Bundled Discounts, Loyalty Discounts and Antitrust Policy: Searching for a Standard

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Abstract:
Bundled discounts and loyalty discounts can exclude equally efficient rivals under some circumstances. Consequently, they warrant antitrust scrutiny. Until the Supreme Court weighs in on the matter, the lower courts will continue to search for a standard that will distinguish reasonable from unreasonable discounting. To date, they have not found that standard. As we show with some simple numerical examples, identifying a reasonable standard presents considerable challenges. We discuss these issues and conclude with a recommended antitrust treatment that relies a Rule of Reason analysis.

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I. Introduction

In most circumstances, discounts are procompetitive and lead to enhanced consumer welfare. When a manufacturer extends a discount to a downstream firm, the downstream firm’s marginal cost of goods sold declines and at least some of that cost saving is usually passed on to consumers in the form of lower prices. If there is no reduction in quality, consumers are made better off by these lower prices. Thus, it would appear that discounts should be applauded. But discounts have aroused antitrust suspicion in some — but not all — circumstances. In particular, bundled discounts and loyalty discounts, which are often grouped together with other conditional pricing arrangements, have come under antitrust scrutiny.

In this paper, we focus our attention on bundled and loyalty discounts, because they raise some unsettled issues for antitrust enforcers and the business community. When a manufacturer offers a discount on Product A that is conditional on a customer’s purchases of both Product A and Product B, it is offering a bundled discount. As an example, suppose that a purchaser of products A and B will receive a five percent discount on all purchases provided that her purchases of A and her purchases of B both meet or exceed some threshold. Since the discount on purchases of A depends on the purchases of B and vice versa, the discounts are said to be bundled. Such discounts may be procompetitive. They can also, however, enable a monopolist in one market to make sales in another initially competitive market.

Loyalty discounts provide another example of conditional pricing. A purchaser will enjoy reduced prices if it buys a specified fraction of its requirements from the seller. This
requirement is distinct from bundled discounts, in that it does not involve multiple products. As an example, suppose a manufacturer offers a five percent discount on all purchases of Product A if a customer buys all its requirements of that product from the seller, a four percent discount if the customer buys 90 to 99% of its requirements from the seller, and no discount otherwise. This loyalty discount reduces a customer’s input costs if it sources a certain fraction of its needs from a single upstream producer.

Both bundled discounts and loyalty discounts provide advantageous prices to customers that meet certain purchase requirements from the discounting supplier. In spite of some common characteristics and their seeming similarity, bundled discounts and loyalty discounts are sufficiently different to warrant separate analyses. To the extent that these discount programs foreclose entrants or exclude rivals, they arouse competitive concerns. The Department of Justice, the Federal Trade Commission, and numerous antitrust scholars have expressed interest in these discounting practices. We share their interest.

In this paper, we explore the competitive significance of both bundled and loyalty discounts. We also review the antitrust treatment of these discounting practices along with current proposals for evaluating them. As will become apparent, bundled discounts and loyalty discounts share some economic characteristics with a variety of extensively studied vertical controls, including exclusive dealing, requirements contracts, tying, and full-line forcing. Our central goal is to identify the most appropriate antitrust treatment for these conditional discount programs.
The paper proceeds as follows. In Section II, we examine the antitrust treatment of both bundled discounts and loyalty discounts in the United States. We also summarize their treatment in other jurisdictions. In Section III, we turn our attention to bundled discounts and their competitive significance. In Section IV, we examine loyalty discounts as well as their competitive significance. In Section V, we suggest that the courts evaluate bundled discounts and loyalty discounts under the rule of reason. We also offer some thoughts on how such an analysis should proceed. In Section VI, we close with some concluding remarks and policy recommendations.
II. The Antitrust Landscape

Bundled discounts and loyalty discounts are designed to increase the volume of sales by lowering the average net price paid by repeat customers. If the seller faces competition, these increased sales come at least in part at the expense of its rivals. Faced with declining sales or an inability to penetrate the market, the seller’s rivals may file an antitrust suit alleging unlawful monopolization or attempted monopolization, which are forbidden in the United States by §2 of the Sherman Act:

§2. Every person who shall monopolize, or attempt to monopolize, or combine or conspire with any other person or persons, to monopolize any part of the trade or commerce among the several States, or with foreign nations, shall be deemed guilty of a felony... (15 U.S.C. §2)

This general language has gained meaning through judicial decisions over the last 125 years. The standards for unlawful monopolization were set out in the Supreme Court’s Grinnell decision:

The offense of monopoly under §2 of the Sherman Act has two elements: (1) the possession of monopoly power in the relevant market and (2) the willful acquisition or maintenance of that power as distinguished from growth or development as a consequence of a superior product, business acumen, or historic accident.¹

Attempted monopolization is different only because actual monopoly has not yet been achieved. In *Spectrum Sports*, the Supreme Court observed that

...it is generally required that to demonstrate attempted monopolization a plaintiff must prove (1) that the defendant has engaged in predatory or otherwise anticompetitive conduct with (2) a specific intent to monopolize and (3) a dangerous probability of achieving monopoly power.²

In most instances, the “dangerous probability” requirement is satisfied if the defendant’s market share exceeds 50 percent. Bundled discounts and loyalty discounts may be seen as “willful” efforts to protect a monopoly position or to achieve such status. Aggressive competition, however, is not unlawful unless it is predatory or otherwise unreasonably exclusionary. Competition on the merits—no matter how hard-nosed—does not violate §2 of the Sherman Act. Consequently, conditional pricing becomes objectionable only if it is predatory.³ It is, thus, necessary to show that conditional pricing is predatory, or otherwise unreasonably exclusionary, if monopolization or attempted monopolization is alleged. Against this backdrop, the lower courts in the United States have considered the legality of bundled discounts and loyalty discounts.

