MEASURING DAMAGES IN A PRIVATE PLAINTIFF ROBINSON-PATMAN CASE: APPLYING ECONOMICS TO RELIEVE THE PAIN OF *J. TRUETT PAYNE*

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Draft Version: Fall, 2002. To cite, use the subsequent modified final version that appeared in Antitrust Bulletin, Spring 2003, 77-117.

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The distinct concepts of antitrust injury and damages have become hopelessly crossed in Robinson-Patman cases as a result of the Supreme Court's effort to reconcile consumer injury with the goals of the Robinson-Patman Act in *J. Truett Payne Co. v. Chrysler Motors Corp.*[2] This confusion is truly unfortunate because the concepts of antitrust injury and damages are analytically distinct. Antitrust injury requires that the same aspect of the exclusionary or predatory act that supports the antitrust liability claim, also reduce consumer welfare by potentially raising prices or reducing incentives for technological change, and further cause the plaintiff to lose profits. In contrast, "damages" refers only to the amount of the lost profits suffered by the plaintiff as a result of the exclusionary conduct generally.

Others have written persuasively concerning the goals of the Robinson Patman Act,[3] and it is not our intention to add to this literature. Rather, we address one particular fallout from the Court's *J. Truett Payne* decision—one that has more practical ramifications for antitrust practitioners and damage experts: *J. Truett Payne* not only confused the concepts of antitrust injury and damages; in the process, the Court also set forth guiding principles for the damage calculation in secondary line, private plaintiff Robinson-Patman cases[4] that cause *pain* for antitrust practitioners and damage experts alike. For antitrust practitioners (and particularly for plaintiff's counsel), *J. Truett Payne* took what used to be a sometimes-complicated trial issue regarding the *amount* of damages, and converted it into a question of *antitrust standing*—and, thus, a potential basis for summary adjudication. For damages experts, *J. Truett Payne* creates a daunting challenge, requiring a complex analytical construct necessitating a mixture of high quality information about demand conditions at several levels in a vertical chain of production and distribution. Below we explain what the judicial requirements of proof presently appear to be, and we outline the direction for a damage methodology that can meet this standard.

A. J. Truett *Payne: The Source of the Pain.*

[2] 451 U.S. 557 (1981).

[3] *See e.g.*, Herbert Hovenkaup, *The Robinson-Patman Act and Competition: Unfinished Business*, 68 ANTITRUST L.J. 125 (2000); Ward Bowman, *Restraint of Trade by the Supreme Court: The Utah Pie Case*, 77 Yale L.J. 70 (1967); Richard Posner, THE ROBINSON PATMAN ACT, AMERICAN ENTERPRISE INST. (1976); THE ROBINSON-PATMAN ACT; LAW AND POLICY; VOLUME I, ABA ANTITRUST SECTION MONOGRAPH 4 (1980).

[4] Hereafter, when we refer to a Robinson-Patman case, we restrict ourselves to secondary line cases. To establish a secondary line violation of Section 2(a) of the Robinson-Patman Act, the following elements must be proven: (1) a price difference; (2) for a commodity of like grade and quality; (3) in commerce in the United States; (4) sold by the same seller; (5) to two or more customers in competition; and (6) injury to competition. Each of these elements is the subject of extensive case law analysis that is beyond the scope of this paper. The focus of our inquiry begins once these elements have been proven in the plaintiff's *prima facie* case and the plaintiff must satisfy the requirements of Section 4 of the Clayton Act.

In *J. Truett Payne v. Chrysler Motors Corp.*, the Court confronted issues at the intersection of Section 4 of the Clayton Act and the aims of Robinson-Patman Act. Clayton Act Section 4 requires that a private plaintiff proffer evidence that he was "injured in his business or property by reason of anything forbidden in the antitrust laws…."[5] The language "injury to business or property" means that the plaintiff must suffer some damage.[6] The words "by reason of anything forbidden in the antitrust laws" gives rise to the antitrust injury requirement.[7] To fully appreciate the complexity of the issues before the Court in *J. Truett Payne*, it is necessary to have some historical background about the evolution of Section 4's "antitrust injury" requirement, and the rather unique history and purpose of the Robinson-Patman Act.

1. Antitrust Injury Takes Center Stage.

Antitrust injury became a requirement for every private plaintiff bringing an antitrust action in 1977 when the Supreme Court rendered its opinion in *Brunswick Corp. v. Pueblo Bowl-O-Mat, Inc.*[8] *Brunswick* involved the attempted acquisition of bowling alleys by Brunswick, which up to that point in time was primarily a manufacturer of bowling equipment. In a seven-year period, Brunswick acquired 222 bowling centers making it the largest bowling center operator in the country. The plaintiffs alleged that, because of acquisitions in three markets (Pueblo, Colo., Poughkeepsie, N.Y., and Paramus, N.J) they were injured. The plaintiff's theory of damages was that, had Brunswick not made acquisitions in these markets, the acquired bowling centers would have gone out of business. As a result, in the world absent the merger, plaintiffs would have been able to charge higher prices or sell more bowling services. The Third Circuit approved this damage theory because the damages were "causally linked" to the merger. Indeed, "but for" the merger, the plaintiffs would have been more profitable.[9]

The Supreme Court disagreed with a standard based on causation alone, stating that the Third Circuit holding improperly "divorces antitrust recovery from the purposes of the antitrust laws."[10] According to the Court, the plaintiff's damages were not linked to "the reason the

[5] 15 U.S.C. § 15(a).

[6] Zenith Radio Corp. v. Hazeltine Research, Inc., 395 U.S. 100, 114 n.9 (1969).

[7] Brunswick Corp. v. Pueblo Bowl-O-Mat, Inc., 429 U.S. 477 (1977); Blue Shield v. McCready, 457 U.S. 465, 482-84 (1982).

[8] 429 U.S. 477 (1977).

[9] Id. at 487.

[10] Id.

merger was condemned," but only to the merger itself.[11] The merger violated the antitrust laws because it increased concentration. But the plaintiff's damages were not a result of the increased concentration. Put differently, the conduct proscribed by the antitrust laws was to increase concentration and reduce competition, but the conduct causing damage to the plaintiff was the preservation of competition by preventing the exit of competing bowling alleys from the market. The Court held that causation was not enough; the same conduct that harms competition must also cause the damages. The Court expressed this concept with now famous language that a plaintiff must prove "antitrust injury, which is to say injury of the type the antitrust laws were intended to prevent and that flows from that which makes defendants' acts unlawful."

Brunswick substantially transformed antitrust jurisprudence. Prevailing law in 1977 did not require antitrust plaintiffs to demonstrate more than liability and some damages.[12] In subsequent cases, a broad consensus emerged that Section 4 of the Clayton Act requires that a private plaintiff in an antitrust action show both injury to itself, and injury to consumers arising from the same conduct; a broad showing of causation is insufficient.[13] A "reduction in competition" refers to changes in market structure or market conduct that harm consumers.[14]

A recent Ninth Circuit case demonstrates just how far this trend has gone, and is very explicit that, at least in non-Robinson-Patman cases, antitrust injury and causation are distinct concepts. In *Pool Water Products v. Olin Corp.*,[15] the plaintiffs claimed that Olin was engaged in a variety of anticompetitive activities whose impact was to decrease the plaintiff's prices and market share.[16] The Ninth Circuit, upholding summary judgment, held that "[a]ll that plaintiffs have claimed is that their alleged injuries are causally linked to defendants' illegal activities.

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[11] Id.

[12] *See* Radiant Burners, Inc. v. People's Gas Light & Coke Co., 364 U.S. 656, 659 (1961). This history is well articulated in Jonathan M. Jacobson and Tracy Greer, *Twenty-one Years of Antitrust Injury: Down the Alley with Brunswick v. Pueblo Bowl-O-Mat*, 66 ANTITRUST L.J. 273 (1998).

[13] *See* Atlantic Richfield Co. v. U.S. Petroleum, Inc., 495 U.S. 328, 334 (1990) ("A plaintiff can recover only if the loss stems from a competition-reducing aspect or effect of the defendant's behavior.").

[14] Reiter v. Sontone Corp., 442 U.S. 330, 343 (1979) (holding that Congress designed the Sherman Act as a "consumer welfare prescription"); Full Draw Productions v. Easton Sports, Inc., 182 F.3d 745, 749 (10th Cir. 1999) ("the injury should reflect the anticompetitive effect ... made possible by the violation"); Rebel Oil Co., Inc. v. Atlantic Richfield Co., 51 F.3d 1421, 1433 (9th Cir. 1995) ("An act is deemed anticompetitive ... when it harms both allocative efficiency and raises the prices of goods above competitive levels or diminishes their quality.").

[15] 258 F.3d 1024 (9th Cir. 2001).

[16] Id. at 1035.

That is not enough to maintain a private antitrust action."[17] It is "not enough to show that one's injury was caused by illegal behavior," what is required is that damages are caused by the same conduct that reduces competition.[18] Because the conduct that drove prices down harmed plaintiffs, but did not harm consumers, the court held that antitrust injury was not present—causation is not equivalent to antitrust injury.[19]

The distinct principles of damage to the plaintiff and antitrust injury are capable of coherent distinction in non-Robinson-Patman cases like these. But, what does "antitrust injury" mean in the context of a Robinson-Patman case? Directly importing the antitrust injury concept from Sherman Act and Section 7 Clayton Act cases would require that a Robinson-Patman plaintiff demonstrate that its damages result from the same aspect of price discrimination that harms consumers. But, as shown below, simply porting over the concept of antitrust injury conflicts with the prevailing precedent concerning the goals of the Robinson-Patman Act.

