It is easy to see that full foreclosure is not optimal for the dominant firm in the short run: To fully exclude F2, F1 has to offer the customer a surplus at least 10+9=19, which is the least that the customer would get if capacity-constrained F2 is forced to price at its cost level 0; since the maximum total surplus is 55, the most F1 can earn under full foreclosure will be 55-19=36, which is less than 36.5 under partial foreclosure. Yong Chao & Guofu Tan, "All-units discounts as a partial foreclosure device" (2014) USC Dornsife Working Paper No 14-01; shows that for a more general downward-sloping demand F1 can use two-part tariffs to extract full surplus from its non-contestable demand and eliminates any profits in the contestable portion of the demand, resulting in full foreclosure. Nevertheless, F1 can achieve higher profits by using AUDs at the expenses of the customer.

[13] It is interesting to note that in this example, F1's dominance is generated by a combination of its larger capacity level and its adoption of AUDs, given that F1 moves before F2 does in the game.

[14] On June 23, 2014, the U.S. Federal Trade Commission and Department of Justice Antitrust Division held a workshop focusing on "conditional pricing practices" including loyalty discounts, bundled discounts and related pricing schemes.

THE ECONOMICS OF MULTIPRODUCT LOYALTY PROGRAMS

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In this I paper I review the economic theory of loyalty discount programs. The emphasis is on recent developments, both in economic understanding and its application to recent cases. I begin with a taxonomy of loyalty programs within which the majority of litigated cases can be identified. A key feature of recent theorizing about loyalty programs is the importance of the dominant firm's uncontestable market, a market which in which entrants cannot compete, either because of insufficient capacity, or because in multiproduct cases, the entrant does not have the technology or expertise to produce in some products supplied by the dominant firm. Other issues that are discussed are the analogy between loyalty programs and price discrimination, which is a helpful one, and the less helpful analogy with predatory pricing theory and case law. I also assess the potential for "bright-line" tests for anticompetitive loyalty programs to emerge.

Dans cet exposé, je passe en revue la théorie économique des programmes d'escompte de fidélisation. L'accent est mis sur les faits nouveaux, tant sur le plan de la compréhension économique que sur le plan de son application aux affaires récentes. Je débute par une taxonomie des programmes de fidélisation auxquels la majeure partie des litiges peuvent être rattachés. Occupe une place de premier plan dans les théories au sujet des programmes de fidélisation l'importance du marché non disputable de la société dominante, marché sur lequel les entrants ne peuvent pas livrer concurrence, parce que le manque de capacité ou la multiplicité des produits les empêche de disposer de la technologie ou de l'expertise nécessaire pour fabriquer certains produits fournis par la société dominante. Sont également analysées l'analogie entre les programmes de fidélisation et la discrimination par les prix, qui est utile, ainsi que l'analogie, moins utile, avec la théorie et la jurisprudence sur les pratiques de prix d'éviction. J'évalue également la possibilité que ressortent des critères clairs en matière de programmes de fidélisation anticoncurrentiels.

Introduction

The law and economics of loyalty programs have been in a state of flux for decades due to a lack of a well identified theoretical framework from which to analyze the competitive effects.

The lack of consensus has been reflected in divergent decisions taken in the antitrust courts. As Scott Morton and Abrahamson (2016) have described, U.S. Courts have often "analogized" loyalty rebates to doctrines on tying, exclusive dealing and predatory pricing due to this absence of a solid theoretical framework for loyalty discounts.

As Giolio Federico (2011) argues, the European Commission seemed to have developed a stronger framework to guide antitrust cases related to loyalty discounts with the release of a Guidance Paper in 2009. However, even subsequent to the paper's release in the European Union the General Court has varied from an almost per se prohibition of loyalty rebates when offered by dominant firms (e.g. *Tomra*) to a more nuanced rule of reason approach (e.g. *Intel*).[1] This wide variation in how the European courts treat these different cases suggests that there is still a need for clarifications and strengthening of the economic theory of loyalty programs.[2]

In Canada, several important cases have helped to flesh out the legal treatment of loyalty programs under section 79, the Abuse of Dominance section, of the *Competition Act*. *Nutrasweet*, the first Abuse of Dominance case filed by the Commissioner, concerned the use of loyalty discounts to exploit and abuse market power. NutraSweet offered customers for its aspartame product a substantial discount if they would both purchase NutraSweet aspartame exclusively and agree to display the NutraSweet logo on the retail products (most of which were canned or bottled soft drinks). The sum of the logo and promotion allowances was on the order of 40% of the list price, with the logo display allowance accounting for most of the discount. As with many loyalty programs, the major incentive was for *exclusive* purchases by the buyer from NutraSweet, and the competitive effects analysis has significant overlap with that of exclusive dealing.

The Tribunal found that the loyalty scheme created substantial switching costs for customers. Also that the set of restrictions on customers taken together amounted to a practice of anticompetitive acts which had the effect of preventing or inhibiting entry by competing suppliers.

The *Canada Pipe* case is discussed in a separate section at the end of this article so will be reviewed only briefly here. Canada Pipe offered a bundle of loyalty discounts to distributors who agreed to carry Canada Pipe's cast iron drain, waste and vent products exclusively (the distributors were completely free to carry plastic DWV products). The loyalty

program involved multiple products in that Canada Pipe supplied both pipe and fittings to distributors. The Tribunal found that although Canada Pipe was dominant in the relevant markets, the loyalty program did not constitute a practice of anticompetitive acts. The decision was reversed by the Federal Court of Appeals and settled shortly thereafter.

The Federal Court of Appeal decision in *Canada Pipe* was important in clarifying the legal framework, not just for loyalty programs, but for Abuse of Dominance cases in general. First, the FCA emphasized the importance of a "but for" analytical framework for analyzing competitive effects. The anticompetitive acts must be compared with a counter-factual world where they were absent, not with some hypothetical absolute standard of competition. Second, the FCA interpreted section 79 (i) (b) of the Competition Act as referring to the purpose of a practice of anti-competitive acts, and not to their effects.

Finally, in 2003 the Competition Bureau investigated the loyalty program operated by IKO Industries Ltd., Canada's largest manufacturer of asphalt roofing shingles. The Bureau negotiated a change in the program involving a switch to volume based discounts.

Loyalty programs can be defined as any program that offers a discount to a buyer based on the volume of that buyer's sales. The discount can be offered either in a previous time period, or the same time period.[3] Volume may also be expressed in terms of market share (e.g. if instead of the supplier requiring that the buyer purchase at least 8 units of the 10 they require from the supplier, the requirement may alternatively be that the buyer source at least 80% of their needs for this input from the supplier). The discounts are most often provided only once purchases have reached a threshold. Usually these types of programs require the firm to have knowledge about the buyer's purchases, not just with the seller, but also with other firms in the market.[4] This last point is where the concern for antitrust is greatest.

A Taxonomy

I present below a series of four examples, designed to capture the essential attributes of the common variations of loyalty programs that we observe in practice and that have comprised the majority of competition cases in Canada, the U.S. and Europe.

Example 1

Volume-based All Units Discounts (AUDs). A computer OEM requires 100 memory chips. The dominant chip maker offers a schedule to the buyer such that the first 80 chips are $1, but purchasing any subsequent units reduces the price on *all units* purchased to 90 cents. The entrant/smaller rival is usually restricted from competing for the whole market by a capacity constraint, so that the market can be divided into a "contestable" segment and a monopoly segment in which the dominant firm faces no competition.

Key cases

Two important cases involving AUDs are *Tomra*[5] and *Michelin II*.[6] In *Tomra*, the dominant manufacturer of "reverse vending machines" offered a variety of loyalty discounts to customers (mostly grocery stores) which the Competition Commission found had impeded entry and competition and constituted an abuse of a dominant position. In *Michelin II*, Michelin offered AUDs on purchases of replacement tires, usually with more than one tier of discount.

Example 2

Share-based All Units Discounts (AUDs). This time the dominant memory chip maker offers a pricing schedule: 1$ per chip if the buyer fills no greater than 80% of their needs from the dominant firm, but 90 cents per chip if greater than 80% of their needs are met by the dominant firm. This is an example of what Fiona Scott Morton has called "contracts that reference rivals" because meeting the seller's threshold depends on the rival's behaviour as well as that of the dominant firm.[7]

Examples 1 and 2 are closely related. If the buyer has perfectly inelastic demand (their demand is constant independent of price changes) then they are identical i.e. it makes no difference whether the threshold for the loyalty rebate is a specific volume or whether it is expressed as a market share. But if the buyer's demand has some price elasticity, then with a volume based rebate the entrant could still increase their market share by lowering their price sufficiently.

Key cases

In the *Concord Boat*[8] case, *Brunswick Corporation* used three types of market share based loyalty discounts in the sale of stern drive and

inboard marine engines. The agreements specified a 3% discount to boat builders who bought 80% of their engines from Brunswick, a 2% discount for a 70% share and a 1% discount for a 60% share. Although the jury originally found for the plaintiffs, the decision was reversed by the Eighth Circuit on appeal. One interesting aspect of the appeals court decision is the finding that Concord's prices were above costs, and thus did not violate the predatory pricing standard set out in *Brooke Group*.[9]

Example 3

Multiple products, Bundled Loyalty Discounts. Suppose that there are two leading types of boat engine, powered by diesel and gasoline respectively. Engine Maker A, the dominant firm, makes both types but has a monopoly in the market for diesel engines. The market for gasoline engines is competitive: as well as A, firm B also supplies them, but firm B does not have the capacity or the technology to enter the market for diesel engines. Firm A offers a 5% discount over the list price for buying both types of engine from them.

Key cases

Two key cases that have defined US legal standards with respect to multiproduct loyalty discounts are *Lepage's*[10] and *Meritor*[11]. In *Lepage's*, 3M offered bundling rebates to office supply stores that carried multiple 3M products. In Meritor the maker of a full line of truck transmissions offered discounts to truck manufacturers who maintained high market share thresholds with the incumbent across all product lines. In both cases the plaintiffs were successful despite the incumbent's pricing in the identified product line being found to be above cost.

Example 4

Preferential dealing contracts. A supplier of multiple products offers two pricing menus: one in which the buyer can pick and choose which products to take, with the remainder of their needs being met by other suppliers; and one in which the buyer undertakes to meet all of their needs from the seller's product line i.e to purchase from the dominant firm exclusively. Clearly this is an extreme form of a Contract that References Rivals (CRR), where the rivals share must not exceed zero.[12]

NutraSweet and *Canada Pipe*[13], both described elsewhere in this article, are examples of the above contract type.

Some Dimensions of a Competitive Effects Analysis of Loyalty Programs

The importance of the Dominant Firm's uncontestable market

Several dimensions of the competitive effects of loyalty programs are worthy of note. In this article I place an emphasis on multiproduct loyalty programs, in which a dominant producer supplies several products (which may be substitutes, complements or unrelated) of the sort described by my Examples 3 and 4 above. An illustrative case is *Lepage's v. 3M*,[14] in which 3M, a maker of a multitude of office supply products, offered loyalty discounts to distributors who met volume goals across a range of six product categories in purchases from 3M, thereby foreclosing the entry of Lepage's, the leading manufacturer of unbranded transparent tape, who made only Scotch tape but had no capacity to supply the other products.

Central to *Lepage's* and many similar cases is the concept of an *uncontestable market* for the incumbent.[15] The idea is that the incumbent is already supplying a set of products to the buyer which the entrant does not have either the capacity, or access to the required intellectual property, or the knowhow, to manufacture. Equivalently, in the single product case, the entrant may have a capacity constraint such that they can produce equivalent or even superior products to those of the incumbent but in a limited volume, but cannot match the full volume supplied by the incumbent.[16]

The concept of a contestable and uncontestable market has played a critical role in many U.S. cases involving loyalty discounts. However, the application of the concept is not as straightforward as it may sound. For example, the contestable and uncontestable parts of the dominant firm's product line should be defined *with respect to a particular buyer.* For example, in *Lepage's* the big retailers like Wal Mart were presumably purchasing a full line of 3M products but a smaller retailer might not be. The implication is the share of market that is contestable will vary across different buyers and would have to be evaluated on a case-by-case basis.[17]

A separate issue is that the contestable and uncontestable markets that are relevant to a particular loyalty discount may not match well, or at all, with the identification of relevant product markets. To illustrate again from *LePage's* – 3M supplied products in several distinct product markets which were considered uncontestable to Lepage's and one product market which was contestable to Lepage's. Thus the traditional approach to market definition is of only limited usefulness, because the strategic use of market power cuts across several traditionally defined antitrust product markets.

The two cases, that of multiple products where the smaller rival can only compete in some markets, and the case of a homogeneous or nearly homogeneous market where the smaller rival is capacity constrained, are more or less symmetric from a strategic and a competitive effects perspective. One potential difference could arise from the presence of demand side interactions in the multiproduct case e.g. where the buyer needs to stock the full range of products supplied by the seller, as was suggested in *Canada Pipe*. In *Lepage's* also, the buyers had a preference for buying a bundle of products all from 3M, as opposed to buying them separately from individual suppliers. There are also potential supply side interactions that are relevant – the dominant firm may exploit economies of scope between the different products that are supplied to the buyer, and as a result there may be an efficiency advantage for the buyer to keep a single supplier for all of the relevant products. Some examples of such economies of scope could arise with economies of joint delivery of multiple products from a single supplier, or common in store display advertising of an array of products from a single supplier.

