

FTC-DOJ Conditional Pricing Practices Workshop
June 23, 2014
Segment 2
The Economics of Conditional Pricing Practices
Transcript

MICHAEL A SALINGER: I'm going to talk about loyalty discounts by a dominant producer threatened by partial entry. What I mean by partial entry, is that there's an entrant-- or it doesn't have to be a new firm but a small firm-- that can compete for part of a dominant firm's market but not all of it. As you can tell from the first word of the title, I'm going to conclude that this can be done in an anti-competitive way.

The pricing schemes I have in mind-- or that I'm analyzing-- are simple. The regular price is \$10. At least that's for small customers. So say, if you buy less than 100 units, you pay \$10. But you're a big customer-- you buy 100 units or more-- then you pay \$9.

So that looks like a pretty standard quantity discount to virtually everyone. Except that if you found your way to this room, you probably recognize that there's actually something quite unusual about that. Which is that if you buy 99 units you pay \$990. If you buy 100 units you pay \$900. So you buy more, and you pay less.

Whether or not we think that's anti-competitive I think we can agree that that's puzzling. When the organizers of this conference contacted me several months ago, they asked for help in learning what's being taught in business schools about these practices, and whether in business schools we're teaching people how to do this. I consulted with my marketing colleagues at BU. They assure me that they're not teaching our students to do this.

There are a lot of--

[LAUGHTER]

There are a lot of business school professors here, and I'd be curious to learn whether at other business schools they're teaching their students how to realize the value that they've created-- or to exploit their market power depending on your perspective-- better than we are. But the business students are learning the Learner Rule. They're learning to segment the market. To charge more where the elasticity of demand is less.

Business students are learning about the use of bundling as a price discrimination technique. And they know the Stigler Model and the advances of it leading up to Mike's work with his co-authors. But they're not learning this as far as I can tell.

OK so it's puzzling. But is it anti-competitive. And if it is anti-competitive, is it like any of our standard forms of anti-competitive behavior? Is it predatory pricing? We've already had a discussion of that, it sort of looks like it.

Because-- at least on the margin-- if you are paying less to buy more, then the pricing is negative. Is it exclusive dealing? Is it tying? And more generally, if it is anti-competitive, in broad terms we have two classes of anti-competitive behavior.

One is exclusionary behavior, and the other is behavior that facilitates coordinated pricing. So which is it? By the end of this, I'm going to answer that.

To be a little more specific about the setting, I have an incumbent monopolist. There's competition from an entrant that can compete for a part, but not all of its market. The first time I started thinking about this it was many years ago, and it was a case that involved pharmaceuticals.

There was a pharmaceutical that had multiple uses. There was an entrant that had FDA approval for its drug for one of the uses, but not all the uses. So the incumbent still had a protected monopoly for a lot of the uses, but there was competition in this one use. In my model there's some differentiation within the competitive segment so that if you had competition-- just in the competitive segment, and the prices were the same-- some people would buy the entrant's product, some people would buy the competitor's product, and there'd be some premium they'd be willing to pay.

Since time is short, for the purposes of this presentation I'm going to focus on a numerical example. In the numerical example, the customer's get a value of \$100 from the incumbent's product. So think of \$100 as being the monopoly price.

The competitive segment is 20% of the market. And in the competitive segment, half the customers prefer the entrant's product while half prefer the incumbent's. There's, as I said, there's some differentiation.

And so there's a parameter in the model that measures the intensity of the differentiation. So there's some customers who are willing to pay as much as \$20 for their preferred product over the product they don't prefer. And the relationship is linear within that segment.

And what I do, is I compare three broad classes of pricing strategy. One is simple pricing where the incumbent just has to charge a constant price per unit. The other is two classes of pricing strategies where the incumbent is able to focus its competitive pricing on the competitive segment.

The model was originally set up to understand all units discounts, but it does apply to bundle discounts. So which of these strategies that focuses the price cuts, depends on whether you're looking at an all units context or a bundled context. So one is that you do segment pricing-- and this might make more sense in the bundled context where you just lower the price, the good where you face competition-- or the other kind of strategy is to offer a discount on incremental purchases once you reach a certain threshold.

And then I'm going to compare that to loyalty discounts where once you reach a threshold, you get a discount. Not just on the incremental purchases, but on all purchases. So with simple

pricing the result is that the incumbent charges \$100-- which is the monopoly price-- and the entrant charges \$80, which allows it to get the entire competitive segment.

And the reason for this, is that if the incumbent has to lower its price to everybody to compete in the competitive segment, then it's too expensive for it to compete in the competitive segment. So it just cedes the competitive segment to the entrant and exploits its monopoly where it still has a monopoly. So obviously it depends on the parameter values, but the result reminds me a little bit of the results that Mike Winston and Dick Cavis got years ago, about what happens when drugs go off patent and they increase their price, they don't lower their price. And basically they're saying look there's a part of the market we're just not going to compete for, but there's still a high value part that we can get.

So what happens when you have these pricing schemes that are targeted at the competitive segment? Well with segment pricing, the monopolist can charge a different price in the monopoly segment. In the competitive segment it charges-- so of course in the monopolized segment it charges a monopoly price of \$100, and in the competitive segment it charges \$30. The entrant charges \$25.

There's a technical aside here for the economists in the room that-- for reasons that we could get into offline-- the incumbent moves first in the pricing game. What you end up with, is an average price of \$85.40. So I should have said that the simple pricing, you end up with an average price of \$96. With this pricing, the price continues to be \$100 in the monopoly segment, but it becomes quite competitive in the competitive segment.

