

Unclassified

DAF/COMP/WD(2016)61

Organisation de Coopération et de Développement Économiques  
Organisation for Economic Co-operation and Development

29-Sep-2016

English - Or. English

**DIRECTORATE FOR FINANCIAL AND ENTERPRISE AFFAIRS  
COMPETITION COMMITTEE**

Cancels & replaces the same document of 28 September 2016

**FIDELITY REBATES**

- Note by Professor Joseph Farrell -

15-17 June 2016

*This paper by Professor Joseph Farrell was submitted as background material for Item 6 of the 125th meeting of the OECD Competition Committee on 15-17 June 2016.*

*More documents related to this discussion can be found at  
<http://www.oecd.org/daf/competition/fidelity-rebates.htm>*

**JT03401606**

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## CONTRIBUTION REGARDING FIDELITY DISCOUNTS<sup>1</sup>

*Note by Joseph Farrell<sup>2</sup>*

1. This is a contribution to the June 2016 OECD workshop on fidelity discounts, slightly updated after the workshop. I continue to write academically on this topic.

2. In my experience discussing competitive risks of fidelity discounts, an influential idea is that those risks come about through discounts that bring prices to unduly low, perhaps below-cost, levels, bringing us to the kinds of indirect competitive risks that are familiar from discussions of predatory pricing.<sup>3</sup>

3. I suspect that this idea has become influential in part because the word “discount” brings to mind the idea that prices might be low, and in part because a justly celebrated economic model of anticompetitive exclusive dealing relies on a dominant firm denying rivals viable scale through a “divide and conquer” strategy.

4. But whatever the analytical or linguistic sources of the notion that when fidelity discounts raise competitive risks, they do so through low prices and/or through denial of scale, I believe that it’s misleading. The “discounts mean low prices” habit of mind may be helpfully tested by at least intermittently speaking not of “fidelity discounts” but of “infidelity surcharges”. Put more substantively, it is not obvious that the discounted price will be lower than the price would be without the dependence of price on share of needs.

5. The too-exclusive focus on the divide-and-conquer strategy raises much deeper issues. Share-of-need fidelity discounts can protect a dominant firm’s high prices against competition from those who would be willing to price lower (or generally offer better deals to consumers). This does not depend on denying rivals viable scale, nor on the dominant firm exploiting coordination failures or a negative contracting externality. It does, however, depend on the direct buyers competing downstream; and it has to overcome both a positive contracting externality and a short-run bilateral incentive for the dominant firm and any one direct buyer to chip away at the profitably anticompetitive scheme. It also may depend on compensation to direct buyers that will not be passed through to downstream consumers.

6. Schemes that insulate high prices (or more generally bad deals) against competition are the core concern of antitrust. And although we know of ways in which selectively or temporarily low prices can be the insulation for pricing that is high overall (this is predatory pricing, for instance), many practitioners are understandably wary of complaints (especially those brought by rivals) that prices are “too low”. For this

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<sup>1</sup> This summarizes what I expect to say at the Workshop, and touches on topics that I am exploring in more depth in ongoing work that unfortunately is not yet ready for public posting.

<sup>2</sup> Professor of Economics, University of California, Berkeley, and Partner, Bates White LLC: affiliations for identification purposes only. That is, these are my views and don’t purport to represent others’.

<sup>3</sup> I call those risks “indirect” because it is not the low prices that constitute the harm, but rather the monopoly that may later ensue.

reason, focusing on whether a price net of imputed discount is below cost has the rhetorical effect of classifying a challenged practice into a category of suspect theories. I argue that that is fair (though not conclusive) as regards pure quantity discounts, but as I'll describe, it's not fair when it comes to share-of-need discounts.

7. At the risk of belabouring the well-known, I think it might therefore be helpful to offer a formulation of anticompetitive practices in rather general terms. I'll keep this to two paragraphs, then get on to fidelity discounts.

8. A firm might hope to profit by limiting its trades with customers, but this is typically limited by a competitive constraint: customers' ability to trade instead, and/or also, with the firm's rivals.<sup>4</sup> Anticompetitive conduct involves somehow limiting *others'* trades—in particular a firm limiting trade between the firm's rivals and their mutual customers—thus weakening or evading the competitive constraint.

