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# THE INDIRECT PURCHASER RULE AND PRIVATE ENFORCEMENT OF ANTITRUST LAW: A REASSESSMENT

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ABSTRACT

Despite broad statutory language authorizing "any person" injured by an antitrust law violation to sue for damages, the Supreme Court of the United States has construed that language to bar antitrust damages claims by indirect purchasers, such as consumers two or more steps removed from antitrust violators. The Court and some scholars have justified the indirect purchaser rule on the ground that assigning direct purchasers exclusive rights to recover antitrust damages increases the likelihood of suit. But this article presents new evidence that the rule reduced private antitrust litigation by twenty percent. It argues that the rule should be abandoned, consistent with the statutory text.

## I. INTRODUCTION

> [A]ny person who shall be injured in his business or property by reason of anything forbidden in the antitrust laws may sue therefor … and shall recover threefold the damages by him sustained, and the cost of suit, including a reasonable attorney's fee.[1]

The Clayton Act, excerpted above, provides for private enforcement of the United States antitrust laws.[2] The Act's right of action allows private parties to sue, and its treble-damage remedy creates private incentives to bring suit. According to the Supreme Court, the statute demonstrates Congress's "belief

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[1] 15 U.S.C. § 15(a) (2012).

[2] *Id.* Section 4 of the Clayton Act, ch. 323, § 4, 38 Stat. 730, 731 (1914), replaced the private right of action provision contained in the Sherman Act, ch. 647, § 7, 26 Stat. 209, 210 (1890).

that private antitrust litigation is one of the surest weapons for effective enforcement of the antitrust laws."[3] Although private antitrust litigation was rare in the first half of the twentieth century, it boomed in the post-war era.[4] The evolution of private antitrust filings can be seen in Figure 1. Today, private lawsuits account for 94 percent of antitrust cases filed in federal courts.[5]

The language of the Clayton Act—"any person ... injured in his business or property by reason of anything forbidden in the antitrust laws may sue"—is broad. But in 1977, the Supreme Court in *Illinois Brick Co. v. Illinois*[6] construed that language to bar damages actions by *indirect purchasers*, such as consumers two or more steps removed from an antitrust law violator in a distribution chain.[7] The Court instead assigned *direct purchasers* exclusive rights to sue for antitrust damages. This rule applies even if direct purchasers, such as wholesalers or retailers, "pass on" cartel or monopoly overcharges to consumers.[8]

The Court cited three concerns with private antitrust suits by indirect purchasers. First, apportioning damages among direct and indirect purchasers was too complicated.[9] Second, awarding damages to both direct and indirect purchasers risked multiple liability for defendants.[10] Third, dividing damages between direct and indirect purchasers diluted incentives to sue, thereby weakening private enforcement of the antitrust laws.[11] A rule barring suits by indirect purchasers avoided these concerns.

The rationale for the Court's rule has eroded. First, apportioning damages among direct and indirect purchasers is not too complicated.[12] Lower courts routinely determine indirect purchaser damages in state law cases that permit them.[13] Second, the concern over multiple liability for antitrust defendants

[3] Minn. Mining & Mfg. Co. v. N.J. Wood Finishing Co., 381 U.S. 311, 318 (1965); *see also* Zenith Radio Corp. v. Hazeltine Research, Inc., 395 U.S. 100, 130–31 (1969) ("[T]he purpose of giving private parties treble-damage and injunctive remedies was not merely to provide private relief, but was to serve as well the high purpose of enforcing the antitrust laws.").

[4] *See generally* Daniel A. Crane, The Institutional Structure of Antitrust Enforcement 49–67 (2011).

[5] U.S. Courts, Judicial Business tbl.C-2 (2019), https://bit.ly/38TXUL2.

[6] 431 U.S. 720 (1977).

[7] *Id.* at 728–29.

[8] *See, e.g.*, Kansas v. UtiliCorp United, Inc., 497 U.S. 199 (1990) (applying indirect purchaser rule in case involving public utility that passed on 100 percent of monopoly overcharge to consumers).

[9] *Ill. Brick*, 431 U.S. at 740–42.

[10] *Id.* at 730–31.

[11] *Id.* at 745–46.

[12] *See* Herbert Hovenkamp, Apple v. Pepper*: Rationalizing Antitrust's Indirect Purchaser Rule*, 120 Colum. L. Rev. F. 14, 19–21 (2020) [hereinafter Hovenkamp, *Rationalizing Antitrust's Indirect Purchaser Rule*]; Herbert H. Hovenkamp, *The Rationalization of Antitrust*, 116 Harv. L. Rev. 917, 940–41 (2003) (reviewing Richard A. Posner, Antitrust Law (2d ed. 2001)) [hereinafter, Hovenkamp, *The Rationalization of Antitrust*].

[13] *See, e.g.*, *In re* Static Random Access Memory (SRAM) Antitrust Litig., 264 F.R.D. 603, 606 (N.D. Cal. 2009).

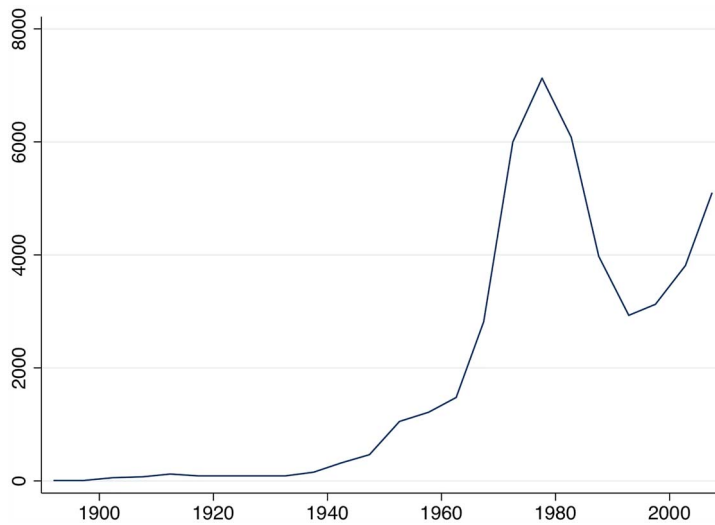



**Figure 1**. Private Antitrust Filings in Federal Courts

*Source*: Crane, *supra* note 4.

begs the question.[14] (And it is ironic, given antitrust law's preference for treble damages.) In any event, the rule, which allows direct purchasers to recover damages sustained by indirect purchasers, exacerbates the concern because some state antitrust laws allow recovery by indirect purchasers themselves.[15]

What remains is claim that dividing damages between direct and indirect purchasers dilutes incentives to sue, thereby weakening private antitrust enforcement. That claim got a boost from scholars who used economic theory[16] and empirical evidence[17] to support it. In particular, Professor William Landes and then-Professor Richard Posner wrote an influential article defending the Supreme Court's rule. According to Landes and Posner, direct purchasers are more efficient enforcers of the antitrust laws than indirect

[14] *See* Gregory J. Werden & Marius Schwartz, Illinois Brick *and the Deterrence of Antitrust Violations—An Economic Analysis*, 35 HASTINGS L.J. 629, 635 (1984) ("[T]he *Illinois Brick* Court failed to set forth clearly why the risk of multiple liability is either socially undesirable or legally impermissible.").

[15] John Cirace, *Apportioning Damages Between Direct and Indirect Purchasers in Consolidated Antitrust Suits:* ARC America *Unravels the* Illinois Brick *Rule*, 35 VILL. L. REV. 283, 287–288 (1990). For an example, see *In re* Flash Memory Antitrust Litig., 643 F. Supp. 2d 1133, 1155–56 (N.D. Cal. 2009).

[16] William M. Landes & Richard A. Posner, *Should Indirect Purchasers Have Standing to Sue Under the Antitrust Laws? An Economic Analysis of the Rule of* Illinois Brick, 46 U. CHI. L. REV. 602, 608–25 (1979); Werden & Schwartz, *supra* note 14, at 639–64.

[17] Jon M. Joyce & Robert H. McGuckin, *Assignment of Rights to Sue Under* Illinois Brick*: An Empirical Assessment*, 31 ANTITRUST BULL. 235 (1986); Landes & Posner, *supra* note 16, at 625–34; Edward A. Snyder, *Efficient Assignment of Rights to Sue for Antitrust Damages*, 28 J.L. & ECON. 469, 475–81 (1985).

purchasers because of their closer proximity to violators.[18] Therefore, concentrating the recovery in direct purchasers is better than dividing it between direct and indirect purchasers.[19]

The economic logic of that claim is questionable. Of course it is true that allowing more plaintiffs and dividing damages between them lowers individual incentives to sue. And it may be true that direct purchasers are better positioned to detect antitrust violations. But that does not imply that the overall probability of suit is greater under a rule that assigns direct purchasers exclusive rights to sue. After all, different parties will have different incentives to sue conditional on damage awards. For example, a direct purchaser may not want to sue an important supplier. The overall probability of suit will depend on the set of parties allowed to sue and their profit incentives—including, but not limited to, damage awards—at the margin.

Empirical evidence for the claim is wanting. Several early studies showed that the Supreme Court's rule had either a positive effect or no effect on the frequency of private antitrust litigation.[20] However, those studies used time-series and pooled cross-section methods that boil down to prior to-and-after comparisons. The studies did not estimate a counterfactual outcome, which the panel structure of the data used in the studies allows. This is not a criticism of choices made by the studies' authors. Rather, the relevant methods were not available or not widely used at the time.

This article presents new evidence that the rule against indirect purchaser plaintiffs reduced private antitrust litigation by twenty percent. To make that finding, it uses the fact that a handful of federal judicial districts adopted the rule ahead of the Supreme Court. Neither a comparison of these districts with others, nor one of a district before and after it adopted the rule, is appropriate, given the possibility of unobserved district or time effects. However, a comparison of the before-and-after difference in districts affected by the Supreme Court's decision with the same difference in districts not affected (a difference in differences) is appropriate, if the two groups exhibit common trends before the decision. Making that comparison, this article finds that the indirect purchaser rule reduced private antitrust litigation by about twenty percent.

Of course, the frequency of suit is only a proxy for private antitrust enforcement. In equilibrium, a high probability of suit lowers the number of violations and therefore the number of suits. However, there are strong reasons to doubt that the estimated reduction in private antitrust litigation is due to fewer violations. For one, that story is not consistent with the trend in price markups, which started to increase around the time private antitrust litigation

[18] Landes & Posner, *supra* note 16, at 609–15. On average, closer proximity results in lower costs of detecting an antitrust violation. *Id.*

[19] *Id.*; *see also* Ill. Brick Co. v. Illinois, 431 U.S. 720, 735 (1977).

[20] Joyce & McGuckin, *supra* note 17, at 258–59; Landes & Posner, *supra* note 16, at 625–34; Snyder, *supra* note 17, at 475–81.

started to decrease.[21] But more important is that a feature of the rule allows us to sort cause from effect. As explained later on, the indirect purchaser rule has two parts. The first part, the result of *Hanover Shoe, Inc. v. United Shoe Machinery Corp.*,[22] allows direct purchasers to recover the full amount of any overcharge (no "defensive" passing-on).[23] The second part, the result of *Illinois Brick*, disallows recovery by indirect purchasers (no "offensive" passing-on).[24] The two cases were decided almost ten years apart. Because *Hanover Shoe* was already in place at the time of *Illinois Brick*, the *Illinois Brick* decision itself could not have increased incentives to sue. And so, by considering the two decisions separately, we can separate partial equilibrium effects from general equilibrium effects. In any event, the rule rests in part on earlier findings that it had a positive effect on the frequency of suit. Because this study finds the opposite, it further erodes the rule's rationale.

The Supreme Court chose to bar private antitrust suits by indirect purchasers, in part because it believed that "the antitrust laws will be more effectively enforced by concentrating the full recovery in ... direct purchasers."[25] Since then, market power has grown according to some measures.[26] For example, Figure 2 shows average markups over marginal cost, which increased threefold over the past 40 years.[27] In response, there have been calls to revise antitrust standards and to "break up" large businesses.[28] Others have advocated for stronger enforcement of existing antitrust standards.[29] Yet, a recent enforcement action against Apple was nearly thrown out of court, after

[21] *See infra* Figure 2.

[22] 392 U.S. 481 (1968).

[23] *Id.* at 494.

[24] Ill. Brick Co. v. Illinois, 431 U.S. 720, 729 (1977).

[25] *Id.* at 735. *See also* Barak D. Richman & Christopher R. Murray, *Rebuilding* Illinois Brick*: A Functionalist Approach to the Indirect Purchaser Rule*, 81 S. CAL. L. REV. 69, 90 (2007) ("At the heart of the debate between the majority and dissent in *Illinois Brick* was the primacy of deterrence over compensation.").