Now what happens when you have discounted marginal prices? Well there are a variety of ways that this can happen, but think of the threshold being the monopolist segment. So the incumbent actually raises the price to \$101.25-- up to 80% percent-- but then charges \$20 after that. And the entrant charges \$20 as well, and you get an average price of \$85.

I should say that in this model it's certainty. It doesn't matter whether these thresholds are stated as an absolute quantity or as a market share. But I think as a practical matter, it matters quite a bit. And if you find yourself stating it as a market share, then it is acting as a tax on the entrant's sales. And that strikes me as being problematic.

The lesson from these two forms of pricing practices-- where you focus the competition on the competitive segment-- is that consumers benefit from this. You get more competitive pricing. And you can imagine someone alleging, boy if you focus the price cuts on the competitive segment that that's exclusionary in some way. But it seems to me that actually, that's what we mean by competition. And that's the sort of pricing that should be encouraged.

So what happens with loyalty discounts? Well with loyalty discounts, the discounted price-- that in this numerical example is \$94.72-- and the threshold at which it applies is 90.4%. and the entrant actually charges more than \$94.72. The entrant charges \$95.69, but you get an average price of about \$95. And you should compare that with the two pricing schemes before where the average price was about \$85. So there are two things to notice about this.

One is that the entrant's share is approximately the efficient share. And with different parameters, sometimes the entrant gets more than the efficient share. So the problem here isn't excluding the entrant when it's really efficient to allow the entrant in. The problem is that the price is high.

So why does it work? The reason it works, is that the all units discount confronts the entrant with a very stark choice between taking its allocated share-- at what might be a high price-- or-- if it wants more than its allocated share-- it needs to cut its price quite dramatically. If the incumbent recognizes that it can create this choice for the entrant-- it can design the entry scheme-- so it leaves just enough share for the entrant that it can anticipate that the entrant will take the share and take the high price, and then in anticipation of the high price that the entrant will charge, the incumbent can also charge a high price. So really what's going on here, is that the pricing scheme destroys competition at the margin and results in less aggressive pricing.

So back to the question, is this anti-competitive? Yes this is anti-competitive. What category of anti-competitive behavior is it? Is it predatory pricing? No. This is not about charging low prices, this is about charging high prices.

Is it exclusive dealing? Well, no. Actually the way this mechanism works, is not by having exclusive dealing. The way the mechanism works, is that you leave part of the market for the entrant.

Is it tied? Well in the bundle discount interpretation of the model, I would agree that it is a form of tying. I very much liked Mike Waldman's presentation when he said, look there are lots of theories of tying. Some of them are good, and some of them are bad.

So to say that it's tying from an economic standpoint, it's being not helpful. And from a legal standpoint-- given that the Supreme Court hasn't overturned the Per Se Rule-- it strikes me as being harmful. Since presumably-- I would hope we would have general agreement in the room-- that the Per Se Rule doesn't make any sense.

More generally, is it exclusionary or collusive? In the first instance, it's collusive, but I would say that-- Tim Muris and Susan Creighton some years ago had an article about cheap exclusion. And you might interpret this as a cheaper form of exclusion than the alternative pricing schemes.

Yep. OK. You know what? So I was going say, it's not really Section One or Section Two. It strikes me as being a good use of the gap filling use of Section 5.

SPEAKER 1: Thank you very much.

[APPLAUSE]

SPEAKER 1: Our next speaker is Abe Wickelgren.

ABRAHAM L WICKELGREN: Hi. All right. I'm going to talk a little bit about loyalty discounts here. First, this is based on joint work with Einer in our paper Robust Exclusion and Market Division Through Loyalty Discounts.

First I want to sort of-- just a brief overview. And that is that I think a key principle here in thinking about loyalty discounts-- or conditional pricing practices more generally-- is that there really isn't a general principle. I think there's certainly is-- Mike and Mike talked about this earlier-- there's plausible reasons for conditional pricing to be pro-competitive.

We can reduce cost, it can promote complementary investments. There's also plausible models where conditional pricing is potentially anti-competitive. Einer and I have one that I'll talk about in a little bit more detail.

There are others, and hopefully there will be more of them. In any particular situation, one model or more models may potentially fit one particular case or they may not. Basically I think there's really no substitute for taking the various theories that are available, looking at the particular cases and, or the particular industry, and trying to decide if one of these models fits.

You can't really say across the board that there's some real simple test or simple way to determine whether a particular loyalty discount is likely to be pro-competitive or anti-competitive.

All right, so to talk about our models. We have it divided into two different types of loyalty discounts. We have loyalty discounts with buyer commitment.

Here, buyers who commit to loyalty to one supplier-- we think of it as an incumbent who is present in the market initially-- get a discount off a list price. Which is the price for those buyers who do not agree to this loyalty. Here the incumbent is committing to a discount.

It's not committing to a list price in the first stage, but the results are robust to allowing the incumbent to also commit to a list price as well. Or a maximum list price, which then it could later reduce.

We also talk about loyalty discounts without buyer commitment. Here, the incumbent is offering some buyers a loyalty discount. Buyers get to decide later-- after seeing what the prices of an incumbent and a potential entrant are-- whether they want to fulfill the loyalty commitment and get the discounted price or not.

Some common features of both models. We've got an incumbent and an entrant. Simple model, constant marginal cost, there's no economies of scale. The entrant may have some cost advantage here.