The reason why the uncontested market concept is critical to the competitive analysis of loyalty discounts is that without it, it can always be argued that an equally efficient entrant could potentially supply the entire market and that no loyalty discount program could exclude such a firm.[18] For example, in *Canada Pipe*, the Tribunal accepted that Canada Pipe's Stocking Distributor program contained no contractual restrictions to a customer purchasing from rival suppliers, and that at the beginning of each calendar year, all suppliers and potential suppliers were actually in a symmetric position since no accrued rebates were owing at that point.

Tying and Price Discrimination

The competitive effects of loyalty programs support a close analogy to the analysis of tying, a point made by several commentators. The

uncontestable and contestable markets play the role of the tying and tied goods in tying analysis. By leveraging their control of the tying good, the dominant firm is able to increase the price of the tied good above competitive levels and possibly induce the exit of rival producers in the tied good market.

The analogy of loyalty programs with tying is not exactly one-to-one, however. In the classic analysis of tying by Whinston (1990) the decision to tie has the effect of making the dominant firm more aggressive in its pricing in the competitive tied market. In turn, more aggressive pricing can force the exit of one or more rival firms in the tied market. There are, however, two striking and related differences between the use of tying and the use of loyalty programs as strategic devices to improve the position of the incumbent. First, as Chao, Tan and Wong (2016) show, a loyalty program can induce a *partial foreclosure equilibrium* where the competitor survives but with a reduced market share. By contrast, a profitable tying contract would generally only be profitable if the entrant were excluded completely.

The second point is really a corollary of the first. In a tying equilibrium, the incumbent induces exit by creating price competition that is *more aggressive* than without the tying contract.[19] But, as Chao *et al* and Scott Morton and Abrahamson both show, loyalty programs make the pricing in the competitive segment *less aggressive* i.e. they soften price competition. It is even possible for a loyalty program to make the competitive firm better off. The reason for this is that the loyalty program creates a "cliff" in the smaller firms profit function, where it cannot expand market share without charging significantly lower prices, and hence a more profitable option is actually to increase prices and extract more profits from the smaller customer base to which it has access.

The Analogy with Predatory Pricing

Because loyalty programs appear to involve aggressive discounting aimed at the buyers in the competitive market, an analogy with predatory pricing is a natural one to consider. Predatory pricing involves aggressively low pricing by an incumbent dominant firm that is explicitly designed to induce the exit of a smaller rival. Predatory pricing also involves a profit sacrifice by the dominant firm in the short term with the expectation that, after the exit of the "victim" firm, the dominant firm will be able to increase prices to monopoly levels and recoup the earlier loss in profits.[20]

A well designed loyalty program need not involve any profit sacrifice at all, however. By a strategic choice of the threshold (h) and the discount (d) the incumbent can ensure that their profits increase as a result of the loyalty program.[21] Moreover, the goal of the program may not be the exit of the rival, but rather an increase in market share and a softening of price competition in the contestable market. And finally, there is no need for a recoupment phase when the predator seeks to regain their lost profits from strategically low pricing, since a well-designed loyalty program can help to preserve the market power of a dominant firm indefinitely.

Finally, the above analysis suggests the traditional price-cost tests for predatory pricing, which are predicated on a profit sacrifice model, will be of little use in identifying anti-competitive loyalty programs. I return to this point in a subsequent section.

Pro-competitive and anticompetitive attributes of loyalty programs

The majority of Competition Authorities have recognized that loyalty programs have complex attributes and need to be judged by a rule of reason standard.[22] The welfare effects of loyalty programs are complex, and certainly not always harmful. There is a valid analogy with price discrimination, in that both loyalty programs and price discrimination can have the effect of lowering the "marginal price" – the price paid for the marginal unit purchased, which in turn is likely to lead to an expansion of total sales. If, prior to the implementation of the loyalty program, the dominant firm is exercising market power, than an output expansion will be welfare increasing. In addition, to the extent that a loyalty program causes a displacement of sales by a more efficient dominant firm in favour of a less efficient entrant, that will also imply a welfare improvement. But loyalty programs also have the potential for causing exclusionary harm. Finally, the antitrust standard matters, whether a practice is judged according to a standard of consumer welfare, or total welfare – the latter being more likely in Canada. Since the welfare analysis of loyalty programs is complex and technical, I have summarized in the paragraphs below the properties that are of the greatest significance.

Pro-competitive attributes of Loyalty programs

It is worthwhile emphasizing an obvious point that may have been obscured in recent scholarship on loyalty programs: Loyalty programs are ubiquitous, appearing everywhere from the local coffee house or

bakery, to airlines and PC chip makers. The vast majority of programs do not raise competition concerns; to the contrary, it is reasonable to infer that since they are practices being pursued in competitive markets their role must be to enhance efficiency. A safe rule of antitrust analysis is that something so ubiquitous is highly unlikely to be anticompetitive in every case, or even in the majority of cases. The well-known observation of Ronald Coase is instructive.

> "One important result of this preoccupation with the monopoly problem is that if an economist finds something—a business practice of one sort or other—that he does not understand, he looks for a monopoly explanation. And as in this field we are very ignorant, the number of ununderstandable practices tends to be very large, and the reliance on a monopoly explanation, frequent."[23]

There are two broad categories in which loyalty programs can be pro-competitive

Loyalty programs in many cases are efficiency enhancing.

a. Loyalty programs can be used to correct inefficiencies arising from double marginalization. Double marginalization arises when an upstream supplier is already exercising market power by pricing above marginal cost and a downstream distributor or manufacturer creates additional inefficiency and distortion by marking up the manufacturers prices a second time. In the resulting pricing equilibrium the quantities supplied are too small and prices are too high, even compared to a benchmark of quantities (and prices) that maximize joint monopoly profits. A loyalty discount, because it creates an incentive to expand the quantity demanded, can correct such distortions.

b. Second, loyalty programs may help to align incentives between manufacturers and distributors. Efficient distribution may require that retailers and distributors engage in sales and marketing activities where their incentives are not easily aligned with those of the manufacturer. There are well known efficiency distortions created by the problems of hold-up and free riding. Loyalty programs can help to correct these distortions and promote efficient distribution.

c. Higher quality brands may use loyalty programs to help customers become better informed, leading to an equilibrium with better matching of customers with the high quality brand, which in turn can imply increase welfare.

Deterring a high cost entrant can increase welfare.

If the entrant is less efficient or higher cost than the incumbent - even where an entrant or smaller competitor is deterred from entering (or their market share is lower than it would have been without the loyalty program) economic welfare may be higher with the loyalty program than without it.

This is a complex issue to evaluate in any individual case. As Salop (2016) and others have pointed out, the entry of even a less efficient entrant can make consumers better off because of the increased competition that the entrant provides. The effect on total welfare would likely require a careful modelling of the specific case with and without the loyalty program (the counter factual). In the general case, by deterring a less efficient competitor a loyalty program initiated by a dominant firm could both increase or decrease welfare.

Anticompetitive properties of loyalty programs

The early discussions of loyalty programs were often in the context of oligopolistic markets, an example being airline frequent flyer programs.[24] Absent a framework of dominance a typical conclusion was that loyalty programs were likely to increase switching costs between rival producers, and possibly imply an increase in the ability of producers to exercise market power.[25]

As Guofo Tan[26] and others have observed, loyalty programs when practiced by a dominant firm resemble tying contracts practiced by a dominant firm. The dominant firm leverages its market power in its captive market to exploit additional market power in the competitive market segment (the small competitor either has a capacity constraint (examples 1 and 2) or can only produce in only one product (example 3). We can harvest intuition from the theory of tying to provide insight into the likely anticompetitive effects. First, tying is generally only profitable and anticompetitive when the dominant firm cannot exploit all of its market power in the tying good just by pricing in that market alone.[27] Second, the welfare effects of tying are ambiguous — it is not always anticompetitive.

As mentioned above, the economic effects of loyalty programs are very similar to those of tying. The non-contestable market segment (in Example 1) or the incumbent monopoly product (in Example 3) can be

seen as the tying good. While the contestable market segment (Example 1) and the competitive product (Example 3) act as the tied good. It has been known since Whinston (1990) that tying can be exclusionary, and potentially anticompetitive.[28]

Bright Line Tests for Anticompetitive Loyalty Discount Programs

The analogy drawn between loyalty programs and predatory pricing suggests that a traditional cost-based pricing test might be adapted to identify whether a loyalty program is anticompetitive or not. The issue has come to the fore in several high profile U.S. cases.[29]

In classifying cases according to the application of price-cost tests, I will restrict my discussion to their use in multiproduct cases. In both *LePage's* and *Cascade Health* the courts applied a form of discount attribution test (more on this below). In *Canada Pipe* the Competition Tribunal did not explicitly apply a price cost test. However, they did make reference to price cost margins in their decision, but did not go into detail on the role of contestable and uncontestable markets in performing a test.[30]

In order to assess the usefulness of price-cost tests in this context, a first step is to review how such tests came to prominence with respect to allegations of predatory pricing. Such tests have become so familiar and embedded within the case law of predatory pricing, that it is possible to forget their underlying economic framework. In the context of predatory pricing, price cost tests owe their origin to the important paper by Areeda and Turner (1975)[31] and its various refinements, notably that by Baumol (1996)[32]. The rationale for a price cost test is that if a dominant firm is pricing no lower than its own average variable cost, an equally efficient (or more efficient) competitor would not be deterred from entering (for entry to be socially beneficial, the entrant's average total costs should be less than the incumbent's average variable costs).[33]

Several authors have pointed out that it is not necessary for an entrant to be equally or more efficient for entry to increase economic welfare.[34] This is because entry creates more competition, and competition benefits consumers. However, this issue is more important in jurisdictions where consumer welfare is the primary criterion for antitrust action, and less important where total welfare is the criterion, as it is in Canada.[35] Thus, particularly in Canada, the test of "is the practice likely to deter an equally efficient entrant?" is still an important one.

The advance in the use of price-cost tests in multiproduct cases is the recognition that the uncontestable market must be factored in to the construction of any such test for it to have any interpretative value. Suppose for example that Deep Cove Express[36], a monopolist manufacturer of gasoline engines for powerboats, also makes and supplies diesel engines where there are several competing suppliers. The manufacturer offers boatbuilders a 10% discount if they purchase both types of engine from Deep Cove. If Deep Cove's diesel engines have average variable costs of $50,000 per engine and they sell for $60,000 without the discount, the discounted diesel engine price is $54,000. A conventional price-cost test would find price exceeding variable costs and no reason to presume harm. Assume in addition that Deep Cove sells the same volume of gasoline engines and at the same price as its diesel engines. If the discount is computed as an attributed discount, comparing the incremental cost to the buyer of buying diesel engines from Deep Cove (in addition to the purchase of gasoline engines) with Deep Cove's variable costs for its diesel engine, the comparison would be of $48,000 with $50,000 so that Deep Cove would be found to be selling below cost, and at least trigger further investigation of predatory behavior.

The example above captures the concept of *exclusionary bundling* articulated by Barry Nalebuff.[37] This concept can be applied directly to my example 3 in the introductory section of this paper, where a customer who purchases both of two products from the incumbent can do so at a discount of 5%. As defined by Nalebuff:

> Exclusionary bundling arises when a firm has market power in product A and faces competition in product B. A firm engages in exclusionary bundling when the incremental price for an A-B bundle over A alone is less than the long-run average variable costs of B.[38]

The key concept with Nalebuff's test is "incremental price" which is calculated as follows. The incremental price is defined as the additional amount that the customer would have to pay in order to buy both A and B from the monopolist compared to buying just A alone. Provided that the incremental price exceeds the incumbent's average costs for product B, an equally or more efficient rival will not be deterred from entering market B. Or in Nalebuff's words "The intuition behind the test is that exclusionary bundling forecloses equally efficient rivals".[39] As Nalebuff points out, if the entrant has a capacity constraint, an incumbent may be able to pass the exclusionary bundling test but still exclude an equally efficient entrant with a capacity constraint because of an inability to

achieve sufficient scale.[40] The exclusionary bundling test is therefore at best an incomplete test.

A different but related construction of a price statistic has been proposed by Fiona Scott Morton and Zachary Abrahamson in a recent paper.[41] The authors define a statistic that they call the E*ffective Entrant Burden* (EEB) which measures the magnitude of the penalty that a buyer must incur in order to purchase from an entrant in quantities that will overcome the incumbent's threshold (a parameter of the all units discount program). Although the EEB statistic is primarily designed to apply to all units discount programs for single products, it can equally be computed in the context of multiproduct loyalty discounts.[42]

The EEB statistic is defined as:

$$EEB = hd/s$$

Where h = the requirements threshold at which a buyer receives a discount across all units purchased up to that point ($0<h<1$); s = the contestable share of the market which is accessible to an entrant (possibly due to the entrant's capacity constraint or the entrant's lack of expertise and/or intellectual property in manufacturing some of the incumbent's products); and d = the discount received by the buyer upon reaching a share h of their purchases from the incumbent ($0<d<1$).

