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Chapter 16

RECENT DEVELOPMENTS IN THE ECONOMICS OF EXCLUSIONARY CONTRACTS

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1.0 INTRODUCTION

Exclusionary practices have long been a concern of antitrust law. There are sound and innocuous business reasons for many kinds of exclusionary practices, but there has also been considerable worry that they might have more sinister reasons. An early example is the 1922 *United Shoe Machinery* case, in which the United States Supreme Court objected to certain clauses in the contracts used for leasing shoe-making machinery. The leases, explained the Court, had "the practical effect" of "specific agreements not to use the machinery of a competitor."[1] The specific exclusionary clauses banned were:

> (1) the restricted use clause, which provides that the leased machinery shall not... be used upon shoes... upon which certain other operations have not been performed on other machines of the defendants; (2) the exclusive use clause, which provides that if the lessee fails to use exclusively machinery of certain kinds made by the lessor, the lessor shall have the right to cancel the right to use all such machinery so leased; (3) the supplies clause, which provides that the lessee shall purchase supplies exclusively from the lessor; (4) the patent insole clause, which provides that

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1. *United Shoe Machinery Corp. v. U.S.*, 258 U.S. 451, 458 (1922).

> the lessee shall only use machinery leased on shoes which have had certain other operations performed upon them by the defendants' machines; (5) the additional machinery clause, which provides that the lessee shall take all additional machinery for certain kinds of work from the lessor or lose his right to retain the machines he has already leased; (6) the factor output clause, which requires the payment of a royalty on shoes operated upon by machines made by competitors; (7) the discriminatory royalty clause providing lower royalty for lessees who agree not to use certain machinery on shoes lasted on machines other than those leased from the lessor.[2]

There have been a number of other cases in which exclusionary agreements were held to be bad conduct. In *Klor's Inc. v. Broadway-Hale Stores, Inc.*,[3] Klor's, a department store, complained that Broadway-Hale, another department store, had demanded that manufacturers and distributors of major appliance brands not deal with Klor's. They complied, although the appliances were still sold to other nearby retailers. The U.S. Supreme Court ruled Broadway-Hale's action to be a group boycott. In *Lorain Journal Co. v. U.S.*,[4] a monopolistic newspaper faced competition for advertising from a new radio station. The newspaper responded by refusing to print advertisements from anyone who advertised with the ratio station. The Supreme Court found that this was an attempt to monopolize, and illegal under Section 2 of the Sherman Act. In *Packard Motor Car Co. v. Webster Motor Car Co.*,[5] on the other hand, exclusion was allowed. One of several Packard dealers in a town told Packard that he would quit unless Packard made him the exclusive dealer, shutting out another dealer named Webster. The appeals court reversed the district court's finding of a conspiracy in restraint of trade in violation of Section 2 of the Sherman Act.[6]

If it is decided that exclusion should be prohibited, there are important practical problems in determining which contracts are effectively exclusionary, or in detecting unwritten exclusionary agreements. The first step, however, is to decide whether harm is caused even by naked exclusion: a trader's straightforward requirement that anyone who trades with him must trade with him alone, when there are no apparent efficiency reasons for such a requirement. Is anything wrong with naked exclusion?

The naive view is that exclusion agreements are bad because they increase monopoly profits by shutting out competition. This ignores the fact

2. *United Shoe Machinery Corp. v. U.S.*, 258 U.S. 456-8 (1922).

3. 359 U.S. 207, 212-13 (1959).

4. 342 U.S. 143 (1951).

5. 243 F2d. 418, 420, 421 (D.C. Cir. 1957).

6. Other cases include *Standard Oil Co. of California (Standard Stations) v. United States*, 337 U.S. 293 (1949) and *Federal Trade Commission v. Motion Picture Advertising Service Co.*, 344 U.S. 392 (1953).

that even under monopoly no consumer will sign away a valuable right unless he receives some kind of compensation, something noted by Director and Levi as long ago as 1956. Suppose, for example, that a customer is willing to pay up to $10 for a product, but no more. A monopolist could then charge a price of $10, but if the consumer must sign the exclusion contract on top of the $10, he will balk and refuse to buy. The monopolist cannot have both the $10 and the exclusion contract; to obtain the exclusion contract, he must lower the price to, say, $8. The question is then whether exclusion is worth $2 to the monopolist.

Director and Levy raised this question, but they did not answer it. The first step of the formal modelling will be to show that the monopolist will not find it worthwhile to sacrifice profit in return for exclusion unless the situation involves special complications. These complications can be of three kinds: "efficiency reasons," "price discrimination reasons," and "strategic reasons."