We've got end buyers-- multiple buyers-- here with independent demands. So here we're not thinking about buyers that compete with each other. In the first period-- it looks like we have some font incompatibilities here-- i offers-- the incumbent offers-- a loyalty discount. That box is supposed to be a θ , but we can just think of it as a box today. Box is the fraction of buyers that are covered by the loyalty discounts.

In between period one and period two, the entrant decides whether to enter the market or not. Since there's no fixed cost of entry here, the entrant's only not going to enter if there's no buyers available. In period two, the firms name their prices.

Again, this fraction that have agreed to the loyalty commitments can buy from the incumbent on some discount off the incumbent's list price for all the other buyers. And then buyers make their purchase decisions in period three. When we think about the buyer commitment case, first thing we have to do is think about what's going to happen after the entrant enters, and there's this fraction box that can only buy from the incumbent.

If this fraction is large, we'll get a pure strategy equilibrium. In this equilibrium, essentially both firms charge their monopoly prices. The buyers who haven't agreed will buy from the entrant at the entrant's somewhat lower monopoly price because the entrant has potentially a cost advantage here.

The buyers who are committed, buy from the incumbent. When I say both firms charge their monopoly prices, what I mean by the incumbent's monopoly price, is it offers the monopoly price plus the loyalty discount whatever that is for as its list price. And the price that the buyers who actually get the discount, is effectively its monopoly price.

If this fraction of covered buyers is smaller, we don't get a pure strategy equilibrium. In this case, you can think about if the entrant were to price high and the incumbent knew that, the incumbent would undercut that in order to capture the entire market. On the other hand, if the entrant's price is low, the incumbent wants to charge its monopoly price and just serve the committed buyers. But in that case, the entrant charged a higher price too, because they could have sold to the free buyers at a higher price.

What drives the results in the model are these important characteristics of this mixed strategy equilibrium. In this equilibrium, both are going to charge their monopoly prices sometimes, and the rest of the time they're going to charge some price between the incumbents marginal cost and the entrant's monopoly price. The key property of this, is that the average price that buyers are going to pay-- either from the incumbent or the entrant-- is going to be higher, the higher the fraction of buyers who've committed to receive this loyalty discount and buy from the incumbent.

This is critical because this is what creates the externality that makes it profitable for the incumbent to offer these contracts even though it may be broadly inefficient. That is that when one buyer commits to the loyalty discount, this raises the average price that all the other buyers are going to pay. So a greater fraction of committed buyers essentially creates more market segmentation and leads to less aggressive competition.

And that generates this negative externality. And makes it so that it's possible-- even though there's dead weight loss created for the incumbent-- to get buyers to agree to this. Because some of the cost that buyers are creating is externalized onto other buyers.

So the main results we get here. If we have enough buyers and the entrant's cost advantage isn't too big, then we can show that at least one buyer is always going to agree. There is no equilibrium here where all buyers reject this offer of the loyalty discount.

As a result, prices are always going to be above the competitive level. In addition, there always will exist an equilibrium in which all buyers commit and the entrant is entirely excluded. We can't rule out-- when we keep the model fully general that maybe some intermediate level of buyers will commit-- but there's also an equilibrium where everyone commits.

In order to try and get a little bit more purchase on what we mean by many buyers and how big the cost advantage can be, we used some linear demand simulations. Here what we show, is if the cost advantage isn't too big, many buyers can mean only three. In addition, in the linear demand case at least, although we can't generally theoretically rule out some intermediate equilibrium, we never find it.

Exclusion here, is the principal competitive problem. Whenever it's possible for the incumbent to get one buyer to commit, it's always optimal for the incumbent to get all buyers to commit to the loyalty discount. And the entrant is effectively completely excluded from the market. That's the buyer commitment case.

Then we also have set up another model where there's no buyer commitment. Again, we need to think about what's going to happen after entry, when some fraction of the buyers have this loyalty discount option. Here we never get a pure strategy equilibrium.

As you'll notice, this model has somewhat similar features to Michael's model, in that we're going to get market segmentation here. Not because of any fixed characteristics of the products, but because of the way the incumbent offers the loyalty discount. If we have some fraction of buyers that are covered by the loyalty discount, we can think if the entrant knew exactly what the incumbent's discounted prices-- the prices for buyers that are covered by the loyalty discount-- it's either going to want to charge a price that's just below that so that it can sell to the entire market, or it's going to want to charge its monopoly price and only sell to those buyers who don't get the loyalty discount.

Here we show that the loyalty discount that the incumbent wants to offer is always large enough so that the buyers who don't get the loyalty discount, their price is always going to exceed the entrant's monopoly price. In either case, the incumbent's going to want to change its price. It's not going to want the entrant to take the whole market.

And if the entrant is charging its monopoly price, the incumbent is going to want to charge its monopoly price. So again, we get a mixed strategy equilibrium. We can think about this as-- in some ways that the simultaneous case of Michael's case where the incumbent price is first-- and you see that while the specifics are a little bit different, the general flavor of the results is similar.

Both the incumbent and the entrant are going to randomize their prices over some interval between the incumbent's marginal cost and the entrant's monopoly price. The entrant is always

going to sell to the buyers who don't have access to the loyalty discount. As I said, the large discount here is always going to be optimal.

And the incumbent is usually-- but not always because it's a mixed strategy equilibrium-- going to sell to covered buyers. Here we have a different key property from the last one. Now we have more covered buyers. It's actually going to reduce the average prices.

Competition here, is over the covered buyers. More covered buyers means there's more reason to compete aggressively. We're going to get more covered buyers the smaller the entrant's cost advantage.