[26] *See, e.g.*, David Autor et al., *The Fall of the Labor Share and the Rise of Superstar Firms*, 135 Q.J. ECON. 645 (2020) (market concentration); Jan De Loecker, Jan Eeckhout & Gabriel Unger, *The Rise of Market Power and the Macroeconomic Implications*, 135 Q.J. ECON. 561 (2020) (markups); Gauti B. Eggertsson, Jacob A. Robbins & Ella Getz Wold, *Kaldor and Piketty's Facts: The Rise of Monopoly Power in the United States* (Nat'l Bureau of Econ. Research, Working Paper No. 24287, 2018) (monopoly rents); Mordecai Kurz, *On the Formation of Capital and Wealth: IT, Monopoly Power and Rising Inequality* (Stanford Inst. for Econ. Policy Research, Working Paper No. 17-016, 2017) (monopoly wealth).

[27] De Loecker, Eeckhout & Unger, *supra* note 26, at 562.

[28] *See, e.g.*, Lina M. Khan, *The Separation of Platforms and Commerce*, 119 COLUM. L. REV. 973 (2019). This is part of a larger debate over the proper scope of antitrust law. *Compare* TIM WU, THE CURSE OF BIGNESS 127–39 (2018) (advocating political as well as economic goals for antitrust law), *with* Joshua D. Wright et al., *Requiem for a Paradox: The Dubious Rise and Inevitable Fall of Hipster Antitrust*, 51 ARIZ. ST. L.J. 293 (2019) (rejecting "big-is-bad" antitrust enforcement), *and* Herbert J. Hovenkamp, *Progressive Antitrust*, 2018 U. ILL. L. REV. 71, 108–11 (advocating "a more-or-less neoclassical antitrust policy with consumer welfare, or output maximization, as its guiding principle," *id.* at 112).

[29] *See generally* JONATHAN B. BAKER, THE ANTITRUST PARADIGM (2019).

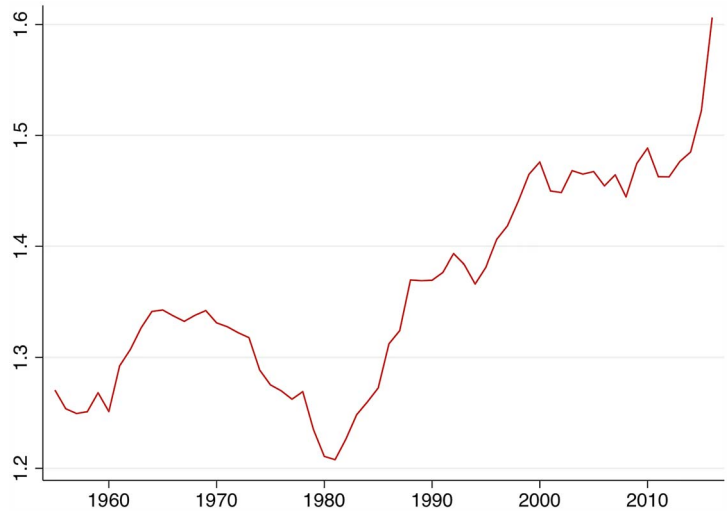



**Figure 2**. Average Markups over Marginal Cost

*Source*: De Loecker, Eeckhout & Unger, *supra* note 26.

Apple claimed that the consumers suing them were not direct purchasers under *Illinois Brick*.[30] A divided Supreme Court let the case proceed.[31] Although five Justices agreed that the consumers suing Apple were direct purchasers, it was a "near miss" that renewed debate over the rule. Thirty states and the District of Columbia as *amici curiae* asked the Supreme Court to overturn *Illinois Brick*,[32] and at oral argument, one Justice asked why not.[33] But the Court kept the rule—for now.

The rule should be abandoned. It is plainly inconsistent with the text of the Clayton Act. It ignores the Act's legislative history. And it is bad antitrust policy. Rather than encourage private antitrust enforcement, the rule closes the courthouse door to plaintiffs who would otherwise be entitled to sue. The Supreme Court should reconsider the rule in an appropriate case, or Congress should amend the Clayton Act to make clear that indirect purchasers may sue for damages.[34]

[30] Apple Inc. v. Pepper, 139 S. Ct. 1514 (2019).

[31] *Id.* at 1525.

[32] Brief for Texas, Iowa, and 29 Other States as Amici Curiae in Support of Respondents, Apple Inc. v. Pepper, 139 S. Ct. 1514 (2019) (No. 17-204).

[33] Transcript of Oral Argument at 16–18, 39–40, Apple Inc. v. Pepper, 139 S. Ct. 1514 (2019) (No. 17-204) (remarks of Justice Gorsuch).

[34] Congress could do so—as a number of states did following *Illinois Brick*, *see, e.g.*, WIS. STAT. § 133.18(1)(a)—by inserting "directly or indirectly" immediately after "any person . . . injured." 15 U.S.C. § 15(a) (2012).

The remainder of this article proceeds as follows. Section I provides background information about the indirect purchaser rule in antitrust law. Section II examines the theoretical effect of the rule, concluding that it is ambiguous. Section III proposes an empirical approach to estimate the effect of the rule. And Section IV presents the results of that approach.

## II. BACKGROUND

### A. The Clayton Act

Section 4 of the Clayton Act provides for private enforcement of the antitrust laws.[35] The text reads:

> [A]ny person who shall be injured in his business or property by reason of anything forbidden in the antitrust laws may sue therefor … and shall recover threefold the damages by him sustained, and the cost of suit, including a reasonable attorney's fee.[36]

This statutory language is broad. It authorizes private actions by "any person" injured as a result of "anything forbidden" by the antitrust laws.[37] And the statute provides a strong remedy—"a powerful financial incentive" to bring suit, and a large penalty for wrongdoing[38]—in the form of threefold, or treble, damages.

The text of the Clayton Act reflects Congress's objectives to compensate for injuries caused by antitrust law violations and to deter future violations.[39] Section 4 slightly modified the private right of action provision contained in the Sherman Act,[40] which "was conceived of primarily as a remedy for '(t)he people of the United States as individuals,' especially consumers," although it had "punitive purposes," too.[41] Clayton Act § 4 expanded the remedy to persons injured by "any antitrust violation."[42] As one member of the House of Representatives explained during the debate on the Clayton Act, the provision "opens the door of justice to every man, whenever he may be injured by those

[35] Clayton Antitrust Act of 1914, ch. 323, § 4, 38 Stat. 730, 731.
[36] 15 U.S.C. § 15(a).
[37] *Id.*
[38] Philip E. Areeda & Herbert Hovenkamp, Antitrust Law: An Analysis of Antitrust Principles and Their Application ¶ 330b (4th ed. 2019 & Supp. 2020).
[39] Brunswick Corp. v. Pueblo Bowl-O-Mat, Inc., 429 U.S. 477, 485 (1977) ("[T]he treble-damages provision [of Section 4], which makes awards available only to injured parties, and measures the awards by a multiple of the injury actually proved, is designed primarily as a remedy."); Zenith Radio Corp. v. Hazeltine Research, Inc., 395 U.S. 100, 130–31 (1969) ("[T]he purpose of giving private parties treble-damage and injunctive remedies was not merely to provide private relief, but was to serve as well the high purpose of enforcing the antitrust laws.").
[40] Sherman Antitrust Act of 1890, ch. 647, § 7, 26 Stat. 209, 210.
[41] *Brunswick Corp.*, 429 U.S. at 486 n.10 (quoting 21 Cong. Rec. 1767–69 (1890) (remarks of Sen. George), and then citing *id.* at 3147 (Sen. George)).
[42] *Id.* (citing H.R. Rep. No. 627, 63d Cong., 2d Sess., 14 (1914)).

who violate the antitrust laws, and gives the injured party ample damages for the wrong suffered."[43]

Despite the plain text of the statute and its legislative history, the Supreme Court closed the door to antitrust damages actions by indirect purchasers. The Court fashioned a rule against indirect purchaser suits not as an ordinary reading of the text of the Clayton Act but as a matter of antitrust policy. It did so with two decisions, *Hanover Shoe* and *Illinois Brick*.

### B. *Hanover Shoe*

The Supreme Court's rule against indirect purchaser plaintiffs has two components. First, indirect purchasers may not sue for antitrust damages. That was the rule of *Illinois Brick*. Second, direct purchasers may recover the entire amount of an illegal overcharge, trebled, even if they "pass on" the overcharge to their customers. That was the rule of a lesser known case, *Hanover Shoe*, decided about ten years earlier.

In *Hanover Shoe*, Hanover, a shoemaker, alleged that United, a supplier of shoe machines, monopolized the shoe machinery market and, as a result, Hanover overpaid for United's machines.[44] Hanover sought damages equal to the full amount of United's overcharge, trebled.[45] United raised as a defense that Hanover was not damaged at all, because Hanover "passed the cost on to its customers" by raising shoe prices.[46] The Supreme Court rejected that defense.

Although Hanover's customers, not Hanover, may have borne the burden of United's overcharge, Hanover paid the high monopoly price, and the Court worried about the "insurmountable" task of determining damages if it allowed such a "passing-on" defense.[47] The Court also believed that allowing the defense would weaken private antitrust enforcement. After all, "ultimate consumers" will often be the ones who bear the burden of high monopoly prices, but they "have only a tiny stake in a lawsuit, and little interest in attempting a class action."[48] According to the Court, if we left private antitrust enforcement up to consumers, "those who violate the antitrust laws ... would retain the fruits of their illegality because no one was available who would bring suit against them."[49] A rule that entitled direct purchasers to the full amount of an illegal overcharge, trebled, seemed the better option.

[43] 51 Cong. Rec. 9073 (1914) (remarks of Rep. Webb); *see also Brunswick Corp.*, 429 U.S. at 486 n.10 (summarizing the House and Senate debates).
[44] Hanover Shoe, Inc. v. United Shoe Machinery Corp., 392 U.S. 481, 483–484 (1968).
[45] *Id.*
[46] *Id.* at 487–88, 488 n.6
[47] *Id.* at 492–93.
[48] *Id.* at 494.
[49] *Id.*

### C. *Illinois Brick*

*Illinois Brick* was the "mirror image" of *Hanover Shoe*.[50] That is, whereas *Hanover Shoe* concerned the defensive use of passing-on, *Illinois Brick* concerned its offensive use. In *Illinois Brick*, the State of Illinois sued Illinois Brick, a concrete block manufacturer, alleging price fixing.[51] Illinois Brick sold concrete blocks to masonry contractors, who in turn sold masonry structures to general contractors. Those general contractors provided services to the State of Illinois. Thus, the State was an ultimate consumer of price-fixed concrete blocks but was not a direct purchaser.[52]

The Supreme Court in *Illinois Brick* reaffirmed the rule of *Hanover Shoe* and decided that the rule required symmetry.[53] If passing-on could not be used defensively, it could not be used offensively either. Therefore, the State of Illinois could not recover from Illinois Brick damages it sustained due to intermediaries passing on Illinois Brick's overcharge. "[T]he overcharged direct purchaser, and not others in the chain of manufacture and or distribution, is the party 'injured in his business or property' within the meaning of [Section 4 of the Clayton Act]."[54]

The Court gave three reasons for concentrating recovery in direct purchasers. First, apportioning damages among direct and indirect purchasers was too complicated.[55] Second, awarding damages to both direct and indirect purchasers risked multiple liability for defendants.[56] And third, dividing damages between direct and indirect purchasers diluted incentives to sue, thereby weakening private enforcement of the antitrust laws.[57]

But there were two possible exceptions. The first was for indirect purchasers with pre-existing fixed cost, fixed quantity contracts.[58] Such purchasers incur the full amount of any overcharge, and there is no need to compute passing-on.[59] The second was for situations in which direct purchasers are "owned or controlled" by their customers or suppliers.[60] Otherwise, a seller could evade antitrust liability by creating a subsidiary.[61]

[50] Landes & Posner, *supra* note 16, at 603.
[51] Ill. Brick Co. v. Illinois, 431 U.S. 720, 726–27 (1977).
[52] *See id.*
[53] *See id.* at 728, 737 n.18.
[54] *Id.* at 729.
[55] *Id.* at 740–42.
[56] *Id.* at 730–31.
[57] *Id.* at 745–46.
[58] *Id.* at 735–36 ("In such a situation, the [direct] purchaser is insulated from any decrease in its sales as a result of attempting to pass on the overcharge, because its customer is committed to buying a fixed quantity regardless of price." *Id.* at 736.).
[59] *See* Areeda & Hovenkamp, *supra* note 38, ¶ 346e.
[60] *Ill. Brick*, 431 U.S. at 736 n.16 (citing Perkins v. Standard Oil Co., 395 U.S. 642, 648 (1969); *In re* W. Liquid Asphalt Cases, 487 F.2d 191, 199 (9th Cir. 1973)); Mid-West Paper Prods. Co. v. Cont'l Grp., 596 F.2d 573, 589 (3d Cir. 1979).
[61] *Mid-West Paper Prods.*, 596 F.2d at 589 ("[T]o bar the purchaser from the subsidiary from suing on the authority of Illinois Brick 'would invite evasion (of the antitrust laws) by the simple

Professor Andrew Gavil, reviewing the papers of Justices Blackmun, Brennan, Marshall, and Powell, provides an inside look at the *Illinois Brick* decision.[62] It was clear from the *Illinois Brick* opinion itself that consistency (or symmetry) with *Hanover Shoe* motivated the *Illinois Brick* majority.[63] But the initial vote at conference was 6–3 in favor of allowing indirect purchasers to sue for damages.[64] Within a week, "owing largely to Justice White's emergence as a leader for the view that indirect purchasers should largely be barred from federal court," the vote reversed, 6–3 in favor of disallowing indirect purchaser plaintiffs.[65] This was despite a persuasive memorandum written by Justice Brennan, arguing that such a rule would "frustrate" both the deterrent and compensatory objectives of the statute and ignore its "literal language."[66] Justice White, who had authored the majority opinion in *Hanover Shoe*, took the pen in *Illinois Brick*, emphasizing the symmetry point.[67] Justice Brennan wrote the principal dissent, deriding the majority's "argument that *Hanover Shoe* should be applied 'consistently,'" as "superficial."[68]

### D. Later Developments

The *Illinois Brick* decision was controversial, and not just among the Justices. At once, there were congressional efforts to override it.[69] The rule's opponents argued that the decision denied compensation to the real victims of price fixing; put too much faith in direct purchasers, who may be beholden to antitrust violators; conflicted with the recent Hart-Scott-Rodino Act, which allowed

expedient of inserting a subsidiary between the violator and the first non-controlled purchaser.'" (quoting Stotter v. Amstar, 579 F.2d 13 (3d Cir. 1978))).