Efficiency reasons for exclusion are unobjectionable from the viewpoint of public policy, since they increase economic efficiency rather than decrease it. They include any reason which raises the quality or lowers the cost of the product. A high-quality automaker, for example, might not want a dealer to sell both its own cars and another automaker's shoddy cars from the same lot, for fear of degrading its image of high quality. Efficiency reasons are numerous and varied; for a survey see Ornstein (1989).

Price-discrimination reasons for exclusion depend on pre-existing monopoly power, which can use exclusion to fully exploit the gains from trade.[7] Price discrimination is a different flavor of argument than either efficiency or strategy, because price discrimination can either help or hurt efficiency and consumers, depending on the circumstances. This makes its policy implications unclear.

Strategic reasons for exclusion exploit lack of cooperation among the parties offered the exclusion contracts. Such problems arise in special, but not necessarily uncommon circumstances that will be described below. Our understanding of strategic behavior has been considerably extended by recent advances in game theory, and it will be the focus of this article.

I will begin by answering the Director-Levi question using an argument from basic price theory to show why exclusion will ordinarily fail to be profitable. I will then lay out three recent models of strategic exclusion: Krattenmaker & Salop (1986), Rasmusen, Ramseyer & Wiley (1989), and Aghion & Bolton (1987). Since these models use game theory, rather than more traditional price theory, the topic of exclusion provides a nice example of two styles of economic analysis.

7. See Rasmusen, Ramseyer & Wiley (1989), which explains the "Full Exploitation Argument" (related to arguments for tie-ins in Burstein (1960)) for how exclusion might allow a protected first-period monopolist to fully exploit his existing monopoly power.

2. THE TRIANGLE-LOSS ARGUMENT: EXCLUSION FAILS

The first model addresses the Director-Levi question: Is the excluder willing to pay for exclusion?

Naked exclusion might conceivably be used to acquire either monopoly or monopsony power, and any model of exclusion can be adapted to either case:

(1) Monopoly exclusion. A seller induces buyers to sign contracts agreeing not to deal with any other seller. Example: If United Shoe requires shoemaking firms not to buy shoemaking machinery from any other company.

(2) Monopsony exclusion. A buyer induces sellers to sign conracts agreeing not to deal with any other buyer. Example: If Alcoa requires electric utilities not to sell to any other aluminum company.

To be consistent, I will use monopsony exclusion as the paradigm through all the models.

Consider an industry with two stages of production. First, suppliers of a raw material sell to intermediate firm at price R. The intermediate firms process the good at cost C per unit, and then resell to final consumers at price P. You might imagine that 100 farmers produce tomatoes in a given region and 10 grocery chains package and sell the tomatoes. Let us assume that all the input suppliers have identical upward-sloping supply curves of the kind shown in Figure 1.

We start by assuming that demand in the final market is perfectly elastic. The reason might be that packaged tomatoes can be brought in from outside at a certain price, which puts a ceiling on what a monopolist could charge. This assumption allows us to start by isolating the case of supplier-market monopsony; the next section will add final-market monopoly to the picture.

In competition with each other, the intermediate firms sell at a price of P_c in the final market. Hence, they bid up the input price to $R = P_c - C$. At this price a supplier's producer surplus equals area $A_1 + A_2 + A_3$ in Figure 1.

Let us suppose that one of the intermediate buyers, whom we will call the excluder, offers a bonux of X to any supplier who will sign a naked exclusion contract in which the supplier agrees to sell only to the excluder. If the supplier signs, the excluder becomes a monopsonist with respect to that supplier, and offer him the low monopsony price of $R_m < P_c - C$. The supplier's producer surplus then falls to A_1.

Table 1 illustrates the payoffs (not the prices) received by supplier i given the actions of all the other suppliers. Such a table is useful for testing whether an equilibrium exists in which all suppliers choose the same action. If the other suppliers refuse, will supplier i refuse too? If they sign, will he sign?

Table 1: Basic Model: No Exclusion

		All Other Suppliers: Refuse	All Other Suppliers: Sign
Supplier i	Refuse	$A_1 + A_2 + A_3$	$A_1 + A_2 + A_3$
	Sign	$A_1 + X$	$A_1 + X$

Payoffs to Supplier i

Everything depends on the value of the signing bonus X. If the excluder offers a big enough X, exclusion succeeds. Krattenmaker & Salop (1986b) suggest this as their "Real Foreclosure" argument for exclusion. But one must answer the obvious question: how big does X have to be? If X equals $1 billion, the suppliers will sign and exclusion will succeed, but the excluder will suffer heavy losses. Failure to ask this question is what Director and Levi (1956) complained of: it is not enough to say that exclusion is possible; the question is whether it is profitble.

In the present case X must equal at least $A_2 + A_3$ for the supplier to be willing to sign, since his revenue falls by $A_2 + A_3$ in going from competition to monopsony. But the monopoly profit is only A_2, so the excluder is only willing to offer X up to A_2. Exclusion, while possible, is not profitable. Hence, unless one believes that firms purposely carry out unprofitable policies, fears of exclusion in this simplest case are groundless.