Less than here, because the entrant has a cost advantage. We're always going to get less than half the buyers that are covered. If the incumbent had a cost advantage, we might see more than half the buyers covered by the loyalty discount. Because if any buyers are covered, all buyers are better off covered.

It's not going to be difficult for the entrant to-- or for the incumbent rather-- to get people to accept this loyalty discount option. Prices are always elevated above competitive levels. So here-- unlike in the case with buyer commitment-- the principle competitive problem is not exclusion. It's more collusion and market segmentation.

As I said, the important thing about models such as these, is to think carefully about what are the important conditions for when these models might apply. In the buyer commitment case, obviously we need some form of buyer commitment. In addition, for both of these models, there has to be just one entrant.

Or at least some form of limited competition among entrants. If we had a couple of different entrants who were competing through per trans style competition, that's going to push the entrant's prices down to cost. Which is going to prevent this buyer commitment device from elevating the price to free buyers, and therefore elevating the price to committed buyers as well.

We don't have competition for loyalty discounts in the model. I think if we did, it would be different. But I don't think it necessarily eliminates the consumer harm. We might get some ex anti-competition that's passed on a lot of the benefits-- of the profit benefits-- but I think you still end up with the dead weight loss from elevated prices.

For the no buyer commitment case, again we need either one entrant or some form of limited competition among the entrants. In addition, it's important here in this model that the entrant can't price discriminate. The uncovered buyers in some way need to be able to masquerade as covered buyers so it's at least somewhat costly for the entrant to be able to tell who's covered and who isn't.

Therefore the entrant ends up offering the same price to covered and uncovered buyers. Otherwise the entrant can just compete for covered buyers without losing its profits from uncovered buyers. And that's going to defeat the point of this loyalty discount for the incumbent.

Just to wrap up, the role of models like these is to identify some potential mechanisms for anti-competitive effect. Clearly identify what the important conditions are for those effects, and then the agencies can determine-- in the particular cases-- if conditions like this exist in any given case. So that these anti-competitive mechanisms are plausible.

As I said, I think we're going to need many such models because the cases are varied. And of course finding that anti-competitive mechanism isn't the whole story. We always have to consider potential offsetting efficiency benefits as well.

SPEAKER 1: OK, thank you.

[APPLAUSE]

SPEAKER 1: Our next speaker is Tim Brennan. Tim?

TIM BRENNAN: Thanks. The [INAUDIBLE] looks a little unfamiliar here. I see it's a-- there we go. OK.

First, I just want to thank everybody for inviting me. It's a real honor to be included. I also should say in the fine print there, I'm currently the chief economist of the Federal Communications Commission. So not only does the usual disclaimer apply, but I have little doubt that it applies in this particular case.

I'm going to try to be very brief to leave more time for other people here. So first just a moment of background. Been thinking about this issue on and off for quite some time. Beginning with thinking about Steve's raising levels of cost. And thinking about that if you're going to raise someone's cost, you have to raise the price of an input. That seems like a truism.

Which leads me to think about what's going on in these input markets, or more generally compliment markets. Then in 2003, I was a part time staff assistant to Lou Frobe when he was director of Bureau of Economics here. And he asked me to think about these bundle discount cases.

I noticed that the buyers in these cases weren't end users, but they were competing intermediate good providers. Which again brings up this question of, do these things device to suppress competition among them? So that's basically what I've been thinking about here.

And a perspective from this that I'll come back to, is that one of the things here-- unlike some of the models-- is that the buyers here and sometimes the signers of these contracts or agreements-- they may not be explicit contracts-- I don't think of them as being victims. I think of them as being participants. And that can change a lot of how one thinks about this.

Just very quickly a few pictures to illustrate what's going on. Pat Greenly told me the reason I was invited to this was that I was the one economist he could find who thought that Lapages might have had a case. But since I don't know the facts, I'll--

[LAUGHTER]

--I never know the facts about anything so that's not a particular impediment here, but I'll go with it. But you could put Intel, or ADM, or whatever your particular favorite story is here. So imagine that this practice is exclusive dealing, wealthy rebates, bundle discounts-- there are differences as Mike and Mike pointed out earlier, but they're kind of cousins too in a lot of ways.

So I'm not going to focus on the differences particularly, especially because of limited time. The way I think of these things is basically as a sequence. The first one of these wouldn't bother me.

I may be somewhat unusual in that. But at least as an operating principle, if it's just a purely vertical thing, one to one, I don't really care. We still don't care, except for some very specific story. Where it gets interesting, is if it starts to get spread out across the complement market.

Here the stalwarts of tape. And where you begin to think about it, is at what point does this become sufficiently broad that we begin to wonder whether the rivals are now going to have to pay more for-- in this case retailing services basically-- for this to be a problem? The way I look at it, is to ask whether the people who participate in these contracts, essentially are they so big that if they merged-- at least merged for these purposes-- would we care?

You think of the [INAUDIBLE] story basically as saying-- that if what I call a retailer four there-- if they could expand arbitrarily, then there would be no exclusionary effect. But they also would say, well you wouldn't care about the merger of the first three retailers there because they couldn't raise price, because the other guy could expand. And the idea that one could look at these things as being somewhat merger like, is also something I'll come back to.

But if one's looking for a safe harbor, or screen, or something like that, that's a place where I would take a look. So essentially, my view of these things is to think about these things as if these things were mergers. Now that's the first question. It's not the last one.

So let me take a couple of slides to go through some of the questions that should occur to one if one thinks about this. Again this is the start of the story, it's not the end. First, what happened to all the fancy theory here?