[62] Andrew I. Gavil, *Antitrust Remedy Wars Episode I:* Illinois Brick *from Inside the Supreme Court*, 79 St. John's L. Rev. 553 (2005).

[63] *See Ill. Brick*, 431 U.S. at 731 ("[T]he reasoning of *Hanover Shoe* cannot justify unequal treatment of plaintiffs and defendants with respect to the permissibility of pass-on arguments."); *id.* at 736 ("We are left, then, with two alternatives: either we must overrule *Hanover Shoe* (or at least narrowly confine it to its facts), or we must preclude respondents from seeking to recover on their pass-on-theory."); *id.* at 737 n.18 ("[W]e assume that use of pass-on will be permitted symmetrically, if at all.").

[64] *See* Gavil, *supra* note 62, at 596.

[65] *Id.* at 576, 605. According to the materials surveyed by Professor Gavil, the Justices (and their clerks) were also influenced by a journal article written by Professor Milton Handler and Michael D. Blechman, *see id.* at 616–17 (citing Milton Handler & Michael D. Blechman, *Antitrust and the Consumer Interest: The Fallacy of Parens Patriae and a Suggested New Approach*, 85 Yale L.J. 626 (1976)), even though Handler and Blechman's view was an outlier, *see id.* at 617, 622.

[66] *Id.* at 603–04.

[67] *See Ill. Brick*, 431 U.S. at 731, 736, 737 n.18.

[68] *Id.* at 753 (Brennan, J., dissenting).

[69] H.R. 11942, 95th Cong., 2d Sess. (1978); S. 1874, 95th Cong., 2d Sess. (1978); H.R. 9132, 95th Cong., 1st Sess. (1977); H.R. 8516, 95th Cong., 1st Sess. (1977), H.R. 8359, 95th Cong., 1st Sess. (1977).

state attorneys general to recover antitrust damages on behalf of their citizens; and overstated the complexities of "tracing" indirect purchaser damages.[70] However, the proposed legislation did not pass.[71]

Although Congress never undid *Illinois Brick*, a number of states enacted "*Illinois Brick* repealers," which allowed indirect purchasers to recover damages under state antitrust law.[72] This raised the question whether Section 4 of the Clayton Act, interpreted by the Supreme Court to bar damages actions by indirect purchasers, preempted such laws. The Supreme Court, in *California v. ARC America Corp.*,[73] held that federal law did not preempt state indirect purchaser laws, notwithstanding *Illinois Brick*, because Congress did not intend to occupy the field and because the state indirect purchaser laws did not frustrate Congress's purposes and objectives.[74]

The existence of state indirect purchaser laws is an important part of why *Illinois Brick* is on shaky grounds. To begin, courts—including federal courts—now routinely determine indirect purchaser damages in state law cases that permit them.[75] The damages in these cases are not "virtually unascertainable."[76] Moreover, because some state antitrust laws allow recovery by indirect purchasers, the federal rule, which allows direct purchasers to recover the full overcharge, heightens, rather than lessens, the concern over multiple or conflicting claims to a common fund.[77] What remains is the claim that the rule improves incentives to file suit.

The Supreme Court doubled down on the indirect purchaser rule in *Kansas v. UtiliCorp United, Inc.*[78] In *UtiliCorp*, a regulated public utility had passed on 100 percent of an alleged overcharge by a natural gas pipeline company.[79] (The passing-on was pursuant to state regulations.) Despite complete passing-on,

[70] *See* Edward D. Cavanagh, Illinois Brick*: A Look Back and a Look Ahead*, 17 Loy. Consumer L. Rev. 1, 23–25 (2004).

[71] *Id.* at 26.

[72] Between *Illinois Brick* and *California v. ARC America Corp.*, 490 U.S. 93 (1989) (affirming validity of *Illinois Brick* repealers), at least ten states enacted such laws. *See* Cal. Bus. & Prof. Code § 16750(a); Md. Code Ann., Com. Law § 11-209(b)(2); Mich. Comp. Laws § 445.778; Minn. Stat. § 325D.57; Haw. Rev. Stat. § 480-13(a); Ill. Comp. Stat. § 10/7(2); N.M. Stat. Ann. § 57-1-3(A); R.I. Gen. Laws § 6-36-12(g); S.D. Codified Laws § 37-1-33; Wis. Stat. § 133.18(1)(a). Today, at least half of all states allow indirect purchaser damages actions. Hovenkamp, *Rationalizing Antitrust's Indirect Purchaser Rule*, *supra* note 12, at 16. For an overview, see Areeda & Hovenkamp, *supra* note 38, ¶ 2412d.

[73] 490 U.S. 93 (1989).

[74] *Id.* at 101–03. Justice White once again wrote the majority opinion.

[75] *See, e.g.*, *In re* Static Random Access Memory (SRAM) Antitrust Litig., 264 F.R.D. 603, 606 (N.D. Cal. 2009).

[76] Ill. Brick Co. v. Illinois, 431 U.S. 720, 725 n.3 (1977) (quoting Hanover Shoe, Inc. v. United Shoe Machinery Corp., 392 U.S. 481, 493 (1968)). For a simple method to compute damages, see Hovenkamp, *Rationalizing Antitrust's Indirect Purchaser Rule*, *supra* note 12, at 19–21.

[77] Cirace, *supra* note 15, at 287–288. For an example, see *In re* Flash Memory Antitrust Litig., 643 F. Supp. 2d 1133, 1155–56 (N.D. Cal. 2009).

[78] 497 U.S. 199 (1990).

[79] *See id.* at 204–05.

the Court held that two states, suing as *parens patriae* on behalf of customers, were precluded from suing the pipeline company under *Illinois Brick*.[80] Only the utility, not the customers, could recover antitrust damages,[81] despite the fact that the utility was unlikely to suffer much injury, given inelastic demand by utility customers. Justice White, who at this point had written the majority opinions in *Hanover Shoe*, *Illinois Brick*, and *ARC America*, dissented, along with three other Justices.[82] According to Justice White, the "rigid and expansive holding" in *UtiliCorp* went too far.[83] In an unexpected twist, he described *Illinois Brick* as an "exception" to the more general rule that persons injured by anticompetitive conduct have a cause of action under Clayton Act § 4,[84] which did "not distinguish between classes of customers."[85]

Finally, in a series of decisions concerning arbitration,[86] the Court made it harder for direct purchasers to bring antitrust claims, weakening the supposed deterrent effect of the indirect purchaser rule.[87] In particular, in *American Express Co. v. Italian Colors Restaurant*,[88] the Court held that "a contractual waiver of class arbitration is enforceable under the Federal Arbitration Act," even "when the plaintiff's cost of individually arbitrating a federal statutory claim"—in *Italian Colors*, a federal antitrust claim—"exceeds the potential recovery."[89] So, per *Illinois Brick*, indirect purchasers cannot sue because they do not purchase directly from defendants. But, per *Italian Colors*, direct purchasers often cannot sue because they are subject to mandatory arbitration clauses.[90] Go figure.

[80] *See id.* at 208.

[81] *Id.* at 204. The Court found that the case did not fit under the pre-existing cost-plus contract exception to *Illinois Brick*. *See id*. at 217–18.

[82] *See id.* at 219 (White, J., dissenting).

[83] *Id.* at 225.

[84] *Id.* at 226.

[85] *Id.* at 220.

[86] Am. Express Co. v. Italian Colors Rest., 570 U.S. 228 (2013) (upholding contractual waiver of class arbitration even though cost of individually arbitrating a federal statutory claim exceeded potential recovery); AT&T Mobility LLC v. Concepcion, 563 U.S. 333 (2011) (finding federal preemption of state law rule regarding the unconscionability of class arbitration waivers in consumer contracts); Stolt-Nielsen S.A. v. AnimalFeeds Int'l Corp., 559 U.S. 662 (2010) (holding that a party may not be compelled to submit to class arbitration absent an agreement to do so).

[87] Mark A. Lemley & Christopher R. Leslie, *Antitrust Arbitration and* Illinois Brick, 100 Iowa L. Rev. 2115, 2128–31 (2015).

[88] 570 U.S. 228 (2013).

[89] *Id.* at 231.

[90] An arbitration provision may kill an antitrust claim for a number of reasons. For example, its express terms, or the fact that it requires confidentiality, may prohibit or prevent class arbitration, joinder, informal collaboration to produce evidence, fee shifting, or collateral estoppel. *See id.* at 235 (Kagan, J., dissenting) ("In short, the agreement as applied in this case cuts off not just class arbitration, but any avenue for sharing, shifting, or shrinking necessary costs."); Lemley & Leslie, *supra* note 87, at 2126, 2129–30. *See generally* Einer Elhauge, Essay, *How* Italian Colors *Guts Private Antitrust Enforcement by Replacing It with Ineffective Forms of Arbitration*, 38 Fordham Int'l L.J. 771 (2015).

Which brings us to today. And to the Court's decision last term in *Apple Inc. v. Pepper*.[91] In *Apple*, a group of consumers nearly had their class action antitrust lawsuit against Apple dismissed on the theory that the consumers were not direct purchasers under *Illinois Brick*. At issue was whether the consumers bought smartphone apps directly from Apple, who distributed the apps through its retail App Store, or from app developers, who set the prices of the apps.[92] A bare majority of the Justices agreed that the consumers suing Apple were, in fact, direct purchasers.[93] But it was a "near miss" that renewed debate over the rule.

Several aspects of *Apple* are worth nothing. First, the case highlights the difficulty of applying the indirect purchaser rule to complex transactions like the ones between Apple and its smartphone users.[94] Second, the case shows how, as a result of that difficulty, defendants may try to manipulate the rule to avoid liability.[95] Third, the majority opinion, written by Justice Kavanaugh, emphasized the text of the Clayton Act,[96] and it noted the "the longstanding goal of ... consumer protection in antitrust cases."[97] That was a far cry from *Illinois Brick*. Indeed, the *Apple* decision may signal the Court's willingness to revisit *Illinois Brick*.[98] Note that in *Apple*, thirty states and the District of Columbia as *amici curiae* asked the Supreme Court to overturn *Illinois Brick*,[99] and at oral argument, one Justice asked why not.[100] But the Court kept the rule—for now.

[91] 139 S. Ct. 1514 (2019).

[92] *Id.* at 1519–120.

[93] *Id.* at 1525.

[94] Hovenkamp, *Rationalizing Antitrust's Indirect Purchaser Rule*, *supra* note 12, at 17–18 (arguing that *Apple* overruled Campos v. Ticketmaster Corp., 140 F.3d 1166 (8th Cir. 1998), *sub silentio*).

[95] *See Apple*, 139 S. Ct. at 1522–23 ("Apple's line-drawing does not make a lot of sense, other than as a way to gerrymander Apple out of this and similar lawsuits.").

[96] *See id.* at 1520 ("First is text: ... The broad text of § 4—"any person" who has been "injured" by an antitrust violator may sue—readily covers consumers who purchase goods or services at higher-than-competitive prices from an allegedly monopolistic retailer."); *see also id.* at 1522 ("To the extent that *Illinois Brick* leaves any ambiguity about whether a direct purchaser may sue an antitrust violator, we should resolve that ambiguity in the direction of the statutory text.").

