

NOTES ON RAISING RIVALS' COSTS

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This notes contain a short description of the most relevant theories addressing the issue of anticompetitive exclusion through raising rivals' costs (RRC). RRC is an important kind of strategic behavior that has been generally overlooked in antitrust literature until the ascent of the so-called Post-Chicago School¹. RRC is generally initiated by the dominant firm or group of firms and directed against smaller firms, and is aimed at forcing upon rivals higher costs than those borne by the strategizing firm. The result is that the profit-maximizing output of the victims is decreased, and the strategizer can reap the benefit in higher prices or enlarged output². Importantly, the strategizer can earn monopoly profits *during* the period in which such strategic behavior occurs – in fact, often it will earn them *only during* the period in which the strategic behavior occurs. As a result, such behavior is profitable even if it lasts indefinitely.

I proceed as follows. Section 1 gives an overview of the RRC hypothesis, and describes how it gradually replaced traditional theories of market foreclosure as developed by earlier doctrines. Section 2 analyzes the seminal work of Krattenmaker and Salop (1986) on anticompetitive foreclosure through vertical contracting. Section 3 addresses the issue of anticompetitive foreclosure through vertical integration, mostly drawing on Riordan and Salop (1995)³.

¹ According to Lopatka (1995), "The federal courts have virtually ignored the theory for a decade while it has been hotly debated in the scholarly literature". In 1995, the term "raising-rivals'-costs" appeared in 186 separate publications in the Westlaw "Journals and Law Reviews" database, but it appears in only four cases in the Westlaw "Allfeds" database, and in none of these four was it the basis for liability.

² That is, the strategy results in reduced output and higher prices. Salop and Scheffman (1983) offer a few generalizations about the welfare effects.

³ RRC theory has been also applied to collusion and horizontal agreements. See Lagenfeld and Silvia (1993) for an interesting review of US caselaw on raising rivals' cost as well as a theory of 'raising own costs'. According to the authors, "[a]n economic review of the FTC's enforcement record in horizontal restraint cases from 1980 to 1992 shows that three general economic theories appear to explain the types of cases that the Commission has prosecuted Approximately three-quarters of these cases are best classified as raising rivals' costs or raising own costs theories, rather than strictly traditional collusion theories.

Section 4 concludes by overviewing the most relevant critiques that have been formulated vis-à-vis RRC theories.

1 INTRODUCTION: THE EMERGENCE OF RRC THEORIES

The underlying idea of the RRC hypothesis is that a number of practices, such as refusal to deal, tying and exclusive distribution, might be plausibly explained – more than as strategies aimed at the elimination of rivals – as strategies aimed at increasing the production or distribution costs faced by competitors, e.g. preventing them from enjoying economies of scale or forcing them to resort to less satisfactory inputs. Such a strategy limits rivals’ competitive prospects and creates a ‘price umbrella’ under which the strategizing firm manages to increase its returns⁴.

The theory of RRC gradually replaced the more traditional theories of market foreclosure in contemporary antitrust analysis. The application of RRC theories during antitrust proceedings, however, necessarily implies a thorough assessment of the welfare effects of the contested practice. While a mere horizontal agreement whose only aim is denying a competitor access to a certain input, or forcing such competitor to pay a higher price for that input, is (and must be) considered as *per se* illegal, many other RRC practices appear more subtle and hard to detect and assess. In these cases, courts should carefully consider the potential efficiencies arising from the practice under scrutiny, which will then be subject to a rule of reason. An example of the latter case is exclusive distribution agreements.

There is an intuitive reason for thinking that strategic raising of rivals’ costs is more common than predatory pricing⁵. As a strategy, RRC can be both more profitable and less risky than predation, and it can occur in a wider variety of markets. Under traditional theories of predatory pricing a dominant firm attempts to dispatch a rival from the market by undergoing an indefinite period of below-cost selling in the hope that the victim will leave the market

⁴ See Hovenkamp, *The Reckoning of Post-Chicago Antitrust*, translated by myself on MCR 1/2001 as *Un esame dell’antitrust del dopo-Chicago*, p. 43.