Well, if these people-- if the buyers, the signers of these contracts-- are not people who have to in some sense be cajoled into it because it's making them more soft, then I'm not sure there's a mystery here besides the Coase Theorem. They'll figure it out. Not that there aren't models-- some of them produced by people in this room-- but I'm not sure that one needs a whole lot for it.

What about price cost tests? Now whether they're relevant anywhere-- and I saw Aaron come in, so I figure I would raise that question and not get into it-- but the issue basically here, is I don't view this as a predatory theory. But I view it as being something like a merger story. Which means I don't really care about what the price cost margin is. I care about whether or not a complement market was tied up.

The metaphor that occurs to me, it's kind of like a bunch of people-- a bunch of cops-- looking at the dead body on the pavement and arguing about how much the murderer paid for the gun. Who cares? It's the dead body you're worried about.

Next, what happened to the Chicago School here? Well the harm basically is the elimination of competition in a compliment market. Now if the upstream market is already monopolized, then arguably at the margin there's not a lot of-- it's a lot harder to tell a story that this particular practice matters.

It matters more if the perpetrator-- 3M in the story-- wouldn't have had a monopoly. Just to take an old example, it also struck me in the Microsoft case, that they spent all this time saying, well gee, because of scale economies application lock in and network externalities, Microsoft in the 1990s had the most impenetrable monopoly known to humanity. OK if that's true, who cares about browsers?

You want to know that in some sense, the practice matters. And it's going to matter more in some sense, the less secure the prior monopoly is. So what about prior dominance? It basically weakens the marginal effect of these things even a little guy or a new entrant could do it.

What about competition excluding per some reference that already I've been asked about that before. And that could happen, but I think it's been alluded to already. The harm is still there. It's just that more of the rents are going to get transferred to the buyers.

Ralph Winter gave a talk along those lines here just a week or two ago. And again, it doesn't really change the story. Which is whether or not a compliment market has been tied up. Whether there was competition to tie it up doesn't seem to matter a great deal if that's the story.

Now a tough question here, is well how much is enough? Just because you tie up something, well how much have you tied it up? How much does it cost somebody to get around it?

Now I don't have time to go into this here. And thinking about this before, if this was strictly exclusive dealing, then it basically becomes essentially like the efficient component pricing rule. It excludes inefficient-- less efficient-- entrants, but it wouldn't exclude more efficient ones. That strikes me as too strict.

I've never quite understood this obsession with people have to be equally efficient entrants. Less efficient entrants can provide competitive benefits. There's nothing sort of-- why one singles those out doesn't quite make sense to me.

If someone were to pass a law banning entry by inefficient entrants would we think that was a good idea? So I don't understand. I don't quite understand that as a policy issue. Unless one is concerned about shilling or an over-deterrence effect. Which I'm not as worried about here as some others.

Which gets to the last point. What about efficiencies? I totally agree that there are efficiencies out there. I think one of the coolest things about learning about this stuff has been learning the

Chicago vertical efficiency stories. I think they're cool, and I think that they're great, and I think that they're right.

So you've got a balancing act. We're not unfamiliar with balancing acts. We have to do it with mergers. That's part of the reason, as Joe has pointed out.

And in some sense, why you let little ones go, but you don't let big ones go. At some point you cross a line. So maybe the issue here, is think about crossing a line.

And one of the peculiar things about this area of the law, is that it's all or nothing. Either we ban the practice, or we allow the practice. How about saying, OK 3M, you can do it with one retailer. You can do it with two retailers. But you can't do it with all the retailers, and seeing what happens.

Basically we do those kinds of balancing things all the time. Whether they're easy or not, I don't really know. But that's one way of incorporating efficiencies into this. As long as we insist upon this being all or nothing, then it's going to be a problem.

The last thing I want to mention here, is there are undoubtedly other questions here. And in the interest of time, I'm going to blow by those. And I probably will take advantage of the fact that there's no time allowed for questions from the floor, which will protect me even more.

But I'll add as a kind of-- I'm just about done-- I'll add as a concluding remark, that to take the phrasing that's come up earlier-- the phrasing outside the US-- as long as we think of these things as abuse of dominance rather than abuse creating dominance, we're going to have a hard time getting these stories straight. So with that I'll turn it over. Thank you very much.

[APPLAUSE]

SPEAKER 1: Our next speaker is Ben Klein. Ben?

BENJAMIN KLEIN: Thank you. I'm also happy to be here. Even though I'm on L.A. time.

[LAUGHTER]

I'm going to talk about the economics of alternative legal standards for loyalty discounts. And in particular-- I'm going to have to go a lot faster than is optimal-- what was that?

TIM BRENNAN: I yield you my time.

BENJAMIN KLEIN: OK. Did you hear that? What does economics tell us about whether we should be using a predatory pricing or an exclusive dealing standard for loyalty discounts? People discussed this ZF Meritor v. Eaton case in third circuit, which proposed the criterion.

I'm going to try to do some economic analysis of the criterion that they proposed, but their rule was that predatory pricing principals-- including the price costs-- as would control if the case

presented solely a challenge to Eaton's pricing practices. However the court noted that Eaton's contracts included preferential product listing in the truck manufacturers data books. All four-- as you know, this has to do with heavy duty truck transmissions that are sold to four major truck manufacturers.

All four of these contracts had that the Eaton transmission was the standard model, and it was the lowest price offering. Two of the four contracts had a form of exclusivity. In addition, the contract had the right to terminate the supply agreement if the truck manufacturer did not meet the contractually specified share.