3.0 THE CARTEL RINGMASTER ARGUMENT

Although exclusion fails in the simplest monopsony model, changing the assumptions might change the conclusion. The previous model assumed that final demand was perfectly elastic. Instead, let us assume that the final demand curve is downward sloping, so successful exclusion results not just in monopsony in the input market, but also in monopoly in the final market. Thus, this model will mix vertical monopolization with horizontal monopolization. To keep down the level of complexity, let us also assume that the suppliers are infinitesimal, and that they form a continuum of length Q_c, all with the same production cost M, as shown in Figure 2. (Note that Figure 2 shows the entire market, unlike Figure 1, which showed just a single supplier.)

The excluder now obtains two benefits from exclusion: monopsony power in the input market (as in the previous example) *and* monopoly power in the final market. The previous section showed that monopsony power in the input

market was not valuable enough to outweigh the cost of inducing suppliers to sign contracts. But what if the additional benefit of monopolizing the final market is added? Krattenmaker & Salop (1986a) suggest in their "Cartel Ringmaster" argument that exclusion will be profitable because the excluder gets the monopoly benefit from buying the rights to a supplier's raw materials, whereas the other intermediaries would only get the competitive benefit. But again we must ask how big X must be and whether the excluder would be willing to pay that much.

Table 2 shows the payoffs to supplier i per unit of raw material supplied. If all the suppliers refuse, so there is a fully competitive market, then the final-market price is P_c and the intermediaries bid the input price up to $R = P_c - C$. The supplier's cost of production is M, so his profit is $P_c - C - M$ per unit. If supplier i refuses, but all the other suppliers sign, then the excluder will raise the final-market price to the monopoly level P_m. A rival intermediary would then be willing to also charge P_m, and to pay supplier i $R = P_m - C$ per unit. Effectively, supplier i and the rival can undercut the ringmaster's cartel. Finally, is supplier i signs the exclusion contract, he receives the bonus X, but the excluder will pay him only $R = M$ for the raw material, so his total payoff is just X.

How big an exclusion bonus is the excluder willing to offer? For exclusion to succeed, supplier i must prefer the Sign-Sign payoff of X to the Refuse-Sign payoff of $P_m - C - M$, so it must be true that $X \geq P_m - C - M$. But the unit profit of the excluder from the combination of monopoly and monopsony is only $P_m - C - M$, since he obtains P_m from the consumer, pays C for processing, and pays M to the supplier. Moreover, the excluder must pay X to gain control of each of the Q_c units, but he receives the monopoly profit only on the monopoly output of Q_m, which must be smaller than Q_c to raise the monopoly price above the competitive price. Paying $X \geq P_c - C - M$ is therefore unprofitable, and exclusion is unprofitable in this model too.

Table 2: Cartel Ringmaster

		All Other Suppliers: Refuse	All Other Suppliers: Sign
Supplier i	Refuse	$P_c - C - M$	$P_m - C - M$
	Sign	X	X

Payoffs per unit supplied to Supplier i.

The situation is very much like the standard cartel problem. If all the suppliers sign, then the excluder, acting as cartel ringmaster, can restrict output and increase industry profits. Some or all of those industry profits could go to the suppliers, so the suppliers might be better off if they all signed. But acting individually, each supplier prefers to stay out of the cartel and sell to the rival, who then undercuts the cartel ringmaster. The game is a form of the prisoner's dilemma: the suppliers would be willing to enter into a joint agreement to sign exclusion contracts, but individually each one prefers to refuse to sign.[8]

The cartel ringmaster method of cartelization would succeed if some way could be found around the hold-out problem. The cartel ringmasster method does not provide an answer to the problem of how to get suppliers to join the cartel, but if courts enforce the exclusion agreements, it does provide a mechanism by which to prevent cheating. Cartels usually face three big problems: getting everyone to join, deterring entry, and punishing those who join and then violate the cartel rules. The cartel ringmaster scheme does not help solve the first two problems, but it does solve the third, because no supplier who signs the agreement can flood the outside market. As Krattenmaker and Salop note, a seeming vertical restraint (the exclusion agreement) might actually be a horizontal restraint.

Returning to the details of the cartel ringmaster model, the discussion above established that exclusion does not occur in equilibrium, but not what actually does ocur. The equilibrium outcome is that exclusion contracts will be refused, but the strategies that lead to the outcome are complicated. For completeness, I will present the technical argument, which many readers may prefer to skip. Although the excluder will choose not to try to exclude in equilibrium, the strategies must specify what happens if he does try to exclude, which is where the complexity lies. The Nash equilibrium turns out to be the following strategy combination, which involves mixed strategies off the equilibrium path.