In the Deep Cove Express example, the threshold is actually 100%, the AUD discount (after exceeding that threshold) is 10% and the contestable share is 50%. The EEB statistic for this example can therefore be calculated as 0.2 i.e. the entrant must price at a discount of at least 20% below the incumbent's list price in order to gain any market share at all in the diesel engine market. In order to formulate the EEB statistic as a price cost test we would require that the incumbent's variable costs in manufacturing diesel engines were no greater than (1-EEB) × Incumbent's price as a necessary condition for an equally efficient entrant to be deterred by the multiproduct loyalty discount.

In this example the applications of the Exclusionary Bundling test and of the EEB statistic are essentially the same, leading to the same conclusion. Where they could differ would be in a case where either the threshold h or the contestable share s do not coincide with a product boundary. For example, suppose that the entrant only has the capacity to produce *half* of the diesel engine market. The Exclusionary Bundling test

would remain unchanged, but since *s* is now 25% the EEB statistic would increase to 0.4 with the implication that the entrant must discount their price to 60% of the incumbent's price in order to capture any sales at all.

In this last example, the EEB statistic runs into a problem when used as a screen for predation against an equally efficient competitor. It does tell us that the entrant must price 40% below the incumbent's price in order to encourage the buyer to switch some business, but there is no reason to expect that the EEB price is either above or below the incumbents variable costs (the EEB statistic can take values greater than one, meaning that the entrant must pay buyers to take its product). Thus, an EEB price that is below the incumbent's long run variable costs is neither necessary nor sufficient for exclusion of an equally efficient entrant.

Scott Morton and Abrahamson do present some interesting calculations of the EEB statistic derived from important contested loyalty discount cases.[43] What these data suggest, albeit in an inconclusive way, is that "high" levels of the EEB statistic are likely to lead to legal findings of liability against the incumbent dominant firm, whether or not there is any normative basis for concluding that the loyalty program is responsible for a substantial lessening of competition. Prominent examples are the *Intel* litigation in both the U.S. and the EU, where the EEB was calculated at 70% and *Concord Boat* where the EEB was only 2% and the defendant escaped liability.[44]

To conclude this section, price cost tests, including the newer Effective Entrant Burden statistic are of extremely limited usefulness in determining whether a particular loyalty discount program is anticompetitive. What is required is a full competitive effects analysis of the program in question, with consideration given to the role of contestable and uncontestable markets, and there do not appear to be any simple screens available that would avoid a full investigation in some cases.

Canada Pipe (2005) seen in the context of the modern theory of loyalty discounts

The Canada Pipe Company produced cast iron drain, waste and vent (DWV) pipe and related products through its Bibby Ste-Croix division in Quebec. Bibby sold these DWV product to various distributors in Canada, who in turn sold them to contractors for use in construction projects. Bibby offered distributors a Stocking Distributor Program (SDP) wherein Bibby gave quarterly and annual rebates to distributors in return

for stocking only Bibby-supplied cast-iron DWV products. In addition, the list price was reduced by up to 40% for exclusive distributors.

The Canada Pipe case fits into the framework that I have set out as a loyalty program with a 100% threshold i.e. the distributors were required to stock Canada Pipe's products exclusively in order to receive the rebates and discounts. From an economic theory perspective of course, when a loyalty discount has a threshold of 100%, it becomes indistinguishable from exclusive dealing or possibly preferential dealing[45], and the theory of exclusive dealing applies as much as that of loyalty programs.

In *Canada (Commissioner of Competition) v. Canada Pipe Company Ltd*. the Competition Tribunal dismissed an application by the Commissioner, with the Commissioner arguing that the SDP contravened sections 79 and 77 of the *Competition Act*. The Tribunal found that Canada Pipe was dominant within the relevant markets, but that the SDP did not constitute a practice of anticompetitive acts. The decision was later reversed by the Federal Court of Appeals. The Canada Pipe case raised many important legal issues concerning the application of the Competition Act in Abuse of Dominance cases. My purpose is to comment on the economic analysis of the case as articulated by the Tribunal and the Federal Court of Appeals, in light of more recent work on loyalty discount programs.

The most significant finding of modern work on loyalty discounts is the significance of non-contestable market segments that may allow dominant firms, whether multiproduct or single product, to design loyalty schemes that offer the buyer a steep incentive to purchase from the dominant firm in the contestable segment. A second and related lesson to be drawn from modern research is that standard product market identification methodologies can be misleading in multiproduct loyalty program cases. Although several individual products may be correctly identified, it is the *interaction* of purchases of these products, incentivized through the loyalty discount, that can create anticompetitive effects. An excellent example occurred in the *Lepage's* case where the loyalty incentive offered by 3M was across many products, not the single adhesive tape product manufactured by *Lepage's*.

Applying these insights to *Canada Pipe*, several things emerge. First, three product markets were identified by the Tribunal, consisting of cast iron pipe, fittings and couplings.[46] Both Canada Pipe and its only domestic competitor, Vandem Industries, were active producers of both pipe

and fittings but not couplings. It is unclear whether Canada Pipe possessed a multiproduct advantage of the sort that I have discussed above – Canada Pipe did offer a larger variety of products than its rival. It is also true that Vandem had a small market share, holding at most 10% share of domestic production at any time during the period of alleged abuse of dominance. Had a clear articulation been made of an uncontested market theory based on a capacity constraint for Vandem, it is possible that the Tribunal would have found it compelling, but only if they were also convinced that barriers to entry were high. In fact the Tribunal was impressed by the extent of actual entry at the distribution level i.e. competition among buyers, which had an important role in their conclusion that a substantial lessening of competition had not taken place.[47]

The economic analysis presented by both sides in Canada Pipe considered the SDP more as a set of incentives for exclusive dealing rather than as a loyalty discount program. But as I have noted, this was appropriate given that the threshold for the discount was 100%, or exclusive purchasing from Canada Pipe.[48] Apart from explicitly setting out a case for a small and capacity constrained constestable market from Canada Pipe's domestic competitor, the modern research on loyalty discounts, which has focused on loyalty thresholds that are endogenous and less than 100%, would not appear to have much to add to the economic analysis that was presented at the time.

References

Barry Nalebuff, "Exclusionary Bundling" (2005) 50:3 The Antitrust Bull 321

Canada, Competition Bureau, *Annual Report of the Commissioner of Competition: For the Year Ending March 31, 2003* (Gatineau: Industry Canada, 2003) online: <publications.gc.ca/collections/Collection/RG51-2003E.pdf>.

David Spector, "Loyalty Rebates: An Assessment of Competition Concerns and a Proposed Rule of Reason" (2005) 1:2 Comp Pol'y Intl 89

Einer Elhauge, "Why Above-Cost Price Cuts to Drive out Entrants Are Not Predatory: And the Implications for Defining Costs and Market Power" (2003) 112:4 Yale LJ 681.

Einer Elhauge, "The Failed Resurrection of the Single Monopoly Profit Theory" (2010) 6:1 Comp Pol'y Intl 155.

Fiona M Scott Morton & Zachary Abrahamson, "A Unifying Analytical Framework for Loyalty Rebates" (2016) Yale University Working Paper at 4–5

Fredrik Carlsson & Åsa Lofgren, "Airline choice, switching costs and frequent flyer programmes," (2006) 38:13 Appl Econ 1469.

Giulio Frederico, "The Antitrust Treatment of Loyalty Discounts in Europe:

Towards a More Economic Approach" (2011) 2:3 J European Comp L & Practice 277.

Guofu Tan & Yong Chao, "All-units discounts as a partial foreclosure device" (2014) USC Dornsife Working Paper No 14-01

Janusz A Ordover & Greg Shaffer, "Exclusionary discounts" (2013) 31:5 Intl J Ind Organ 569

Jean Tirole, *The Theory of Industrial Organization* (Cambridge, MA: MIT Press, 1988)

Michael D Whinston, "Tying, foreclosure, and exclusion" (1990) 80:4 Am Econ Rev 837

Patrick Greenlee, David Reitman & David S Sibley, "An Antitrust Analysis of Bundled Loyalty Discounts" (2008) 26 Intl J Ind Organ 1132

Phillip Areeda & Donald F Turne, "Predatory Pricing and Related Practices under Section 2 of the Sherman Act"(1975) 88:4 Harv L Rev 697.

Richard J Gilbert, "Exclusive dealing, preferential dealing, and dynamic efficiency" (2000) 16:2 Rev Ind 167.

Ramon Caminal & Adina Claici, "Are Loyalty Rewarding Pricing Schemes Anti-Competitive?" (2007) 25 Intl J Ind Organ 657

Steven C Salop, "Exclusionary Conduct, Effect on Consumers, and the Flawed Profit-Sacrifice Standard" (2006) 73 Antitrust LJ 311

Steven C Salop, "The Raising Rivals' Cost Foreclosure Paradigm, Conditional Pricing Practices and the Flawed Incremental Price-Cost Test" (2017) 81 Antitrust LJ (forthcoming).

William J Baumol, "Predation and the Logic of the Average Variable Cost Test" (1996) 39:1 JL & Econ 49.

William J Baumol, John C Panzar, & Robert D Willig, *Contestable Markets and the Theory of Industry Structure* (New York, Harcourt Brace Jovanovich, 1982).

Yong Chao & Guofu Tan, "All Units Discounts: Leverage and Partial Foreclosure in Single-Product Markets" (2017) 30:1 Can Comp L Rev 93.

Yong Chao, Guofu Tan, & Adam Chi Leung Wong, "Nonlinear Pricing with Asymmetric Competition" (Paper delivered at the John O Ledyard 75th Birthday Celebration Conference, California Institute of Technology, 11 April 2015 [unpublished]

Endnotes

[1] EC, *Commission Decision of 29 March 2006 relating to proceedings under Article 82 [EC] and Article 54 of the EEA Agreement (Case COMP/E-1/38.113 – Prokent-Tomra)* [2006] OJ, C 734/07 [*Prokent-Tomra*]; *Tomra Systems and Others v Commission*, T-155/06 [2010] ECR II-4361; *Tomra Systems and Others v Commission*, C-549/10 P, [2012] ECR I-0000; EC, *Commission Decision of 13 May 2009 relating to a proceeding under Article 82 of the EC Treaty and*

Article 54 of the EEA Agreement (Case COMP/C-3/37.990 — Intel) [2009] OJ, C 227/07.

[2] Some important papers by economists that address the economics of loyalty programs are David Spector, "Loyalty Rebates: An Assessment of Competition Concerns and a Proposed Rule of Reason" (2005) 1:2 Comp Pol'y Intl 89; Patrick Greenlee, David Reitman & David S Sibley, "An Antitrust Analysis of Bundled Loyalty Discounts" (2008) 26 Intl J Ind Organ 1132; Barry Nalebuff, "Exclusionary Bundling" (2005) 50:3 The Antitrust Bull 321; Janusz A Ordover & Greg Shaffer, "Exclusionary discounts" (2013) 31:5 Intl J Ind Organ 569; and the recent work of Yong Chao & Guofu Tan, "All Units Discounts: Leverage and Partial Foreclosure in Single-Product Markets" (2017) 30:1 Can Comp L Rev 93.

[3] My focus here is on contemporaneous loyalty discounts of the AUD type. When discounts are retroactive, such as receiving the 10th cup of coffee free, or airline frequent flyer miles, the appropriate framework is more one of switching costs in oligopolistic competition, which I do not discuss in this article. For a recent discussion, see Fredrik Carlsson & Åsa Lofgren, "Airline choice, switching costs and frequent flyer programmes," (2006) 38:13 Appl Econ 1469.

[4] Fiona M Scott Morton & Zachary Abrahamson, "A Unifying Analytical Framework for Loyalty Rebates" (2016) Yale University Working Paper at 4–5.

[5] *Prokent-Tomra, supra* note 1.

[6] *Michelin v European Communities*, T-203/01, [2003] ECR II-04071.

[7] Fiona M Scott Morton, "Contracts that Reference Rivals" (2013) 27:3 Antitrust Magazine at 72.

[8] *Concord Boat Corporation v Brunswick Corporation*, 207 F (3d) 1039 (8th Cir 2000).

[9] *Brooke Group v Brown & Williamson Tobacco Corp*, 509 US 209 (1993). The Brooke Group decision by the U.S. Supreme Court created a two part test for predatory pricing: (i) Is the alleged predatory pricing below variable cost?; and (ii) Do they have a reasonable prospect of recouping any losses incurred during the predatory period?

[10] *Lepage's Inc v 3M*, 324 F (3d) 141 (3d Cir 2003) [*Lepage's*].

[11] *ZF Meritor LLC v Eaton Corporation*, 696 F 3d 254 (3d Cir 2012).

[12] The difference between Examples 3 and 4 is subtle, but significant. In Example 3, the dominant firm offers the discount (on all products) for any customer buying multiple products independent of whether the customer sources their needs exclusively from the incumbent. In Example 4 the customer is required to source all products from the dominant firm exclusively in order to obtain discounted prices.

[13] *Commissioner of Competition v Canada Pipe*, 2005 Comp Trib 3.

[14] *Lepage's, supra*, note 10.