2. The Unique History of the Robinson-Patman Act.

The Robinson-Patman Act was passed in 1936 to close what was perceived as a major loophole in the original Clayton Act's prohibition on price discrimination. The original Section 2 of the Clayton Act exempted quantity discounts.[20] The revolution in distribution and retailing that occurred in the 1920s and 1930s gave rise to a conflict between the large chains and the mass of traditional small retailers. The perceived monopoly power of the large chains, whether real or imagined, gave rise to political forces that resulted in the Robinson-Patman Act that amended Section 2 of the Clayton Act. The bill was introduced in the wake of the FTC's investigation of the chain stores,[21] and FTC witnesses played a prominent role in congressional hearings. Much of the original leverage for the bill came from the Wholesale Grocers' Association.[22] Contrary to our perception of the Robinson-Patman Act today, the pro-small business focus of the Act was not inconsistent with the evolving goals of antitrust laws at the time.[23]

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[17] Id. at 1033.

[18] Id. at 1034.

[19] Id.

[20] *See e.g.*, National Biscuit Co. v. FTC, 299 F. 733 (2d Cir. 1924).

[21] FTC, Final Report on the Chain Store Investigation, S. Doc. No. 4, 74th Cong., 1st Sess., 96-97 (1935).

[22] Earl W. Kintner 4, THE LEGISLATIVE HISTORY OF THE FEDERAL ANTITRUST LAWS AND RELATED STATUES, 2895 (1980).

[23] *See* Gerard Dumenil, Mark Glick and Dominique Levy, *The History of the Antitrust Laws as Economic History*, 52 ANTITRUST BULL. 373 (1997). Herbert Hovenkaup makes this same point in a recent and thoughtful paper.

Jurists[24] and legal scholars[25] alike (both before and after *J. Truett Payne*) have recognized again and again that, unlike the other antitrust statutes, the Robinson-Patman Act's aim is to protect smaller competitors from price discrimination, and not to protect consumers or maximize consumer welfare in general. The legislative history of the Robinson-Patman Act reveals an attempt to restrict price discrimination to specific enumerated exemptions as a way of protecting small firms from the competitive advantages of larger competitors that can wield monopsony power. In other words, the approach taken by the drafters was not to eliminate price discrimination altogether, but to limit price discrimination to primarily two specific situations embodied in the legislative defenses: (1) meeting competition, and (2) cost justified price differentials.

When the revolution in antitrust ushered in by *Brunswick* occurred, the Robinson-Patman Act could have been brought into conformance simply by requiring a showing of monopsony power (buyer power) that potentially could force prices below competitive levels and harm consumer welfare. *J. Truett Payne* did not address this issue, but the Supreme Court did consider and reject this approach two years later, in *Falls City Industries v. Vanco Beverage*.[26]

Herbert Hovenkaup, *The Robinson-Patman Act and Competition: Unfinished Business* 68 ANTITRUST L.J. 125 (2000).

[24] Boise Cascade Corp. v. FTC, 837 F.2d 1127, 1153-59 (D.C. Cir. 1988) (Mikva, J., dissenting) (criticizing the majority for "inject[ing] Sherman and Clayton Act doctrine into the distinct jurisprudence of Robinson-Patman's secondary-line cases"; "At bottom, today's decision refuses to recognize the inherent tension between the Robinson-Patman Act and the rest of antitrust law."); J.F. Feeser, Inc. v. Serv-A-Portion, Inc., 909 F.2d 1524, 1532-33, 1535 (3d. Cir. 1990) (relying on Conference Report to conclude that statutory language "to injure, destroy, or prevent competition *with any person*" was added to indicate that the Robinson-Patman Act, unlike other antitrust statutes, was aimed at protecting competitors; stating that the former Section 2 of the Clayton Act was "too restrictive, in requiring a showing of general injury to competitive conditions in the line of commerce concerned; whereas the more immediately important concern is the injury to the competitor victimized by the discrimination" (quoting S. Rep. No. 1502, 74th Cong. 2d Sess. 4 (1936)); "the statute and its accompanying legislative history . . . compel a holding that evidence of injury to a competitor may satisfy the component of competitive injury necessary to show a violation of the Robinson-Patman Act."); a*ccord* Monahan's Marine, Inc. v. Boston Whaler, Inc., 866 F.2d 525, 529 (1st Cir. 1979) (Breyer, J.); Rebel Oil Co. v. Atlantic Richfield Co., 51 F.3d 1421, 1446 n.18 (9th Cir. 1995); Chroma Lighting v. GTE Products Corp., 111 F.3d 653, 655-67 (9th Cir. 1997) ("proof of injury to a competitor, and that the inference of competitive injury that arises from proof of injury to a competitor may not be rebutted by evidence that competition was not adversely affected").

[25] L. Sullivan, HANDBOOK OF THE LAW OF ANTITRUST 694 (1977) ("Robinson-Patman . . . secondary line cases lack any requirement that injury be shown to competitive structure or process; they rely instead on injury to particular firms in the market . . . . There is warrant in the history of the statute for construing it so and the courts have regularly done so." (footnote omitted).); Herbert Hovenkaup, The Robinson-Patman Act and Competition: Unfinished Business 68 ANTITRUST L.J. 125 (2000); Ward Bowman, "Restraint of Trade by the Supreme Court: The Utah Pie Case," 77 Yale Law J. 70 (1967); Richard Posner, The Robinson Patman Act, American Enterprise Inst. (1976); The Robinson-Patman Act; Law and Policy; Volume I, ABA Antitrust Section Monograph 4 (1980).

[26] 460 U.S. 428 (1983).

Falls City rejected the defendant's theory that "the Morton Salt rule [that competitive injury can be inferred from disparate pricing] should be applied only in cases involving 'large buyer preference or seller predation.'"[27] Instead, the Supreme Court held that large buyer power was not required to demonstrate competitive injury.[28]

Separate development of the antitrust injury doctrine, and judicial consensus on the goals of the Robinson-Patman Act, inevitably left open the question of how the antitrust injury requirement would be applied to a private plaintiff bringing a Robinson-Patman case. This was the issue addressed squarely by the Supreme Court in *J. Truett Payne*.[29]

3. *J. Truett Payne*'s Attempt to Reconcile Antitrust Injury and the Unique Goals of Robinson-Patman.

With this backdrop, *J. Truett Payne* arrived at the Supreme Court. While numerous antitrust cases had held that injury to a competitor without injury to competition itself was insufficient, Robinson-Patman cases were a conspicuous exception to that otherwise general rule. But that was about to change (or was it?).

J. Truett Payne involved allegations by a Chrysler-Plymouth dealer in Birmingham, Alabama that Chrysler's sales incentive programs ran afoul of Robinson-Patman's prohibition against price discrimination. The jury found in favor of the plaintiff and awarded damages calculated at "the amount of the price difference multiplied by the number of petitioner's purchases"—the so-called "automatic damages theory."[30] The Fifth Circuit rejected the approach and reversed the jury verdict on the grounds of lack of antitrust injury.

On appeal to the Supreme Court, the plaintiff contended that, once price discrimination was demonstrated, no further showing was required to demonstrate antitrust injury. Thus, the Court was faced squarely with the issue of whether different rules applied to Robinson-Patman cases because of its unique history. The Court ostensibly answered that question in the negative, but, upon closer examination, adopted a slightly different standard for antitrust injury that leaves one wondering whether the rules really are the same.

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[27] Id. at 436 (citation omitted).

[28] Id.

[29] 451 U.S. 557 (1981).

[30] 451 U.S. at 560.

The Court opened its analysis by stating that "[o]ur decision here is virtually governed by our reasoning in Brunswick Corp. v. Pueblo Bowl-O-Mat, Inc."[31] The Court then held that the *same* antitrust injury requirement that holds for other antitrust cases applies to Robinson-Patman cases as well[32]. Rather than face the historical difference in Robinson-Patman jurisprudence head on, however, the Court subtly limited its use of the term "antitrust injury" to mean simply that damages must be *caused* by the discrimination.[33]

This shift in position sidestepped the problem of squaring "antitrust injury" with the historical goals of Robinson-Patman, but, in the process, created yet another quirk in Robinson-Patman jurisprudence that becomes the source of the *pain* for antitrust practitioners and damages experts in such cases. The Court seemingly lost sight of the unique history and purpose of the Robinson-Patman Act and, rather than simply acknowledging this unique history, blurred the line between damages and antitrust injury. The traditional concept of "antitrust injury" involves matching the *specific* aspect of the anticompetitive conduct that reduces competition with the direct proximate cause of the plaintiff's injury. In contrast, the "antitrust injury" concept utilized by the Court in *J. Truett Payne*, is arguably more general—requiring only that the plaintiff's injury result from the price discrimination, not that it also harm consumers.[34] This is the very position rejected in *Brunswick*.