Excluder: Offer $X < P_c - M - C$.
Each Supplier: Do not sign if $X < P_c - M - C$.
Sign with probability $\theta(X)$ if $X > P_c - M - C$.

The mixing probability $\theta(X)$ is chosen so that $P(Q_{final}) - C - M = X$, where Q_{final} is the amount sold in the final market, which depends on θ. The amount Q_{final} is the sum of the rivals' sales (which equal the total free supply, $(1 - \theta)Q_c$) and the excluder's sales (some amount less than θQ_c which is chosen by him as Stackelberg follower to maximize his profits).

8. For another statement of this argument, see Spulber (1989, p. 483).

To test whether this strategy is a Nash equilibrium, we must see whether any player has incentive to deviate. First, consider the suppliers. If a supplier signs, he receives $R = M$. If the free-market input price is $R = P_c - C$, as it would be under open competition, the supplier should sign if and only if $X > P_c - C - M$. But it will not be true that $R = P_c - C$ if some suppliers sign, because their signing allows the final-market price to rise above P_c, which also raises the free-market input price. The equilibrium strategy asserts that some suppliers sign and some refuse. For no supplier to wish to deviate, the suppliers must be indifferent between signing and refusing. The equilibrium final output price is $P(Q_{final})$. If the supplier signs, his payoff is X; if he does not sign, he can sell to some intermediary at a price of $R = P(Q_{final}) - C$ since the intermediary can resell for $P(Q_{final})$ in the final market. For the supplier to be indifferent between signing and not signing, it must therefore be true that the refuser's payoff of $P(Q_{final}) - C - M$ equals the signer's payoff of X. The percentage that sign, θ, is defined to make this true. Hence, no supplier can profit by deviating.

Second, consider the excluder. Can he profit by offering some $X > P_c - C - M$? Proportion $\theta(x)$ of the suppliers will sign, at a total cost of $\theta Q_c X$ to the excluder. Given the definition of θ, this amount equals $\theta Q_c(P(Q_{final}) - C - M)$. But the excluder's net revenue from the final market will be no greater than $\theta Q_c(P(Q_{final}) - C - M)$, because he must pay M to the suppliers and C for the processing. And in fact the excluder's net revenues from the final market are less than $\theta Q_c(P(Q_{final}) - C - M)$, because if $Q_{final} < Q_c$ it must be that the excluder does not sell the full amount he controls of the good. Hence, the net revenues from the final market cannot recoup the cost of the exclusion contracts.

This has been a complicated argument, so it is worth restating the point more simply. If input suppliers could collude, they could increase their profits by restricting industry output. Collusion is hard to enforce, but one way to make it easier to enforce is by somehow getting all suppliers to agree to sell to a single intermediary. The intermediary then restricts output to the ultimate consumers. The point is not especially to exclude rival intermediaries, but to cartelize the suppliers. If this works, the suppliers gain, unlike in true exclusion models. But the scheme suffers from a problem similar to that of any cartel: how is everyone brought into the scheme?

4.0 THE COORDINATION ARGUMENT

We come next to models in which exclusion is profitable and hurts the suppliers. In Rasmusen, Ramseyer & Wiley (1989), exclusion is a possible outcome, though not the only one. The model returns to the simple monopsony model of Figure 1, but with a crucial difference. Instead of the processing cost C being independent of the total amount processed, let us assume that there is a minimum efficient scale for processing. More

specifically, let us assume that an intermediary's average processing cost $C(Q)$ is such that $C' < 0$ *for* $Q < Q^*$ and $C(Q) = C$ for $Q \geq Q^*$. Average cost falls until output reaches the minimum efficient scale of Q^* and is constant thereafter, as illustrated in Figure 3. Let us also assume that Q^* is greater than the output any single supplier could supply to an intermediary.

The supplier payoffs associated with different strategy combinations are shown in Table 3. If all the suppliers refuse, then supplier i's payoff is simply the competitive producer surplus, $A_1 + A_2 + A_3$. If supplier i signs, whether or not the other suppliers sign, i's payoff is the A_1 he gets from his monopsony sale plus the signing bonus of X.

The strategy combination crucial to the argument is for supplier i to refuse, but the other suppliers to sign. In that case, unlike in the original model, the rival intermediary will choose not to enter. If he did enter, buying just from supplier i, his output would be much less than Q^* and his average processing cost $C(Q)$ would be too high to compete with the excluder in the final market. But if the rival stays out, the refusing supplier i not only misses the signing bonus X, he also faces a monopsony buyer, so his payoff is just A_1.

For low values of X, including $X = 0$ this game has two Nash equilibrium outcomes: (a) all suppliers sign, and (b) no suppliers sign. Looking at Table 2, note that if all the other suppliers sign, so will i; but if all the other suppliers refuse, so will i. This is a coordination game, similar to "Pure Coordination" in Chapter 1 of my 1989 book. Which of the two different equilibria is actually played out depends on a number of considerations detailed in Rasmusen, Ramseyer & Wiley (1989) and Rasmusen (1989b). Profitable exclusion is open as one possibility, especially since the excluder may be able to influence the expectations and beliefs of the disorganized suppliers.