[97] *Id.* at 1524; *see also id.* at 1525 (professing the consumer protection goal of antitrust since the Sherman Act).

[98] Leading Case, Apple Inc. v. Pepper, 133 HARV. L. REV. 382, 382 (2019).

[99] Brief for Texas, Iowa, and 29 Other States as Amici Curiae in Support of Respondents, Apple Inc. v. Pepper, 139 S. Ct. 1514 (2019) (No. 17-204).

[100] Transcript of Oral Argument at 16–18, 39–40, Apple Inc. v. Pepper, 139 S. Ct. 1514 (2019) (No. 17-204) (remarks of Justice Gorsuch). That is not to say that Justice Gorsuch is likely to vote in favor of overruling *Illinois Brick*. His dissent in *Apple* and the fact that he clerked for Justice White, the author of the majority opinions in *Hanover Shoe*, *Illinois Brick*, and *ARC America*, suggest otherwise. Rather, it seems more likely that a coalition of Democratic appointees together with Justice Kavanaugh, who in *Apple* emphasized the text of the Clayton Act, *see supra* note 96, would do so.

## E. Antitrust Injury and Proximate Cause

Before turning to an analysis of the indirect purchaser rule, a word on the rule's relationship to standing and, in particular, the requirements of "antitrust injury" and proximate cause. In addition to satisfying Article III of the Constitution's case or controversy requirement,[101] a private antitrust plaintiff must show:

> (1) that the acts violating the antitrust laws caused — or, in an equity case, threatened to cause — it injury-in-fact to its "business or property"; (2) that this injury is not too remote or duplicative of the recovery of a more directly injured person; (3) that such injury is "antitrust injury," which is defined as the kind of injury that the antitrust laws were intended to prevent and "flows from that which makes defendants' acts unlawful"; and, in a damage case, (4) that the damages claimed or awarded measure such injury in a reasonably quantifiable way.[102]

These elements constitute antitrust standing. Some have a statutory source;[103] others do not.[104]

One of the standing requirements, "antitrust injury," is relevant to the indirect purchaser rule, in part, because the Supreme Court announced the requirement and the rule in the same year. In January 1977, the Court decided *Brunswick Corp. v. Pueblo Bowl-O-Mat, Inc.*,[105] which required plaintiffs to prove antitrust injury, that is, "injury of the type the antitrust laws were intended to prevent and that flows from that which makes defendants' acts unlawful."[106] In *Brunswick*, the Court held that injury-in-fact and an antitrust violation were not enough to award damages to plaintiffs who challenged a merger that prevented their rivals from failing.[107] The plaintiffs claimed that the merger "depriv[ed] [them] of the benefits of increased concentration," namely, "profits they would have realized had competition been reduced."[108] In other words, they alleged injury from more, not less, competition. So antitrust damages were not available to them, even if an antitrust violation

[101] U.S. CONST. art. III, § 2.

[102] AREEDA & HOVENKAMP, *supra* note 38, ¶ 335a; *see also* Associated Gen. Contractors of Cal. v. Cal. State Council of Carpenters, 459 U.S. 519, 536–44 (1983).

[103] *See* 15 U.S.C. § 15(a) ("[A]ny person who shall be injured in his *business or property by reason of* anything forbidden in the antitrust laws ... shall recover threefold the damages by him *sustained*." (emphasis added)); *id.* § 26 ("Any person ... shall be entitled to sue for and have injunctive relief ... against *threatened* loss or damage by a violation of the antitrust laws ... under the same conditions and principles ... [usually employed by] courts of equity." (emphasis added)).

[104] AREEDA & HOVENKAMP, *supra* note 38, ¶ 335a ("[T]he statutory language does not illuminate any 'antitrust injury' requirement or tell us how proximate causation must be defined or how precisely damages must be measured.").

[105] 429 U.S. 477 (1977).

[106] *Id.* at 489.

[107] *Id.* at 488.

[108] *Id.*

caused their injury.[109] To hold otherwise would "divorce[] antitrust recovery from the purposes of the antitrust laws."[110]

Five months later, the Court decided *Illinois Brick*, barring antitrust damages actions by indirect purchasers.[111] In *Illinois Brick*, antitrust injury—as *Brunswick* used the term—was not in dispute. The plaintiffs alleged harm from higher prices due to a price-fixing conspiracy.[112] That is "injury of the type the antitrust laws were intended to prevent and that flows from that which makes defendants' acts unlawful."[113] But *Brunswick* and *Illinois Brick* were decided around the same time. And both affected the availability of private antitrust suits, making *Brunswick* relevant to the empirical analysis of *Illinois Brick*. Section III.A explains how *Brunswick* affects the empirical strategy. In short, it is one of multiple reasons to prefer the methodology of this study, as opposed to those of earlier studies of the indirect purchaser rule.[114]

According to *Illinois Brick*, the indirect purchaser rule is not a rule of "standing" at all.[115] The questions of whether indirect purchasers have standing to sue and whether they may recover damages are "analytically distinct."[116] Thus, the rule against damage recovery by indirect purchasers is perhaps better understood as a construction of Clayton Act § 4, limiting the scope of antitrust

[109] *Id.* at 487–88 (acknowledging that some unlawful mergers may cause harms that are not actionable). How can it be that there was an antitrust violation, if the merger resulted in more, not less, competition? Conduct that violates the antitrust laws may diminish competition in one temporal or market dimension but enhance competition in another. Areeda & Hovenkamp, *supra* note 38, ¶ 337a. Sometimes courts say there was no antitrust injury when they mean there was no antitrust violation, *id.* ¶ 335c, but "*Brunswick* establishes that the private remedial provisions of the antitrust laws are not coterminous with the substantive prohibitions of those laws," *id.* ¶ 337b. *See also id.* ¶ 335f ("[Because] the government[] ... need not prove standing, ... if both government and private suits are rejected, there has been no violation; if only the private suit fails, lack of standing must be the explanation. To test standing in a private suit, therefore, the court should *assume* the existence of a violation and then ask whether the standing elements are shown." (emphasis added)).

[110] *Brunswick*, 429 U.S. at 487.

[111] Ill. Brick Co. v. Illinois, 431 U.S. 720, 728–29 (1977).

[112] *Id.* at 726–27.

[113] *Brunswick*, 429 U.S. at 489.

[114] Earlier studies used time-series and pooled cross-section methods, making them more likely to attribute time (or district) variation in private suits to *Hanover Shoe* or *Illinois Brick*. This study uses a difference-in-differences design to measure the effects of the decisions relative to an estimated counterfactual. As Section III.A explains, in order for *Brunswick* to undermine the difference-in-differences analysis of *Illinois Brick*, there would need to be pre-Supreme Court-decision, lower-court variation in its application that correlates with lower-court variation in the application of the *Illinois Brick* rule just before 1977. But *Brunswick* did not resolve a lower-court split in the way that *Illinois Brick* did, let alone one that correlates with the *Illinois Brick* variation.

[115] 431 U.S. at 728 n.7 ("Because we find *Hanover Shoe* dispositive here, we do not address the standing issue, except to note, as did the Court of Appeals below, that the question of which persons have been injured by an illegal overcharge for purposes of § 4 is analytically distinct from the question of which persons have sustained injuries too remote to give them standing to sue for damages under § 4." (citations omitted)).

[116] *Id.*

liability.[117] But it became common for courts and commentators to refer to the rule as one of standing.[118]

The *Apple* dissenters emphasized the indirect purchaser rule's relationship to proximate cause.[119] But that emphasis conflicts with the availability of injunctive relief to indirect purchasers.[120] And it flouts the modern approach to proximate cause, which rightly focuses on foreseeability.[121] In equity suits and, for that matter, damages suits under state antitrust laws, indirect purchasers readily establish proximate cause.[122] If we must locate the indirect purchaser rule within the elements of antitrust standing, perhaps there is a better fit. For example, the requirement that damages are reasonably ascertainable.[123] Or that the injury is not so remote that there exists a superior plaintiff.[124] After all, these were primary concerns of the *Illinois Brick* majority.[125] But not much depends on the correspondence between the indirect purchaser rule and the elements of antitrust standing, or whether we understand the rule as one of standing at all[126]—the *Illinois Brick* majority did not.[127]

## III. THEORETICAL FRAMEWORK

After the *Illinois Brick* decision, a debate began about the wisdom of the indirect purchaser rule.[128] As part of that debate, several scholars used economic

[117] *See* Hovenkamp, *Rationalizing Antitrust's Indirect Purchaser Rule*, *supra* note 12, at 15 ("Th[e] rule, the Court noted, was not one of 'standing' but rather entitlement to damages." (citing 431 U.S. at 728 n.7)). *See generally* William H. Page, *The Scope of Liability for Antitrust Violations*, 37 STAN. L. REV. 1445 (1985).

[118] *See, e.g.*, Associated Gen. Contractors of Cal. v. Cal. State Council of Carpenters, 459 U.S. 519, 550 (1983) (Marshall, J., dissenting) ("In *Illinois Brick* the Court held that an indirect purchaser has no standing to sue a seller on the theory that overcharges paid to the seller by a direct purchaser were passed on to the indirect purchaser."); Landes & Posner, *supra* note 16. Even Justice White, the author of *Illinois Brick*, eventually used this language. *See* Kansas v. UtiliCorp United, Inc., 497 U.S. 199, 220 (1990) (White, J., dissenting) ("In *Illinois Brick Co. v. Illinois*, we held that certain indirect purchasers of concrete block lacked standing to challenge the manufacturer's business practices under the antitrust laws ...." (citation omitted)).

[119] Apple Inc. v. Pepper, 139 S. Ct. 1514, 1525–31 (2019) (Gorsuch, J., dissenting); *see also id.* at 1520 (majority opinion) (noting that *Illinois Brick* "incorporat[ed] principles of proximate cause into § 4").

[120] *See* Hovenkamp, *Rationalizing Antitrust's Indirect Purchaser Rule*, *supra* note 12, at 15–16 (citing *In re* Warfarin Sodium Antitrust Litig., 214 F.3d 395, 402 (3d Cir. 2000)). *But see Apple*, 139 S. Ct. at 1520 n.1 (declining to address injunctive relief).

[121] *See* Hovenkamp, *Rationalizing Antitrust's Indirect Purchaser Rule*, *supra* note 12, at 26–27.

[122] *See, e.g.*, *In re Warfarin Sodium*, 214 F.3d at 402; *In re* Flash Memory Antitrust Litig., 643 F. Supp. 2d 1133, 1154–55 (N.D. Cal. 2009).

[123] *See* AREEDA & HOVENKAMP, *supra* note 38, ¶ 340.

[124] *Id.* ¶ 339.

[125] Ill. Brick Co. v. Illinois, 431 U.S. 720, 741–47 (1977)

[126] AREEDA & HOVENKAMP, *supra* note 38, ¶ 346c.

[127] *See Ill. Brick*, 431 U.S. at 728 n.7.

[128] *See, e.g.*, Landes & Posner, *supra* note 16; Robert G. Harris & Lawrence A. Sullivan, *Passing on the Monopoly Overcharge: A Comprehensive Policy Analysis*, 128 U. PA. L. REV. 269 (1979); William Landes & Richard Posner, *The Economics of Passing On: A Reply to Harris and Sullivan*,

theory to analyze the rule.[129] Although the approach of this article is empirical, not theoretical, it is helpful to review several theoretical approaches. In doing so, we will see that the net theoretical effect of the rule is ambiguous.[130]

The economic approach tends to stress deterrence, not compensation, and the first economic analysis of the *Illinois Brick* decision—an influential article by Professor William Landes and then-Professor Richard Posner—was no exception.[131] Landes and Posner argued in favor of the rule on the ground that it enhanced deterrence of antitrust violations. They offered three reasons for this conclusion:

> First, the direct purchaser is a more efficient enforcer of the antitrust laws than the indirect purchaser and should therefore be given maximum incentive to bring antitrust suits. Second, the problem of apportioning damages among direct and indirect purchasers would be so costly that it would decrease the incentives of any purchaser to sue. Third, even if direct and indirect purchasers were equally efficient antitrust enforcers, and even if allocation problems could be solved without seriously depleting the recovery pool, deterrence would be weakened if the right to sue were divided among more parties, so that each claim was relatively small.[132]

In Landes and Posner's view, direct purchasers are more efficient enforcers of the antitrust laws than indirect purchasers because of their closer proximity to violators.[133] On average, closer proximity results in lower costs of detecting antitrust violations. And so, direct purchasers are more likely to invest in detection and to detect violations.[134] They should therefore be given maximum incentives to sue.