*Bundled Discounts*

Bundled discounts are earned by purchasing certain amounts and/or a fixed proportion of two or more products offered by a multi-product firm. As with any conditional pricing

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³ Easterbrook (1986) pointed out that it is often difficult to distinguish aggressive competition from exclusionary conduct.
arrangement, bundled discounts benefit purchasers through lower per-unit prices, but they may also induce firms to purchase all of its needs from the multi-product firm when a subset of the bundle is offered by an equally or more efficient rival.

Bundled discounts can take a variety of forms, with varying economic consequences. For example, some bundles include many component products, while others only involve two. Some bundles are based on fixed quantity requirements; others are specified as proportions requirements. This diverse set of bundled discount types, of course, makes generalized treatment quite difficult. One common observation, however, is that the judiciary is concerned about single product firms being unable to match prices with multiproduct firms that employ a bundled discount program⁴.

The antitrust problem of bundled discounts was the subject of *LePage’s, Inc. vs. 3M Company* in the Third Circuit and *Cascade Health Solutions vs. PeaceHealth* in the Ninth Circuit.⁵,⁶ In the first case, LePage’s had entered the transparent tape market in competition with 3M’s Scotch brand transparent tape. LePage’s strategy was to sell private label tape under contracts with large retailers (e.g., Office Depot and Walmart). At the same time, 3M offered a bundled rebate program to multi-product purchasers. The program spanned six distinct product groups, reflecting 3M’s conglomerate structure. The diverse product groups were as follows:

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⁴ Crane (2005) examined the competitive significance of such programs and argued that they do not constitute coercion or exclusion. The argument appears, however, to rely on the assumption that the discounting firm is not incurring incremental losses in the monopolized market. This assumption seems reasonable at first glance, but is in conflict with much of the literature on the competitive effects of multiproduct discounting. See, for example, Kobayashi (2005), Crane (2006), Greenlee et. al. (2008), Hovenkamp and Hovenkamp (2008), and Elhague (2009).


⁶ For a brief overview of *LePage’s vs. 3M*, see Rubinfeld (2005).
health care products, home care products, home improvement products, stationery products (including transparent tape), retail auto products, and leisure time products. It is obvious that this set is very diverse. LePage’s argued that it could not compete with the breadth of 3M’s offerings, and thus could not compete against the bundled rebate program. The en banc ruling by the Third Circuit in LePage’s, which was left to stand by the U.S. Supreme Court, stated that a bundled discount is exclusionary if a rival cannot match the rebate, simply because the rival does not offer an equal breadth of products. The Third Circuit’s opinion makes it fairly clear that it was concerned about monopoly leveraging. Jaeckel (2010) states that:

“In its decision, the Third Circuit held that a multiproduct seller with monopoly power in one or more of the products in the bundle engages in unlawful monopolization or monopoly maintenance when the seller uses a bundled rebate program that (a) has the effect of expanding the monopolist’s share in one or more of the competitive product markets, and (b) lacks a clearly legitimate business justification.”

Interestingly, these competitive concerns were irrelevant to LePage’s as it was only disadvantaged in the transparent tape business. The Third Circuit recognized the plight of single-product firms as it also concluded that bundled discounts could be used to maintain monopoly power. The LePage’s decision concludes:

“There is ample evidence that 3M used its market power over transparent tape, backed by its considerable catalog of products, to entrench its monopoly to the detriment of LePage’s, its only serious competitor, in violation of §2 of the Sherman Act.”
The LePage’s ruling establishes a non-price related standard for reviewing bundled discounts. Instead of adopting a predatory pricing standard for identifying exclusion, the Third Circuit ruled that 3M’s bundled discount was exclusionary simply because LePage’s could not match the breadth of products offered by 3M. Rubinfeld (2005) summarizes the ruling by stating that “3M's pricing programs harmed LePage's because LePage's smaller volumes made it difficult for LePage's to compete. The Third Circuit opinion appears to condemn pricing programs even when such programs reduce prices for many customers and an equally efficient firm could match the reduced prices.” This ruling has drawn criticism from scholars and practitioners alike.\(^7\)

Dissatisfied with the Third Circuit’s decision in LePage’s, the Antitrust Modernization Commission (AMC) examined the issue of bundled discounts with the aim of establishing a reasonable antitrust treatment. At the outset of this process, the AMC observed that bundled discounts are often procompetitive, and therefore, care must be exercised to avoid crafting an antitrust policy that would deter beneficial bundling. The goal of the AMC was to design an antitrust policy that would permit beneficial bundling, while simultaneously condemning bundled discounts that could be used to hinder competition.

The AMC rejected the Third Circuit’s exclusion standard for evaluating bundled discounts under §2. Instead, it proposed a three-prong predatory pricing test, elements of which were adopted in the Ninth Circuit’s decision in PeaceHealth.\(^8\) If a seller offers a bundled

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\(^7\) See Carlton et. al. (2008), Hovenkamp and Hovenkamp (2008), and Klein and Lerner (2008) for a discussion of these criticisms.