9. Much is packed into that “somehow”!<sup>5</sup> In particular, when a firm simply makes an excellent product and straightforwardly sells it cheaply, that's not anticompetitive even though it has the effect of limiting others' trades. It's proven (not only for me) surprisingly difficult to capture crisply and precisely in a few words what I continue to believe is fundamentally a shared but subtle meaning. I find it helpful to think along the following lines: what's anticompetitive is finding ways to thwart or discourage others' trades by means other than the straightforwardly cheap and excellent product. At least part of what had been packed into “somehow” is now packed into “straightforwardly”, (and maybe some into “other than”), but I think it's still progress. More concretely, we should watch for conduct that weakens the competitive constraint, which especially means weakening how well it operates if the dominant firm sets a high price or otherwise fails to perform well for consumers.

### **Share-of-Need Fidelity Discounts Can Tax Others' Trades and Protect High Prices**

10. Once in place—and a lot of analysis bears on that proviso—a share-of-need fidelity discount raises the direct buyer's (distributor's) incremental cost of buying more from the dominant firm's rivals.<sup>6</sup> In the presence of flexible pricing, the standard economics of taxation and incidence tells us that such a tax on the buying side should affect trade between those rivals and this distributor in the same way as would raising those rivals' costs (for sales to this distributor) on the selling side.

11. This insulates the dominant firm (call it M) from having its trades topped up or displaced by trades between the distributor and M's rivals, if M cares to raise its own price. And in many cases it will: its rival's costs have in essence been raised, and if M also is collecting a tax on each unit sold by rivals to this distributor, that also discourages M from making marginal sales itself.

12. Thus if share-of-need discounts are in place, distributors' marginal costs of expanding output either from M or from rivals are raised. Notice that this is not true of pure quantity discounts. If M charges a given distributor D a total of  $B(x)$  for  $x$  units, the shape of the  $B(\cdot)$  function does not affect D's marginal

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<sup>4</sup> Technically, the Cournot model stresses the role played by customers and rivals topping up the limited set of transactions that an anticompetitive scheme would propose, and thereby undermining the artificial scarcity and higher price that would be the motivation for such a scheme. Other models of competition include the incentive for customers and rivals to bypass and take transactions away from a firm that tries to sustain high prices on its own sales.

<sup>5</sup> Also, it might seem natural to think that it's not possible for A to discourage B and C from trading; but that's certainly not the case: it happens in many if not all anticompetitive practices.

<sup>6</sup> Or, analogously, limit the extent to which it can do so.

cost of buying an additional unit from rivals R. M can of course choose its own wholesale prices, but it will be responding to rivals' untaxed prices and facing the full effects of competition if it does choose high marginal prices.

13. This may surprise some readers, because typically if D buys one more unit from R, it will readjust its purchases from M; when M's and R's products are substitutes (for this distributor) it will reduce its demand for M by an amount sometimes called a diversion ratio. If D loses a quantity discount as a result, won't D be reluctant to buy that additional unit from R, and doesn't that act like a tax on D's purchases from R also?

14. My answer is no.

15. First, as context, a steep quantity discount (at equilibrium quantities) means a low marginal price. Since M and R sell to distributors who compete to sell to final consumers, it is the distributors' marginal costs of expanding sales that affect final consumers. At the margin M is charging a low price: if M's and R's products are close substitutes at the margin, that may discourage distributors from buying from R, but it does so by satisfying consumer needs: it isn't directly a way to insulate high prices from competition. That doesn't directly address the question as posed (is there a tax-like effect), but it does speak to the overall evaluation.

16. At a technical level (and addressing the question as posed), the envelope theorem tells us that D's marginal profit from buying one more unit from R can be calculated as if D did not adjust its (optimized) purchases from M; thus a profit-maximizing D will buy from R until its marginal revenue from sales of R is equal to the marginal wholesale price charged by R; the shape of  $B(\cdot)$  plays no role, and there is no implied "tax" on that first-order condition.

17. An even more technical analysis applies if, as hinted above, one works from the first-order conditions that incorporate the diversion ratio(s). I won't write that out here, but suffice it to say that in general the shape of  $B(\cdot)$  does enter both the first-order condition for a marginal unit from R, readjusting the quantity from M, and the condition for a marginal unit from M, readjusting the quantity from R; those two conditions are always consistent with the results obtained by using the envelope theorem, and in fact imply those results except in the extreme case where the product of the diversion ratios is 1, which basically means that D's total output is fixed. Not only is that an extreme case, but it is the case in which the Ds don't really compete with one another; as I mentioned above, I am focusing primarily on when they do compete, in part for reasons we discuss next.