⁵ There is general agreement that predatory pricing will work only in concentrated markets containing high barriers to entry and in which the predator is a dominant firm. See Hovenkamp (1983), at 179-84.

before the predator's resources are exhausted⁶. Not only is this strategy very expensive at the onset, but it is also seldom likely to be successful. Even if the victim is forced into bankruptcy by the predatory pricing, it will sell its assets at a low price to a new firm who will maintain the victim's productive capacity on the market.

Raising rivals' costs, on the other hand, does not involve an initial term of loss selling to be followed by the mere likelihood of monopoly profits. The monopoly profits may flow in immediately. Furthermore, the strategy need not involve any event as cataclysmic (and therefore calculated to invite antitrust litigation) as the exit of a firm from the market. The market may look quite "normal," with relatively stable market shares and competitive profits earned by smaller firms, although dominant firms will earn more.⁷ In fact, one of the greatest advantages of pursuing a strategy of raising rivals' costs is its subtlety. For all these reasons, but particularly because they are more likely to be successful, threats to raise rivals' costs may be more credible than threats to engage in predatory pricing.⁸

Finally, one effect of RRC may be to create artificial entry barriers. For example, an industry dominated by three or four firms and containing a competitive fringe might be in a position either to engage in self-regulation or to petition the government for certain forms of regulation. In that case the dominant firms might easily reach a tacit understanding regarding their support for a regulation, compliance with which is subject to economies of scale. Each dominant firm acting alone will know that the effect of the regulation will be to leave its position unchanged vis-a-vis the other larger

⁶ It should be noted, however, that a substantial "predatory pricing" literature deals with nontraditional forms of predatory pricing – such as the strategic construction of excess capacity in industries subject to economies of scale, which facilitates so-called "limit pricing." In such cases the victims of the predatory pricing are generally firms that would like to enter the predator's market, but have not yet done so.

⁷ Evidence that dominant firms are earning higher profits than fringe firms can be found in a variety of markets. Such evidence may imply no more than that the market is subject to economies of scale, although it generally suggests a certain amount of collusion, whether express or tacit, on the part of the dominant firms. See Weiss, *The Structure-Conduct-Performance Paradigm and Antitrust*, 127 U. Pa. L. Rev. 1104, 1115-19 (1979).

⁸ See Salop and Scheffman (1987), at 267.

firms but will disproportionately raise the costs of fringe firms and perhaps the entry costs for potential rivals.⁹

Hovenkamp (1985) lists a number of RRC strategies which are usually somewhat hidden and hard to detect:

- a) **The dominant firm files litigation against a nondominant competitor.** This could be patent or other intellectual property litigation, regulatory litigation, or litigation of virtually any other kind. The litigation forces the two firms to spend roughly equal amounts, but it is much more costly to the smaller firm, for the costs are distributed over a smaller output¹⁰ ;
- b) **The dominant firm or group of firms petitions the government or a regulatory agency** for a procedure or fee that will cost both dominant and nondominant firms the same absolute amount to implement. The effect is that the compliance cost per unit is higher for the nondominant firm;
- c) **a trade association that engages in self-regulation or self-evaluation of products** and that is dominated by a few large firms might adopt a product standard compliance with which is subject to substantial economies of scale. The result is that the smaller firms' costs rise disproportionately to those of the larger firms;
- d) **the dominant firm engages in a form of advertising that must be met by the smaller firms.** In order to preserve their market shares

⁹ In some cases, a regulation does not create an advantage but a burden for incumbents. The concept of incumbent burdens originated in MacAvoy, Spulber and Stangle, (1989). An incumbent burden arises when "incumbents face costs owing to regulation that are not imposed on entrants." As reported by Sidak and Spulber (1997), "incumbent burdens are analogous to the phenomenon of 'raising rivals' costs,' except that in an industry subject to public utility regulation the 'rival' whose cost is being raised is the incumbent public utility rather than the entrant." As a consequence, in a regulated network industry, "the raising of a rival's cost is a method not of facilitating inefficient exclusion from a market, but of facilitating inefficient entry into it." In the telecommunication industry, for example, mandatory structural separation of the ILECs would be a newly imposed incumbent burden because, by regulatory fiat, it would compel the incumbent – and *only* the incumbent – to operate through structurally separate wholesale and retail operations.