In two of the four contracts actually-- and the court thought that that meant the buyers thought they were at risk of not having an assured supply if they didn't meet the minimum quantities. One company actually did not meet the contractual quantity, and they just lost the loyalty discount. But they weren't terminated.

And the court concludes that because of these contract characteristics, quote, "Price itself was not the clearly predominant mechanism of exclusion, and therefore exclusive dealing, not predatory pricing, was the applicable antitrust standard." It's weird that I see the whole audience looking this way. But Mike, nobody's looking at me, so I can't tell if you're up to it.

But anyway, the first decision to apply the Meritor Principle, Asahi, and Asahi had to do with Sanofi drugs. These are drugs that treat blood clotting and they were selling them to hospitals through GPOs.

The New Jersey district court in 2014, just recently concluded that price discounts were the predominant mechanism of exclusion. The court therefore used the predatory pricing Brooke group standard of price lists and incremental costs, as a necessary condition for liability and granted summary judgment for Sanofi. So how does the court determine that price is the predominant mechanism of exclusion rather than non-price things in the Meritor case?

The court says, well the non-price elements of the Eaton contract were not present in the Sanofi contracts. However, the Sanofi contracts actually included non-price restrictions. They included formulary and promotional requirements, where the non Sanofi products could not have greater availability.

And there were restrictions placed on Sanofi's rival's promotional programs. Basically the rivals could not have a preferred position in a hospital's formulary. No sign has gone up yet.

Interpreting the distinction in Meritor and Asahi regarding whether price discounts are the quote, "predominant mechanism of exclusion," requires an understanding of the essential economics of loyalty contracts. As you know, they're very, very complicated models. But I think this fundamental distinction is disconnected with the fundamental economics.

In particular, loyalty contracts-- including contracts that include both a minimum distribution requirement in addition to sales share requirements-- are commonly used as part of the competitive process in cases where there's no possibility of exclusion. I have two main points.

One-- I'm hiding in that last bullet-- one is that distribution restrictions in these minimum sales share terms are complements.

They're different aspects of what the transactors are contracting over. And two, that in contrast to most of what you're going to hear today, there is a common pro-competitive motivation for loyalty contracts. Let me outline the non exclusionary economic motivation for loyalty discounts.

Figure one is just to illustrate that's common in the real world. Every firm has a negatively sloped demand curve. What I have drawn here in figure one, is this is individual demand by a particular buyer-- like a truck manufacturer or a hospital-- for either the Eaton transmission or hospital's demand for the Sanofi drugs.

And in the real world, every demand for every product is negatively sloped. It's pervasive. Except for the wheat farmers of the economic theory principles class that you have. I always tell people I have a negative demand for my product, and I have no market power.

SPEAKER 2: [INAUDIBLE]

[LAUGHTER]

BENJAMIN KLEIN: Right. Well you help me. So the usual thing is that because there's a negatively sloped demand, and you have a single linear price here-- the price is set at p_1 , the quantity is q_1 -- and the normal thing here is that there's unrealized gain from trade. There's a gap between the price and the marginal cost.

Sometimes the marginal cost is extremely low like in a drug. Therefore transactors have an economic incentive to have some contractual solution to this. And figure two, I've illustrated one of them as a contingent loyalty contract that creates these mutual gains from trade.

I've represented this in a way where it's a first unit price discount. So the price goes from p_1 to p_d if you can see it. I don't know what the big picture looks like. If the buyer commits to buy q_c units-- and the interesting thing about this is that this illustrates that the contract is conditional because the point d -- which is the contract point-- is off the demand curve.

Off the single price demand curve. Which doesn't mean the buyer is forced but it means that it's conditional. That this contract is conditional.

And number two, that there's also a buyer incentive to try to shave the contract. If the price were just lowered to p_d , all they would buy is d . The economic analysis of this contingent contract that is entered into by the buyers and sellers here involves two fundamental economic questions. What are Eaton and Sanofi purchasing from the buyers of their products? And how are Eaton and Sanofi paying the buyers for what they're purchasing?

The answer to question one, is that Eaton and Sanofi are contracting for buyer's services that have the effect of shifting sales. The way we should understand these contracts-- and all the ones

that I've seen-- these buyers are supplying sales shifting services. They're increasing their demand for the seller's product at the expense of a rival very directly.

It's not this thing with going to the fast food restaurant and getting a discount if you get the 10th meal. That's not what these things are about. And it's not somehow with trying to increase the aggregate quantity of sales, buy a six-pack or something like that.

These products, as Tim said, they're an input. they're a very small fraction of the total product of, like, hospital services. We're not talking about somehow increasing the aggregate amount of blood clotting drugs or anything like that. Or trucks.

What we're talking about, is they're writing a contract. Buying more of our stuff and less of the rival's stuff. That's why I call it sales shifting services. Buyers have the ability to shift sales between suppliers by acting as the purchasing agent for they're loyal customers. Thereby internalizing individual consumer purchase decisions.

There are a number of models. But Klein and Murphy, we discuss how because consumers are somewhat loyal to a buyer, when the buyer chooses-- the buyer as acting as the agent-- can get them a lower price at reduced variety by either having an exclusive-- or what is more commonly the case-- it's often efficient for these buyer's sales shifting services to involve partial rather than full exclusivity to take account of customers with strong preferences. So there are some consumers that have very strong preferences, where the price discount is worth less than the decrease in variety.

And the contract usually is in this thing of a partial exclusive. If it was in a full exclusive, then it would be a lot easier. We know it's exclusive dealing. We'd know how to do the economics. We'd know how to do the law.