In retrospect, the focus on investments in detection was somewhat odd. It probably reflected the fact that *Illinois Brick* involved a price-fixing conspiracy.[135] Subsequent decisions made clear that the indirect purchaser rule applies to other situations, such as those involving claims of illegal tying,[136] merger,[137] or monopolization.[138] (*Apple Inc. v. Pepper* is a good example.) The anticompetitive behavior in such situations is not secret. And even when

128 U. Pa. L. Rev. 1274 (1980); Robert G. Harris & Lawrence A. Sullivan, *Passing on the Monopoly Overcharge: A Response to Landes and Posner*, 128 U. Pa. L. Rev. 1280 (1980).

[129] Landes & Posner, *supra* note 16; Snyder, *supra* note 17, at 471–74; Werden & Schwartz, *supra* note 14.

[130] Joyce & McGuckin, *supra* note 17, at 235, 237–38.

[131] Landes & Posner, *supra* note 16, at 605 ("[T]he rule of *Illinois Brick* is preferable if . . . it better deters antitrust violations than the alternative rule, even though it denies full compensation to some persons harmed by the violations.").

[132] *Id.* at 608–09.

[133] *Id.* at 609–15.

[134] *Id. See also* Werden & Schwartz, *supra* note 14, at 639–64.

[135] Ill. Brick Co. v. Illinois, 431 U.S. 720, 726–27 (1977).

[136] *See, e.g.*, Link v. Mercedes-Benz of N. Am., Inc., 788 F.2d 918 (3d Cir. 1986).

[137] *See, e.g.*, Lucas Auto. Eng'g v. Bridgestone/Firestone, 140 F.3d 1228 (9th Cir. 1998).

[138] *See* Apple Inc. v. Pepper, 139 S. Ct. 1514 (2019).

anticompetitive behavior is secret, as with some price fixing, private treble-damage suits tend to follow investigations and prosecutions by the Department of Justice.[139] That was the case in *Illinois Brick*, for example.[140] In other cases, anticompetitive behavior may be detected by chance.[141]

That said, the general point that some private parties may have better information about violations, and therefore private enforcement of law is desirable, is a good one.[142] As Justice John Paul Stevens noted in dissent in *Mitsubishi Motors Corp. v. Soler Chrysler-Plymouth, Inc.*,[143] "[t]he interest in wide and effective [antitrust] enforcement has ... , for almost a century, been vindicated by enlisting the assistance of 'private Attorneys General'; we have always attached special importance to their role because '[e]very violation of the antitrust laws is a blow to the free-enterprise system envisaged by Congress.'"[144] In some cases, direct purchasers may be better suited to the role of private attorneys general because they have better or more information. In other cases, they may not.

As an aside, Landes and Posner's second reason, that apportioning damages is too costly, is not true. Landes and Posner envisioned damages calculations that involved computing passing-on at each stage using estimated elasticities of supply and demand.[145] But a more straightforward approach, suggested by Professor Herbert Hovenkamp, is to measure damages using lost profits for intermediaries and net overcharges for final purchasers.[146] These amounts can be estimated using well-known "yardstick" methods.[147] In any event, lower federal courts routinely determine indirect purchaser damages in state law cases that permit them.[148]

Landes and Posner's third reason, that "deterrence would be weakened if the right to sue were divided among more parties, so that each claim was relatively small,"[149] most closely resembles the reasoning of the Court. Justice Byron White, writing for the majority in *Hanover Shoe*, explained that indirect purchasers "would have only a tiny stake in a lawsuit" and so antitrust violators would be undeterred "because no one was available who would bring suit

[139] *See, e.g.*, *In re* Vitamins Antitrust Litig., 320 F. Supp. 2d 1 (D.D.C. 2004).
[140] *See* Illinois v. Ampress Brick Co., Inc., 536 F.2d 1163, 1164 (7th Cir. 1976), *rev'd sub nom*. Ill. Brick Co. v. Illinois, 431 U.S. 720 (1977).
[141] *See* Werden & Schwartz, *supra* note 14, at 639–40.
[142] *See generally* Steven Shavell, Foundations of Economic Analysis of Law 578–81 (2004).
[143] 473 U.S. 614 (1985).
[144] *Id.* at 653–54 (Stevens, J., dissenting) (quoting Hawaii v. Standard Oil Co., 405 U.S. 251, 262 (1972)).
[145] Landes & Posner, *supra* note 16, at 615–21.
[146] *See* Areeda & Hovenkamp, *supra* note 38, ¶ 346k1; Hovenkamp, *Rationalizing Antitrust's Indirect Purchaser Rule*, *supra* note 12, at 19–21.
[147] *Id.*
[148] *See, e.g.*, *In re* Static Random Access Memory (SRAM) Antitrust Litig., 264 F.R.D. 603, 606 (N.D. Cal. 2009).
[149] Landes & Posner, *supra* note 16, at 609.

again them."[150] Justice White repeated the point in *Illinois Brick*.[151] Dividing damages between direct and indirect purchasers would weaken deterrence in part because indirect purchasers "have little incentive to sue."[152]

Of course it is true that allowing more plaintiffs and dividing damages between them lowers individual incentives to sue. And it may be true that direct purchasers are better positioned to detect antitrust violations. But that does not imply that the overall probability of suit is greater under a rule that assigns direct purchasers exclusive rights to sue. After all, different parties will have different incentives to sue conditional on damage awards. For example, a direct purchaser may not want to sue an important supplier. The overall probability of suit will depend on the set of parties allowed to sue and their profit incentives—including, but not limited to, damage awards—at the margin.[153]

To illustrate, consider the economic model proposed by Professor Edward Snyder.[154] Suppose a plaintiff (or plaintiff class) may sue a defendant. A rational plaintiff will sue if the expected award exceeds expected costs. The expected award is simply the potential award multiplied by the probability of a successful suit. Expected costs are expected recoverable costs, which are incurred only if the plaintiff loses (expected recoverable costs are recoverable costs multiplied by one minus the probability of a successful suit), plus nonrecoverable costs.[155]

Further suppose that two rules are available. The first rule assigns the potential award to direct purchasers. The second rule divides the potential award between direct and indirect purchasers. Whether the first or second rule results in a greater likelihood of suit depends on direct and indirect purchasers' relative probabilities of success, the division of damages (corresponding to the rate of passing-on), and differences in recoverable and nonrecoverable costs. If, for example, direct purchasers' nonrecoverable costs greatly exceed indirect purchasers', or if the rate of passing-on exceeds the ratio of direct to indirect purchasers' probabilities of success, then allowing indirect purchasers to sue and dividing damages results in greater deterrence.[156] If, instead, the

[150] Hanover Shoe, Inc. v. United Shoe Machinery Corp., 392 U.S. 481, 494 (1968).

[151] Ill. Brick Co. v. Illinois, 431 U.S. 720, 745–47 (1977) ("Many of the indirect purchasers barred from asserting pass-on claims under the *Hanover Shoe* rule have such a small stake in the lawsuit that even if they were to recover as part of a class, only a small fraction would be likely to come forward to collect their damages.").

[152] *Id.* at 725–26.

[153] *See* Snyder, *supra* note 17, at 471–74; Werden & Schwartz, *supra* note 14, at 642–45.

[154] Snyder, *supra* note 17, at 471–74.

[155] Using Snyder's notation, *supra* note 17, the plaintiff will sue if $P{\cdot}A > (1{-}P) \cdot RC + NC$, where $P$ is the probability of success, $A$ is the potential award, $RC$ are recoverable costs, and $NC$ are nonrecoverable costs. *Id.* at 471–72.

[156] *Id.* at 472–73, 472 n.11. In the first example, it would be that $P_i{\cdot}S{\cdot}A > (1{-}P_i){\cdot}RC_i + NC_i$ but that $P_d \cdot A < (1{-}P_d){\cdot}RC_d + NC_d$ (and hence $P_d{\cdot}(1{-}S){\cdot}A < (1{-}P_d){\cdot}RC_d + NC_d$), where $S$ is the rate of passing-on and subscripts $i$ and $d$ correspond to indirect and direct purchaser, respectively. In the second example given in the text accompanying this footnote, the second

opposite is true, then the rule against indirect purchaser suits results in greater deterrence.[157]

Conditional on damage awards, why might some indirect purchasers sue but some direct purchasers not sue? The most obvious reason is that a direct purchaser might not want to upset an important supplier. Landes and Posner doubted this possibility,[158] but they were in the minority.[159] Even the *Illinois Brick* Court acknowledged it: "We recognize that direct purchasers sometimes may refrain from bringing a treble-damages suit for fear of disrupting relations with their suppliers."[160] In the model described above, this corresponds to higher nonrecoverable costs for direct purchasers.[161] Or, it could be understood as part of the "award," that is, the difference in profits, resulting from a successful suit, as in the model proposed by Gregory Werden and Professor Marius Schwartz.[162]

In practice, do direct purchasers sometimes decline to sue their suppliers? The answer appears to be yes. Scholars point to the Ticketmaster case and Microsoft follow-on litigation as prominent examples.[163] In *Campos v. Ticketmaster Corp.*,[164] concertgoers sued Ticketmaster alleging monopolization of the market for ticket distribution services (among other antitrust offenses).[165]

inequality in this footnote could be reversed and yet there would still be a deterrent gain since $S > P_d/P_i$.

[157] *Id.* at 473. For an analysis of other possibilities, see *id.* The point is that the net theoretical effect of the indirect purchaser rule is ambiguous.

[158] Landes & Posner, *supra* note 16, at 614.

[159] *See, e.g.*, Roger D. Blair & Jeffrey L. Harrison, *Reexamining the Role of* Illinois Brick *in Modern Antitrust Standing Analysis*, 68 GEO. WASH. L. REV. 1, 33 (1999) ("The direct purchaser's motivation could well depend, as the Court has noted, on the ability of the direct purchaser to pass the overcharge along and its unwillingness to bring an action against suppliers it may have to depend on in the future."); Andrew I. Gavil, *Thinking Outside the* Illinois Brick *Box: A Proposal for Reform*, 76 ANTITRUST L.J. 167, 192 (2009) ("[W]hether the offender is a monopolist or a cartel, by definition it likely possesses market power. Hence, the direct purchaser is likely to have few, if any, alternative sources of supply. Under such circumstances, direct purchasers will be reluctant to risk their relationships with suppliers by initiating major antitrust litigation against them."); Harris & Sullivan, *supra* note 128, at 351–52 ("If the ongoing relationship between the direct purchaser and the potential defendant has any value to the direct purchaser (and often it will have), the direct purchaser will to that extent be deterred from suing."); Hovenkamp, *The Rationalization of Antitrust*, *supra* note 12, at 941 ("Often the rule against indirect purchaser recovery is used to deny a damage action to consumers even when it is clear that the direct purchasers are highly unlikely to sue." (citing Campos v. Ticketmaster Corp., 140 F.3d 1166 (8th Cir. 1998))); *cf.* Snyder, *supra* note 17, at 472 ("Sellers cannot retaliate easily against *indirect* purchasers." (emphasis added)).

[160] Ill. Brick Co. v. Illinois, 431 U.S. 720, 746 (1977).

[161] *See* Snyder, *supra* note 17, at 472 ("Nonrecoverable costs also include retaliation costs in the form of supply cut-offs ....").

[162] *See* Werden & Schwartz, *supra* note 14, at 639–64.

[163] *See, e.g.*, Joseph P. Bauer, *The Stealth Assault on Antitrust Enforcement: Raising the Barriers for Antitrust Injury and Standing*, 62 U. PITT. L. REV. 437, 447 (2001); Gavil, *supra* note 159, at 191–92 n.73; Hovenkamp, *The Rationalization of Antitrust*, *supra* note 12, at 941.

[164] 140 F.3d 1166 (8th Cir. 1998).

[165] *Id.* at 1168.

But the court dismissed the damages claims, holding that the plaintiffs were indirect purchasers within the meaning of *Illinois Brick*.[166] The potential plaintiffs that satisfied the *Illinois Brick* standard—concert venues—never sued.[167] Similarly, in the Microsoft follow-on litigation, no major equipment manufacturer that was a direct purchaser of Windows ever sued Microsoft, even though a district court certified a direct purchaser class and even though several of Microsoft's rivals sued.[168]

More recently, in *Apple Inc. v. Pepper*, a group of consumers sued Apple over its monopoly app store and nearly lost on the theory that independent app developers were the only proper plaintiffs under *Illinois Brick*.[169] Eventually, the app developers sued.[170] But not until after the consumers won a victory on the *Illinois Brick* question in the Supreme Court—more than seven years into the litigation.[171] The alleged indirect purchasers (consumers) led the charge against Apple, and the direct purchasers (app developers) followed on.