[15] The concept of a *contestable* part of the incumbent's market as used in the literature on loyalty discounts is distinct from the concept of contestability as used in the broader literature of Industrial Organization (e.g. William

J Baumol, John C Panzar, & Robert D Willig, *Contestable Markets and the Theory of Industry Structure* (New York, Harcourt Brace Jovanovich, 1982).
[16] The effect of a capacity constraint on AMD has been often cited in descriptions of the *Intel* case.
[17] An evaluation of the contestable market at the buyer level is valid for considering access to particular buyers, as was the case in *Lepage's*. If the concern is with loyalty programs that prevent *market* entry (which was not the case in *Lepage's*) then the focus should be on contestability across the whole market. The importance of this distinction underlines the need to analyze loyalty programs on a case by case basis.
[18] There can still be contractual barriers to entry, of course, such as long term contracts with the incumbent supplier.
[19] A particularly clear exposition of this point can be found in Jean Tirole, *The Theory of Industrial Organization* (Cambridge, MA: MIT Press, 1988).
[20] This description matches that found in the Competition Bureau's *Abuse of Dominance Guidelines*; Canada, Competition Bureau, "Enforcement Guidelines - The Abuse of Dominance Provisions" (Ottawa: Industry Canada, 2012) at s 3.2.2, online: <www.competitionbureau.gc.ca/eic/site/cb-bc.nsf/vwapj/cb-abuse-of-dominance-provisions-e.pdf/$FILE/cb-abuse-of-dominance-provisions-e.pdf>.
[21] These parameters are defined more fully in a later section.
[22] The exceptions are perhaps periods when the EU Competition Commission regarded loyalty programs practised by dominant firms as almost *per se* anticompetitive, such as the period prior to the publication of the Commission's EC, *Guidance on the Commission's enforcement priorities in applying Article 82 of the EC Treaty to abusive exclusionary conduct by dominant undertakings*, [2009] OJ, C 45/02.
[23] Ronald H Coase, "Industrial Organization: A Proposal for Research," in Victor Fuchs, ed, *Policy Issues and Research Issues in Industrial Organization* (New York: National Bureau of Economic Research, 1972) at 69.
[24] See for example, Roman Caminal & Adina Claici, "Are Loyalty Rewarding Pricing Schemes Anti-Competitive?" (2007) 25 Intl J Ind Organ 657.
[25] *Ibid*.
[26] Yong Chao, Guofu Tan, & Adam Chi Leung Wong, "Nonlinear Pricing with Asymmetric Competition" (Paper delivered at the John O Ledyard 75th Birthday Celebration Conference, California Institute of Technology, 11 April 2015 [unpublished].
[27] Unless tying can change the market structure in the tied good, which is the analysis in Michael D Whinston, "Tying, foreclosure, and exclusion" (1990) 80:4 Am Econ Rev 837.
[28] Whinston, *supra* note 26.
[29] *Lepage's*, *supra* note 10; *Cascade Health*, 515 F (3d) 883 (9th Cir 2007) and *Ortho Diagnostic Sys, Inc v Abbott Labs, Inc*, 920 F Supp 455 (SDNY 1996) were cases in which price-cost tests were at the forefront of the analysis.
[30] *Canada Pipe, supra* note 13.

[31] Phillip Areeda & Donald F Turne, "Predatory Pricing and Related Practices under Section 2 of the Sherman Act"(1975) 88:4 Harv L Rev 697.
[32] William J Baumol, "Predation and the Logic of the Average Variable Cost Test" (1996) 39:1 JL & Econ 49.
[33] More precisely the incumbent's average avoidable costs should be used. Average variable costs are often employed as a proxy.
[34] See, for example, Steven C Salop, "Exclusionary Conduct, Effect on Consumers, and the Flawed Profit-Sacrifice Standard" (2006) 73 Antitrust LJ 311; and Einer Elhauge, "The Failed Resurrection of the Single Monopoly Profit Theory" (2010) 6:1 Comp Pol'y Intl 155.
[35] A price decrease that is triggered by entry creates a large transfer from producer surplus to consumer surplus and a small reduction in deadweight loss. Only the latter counts under a total surplus standard, but both of the two magnitudes count under a consumer surplus standard, implying a substantially larger gain from entry, or equivalently, a substantially larger cost from the prevention of entry.
[36] A fictional firm.
[37] Barry Nalebuff, *supra* note 2.
[38] *Ibid*.
[39] *Ibid* at 329. The test of excluding an equally rival is not a total welfare test. For instance, in this example welfare may increase with the bundling discount, even though it excludes the rival diesel engine manufacturer. If the no bundling equilibrium involved a price for gasoline engines of $60,000 and a competitive price of diesel engines of $50,000, then consumers would be better off with the loyalty program. I am indebted to a referee for pointing this out.
[40] *Ibid* at 337.
[41] Fiona M Scott Morton & Zachary Abrahamson, *supra* note 4 at 47.
[42] The authors compute the EEB for several cases involving multiproduct discounts, such as *Eisai*, *Meritor* and *LePage's*.
[43] Scott Morton & Abrahamson, *supra* note 4 at 55.
[44] *Ibid*.
[45] When a program offers a discount for exclusivity, but allows non-exclusive purchases at a higher price, it is known as preferential dealing. See, for example, Richard J Gilbert, "Exclusive dealing, preferential dealing, and dynamic efficiency" (2000) 16:2 Rev Ind Org 167.
[46] In addition the Tribunal identified six geographic markets.
[47] More precisely, the Tribunal found that while Canada Pipe had been dominant in the relevant markets, the various elements of the SDP did not constitute a practise of anticompetitive acts. The decision was reversed by the Federal Court of Appeal.
[48] Interestingly, in the negotiated Consent Agreement with the Commissioner of Competition, Canada Pipe was allowed to keep many elements of its discount program, but was not permitted to make the discounts conditional on exclusivity, *Canada Pipe*, *supra* note 13.

LA THÉORIE ÉCONOMIQUE DES PROGRAMMES DE FIDÉLISATION MULTIPRODUITS

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In this I paper I review the economic theory of loyalty discount programs. The emphasis is on recent developments, both in economic understanding and its application to recent cases. I begin with a taxonomy of loyalty programs within which the majority of litigated cases can be identified. A key feature of recent theorizing about loyalty programs is the importance of the dominant firm's uncontestable market, a market which in which entrants cannot compete, either because of insufficient capacity, or because in multiproduct cases, the entrant does not have the technology or expertise to produce in some products supplied by the dominant firm. Other issues that are discussed are the analogy between loyalty programs and price discrimination, which is a helpful one, and the less helpful analogy with predatory pricing theory and case law. I also assess the potential for "bright-line" tests for anticompetitive loyalty programs to emerge.

Dans cet exposé, je passe en revue la théorie économique des programmes d'escompte de fidélisation. L'accent est mis sur les faits nouveaux, tant sur le plan de la compréhension économique que sur le plan de son application aux affaires récentes. Je débute par une taxonomie des programmes de fidélisation auxquels la majeure partie des litiges peuvent être rattachés. Occupe une place de premier plan dans les théories au sujet des programmes de fidélisation l'importance du marché non disputable de la société dominante, marché sur lequel les entrants ne peuvent pas livrer concurrence, parce que le manque de capacité ou la multiplicité des produits les empêche de disposer de la technologie ou de l'expertise nécessaire pour fabriquer certains produits fournis par la société dominante. Sont également analysées l'analogie entre les programmes de fidélisation et la discrimination par les prix, qui est utile, ainsi que l'analogie, moins utile, avec la théorie et la jurisprudence sur les pratiques de prix d'éviction. J'évalue également la possibilité que ressortent des critères clairs en matière de programmes de fidélisation anticoncurrentiels.

INTRODUCTION

Les aspects juridique et économique des programmes de fidélisation sont en constante évolution depuis des décennies, faute d'un cadre théorique bien défini qui permettrait d'analyser les

effets concurrentiels. L'absence de consensus s'est manifestée par des divergences dans les décisions des tribunaux antitrust. Comme l'ont décrit Scott Morton et Abrahamson (2016), les tribunaux américains ont souvent tracé un parallèle entre les rabais de fidélisation et les doctrines portant sur la vente liée, l'exclusivité et les prix d'éviction, et ce, en raison de l'absence d'un cadre théorique solide concernant les remises de fidélisation.

Comme le soutient Giolio Federico (2011), la Commission européenne semble avoir établi un cadre plus solide pour orienter les affaires antitrust liées aux remises de fidélisation, comme en témoigne la publication d'un document d'orientation en 2009. Or, même après la publication de ce document dans l'Union européenne, la position du Tribunal a oscillé entre une interdiction presque totale des rabais de fidélisation offerts par des sociétés dominantes (p. ex.; l'affaire *Tomra*) et une approche plus nuancée fondée sur la règle de bon sens (p. ex.; l'affaire *Intel*)[1]. La grande disparité des approches adoptées par les tribunaux européens pour trancher ces causes porte à croire qu'il existe toujours un besoin de clarifier et de renforcer la théorie économique des programmes de fidélisation[2].

Au Canada, plusieurs affaires importantes ont contribué à étoffer la jurisprudence traitant de ces programmes en vertu de l'article 79 (abus de position dominante) de la *Loi sur la concurrence*. L'affaire *NutraSweet*, la première que le commissaire a déposée en matière d'abus de position dominante, concernait l'utilisation de remises de fidélisation dans le but d'exploiter un pouvoir sur le marché et d'en abuser. NutraSweet offrait à ses clients un rabais substantiel sur l'aspartame s'ils achetaient le sien exclusivement et s'ils acceptaient d'inclure le logo de NutraSweet sur l'emballage de leurs produits pour particuliers (dont la plupart étaient des boissons gazeuses en bouteille ou en cannette). Le rabais total, découlant surtout de l'affichage du logo, était de l'ordre de 40 % du prix courant. Comme c'est le cas avec de nombreux programmes de fidélisation, NutraSweet offrait à ses clients un incitatif majeur afin d'obtenir *l'exclusivité* de leurs achats, et une analyse révèle que les effets concurrentiels de cet incitatif s'apparentent à ceux de l'exclusivité.

Le Tribunal a conclu que ce procédé de fidélisation engendrait des frais de changement de fournisseur substantiels pour les clients, et que l'ensemble des restrictions imposées aux clients équivalait à une pratique

d'agissements anticoncurrentiels, qui empêchent ou entravent la venue de fournisseurs concurrents.

L'affaire *Tuyauteries Canada* étant abordée dans une section distincte à la fin du présent article, nous ne l'examinerons que brièvement ici. Tuyauteries Canada offrait un lot de remises de fidélisation aux distributeurs qui acceptaient d'offrir exclusivement les produits de drain, de renvoi et d'évent en fonte de Tuyauteries Canada. (Les distributeurs étaient tout à fait libres d'offrir des produits de drain, de renvoi et d'évent en plastique.) Le programme touchait de multiples produits, puisque Tuyauteries Canada fournissait aux distributeurs les tuyaux et les raccords. Selon le Tribunal, même si Tuyauteries Canada occupait une position dominante dans les marchés concernés, l'application du programme de fidélisation ne constituait pas une pratique d'agissements anticoncurrentiels. Cette décision a été infirmée par la Cour d'appel fédérale, puis l'affaire a été réglée à l'amiable peu de temps après.

La décision de la Cour d'appel fédérale dans l'affaire *Tuyauteries Canada* a été importante pour clarifier le cadre juridique, non seulement pour les programmes de fidélisation, mais aussi, en général, pour les affaires touchant l'abus de position dominante. Premièrement, la Cour a souligné l'importance de tenir compte du facteur déterminant dans l'analyse des effets concurrentiels. C'est-à-dire que les agissements anticoncurrentiels doivent être examinés en regard d'un monde conjectural dont ils sont absents, et non d'une norme absolue hypothétique en matière de concurrence. Deuxièmement, la Cour a estimé que l'alinéa 79(1)*b*) de la *Loi sur la concurrence* portait sur l'objet d'une pratique d'agissements anticoncurrentiels, et non sur ses effets.

Enfin, en 2003, le Bureau de la concurrence a fait enquête sur le programme de fidélisation d'IKO Industries ltée, le plus important fabricant de bardeaux d'asphalte du Canada. Le Bureau a négocié une modification du programme occasionnant un passage à des remises liées au volume.

Un programme de fidélisation peut être défini comme un programme offrant une remise à un acheteur en fonction de son volume de ventes. La remise peut s'appliquer soit rétroactivement, soit simultanément[3]. Du reste, le volume peut être exprimé par une part de marché. (Par exemple, au lieu d'exiger que l'acheteur lui achète 8 unités d'un produit sur les 10 qu'il lui faut, le fournisseur peut demander à l'acheteur de s'approvisionner chez lui à 80 % pour ce produit.) La plupart du temps, les remises ne sont offertes qu'après l'atteinte d'un certain seuil d'achats.

Pour offrir ces types de programmes, une société doit habituellement être au fait des achats de l'acheteur, non seulement auprès d'elle, mais aussi auprès d'autres sociétés dans le marché[4]. Et c'est précisément ce point qui retient le plus l'attention dans la lutte antitrust.

Une taxonomie

Voici une série d'exemples conçus pour englober les attributs essentiels des programmes de fidélisation qui sont observés couramment dans la pratique et qui constituent la majorité des affaires ayant trait à la concurrence au Canada, aux États-Unis et en Europe.