B. *The Effects of the Payne: Implications of J. Truett Payne for Damage Analysis.*

While allowing the plaintiff in *J. Truett Payne* to survive another day and attempt to prove the actual damages suffered as a result of the allegedly discriminatory sales incentives, the Court's focus on general causation had two, perhaps unintended, consequences for all subsequent Robinson-Patman plaintiffs and their damage experts. First, it raised the issue of the proper calculation of damages to prominence by linking it to the standing issue of antitrust injury. By so doing it, perhaps inadvertently, converted an issue that had previously been subject to the lenient proof rules applicable to the *amount* of damage, into an issue of *antitrust standing*, not only subject to a harsher standard of proof, but also one subject to summary adjudication. Second, it made it clear that correct damage analysis requires that the plaintiff directly prove the

[31] Id. at 562.
[32] Id.
[33] Id. at 562-67.
[34] Id. at 567.

amount of additional profits it would actually have made absent the discrimination. In so doing, it also rejected out-of-hand the automatic damage theory.

1. Elevating the Damage Calculation to a Standing Issue.

By labeling general causation of damages "antitrust injury," *J. Truett Payne* raised the hurdle that a plaintiff must meet in its damage case. Typically, the standards for proving the "fact" of injury and the threshold for demonstrating the "amount" of damages are different. To establish the existence of damages, a plaintiff must prove with "reasonable certainty" proximate cause between the alleged violation and a loss of profits by the plaintiff. Section 352 of the Restatement, Contracts (Second) 1981, states, "[d]amages are not recoverable for loss beyond an amount that the evidence permits to be established with *reasonable certainty*."[35]

The rule of reasonable certainty generally applies to the fact of damage, but not its amount.[36] A lower standard of proof is applied to the amount of damages. In *Bigelow v. RKO Radio Pictures*,[37] the Supreme Court distinguished between the standards for proving the existence of damages and its quantification stating that "[d]ifficulty of ascertainment is no longer confused with the right of recovery." Earlier, the Supreme Court had held similarly in *Story Parchment Co. v. Paterson Parchment Paper Co.*[38] In that case, the Court held that "[t]he rule that damages, if uncertain, cannot be recovered, applies to their nature, and not to their extent. If the existence of some damage is certain, the fact that the extent of such damage is uncertain does not prevent recovery."[39] Most circuit courts have followed this approach. As the Fifth Circuit stated in *Pierce v. Ramsey Winch Co.*,[40] "[h]aving found evidence sufficient to sustain the jury's verdict as to the fact of damages, we now evaluate, under a relaxed standard, the evidence supporting the award [to the plaintiff]."

Thanks to *J. Truett Payne*, the rule is otherwise in a private Robinson-Patman case. As a practical matter, in a Robinson-Patman case, this usual distinction between fact and amount of damages is not operable. If a plaintiff fails to establish any of the steps in the analysis of proving

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[35] RESTATEMENT (SECOND), CONTRACTS § 352 (1981) (emphasis added).

[36] *See* Alpine Indus. Inc. v. Gohl, 637 P.2d 998.

[37] 327 U.S. 251, 267 (1946).

[38] 282 U.S. 555, 556 (1931).

[39] Story Parchment, 282 U.S. at 556. *See also* Eastman Kodak Co. v. Southern Photo Materials Co., 273 U.S. 359, 379 (1927) ("a defendant whose wrongful conduct has rendered difficult the ascertainment of the precise damages suffered by the plaintiff, is not entitled to complain that they cannot be measured with the same exactness and precision as would otherwise be possible") (quoting Linen Thread Co. v. Shaw, 9 F.2d 17, 19 (1st Cir. 1925)).

[40] 753 F.2d 416, 438 (5th Cir. 1985).

damages caused by the price discrimination, the defendant appears to be free to ask that the case be dismissed, not for lack of a proper damage analysis (*i.e.*, failure to prove the *amount* of damage), but rather on standing grounds (*i.e.*, failure to prove *antitrust injury*). This is because any failure to show damages other than through direct identification of lost customers or through difficult economic analysis, is tantamount to a failure to show injury caused by the price discrimination, the definition of antitrust injury in *J. Truett Payne*.

2. Calculating Damages After *J. Truett Payne*.

J. Truett Payne also made clear that direct evidence of damages is required to establish both antitrust injury and damages. The focus on the causal link between price discrimination and damages allowed the Court to reject the automatic damage theory, because such damages would not be "awarded on the basis of plaintiff's estimate of sales it could have made absent the violation."[41] To establish a reliable damage estimate, a plaintiff needed to adduce direct proof that the "favored" competitor lowered his price, and that the reduced price caused the plaintiff either to lose sales or to lose profits by meeting the favored competitor's lower price. The Supreme Court expressed the standard as follows:

> If the favored purchaser has lowered his retail price, for example, the disfavored purchaser will lose sales to the extent it does not match that lower price. Similarly, if the disfavored purchaser matches the lower price, it will lose profits. Because petitioner has not shown that the favored purchasers have lowered their retail price, petitioner is arguably foreclosed from showing that it lost either sales or profits.[42]

Subsequent lower court decisions have reaffirmed the damage calculation standard set forth in *J. Truett Payne*. In the same year that the *J. Truett Payne* case issued, then Circuit Judge Stephen Breyer authored an opinion in *Allen Pen Co. v. Springfield Photo Mount Co.*[43] Judge Breyer held that the plaintiff in a Robinson-Patman case cannot get to a jury where there is "no evidence that specifically shows or even tends to show that any competitor drew either profits or sales away from [the plaintiff]."[44] Likewise, in *World of Sleep, Inc. v. LA-Z-Boy Chair Co.*,[45] the

[41] Id. at 450.

[42] *J. Truett Payne*, 451 U.S. at 449-50, n.4.

[43] 653 F.2d 17 (1st Cir. 1981).

[44] Id. at 22.

[45] 756 F.2d 1467, 1480 (10th Cir. 1985).

Tenth Circuit dismissed a Robinson-Patman claim holding that a private plaintiff "must show that this [price] disadvantage adversely affected his ability to compete with favored competitors," and that "[s]uch a showing may be made by proof that the illegal discrimination permitted a favored purchaser to lower its prices and reduce a plaintiff's sales or profits."[46]

In *J. Truett Payne*, four justices were ready to declare outright that lost sales due to the price discrimination was required for antitrust injury and damages. The Court apparently compromised in footnote 4 by leaving the possibility open that antitrust injury and damages could be shown by demonstrating that "fewer funds available with which to advertise, make capital expenditures and the like" may also be an avenue for demonstrating injury and damages.[47] Thus, direct evidence that:

> *1. The favored distributor passed on some or all of the lower input price to customers and the nonfavored distributor lost customers to the favored distributor as a result; or*
>
> *2. the nonfavored distributor lost customers to the favored distributor due to lack of advertising or capital expenditure which were inadequate because of the price discrimination,*

would be sufficient to establish antitrust injury. Moreover, in either scenario, the profit margin on the lost sales would constitute the damages.

But, the necessary proof is more easily articulated than it is adduced. Adducing direct evidence to establish damages in the complex context of most antitrust cases presents a daunting challenge. If the plaintiff can show that (1) the favored distributor passed on the discriminatory discount and (2) as a result, siphoned off customers from the disfavored distributor, then antitrust injury is demonstrated. Since antitrust injury in a Robinson-Patman case means "causation," in

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[46] Id. at 1480. Many other courts have held similarly. *See e.g.*, Olympia Co., Inc. v. Celotex Corp., 597 F. Supp 285, 291 (E.D. La. 1984) (requiring that the plaintiff demonstrate "the likelihood that Olympia lost sales or profits because Celotex extended discriminatory prices to Standard, as required by law for Olympia to prevail on its claims"); Richard Short Oil Co., Inc. v. Texaco Inc., 799 F.2d 415, 421 (8th Cir. 1986) (upholding directed verdict because "[n]o evidence was presented at trial that Short actually lost sales to any competing Texaco station as a result of the difference in prices; nor was there any evidence that Short ever lowered its prices and decreased its profits in order to compete with any lower price by a Texaco dealer"); Stelwagon Manuf. Co. v. Tarmac Roofing Sys, Inc., 63 F.3d 1267, 1276 (3rd Cir. 1995) (finding that plaintiff failed to satisfy the elements of Section 4 of the Clayton Act because plaintiff "failed to offer any documentary evidence as to the effect of the discrimination on resale prices, it also failed to identify a single lost sale"); Coastal Fuels of Puerto Rico v. Caribbean Petroleum Corp., 79 F.3d 182, 194 (1st Cir. 1996) (holding that plaintiff is "required to show that, as a result of [defendant's] price discrimination, it 'lost sales and profits'") (quoting *Allen Pen Co.*, 653 F.2d at 21).

[47] 451 U.S. at 564, n.4.

the absence of either of these elements, it cannot be shown that the lower prices to the favored distributor impacted the nonfavored distributor, *i.e.*, caused injury. Damages are simply the nonfavored distributor's lost profits from those lost customers' sales. If there are no lost customers, then there are no damages and no antitrust injury.

In addition, the second alternative for proving damages offered in footnote 4 of *J. Truett Payne* (that the nonfavored distributor lost customers to the favored distributor due to lack of advertising or capital expenditures) is hollow at best and misguided at worst. Unlike input prices, which are variable costs to the distributor that impact pricing downstream and therefore downstream sales, advertising and capital expenditures are usually fixed costs. Suppose, for example, the favored distributor pockets his discounts and advertises more in the nonfavored distributor's territory. Is the nonfavored distributor harmed? Not in the same way a price cut would harm him. This is because a rational counter-strategy exists. If the nonfavored distributor could make profits from advertising above the costs of advertising, he should be able to borrow the funds to counter the favored distributor. Damages would only arise in the presence of imperfect capital markets, or if the nonfavored distributor were diverted from his optimal capital structure—both dubious propositions to prove.