But the fact that it's partial, creates these contract specification problems that I will talk about, where you need these other terms in the contract. But that's the answer to question one. That's what people entering these contracts to do.

And answer to question two, is how are they paying for it? They're compensating buyers for providing these sales shifting services in many different ways with price discounts, rebates, upfront payments, but the key is that the payment is contingent, and not the particular form of payment. But it's basically, you can think of all of these as price discounts.

The court-- Meritor and Asahi in their decisions-- distinguishing between the contractual arrangements that involve the price discounts and those that involve these non price terms-- such as preferred product display restrictions-- those decisions are confusing the two questions. The form in which buyer's sales shifting services are contractually specified-- which may include either, or often both, minimum purchase quantities and preferred distribution provisions-- that's question one. What's being purchased? Question two, the form in which the seller pays for it. And as I said, all of them involve some form of prices discount.

SPEAKER 3: [INAUDIBLE]

BENJAMIN KLEIN: No.

SPEAKER 3: Yes.

[LAUGHTER]

BENJAMIN KLEIN: OK.

SPEAKER 3: [INAUDIBLE]

BENJAMIN KLEIN: OK. How will I do this? The key determinants of how you specify the contract relates to how easy it is to specify and monitor the sales. First I talk about, can you just specify the services directly? Like saying you're going to give somebody eye level shelf space, which will shift a certain fraction of the sales.

That doesn't really work for these types of cases. And then you also can have-- I tell you why it doesn't work. I assume you can get this online, and study it very closely at your convenience-- and then you could just specify the quantity. Go to that figure and say I'm going to have that person by q_2 . If they buy q_c , I will give them the prices discount pd .

But you really can't contract on that because there's randomness in the real world. One of the things you do to standardize, is use a sale share-- rather than a sales level-- to standardize across different size buyers and changing market conditions. And we'll talk about in the panel-- I'm certain-- about contracts that reference rivals. But here, this is just one of the ways you can contractually specify it. But even when you do that, there's all this remaining variability.

SPEAKER 3: [INAUDIBLE]

BENJAMIN KLEIN: Let me just--

SPEAKER 1: [INAUDIBLE] and move on. In the remaining 10 or 12 minutes we have, we have two discussers that we'll hear from. Thank you very much Ben. Our first--

[APPLAUSE]

SPEAKER 1: And our first of two discussions is Francine Lafontaine. Francine?

FRANCINE LAFONTAINE: Well let me start by thanking again the organizers and also the panelists for very stimulating and interesting discussion of different ways to think about these complex pricing . practices. I say complex pricing practices, in part because economists do tend to focus on prices. And the court has obviously focused on prices in determining-- to some extent-- which are the likely effects or the conditions criteria that should apply to some of these practices.

Since I'm an empirical person that spends time with contracts, I'm going to begin by saying that when you look at these complex pricing practices-- just like professor Klein has just illustrated,

and also Mike Winston talked about a little bit before-- they are typically embedded in what is a fairly complex contractual relationship. Even beyond that, it's not all in the contract. I'm just going to add to the complexity.

Already things are very complicated. We have a lot of moving parts, a lot of different ways that we can try and classify these contracts or these practices. We've talked about whether the rivals are referenced or not. We've talked about whether there's a single product or many products.

But on top of that, there's all these other conditions that come in these contracts, including promotional requirements, distribution, highlights of some sort, placement, and other things like that. In fact this reminds me of a paper-- I just want to mention-- a paper by Paulina Pulito a long time ago. Which was very descriptive but allowed us to learn. It's a paper in 1991, allowed us to see the connection even across different vertical restraints.

So beyond the traditional ones. Exclusive dealing, along with exclusive territories, along with resale price maintenance, and other things like that. As I said, they can even be implicit, these kind of constraints.

So there's this nice paper by Ralph Winter-- who's been mentioned with the co-author-- and they discussed briefly in the paper the Nielsen case in Canada. Where the exclusivity, the courts ruled against the exclusivity, and it was removed. But at the end of the day, the relationships didn't change. They remained exclusive. Even once the courts have banned the contract.

I guess my main point, is that we need to do a lot to try and understand how the combination of practices works together. How some of them are complimentary to one another, also how some of them are alternatives to each other. So I'm back to also Michael Winston's point, a little bit before Matthewson and Winter had talked to us about how these things interact and can generate outcomes as a group.

Let me add to that, and Matthewson and Winter's paper is a good way to get into that. One of the things that they were discussing, is how the combination of restraints can lead to something that's very similar to vertical integration at the end of the day. Well in a lot of the settings that we're talking about-- at least many that I'm familiar with, for example firm's decisions to use independent dealers versus using internal sales forces, or firm's decisions to franchise or not which I've spent some time on-- they actually can change that margin of vertical integration to a fairly large extent in a pretty clear way. Just like if we make certain practices more subject to legal oversight, the firms might change to other practices that do similar things.

We also need to think about the fact that they might work on that other margin. Which means less independent dealers and less other kinds of businesses. And the drawback of that, is obviously they were choosing these independent dealers and other things for a reason.

And we're having them move toward something that's a little bit less efficient than what they were choosing by revealed preferences. They were doing the other type before. I'm just adding complexity because when you look at these contracts, they are very complicated. I'm just going to leave it at that, and then let my co-discussant and complete the discussion.

RANDAL HEEB: Thank you, and thank you all of the panelists. I also benefited in addition to hearing the discussion too. A couple of very interesting phone calls discussing all these issues. What comes through all of this, is this is a very complicated realm.