The Coordination Argument shows a way around the Director-Levy (1956) point that exclusion is costly. In equilibrium, $X = 0$, but suppliers sign the contract anyway. The reason is that no supplier's signature hurts him individually; rather, it is the suppliers' signing in aggregate that causes harm.

Table 3: Coordination

		All Other Suppliers	
		Refuse	Sign
Supplier i	Refuse	$A_1 + A_2 + A_3$	A_1
	Sign	$A_1 + X$	$A_1 + X$

Payoffs to Supplier i.

5.0 LIQUIDATED DAMAGES AND CONDITIONAL CONTRACTS: EXCLUSION SUCCEEDS

Aghion & Bolton (1987) contains two models of exclusion, one based on liquidated damages and other on conditional exclusion contracts. I will simplify these models drastically from their original form and use a numerical example. Also, I will recast the models as monopsony rather than monopoly, to be consistent with our analysis so far. The reader should be warned that it is not clear whether Aghion and Bolton wold approve of my simplification of their more intricate model.[9]

In both models, 10 suppliers can each produce one unit of the input at a cost of $M = 1$. Demand in the final market is assumed to be elastic at price $P = 3$, to avoid the monopoly-monopsony complexities discussed earlier in the Cartel Ringmaster model. Initially there is one intermediary buyer, who processes the input and sells it in the final market. This initial intermediary, called the incumbent, can process one unit at cost $C_{incumbent} = 0.5$. A rival intermediary, who appears later, can process one unit at the lower cost $C_{rival} = 0.1$. If there is no exclusion, the rival enters the market, outbids the incumbent for the input, and buys the entire 10 units at a price of $R = 2.5$. The rival's profits are 4 (=(10)(3 - 2.5 - 0.1)), the incumbent's profits are 0, and the sum of the suppliers' profits is 15 (=(10)(2.5 - 1)).

5.1 Aghion & Bolton I: Liquidated Damages

The first model views exclusion as a conspiracy between the incumbent and the suppliers to extract profits from the entrant. This is possible because the low processing costs of the rival would ordinarily allow him to make a profit in competition with the incumbent.

The most obvious possibility for collusion is between the incumbent and the rival, who could cooperate to set the input price at the monopsony level of $R + 1$ and divide the supplier's former profits of 15 among themselves. But we will assume that the incumbent and rival do not collude in this way (which, in any case, would fail if there were other intermediaries that could also process at cost $C = 0.5$). Instead, we will see that the incumbent and the *suppliers* can collude to take away the rival's profits.

The method of collusion is a liquidated-damages contract. Suppose the contract specifies liquidated damages of 0.4 if a supplier switches to the rival. The rival would still enter, but in competition with the incumbent's $R + 2.5$ he must offer $R = 2.9$ to attract the suppliers instead of $R = 2.5$. The rival's profit will be 0 (=(10)(3 = 2.9 - 0.1)), the incumbent's profit will be 4 (=(10)(.4)), and each supplier will have a profit of 1.5 (=91)(2.9 - 0.4 - 1)). The suppliers do no worse than under simple competition, and they would do better if th excluder offered them some positive X to sign the liquidated-damages contract. The excluder does very well, though only by going out of business and profiting from the liquidated damages.

Exclusion could happen as a result of liquidated-damages contracts, but only accidentally, and in a slightly more complicated world. In the original Aghion & Bolton model no one knows in advance what the rival's costs will be. Suppose that there is a 0.9 chance of the rival having costs $C_{rival} = 0.1$, and a 0.1 chance of $C_{rival} = 0.4$. Ten percent of the time the damages of 0.4 will exclude entry. But this is accidental, and the incumbent wil regret the absence of the liquidated damages. This exclusion contract is profitable only when it fails to prevent entry. Moreover, the incumbent must pay $X = 0.15$ to induce suppliers to sign this contract, because with probability 0.1 they will receive a payment of only $R = 1$ instead of $R = 2.5$.

The chief limitation on Aghion & Bolton I is that it assumes there is a good chance the potential entrant will have lower costs than the incumbent, which seems unlikely.

Mathewson & Winter (1987) have also constructed a model in which the two parties to the exclusion contract benefit at the expense of an outside party. In their model, two sellers, one of which has lower costs than the other, sell differentiated products to a monopsony buyer. Under unfettered Bertrand competition, both sellers would make positive profits. If the low-cost one offers an exclusive-dealing contract, however, he can do better. He can effectively commit to a lower price, and the buyer and that seller end up with higher profits, at the expense of the high-cost seller.