Finally, limiting damages to the profits lost on sales to customers that switched from the nonfavored to the favored distributor probably understates the actual damage. Because the nonfavored distributor has higher variable costs then in the non-discrimination situation, he may have lost customers to other competitors, or simply been forced to price his product too high for some price sensitive customers (who don't buy at all). The effects of this last point can be ameliorated somewhat by bifurcating the proof necessary to establish antitrust injury from the fuller damages proof. Antitrust injury is established by showing some, non-diminimis number of lost customers due to the favored distributor passing on a discount. Damages are then addressed separately by attempting to model the plaintiff's profits in the situation absent the discrimination.

But, how does one model damages in the complex setting of most Robinson-Patman claims? And, what limitations does *J. Truett Payne* impose on such models? It is to these issues that we now turn. First, we discuss the cases decided since *J. Truett Payne* in an attempt to define what the new rules for proof of damage are. Then, in Section D, we propose an economic model for supplying the newly required proof.

C. ***The Symptoms of Payne: How Does One Prove Damages After J. Truett***

***Payne*?**

J. Truett Payne requires that damages be proved directly; but what does that mean? For insight we turn to commentator discussions before *J. Truett Payne* and case examples after it.

1. Does *J. Truett Payne* Preclude Damages Based on an "Overcharge" Theory?

Following the opinion in *Brunswick*, some commentators interpreted the Supreme Court as holding that any "overcharge" theory of damages in a Robinson-Patman Act case would be prohibited. For example, in 1977, shortly after *Brunswick*, Milton Handler commented that "Brunswick thus serves to reaffirm Enterprise's basic teaching: that cognizable injury in a section 2(a) case is to be traced not to the higher price paid by the plaintiff (the overcharge) since the infraction is a price difference and all the law requires of the seller is a parity in pricing but rather to the undercharge to plaintiff's competitor."[48] Handler forcefully argued that the "but for" world must consist of both the plaintiff and favored distributor receiving the plaintiff's higher price from the manufacturer. The damages would then consist of lost profits due to the favored distributor receiving a lower price. As Handler put it, "[i]t is the harm from the discrimination, that is, the undercharge and not from the overcharge which constitutes antitrust injury in the Brunswick sense."[49]

The Supreme Court neither acknowledged, nor addressed the overcharge/undercharge dichotomy in rendering its decision in *J. Truett Payne*. Not surprisingly, however, it did not take long for the issue to arise again, in *Hasbrouck v. Texaco.*[50] *Hasbrouck* involved alleged price discrimination by Texaco in the sale of gasoline. The Robinson-Patman plaintiff, Hasbrouck, operated a retail service station that purchased gasoline directly from Texaco. Texaco also sold gasoline at a discount to middlemen, who then resold gasoline at a cheaper price to Texaco independent retail stations in competition with Hasbrouck. Hasbrouck demonstrated antitrust injury by identifying some lost customers. However, attempting to identify every customer of a gas station that switched due to a price differential would have been a nearly impossible task. Instead, Hasbrouck retained Keith Leffler, an economist at the University of Washington, who attempted to determine econometrically the "but for" price absent discrimination. Due to data limitations, Leffler presented the jury with several scenarios, none of which assumed that

[48] Milton Handler, *Changing Trends in Antitrust*, 77 Colum. L. Rev. 979, 993 (1977).
[49] Id.
[50] 634 F. Supp. 34 (E.D. Wash. 1985).

Hasbrouck would have received the lower favored price or the higher nonfavored price absent the discrimination. Texaco challenged Hasbrouck's approach contending that "any damage estimate based upon a hypothetical lower price to plaintiff is improper."[51] That is, Texaco maintained (expanding upon the reasoning in Handler's article) that Supreme Court precedent prohibited any overcharge theory. As the district court explained: "According to Texaco, the Robinson-Patman Act is not concerned with whether the plaintiffs paid too much for their gasoline but whether their competitors paid too little. Put another way, the defendant categorizes the Act as proscribing undercharges not overcharges."[52]

Thus, Texaco's defense placed squarely before the district court whether *J. Truett Payne* must be read to reconcile *Brunswick* with the goals of the Robinson-Patman Act by prohibiting any form of the "overcharge" theory. The district court rejected the invitation and ruled instead that the plaintiffs "presented 'just and reasonable' estimates of their lost sales and profits."[53]

Following the district court opinion, Texaco appealed to the Ninth Circuit, contending that "the Robinson-Patman Act proscribes the undercharge, and not the overcharge."[54] Texaco alleged that the district court was in error because it "refused to instruct the jury . . . that Section 2(a) of the Robinson-Patman Act is an undercharge, and not an overcharge statute."[55] In essence, Texaco contended that the "but for" price, as a matter of law, can only be the ***higher, disfavored price***. Texaco never raised the issue of the permissibility of using the lower "favored" buyer's price, because Texaco took the position that the law allows only the assumption that both competitors would have received the higher "unfavored" buyer's price in the "but for" world.

The Ninth Circuit disagreed with Texaco and upheld the jury award because there was "no evidence that the jury based its damage award on an overcharge theory."[56] This was because

> [n]one of the projections estimated Hasbrouck's damages by measuring the amount of the overcharge. The various projections simply permitted the jury to compare estimates of damages in different market situations, allowing them to determine what Hasbrouck's sales and profits would have been in the absence of

[51] Id. at 41.

[52] Id.

[53] Id. at 42.

[54] Brief of Appellant Texaco, Inc. at 27, *Hasbrouck v. Texaco, Inc.*, 842 F.2d 1034 (9th Cir. 1987) (No. 85-4225).

[55] Id. at 28.

[56] Hasbrouck, 842 F.2d at 1043-44 (citation omitted).

> price discrimination. Obviously, such a determination necessarily entails postulating the elimination of the price differential, either by increasing the favored buyer's price, or a combination of the two.

In other words, the Ninth Circuit held that it was permissible to postulate a "but for" price lower than the "disfavored" buyer's price, and this would not constitute an "overcharge" theory.

In so ruling, the Ninth Circuit seemed to suggest that it was permissible for a plaintiff to assume that the plaintiff would have received the lower price of the favored customer in the "but for" world. However, since none of Dr. Leffler's calculations postulated eliminating the price differential by decreasing Hasbrouck's price to the discriminatory price, and because the issue before the Ninth Circuit was whether the law requires damages to be calculated using the higher prices only, this is probably not a fair inference from the Ninth Circuit's opinion.

Nonetheless, in a recent case, the Tenth Circuit appeared to accept just such an interpretation.[57] In that case, Holland Plastics brought a Robinson-Patman claim alleging that Huntsman had sold polystyrene beads that are used by block molders to manufacture roofing insulation at a lower price to a Holland competitor than to Holland. The alleged favored distributor was Iowa EPS. Iowa EPS and Holland were the only two block molders in Iowa. Holland retained David Ciscel, an economist at Memphis State University, to calculate damages. Dr. Ciscel argued that, in the "but for" world, Holland would have received the same lower price as Iowa EPS. This, Dr. Ciscel's model maintained, would have led to higher growth rates and greater profits for Holland. Indeed, the damages computed by Dr. Ciscel exceeded those that one would obtain using the "automatic damages theory," multiplying the price differential by the number of Holland's sales.

Huntsman contended that Dr. Ciscel's method was essentially the prohibited automatic damage theory and that *J. Truett Payne* prohibited the assumption that the "but for" price would be the favored price. The district court granted summary judgment and Holland appealed to the Tenth Circuit. Holland's appellate brief contended that the use of the lower favored price was permissible because it was "a reduction in price component identical to that in Hasbrouck v. Texaco."[58] The Tenth Circuit reversed the summary judgment order. The Tenth Circuit agreed

[57] Huntsman Chemical Corp. v. Holland Plastics Co., 2000-1 Trade Cases (CCH) ¶ 72,807 (10th Cir. 2000). The authors were counsel for Huntsman in the case following the remand from the Tenth Circuit.

[58] Holland's Brief to the Tenth Circuit at 14.

with Holland stating, "Holland argues that J. Truett Payne Co. does not prohibit use of the discriminatory price as an aid in calculating damages, and we agree."[59] Moreover, the Tenth Circuit contended that:

> [n]owhere in the opinion [*J. Truett Payne*] did the Court imply that it is improper for an expert to use in a damage model a comparison of the profits the disfavored plaintiff would have made had it received the same discriminatory price as his favored competitors. The Court simply held that evidence of the amount of price discrimination, standing alone, is not sufficient to prove damages actually suffered from an antitrust injury.[60]

The Tenth Circuit's opinion is perplexing. The court appears to imply that, while the automatic damage theory is precluded, an expert can use the lower price, and simply add assumptions about the impact of the lower price on sales and costs, and that such would be acceptable. While such a position lacks logical coherence, the Tenth Circuit's opinion may have been colored by two factual misreadings of the record evidence. First, the Tenth Circuit assumed that Holland, like Hasbrouck, had demonstrated the loss of actual customers.[61] This was not the case. A reading of the lower court hearing transcript reveals that the district judge's dismissal was specifically premised on Holland's inability to demonstrate lost customers. Second, the Tenth Circuit wrongly assumed that the relevant geographic market for block molders was limited to Iowa. On remand, Huntsman demonstrated that (1) there had been no lost customers, (2) the relevant geographic market was not limited to Iowa and Holland had many competitors, and (3) even Dr. Ciscel admitted in testimony that utilizing the lower price to calculate damages was probably improper. Given the fuller record on remand, the case settled and was not appealed.