Exemple 1

Remises globales liées au volume. Un fabricant d'équipement informatique d'origine a besoin de 100 puces mémoire. Le fabricant de puces dominant propose un tarif à l'acheteur : les 80 premières puces coûtent 1 $ pièce, mais l'achat d'une 81e puce réduit le prix de *toutes les unités* achetées pour le faire passer à 0,90 $. Ainsi, un nouveau venu ou un plus petit concurrent ne peut généralement rivaliser pour l'ensemble du marché, car il se heurte à une contrainte de capacité, de sorte que le marché peut être divisé en une partie « disputable » et une partie monopolistique, où la société dominante n'a aucune concurrence.

Affaires importantes

Parmi les affaires importantes concernant les remises globales, mentionnons *Tomra*[5] et *Michelin II*[6]. Dans l'affaire *Tomra*, la commission de la concurrence a conclu que Tomra, le plus important fabricant de distributrices à rebours, avait entravé la venue de nouveaux concurrents et avait abusé de sa position dominante en offrant diverses remises de fidélisation à ses clients (des épiceries, pour la plupart). L'affaire *Michelin II* portait sur l'offre de remises globales, habituellement à plusieurs niveaux, sur les pneus de remplacement.

Exemple 2

Remises globales liées à la part de marché. Cette fois, le fabricant dominant offre le tarif suivant : 1 $ par puce si l'acheteur lui achète 80 % ou moins des puces qu'il lui faut, mais 0,90 $ par puce dans le cas contraire. Voilà un exemple de ce que Fiona Scott Morton appelle « les contrats avec référence aux concurrents », car l'atteinte du seuil du vendeur dépend des actions de la société dominante, mais aussi de celles de la concurrence[7].

Les exemples 1 et 2 sont étroitement liés. Si la demande de l'acheteur est parfaitement inélastique (elle ne varie pas en fonction des changements de prix), alors les exemples sont identiques, c'est-à-dire qu'en ce qui concerne l'obtention d'un rabais de fidélisation, il n'y a aucune différence entre un seuil exprimé par un volume et un seuil exprimé par une part de marché. Mais si la demande de l'acheteur est assez élastique et que le rabais est lié au volume, le nouveau venu pourrait toujours accroître sa part de marché en abaissant suffisamment son prix.

Affaires importantes

Dans l'affaire *Concord Boat*[8], Brunswick Corporation utilisait trois types de remises de fidélisation liés à la part de marché pour la vente de moteurs de bateau en Z et en-bord. Les contrats prévoyaient des remises selon le pourcentage de moteurs qu'un constructeur d'embarcations achetait à Brunswick : 3 % de remise pour une part de marché de 80 %, 2 % pour une part de 70 % et 1 % pour une part de 60 %. Bien que le jury se soit d'abord prononcé en faveur des demandeurs, la décision a été cassée par la Cour d'appel pour le huitième circuit. L'un des aspects intéressants de la décision de la Cour d'appel est la constatation que les prix de Concord étaient supérieurs aux coûts de revient, ce qui signifie que la société n'a pas enfreint le critère relatif aux prix d'éviction formulé dans l'arrêt *Brooke Group*[9].

Exemple 3

Remises de fidélisation regroupées multiproduits. Supposons qu'il existe deux grands types de moteurs de bateau, l'un au diesel et l'autre à essence. Le fabricant A, la société dominante, produit les deux types, mais profite d'un monopole dans le marché du moteur diesel. Quant au marché du moteur à essence, il est concurrentiel : le fabricant B le produit aussi. Or, le fabricant B ne dispose ni de la capacité ni de la technologie nécessaires pour entrer dans le marché du moteur diesel. Le fabricant A offre donc une remise de 5 % sur le prix courant à ses clients qui lui achètent les deux types de moteurs.

Affaires importantes

Deux affaires importantes ont défini les normes juridiques américaines en ce qui concerne les remises de fidélisation multiproduits : *Lepage's*[10] et *Meritor*[11]. Dans l'affaire *Lepage's*, 3M offrait des rabais regroupés aux magasins de fournitures de bureau qui vendaient plusieurs produits 3M.

Dans l'affaire *Meritor*, le fabricant d'une gamme complète de boîtes de vitesses pour camions offrait des remises aux constructeurs de camions dont la part des achats effectués auprès de la société en place excédait un seuil élevé pour tous les produits de la gamme. Dans les deux cas, les demandeurs ont obtenu gain de cause même s'il se trouvait que les prix demandés par la société en place pour les produits cités dépassaient les coûts de revient.

Exemple 4

Contrats d'achat préférentiel. Un fournisseur propose deux grilles de prix : l'une où l'acheteur peut choisir certains produits et se procurer les autres auprès d'autres fournisseurs; l'autre où l'acheteur s'engage à combler tous ses besoins à partir de la gamme du vendeur, c'est-à-dire à n'acheter que les produits de la société dominante. De toute évidence, il s'agit d'un cas extrême de contrat avec référence à la concurrence, dans lequel il ne doit revenir aucune part aux concurrents[12].

Affaires importantes

Les affaires *NutraSweet* et *Tuyauteries Canada*[13], toutes deux traitées ailleurs dans le présent article, concernaient des contrats d'achat préférentiel.

Quelques dimensions d'une analyse des effets concurrentiels des programmes de fidélisation

L'importance du marché indisputable de la société dominante

Plusieurs dimensions des effets concurrentiels des programmes de fidélisation sont dignes de mention. Dans le présent article, je mets l'accent sur les programmes multiproduits, où un producteur dominant fournit plusieurs produits (il peut y avoir un lien de substitution ou de complémentarité entre certains de ces produits, ou aucun lien), comme dans mes exemples 3 et 4 ci-dessus. À titre d'illustration, je me sers de l'affaire *Lepage's v. 3M*[14], dans laquelle 3M, fabricant d'une multitude de fournitures de bureau, offrait des remises de fidélisation aux distributeurs qui atteignaient un certain volume de vente dans six catégories de produits. Ce faisant, 3M bloquait la venue sur le marché de Lepage's, le plus important fabricant de ruban transparent sans marque, qui ne fabriquait que du ruban adhésif sans avoir la capacité de fournir les autres produits.

Un concept central dans l'affaire *Lepage's* et d'autres affaires similaires est celui du *marché indisputable* de la société en place[15]. Dans ce marché, la société en place fournit déjà à l'acheteur un ensemble de produits que le nouveau venu ne peut fabriquer, faute de capacité, d'un accès à la propriété intellectuelle nécessaire ou de savoir-faire. De la même manière, dans le cas d'un produit unique, il se peut que le nouveau venu subisse une contrainte de capacité, de sorte qu'il peut produire des produits équivalents, voire supérieurs à ceux de la société en place, mais sans pouvoir égaler le volume que fournit cette dernière[16].

Le concept de marché disputable et indisputable a joué un rôle crucial dans bon nombre de causes américaines ayant trait aux remises de fidélisation. L'application du concept n'est cependant pas aussi simple qu'il n'y paraît. Par exemple, les parties disputable et indisputable de la gamme de produits de la société dominante doivent être définies *par rapport à un acheteur particulier*. Dans l'affaire *Lepage's*, on peut présumer que les gros détaillants comme Walmart achetaient une gamme complète de produits 3M, mais ce n'était peut-être pas le cas pour un petit détaillant. Par conséquent, la part disputable du marché varie d'un acheteur à l'autre et doit être évaluée au cas par cas[17].

Autre problème : il se peut que les marchés disputable et indisputable se rapportant à une remise de fidélisation particulière ne correspondent pas bien, voire pas du tout, à la délimitation des marchés des produits concernés. Je me sers une fois de plus de l'affaire *Lepage's* à des fins d'illustration. 3M fournissait des produits dans plusieurs marchés considérés comme indisputables pour Lepage's et dans un marché considéré comme disputable pour Lepage's. L'utilité de la méthode traditionnelle de définition des marchés est donc limitée, puisque l'utilisation stratégique du pouvoir de marché recoupe plusieurs marchés concurrentiels définis de manière classique.

Les deux cas, soit celui des programmes multiproduits où le petit concurrent ne peut rivaliser que dans quelques marchés et celui d'un marché homogène ou quasi homogène où le petit concurrent se heurte à une contrainte de capacité, sont plus ou moins symétriques du point de vue des effets stratégiques et concurrentiels. Or, une différence potentielle pourrait résulter de la présence d'interactions du côté de la demande dans le cas des programmes multiproduits, par exemple, lorsque l'acheteur doit avoir en stock la gamme complète des produits du vendeur, comme c'était vraisemblablement le cas dans l'affaire *Tuyauteries Canada*. Dans

l'affaire *Lepage's*, les vendeurs préféraient aussi acheter un lot de produits 3M plutôt que d'acheter ces produits séparément auprès de fournisseurs distincts. Certaines interactions du côté de l'offre peuvent aussi s'avérer pertinentes. En effet, la société dominante peut exploiter les économies de gamme entre les différents produits qu'elle fournit à l'acheteur. Ce dernier peut alors profiter d'un avantage d'efficience s'il achète ces produits auprès d'un seul fournisseur. Ces économies de gamme peuvent découler de la livraison combinée de multiples produits venant d'un seul fournisseur ou du regroupement de la promotion en magasin pour ces produits.

Pourquoi le concept de marché indisputable est-il indispensable à l'analyse de la concurrence des remises de fidélisation? Parce que sans lui, on peut toujours avancer qu'il est possible pour un nouveau venu, à efficience égale, d'approvisionner l'entièreté du marché, et qu'aucun programme de remises de fidélisation ne pourrait l'en empêcher[18]. Par exemple, dans l'affaire *Tuyauteries Canada*, le Tribunal a accepté que le programme de distributeurs stockistes de Tuyauteries Canada n'empêchait pas contractuellement les clients de s'approvisionner auprès de concurrents et qu'au début de chaque année civile, tous les fournisseurs réels ou potentiels se trouvaient sur un pied d'égalité, puisqu'aucun rabais n'était dû à ce moment.

La vente liée et la discrimination par les prix

Selon plusieurs commentateurs, l'analyse des effets concurrentiels des programmes de fidélisation est fortement analogue à celle de la vente liée. Le marché indisputable et le marché disputable jouent respectivement le rôle du produit principal et du produit lié. Exploitant sa mainmise sur le marché du produit principal, la société dominante parvient à faire passer le prix du produit lié au-dessus des niveaux concurrentiels et, possiblement, à exclure les concurrents du marché du produit lié.

L'analogie entre les programmes de fidélisation et la vente liée n'est pas parfaite, cependant. Aux termes de l'analyse classique réalisée par Whinston (1990), la société dominante qui décide d'employer la vente liée fixera des prix plus compétitifs dans le marché concurrentiel du produit lié, ce qui peut provoquer la sortie d'une ou de plusieurs sociétés de ce marché. Toutefois, en tant que procédés stratégiques visant à améliorer la position de la société en place, la vente liée et les programmes de fidélisation présentent deux différences frappantes mais reliées. D'abord, comme l'ont démontré Chao, Tan et Wong (2016), un programme de fidélisation

peut entraîner un *équilibre d'exclusion partielle*, dans lequel le concurrent survit, mais avec une part de marché réduite. À l'inverse, un contrat de vente liée n'est profitable que si le nouveau venu est complètement exclu.

La seconde différence est en fait un corollaire de la première. Dans un équilibre de vente liée, la société en place provoque l'exclusion de ses rivaux en fixant des prix *plus compétitifs* que ceux qu'elle fixerait sans contrat de vente liée[19]. Mais comme *Chao et al.* et Scott Morton et Abrahamson l'ont démontré, les programmes de fidélisation rendent les prix *moins compétitifs* dans la portion concurrentielle du marché, c'est-à-dire qu'ils atténuent la concurrence par les prix. Il est même possible qu'un programme de fidélisation profite à une société concurrente. En effet, le programme crée un « saut » dans la fonction des bénéfices du petit concurrent : celui-ci ne peut accroître sa part de marché sans abaisser ses prix de façon importante. Or, il sera plus avantageux pour lui de hausser ses prix afin d'augmenter les bénéfices qu'il tire de la clientèle relativement restreinte à laquelle il a accès.

L'analogie avec l'éviction par les prix

Puisque les programmes de fidélisation semblent comporter des remises élevées destinées aux acheteurs du marché concurrentiel, il est naturel de tenter de les comparer à l'éviction par les prix. Lorsqu'une société dominante recourt à cette pratique, elle fixe des prix très bas dans l'intention expresse de provoquer l'éviction d'un petit concurrent. Elle sacrifie ainsi certains bénéfices à court terme, mais s'attend, après l'éviction de la société « victime », à pouvoir fixer les prix à des niveaux monopolistiques et à récupérer les pertes[20].