Another possibility is that direct purchasers might decline to sue, not because they "fear … disrupting relationships with their suppliers,"[172] but because they share in monopoly rents.[173] This is related to Landes and Posner's idea that in order for direct purchasers to decline to sue, they must be compensated in some way.[174] And if a supplier must "pay off" would-be direct purchaser plaintiffs, such compensation is, in effect, a form of damages.[175] But if direct purchasers suffer little harm (for example, indirect purchasers' demand is relatively inelastic), such compensation could be small relative to the social harm. And the compensation could exist without express collusion.[176]

Here, the Microsoft follow-on litigation is perhaps a good example. Not only did the major equipment manufacturers that were direct purchasers

[166] *Id.* at 1174.

[167] *See* Bauer, *supra* note 163, at 447 ("The consequence of the Eighth Circuit's holding was that the only private parties who had any incentive to bring a lawsuit, and any basis for asserting that they were harmed, were barred from bringing a treble damage action.").

[168] Gavil, *supra* note 159, at 191–92 n.73 (citing *In re* Microsoft Corp. Antitrust Litig., 214 F.R.D. 371 (D. Md. 2003)).

[169] Apple Inc. v. Pepper, 139 S. Ct. 1514, 1519 (2019).

[170] Class Action Complaint, Cameron v. Apple Inc., No. 19-3074 (N.D. Cal. June 4, 2019).

[171] The app developers filed suit less than one month after the *Apple* decision. *See id.*; *Apple*, 139 S. Ct. at 1514.

[172] Ill. Brick Co. v. Illinois, 431 U.S. 720, 746 (1977).

[173] *See* Richman & Murray, *supra* note 25, at 94–95 ("Because illegal cartels and monopolists can share rents with direct purchasers without explicitly including them in an illegal conspiracy … antitrust violators can manipulate the incentives of the only parties who have standing."); Maarten Pieter Schinkel, Jan Tuinstra & Jakob Rüggeberg, *Illinois Walls: How Barring Indirect Purchaser Suits Facilitates Collusion*, 39 RAND J. Econ. 683, 684–85 (2008) ("[A]n upstream cartel can prevent private litigation as long as it assures that its direct purchasers downstream benefit more from the existence of the cartel than they can claim antitrust damages for.").

[174] Landes & Posner, *supra* note 16, at 613–14.

[175] *Id.*

[176] *See* Schinkel, Tuinstra & Rüggeberg, *supra* note 173, at 685 (describing an "arrangement [that] is tacit, simple, and covert").

of Microsoft Windows have ongoing relationships with Microsoft that they did not want to disrupt,[177] the manufacturers also received benefits from Microsoft that might have amounted to sharing in monopoly profits.[178] Despite this possibility, a court refused to allow indirect purchasers to sue Microsoft under a co-conspirator exception.[179]

The point is not that direct purchasers will never sue antitrust violators because they are beholden to them or because they share in monopoly rents. It is not even that direct purchasers' incentives to sue will tend to be lower than indirect purchasers. Far from it. Rather, the point is that incentives to sue will depend on profit incentives, including, but not limited to, damage awards. Such profit incentives will depend on past and future harm from anticompetitive conduct, the availability of alternative sources of buyers or suppliers, access to information, and other factors. The profit incentives will vary from party to party, and from situation to situation, such that the net theoretical effect on the overall probability of suit of a rule that assigns direct purchasers exclusive rights to recover antitrust damages is ambiguous.

But wait. Is what matters the probability of suit? Or the expected sanction? Landes and Posner avoided the issue by assuming that "the judgment approximates the social costs of the violation, adjusted to reflect the probability that the violator will be brought to bar."[180] Perhaps this assumption can be justified on the automatic trebling of antitrust damages,[181] or the preclusive effect of antitrust judgments, such that all plaintiffs collect damages owed after antitrust liability has been established (by the Department of Justice or otherwise).[182] Werden & Schwartz likewise focused on the likelihood of detection.[183] (They assumed that a potential plaintiff who discovered collusion would always file a treble-damages suit.[184]) Snyder, however, analyzed the distinction and observed that a necessary and sufficient condition for the expected sanction to be higher under an alternative rule in which direct and indirect purchasers are allowed to sue is "that direct purchasers would not sue under the [existing] rule and that ... indirect purchasers would sue under the alternative rule."[185]

[177] Hovenkamp, *The Rationalization of Antitrust*, *supra* note 12, at 941.

[178] *See* Dickson v. Microsoft Corp., 309 F.3d 193, 222 (4th Cir. 2002) (Gregory, J., dissenting); Areeda & Hovenkamp, *supra* note 38, ¶ 346f ("In exchange for [exclusive] agreements the OEMs allegedly received various benefits, including discounts, cooperation in development, and greatly enhanced computer sales via the continuous upgrading demanded by Microsoft Window's spiraling hardware requirements.").

[179] Hovenkamp, *The Rationalization of Antitrust*, *supra* note 12, at 941 n.128 (citing *Dickson*, 309 F.3d at 214–15).

[180] Landes & Posner, *supra* note 16, at 608 & n.21.

[181] *Cf. id.*

[182] *But see* Gavil, *supra* note 159, at 191–92 n.73 (noting Microsoft case); Hovenkamp, *The Rationalization of Antitrust*, *supra* note 12, at 941–42 (same).

[183] *See* Werden & Schwartz, *supra* note 14, at 649–50, 662–64.

[184] *See id.* at 641.

[185] Snyder, *supra* note 17, at 472.

To summarize, the net theoretical effect of a rule that bars recovery by indirect purchasers and allows direct purchasers to recover the full amount of any overcharge is ambiguous. On the one hand, direct purchasers may have better information about violations, making them more efficient private enforcers of the antitrust laws. And concentrating recovery may provide greater overall incentives to sue. On the other hand, anticompetitive behavior may not be hidden, or it may be established by a public enforcement action, such that direct purchasers do not have any informational advantages. And indirect purchasers, individually or collectively, may have stronger incentives to sue, for example, if they suffer more harm, or if direct purchasers fear disrupting relations with an important supplier (by hypothesis, one with market power), or they share in monopoly rents. Ultimately, the probability of suit and the expected sanction will depend on the set of parties allowed to sue and their profit incentives, including, but not limited to, damage awards.

## IV. EMPIRICAL METHODOLOGY

Given that the net theoretical effect of the Supreme Court's rule against antitrust recovery by indirect purchasers is ambiguous, the rule is a good candidate for empirical study. This section describes the empirical strategy, data, and statistical model used to evaluate the Court's rule. The basic approach is to use lower federal courts' adoption of the *Hanover Shoe* and *Illinois Brick* rules ahead to the Supreme Court to determine whether judicial districts were affected or not affected by the Court's decisions, and then to use that fact to measure the effects of the decisions on private antitrust litigation. The method, a "difference-in-differences" design, is akin to a natural experiment.[186] The approach is described in greater detail below.

### A. Empirical Strategy

To evaluate the effect of the indirect purchaser rule on the frequency of private antitrust litigation, this article uses the fact that a handful of federal judicial districts adopted the rule ahead of the Supreme Court.[187] That was true for both *Hanover Shoe* and *Illinois Brick*. Federal judicial districts are classified

[186] *See, e.g.*, David Card & Alan B. Krueger, *Minimum Wages and Employment: A Case Study of the Fast-Food Industry in New Jersey and Pennsylvania*, 84 Am. Econ. Rev. 772 (1994).

[187] District court decisions are not binding on the district court in the same way that decisions from higher courts are. For that reason, when this article says that a district "adopted" a rule, it means "employed" or "followed," rather than "established," if the relevant decision was by a district court. That said, district court decisions are persuasive authority within the district. And they indicate whether defensive or offensive passing-on was allowed, absent binding authority from a higher court. Following Landes & Posner, *supra* note 16, at 627–28, and Snyder, *supra* note 17, at 475–77, this article classifies judicial districts at the district level.

according to whether they adopted the relevant rule, the opposite rule, or no rule ahead of the Supreme Court.[188]

Figure 3 displays the status of the *Hanover Shoe* rule (barring defensive passing-on) at the time of the Supreme Court's *Hanover Shoe* decision in 1968. The figure shows all 94 federal judicial districts, except Puerto Rico and other territories of the United States.[189] The districts' statuses with respect to defensive passing-on evolved over the years leading up to *Hanover Shoe*, and this variation is accounted for in the data set and the statistical analysis. The figure shows a snapshot in 1968, just before the *Hanover Shoe* decision. As the figure shows, the Third Circuit, Seventh Circuit, Southern District of New York, and Western District of Washington adopted the *Hanover Shoe* rule ahead of the Supreme Court. The First Circuit, Fourth Circuit, Eighth Circuit, and Ninth Circuit (excluding the Western District of Washington[190]) adopted the opposite rule, namely, that defensive passing-on was allowed. All other judicial districts had no rule in place at the time of the Court's *Hanover Shoe* decision.

Figure 4 displays the analogous classifications for *Illinois Brick* (barring offensive passing-on). Again, there was variation in the timing and location of the adoption of the *Illinois Brick* rule ahead of the Supreme Court's *Illinois Brick* decision in 1977, and this variation is accounted for in the statistical analysis. (For instance, a district court might adopt a rule and the relevant court of appeal might adopt the same rule, expanding the number of districts with the rule. Or the court of appeal might adopt the opposite rule, changing the rule in effect in the district.) The figure displays a snapshot in 1977. At the time of the *Illinois Brick* decision, the Third Circuit, District of Columbia, Northern District of Ohio, Eastern District of Michigan, and District of Colorado already had the *Illinois Brick* rule in place.[191] The Second Circuit,

[188] The classifications are drawn from: Illinois v. Ampress Brick Co., 67 F.R.D. 461, 464 n.1 (N.D. Ill. 1975), *rev'd on other grounds*, 536 F.2d 1163 (7th Cir. 1976), *rev'd sub nom*. Ill. Brick Co. v. Illinois, 431 U.S. 720 (1977); S. Rep. No. 95-934, at 10–11 (1978); Landes & Posner, *supra* note 16, at 626–27; Snyder, *supra* note 17, at 475 tbl.1, 476 tbl.2; and independent research.

[189] At the time of the Supreme Court's decision in *Hanover Shoe* in 1968, one of these districts—the Middle District of Louisiana—did not yet exist. The next section describes how the empirical analysis handles that and related issues.

[190] In 1964, the Western District of Washington rejected a passing-on defense, Public Util. Dist. No. 1 v. Gen. Elec. Co., 230 F. Supp. 744, 747 (W.D. Wash. 1964), despite the Ninth Circuit accepting such a defense about a decade prior, Wolfe v. Nat'l Lead Co., 225 F.2d 427, 433 (9th Cir. 1955) ("If appellants did not absorb such increase in price but passed it on to their customers, they could not recover in a treble damage action brought under the antitrust act.").

[191] Landes & Posner, *supra* note 16, at 627, included the Eighth Circuit and the Southern District of New York in this group. But, as the source they relied on, *id.* at 627 n.51 (citing Illinois v. Ampress Brick Co., 67 F.R.D. 461, 464 n.1 (N.D. Ill. 1975)), indicates, the Eighth Circuit in fact vacated the relevant district court order interpreting *Hanover Shoe* to limit recovery to direct purchasers. *See* Minnesota v. U.S. Steel Corp., 438 F.2d 1380 (8th Cir. 1971). And the Southern District of New York went back on the *Illinois Brick* rule (in fact, it adopted the opposite rule) in 1975, just months before the Second Circuit went the same way. *See In re* Master Key Antitrust Litig., 528 F.2d 5 (2d Cir. 1975); Carnivale Bag Co. v. Slide-Rite Mfg. Corp. 395 F. Supp. 287 (S.D.N.Y. 1975). In addition, Landes & Posner did not include the

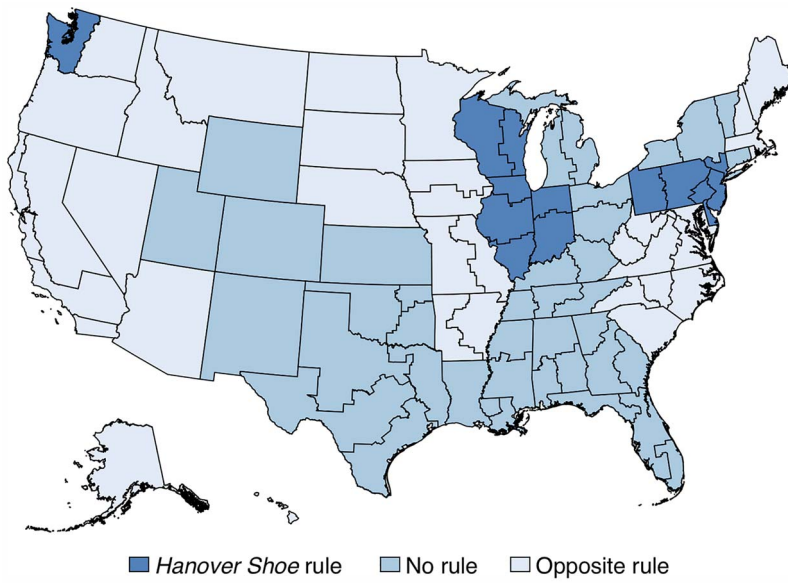



**Figure 3**. *Hanover Shoe* Rule Prior to *Hanover Shoe* (1968)

*Source*: *See* sources cited *supra* note 188; *see also* Commonwealth Edison Co. v. Allis-Chalmers Mfg. Co., 335 F.2d 203 (7th Cir. 1964); Public Util. Dist. No. 1 v. Gen. Elec. Co., 230 F. Supp. 744 (W.D. Wash. 1964); Atlantic City Elec. Co. v. Gen. Elec. Co., 226 F. Supp. 59 (S.D.N.Y. 1964); Hanover Shoe Co. v. United Shoe Machinery Corp., 281 F.2d 481 (3d Cir.) (1960) (per curiam); Beacon Fruit & Produce Co. v. H. Harris & Co., 260 F.2d 958 (1st Cir. 1958) (per curiam); Miller Motors, Inc. v. Ford Motor Co., 252 F.2d 441 (4th Cir. 1958) (dictum); Wolfe v. Nat'l Lead Co., 225 F.2d 427 (9th Cir. 1955); Clark Oil Co. v. Phillips Petroleum Co., 148 F.2d 580 (8th Cir. 1945); Nw. Oil Co. v. Socony-Vacuum Oil Co., 138 F.2d 967 (7th Cir. 1943).