Nonetheless, the Tenth Circuit's statements about *J. Truett Payne* and *Hasbrouck* are disturbing, and demonstrate the propensity for confusion inherent in the current state of the law. While *Hasbrouck* was correct in rejecting the overcharge theory, it should not be interpreted as endorsing use of the favored price (an issue not raised in the case), and, as we shall demonstrate below, such a position would violate accepted economic tenets.

2. The Plaintiff's Price in the "But For" World: Can It Ever Be the

[59] Huntsman, 2000-01 Trade Cases (CCH) ¶ 72,807 at 86,928.

[60] Id. at 86,929.

[61] Id. at 86,926.

"Favored" Distributor's Price?

J. Truett Payne made it clear that damages can not be calculated simply by taking the price differential and multiplying that differential by the number of units purchased by the nonfavored distributor—the so-called "automatic theory." While the Court rejected the automatic theory, it was silent, however, on how the damage calculation was to be carried out, other than that damages had to be proven directly. Lower courts have struggled with this issue. For example, can a damage expert assume that the nonfavored producer would get the favored price, yet stop short of calculating automatic damages, by, for example, reconstructing a "but for" income statement and balance sheet and calculating damages as Dr. Ciscel attempted to do based on the differing values of the company? The lower courts that have addressed the issue since *J. Truett Payne* have declined that approach based on the particular facts before them, but have not rejected the notion entirely, suggesting that, under some circumstances, like in markets were there are only two competitors, such an approach could be acceptable.

For example, in *Olympia Co., Inc. v. Celotex Corp.*,[62] the district court granted summary judgment to the defendant in a Robinson-Patman case because, among other grounds, "Olympia ha[d] calculated its alleged damage from price discrimination on the basis of an average differential of 5% between the cost it paid and Standard paid for Celotex materials."[63] Olympia and Standard were competing roofers in a bidding market that used materials purchased from Celotex. Damages were based on a projection of sales and profits "based upon the hypothetical premise of Olympia being granted an average 5% price reduction."[64] The court concluded that "[t]his approach is not a proper method for proving injury and damages under the Robinson-Patman Act."[65] According to the court, the root error was to assume in the "but for" world that the "alleged unlawful price discrimination will be extended to Olympia, as well as Standard." "This assumption is unacceptable" in Robinson-Patman cases, the court held.[66]

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[62] 597 F. Supp. 285 (E.D.La. 1984).

[63] Id. at 298.

[64] Id.

[65] Id.

[66] Id.

Following *Olympia*, the Eighth Circuit, in *Rose Confections, Inc. v. Ambrosia Choc. Co.*,[67] construed the Supreme Court's admonition concerning causation to mean that a damage analysis cannot assume that, in the "but for" world, absent the price discrimination, the plaintiff would have received the lower price. The court expressed this as follows:

> Ambrosia claims that this proof was erroneous as a matter of law because it relied on a legally impermissible premise – that Rose Confections would have received the benefit of the discriminatory price given Barg & Foster. As a result, Ambrosia argues, the damages proof shows only what Rose Confections' market position would have been had it shared in the violation, and not, as the law requires, what it would have been absent the violation.

According to the Eighth Circuit, the damages expert must construct the "but for" world using the prices that would exist if the manufacturer were forced to set a single price.[68] The Eighth Circuit reasoned that this price would generally not be the lower price:

> Like any damages remedy, the purpose of the statute is to place the antitrust plaintiff as far as possible in the position it would have occupied but for the violation. Thus, any calculation of section 4 damages must strive to approximate a violation-free state of affairs…. The yardstick model did not do this; on the contrary, it assumed that Rose Confections would share in the benefit of the violation. This erroneous premise was reflected in the economist's calculation of lost potential sales and was carried forward into the accountant's calculation of lost profit on those sales.[69]

The Eighth Circuit's reasoning appeared to be that, if several distributors received the discounted price and one was discriminated against, giving the better price to the one nonfavored distributor does not eliminate discrimination in the "but for" world. This is because other non-plaintiff distributors still receive higher prices. However, if only two distributors compete, then this problem does not exist and using the favored distributor's price might be acceptable:

> The Robinson-Patman violation here was discriminatory treatment as between two purchasers, and it is suggested that the discrimination, and the violation could be cured by assuming either that both Rose Confections and Barg & Foster, or neither of them, received the freight absorption. We disagree. *This argument might have some merit if Rose Confections and Barg & Foster*

[67] 816 F.2d 381, 394 (8th Cir. 1987).

[68] Id. at 393.

[69] Id. at 394.

> *were the only potential customers of Ambrosia*, but here the record is clear that Ambrosia sold chips to at least one other Midwest-based private-label bagger…. Even if discrimination between Rose Confections and Barg & Foster were to disappear if both had received free freight chips, there would still be price discrimination against Sather Cookie. This state of affairs cannot be said to be violation free … and cannot be the basis for an award of damages under Section 4.[70]

In sum, the instincts expressed by the lower courts are on track. An expert should not be allowed to assume that the nonfavored distributor would have received the favored distributor's price in the "but for" world. Unfortunately, *Rose Confections* left open the possibility that such an assumption would be acceptable in cases where the geographic market contains only two competitors.

We show below (and then prove it algebraically in Appendix I) that the *Rose Confections* exception is simply wrong. It is improper under any circumstance for an expert to assume that, in the "but for" world, the nonfavored distributor would receive the lower price that the favored distributor had received in the actual world.

We begin by framing the problem using Figure 1. To facilitate a tractable illustration of the concepts, we assume that each distributor has linear demand for the manufacturer's products. This means that, when graphed, the demand curve is a straight line.[71] A manufacturer will practice price discrimination only when it increases his profits over a single uniform price strategy. Presumably, in the actual world, the manufacturer could adopt either policy, dual prices or a single price. But, because it is more profitable, the manufacturing firm in a Robinson-Patman case has elected to charge each distributor a different price. Construction of the "but for" world thus entails limiting the manufacturer's pricing policy options to a single uniform price. The manufacturer's problem in the "but for" world is to find the price that, when charged

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[70] Id. at 394-95 (emphasis added). The same issue arose in *Stelwagon Mfg. Co. v. Tarmac Roofing*, 63 F.3d 1267 (3rd Cir. 1995). Stelwagon was a distributor of modified asphalt products ("MAPs") for roofing contractors. Stelwagon's supplier, Tarmac, also sold MAPs to two competitors—Standard Roofing Company ("Standard") and Celotex Corporation ("Celotex") at preferential prices. Stelwagon's damage expert calculated lost sales by assuming that, had Stelwagon received the lower price, its sales of MAPs would have mirrored the sales of other Stelwagon products. The Third Circuit held that this approach was not acceptable because the expert's "analysis failed to sufficiently link any decline in Stelwagon's MAPs sales to price discrimination." This failure consisted of ignoring other causes and assuming receipt of a lower price in the "but for" world.

[71] In Appendix I, we show algebraically that the same result holds when the assumption is removed and demand is either linear or non-linear.

to both distributors, maximizes the manufacturer's profits under the single price constraint. To illustrate, consider the manufacturer's situation depicted in Figure 1.

FIGURE 1

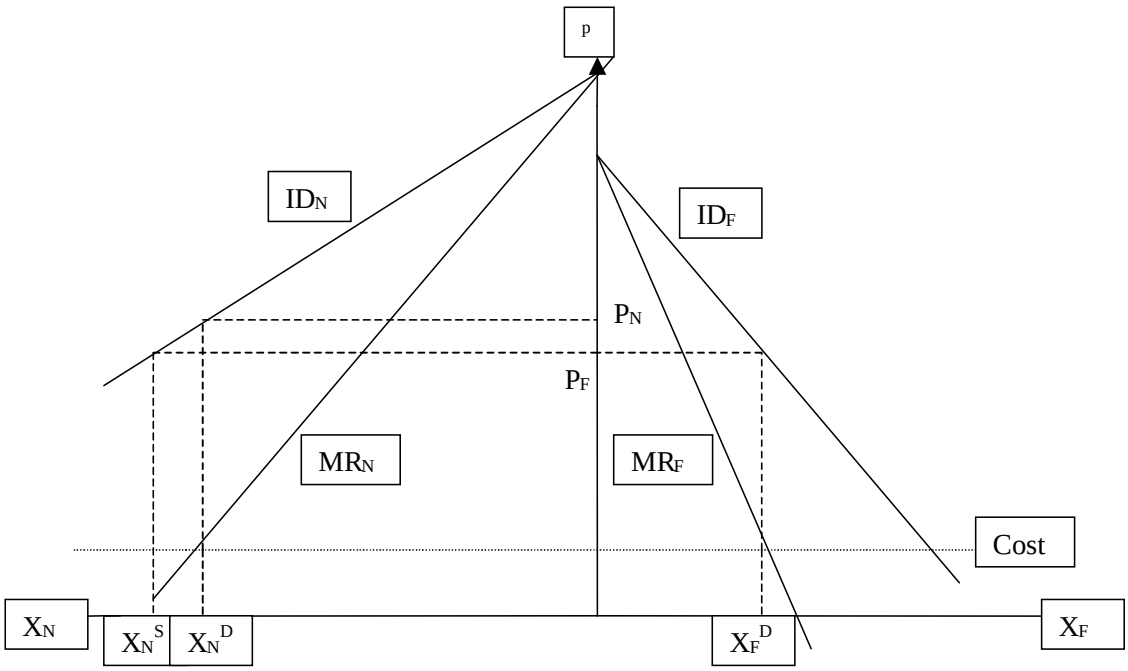

Figure 1 shows the prices charged to the favored (P_F) and nonfavored (P_N) distributors by the manufacturer when price discrimination is allowed. MR are the marginal revenue curves and ID are the inverse demand curves, for linear demand. The Text explains that if price discrimination is prohibited, the uniform price will not be the lower price P_F but rather will lie between the two prices.