\(^8\) For a more thorough comparison of the AMC attribution test and the PeaceHealth standard, see Jacobson (2006).
discount program that tends to exclude a rival, the AMC would require the program fail a
discount attribution test in order for the firm to be guilty of a §2 violation. All of the discounts
offered on the full array of products are to be attributed to the product(s) offered by the
excluded rival. If the net price is less than the seller’s average variable cost, then the price is
presumptively predatory. The second prong of the test determines whether the loss resulting
from below-cost pricing can be recouped by the discounter in the future. If so, the court should
move on to the third prong, which asks whether there has been (or will be) economic harm to
the market. If a bundled discount program satisfies all three prongs of the test, it should be
impermissible according to the AMC.

The AMC’s three-prong test for bundled discounts was intended to provide a safe
harbor for firms that can demonstrate that their bundled discount programs do not fail the
attribution test. Such a safe harbor provides shelter for procompetitive or competitively neutral
discount plans from antitrust liability.

The Ninth Circuit’s PeaceHealth in 2007 decision applies a more analytical price-based
approach than that developed in LePage’s and requires that the discounted price be below a
reasonable measure of the defendant’s costs in order to identify exclusion. PeaceHealth, one of
two hospital operators in Lane County, Oregon, provided primary, secondary, and tertiary
medical care services, and it offered a bundled discount to payors that agreed to make
PeaceHealth their sole preferred provider. Its rival, McKenzie-Willamette Hospital, only offered
primary and secondary care. McKenzie-Willamette, like LePage’s, argued that it could not
compete with the breadth of its competitor’s product offerings, and thus could not compete
with the discount. The Ninth Circuit was unwilling to adopt the Third Circuit’s LePage’s standard
due to "the endemic nature of bundled discounts in many spheres of normal economic activity." The court found that bundled discounts were anticompetitive if they resulted in below-cost pricing, effectively adopting a predatory pricing approach, consistent with *Brooke Group*[^10], for scrutinizing bundled discounts. The court ruled that "a plaintiff who challenges a package discount as anticompetitive must prove that, when the full amount of the discounts given by the defendant is allocated to the competitive product or products, the resulting price of the competitive product or products is below the defendant’s incremental cost to produce them.” The Ninth Circuit did not adopt the recoupment prong of the AMC test, and it stated that the third prong is redundant in Rule of Reason cases.

**Loyalty Discounts**

A loyalty discount program offers discounted prices to purchasers that buy a pre-specified amount or fraction of their needs from the discounting firm. These loyalty programs are often structured so a customer will receive increasing discounts on all of its purchases as the share of its total requirements accounted for by the seller’s product rises. In such cases, the loyalty discounts reward the seller’s loyal (i.e. repeat) customers. The seller’s loyalty programs are obviously intended to induce customers to buy larger quantities from the discounting firm. They do this by effectively lowering the average price paid, and thereby benefiting loyal customers. It is hard to see how these lower prices can be anticompetitive as long as they are

[^10]: In *Brooke Group Ltd. V. Brown & Williamson Tobacco Corp.*, 509 U.S. 209 (1993), the Supreme Court ruled that predatory pricing has two elements. First, prices must be below some (unspecified) measure of cost. Second, there must be a reasonable prospect of recouping the losses incurred due to the below cost pricing.
not predatory. After all, as standalone loyalty programs do not involve multiple products, an equally efficient rival should not be excluded.

Loyalty discounts raise two competitive concerns. First, a loyalty discount program may involve below-cost pricing. If a plaintiff satisfied the court’s *Brooke Group Standard*, the program would violate §2 of the Sherman Act. In other words, to find a §2 violation, prices must be below-cost, and the seller must have a reasonable prospect of recouping any losses incurred as a result of the below-cost pricing. Second, a loyalty discount program may *de facto* require exclusivity, which implies that it could prevent entry or induce exit. Suppose, for example, that a buyer is offered a 10 percent discount on all purchases if it buys 100 percent of its requirements from the discounting seller, but no discount at all if it were to buy even token amounts from rivals. This loyalty program produces economic effects that are similar to those of a requirements contracts. Thus, the program should be evaluated under precedents for exclusive dealing or requirements contracts. Based the ability for loyalty programs to be predatory or exclusionary, there are three primary considerations to make when determining whether a loyalty discount program violates §2:

1. Do the discounts result in below-cost pricing?

2. Can equally efficient rivals match the discounts?

3. Are the discounts so attractive that they induce the customer to deal exclusively with the dominant firm?

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12 For an overview of the law and economics of exclusive dealing, see Chapter 18 in Areeda and Hovenkamp (2011), Chapter 20 in Blair and Kaserman (2009), and Bernheim and Heeb (2015). Also, see Marvel (1982), Jacobson (2002), and Calzolari and Denicolò (2013).
Answering these three questions determines whether an antitrust analysis should be based on a predatory pricing standard or an exclusive dealing standard.