There are many, many different mechanisms, many papers, that shine a light on different things that are happening. The Michaels, Winston and Waldman, told us the taxonomy of many of these mechanisms. But I want to try to get a little bit of a simpler mechanism to focus on the question of, what as antitrust enforcers-- or people who are thinking about antitrust enforcement-- we could get fewer special cases than all of the complete taxonomy. But enough cases that we can actually apply the right mechanisms to the right models.

I would lend my voice to the chorus maybe with the exception of Ben here, that thinks that the mechanism and the analysis need to be synced so that if the mechanism of exclusion that is alleged is a particular economic mechanism, that the examination would have to follow that. I'm not sure you disagree with that, I imagined from our earlier conversation that you were going to give a conclusion that maybe the price cost test would span a wider set of issues then I would maybe advocate.

BENJAMIN KLEIN: Well that's a-- well-- I'm certain I'm going to be in trouble if I say anything.

[LAUGHTER]

RANDAL HEEB: I won't put words in your mouth. So let me propose a taxonomy that's just a little bit broader than price cost test or exclusive dealing, but far less broad than the different examples that Michael and Michael set out for us earlier. Obviously one is predation And we know when it happens in both in a single product simple case and also when we use an attributed bundling test.

We can examine the same mechanism in a lot of more complicated situations. One thing that's come up in a lot of recent papers, including the first two, are mechanisms that essentially invite collusion or soften competition. And that's interesting, because it leads to a different conclusion about who's complaining. And in particular, we might not have the rival standing up complaining and inviting antitrust scrutiny.

I think that opens some interesting questions. Do we want the agencies exploring exclusive arrangements where there isn't a rival complaining that competition is being reduced? Does that open the door to too much scrutiny, or are we getting the right level? I'm not sure what the right answer is.

The other mechanisms-- and I'm going to name six, those were two-- the next two are those mechanisms that are in essence the pro-competitive mechanisms. The competition for the market and the solving a contracting problem that leads to more efficiency. And then the last two mechanisms that I think are in play-- and these are not exclusive, even though maybe taxonomy implies that they should be-- the two anti-competitive concerns with respect to exclusive dealing mechanisms-- broadly speaking-- can be thought of as the simultaneous mechanisms.

The ones that demonstrate that you could have exclusion and extraction in the same period, possibly from the same groups of consumers. These are the bundling stories most familiarly. And the ones that I think are more common and maybe more of a concern, are those in which the mechanism of potential harm is that the rival is hindered from becoming a better competitor in the future.

I think that that's the way to see the Eaton case. That's the way to see the AMD case. Even though in both of those instances, arguments were made that would be consistent with the simultaneous exclusion and extraction story.

I think what's really going on, is that in Eaton's case, ZF Meritor had a dramatically better product that was more expensive, that didn't have customer buy in. That Eaton itself probably recognized was eventually going to be the technology of the future. And the question was would ZF Meritor be allowed to have enough customer interaction to obtain buy in.

To build up customer loyalty, to work their way through some production issues, build the scale-- and we usually use scale as the shorthand for this, and I think it's the least important of all the different mechanisms. The customer buy in-- the experience that allows the company to build up the quality of the product-- is probably much more important. And that means that the competitive harm is in the future.

And so I think we need to pay a lot of attention to that and not be distracted or confused by easier to understand simultaneous mechanisms. Because dynamic models are hard. And as we know, dynamic models can lead to all sorts of different conclusions.

There's a tendency to form our intuition with the static models, but if what's really going on is the dynamic story, we're going to miss the point. So as I like to think about it-- those six areas-- we could focus and get some different conclusions as to what our antitrust focus should be in those cases. With respect to predation, I think a price cost test makes a lot of sense, and it's the mechanism for the right situation.

For collusion, I think it's really interesting that there's so much research recently on this topic. And I really think the question there is one of, do we open up the door through which a lot of exploration of pro-competitive contracting could be exposed antitrust scrutiny? But I think that most of the action at least-- I spend all my time in cases that are actually litigated, that means that there actually is a complaining party-- and overwhelmingly the debate there is the question between solving the contract problems.

When we see a restrictive practice that references rivals, is it one that is done in order to solve a contracting externality and therefore it's pro-competitive, or is it one designed to increase the monopolist's sales by weakening the rival in the future in order to preserve market power. I think the tension between those two, is really where most of the action is.

FRANCINE LAFONTAINE: Randy and I had agreed that I would get just a couple of minutes at the end, so we pretty much did that OK.

BENJAMIN KLEIN: Collusion.

FRANCINE LAFONTAINE: Sorry? Yes collusion. So I will have just one last point quickly that I'd like to make. And that is, I mean it's quite obvious already from the discussion that Mike and Mike gave us earlier, that there are a lot of different mechanisms at play that can be explaining some of these practices. And this summary that you gave into taxonomy is quite useful in that.

What that means though when there are so many different ways to think about something, is that we do need more empirical evidence. I'll have a chance, along with Julie, to talk a little bit more about empirical evidence later. The bottom line is going to be that we have fairly little.

There's lots of reasons for that, but I'm not going to get into that right now. But I'm going to suggest instead, that from the connection between theory and empirics, what we need is a clearer sense from the theories as to what to look for in terms of kinds of markets, set ups, where we should expect certain mechanisms to be a bigger part of the story than other mechanisms. So taxonomy of mechanisms and potentially types of markets, would help foster-- at least in my mind-- the connection between theory and empirics for the future. So that's my last point about that.

SPEAKER 1: OK.