Figure 1 represents the case where the demand curves for the two distributors are linear. The favored distributor "F" has inverse demand curve labeled ID_F for the manufacturer's product, and the nonfavored distributor "N" has the inverse demand curve labeled ID_N for the manufacturer's product. The cost of production, "c", for the manufacturer is the same regardless of which distributor the product is sold to, and we will assume it is constant as his output changes. Under the facts that we have just assumed, if the manufacturer is allowed to price discriminate, he will maximize his profit by setting the price charged to each distributor such that his marginal revenue from that distributor will equal the marginal cost, c. As shown in Figure 1, this will result in his charging a lower price p_F and selling an amount x_F^D to the favored distributor, and a higher price p_N and an amount x_N^D to the nonfavored distributor.

Now consider the "but for" world where the manufacturer is constrained to set a single uniform price. With a single price rule in the "but for" world, the manufacturer will still attempt to maximize his profits. In order to maximize his profits under such a constraint, the manufacturer will set his total marginal revenue equal to his marginal cost. Framed in this way the question is, can the manufacturer maximize profits by charging p_F as the uniform price? Figure 1 clearly shows that p_F cannot be the uniform profit-maximizing price. At price $p_{F,}$ distributor F would buy quantity x_F^D and the marginal revenue from these sales to distributor F would be equal to the marginal cost c. But, at this same price, distributor N would buy x_N^S and the marginal revenue from sales to N would be less than c. The manufacturer's total marginal revenue will be the weighted average of the marginal revenues from his sales to the two distributors. His marginal revenue will be less than his marginal cost c, and as a result the manufacturer will not have maximized profits by setting a uniform price of $p_{F.}$. Hence, he would not charge p_F since it would not be his profit maximizing single price.

With the problem framed in this manner, one can see further that the optimal single uniform price for the manufacturer must lie between p_F and p_N. We have just shown that the optimal single uniform price cannot be p_F. Inspection of Figure 1 shows that, for a price below p_F, the marginal revenue from the sales to both distributors would be less than c. This means that the weighted sum of the two marginal revenues would be less than c. Therefore, no price less than p_F could be the manufacturer's optimal single uniform price. By the same logic, neither p_N nor a price greater than p_N could be the optimal single price for the manufacturer. Thus, the optimal price that the manufacturer would charge if constrained to charge a single uniform price must lie between p_F and $p_{N.}$[72]

Thus, we have proven that the "but for price" must be somewhere in between the favored distributor's price and the non-favored distributor's price, but where? Both the overcharge and the undercharge theory are partially correct and partially flawed.

We now address a framework for ascertaining the "but for" price and calculating the true amount of damage. This framework does not purport to be exhaustive. For example, the simple

[72] At the end of Appendix II, we give a numerical example for linear demand functions that illustrates the points just made, that the "but for" price that would obtain if price discrimination were illegal cannot be the most favored price that exists when price discrimination occurs, and further that it must lie between p_F and p_N. It is less obvious that this result continues to hold if we lift the assumption of linear demand. We prove in Appendix I that the above result holds for any demand curve. There is no economic literature we are aware of that has demonstrated this result, yet the proof is straightforward.

approach we suggest could be extended to consider numerous distributors or incorporate different oligopoly assumptions concerning rivalry. We do not address these extensions here. Instead, we describe how a damage model should be constructed using a simple framework.

D. ***Alleviating the Payne: From Antitrust Injury to Calculation of Damages.***

While the case law and some literature have considered the issue of the "but for" price in a Robinson-Patman case, we are not aware of any literature discussing how damages should be calculated once a proper approach to the "but for" price is incorporated. We now address the issue of the calculation of damages in the simplest of models in a Robinson-Patman case. We do so using Figure 2:

FIGURE 2

Calculating Robinson-Patman Damages

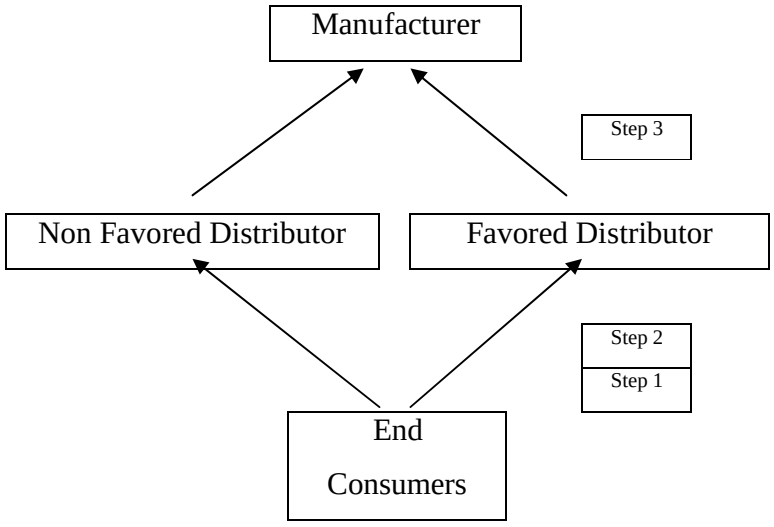

Figure 2. Step 1: Each distributor sets the price mark up on the price he gets from the manufacturer according to the elasticity of demand he faces from the end consumers. Step 2: The price he charges determines how much he sells and what profits he makes. Step 3: The manufacturer sets his prices to the distributors according to the derived demand he faces. Step 4: Profits for a distributor can be calculated and compared for the cases of allowed and not allowed third degree price discrimination.

A damage calculation incorporating a proper "but for" price necessitates that we begin downstream at the end user level and then analytically work upstream to the manufacturer's pricing decision. This is because the characteristics of final end user demand determine each

distributor's optimal pricing strategy, and hence what he will sell and the elasticity of demand facing the manufacturer from each distributor. From this information, the manufacturer then sets his optimal discriminatory or nondiscriminatory prices. In economic parlance, the demand faced by the manufacturer is "derived" from the demand faced by the distributor, end user demand. Therefore, damage analysis must begin downstream and move upstream. Figure 2 depicts the steps in the process.

We will now address each analytical step in the damage calculation process separately. The ultimate goal is to determine the profits lost by the nonfavored distributor that were caused by the manufacturer's price discrimination. As with the last section, we relegate the economic modeling to an appendix (Appendix II). We textually describe here, however, the steps in the damage computation and their underlying analytical rationale.

1. ***Step 1: End User Demand.***

The process of the mathematical determination of the damages begins from given end user demand functions. Hence the first step in calculating damages in the real world is to empirically estimate the relevant end user demand functions. These estimations are done the same way demand functions are empirically estimated for any other purposes.

2. ***Step Two: Distributor Pricing and Profits.***

Step two consists of establishing how much each distributor will choose to sell to his end users (and the prices he will charge and the profits he will make), conditional on the price the manufacturer charges him for the product. Each distributor will set his own price and output in order to maximize his individual profits by observing end user demand (Step 1)

3. ***Step Three: The Actual and the "But For" Manufacturer's Price.***

Step three begins by looking at part of the results from step two from a different angle. Once we have established in step two how much each distributor chooses to sell conditional on the prices he is charged by the manufacturer, we have the demand function by each distributor on the manufacturer, since a distributor will clearly not want either more or less from the manufacturer than he wants to sell. Once this is recognized step three consists of determining the prices the manufacturer will charge to each distributor in pursuit of maximizing his total profits under two conditions, the condition where the manufacturer is free to price discriminate and the condition where is not free to price discriminate.

4. ***Step 4: Lost Profits.***

Finally, we calculate the profit losses to the nonfavored distributor. Using the prices the manufacturer will charge to the nonfavored distributor when he is free to price discriminate and when he is not free to price discriminate from step three, we have the profits of this distributor in the two cases from step two. Subtracting the profits obtained when price discrimination occurs from the profits the distributor would have gotten in the but for world where price discrimination is prohibited yields the relevant lost profits.

5. ***Establishing Damages in the Real World.***

Following these steps, and assuming sufficient and reliable data, Robinson-Patman damages can be accurately calculated. The reader should not be mislead into thinking, however, that the process is an easy one. To the contrary, accumulating the data necessary to accurately calculate damages is a difficult and time-consuming task. In the final analysis, the reliability of the damage calculation will only be as good as the accuracy of the data-gathering process. Mathematical precision in the calculation process should not be confused with reliable accuracy in the damage amount arrived at. There are, however, standard econometric techniques for estimating the parameters of the linear demand functions of the end users from step 1. If sufficient and reliable data is obtained, the resulting calculation should accurately estimate the damages resulting from the discriminatory pricing.