In *Concord Boat*\textsuperscript{13}, the Eighth Circuit analyzed a loyalty discount program offered by Brunswick, which sold stern-drive engines in competition with several rivals to boat builders. Although Brunswick was the dominant seller, it was interested in expanding its sales. To further this goal, it offered a combination of loyalty and volume discounts. The loyalty discount plan involved a three year agreement. Boat builders and dealers could obtain a three percent discount if their purchases from Brunswick amounted to at least 80 percent of their needs. The discount for 70 to 80 percent of their needs was two percent and one percent from 60 to 70 percent.\textsuperscript{14} Brunswick’s quantity discount plan allowed boat builders to earn a five percent discount if its purchases of Brunswick engines met certain quantity thresholds. Concord Boat complained that Brunswick’s discount plan allowed it to monopolize the stern-drive engine market, which then resulted in monopoly prices that exceeded the prices that would have been charged in a more competitive market.

The court observed, in *Concord Boat*, that boat builders and dealers routinely switched to other stern-drive engine when they offered more attractive discounts. Consequently, there was evidence that rivals could match Brunswick’s offer and thereby compete. The court also observed that the discount plan was not a de facto exclusive dealing arrangement. Moreover, the boat builders were not obligated to buy from Brunswick for any specified period of time.

\textsuperscript{13} *Concord Boat Corporation v. Brunswick Corporation*, 207 F. 3d 1039 (2000).
\textsuperscript{14} The terms changed a bit over time, but the essence of the plan was unchanged.
Finally, Brunswick’s net prices were well above its costs so that equally efficient rivals could compete with Brunswick.

In Eaton\(^{15}\), the Third Circuit took a noticeably different approach. Most importantly, it demonstrated a reluctance to apply the *Brooke Group* predatory pricing standard to loyalty discounts, arguing that Eaton’s loyalty program included non-price exclusionary features. Eaton had monopoly power in the market for heavy-duty truck transmissions, and it attempted to expand or retain that monopoly power by offering the four direct purchasers of these transmissions—collectively known as Original Equipment Manufacturers (OEMs)—loyalty contracts. These contracts were of unprecedented length (by industry standards) and included a variety of potentially exclusionary provisions including:

1) OEMs must list Eaton’s transmissions as the standard in their catalogues.

2) OEMs must preferentially price Eaton’s transmissions, compared to those of its competitors.

3) OEMs must remove Eaton’s competitor’s transmissions\(^{16}\) from their catalogues.

4) OEMs must provide Eaton the opportunity to match the price and quality of competitor’s transmissions.

If an OEM met the provisions outlined in its particular contract with Eaton and purchased a pre-specified fraction of its transmissions needs from Eaton, it would receive a loyalty discount.\(^{17}\) ZF

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\(^{15}\) *ZF Meritor LLC and Meritor Transmission Corporation v. Eaton Corporation*, 11-3301 (2012)

\(^{16}\) These additional requirements complicate the inferences that can be drawn regarding loyalty discounts. Klein and Lerner (2016) explore these complications in some detail.

\(^{17}\) The minimum requirements threshold for loyalty discounts was different for each OEM, but ranged between 65% and 95%.
Meritor LLC and Meritor Transmissions Corporation alleged that these loyalty contracts were exclusionary. Eaton countered by arguing that its loyalty contracts were *per se* permissible, because it never priced below-cost. The Third Circuit agreed that Eaton’s prices were not predatory, but nonetheless, that they were illegally exclusionary. The court ruled that the non-price features of Eaton’s contracts violated § 1 and § 2 of the Sherman Act and § 3 of the Clayton Act.

Neither *Concord Boat* nor *Eaton* provide a useful standard for evaluating the likely competitive effects of loyalty discount programs. In *Concord Boat*, the Eighth Circuit fails to establish an explicit standard that the plaintiffs’ case fails to meet – or rather, a safe harbor into which Brunswick’s discount program falls. In *Eaton*, by focusing on non-price terms, the Third Circuit fails to establish an antitrust standard with clear boundaries that can be applied in other cases.

**Summary**

The legal status of bundled discounts and loyalty discounts is continuing to evolve. At this point, bundled discounts may be vulnerable to charges of predation under the discount attribution test. Loyalty discounts appear to be similarly vulnerable, but may also be likened to exclusive dealing. More extensive generalizations are difficult due to the variety of bundled and/or loyalty discount programs. Until the Supreme Court weighs in on the issue, an element of uncertainty will persist. When the Court finally does consider conditional pricing programs,

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18 The Brazilian competition authority, CADE, similarly argued that loyalty programs should be evaluated under an exclusionary practices standard in a case against Anheuser-Busch InBev NV’s Brazilian unit, AmBev.
there are some wrinkles and competitive ambiguities that it should consider. We examine some of these in the next two sections.
III. Bundled Discounts: Some Complications

Crafting an antitrust standard for evaluating bundled discounts presents a number of considerable challenges. A generalized treatment of bundled discounts is extremely difficult for at least two reasons. First, the discount structure can take many different forms that may result in very different competitive consequences. If different discount structures are not economically equivalent in their competitive effect, standardized treatment may not be reasonable or desirable. Second, the impact of any specific discount program could vary across characteristics of the discounting firm and rival sellers. Consequently, a particular bundled discount program may be predatory and/or exclusionary against one set of rivals, but not against another. As such, a reasonable antitrust treatment of bundled discounts must be adaptable to firms’ characteristics. In this section, we explore some of the complications presented with various price-cost tests.