Seventh Circuit, Eighth Circuit, Ninth Circuit, and Southern District of Florida had adopted the opposite rule, allowing offensive passing-on. The remaining judicial districts had not adopted either rule.

For both the *Hanover Shoe* and *Illinois Brick* rules, districts with the opposite rule or no rule were "treated," or affected, by the relevant Supreme Court decision. (The intensity of treatment was higher for districts with the opposite rule.) Districts with the rule already in place form a "control" group. Of course, whether a district adopted the rule ahead of the Supreme Court is not

District of Columbia or the Eastern District of Michigan in the *Illinois Brick* group, when those districts should have been included. *See* Stern v. Lucy Webb Hayes Nat'l Training Sch., 367 F. Supp. 536 (D.D.C. 1973); City of Detroit v. Am. Bakeries Inc., No. 33046 (E.D. Mich. 1971) (unreported decision summarized in 58 F.R.D. 481 (S.D.N.Y. 1973)). Snyder, *supra* note 17, did not include the Northern District of Ohio or the District of Colorado. *See* City of Akron v. Laub Baking Co., 1972 Trade Cas. P 73,930 (N.D. Ohio 1972); City & Cty. of Denver v. Am. Oil Co., 53 F.R.D. 620 (D. Colo. 1971).

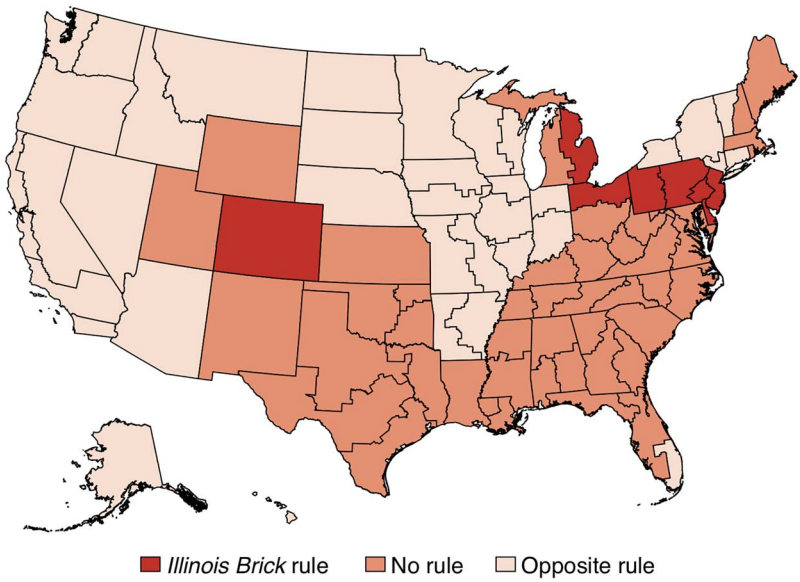



**Figure 4**. *Illinois Brick* Rule Prior to *Illinois Brick* (1977)

*Source*: *See* sources cited *supra* note 188; *see also* Illinois v. Ampress Brick Co., Inc., 536 F.2d 1163 (7th Cir. 1976), *rev'd sub nom.* Ill. Brick Co. v. Illinois, 431 U.S. 720 (1977); Carnivale Bag Co. v. Slide-Rite Mfg. Corp., 395 F. Supp. 287 (S.D.N.Y. 1975); *In re* Master Key Antitrust Litig., 528 F.2d 5 (2d Cir. 1975) (dictum); *In re* W. Liquid Asphalt Cases, 487 F.2d 191 (9th Cir. 1973); Stern v. Lucy Webb Hayes Nat'l Training Sch., 367 F. Supp. 536 (D.D.C. 1973); Donson Stores, Inc. v. Am. Bakeries Co., 58 F.R.D. 481 (S.D.N.Y. 1973); *In re* Master Key Antitrust Litig., 1973–2 Trade Cas. P 74,680 (D. Conn. 1973) (alternative holding); *In re* W. Liquid Asphalt Cases, 350 F. Supp. 1369 (N.D. Cal. 1972), *rev'd*, 487 F.2d 191 (9th Cir. 1973); S. Gen. Builders, Inc. v. Maule Indus. Inc., 1973-1 Trade Cas. P 74,484 (S.D. Fla. 1972); Balmac, Inc. v. Am. Metal Prods. Corp., 1972 Trade Cas. P 74,235 (N.D. Cal. 1972); City of Akron v. Laub Baking Co., 1972 Trade Cas. P 73,930 (N.D. Ohio 1972); Mangano v. Am. Radiator & Standard Sanitary Corp., 438 F.2d 1187 (3d Cir. 1971); City & Cty. of Denver v. Am. Oil Co., 53 F.R.D. 620 (D. Colo. 1971); City of Detroit v. Am. Bakeries Inc., No. 33046 (E.D. Mich. 1971) (unreported decision summarized in 58 F.R.D. 481 (S.D.N.Y. 1973)); Phila. Hous. Auth. v. Am. Radiator & Standard Sanitary Corp., 323 F. Supp. 381 (E.D. Pa. 1970); Phila. Hous. Auth. v. Am. Radiator & Standard Sanitary Corp., 50 F.R.D. 13 (E.D. Pa. 1970), *aff'd sub nom.* Mangano v. Am. Radiator & Standard Sanitary Corp., 438 F.2d 1187 (3d Cir. 1971); United Egg Producers v. Bauer Int'l Corp., 312 F. Supp. 319 (S.D.N.Y. 1970); Armco Steel Corp. v. North Dakota, 376 F.2d 206 (8th Cir. 1967); Washington v. Am. Pipe & Construction Co., 274 F. Supp. 961 (W.D. Wash. 1967); Missouri v. Stupp Bros. Bridge & Iron Co., 248 F. Supp. 169 (W.D. Mo. 1965); Commonwealth Edison Co. v. Allis-Chalmers Mfg. Co., 315 F.2d 564 (7th Cir. 1963).

random. For that reason, a simple comparison between treated and control districts is not appropriate. Such a comparison ignores potential unobserved district effects. Similarly, a simple comparison between a district prior to and

after it adopted the rule is also not appropriate. Such a comparison ignores potential unobserved time effects. However, a comparison of the before-and-after difference in districts affected by a Supreme Court decision with the same difference in districts not affected (a difference in differences) is appropriate, if the two groups exhibit common trends before the decision.[192] Fortunately, the common trends assumption can be tested using the data, and the results of that test are presented in Section IV.

Potential unobserved district or time effects include: economic conditions, such as the 1973–1975 recession; public enforcement, such as the new antitrust sanctions enacted in 1974[193] or the enforcement priorities of different administrations[194]; and contemporaneous Supreme Court decisions, such as *Brunswick*[195] or *Continental T.V., Inc. v. GTE Sylvania Inc.*[196] Like prior studies,[197] the empirical strategy here controls for public enforcement at the district level.[198] And, as described in Section III.C, it controls for district and time fixed effects. The latter absorb economic and legal conditions at the national level, such as new federal antitrust legislation or enforcement priorities. To estimate the effects of *Hanover Shoe* and *Illinois Brick*, then, the strategy uses variation in their application across districts *and* time, comparing the before-and-after difference in districts affected by a particular decision with the same difference in districts not affected.

To illustrate, consider *Brunswick* and *Sylvania*. *Brunswick* established the "antitrust injury" requirement, as explained in Section I.E, and *Sylvania* held that nonprice vertical restraints must be judged under the rule of reason.[199] Both cases were decided in 1977, the same year as *Illinois Brick*. But for either decision to undermine the difference-in-differences analysis of *Illinois Brick*, there would need to be pre-Supreme Court-decision, lower-court variation in their application that correlates with the lower-court variation in the application of the *Illinois Brick* rule just before 1977. That is, the lower-court variation would have to map onto the variation in Figure 4. Of course, the conduct in *Sylvania* was previously *per se* illegal under the Supreme Court's

[192] *See generally* Joshua D. Angrist & Jörn-Steffen Pischke, Mostly Harmless Econometrics: An Empiricist's Companion 221–43 (2009).

[193] *See* Antitrust Procedures and Penalties Act, Pub. L. No. 93-528, § 3, 88 Stat. 1708 (1974) (making criminal antitrust violations felonies).

[194] *See, e.g.*, Donald I. Baker, *To Indict or Not to Indict: Prosecutorial Discretion in Sherman Act Enforcement*, 63 Cornell L. Rev. 405, 410–18 (1978) (describing patterns of antitrust prosecutions). *See generally* William E. Kovacic, *The Modern Evolution of U.S. Competition Policy Enforcement Norms*, 71 Antitrust L.J. 377 (describing the pendulum narrative of antitrust enforcement and offering an alternative account).

[195] 429 U.S. 477 (1977).

[196] 433 U.S. 36 (1977).

[197] *See* Landes & Posner, *supra* note 16, at 628–31; Snyder, *supra* note 17, at 477–78.

[198] *See infra* Section III.C. It also controls for private nonantitrust civil litigation, *see id.*, which may reflect district- or time-varying economic conditions or trends in civil litigation, *see* Landes & Posner, *supra* note 16, at 628–31; Snyder, *supra* note 17, at 478.

[199] 433 U.S. at 59.

decision in *United States v. Arnold, Schwinn & Co.*,[200] so there was no lower-court variation just before 1977. And *Brunswick* did not resolve a lower-court split in the way that *Illinois Brick* did, let alone one that correlates with variation in prior application of the *Illinois Brick* rule.

The measured outcome is the number of private antitrust lawsuits filed in federal courts. The number of suits is a proxy for private antitrust enforcement. (It is the proxy used in prior studies of the indirect purchaser rule.[201]) It is an imperfect proxy, to be sure. After all, in equilibrium, a high probability of suit lowers the number of violations and therefore the number of suits.[202] Prior studies acknowledged this problem but used the proxy anyway.[203] As a practical matter, the number of suits is probably the best proxy we have. Common measures of market power, for example, concentration or price markups, do not exist with enough geographic detail for the time period studied.[204]

But what about the equilibrium effect of stronger private antitrust enforcement? That is, the possibility that stronger enforcement results in fewer violations and therefore fewer suits? Well, there is a feature of the indirect purchaser rule that allows us to sort cause from effect. The feature is that the indirect purchaser rule has two components. And the two components were implemented in sequence. In *Hanover Shoe*, the Supreme Court allowed direct purchasers to recover the full amount of any overcharge (no defensive passing-on).[205] Then, in *Illinois Brick*, the Court disallowed recovery by indirect purchasers (no offensive passing-on).[206] Because *Hanover Shoe* was already in place at the time of *Illinois Brick*, the *Illinois Brick* decision itself could not have increased incentives to sue. And so, by considering the two decisions separately, we can separate partial equilibrium effects from general equilibrium effects.

For example, suppose that the *Illinois Brick* decision led to a decrease in the frequency of private antitrust litigation. Because the decision, which forms one-half of the indirect purchaser rule (no offensive passing-on), could not

[200] 388 U.S. 365 (1967).

[201] *See* Landes & Posner, *supra* note 16; Snyder, *supra* note 17.

[202] *See* Joyce & McGuckin, *supra* note 17, at 240; Landes & Posner, *supra* note 16, at 627–28; Snyder, *supra* note 17, at 478. Further, private suits are not identical in their deterrent effect, *see* Snyder, *supra* note 17, at 477, and multiple suits may be filed in response to a single violation, *see* Joyce & McGuckin, *supra* note 17, at 240; Landes & Posner, *supra* note 16, at 627. Then again, multiple suits filed in response to a single violation may indicate the strength of the case or the amount of damages and, therefore, the expected sanction. *Cf.* Joyce & McGuckin, *supra* note 17, at 241 ("We offer as a measure of [the likelihood that private actions will lead to punishment] the extent to which private civil cases follow on the heels of criminal price-fixing cases ....").