Or, il n'est pas peut-être nécessaire de sacrifier des bénéfices si le programme de fidélisation est bien élaboré. En choisissant de façon stratégique le seuil (h) et la remise (d), la société en place peut faire en sorte que son programme se traduise par une hausse des bénéfices.[21] Du reste, il se peut qu'un programme ne vise pas l'exclusion d'un concurrent, mais une hausse de la part de marché et une atténuation de la concurrence par les prix dans le marché disputable. Finalement, la société prédatrice n'a pas besoin de prévoir une phase de récupération des bénéfices perdus en raison des prix stratégiquement bas, car un programme de fidélisation bien conçu peut aider une société dominante à maintenir son pouvoir de marché indéfiniment.

L'analyse qui précède semble indiquer que les critères traditionnels

d'analyse prix-coûts en matière d'éviction par les prix, fondés sur un modèle de bénéfices sacrifiés, ne seront guère utiles pour repérer les programmes de fidélisation anticoncurrentiels. Je reviendrai sur ce point un peu plus loin.

Programmes de fidélisation : caractéristiques anticoncurrentielles et bénéfiques pour la concurrence

La plupart des autorités en matière de concurrence s'entendent pour dire que les programmes de fidélisation, vu la complexité de leurs caractéristiques, doivent être évalués d'après un critère fondé sur la règle de bon sens[22]. Ces programmes ont des incidences sur le bien-être qui sont complexes, mais pas nécessairement indésirables. Il y a une analogie valide à faire entre les programmes de fidélisation et les programmes de la discrimination par les prix : tous deux peuvent faire diminuer le « prix marginal », c'est-à-dire le prix payé pour l'unité marginale, ce qui a de fortes chances de faire augmenter les ventes totales. Si la société dominante exerce un pouvoir de marché avant la mise en œuvre du programme de fidélisation, cela entraînera une expansion de la production améliorant le bien-être. Il y aura aussi amélioration du bien-être si un programme de fidélisation provoque un transfert des ventes d'une société dominante efficiente en faveur d'un nouveau venu moins efficient. Toutefois, les programmes de fidélisation peuvent aussi causer du tort par effet d'exclusion. Enfin, il faut tenir compte de la norme antitrust, peu importe si la pratique en question est évaluée d'après le critère du bien-être des clients ou d'après un critère de bien-être général, le second critère étant le plus fréquent au Canada. Étant donné la complexité et la nature technique des analyses de bien-être pour les programmes de fidélisation, j'en ai résumé les principales propriétés dans les paragraphes suivants.

Caractéristiques des programmes de fidélisation bénéfiques pour la concurrence

Il convient de souligner un point évident, qui peut avoir été occulté par la recherche récente sur les programmes de fidélisation : ces programmes sont partout, on les voit au café ou à la pâtisserie du coin, chez les compagnies aériennes, les fabricants de puces informatiques, etc. La grande majorité des programmes ne posent pas de problème sur le plan de la concurrence, au contraire. En effet, on peut raisonnablement en déduire que, ces pratiques étant monnaie courante sur les marchés concurrentiels, elles sont un facteur d'efficacité. Selon une règle sûre d'analyse

antitrust, une pratique aussi courante n'a presque aucune chance d'être anticoncurrentielle dans tous les cas, et pas même dans la majorité des cas. Cette observation bien connue de Ronald Coase est édifiante :

[TRADUCTION]

> Cette préoccupation du problème du monopole a une conséquence importante : quand un économiste trouve quelque chose – telle ou telle pratique commerciale – qu'il ne comprend pas, il tente de l'expliquer en invoquant un monopole. Or, nos connaissances dans ce domaine étant très limitées, les pratiques difficilement compréhensibles sont souvent légion, d'où le réflexe fréquent de se rabattre sur l'explication du monopole[23].

Il y a deux grandes catégories de programmes de fidélisation pouvant favoriser la concurrence.

Les programmes de fidélisation améliorent l'efficience dans bien des cas.

a. Premièrement, les programmes de fidélisation peuvent servir à compenser les pertes d'efficience engendrées par la double marginalisation. Celle-ci survient quand un fournisseur en amont exerce déjà un pouvoir de marché en demandant un prix supérieur au coût marginal, et qu'en aval, le distributeur ou le fabricant crée d'autres inefficiences et distorsions en majorant de nouveau les prix du fabricant. Dans le rééquilibrage des prix qui en résulte, les quantités fournies sont trop faibles et les prix, trop élevés, même en comparaison avec des quantités (et des prix) de référence réglées de façon à maximiser les profits du monopole partagé. Une remise de fidélisation, puisqu'elle favorise l'augmentation de la demande, peut corriger ce genre de distorsions.

b. Deuxièmement, les programmes de fidélisation peuvent contribuer à l'harmonisation des incitatifs entre fabricants et distributeurs. Une distribution efficiente peut exiger que les détaillants et les distributeurs s'engagent dans des activités de vente et de marketing leur offrant des incitatifs difficilement conciliables avec ceux du fabricant. Les retards et l'agiotage sont des problèmes qui créent des distorsions d'efficience bien connues, que les programmes de fidélisation peuvent aider à corriger en favorisant une distribution efficace.

c. Les marques de qualité supérieure se servent de programmes de

fidélisation pour mieux informer leurs clients, ce qui mène à un point d'équilibre où les clients sont davantage satisfaits de la marque haut de gamme, et le bien-être peut s'en trouver accru.

Dissuader les nouveaux venus peu rentables peut améliorer le bien-être.

Si le nouveau venu est moins efficient ou génère un coût plus élevé que la société en place, les programmes de fidélisation valent mieux pour favoriser le bien-être économique, et ce, même quand le nouveau venu ou le concurrent de petite taille est dissuadé d'entrer dans le marché (ou que sa part de marché est plus faible qu'elle ne l'aurait été en l'absence du programme de fidélisation).

Cette question est complexe à évaluer pour un cas donné. Comme Salop (2016) et d'autres l'ont fait observer, même l'arrivée d'un nouveau venu moins efficient peut améliorer le sort des clients, puisque celui-ci avive la concurrence. Pour connaître l'effet sur le bien-être global, il faudrait sans doute modéliser soigneusement le cas en question avec le programme de fidélisation et sans un tel programme (comme base contrefactuelle). Dans l'ensemble, le programme de fidélisation établi par une société dominante peut aussi bien améliorer que diminuer le bien-être en dissuadant un concurrent moins efficient d'entrer sur le marché.

Caractéristiques anticoncurrentielles des programmes de fidélisation

Les discussions initiales sur les programmes de fidélisation baignaient souvent dans le contexte des marchés oligopolistiques, comme ceux des compagnies aériennes et de leurs programmes pour grands voyageurs[24]. Dans les contextes où il n'y a pas de société dominante, on est souvent amené à conclure que les programmes de fidélisation ont de fortes chances de faire augmenter les frais de changement de fournisseur entre producteurs rivaux, ce qui peut accroître le pouvoir de marché des producteurs[25].

Comme Guofo Tan[26] et d'autres l'ont fait remarquer, les programmes de fidélisation établis par une société dominante ressemblent aux contrats de vente liée conclus par une société dominante. Celle-ci joue sur le pouvoir de son marché captif pour profiter d'un avantage additionnel dans le segment de marché concurrentiel (le petit concurrent a une capacité limitée [exemples 1 et 2] ou ne peut produire qu'un seul produit

[exemple 3]). L'hypothèse de la vente liée nous donne des indices sur les probables effets anticoncurrentiels. Premièrement, la vente liée d'un produit donné n'est généralement avantageuse et anticoncurrentielle que si la société dominante n'arrive pas à exploiter l'ensemble de son pouvoir de marché pour le produit principal uniquement par l'établissement de prix exclusifs pour ce marché[27]. Deuxièmement, les effets de la vente liée sur le bien-être sont peu clairs : celle-ci n'est pas toujours anticoncurrentielle.

Comme je l'ai dit plus haut, les effets économiques des programmes de fidélisation ressemblent beaucoup à ceux de la vente liée. Le segment de marché indisputable (exemple 1) ou le produit pour lequel la société jouit d'un monopole (exemple 3) peuvent être assimilés au produit principal, tandis que le segment de marché disputable (exemple 1) et le produit concurrentiel (exemple 3) peuvent être assimilés au produit lié. Nous savons depuis Whinston (1990) que la vente liée peut avoir un effet d'exclusion, potentiellement anticoncurrentiel[28].

Critères de démarcation nette pour les programmes de fidélisation anticoncurrentiels

L'analogie établie entre les programmes de fidélisation et l'éviction par les prix laisse à penser que l'on pourrait adapter un critère traditionnel fondé sur les coûts pour déterminer si un programme de fidélisation est anticoncurrentiel ou non, une question qui a occupé l'avant-scène de plusieurs litiges hautement médiatisés aux États-Unis[29].

Pour classifier les dossiers selon l'application d'un critère d'analyse prix-coûts, je m'en tiendrai à son utilisation dans le cas de la vente de produits multiples. Dans les affaires *Lepage's* et *Cascade Health*, les tribunaux ont appliqué une forme de critère de ventilation des remises (j'y reviendrai plus bas). Dans l'affaire *Tuyauteries Canada*, le Tribunal de la concurrence n'a pas explicitement appliqué un critère d'analyse prix-coûts : il a mentionné la marge prix-coûts dans sa décision, mais n'a pas donné de précisions sur le rôle des marchés disputables et indisputables dans l'application du critère[30].

La première étape, pour évaluer l'utilité des critères d'analyse prix-coûts dans ce contexte, consiste à examiner comment ce type de critères a pris de l'importance dans les cas d'allégations d'éviction par les prix. Ces critères sont devenus si normalisés, si intrinsèques dans la jurisprudence à ce sujet qu'il est possible d'en oublier les fondements économiques. Dans le contexte de l'éviction par les prix, les critères d'analyse prix-coûts tirent

leur origine d'un important mémoire par Areeda et Turner (1975)[31] et des divers traités venus le peaufiner, notamment celui de Baumol (1996)[32]. Le raisonnement soutenant une analyse prix-coûts veut que si les prix d'une société dominante ne sont pas inférieurs à ses coûts variables moyens, un concurrent aussi (ou plus) efficient ne sera alors pas dissuadé d'entrer sur le marché (pour que son entrée soit socialement bénéfique, les coûts totaux moyens du nouveau venu doivent être inférieurs aux coûts variables moyens de la société en place[33]).

Divers auteurs ont fait remarquer que le nouveau venu n'a pas nécessairement à être aussi ou plus efficient que la société en place pour que son entrée sur le marché améliore le bien-être économique[34]. En effet, son arrivée crée de la concurrence, et la concurrence profite aux consommateurs. Cela dit, la question a davantage de poids dans les territoires où le bien-être des consommateurs est l'objectif premier des mesures antitrust que dans ceux où cet objectif est plutôt le bien-être total, comme c'est le cas au Canada[35]. Mais, particulièrement au Canada, le critère « est-ce qu'une pratique donnée risque de dissuader des concurrents aussi efficients d'entrer sur le marché? » reste tout de même important.

Dans le cas de la vente de produits multiples, on reconnaît désormais qu'il faut tenir compte du marché indisputable dans les critères d'analyse prix-coûts appliqués si l'on veut qu'ils aient une quelconque valeur interprétative. Supposons par exemple que Deep Cove Express[36], un fabricant monopoliste de moteurs à essence pour bateaux, fabrique et fournit également des moteurs diesel sur un marché où elle a plusieurs concurrents. Deep Cove offre aux constructeurs d'embarcations une remise de 10 % s'ils achètent les deux types de moteurs chez elle. Si la société supporte des coûts variables moyens d'environ 50 000 $ par moteur diesel et qu'elle vend ces moteurs au prix de 60 000 $ sans la remise, leur prix réduit sera de 54 000 $. Selon un critère conventionnel d'analyse prix-coûts, on conclurait que ce prix de vente est supérieur aux coûts variables, et donc qu'il n'y a pas de pratique déloyale en vue. Supposons maintenant que Deep Cove vend le même volume de moteurs à essence que de moteurs diesel, et ce, au même prix. Si l'on calcule la remise en la ventilant, soit en comparant le coût marginal pour l'acheteur qui acquiert des moteurs diesel auprès de Deep Cove (en plus de moteurs à essence) avec les coûts variables de Deep Cove pour fabriquer lesdits moteurs diesel, la comparaison est en fait de 48 000 $ contre 50 000 $, ce qui signifie que la société vend à un prix inférieur au coût de production, une révélation

qui provoquerait à tout le moins la tenue d'une enquête pour comportement anticoncurrentiel.

L'exemple ci-dessus illustre bien la notion de « groupement comme mesure d'exclusion » (exclusionary bundling) telle que le décrit Barry Nalebuff[37]. Cette notion peut être directement appliquée à mon exemple 3, présenté à la section d'introduction, où un client qui achète une paire de produits auprès de la société en place peut profiter d'une remise de 5 %. Comme le définit Nalebuff :

> [TRADUCTION] Il est question de groupement comme mesure d'exclusion lorsqu'une société qui possède un pouvoir de marché sur un produit A et affronte une concurrence pour son produit B offre un forfait combinant les produits A et B pour lequel le coût marginal relatif au produit A seul est inférieur aux coûts variables moyens à long terme pour le produit B[38].