Below, we present two basic numerical examples of bundled discounting schemes. These simple examples expose several deficiencies of applying a discount attribution test, which is required for performing any price-cost test, to bundled discounts. A few of the concerns explored below include: 1. A profitable firm can be found to be engaged in predatory pricing in all markets in which it is active, 2. Even very small discounts can be found to be predatory, 3. Expanding the breadth of product offerings can lead a previously permissible discount program to be suddenly deemed predatory, and 4. The same discounting program can be deemed permissible or predatory, based solely on rivals’ characteristics.
Example 1

Here, we present an example of bundled discounts, where the component products being bundled are homogenous services in numerous geographic markets.\textsuperscript{19} Suppose that Firm A sells a service in all 50 states, and that each state is a separate geographic market.\textsuperscript{20} Firm B is a customer of Firm A and operates in all 50 geographic markets. Firm A offers the following discount schedule for its service.

<table>
<thead>
<tr>
<th>Share of Requirements</th>
<th>Discount</th>
</tr>
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<tbody>
<tr>
<td>100%</td>
<td>5%</td>
</tr>
<tr>
<td>90-99%</td>
<td>4%</td>
</tr>
<tr>
<td>80-89%</td>
<td>3%</td>
</tr>
<tr>
<td>70-79%</td>
<td>2%</td>
</tr>
<tr>
<td>60-69%</td>
<td>1%</td>
</tr>
<tr>
<td>0-59%</td>
<td>0</td>
</tr>
</tbody>
</table>

This discount schedule is not incremental. If, for example, a customer increases its purchases from 90 percent of its requirements to 100 percent of its requirements from Firm A, that customer receives a 5 percent discount on all purchases.

In each of the 50 geographic markets, Firm B purchases services worth $1.0 million at list price. Since this amounts to 100 percent of its requirements, it qualifies for a 5.0 percent discount, and the resulting discounted cost to Firm B is $47.5 million. Assuming that the average cost of providing $1.0 million worth of services is $800,000, Firm A incurs costs of $40.0 million and, therefore, earns a profit of $7.5 million on sales to Firm B. A small equally efficient

\textsuperscript{19} The examples presented in this section provide extensions of the setting described in Nalebuff (2004).
\textsuperscript{20} Since a service is being sold, we need not worry about arbitrage which will make the analysis more complicated without any benefit.
competitor of Firm A, Firm M, sells services of identical quality as those sold by Firm A, but it only operates in a single geographic market, Missouri. If Firm M approaches Firm B with an offer to provide Firm B’s service needs in Missouri, it faces a tough competitive problem, because Firm B will receive a reduced discount on its purchases in the other 49 geographic markets. If Firm B awards its business in Missouri to Firm M, it will receive a 4 percent discount from Firm A on business worth $49 million at list price. The net cost will be $47.04 million. For Firm M to leave Firm B no worse off, it must provide the service in Missouri for no more than $460,000, which is in stark contrast to the $950,000 that A had been receiving for providing those services. Moreover, since the cost of providing those services is $800,000 in each geographic market, Firm M simply cannot compete even though it is equally efficient in producing those services in Missouri. Its product array lacks sufficient breadth.

If the discounts were not bundled (i.e., if the same discount schedule were offered, but individually for each state), Firm M could compete for the business in Missouri. With bundled discounts, the net price of the services in Missouri would be $950,000. Since the cost is only $800,000, competition between Firm A and Firm M would likely depress price below $950,000. Depending on the assumed model of competition, price could fall to $800,000. Consequently, bundling the discounts is anticompetitive, because it prevents an equally efficient rival from competing to drive down price. This argument holds a fortiori if Firm M is somewhat more efficient with costs of, say, $700,000. If the discounts were unbundled, Firm M would win the business at a price just below $800,000, which (a) would be more efficient and (b) would reduce Firm B’s costs and thereby benefit Firm B and its customers.
Bundled discounts also prevent less efficient rivals from forcing prices down. Suppose that Firm A’s costs of supplying the business in Missouri are $800,000, while Firm M’s costs are $850,000. If the discounts were unbundled, Firm A would retain the business in Missouri, but the net price would be driven below $950,000, potentially by $100,000, which would reduce Firm B’s costs and thereby benefit its consumers.

The above example illustrates that bundled discounts can be used to exclude equally efficient rivals whose product offerings are not as wide as the bundling firm. The smaller competitor in the numerical example above could only compete with the bundled pricing program if it were able to supply services to the downstream firm, Firm B, in at least four of the product markets. In that event. Firm B would earn a 4.0 percent discount on $46.0 million worth of services at list price. Thus, it would incur a net cost of $44.16 million. Firm B could charge as much as $3.34 million for the services remaining for states and earn a slight profit. Since we have established that exclusion takes place in this example, we turn our attention to the antitrust treatment of this discount program.

According to the attribution test adopted in PeaceHealth, Firm A is guilty of predatory pricing. The business in Missouri costs Firm A $800,000 to produce. Obtaining (or retaining) that business increases the discount on the entire book of business to 5 percent, and, therefore, the incremental revenue to Firm A is $460,000, which is well below its incremental cost of $800,000.

The problem with this test, however, is that it finds Firm A’s pricing strategy to be predatory in all fifty geographic markets. There is nothing special about Missouri—at least not in this example. Thus, Firm A is guilty of predation in every state because the incremental
revenue of $460,000 is below its incremental cost of $800,000 in each state. At the same time, however, Firm A is actually earning $47.5 million total revenue while incurring total costs of only $40.0 million. It is more than a bit anomalous that Firm A could be found guilty of pricing below cost everywhere while earning a $150,000 profit in each state. Consequently, we conclude that the discount attribution test fails.