5.2 Aghion & Bolton II: Conditional Offers

In Aghion & Bolton's (1987) second model the rival must incur an entry cost of $F = 1$, which presumably was paid some time in the past by the incumbent. This means that the market is a natural monopoly: average cost declines with output.

If the rival enters and captures the entire market as before, the input price is the same $R = 2.5$, and the entrant's profit equals 3 (=(10)(3 - 2.5 - 0.1) -1).

In this model the exclusion contract does not specify liquidated damages; it is just a naked exclusion contract that says the supplier cannot serve anyone but the incumbent. The contract is different in another way, however: it is a conditional contract that allows the incumbent to commit to his future input prices. Specifically, suppose the exclusion contract specifies that the supplier receives $R = 5$ if the other suppliers refuse to sign, and $R = 1.1$ if they do sign.

9. Besides using monopsony, the chief difference between this model and Aghion & Bolton's (1987) original is in the entrant's processing cost. They assume that ex ante nobody knows C_{rival}, which takes values between 0 and 1 with uniform probability. This means that even without any exclusionary conduct on the part of the incumbent, the entrant would sometimes not enter. The present model rules out this possibility of innocuous exclusion.

The payoffs from different combinations of actions are shown in Table 4. If all the suppliers refuse, the rival enters, R equals 2.5, and after paying the production cost of $M = 1$ each supplier has a payoff of 1.5. If the suppliers all sign, then the rival stays out, R equals 1.1, ,and each supplier obtains a payoff of 0.1. If supplier i signs but the other suppliers refuse, then the contract specifies a price of $R = 5$ for supplier i, and his payoff is 4 after paying the production cost.

The only nonstraightforward payoff is the 0 that supplier i obtains when he refuses to sign, but the other 9 suppliers do sign. The rival will not enter if he can only buy from a single supplier, because his profit from entering, buying from that one suppoier, and reselling in competition with the incumbent would be -0.6 (= 1(1)(3 - 2.5 - 0.1) -1). So the rival will not enter. But in that case the incumbent has monopsony power over the lone refuser, and can pay him just $R = 1$, which yields a supplier payoff of 0.

The game is like a 10-person prisoner's dilemma. Signing is a dominant strategy for supplier i. If the other suppliers refuse, i's payoff is 4 from signing and 1.5 from refusing. If the other suppliers sign, i's payoff is 0.1 from signing and 0 from refusing. So supplier i will sign. But every other suppliers will sign too, each will obtain a payoff of 0.1, and exclusion will be successful. And, in fact, the excluder need not offer them even as high a price as $R = 1.1$. A price of $R = 1.001$ would maintain signing as the dominant strategy.

Table 4: Conditional Offers

		All Other Suppliers	
		Refuse	Sign
Supplier i	Refuse	1.5	0
	Sign	4	0.1

Payoffs to Supplier i.

Several elements of this model drive the outcome of exclusion, and not all of them are necessary. Unlike in Aghion & Bolton I, it does not matter that the rival has a cost advantage. If the two firms have the same processing cost of $C = 0.5$, however, the natural monopoly feature of the market results in exclusion without any exclusion contracts; it would not be profitable for the rival to enter and rive the price of inputs up to $R = 2.5$, an input price which yields no surplus to pay the fixed cost of entry. On the other hand, conditional offers without any cost advantage are sufficient by themselves to exclude the rival if there is either a fixed cost, or, as in Rasmusen, Ramseyer & Wiley (1989), a minimum efficient scale. Making the offers conditional turns that model from a coordination game into a prisoner's dilemma. Suppliers sign because they are not bound to sell to the excluder unless the rival fails to enter, but the rival will not enter because he cannot reach the minimum efficient scale when all the suppliers sign.

6.0 CONCLUSIONS AND CAVEATS

Of the three categories of reasons for exclusion - efficiency, strategic, and price discrimination - only strategic reasons have been discussed in this paper. Since exclusion for efficiency reasons is something that government policy should encourage rather than discourage, it is worth at least giving the flavor of possible efficiency reasons. Ornstein (1989) surveys these and lists the motivations. Some examples are:

(1) If a supplier produces a good of uneven quality and sells it to two different buyers, then if one buyer inspects the good, the other buyer must inspect it too, or end up with all the low-quality items. Insisting that the supplier sell only to one seller avoids this inspection cost.[10]

(2) The buyer might wish to provide the supplier with capital, technical expertise, or management advice. If the supplier sells to other buyers, they free-ride on those aids.

(3) It may be efficient for the buyer to have a club with which to hit the supplier in case of supplier misconduct. The supplier might, for example, be tempted to produce a low-quality good. If the buyer can threaten to withdraw his custom and leave the supplier without demand, the buyer can ensure high quality. Allowing the supplier to sell to other buyers diminishes the force of this threat.