### **Will Anticompetitive Share-of-Need Fidelity Discounts Be Accepted?**

18. When direct buyers are final consumers, or separate downstream monopolists who don't compete with one another, and information is complete, the simple model implies that the bilateral incentive facing M and each D is to agree to sell M's output to D at a marginal price equal to marginal cost (or equivalently to agree on a quantity that D would choose at that price), and to refrain from restricting D's trades with R. The gains from trade may be shared via a fixed (lump sum) payment between D and M.<sup>7</sup>

19. A "Chicago School" inference from that analysis was that exclusive dealing must be motivated by efficiencies. On the other hand, the celebrated "divide and conquer" model showed how scale effects for a rival R can create an anticompetitive externality from an exclusive deal between M and one D on other Ds: they see a less viable or less powerful R, and this benefits M in its dealings with those other Ds.

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<sup>7</sup> (Of course many different nonlinear price schedules would be consistent with that result.)

As a result, there can be equilibria in which M exploits the bilateral nature of bargaining to strike deals with all or many Ds that exclude R, increase M's profits, and reduce the welfare of the D's collectively.

20. Another possible anticompetitive harm arises when M and R compete fairly hard, and the Ds compete fairly hard to sell to downstream consumers. Then, the collectively profit-maximizing outcome for M and the Ds jointly is to soften competition overall (the profit-maximizing number of monopoly markups in a value chain is 1; if one starts with more markup than that, vertical deals to "eliminate double marginalization" become not only bilaterally but jointly profitable). If M tries to do that by raising the marginal wholesale price of its product to the Ds, they may respond by buying more from R, frustrating the attempt to raise joint profits. Consequently it can be collectively profitable for M and all the Ds, and even for M and R and all the Ds, jointly, if they all (or enough of them) agree to provisions that effectively raise the marginal cost to each D of buying more product; as noted above, in some circumstances widespread fidelity (share of need) pricing by M, together with a high marginal wholesale price from M, can have that effect.

21. Thus (in contrast to the divide-and-conquer model) there is a collective incentive to sign the anticompetitive web of agreements. But of course having a single agreement would sound alarm bells, so it is natural to ask whether such agreements would emerge from bilateral negotiations between M and each D, one at a time.

22. Not necessarily, even when there is a clear collective incentive. Very briefly, there are three fundamental reasons, in addition to the usual caveats about problems of negotiation.

23. First, bilaterally M and any one D have an incentive to negotiate a lower marginal wholesale price than M is charging to other Ds in general, because an incremental sale to this D presumably displaces less than a full sale to other Ds (the group diversion ratio is less than one). Thus in pairwise bilateral negotiation there is always some temptation to undermine the markups that are good for the group as a whole. This force is part of why vertical negotiations are often pro-competitive.

24. Second, if one D "holds out" and the other Ds go ahead and pay high marginal prices to M and taxes on their purchases from R, the holdout D can be very profitable, as it is exempt from the tax—although it may be unable to buy from M. Unless M is a must-have product (a distributor without M's products will go out of business, even facing that softened competition from other Ds), this holdout option may be more profitable than D would be if none agreed to the softening. This becomes a "positive contracting externality" on the non-signer, and it means that if each D is allowed to think that such profitable holdout is an option, there may not be enough profit to sign up all the Ds, even though joint profits would be maximized. However, while this holdout dynamic does indeed make reaching a deal harder, a very close analog arises in simple horizontal cartels (each firm would love to be the only one outside a price-fixing cartel), and we know that while cartels don't always form, and indeed this may well be part of the reason why, nevertheless sometimes this difficulty is overcome. Analytically, a calculation suggests that in simple cases when the competition among the Ds involves strategic complements (as with differentiated-product price competition), there will be enough excess profits in principle to bring in the Ds even if each is allowed to threaten that probably unrealistically lucrative holdout option.

25. Third, the essence of the scheme is convincing distributors D to accept higher marginal prices than they could get simply by dealing only with R (never mind whether M would decide in the end to offer lower prices), presumably by giving them something of value. By definition that can't be a lower uniform or marginal price: that would defeat the scheme. In a simple model, it is a lump sum. But if a distributor D gets bigger, its importance to the scheme presumably grows too, so it seems likely that in the long run the lump sum might get bigger for bigger Ds. If each D starts to think of that as a benefit of getting bigger, it starts to look like a reduction in incremental wholesale price, again defeating the scheme.

26. These taken together are no doubt often significant obstacles to convincing the Ds to agree to a scheme such as I have described. The bilateral incentives for M and any one D push against the multilateral incentives that I have stressed, and I expect that there are many cases in which they prevent such anticompetitive outcomes. But it would be too optimistic to rely on the pro-competitive bilateral incentives always overwhelming the anti-competitive multilateral incentives. Rather, just as is familiar in more purely horizontal collusion, we should expect that the anticompetitive multilateral incentives will prevail sometimes, though by no means always; and as in the case of horizontal collusion, we should be alert to address it then.