This simple numerical example presents a few other peculiarities. First, in this setting, even very small discounts can be deemed predatory and exclusionary. Suppose, for example, that Firm A offers a 1.0% discount to purchasers that buy 100% of their product needs from it, and no discount otherwise. Under the assumed conditions, even a 1.0 percent bundled discount would be deemed predatory. If Firm B gives all of its business to Firm A, it pays a total of $49.5 million. If it awards the business in a single geographic product market to an equally efficient rival of Firm A, it will pay $49.0 million plus whatever the rival charges. But the rival’s charge cannot exceed $500,000, because the sum cannot exceed $49.5 million. Since $500,000 is less than its cost, the rival cannot profitably compete against even a 1.0% bundled discount.

Second, if we modify this example a bit, we encounter further peculiarities. Suppose that Firm A operates in only 20 states, but still offers a 1.0% bundled discount to any customer that purchases all of its requirements from Firm A. If Firm B buys everything from Firm A, it pays $19.8 million. If Firm B awards the business in one of the geographic product markets to Firm A’s rival, it will pay Firm A $19.0 million for its purchases in 19 states and A’s rival can charge $800,000 for the business in the remaining state. Since this is not below cost, the discount

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21 The obvious question is why the discounting firm would want the business under these conditions. This is a common, and unanswered, question surrounding bundled discounts.
schedule is not predatory or exclusionary according to the discount attribution test. If A expands into a 21st state, its discount program will suddenly be deemed predatory, because a single state rival can no longer profitably match the discount. This is an odd consequence of the discount attribution test.

This simple numerical example highlights three important concerns that arise when evaluating the PeaceHealth discount attribution test. First, the test can identify a profitable firm as engaging in below-cost pricing in all of the product markets in which it is active. That result is unsettling. Second, even a very small discount (e.g., one percent) can be identified as predatory. Third, it is possible for a firm to be engaged in permissible discounting, only until expanding into a product market in which it faces no rival. This is an odd feature that promotes welfare-reducing behavior.

Example 2

The example that we presented above highlights some shortcomings of applying an attribution test for predation to bundled discounts. Another concern deals with the relevance of rivals’ characteristics in identifying predation. If a multi-product firm uses bundled discounts, it can be guilty of predation with respect to one rival while not being guilty with respect to another. Consider, for example, that a seller offers three products — Product A, Product B, and Product C — and a 2.0 percent discount if a buyer purchases 100 percent of its needs of all products. If the buyer substitutes a rival’s product in any of the three markets, it receives no discount. At list prices, the buyer’s purchase requirements are as follows:

Product A: $1.0 million
Product B: $1.0 million
Product C: $50.0 million

If the buyer purchases everything from the bundling seller, it will receive a total discount of $1,040,000. It is obvious that no rival selling either Product A or Product B can compete for the buyer’s business, as any positive price would fall short of compensating the buyer for the lost discount. Consequently, the seller would be guilty of exclusionary predation with respect to rival sellers of Product A or Product B. But this is not necessarily true for a rival that sells Product C.

If a rival seller of Product C wants to take away $10 million of this buyer’s purchases, it must offer a discount of at least $1,040,000, which is 10.4 percent. This would not be exclusionary if the rival’s costs are less than $8,960,000. Thus, the same discount schedule is predatory with respect to rivals that offer Product A and/or Product B, but not necessarily with respect to rivals selling Product C.

Multi-product firms that offer bundled discounts across multiple product lines may observe that their discounting scheme is exclusionary in one market, but not in another. First, rivals in smaller markets may be excluded, while the same scheme is not exclusionary in larger markets. Second, the finding of exclusion is always dependent on rivals’ cost, and some equally efficient rival’s sill may be excluded. In this example, it is not clear that the rival in the third market is equally efficient, but it certainly could be.

With two simple numerical examples of bundled discount schemes, we highlighted a number of concerning issues with applying a discount attribution test to bundled discounts. One particular feature of these pricing schemes that presents a challenge is that firms tie two
unique markets together, but antitrust policy is designed to consider competition within a single market. The complication is exacerbated by the fact that many bundled pricing schemes are not profitable at the margin. We have pointed out two troubling issues that arise when applying an attribution test to bundled discounts. First, a profitable firm could be found to have engaged in below-cost pricing in all markets in which it is active when markets are evaluated one-by-one. This presents a clear weakness of an attribution test that applies all discounts to one product market. Also, an attribution test may treat a particular pricing scheme as permissible, only until the discounting firm expands into a previously unserved market. This is an odd feature of the attribution test, because it implies that a particular pricing scheme is only deemed undesirable after more customers are served – *which presumably increases total economic surplus*.

In addition to demonstrating potential shortcomings of the attribution test, we have shown that the use of exclusion in evaluating different bundled discount schemes can also be flawed. We have shown that the same pricing scheme may exclude rivals in a smaller market, but not in a larger market. This is similar to the breadth of offerings issue raise in *Le Page’s*. We have also demonstrated that an equally efficient rival may be excluded, implying that a particular pricing scheme may only be considered non-exclusionary against rivals that are sufficiently more efficient.
IV. Loyalty Discounts: Some Additional Complications

Loyalty discounts are less perplexing than bundled discounts, but raise other questions. With loyalty discounts, there is only one product in a single geographic market. The discount rate, and thus the final price, depends on the percentage of the buyer’s requirements that the supplier fills. The schedule looks similar to the bundled discount schedule, but there is only one market.