The government must also be careful not to confuse naked exclusion with other behavior. A contract requiring the buyer to buy all of a seller's output, for example, is very different from a contract requiring the seller to sell only to one buyer, and is also more common. But none of the reasoning in this article applies to requirements that the buyer buy all of a seller's output.

10 Kenney & Klein (1983) have made a similar argument with respect to sales contracts in the diamond market.

Other kinds of actions have also been mistakenly thought to be exclusionary; an example with which I am familiar is the government accusation in the 1953 United Shoe case that the leasing of shoe machinery was intrinsically exclusionary (see Wiley, Rasmusen & Ramseyer, 1989).

What conclusions can be drawn for the policymaker from all this theory? It would be dangerous to conclude too much yet, since the theory is stil not fully understood. But the analyst can give some advice to a policymaker who must act without full knowledge. First, we cannot say categorically that antitrust law ought not to worry about exclusion. The Triangle-Loss Argument does tell us that exclusion will not be as general a problem as price-fixing. But the Coordination Argument and the Aghion-Bolton models show that exclusion can be a danger, and the Cartel Ringmaster Argument shows that it can facilitate horizontal collusion. The government should act conservatively, but it should act as a check on egregious exclusion when the excluder cannot present any efficiency justification for his actions.

The various models give some guide to the circumstances in which exclusion might be a danger. The Coordination Model requires the excluder to sign up enough suppliers that no rival can attain the mimimum efficient scale. Thus, if some buyer signs up only a small number of suppliers, the Coordination Argument cannot be used to attack his actions. If, on the other hand, the excluder faces a threat of entry, signs up virtually all the suppliers, and then actually buys inputs from only a fraction of the controlled suppliers, the government should take notice.

The Cartel Ringmaster Argument fails to explain why the suppliers should sign up with the ringmaster rather than hold out and sell separately to a rival. But if the suppliers can be induced to all sign up, which is in their joint interest, the exclusion contract does provide a means to prevent members of what is effectively a cartel from cheating. This has implications similar to the Coordination Argument: if the excluder signs up all the suppliers and then contracts the industry's output, the conclusion of monopolization is hard to avoid. The difference is that in the Cartel Ringmaster Argument the focus is on monopolization of the final market.

Aghion and Bolton's (1987) arguments point towards more specific features of exclusion contracts. Their first model suggests that the liquidated damages specified by a contract should not be significantly greater than the harm caused by a supplier's switch to another buyer. Whether that harm can be measured well enough for this to be the basis for a legal rule is a hard question. But liquidated damages for the purpose of extracting profits from a more efficient entrant have the potential to seriously lower efficiency. The damages themselves are just a transfer, and as discussed above, the excluder has higher profits the less entry he deters. But the situation that fits this model best is the one in which some rival intermediary does research to develop a new technology with lower cost. The liquidated damages would allow the incumbent to seize the benefits from the new technology,

discouraging research. If, for example, any firm that develops a new computer finds that it must pay a high price to chip makers to induce them to switch from their old buyer, fewer new computers will be developed.

The second Aghion and Bolton (1987) argument provides perhaps the easiest guide to policy. That argument points out that a conditional contract, which binds the supplier only if other suppliers sign the contract, can lead to inefficient exclusion. The remedy would be to refuse to enforce such conditional contracts.

It is interesting to compare the warnings of these models to the U.S. Department of Justice's *1985 Guideines for Vertical Restraints*. These state that there is a worry that exclusive dealing may exclude rivals by "prohibitively raising their cost of a vital input or their cost of distribution," but that this is likely to be a danger only if three conditions are met. The three conditions are that "(1) The 'nonforeclosed market' is concentrated and leading firms in the market use the restraint; (2) The firms subject to the restraint control a large share of the 'foreclosed' market; and (3) Entry into the foreclosed market is difficult." These are preconditions for all the models that have been discussed; exclusion cannot have harmful effects unless it is possible to lock up much of the foreclose market without fear of entry there.

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Figure 1: Monopsony (individual supply curve)