¹⁰ See, e.g., *MCI Communications v. American Tel. & Tel. Co.*, 708 F.2d 1081 (7th Cir.), cert. denied, 464 U.S. 891 (1983).

each of the smaller firms must engage in a similar amount of advertising, which will give each of them the same amount of advertising expense as the large firm. However, for the smaller firms the expenses will be distributed over a much smaller amount of output;

- e) **a dominant firm** researching a new product and knowing that it will be the first entrant, **intentionally selects a technology in which economies of scale are substantial**, knowing that the fringe firms will have to follow along.

In short, even if as a general rule economies of scale *are* efficient and ought to be encouraged, post-Chicago economics introduced the concern that scale economies can be used strategically for inefficient purposes. Indeed, a large part of the strategic entry deterrence/predatory pricing literature is dedicated to this phenomenon. Furthermore, according to Hovenkamp (1985), to concentrate on economies of scale in the above examples misses the point. A cost is a cost, no matter how efficient the firm that pays it. In the above cases the market would be more competitive if the cost at issue did not have to be encountered *at all*. That is, the relevant issue is not who is the most efficient payer of these particular costs, but whether the costs would exist *at all* in a competitive market.

2 ANTICOMPETITIVE EXCLUSION THROUGH VERTICAL CONTRACTS

Anticompetitive exclusion by raising rivals' costs first was explored in detail in the context of vertical contracts. In 1986, Thomas Krattenmaker and Steven Salop analyzed vertical restraints in terms of contracts between a firm in an output market (the "purchasing firm") and input suppliers. Specifically, they assessed the effects of "exclusionary rights contracts" pursuant to which the input suppliers would agree not to deal on equal terms with the purchasing firm's competitors¹¹. For example, under a very crude exclusionary rights contract the purchasing firm would pay input suppliers for their commitment not to sell to its rivals. More commonly, the restrained input suppliers might

¹¹ See Krattenmaker & Salop (1986), at 223-24.

sell goods to the purchasing firm under terms mandating that they deal exclusively with that purchaser.

The Krattenmaker/Salop analysis examines two market levels. First, it considers whether the purchase of exclusionary rights unavoidably and significantly increases rivals' costs.¹² The purchasing firm can cause such a result by obtaining exclusionary rights from the lowest-cost suppliers; by obtaining exclusionary rights over a sufficient quantity of a homogeneous input to drive up its price; by orchestrating cartel-like, discriminatory pricing by its input suppliers against its rivals;¹³ or by effectively altering input market structure (by restraining some of the input suppliers) so that unrestrained input suppliers are sufficiently few in number that they can successfully raise price.¹⁴ The focus here is the rivals' options in seeking alternative supplies in the market for the input.¹⁵

Next, Krattenmaker and Salop ask whether RRC enables the purchaser of exclusionary rights to charge a price in the output market above the competitive level.¹⁶ The theory is that with higher input costs, rivals at the same horizontal level are less able to constrain the price of the purchasing firm, so that supracompetitive output prices may result.¹⁷ This second level of inquiry focuses on consumers' ability to find substitutes for products of the excluding firm and of its rivals whose costs have been raised. It asks whether unexcluded rivals, potential entrants, or substitute consumer products would suffice to prevent price from rising.¹⁸ Absent overriding efficiencies, Krattenmaker and Salop find that when both tests are satisfied, acquisition of

¹² *Id.* at 214

¹³ Krattenmaker and Salop (1986) view this technique (denominated "cartel ringmaster") as embedding a collusive agreement in a vertical contract and suggest that the horizontal nature of such arrangements may obviate a need to prove power over price in the output market. *Id.* at 238-40.

¹⁴ *Id.* at 234-42

¹⁵ *Id.* at 227

¹⁶ *Id.* at 214.

¹⁷ Stated differently, RRC may achieve a *horizontal* effect by effectively conscripting the rivals for an "involuntary or coerced cartel." See Baker (1996), at 523.