Le concept central du critère établi par Nalebuff, c'est le « coût marginal » : il s'agit du montant additionnel que le client aurait à payer pour acheter à la fois le produit A et le produit B auprès du monopoliste comparativement au coût d'achat du produit A seul. Tant que le coût marginal est supérieur aux coûts moyens que supporte la société en place pour le produit B, un concurrent aussi ou plus efficient ne sera pas dissuadé de percer le marché B. Ou, dans les mots de Nalebuff : [TRADUCTION] « L'idée derrière ce critère est que le groupement comme mesure d'exclusion écarte les rivaux tout aussi efficients[39] ». Comme cet auteur l'indique, si le nouveau venu a des contraintes de capacité, la société en place pourrait satisfaire le critère du groupement comme mesure d'exclusion, mais tout de même dissuader un nouveau venu tout aussi efficient de percer pour lui faire concurrence parce que celui-ci n'est pas en mesure de produire à une échelle suffisante[40]. Le critère du groupement comme mesure d'exclusion est donc au mieux imparfait.

Un calcul relatif aux prix différent mais apparenté a été proposé par Fiona Scott Morton et Zachary Abrahamson dans un traité récent[41]. Les auteurs y définissent une donnée statistique qu'ils appellent la charge réelle du nouveau venu, ou l'*Effective Entrant Burden* (EEB), laquelle mesure la pénalité que doit subir un acheteur pour acquérir des biens auprès du nouveau venu en quantité suffisante pour dépasser le seuil de la société en place (un paramètre du programme de remises globales). Bien que l'EEB soit une donnée principalement conçue pour s'appliquer aux programmes de remises globales pour un produit seul, elle peut aussi être calculée dans un cas de remises de fidélisation multiproduits[42].

L'EEB se calcule comme suit :

$$\text{EEB} = hd/s$$

… où h = le seuil que l'acheteur doit atteindre pour avoir droit à la remise sur tous les effets achetés jusque là ($0 < h < 1$); s = la part disputable du marché accessible au nouveau venu (possiblement en raison des contraintes de capacité de celui-ci, ou parce qu'il lui manque l'expertise ou les droits de propriété intellectuelle pour fabriquer certains produits de la société en place); et d = la remise reçue par l'acheteur lorsqu'il a atteint le seuil d'achats h auprès de la société en place ($0 < d < 1$).

Dans l'exemple de Deep Cove Express, le seuil est de 100 %, la remise globale (après avoir atteint ce seuil) est de 10 %, et la part disputable est de 50 %. La valeur de l'EEB pour cet exemple est donc de 0,2, à savoir que le nouveau venu doit afficher des prix au moins 20 % inférieurs à ceux de la société en place s'il veut gagner une part du marché des moteurs diesel. Afin de formuler l'EEB en tant que critère d'analyse prix coûts, il faut établir comme condition pour qu'un nouveau venu tout aussi efficient soit dissuadé d'entrer sur le marché que les coûts variables de la société en place pour la fabrication des moteurs diesel ne dépassent pas (1 - EEB) × le prix qu'affiche la société en place.

Toujours dans notre exemple, l'application du critère du groupement comme mesure d'exclusion est essentiellement équivalente à l'application de l'EEB, les deux menant à une conclusion identique. Les conclusions différeraient dans un cas où soit le seuil h, soit la part disputable s ne coïnciderait pas avec les limites d'un produit. Supposons par exemple que le nouveau venu ne possède que la capacité de produire la *moitié* de la demande du marché des moteurs diesel. Le critère du groupement comme mesure d'exclusion demeurerait inchangé, mais puisque s est maintenant 25 %, la valeur de l'EEB passerait à 0,4. Ainsi, s'il veut réaliser la moindre vente, le nouveau venu aurait à réduire son prix pour qu'il corresponde à 60 % du prix affiché par la société en place.

Dans ce dernier exemple, l'EEB s'avère problématique lorsqu'on l'utilise comme filtre pour les pratiques de prix d'éviction contre un concurrent d'efficience égale. En effet, cette donnée nous indique bien que le nouveau venu doit afficher des prix de 40 % inférieurs à ceux de la société en place afin d'inciter les acheteurs à opter pour ses produits, mais rien n'indique si le prix de l'EEB est supérieur ou inférieur aux coûts variables de la société en place (la valeur de l'EEB peut être supérieure à 1,

ce qui signifie que le nouveau venu doit payer les acheteurs pour qu'ils acquièrent son produit). Par conséquent, un prix d'EEB inférieur aux coûts variables à long terme de la société en place n'est ni nécessaire, ni suffisant pour exclure un nouveau venu de même efficience.

À ce sujet, Scott Morton et Abrahamson présentent d'intéressants calculs de l'EEB dérivés de grands litiges sur la question des remises de fidélisation[43]. Leurs données suggèrent, mais de façon incertaine, que lorsque la valeur de l'EEB est « élevée », il y a davantage de chances qu'il y ait jugement contre la société dominante en place, et ce, qu'il y ait ou non une base normative pour conclure que le programme de fidélisation est responsable d'un amenuisement substantiel de la concurrence. Mentionnons les exemples célèbres du litige Intel aux États-Unis comme en Europe, où l'EEB avait une valeur de 70 %, et de *Concord Boat*, affaire dans laquelle l'EEB n'était que de 2 % et le défendeur s'est tiré indemne[44].

Pour conclure cette section, les critères d'analyse prix-coûts, y compris la nouvelle donnée statistique de la charge réelle du nouveau venu (EEB), sont d'une utilité extrêmement limitée pour déterminer si un programme de remises de fidélisation donné est anticoncurrentiel. Ce qu'il faut, c'est une analyse exhaustive des effets concurrentiels du programme en question, en tenant compte du rôle des marchés disputables et indisputables. Il ne semble pas encore exister de filtres simples qui permettraient dans certains cas d'éviter une enquête en bonne et due forme.

L'affaire *Tuyauteries Canada* (2005) à la lumière de la théorie moderne des remises de fidélisation

L'entreprise Tuyauteries Canada fabriquait des tuyaux de drain, de renvoi et d'évent en fonte et des produits connexes (ensemble, les « produits ») qu'elle vendait au Québec par l'intermédiaire de sa division Bibby-Ste-Croix. Bibby, qui vendait ces produits à divers distributeurs au Canada, lesquels les vendaient à leur tour à des entrepreneurs en construction, offrait un Programme de distributeurs stockistes (le « Programme ») au titre duquel elle accordait des rabais trimestriels et annuels aux distributeurs s'ils offraient uniquement les produits fournis par Bibby. En outre, le prix affiché était réduit jusqu'à concurrence de 40 % pour les distributeurs exclusifs.

Le dossier *Tuyauteries Canada* concorde avec la notion que j'ai établie d'un programme de fidélisation dont le seuil est de 100 %, c'est-à-dire un programme où les distributeurs doivent s'approvisionner exclusivement

auprès de Tuyauteries Canada pour avoir droit aux rabais et remises. Du point de vue de la théorie économique, il va de soi que lorsqu'une remise de fidélisation atteint le seuil de 100 %, elle est impossible à distinguer d'une pratique exclusive, voire préférentielle[45], et que la notion d'exclusivité s'applique tout autant que celle des programmes de fidélisation.

Dans *Canada (Commissaire de la concurrence) c. Tuyauteries Canada Ltée*, le Tribunal de la concurrence a rejeté une requête de la commissaire, cette dernière affirmant que le Programme de distributeurs stockistes contrevenait aux articles 79 et 77 de la *Loi sur la concurrence*. Le Tribunal a conclu que Tuyauteries Canada était en position dominante dans les marchés en question, mais que le Programme ne constituait pas une pratique anticoncurrentielle, décision qui a été infirmée plus tard par la Cour d'appel fédérale. L'affaire *Tuyauteries Canada* a soulevé de nombreuses questions juridiques importantes concernant l'application de la *Loi sur la concurrence* dans les cas d'abus de position dominante. Mon but est de commenter l'analyse économique du dossier, telle qu'elle a été articulée par le Tribunal et par la Cour d'appel fédérale, à la lumière des dernières avancées touchant les programmes de remises de fidélisation.

Le constat le plus significatif des travaux modernes concernant les remises de fidélisation, c'est l'importance des segments de marché indisputables qui permettent aux sociétés dominantes, que ce soit pour un produit seul ou des produits multiples, de concevoir des régimes de fidélisation offrant à l'acheteur un puissant incitatif à acheter leurs produits sur les segments de marché disputables. La recherche moderne nous permet de tirer une autre leçon analogue : les méthodes standard d'identification du marché d'un produit peuvent induire en erreur dans le cas d'un programme de fidélisation multiproduits. En effet, même si plusieurs produits individuels sont correctement identifiés, c'est l'action *d'acheter ensemble* ces différents produits, action encouragée par une remise de fidélisation, qui peut avoir un effet anticoncurrentiel. Nous en avons un excellent exemple dans l'affaire *Lepage's*, où l'incitatif de fidélisation qu'offrait 3M touchait de multiples produits, et non le seul produit de ruban adhésif fabriqué par Lepage's.

Si on applique ces observations à *Tuyauteries Canada*, on remarque plusieurs choses. D'abord, trois marchés de produits ont été relevés par le Tribunal : celui des tuyaux en fonte, celui des raccords de tuyaux et celui des joints[46]. Tuyauteries Canada et son unique concurrente nationale,

Vandem Industries, étaient toutes deux des producteurs actifs de tuyaux et de raccords de tuyaux, mais pas de joints. On ne sait pas clairement si Tuyauteries Canada jouissait d'un avantage multiproduits du type dont j'ai parlé précédemment, mais il est vrai que Tuyauteries Canada offrait une plus vaste gamme de produits que sa rivale. Il est également vrai que Vandem possédait une petite part du marché : tout au plus 10 % de la production nationale à son mieux au cours de la période visée par l'allégation d'abus de position dominante. Si quelqu'un avait pu formuler clairement une théorie de marché indisputable fondée sur les contraintes de capacité de Vandem, il est possible que le Tribunal l'ait trouvée convaincante, mais il aurait aussi fallu qu'il soit d'avis que les obstacles à l'entrée sur le marché étaient importants. En fait, le Tribunal a été impressionné par la percée réelle du marché au niveau de la distribution – autrement dit, la concurrence entre les acheteurs –, ce qui a eu beaucoup de poids dans sa conclusion selon laquelle il n'y avait pas eu de diminution sensible de la concurrence[47].

Selon l'analyse économique présentée par les deux parties dans l'affaire *Tuyauteries Canada*, le Programme de distributeurs stockistes était vu plus comme un ensemble d'incitatifs à faire affaire exclusivement avec l'entreprise que comme un programme de remises de fidélisation. Comme je l'ai fait remarquer, c'était approprié étant donné que le seuil pour la remise était de 100 %, soit l'approvisionnement exclusif auprès de Tuyauteries Canada[48]. Hormis les arguments du marché disputable de petite taille et de capacité limitée qu'elle a explicitement dégagés et qui auraient pu servir au concurrent national de Tuyauteries Canada, la recherche moderne sur les remises de fidélisation, laquelle porte surtout sur les seuils de fidélisation endogènes et inférieurs à 100 %, ne semble pas avoir grand-chose à ajouter à l'analyse économique qui a été présentée à l'époque.

Bibliographie

AREEDA, Phillip et Donald F. TURNE. « Predatory Pricing and Related Practices under Section 2 of the Sherman Act », Harvard Law Review, vol. 88, no 4, 1975, p. 697.

BAUMOL, William J. « Predation and the Logic of the Average Variable Cost Test », Journal of Law and Economics, vol. 39, no 1, 1996, p. 49.

BAUMOL, William J., John C. PANZAR, et Robert D. WILLIG. Contestable Markets and the Theory of Industry Structure, Harcourt Brace Jovanovich, New York, 1982.

CAMINAL, Ramón, et Adina CLAICI. « Are Loyalty Rewarding Pricing Schemes Anti-Competitive? », International Journal of Industrial Organization, vol. 25, 2007, p. 657.

CANADA. BUREAU DE LA CONCURRENCE. Rapport annuel du commissaire de la concurrence pour l'exercice se terminant le 31 mars 2003, Industrie Canada, Gatineau, 2003. En ligne : <http://publications.gc.ca/collections/Collection/RG51-2003F.pdf>.

CARLSSON, Fredrik, et Åsa LÖFGREN, « Airline choice, switching costs and frequent flyer programmes », Applied Economics, vol. 38, no 13, 2006, p. 1469.

CHAO, Yong, Guofu TAN, et Adam Chi Leung WONG. « Nonlinear Pricing with Asymmetric Competition ». Mémoire présenté le 11 avril 2015 au California Institute of Technology à l'occasion de la conférence soulignant le 75e anniversaire de John O. Ledyard. Non publié.

ELHAUGE, Einer. « The Failed Resurrection of the Single Monopoly Profit Theory », Competition Policy International, vol. 6, no 1, 2010, p. 155.

ELHAUGE, Einer. « Why Above-Cost Price Cuts to Drive out Entrants Are Not Predatory - And the Implications for Defining Costs and Market Power », Yale Law Journal vol. 112, no 4, 2003, p. 681.

FREDERICO, Giulio. « The Antitrust Treatment of Loyalty Discounts in Europe: Towards a More Economic Approach », Journal of European Competition Law & Practice, vol. 2, no 3, 2011, p. 277.