Accordingly, in practice, both sides in a Robinson-Patman case should attempt to obtain as much information as possible, through discovery or otherwise, concerning the character of end user demand. This requires that the expert gather as much information as possible concerning the characteristics of end user demand for the product at issue. The expert must learn, for example, what substitutes for the products exist, how close end users judge these substitutes to be to the product at issue, the prices of these substitutes, consumer responses to price changes, other price sensitivity of end users, the importance of brand loyalty, warranties and service, location of sellers, etc. Since this is the information needed by the damage expert, it follows that the attorneys must seek discovery of as much relevant information as possible concerning end user demand characteristics, and experts must draw upon all available independent sources of data on this issue. End user market information is the key information needed for the ultimate damage analysis.

CONCLUSION

In sum, the Supreme Court has made it clear that damages in a Robinson-Patman case must be "caused" by the discrimination itself. Absent a showing of such damages, antitrust injury is lacking. To meet the requisite standard the economist must construct the "but for" world as it would look if no discrimination occurred. This requires a four-step process. While the process is difficult, microeconomics can be used to successfully achieve a sensible calculation.

APPENDIX I

Constructing the "But For" Price When Demand is Non-Linear

We are unaware of any economic literature demonstrating that the single uniform price in the "but for" world — the world without price discrimination — will lie between the favored and non-favored distributors' prices. Though intuition may lead one to that assumption, in this Appendix we prove algebraically that such is the case even when the distributors' demand for the manufacturer's product is non-linear.

Consider a manufacturer selling to two distributors. Again, we will consider two cases. In the first case, the manufacturer can exercise third degree price discrimination,[1] and, in the second case, he must sell to both distributors at a single uniform price (the "but for" price). Let $x_i(p_i)$ represent the general demand function of distributor i when faced with price p_i. Since we have only two distributors, we let i = 1 (for distributor F) and i =2 (for distributor N). In the case when both distributors face the same price, we will represent the single uniform price without a subscript, p. Let $\pi_i(p_i)$ or $\pi_i(p)$ represent the corresponding profits the manufacturer receives from the sale of $x_i(p_i)$ or $x_i(p)$ to distributor I at, respectively, price p_i when discrimination is allowed or p when it is prohibited.

For tractability we follow the standard economic literature on third degree price discrimination by making two further weak assumptions. The first assumption has already been made in the notation adopted earlier, *i.e.*, that the demand by distributor i for the manufacturer's product depends only on the price he is offered, and not on the prices that other distributors face. The second assumption is that the profit functions $\pi_i(p_i)$ are strictly concave.[2] We continue to assume that marginal costs are constant.[3]

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[1] Third degree price discrimination is defined as the ability to charge separate profit maximizing prices in separate markets. Third degree price discrimination is what is at issue in a Robinson-Patman case.

[2] Some readers may find it easier to consider the economic meaning of this in terms of marginal revenue curves. For a normal good where $dx_i/dp_i<0$, this strict concavity condition on π_i is equivalent to assuming that the marginal revenue decreases with x_i. One can see this as follows (dropping the unnecessary subscripts here). $\pi=R(x(p))-cx(p)$, where R is the revenue, and we have written it as a function of x, which in turn is a function of p. Then $d\pi/dp=(MR-c)(dx/dp)$, where MR is marginal revenue dR/dx. To have $\pi(p)$ be strictly concave at some p* where MR(p*)=c, $d\pi/dp$ must (locally) be positive for p<p* and negative for p>p*. Given dx/dp<0, we must have MR<c for p<p*, and MR>c for p>p*. But since dx/dp<0, p<p* means x>x*, so when x>x* we have MR<c. Similarly when x<x* we have MR>c. So MR decreases with x. *See* Richard Schmalensee, *Output and Welfare Implications of Monopolistic Third-Degree Price Discrimination*, 71 AM. ECON. REV. 242 (1981).

[3] This common assumption is not required for the results that follow, and is made only to simplify the mathematical presentation.

With these assumptions in mind, consider a manufacturer who cannot exercise third degree price discrimination, and let the symbol "*" indicate the optimal (profit maximizing) value of a variable. To maximize his total profits, $\Pi=\pi_1+\pi_2$, the manufacturer will set the price of his product at price p*, such that the following condition holds:

$$\frac{d\Pi}{dp}(p^*) = 0 = \sum_{i=1}^{2} \frac{d\pi_i}{dp}(p^*) = \sum_{i=1}^{2} \{(p^* - c)\frac{dx_i}{dp}(p^*) + x_i(p^*)\}$$

This expression is simply the standard first order condition for the manufacturer choosing p to maximize his total profits Π. Consider first the term that is the sum of the two $d\pi_i/dp$ terms. Their sum must be zero, but we know the two terms cannot both individually equal zero. This is because, if both terms were equal to zero, then the manufacturer's optimal price to both of the distributors considered individually would be p*. In this case, the manufacturer would charge p* to each distributor even if price discrimination were allowed, and so no price discrimination would occur. In other words, we would not be involved in a Robinson-Patman damage exercise if both the $d\pi_i/dp$ terms were zero. Therefore, one of these terms must be positive and the other term must be negative for their sum to be equal to zero. Now compare the manufacturer's optimal prices when he cannot price discriminate and when he can price discriminate. Suppose that $d\pi_1(p^*)/dp<0$ and $d\pi_2(p^*)/dp>0$, when the manufacturer is constrained to charging a single uniform price. If the manufacturer could price discriminate, he would set his price p_i^* to each distributor to maximize his profits from the sales to each distributor individually, yielding the first order conditions:

$$\frac{d\pi_i}{dp}(p_i^*) = 0, \qquad i = 1,2$$

where p_i^* i=1,2 are the two prices under price discrimination. Because the profit function is strictly concave, as prices increase the value of the first derivative of the function will decrease. Hence, we can have both $d\pi_1(p_1^*)/dp=0$ and $d\pi_1(p^*)/dp<0$ if and only if $p^*>p_1^*$. Accordingly, we have demonstrated for general demand curves the result obtained earlier for linear demand curves, *i.e.*, that the "but for" price that would be charged to both distributors if price discrimination were prohibited could not be the price the manufacturer charged the favored distributor. This demonstration shows that, under no conditions, should the damage expert be allowed to assume that, absent the price discrimination, the nonfavored distributor would have

received the same price that the favored distributor received in the presence of price discrimination.

By the same logic as just used to establish $p_1^* < p^*$, because $d\pi_2(p^*)/dp > 0$ and $d\pi_2(p_2^*)/dp = 0$, we must also have $p_2^* > p^*$. It therefore must be true that $p_1^* < p^* < p_2^*$. The result for the linear demand curve case above, that the nondiscriminatory price must lay between the largest and smallest discriminatory price, also obtains for general nonlinear demand curves. This concludes the proof.

The above proof extends easily to the case of any number of distributors. When constrained to a sell at a single price, the manufacturer will still choose a price so that $d\Pi/dp = 0$. Just as before, the various $d\pi_i(p^*)/dp$, when evaluated at the single price p^*, cannot all be zero, or there would be no price discrimination. Since their sum must be zero, at least one of these terms must be positive and another must be negative. Given the concavity of the profit functions π_i, the price of the distributor whose term is negative must be less than the single uniform price. Similarly, the price of the distributor whose term is positive must be greater than the single uniform price. Hence, whether these two discriminatory prices are the maximum and minimum, or whether there are other discriminatory prices greater or smaller than these prices, the single uniform price must lie between the maximum and minimum discrimination prices. The *Rose Confections* intuition is therefore flawed to the extent it implies that this prohibition, of using the lowest price discrimination price as the appropriate price when price discrimination is forbidden, in any way relates to the number of competitors in the market. The number of competitors makes the computation of the "but for" price more difficult, but does not change the fact that the "but for" price cannot be equal to the favored distributor's price under price discrimination. Expert analysis making such an assumption is clearly erroneous and should be rejected.

APPENDIX II

Calculating Robinson-Patman Damages

Calculating damages in Robinson-Patman cases requires data on, and an analytical understanding of two sets of prices and two sets of demands: the prices the manufacturer charges to each distributor and the corresponding demands by each distributor, and the prices charged by each distributor to the end users and the corresponding demands by the end users. We will continue with the notation used in Appendix I for the prices and quantities of the good sold by the manufacturer to the i^{th} distributor, p_i and x_i, and the profits made by that sale, π_i. We will call the prices and quantities of the good sold by the i^{th} distributor to the end-users w_i and q_i, and the profits made by that sale, ϕ_i. We will call the elasticity of demand by the i^{th} distributor for the good from the manufacturer ε_i, and the elasticity of demand by the end users for the good from the i^{th} distributor γ_i.

1. ***Step 1: End User Demand.***

One must begin the calculation of damages with end user demand, *i.e.*, the demand faced by the distributors. To show how end user demand is linked to the nonfavored distributor's lost profits, we again adopt a standard linear inverse demand model, $w_i(q_i)=a_i-b_iq_i$, though the logic involved holds equally for any end user demand functions. We again assume that there are two distributors, i=F,N (the favored and the nonfavored distributor).

2. ***Step Two: Distributor Pricing and Profits.***

Each distributor will set his own price and output in order to maximize his individual profits by observing end user demand (Step 1). In order to determine this optimal price, each distributor i will set his price w_i to the end users according to the well known rule for profit maximization,

$$w_i\left(1-\frac{1}{\gamma_i}\right) = MC_i \quad \textit{or equivalently} \quad \frac{w_i - MC_i}{w_i} = \frac{1}{\gamma_i} \qquad (1)$$

where MC_i is the marginal cost of the product and γ_i is the elasticity of demand by the end users. The marginal cost to the distributor is the price at which the manufacturer sells him the good,[1] $MC_i = p_i$. With the given inverse demand from Step 1, we have demand curves $q_i(w_i)=(a_i-w_i)/b_i$.