¹⁸ Krattenmaker & Salop (1986), at 227.

an exclusionary right is “unambiguously inconsistent with the consumer welfare antitrust standard”.¹⁹

3 ANTICOMPETITIVE EXCLUSION THROUGH VERTICAL MERGERS

In 1995, Michael Riordan and Steven Salop have extended the RRC analysis to vertical mergers.²⁰ They envision a setting in which the upstream division of an integrated firm raises input price to (or refuses to supply) the firm’s downstream rivals. Riordan and Salop ask, first, whether downstream rivals’ input costs will change following a vertical merger. This requires examination of the availability of equally cost-effective input alternatives and consideration of the integrated firm’s incentives. The focus here is on the input market.²¹ Assuming that rivals’ input costs are raised, the authors then ask whether output prices likely will increase. This inquiry covers the availability of substitute products as well as the extent of competition from unforclosed rivals (including other vertically integrated firms).²² Where the analysis reveals a likelihood of consumer injury by virtue of a price effect in the output market or in an ancillary market, Riordan and Salop would balance the likely consumer harm against the likelihood and magnitude of any specific efficiency benefits. Absent proof of offsetting efficiencies, Riordan and Salop would find the foreclosure anticompetitive.²³

In the RRC context the exclusionary effort is spurred by internalization within a single entity of demand effects previously experienced by two separate firms. As Riordan and Salop explain:

¹⁹ *Id.* at 249-50, 277-82

²⁰ Riordan & Salop (1995). The authors state a comparable set of tests for evaluating cases of customer foreclosure. *Id.* at 551-57.

²¹ *Id.* at 530-38.

²² *Id.* at 530, 538-46.

²³ *Id.* at 546-51. Many of the theoretical underpinnings for the Riordan/Salop analysis are provided by a model developed by Ordovery, Saloner, and Salop. These authors show that vertical foreclosure can emerge as an equilibrium even when the rival can bid to merge with what becomes the predator’s upstream division and even when the rival can consider merging with a competing upstream supplier. See Ordovery, Saloner, and Salop (1990).

The demand for inputs and the demand for outputs are interrelated. For example, if the upstream division raises the input price it charges to rivals of the downstream division, the downstream division will be able to sell more output at the premerger price. Before the merger, the upstream and downstream divisions make profit-maximizing price and output decisions without consideration of the effect of their decisions on the other’s profits that flow from these demand interdependencies. After the merger, these demand externalities can be factored in, thereby possibly increasing the incentives of the upstream division to raise its input prices to downstream rivals in order to benefit the downstream division.²⁴

In much the same fashion, a vertical restriction short of merger can be viewed as a contractual mechanism for taking account of the demand interdependencies.

The authors have identified a number of strengths in the RRC analysis, which I list below.

First, unlike predatory pricing, a strategy of raising rivals’ costs need not entail short-run sacrifice of profit. Benefits to the excluding firm begin to run from the time that rivals’ costs are raised.²⁵ Second, the strategy does not require the excluding firm to possess classical market power, that is, an ability to raise price by reducing its own output. Even if the market is unconcentrated, if rivals’ marginal costs are increased, *they* will produce less output and market price will rise.²⁶ The strategy effectively generates market power that would not otherwise exist.²⁷ Third, there is no reason to assume that mechanisms are unavailable to make it profitable for suppliers to grant exclusionary rights. Purchasers may be able to induce suppliers to grant these

²⁴ Riordan & Salop (1995), at 565

²⁵ Salop & Scheffman (1983)

²⁶ Krattenmaker & Salop (1986), at 251; Salop (1987), at 62.

²⁷ Krattenmaker & Salop (1986), at 248-49.

rights by sharing the increased profits that the rights generate.²⁸ Finally, excluded rivals may not have successful counterstrategies.