Below, we provide an example of a loyalty discount plan. Suppose that there is a single buyer and a seller offering the following discount program.

<table>
<thead>
<tr>
<th>Share of Requirements</th>
<th>Discount</th>
</tr>
</thead>
<tbody>
<tr>
<td>100%</td>
<td>10%</td>
</tr>
<tr>
<td>90-99%</td>
<td>9%</td>
</tr>
<tr>
<td>80-89%</td>
<td>8%</td>
</tr>
<tr>
<td>70-79%</td>
<td>7%</td>
</tr>
<tr>
<td>60-69%</td>
<td>6%</td>
</tr>
<tr>
<td>0-59%</td>
<td>0</td>
</tr>
</tbody>
</table>

The discount is earned on the whole book of business during a period of time – possibly a year. These programs can be applied as rebate or discounts on future purchases. For buyers with ongoing purchases, the discount may appear as a credit on future purchases. That structure does not influence the competitive effects of the discount plan.

Suppose that the buyer’s requirements for a year amount to $100 million (at list prices). If it purchases all of its requirements from the seller offering the loyalty discount, the buyer’s net expenditure on this good will be $90 million. For purposes of the following illustration,
assume that the seller’s profit margin at list prices is 15.0 percent. Consider a situation in which the buyer has already bought $80 million worth of the good (at list prices), and it considers purchasing the remainder from one of the seller’s rivals. For simplicity, we assume that their rival’s product is a perfect substitute for the output of the discounting seller. We also assume that both firms are equally efficient. If the buyer purchases the remaining 20 percent from a rival supplier, its cost on the first 80 percent will now be $73.6 million, because it only qualifies for the 8 percent discount tier. To make the buyer whole, the rival supplier can charge no more than $16.4 million for the remaining 20 percent of the business. This amounts to an 18.4 percent discount. Since the profit margin at list price is less than 18.4 percent, the rival supplier will be unable to make the sale without incurring a loss. The loyalty discounting scheme, in that case, would be exclusionary.22

The example above demonstrates that an equally efficient rival can be foreclosed from a market by a simple loyalty discounting program. The discounting seller never offered an 18.4 percent discount, but a rival would be forced to offer such a discount if it wished to secure 20 percent of the buyer’s book of business. If both rivals had per-unit costs between 81.6 and 90 percent of the list price, an equally efficient rival could not profitably compete for 20 percent of the seller’s book of business. The discounting scheme, however, would not, as a whole, yield below-cost pricing.

22 This example raises the familiar question of why the discounting seller wants to make these incremental sales. If this business is unprofitable for an equally efficient rival, it is similarly unprofitable for the discounting firm. Kobayashi (2005) surveys the existing literature, hoping to answer this question, but is unable to provide a satisfactory answer.
Loyalty schemes can exclude equally efficient rivals. We demonstrated this by showing, with a numerical example, that a discounting seller could prohibit an identical firm from profitably competing for a fraction of a purchaser’s book of business. It is worth noting that this example only demonstrates exclusion when the second seller cannot compete for the purchaser’s entire book of business. Excluding an equally efficient rival is only possible if that rival is capacity constrained, or cannot supply 100% of the purchaser’s requirements for some other reason. This feature of loyalty programs should be considered in evaluating potential anticompetitive effects.

In our example, we assumed that the seller’s output and that of the would-be rival were perfect substitutes. In many instances, this will not be true. In Concord Boat, for example, the Brunswick engines and those of its rivals were not fungible. Intel’s microprocessors and those produced by AMD are not perfect substitutes. In cases like these, consumer demand may require that a downstream manufacturer (boat builder or computer manufacturer), produce a substantial fraction with a specific brand. Dell, for example, may find that it must produce 75 percent of its total output with “Intel Inside”. As a result, only 25 percent of its microprocessor needs is open for competition. For antitrust policy purposes, this poses an interesting question: Is the market segmented such that the 25 percent of the manufacturer demand is monopolizable?

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23 See DeGraba and Simpson (2014).
V. A Suggestion for Antitrust Policy

There are two fundamental standards\textsuperscript{24} for antitrust analysis: the per se standard and the rule of reason standard. The former relies on presumptions that are based on judicial experience. The latter relies on the economic analysis of the facts and circumstances of “specific cases.”

One approach would be to make bundled discounts and loyalty discounts per se illegal. With per se treatment, a plaintiff would merely have to prove that the practice existed. There would be no defense based on the absence of anticompetitive effects because per se treatment presumes that the conduct is anticompetitive.

Per se treatment is most appropriate when dealing with business conduct that is invariably anticompetitive. Price fixing, big rigging, market division, customer allocation, horizontal agreements on minimum prices, and horizontal agreements not to bid competitively have a rich history of antitrust condemnation as they all lead to higher prices and thereby reduce consumer welfare.

The economic analysis of these practices provides a sound analytical foundation for their per se prohibition. In almost all cases, these restraints have no redeeming virtues. When it comes to bundled discounts and loyalty discounts, however, the jury is still out on their economic effects. Until we gain a better understanding of these discount practices, we should be careful about condemning them. Coase (1988; 67) warned that “…if an economist finds something – a business practice of one sort or another – that he does not understand, he looks

\textsuperscript{24} In practice, this dichotomy may not be as sharp as we are suggesting. (Areeda and Hovenkamp (2011))
for a monopoly explanation. And as we are very ignorant in this field, the number of un-
understandable practices tends to be rather large, and the reliance on a monopoly explanation
is quite frequent.” For bundled discounts and loyalty discounts, however, a monopoly
explanation may be misplaced. Consequently, careful study of these discounting practices is
warranted.