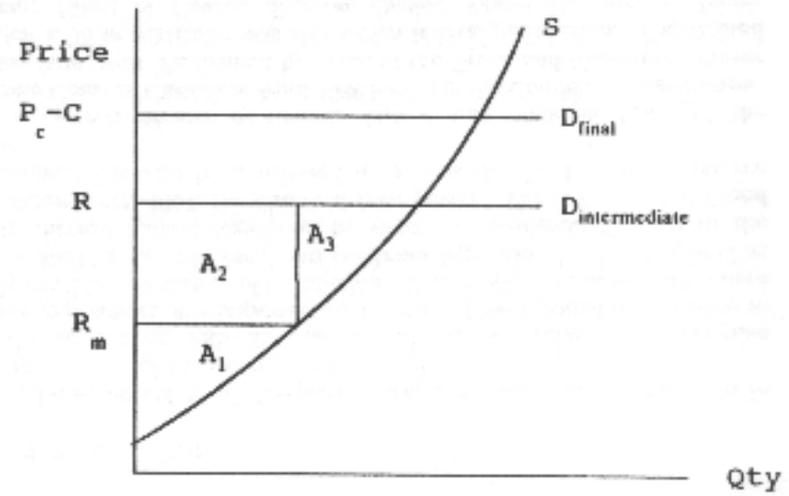


Figure 2: Monopsony and Monopoly

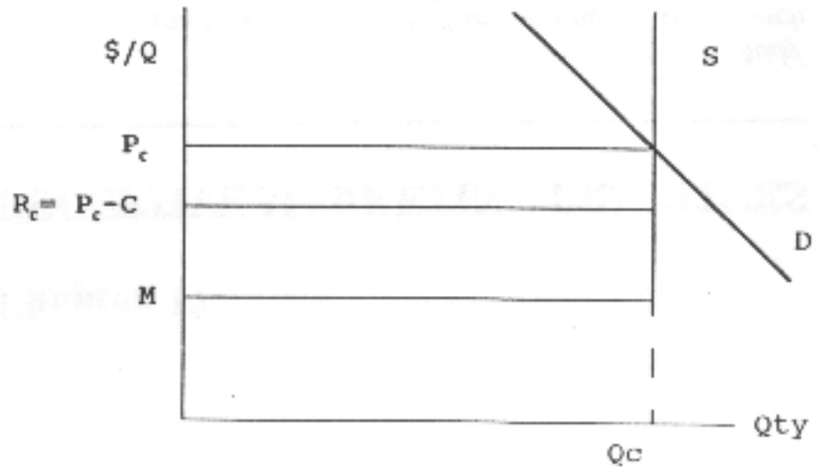
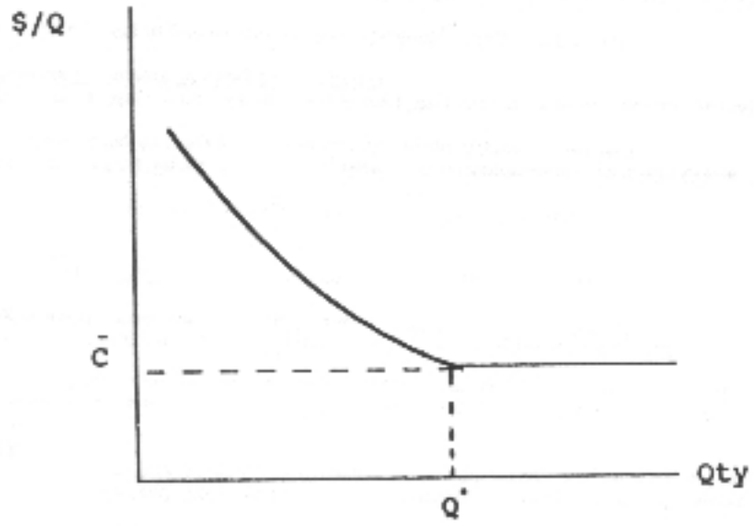


Figure 3: The Cost Curves with a Minimum Efficient Scale



Chapter 17

DECEPTIVE MARKETING PRACTICES

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1.0 INTRODUCTION

A broad spectrum of deceptive marketing practices are dealt with in sections 52 to 61 of the *Competition Act*.

Before dealing with the specifics of the law relating to deceptive marketing practices, it is important as a matter of background information to briefly consider the matter of jurisdiction. Historically, and as recently stated in *R. v. Shaklee Canada Inc.*,[1] anti-combines legislation has been upheld as validly enacted federal legislation by virtue of subsection 91 (27) of the *Constitution Act*, 1867, the Criminal Law power. Peace Order and Good Government has also been referred to, as has the Trade and Commerce power.

In *General Motors of Canada Ltd. v. City National Leasing*,[2] the Supreme Court of Canada in April 1989 held that the *Combines Investigation Act* was *intra vires* Parliament by virtue of the Trade and Commerce Power and that s. 36 in particular was also within federal jurisdiction. The related Supreme Court of Canada decision, *Quebec Ready Mix Inc. v. Rocois Construction Inc.*,[3] was to the same effect. The matter of federal jurisdiction over this type of legislation now appears settled.

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1. [1985] 1 F.C. 593, 4 C.P.R. (3d) 433 (C.A.), affd [1988] 1 S.C.R. 662, 84 N.R. 385.

2. (1986), 28 D.L.R. (4th) (Ont. C.A.), affd [1989] 1 S.C.R. 641.

3. (1985), 25 D.L.R. (4th) 373, 64 N.R. 209 (F.C.A.) affd [1989] 1 S.C.R. 695.