On the other hand, while Krattenmaker and Salop (1986) acknowledge that the rivals might seek to protect themselves by outbidding the potential purchaser of exclusionary rights in order to escape exclusion, they argue that this need not defeat the strategy. Thus, they observe that (1) the predator is likely to bid more to obtain monopoly profits than the target firm will bid to maintain competition,²⁹ (2) the target firm shares the economic benefits of nonexclusion with consumers and without their support may not have sufficient incentive to prevent inefficient exclusion,³⁰ and (3) the target firm may be willing to have its costs raised if it will be able to recoup through supracompetitive prices.³¹ More directly, Krattenmaker and Salop observe that if a target firm must expend resources to avoid exclusion, that expenditure by itself raises the rival's costs and validates the strategy.³²

4 CRITIQUES TO THE RRC THEORIES

The RRC literature has not escaped criticism. One theme of the critics is that the practices that properly are identified as anticompetitive under a RRC approach involve horizontal issues that can be addressed through more conventional techniques. For example, Timothy Brennan (1988) argues that if input prices are raised through an acquisition of market power the purchasing firm is monopolizing the input market, whereas if the purchasing firm merely facilitates the exercise of preexisting market power its actions may not be

²⁸ *Id.* at 273-77. Of course, if the cost of inducing suppliers to grant exclusionary rights exceeds the benefit to the excluding firm of the exclusion, the scheme will falter. See Baker (1996), at 524.

²⁹ Krattenmaker & Salop (1986), at 270. Moreover, the gains to a predator will outweigh the losses to the rival if the predator's output is sufficiently large relative to that of the rival.

³⁰ Krattenmaker & Salop (1986), at 269-70.

³¹ *Id.* at 272

³² *Id.* at 269. Baker (1996) indicates that the target firm's price would rise only insofar as the expenditure to avoid exclusion affects its marginal costs (as opposed to taking the form of a lump-sum payment). Baker (1996), at 525.

essential for that exercise.³³ In Brennan's view the true problem is monopolization of the upstream market, so that how that power is used (e.g., to raise market share in the output market) is not crucial.³⁴ Consequently, the critics argue, "the 'vertical' aspects add little to the competitive analysis not already understood."³⁵

Hart and Tirole (1990) and Reiffen and Vita (1995) separately make a related point. They argue that RRC analysis falters because the integrated input supplier has an incentive to undercut the higher price charged the downstream rival by unintegrated input suppliers.³⁶ It will refrain from undercutting (in an effort to win these sales) only if it expects that the unintegrated input suppliers will match the undercutting in order to retain the sales, thereby reducing the rivals' costs.³⁷ However, Reiffen and Vita reason, if the upstream firms have the ability to refrain from undercutting by coordinating their prices post-merger, why would they not have coordinated premerger?³⁸ Consequently, either (1) there will be undercutting, so that rivals' costs will not be raised or (2) the analysis implicitly assumes preexisting market power. Riordan and Salop (1995) reply that the claim that the integrated supplier has an incentive to undercut is really a claim that it will compete against itself by bidding down the input price to its unintegrated rivals even though this negatively affects the profits of its downstream division.³⁹ They assert that it is a "plausible general assumption for a fairly concentrated market" that the integrated supplier would not do so.⁴⁰ Moreover,

³³ Brennan (1988) suggests that situations where the purchasing firm truly plays a crucial role may be limited to "special cases" where the exercise of upstream market power is constrained by regulation, transaction costs, or government ownership of relevant assets.

³⁴ *Id.* at 110-11. It would seem, however, that an analysis that redirects attention from vertical conduct on grounds that the true problem is horizontal in nature expresses as much predilection as proof.

³⁵ *Id.* at 103; see Calkins (1987) ("one is hard-pressed to identify many instances where one could find a violation for 'raising rivals' costs' but not under conventional law").

³⁶ Reiffen & Vita (1995); Reiffen (1992); Hart & Tirole (1990). Hart and Tirole register a second criticism: if the rival can pay for its input through a "two-part tariff" – a combination of a fixed charge and a per-unit fee – its marginal costs need not change, so there may be no incentive for the rival to reduce its output. *Id.*

³⁷ Reiffen & Vita (1995) at 926 n.31.

³⁸ *Id.* at 926-27.

³⁹ Riordan & Salop (1995).

⁴⁰ *Id.*, at 533.