Under certain conditions, both bundled discounts and loyalty discounts may exclude
equally efficient rivals. As a result, those pricing strategies warrant antitrust scrutiny. Neither
should be unlawful per se since neither is invariably anticompetitive. Thus, we suggest that
these practices should be evaluated under the Rule of Reason.

In evaluating conduct under the Rule of Reason, we start from the presumption that the
Sherman Act was intended to prevent unreasonable restraints. If a restraint is procompetitive
or competitively neutral, it will not be deemed “unreasonable” and, therefore, will not be
unlawful. In contrast, if experience has shown that a specific type of restraint is invariably
unreasonable, it may fall into the per se unlawful category. In cases involving bundled discounts
or loyalty discounts, plaintiffs will be alleging §2 Sherman Act violations. The Grinnell\textsuperscript{25} test for
unlawful monopolization and the \textit{Spectrum Sports}\textsuperscript{26} test for unlawful attempts to monopolize
both require a rule of reason analysis\textsuperscript{27}. The Grinnell Test makes it clear that monopolization
requires proof of predatory, or unreasonably exclusionary conduct. For attempted
monopolization, \textit{Spectrum Sports} similarly requires proof of such conduct.

\textsuperscript{25} United States v. Grinnell Corp., 384 U.S. 563, 570-71 (1966)
\textsuperscript{27} In fact, there are no per se rules under §2 of the Sherman Act.
The dimensions of a rule of reason analysis vary depending on the circumstances in a specific application. The evidence must be sufficient to determine whether the conduct being analyzed impairs competition. As a general proposition, there are three steps in the analysis. First, the plaintiff must show that the discount program impairs competition and that the impairment is apt to be significant. Typically, the plaintiff will allege that the discount program is exclusionary, i.e., that the plaintiff is unable to compete. Since the antitrust laws are intended to protect competition, rather than competitors, the plaintiff must make the case that the discount program results in harm to the market. Assuming that the plaintiff passes this hurdle, it is the defendant’s turn.

The defendant must provide a procompetitive or competitively neutral rationale for the discount program. Discounts are obviously intended to encourage customers to buy larger quantities by offering lower prices. As we have shown above, both bundled discounts and loyalty discounts may exclude equally efficient rivals. The defendant will be expected to put forth evidence that there is some offsetting benefit. Importantly, this benefit must be restraint specific. In other words, the benefit must be unavailable in the absence of the discount program.

If the defendant offers a plausible business justification, the plaintiff may respond by arguing that the alleged benefit can be realized in a less restrictive way. If this argument is persuasive, the defendant may be obligated to substitute the less restrictive alternative.
Finally, if the plaintiff establishes the existence of costs and the defendant offers evidence of benefits, the court will have to weigh the costs and benefits to determine whether the discount program has a net positive or a negative effect.
VI. Antitrust Standard

Establishing an appropriate antitrust standard for evaluating bundled and loyalty discounts is desirable. Such a standard would provide transparency to the business community and offer a safe harbor for businesses wishing to engage in precompetitive discounting. Identifying an appropriate standard, however, has proven quite difficult. The divergent standards adopted by the Third and Ninth Circuits offer some insight, but neither standard is without serious shortcomings.

Carlton et.al. (2008) propose an alternative standard based on largely on tying and scale economies. This standard identifies potential for anticompetitive discounting if the following four criteria are met:

1. There are economies of scale in the rival firm’s production of the competitive (tied) good, and the plaintiff could otherwise compete against the defendant.
2. The defendant has market power in the tying good.
3. The price of the tied good increases for consumers that do not buy the tying good.
4. If the rival firm is still in the market, its marginal costs have increased.

If a conditional pricing scheme fails to meet any of the above criteria, it is deemed permissible by the proposed test. While this test correctly identifies bundled discounts as a form of tying, it ignores loyalty discounts, which do not require multiproduct conditioning. Interestingly, Carlton et.al. (2008) argue that loyalty discounts are a form bundled discounts and do not warrant separate antitrust treatment. We disagree with this assertion. A second concern is that this test is too sensitive. It would likely identify possible anticompetitive bundling in any instance where
average total cost is decreasing in the tied market. Thus, the test is structural, not behavioral, in nature.

Hovenkamp and Hovenkamp (2008) propose a second alternative standard for identifying anticompetitive bundled and loyalty pricing. Their standard is based on the breadth of products offered and identifies potential for anticompetitive discounting if the following four criteria are met:

1. The defendant is a dominant firm in a market that is structurally conducive to durable monopoly.
2. The defendant does not have a significant rival who produces the full range of goods in the disputed bundle.
3. The defendant’s bundle flunks the attribution test over a sufficient range of sales to cause an inference of substantial harm to the rival, either driving it from the market or raising its costs.
4. The defendant cannot show significant joint costs or economies of scope to justify bundling.

Meeting these four conditions is considered to be a minimum standard for allowing a plaintiff’s antitrust case to proceed. Importantly, by crafting the standard as a set of requirements for a plaintiff to meet, a safe harbor is not established.
References