[1] For mathematical simplicity, we assume no costs of operations for the distribution enterprises. Including such costs would just add another term to the final expression, and not qualitatively affect the nature of the results.

The elasticity then becomes $\gamma_i = -(w_i/q_i)(dw_i/dq_i) = w_i/b_iq_i = w_i/(a_i-w_i)$ and hence equation 1 becomes for each distributor i

$$w_i\left(1-\frac{a_i-w_i}{w_i}\right) = w_i - a_i + w_i = p_i \quad or \quad w_i = \frac{a_i+p_i}{2} \qquad (2)$$

Therefore the quantity q_i that each distributor will sell when charging this price w_i, as well as his profits, are

$$q_i(p_i) = \frac{1}{b_i}\left(\frac{a_i-p_i}{2}\right) \quad and \quad \phi_i(p_i) = \frac{1}{b_i}\left(\frac{a_i-p_i}{2}\right)^2 \qquad (3)$$

For each distributor the price that he can buy goods at from the manufacturer is something he cannot control. This price is a parameter presented to the distributor and is an input into his price-quantity decision. We have expressed in the first expression of equation 3 the optimal quantity each distributor will sell as a function of this parameter, p_i. From equation 3 we also see that the profit that each distributor makes depends on the price he is charged for the good from the manufacturer. Therefore we must know the value of the parameter p_i. This is our next step.

Using equation 3 for the profits of the distributor both when price discrimination is allowed and when it is prohibited, we will be able to calculate the profits lost or gained from price discrimination as the difference between the profits in the two cases. This we accomplish in steps three and step four.

3. ***Step Three: The Actual and the "But For" Manufacturer's Price.***

The determination of the demand faced by the manufacturer from each distributor can be determined directly from the above considerations. Equation 3 determines the amount $q_i(p_i)$ that each distributor will desire to sell to the end users when the manufacturer charges him p_i. Clearly, there would be no incentive for the distributor to demand more from the manufacturer than he intended to sell. Moreover, he cannot sell a quantity more than he obtains from the manufacturer. Hence, the demand curve faced by the manufacturer from each distributor, as a function of the price the manufacturer charges the distributors, will be $x_i(p_i) = q_i(p_i)$.

To find the manufacturer's optimal prices, given the above-determined demand curves, we could repeat all the steps we presented above for the determination of the optimal price for the distributor to charge the end users. Instead, we make the following observation and then simply refer to the derivations above. We determined in Step 2 that the demand curves faced by the distributors from the end users were $q_i(w_i)=(a_i-w_i)/b_i$. We also observe from equation 3 that the manufacturer faces demand curves $x_i(p_i)=(a_i-p_i)/2b_i$ from each distributor i. The only difference between these demand curves is that the distributor's demand curve has a two in the denominator. Notice that, as stressed earlier, the parameters a_i and b_i in the demand faced by the manufacturer from distributor i come ultimately from the demand faced by the distributor from the end users.

We can now immediately obtain results for the price and profit analogous to equations 2 and 3 above, correcting for the factor of two by replacing the b term with 2b. In addition, now c, rather than p_i, represents marginal cost. With these substitutions we have, by analogy with equations 2 and 3, the following:

$$p_i\left(1-\frac{a_i-p_i}{p_i}\right)=p_i-a_i+p_i=c \quad or \quad p_i=\frac{a_i+c}{2} \qquad (4)$$

and

$$x_i=\frac{1}{2b_i}\left(\frac{a_i-c}{2}\right) \quad and \quad \pi_i=\frac{1}{2b_i}\left(\frac{a_i-c}{2}\right)^2 \qquad (5)$$

Now consider the case where the manufacturer is prohibited from exercising third degree price discrimination, and instead is forced to set a single price p for both distributors. Again let "F" represent the favored distributor and "N" stand for the nonfavored distributor. Then, using the demand equations $x_i(p_i)=(a_i-p_i)/2b_i$ for the demand faced by the manufacturer from each distributor and adding the two demands to obtain his total demand, the manufacturer would face the following total demand:

$$x_S(p)=\frac{a_F-p}{2b_F}+\frac{a_N-p}{2b_N}=\frac{b_Na_F+b_Fa_N-(b_N+b_F)p}{2b_Nb_F}=\frac{A-Dp}{B} \qquad (6)$$

where we have defined $A=b_N a_F+b_F a_N$, $B=2b_N b_F$, and $D=b_N+b_F$. Hence the total demand faced by the manufacturer, in the case where price discrimination is not allowed, is again linear. Using this notation, the producer will earn a profit for the single price p of $\Pi_S(p)$ where

$$\Pi_S(p) = px_S(p) - cx_S(p) = (p-c)\left(\frac{A-Dp}{B}\right) \qquad (7)$$

The manufacturer uses this profit function to determine his optimal nondiscriminating price

$$p^* = \frac{A+Dc}{2D} \qquad (8)$$

4. ***Lost Profits.***

Finally, we can use the above to calculate the profit losses to the nonfavored distributor. We will use the profit formula for a distributor facing a linear demand curve from equation 3. The actual profits ϕ_A made by the nonfavored distributor with price discrimination, in which case his cost p_i is p^*_N, which is given by equation 4 as $p^*_N = (a_N+c)/2$, is

$$\phi_A(p^*_N) = \frac{1}{b_N}\left(\frac{a_N - p^*_N}{2}\right)^2 = \frac{1}{b_N}\left(\frac{a_N - c}{4}\right)^2 \qquad (9)$$

When price discrimination is not allowed, the manufacturer charges p* as given by equation 8, and the distributor then makes "but for" profits ϕ_{BF} of

$$\phi_{BF} = \frac{1}{b_N}\left(\frac{a_N - p^*}{2}\right)^2 = \frac{1}{b_N}\left(\frac{2a_N - \frac{A}{D} - c}{4}\right)^2 = \frac{1}{b_N}\left(\frac{2a_N - \frac{b_N a_F + b_F a_N}{b_N + b_F} - c}{4}\right)^2 \qquad (10)$$

Subtracting equation (9) from equation (10) we get an expression for damages, "but for" profits the nonfavored distributor would have obtained if price discrimination had not occurred minus that actual profits he received under price discrimination.

$$Damages = \phi_{BF} - \phi_A = \frac{1}{b_N}\left(\frac{2a_N - \frac{b_N a_F + b_F a_N}{b_N + b_F} - c}{4}\right)^2 - \frac{1}{b_N}\left(\frac{a_N - c}{4}\right)^2 \qquad (11)$$

Consider Figure 1 again. The favored distributor receives the lower price, and this price for the linear demand case is (from equation 4) $p_i=(a_i+c)/2$, so $a_F<a_N$. With this observation one can observe from equation 11 that the damages will always be positive, since the second term in the numerator is simply a weighted average of a_F and a_N with the b's as weights, and so it will be less than a_N since $a_F<a_N$.

5. ***A Numerical Example.***

Finally, we consider a numerical example with linear inverse demand functions. We will first illustrate the point made in Section C and Appendix I, that the "but for" price that would obtain if price discrimination were illegal cannot be the most favored price that exists when price discrimination occurs. Then we will proceed to calculate the damages the nonfavored distributor could claim.

Suppose the two distributors faced inverse demands $w_F = 200 - .00005q_F$ and $w_N = 220 - .0001q_N$, and the constant cost of production is c=100, all prices and costs being in dollars. For the latter, every additional 10,000 units sold would drop the market price by a dollar, while for the former it would drop it by a half a dollar. By equation 4 above, we get that the manufacturer will charge the favored distributor $p_F = 150$ and the nonfavored distributor $p_N = 160$. From equation 8 we get that the "but for" price that the manufacturer would charge if price discrimination were not allowed would be $p^* = 153.3$. Here we see in this example the result that was established in general above: the "but for" price could not be the most favored price, and it must lie between the most favored and least favored prices.

We now continue this example to calculate the damages suffered by the nonfavored distributor. From equation 11 we have that damages equal the "but for" profits minus the actually realized profits. For these demands faced by the distributors we get

$$Damages = \$2{,}111{,}111 \qquad (12)$$

In contrast, the automatic damage approach produces damages of $3,000,000. Recall that the price difference during the price discrimination was $10, and from the distributor's price and

the demand function we can determine that sales under price discrimination was 300,000 units. The product of these two terms is the "automatic" damages. It is evident, the actual damages are smaller than the automatic damages and this is typically the case.

6. ***Establishing Damages in the Real World.***

Given the formula just derived for computing damages in the case of linear demand functions, there remains only to determine the parameters in equation 11 using data from the real world. The reader should not be mislead into thinking, however, that, because there is an equation by which damages can be calculated, the process is an easy one. To the contrary, accumulating the data necessary to accurately determine the equation's parameters is a difficult and time-consuming task. In the final analysis, the reliability of the damage calculation will only be as good as the accuracy of the data-gathering process. Mathematical precision in the calculation process should not be confused with reliable accuracy in the damage amount arrived at. There are, however, standard econometric techniques for estimating the parameters of the linear demand functions of the end users from step 1, $w_I(q_i)=a_i-b_iq_i$. If sufficient and reliable data is obtained, the resulting calculation should accurately estimate the damages resulting from the discriminatory pricing.