Ordover, Saloner, and Salop argue that vertical integration changes the upstream division's incentives by internalizing the effect of upstream competition on the downstream division's profitability.⁴¹ As Riordan and Salop summarize: "Vertical mergers can create or enhance market power by altering the incentives of competitors. Vertical mergers do not simply alter the manner in which existing market power is exercised."⁴²

The raising-rivals'-costs literature has also been criticized on the basis of its welfare effects. Reiffen and Vita find that welfare consequences of a vertical merger that raises rivals' costs are inherently ambiguous.⁴³ Drawing on their argument that a successful effort to raise rivals' costs coincides with a premerger ability to coordinate, they contend that if rivals' costs are raised there was premerger market power. They then argue that any price increase experienced by the unintegrated rival may be offset by the price decrease experienced by the downstream division of the integrated firm.⁴⁴ The net result is ambiguous. Riordan and Salop reply that their analysis does not require preexisting market power in the input market, but rather relies on changes in post-merger conduct that derive from changes in the integrated firm's incentives. They note that their test allows consideration of efficiencies – including the elimination of any double mark-up on inputs transferred between divisions of the integrated firm – on a case-by-case basis.⁴⁵

Although they find that the RRC literature "puts some coherence and rigor into the analysis of exclusionary strategies," Ordover and Saloner (1989) also perceive welfare flaws. They cite as an example R&D competition that renders an innovator's component incompatible with a rival's complementary product. Such an innovation could raise the rival's costs and increase the innovator's market power. Yet, it is an outgrowth of competitive rivalry, and competition might be impaired by condemning it. A possible response might be that RRC

⁴¹ Ordover, Saloner & Salop (1992).

⁴² Riordan & Salop (1995), at 948 n.16.

⁴³ Reiffen & Vita (1995), at 921, 929.

⁴⁴ Before the merger the downstream division would have been charged more than marginal cost, given that there was preexisting upstream market power. After the merger, Reiffen & Vita (1995) argue, inputs will be transferred within the integrated firm at marginal cost. *Id.* at 929.

⁴⁵ Riordan & Salop (1995), at 944-49.

analysis accurately depicts creation of the incompatibility as a potential threat to competition, but that the efficiencies flowing from the corresponding innovation make the process, on balance, procompetitive.

Finally, some analysts find that the RRC literature fails to provide practical policy guidance. For example, Ordover and Saloner (1989) observe that the ability of a firm to outbid its rival for access to an input and the rival's ability to respond to the increase in its costs “[depend] on the exact nature of the foreclosure” and are “sensitive to the model formulation.”⁴⁶ Reiffen and Vita (1995), while conceding that it is possible to construct a model with the necessary strategic incentives and some anticompetitive equilibria, argue that this does not tell us which model and which equilibria are most likely.⁴⁷ They find no reliable link between observable industry attributes and market performance that would permit practical application of raising-rivals'-costs analysis to vertical mergers.⁴⁸ Riordan and Salop (1995) reply that their approach provides a “detailed competitive analysis of the likely competitive impact of the merger” and offers better results than a rule of per se legality.⁴⁹

In sum, economic theorists have not yet reached consensus on a standard for identifying anticompetitive foreclosure. Even some who have sought to develop analytical approaches concede that in certain circumstances the results remain imperfect. Thus, Ordover and Saloner (1989) state, “None of the rules, standards, and tests of predatory conduct invariably leads to higher social welfare in the long run when applied to realistic market situations ... No single ‘bright-line’ standard for defining predation can be expected to correctly proscribe any behavior which reduces welfare and to promote procompetitive conduct. This is because the market settings in which predation is rational deviate along many dimensions from the perfectly competitive ideal.”⁵⁰

⁴⁶ *Id.* at 570, 590. Thus, the authors find that the excluded rival cannot respond to removal of the low-cost input suppliers, but, depending on the model, may or may not be able to counter changes in upstream market structure. *Id.* at 567-69.

⁴⁷ Reiffen & Vita (1995), at 927-28.

⁴⁸ *Id.* at 921.

⁴⁹ Riordan & Salop (1995), at 948-50.

⁵⁰ *Id.* at 591.

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ANDREA RENDA – NOTES ON RAISING RIVAL'S COSTS

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