GILBERT, Richard J. « Exclusive dealing, preferential dealing, and dynamic efficiency », Review of Industrial Organization, vol. 16, no 2, 2000, p. 167.

GREENLEE, Patrick, David REITMAN, et David S. SIBLEY. « An Antitrust Analysis of Bundled Loyalty Discounts », International Journal of Industrial Organization, vol. 26, 2008, p. 1132.

NALEBUFF, Barry. « Exclusionary Bundling », The Antitrust Bulletin, vol. 50, no 3, 2005, p. 321.

ORDOVER, Janusz A., et Greg SHAFFER. « Exclusionary discounts », International Journal of Industrial Organization, vol. 31, no 5, 2013, p. 569.

SALOP, Steven C. « Exclusionary Conduct, Effect on Consumers, and the Flawed Profit-Sacrifice Standard », Antitrust Law Journal, vol. 73, 2006, p. 311.

SALOP, Steven C. « The Raising Rivals' Cost Foreclosure Paradigm,

Conditional Pricing Practices and the Flawed Incremental Price-Cost Test », Antitrust Law Journal, vol. 81, 2017. À paraître.

SCOTT MORTON, Fiona M., et Zachary ABRAHAMSON. A Unifying Analytical Framework for Loyalty Rebates, 2016, p. 4-5. Document de travail, Université Yale.

SPECTOR, David. « Loyalty Rebates: An Assessment of Competition Concerns and a Proposed Rule of Reason », Competition Policy International, vol. 1, no 2, 2005, p. 89.

TAN, Guofu, et Yong CHAO. « All Units Discounts: Leverage and Partial Foreclosure in Single-Product Markets », Revue canadienne du droit de la concurrence, 2017.

TAN, Guofu, et Yong CHAO. All-units discounts as a partial foreclosure device, USC Dornsife, 2014. Document de travail no 14-01.

TIROLE, Jean. The Theory of Industrial Organization, Cambridge (MA), MIT Press, 1988.

WHINSTON, Michael D. « Tying, foreclosure, and exclusion », American Economic Review, vol. 80, no 4, 1990, p. 837.

notes

[1] CE, *Décision du 29 mars 2006 de la Commission relative à une procédure d'application de l'article 82 [CE] et de l'article 54 de l'accord EEE (Affaire COMP/E.-1/38-112/Prokent-Tomra*) [2006] JO, C 734/07 [*Progent-Tomra*]; *Tomra Systems et autres c. Commission*, T-155/06 [2010] CE II-4361; *Tomra Systems et autres c. Commission,* C549/10 P, [2012] CE I-0000; CE, *Décision de la Commission du 13 mai 2009 relative à une procédure d'application de l'article 82 du traité CE et de l'article 54 de l'accord EEE (Affaire COMP/C-3/37.990 – Intel*) [2009] JO, C 227/07.

[2] Quelques articles importants écrits par des économistes au sujet de la théorie économique des programmes de fidélisation : David Spector, « Loyalty Rebates: An Assessment of Competition Concerns and a Proposed Rule of Reason » (2005) 1 :2 Comp. Pol'y. Intl. 89; Patrick Greenlee, David Reitman et David S. Sibley, « An Antitrust Analysis of Bundled Loyalty Discounts » (2008) 26 Intl. J. Ind. Organ. 1132; Barry Nalebuff, « Exclusionary Bundling » (2005) 50:3 The Antitrust Bull. 321; Janusz A. Ordover et Greg Shaffer, « Exclusionary discounts » (2013) 31:5 Intl. J. Ind. Organ. 569; et l'article récent de Yong Chao et Guofu Tan, « All Units Discounts: Leverage and Partial Foreclosure in Single-Product Markets » (2017) 30:1 Can. Comp. L. Rev 93.

[3] Je m'intéresse surtout ici aux remises de fidélisation simultanées de type global. Pour ce qui est des remises rétroactives, comme un dixième café gratuit ou des points pour grands voyageurs aériens, il serait plus approprié de se servir d'un cadre tenant compte des frais de changement de fournisseur dans un oligopole, que je n'aborde pas dans le présent article. Pour une analyse

récente, voir Fredrik Carlsson et Åsa Lofgren, « Airline choice, switching costs and frequent flyer programmes » (2006) 38:13 Appl. Econ. 1469.
[4] Fiona M. Scott Morton et Zachary Abrahamson, « A Unifying Analytical Framework for Loyalty Rebates » (2016) document de travail de l'Université Yale, p. 4 et 5.
[5] *Prokent-Tomra, supra* note 1.
[6] *Michelin c. Communautés européennes*, T-203/01, [2003] ECR II-04071.
[7] Fiona M. Scott Morton, « Contracts that Reference Rivals » (2013) 27 :3 Antitrust Magazine, p. 72.
[8] *Concord Boat Corporation v Brunswick Corporation*, 207 F (3d) 1039 (8th Cir 2000).
[9] *Brooke Group v Brown & Williamson Tobacco Corp*, 509 US 209 (1993). Dans l'arrêt *Brooke Group*, la Cour suprême des États-Unis a établi un critère à deux volets concernant les prix d'éviction : i) Le présumé prix d'éviction est-il inférieur au coût variable? ii) Le concurrent peut-il raisonnablement s'attendre à récupérer les pertes subies durant la période d'éviction?
[10] *Lepage's Inc v 3M*, 324 F (3d) 141 (3d Cir 2003) [*Lepage's*].
[11] *ZF Meritor LLC v Eaton Corporation*, 696 F 3d 254 (3d Cir 2012).
[12] La différence entre les exemples 3 et 4 est subtile mais importante. Dans l'exemple 3, la société dominante offre la remise (sur tous ses produits) à tout client qui achète plusieurs produits, que ce client s'approvisionne exclusivement auprès de la société en place ou non. Dans l'exemple 4, le client doit acheter tous les produits de la société dominante exclusivement s'il veut profiter des prix réduits.
[13] *Commissaire de la concurrence c. Tuyauteries Canada*, 2005 Trib. conc. 3.
[14] *Lepage's, supra* note 10.
[15] Le concept de *partie disputable* du marché d'une société en place, tel qu'il est employé dans la documentation spécialisée sur les remises de fidélisation, est distinct du concept de disputabilité (*contestability*) employé dans la documentation générale sur l'organisation industrielle (voir par exemple William J. Baumol, John C. Panzar et Robert D. Willig, *Contestable Markets and the Theory of Industry Structure*, Harcourt Brace Jovanovich, New York, 1982.
[16] Il a souvent été question de l'effet d'une contrainte de capacité sur AMD dans les descriptions de l'affaire *Intel*.
[17] Il est pertinent d'évaluer le marché disputable au niveau de l'acheteur lorsqu'on étudie l'accès à des acheteurs particuliers, comme c'était le cas dans l'affaire *Lepage's*. Si l'on estime qu'un programme de fidélisation pourrait bloquer l'accès au *marché* (ce qui n'était pas le cas dans l'affaire *Lepage's*), il faut alors considérer la disputabilité de l'ensemble du marché. L'importance de cette distinction met en relief la nécessité d'analyser les programmes de fidélisation au cas par cas.
[18] Il peut toujours y avoir des barrières contractuelles à la venue dans le marché, bien entendu, comme des contrats à long terme avec le fournisseur en place.

[19] Ce point est démontré de façon particulièrement claire dans Jean Tirole, *The Theory of Industrial Organization* (Cambridge, MA: MIT Press, 1988).
[20] Cette description concorde avec celle présentée dans les *Lignes directrices concernant l'abus de position dominante* de Bureau de la concurrence; voir Canada, Bureau de la concurrence, « Lignes directrices – Les dispositions sur l'abus de position dominante », Industrie Canada, Ottawa, 2012, section 3.2.2. En ligne : <http://www.bureaudelaconcurrence.gc.ca/eic/site/cb-bc.nsf/vwapj/cb-abuse-of-dominance-provisions-f.pdf/$FILE/cb-abuse-of-dominance-provisions-f.pdf>.
[21] Ces paramètres sont définis davantage dans une section subséquente.
[22] Font peut-être exception les périodes où la Commission de la concurrence de l'U.E. a considéré les programmes de fidélisation des sociétés dominantes comme étant presque toujours anticoncurrentiels en soi, notamment la période ayant précédé la publication par la Commission du document intitulé *Orientations sur les priorités retenues par la Commission pour l'application de l'article 82 du traité CE aux pratiques d'éviction abusives des entreprises dominantes*, [2009] JO C 45/02.
[23] Ronald H. Coase, « Industrial Organization: A Proposal for Research » dans Victor Fuchs, éd., *Policy Issues and Research Issues in Industrial Organization* (New York : National Bureau of Economic Research, 1972), p. 69.
[24] Voir, par exemple, Roman Caminal et Adina Claici, « Are Loyalty Rewarding Pricing Schemes Anti-Competitive? » (2007) 25 Intl J. Ind. Organ. 657.
[25] *Ibid*.
[26] Yong Chao, Guofu Tan, et Adam Chi Leung Wong, *Nonlinear Pricing with Asymmetric Competition*. Mémoire présenté le 11 avril 2015 au California Institute of Technology à l'occasion de la conférence soulignant le 75e anniversaire de John O. Ledyard. Non publié.
[27] À moins que la vente liée ne puisse modifier la structure du marché pour le produit lié, ce qui fait l'objet de l'analyse présentée dans Michael D. Whinston, « Tying, foreclosure, and exclusion » (1990) 80:4 Am. Econ. Rev. 837.
[28] Whinston, *supra*, note 26.
[29] *Lepage's, supra* note 10; *Cascade Health*, 515 F (3d) 883 (9th Cir 2007); et *Ortho Diagnostic Systems v. Abbott Laboratories*, 920 F Supp 455 (SDNY 1996) sont des affaires dans lesquelles les critères d'analyse prix-coûts ont été des éléments prépondérants de l'analyse.
[30] *Tuyauteries Canada, supra* note 13.
[31] Phillip Areeda et Donald F. Turne, « Predatory Pricing and Related Practices under Section 2 of the Sherman Act » 1975) 88:4 Harv. L. Rev. 697.
[32] William J. Baumol, « Predation and the Logic of the Average Variable Cost Test » (1996) 39:1 J.L. & Econ. 49.
[33] Plus précisément, il faudrait utiliser les coûts évitables de la société déjà en place, mais les coûts variables moyens sont souvent employés à titre de substitut.
[34] Voir par exemple Steven C. Salop, « Exclusionary Conduct, Effect on Consumers, and the Flawed Profit-Sacrifice Standard », 2006) 73 Antitrust L.J.

311; et Einer Elhauge, « The Failed Resurrection of the Single Monopoly Profit Theory », (2010) 6:1 Comp. Pol'y. Intl. 155.

[35] Une baisse de prix causée par une nouvelle entrée sur le marché génère un transfert important du surplus des producteurs au surplus des consommateurs ainsi qu'une petite réduction de la perte de poids mort. Seule cette dernière compte pour la norme du surplus total, mais les deux valeurs comptent pour la norme du surplus des consommateurs, ce qui implique un gain bien plus considérable s'il y a entrée sur le marché, ou parallèlement, un coût bien plus considérable s'il y a empêchement de cette entrée.

[36] Société fictive.

[37] Barry Nalebuff, *supra* note 2.

[38] *Ibid*.

[39] *Ibid*., p. 329. Le critère de l'exclusion des concurrents de même efficience n'est pas un critère de bien-être total. Par exemple, dans ce cas de figure, la remise sur le groupement pourrait augmenter le bien-être, même si elle vient exclure les autres fabricants de moteurs diesel. Si l'équilibre sans le groupement suppose un prix de 60 000 $ pour les moteurs à essence et un prix concurrentiel de 50 000 $ pour les moteurs diesel, alors le programme de fidélisation servirait mieux le consommateur. Je remercie un arbitre de l'avoir fait remarquer.

[40] *Ibid*., p. 337.

[41] Fiona M. Scott Morton et Zachary Abrahamson, *supra* note 4, à la page 47.

[42] Les auteurs ont calculé l'EEB dans divers dossiers où il y avait remise multiproduits, comme *Eisai, Meritor* et *LePage's*.

[43] Scott Morton et Abrahamson, *supra* note 4, à la p. 55.

[44] *Ibid*.

[45] Lorsqu'un programme offre une remise exclusive, mais permet des achats non exclusifs à un prix plus élevé, la pratique est qualifiée de préférentielle. Voir par exemple Richard J. Gilbert, « Exclusive dealing, preferential dealing, and dynamic efficiency » (2000) 16:2 Rev. Indus. Org. 167.

[46] De plus, le Tribunal a relevé six marchés géographiques.

[47] Plus précisément, le Tribunal a conclu que, bien que Tuyauteries Canada ait été en position dominante sur les marchés visés, les divers éléments du Programme de distributeurs stockistes ne constituaient pas une pratique anticoncurrentielle. Cette décision a été infirmée par la Cour d'appel fédérale.

[48] Fait intéressant, dans son consentement négocié avec la commissaire de la concurrence, Tuyauteries Canada a pu conserver beaucoup d'éléments de son programme de remises, mais n'avait plus le droit d'accorder ses rabais conditionnellement à un approvisionnement exclusif. Voir *Tuyauteries Canada, supra* note 13.