[203] *See* Landes & Posner, *supra* note 16, at 627–28; Snyder, *supra* note 17, at 477–78.

[204] Even if data on concentration or price markups did exist with enough geographic detail for the time period studied, there would be additional problems. For example, concentration may represent lawfully obtained market share. And proper market definitions are unlikely to align with federal judicial districts.

[205] Hanover Shoe, Inc. v. United Shoe Machinery Corp., 392 U.S. 481, 494 (1968).

[206] Ill. Brick Co. v. Illinois, 431 U.S. 720, 729 (1977).

have increased incentives to sue, we can infer that the decrease in the frequency of suit reflects less enforcement, not fewer violations. Such a result would suggest that, in the short term, the direct effect of the Court's rule on the frequency of suit predominates. This makes intuitive sense. Litigation has to respond right away to new rules of standing and entitlement to damages. Business behavior is more likely to respond over time as litigation under the new rules takes shape.

Finally, there is the possibility that plaintiffs "forum shop." If plaintiffs can freely choose where to sue, a rule favorable to plaintiffs will attract suits from other districts. In that case, a difference-in-differences analysis of a Supreme Court decision may overestimate the effect of the decision. After all, if the Court establishes the rule nationwide, additional suits in districts affected by the Court's decision may reflect, in part, a return of suits from districts with the rule already in place. (The same logic applies to a rule unfavorable to plaintiffs. Forum shopping would lead to an overestimate of the rule's effect.) Of course, a return of suits would imply that forum shopping is not free. Although today antitrust plaintiffs may find jurisdiction and venue in multiple circuits, that was somewhat less common in the 1960s and 1970s. (It is not clear, for example, that the *Illinois Brick* case could have found venue outside the Seventh Circuit.) In any event, as Figure 4 shows, the districts that adopted the *Illinois Brick* rule ahead of the Supreme Court were small enough in number and population that, even if we made the extreme assumption that all private suits that left those districts went to districts with the opposite rule, that would not come close to accounting for the eventual drop (estimated in Section IV) in districts with the opposite rule, which include the most populous and antitrust-active districts.

### B. Data

The data are derived from appendix tables contained in annual reports published by the Administrative Office of the U.S. Courts (AOUSC), for the analysis of *Hanover Shoe*, and from the Integrated Database (IDB) of civil case filings published by the Federal Judicial Center, for the analysis of *Illinois Brick*. Both data sources cover all civil cases filed in federal court, but the IDB data do not begin until 1970, requiring some data to be collected from the AOUSC reports.

The AOUSC reports contain appendices with statistical tables, one of which displays civil cases commenced in U.S. district courts by nature of suit and district.[207] Although the exact format of the tables changed from year to year, once combined, the reports contain information on the number of antitrust cases commenced in federal district courts by the United States and by private

[207] *See, e.g.*, 1965 ADMIN. OFFICE OF THE U.S. COURTS. ANN. REP. 182 tbl.C3.

parties for the ten-year period from 1964 to 1973.[208] These data are used to study the effects of *Hanover Shoe*. The statistical tables are organized by fiscal year, beginning on July 1 and ending on June 30. Following Snyder,[209] the judicial decisions are organized by calendar year, but they "take effect" in the following year. For example, *Hanover Shoe* was decided in June 1968. In the data set, the *Hanover Shoe* rule is assigned to fiscal year 1969, which begins on July 1, 1968, and later fiscal years. This assignment of decisions to fiscal years means decisions lead fiscal years by at most six months. And it ensures that decisions apply to fiscal years if they are in effect for more than half of the fiscal year.

Several judicial districts were added or reorganized during the time period. In October 1965, the Eastern and Western Districts of South Carolina were combined into a single district.[210] The Eastern and Central Districts of California were created in March 1966.[211] And the Middle District of Louisiana was created in December 1971.[212] To avoid mechanical changes in the number of suits in these districts, the districts are aggregated. (That is, for the analysis of *Hanover Shoe*, there is one district for South Carolina, one district for California, and one district for Louisiana.) This is consistent with the approach taken by Snyder.[213]

The IDB data begin in 1970 and cover all civil cases filed in federal court.[214] These data are used to study the effects of *Illinois Brick*. The data are at the case level. Nature of suit information allows antitrust cases to be identified, and jurisdiction information and party names allow private antitrust cases to be distinguished from those brought by the Federal Trade Commission or the Department of Justice. Cases originally filed in the federal district courts are aggregated at the district level by month, according to the date of filing. Because the resulting data set is monthly, there are no fiscal year issues. Rules are assumed to be in place in the month following the relevant judicial decision.

Unfortunately, neither the AOUSC data nor the IDB distinguish between suits filed by direct and indirect purchasers. However, this limitation is minor because the argument for the rule against indirect purchasers is that, by increasing direct purchasers' incentives, the rule raises the overall probability of suit. Obviously, indirect purchaser suits were not allowed after *Illinois Brick*, so if the analysis showed an increase in total suits, we could conclude that

[208] For an example, see Figure A.3.

[209] Snyder, *supra* note 17, at 478 n.23.

[210] Pub. L. No. 89-242, 79 Stat. 951 (1965).

[211] Pub. L. No. 89-372, 80 Stat. 75 (1966).

[212] Pub. L. No. 92-208, 85 Stat. 741 (1971).

[213] *See* Snyder, *supra* note 17, at 476–77. Except, here, there is not further aggregation of districts into circuits. Note that nine judicial districts that were part of the Fifth Circuit split off to form the Eleventh Circuit in October 1981. Pub. L. No. 96-452, 94 Stat. 1994 (1980). Because *Hanover Shoe* and *Illinois Brick* were settled law at that point, and because the unit of observation is at the district level, the split does not affect the analysis.

[214] *Integrated Database (IDB)*, Fed. Jud. Ctr., https://www.fjc.gov/research/idb.

an increase in direct purchaser suits more than offset any decrease in indirect purchaser suits.

In total, the AOUSC data include 850 observations over fiscal years 1964–1973. The IDB data include 10,800 observations over calendar years 1973–1982. These time periods represent symmetric ten-year intervals centered around the *Hanover Shoe* and *Illinois Brick* decisions, respectively. (The analysis considers five- and seven-year intervals, in addition to ten-year intervals.) The AOUSC data are at the district-year level, and the IDB data are at the district-month level. Table A.1 displays summary statistics for the two data sets.

### C. Statistical Model

This section describes the statistical model used to analyze the effects of the *Hanover Shoe* and *Illinois Brick* rules. Readers with little interest in statistics may rely on Section III.A to understand the empirical strategy. What follows provides greater detail about the model specifications underlying the results presented in Section IV.

Because the measured outcome is the number of private antitrust suits, the statistical model used is a Poisson regression.[215] This type of regression is appropriate for count variables. (The results are robust to using other regression models for nonnegative integer outcome variables, such as negative binomial regression.) Suppose that the number of private antitrust lawsuits filed in district $i$ at time period $t$, $y_{it}$, follows a Poisson distribution with mean $\mu_{it}$. That is, $y_{it} \sim P(\mu_{it})$. And suppose that the mean depends on a set of explanatory variables, including the presence or absence of a rule assigning direct purchasers exclusive rights to recover damages. Then the Poisson regression uses maximum likelihood estimation to estimate the model:

$$\log(\mu_{it}) = \beta_1 \cdot Rule_{it} + \beta_2 \cdot NoRule_{it} + \beta_3 \cdot Government_{it} + \beta_4 \cdot Civil_{it} + \delta_i + \eta_t,$$

where $Rule_{it}$ indicates whether the *Hanover Shoe* or *Illinois Brick* rule is in effect (depending on the regression) in district $i$ at time $t$; $NoRule_{it}$ indicates whether no rule is in effect; $Government_{it}$ is the number of government antitrust cases; $Civil_{it}$ is the number of private nonantitrust civil cases; and $\delta_i$ and $\eta_t$ are district and time fixed effects, respectively.[216]

Regressions that include both $Rule_{it}$ and $NoRule_{it}$ as independent variables measure the effects of the relevant rule (or no rule) relative to the opposite rule. That is, the opposite rule is the base category. So, for example, if a regression includes $Illinois\ Brick_{it}$ (no offensive passing-on) and $NoRule_{it}$ as independent

[215] For an introduction to Poisson regression, see A. Colin Cameron & Pravin K. Trivedi, Regression Analysis of Count Data (2d ed. 2013).

[216] The Poisson regression is a generalized linear model with Poisson error and log link. The log link exponentiates the linear independent variables; it does not log transform the dependent variable.

variables, the base category is the opposite rule (offensive passing-on allowed). Regressions that omit $NoRule_{it}$ as an independent variable measure the effects of the relevant rule relative to no rule or the opposite rule. That is, no rule or the opposite rule is the base category.

For the analysis of *Hanover Shoe*, which uses annual data, the time fixed effects are year fixed effects. For the analysis of *Illinois Brick*, which uses monthly data, the time fixed effects are month-by-year fixed effects. Because of the inclusion of district and time fixed effects ($\delta_i$ and $\eta_t$) and the definition of the treatment indicator ($Rule_{it}$), the coefficient on the treatment indicator is a difference-in-differences estimate.[217] It is a comparison of the average difference in private antitrust litigation before and after a rule change in districts affected by the change with the same difference in districts not affected.

The results reported in the next section are semielasticities: proportional changes in the number of suits in response to discrete changes in the relevant rule. So, for example, a semielasticity of $-0.20$ corresponds to a twenty percent reduction in the frequency of private antitrust litigation. Statistical significance is determined using standard errors that are robust to within-district serial correlation. That is, the standard errors account for heteroskedasticity across "clusters" of observations (in this case, judicial districts). As the reported coefficients are semielasticities, standard errors are computed using the delta method.

## V. RESULTS

This section presents the results of the empirical approach described in Section III. The results can be summarized as follows. Whereas the *Hanover Shoe* rule had no statistically significant effect on private antitrust litigation, the *Illinois Brick* rule had a statistically significant negative effect, reducing private antitrust litigation by about twenty percent. The results are robust to including different control variables and years of data. Graphical evidence confirms the main results, and it further indicates that judicial districts affected and not affected by the decisions exhibit common trends before the decisions, suggesting the study design is appropriate. The results are contrary to prior empirical studies and contrary to the Supreme Court's hypothesis that the indirect purchaser rule would increase overall incentives to sue.

Table 1 displays the main results. The table reports the 25th percentile, median, and 75th percentile estimates of the effects of the *Hanover Shoe* and *Illinois Brick* rules from Tables A.2 and A.3. (Tables A.2 and A.3 display estimates using different sets of treatment definitions, control variables, and time periods, as described in greater detail below.) As Table 1 shows, there was no statistically significant effect of *Hanover Shoe* on private antitrust litigation. In fact, contrary to the hypothesis that the decision increased incentives to

[217] *See* ANGRIST & PISCHKE, *supra* note 192, at 233–37.

**Table 1.** Effects of *Hanover Shoe* and *Illinois Brick* Rules on Private Antitrust Litigation

| | 25th percentile | Median | 75th percentile |
|---|---|---|---|
| *Hanover Shoe* rule | −0.184 | −0.061 | 0.079 |
| | (0.314) | (0.180) | (0.206) |
| *Illinois Brick* rule | −0.185* | −0.224** | −0.303*** |
| | (0.084) | (0.086) | (0.092) |

*Source*: AOUSC; Federal Judicial Center IDB; author calculations.
*Notes*: This table displays Poisson regression estimates of the effects of the *Hanover Shoe* and *Illinois Brick* rules on the number of private antitrust lawsuits filed in federal courts. The estimates are the 25th percentile, median, and 75th percentile coefficients from Tables A.2 and A.3. Reported coefficients are semielasticities, corresponding to the proportional change in the number of suits in response to a discrete change in the rule. Standard errors robust to within-district serial correlation in parentheses. All regressions include district and year fixed effects. Stars correspond to statistical significance at the following levels: $^{+}p < 0.10$, $^{*}p < 0.05$, $^{**}p < 0.01$, $^{***}p < 0.001$.

sue (and contrary to prior empirical studies), the median estimate is, in fact, slightly negative (−0.061). It is not statistically significant.

By contrast, the median estimate of the effect of *Illinois Brick* is strongly negative (−0.224) and statistically significant. The 25th and 75th percentile estimates range from −0.185 to −0.303, and both of them are statistically significant. This means that, whereas *Hanover Shoe* had no detectable effect on private antitrust litigation, *Illinois Brick* reduced private antitrust litigation significantly, by as little as eighteen percent or as much as thirty percent. For convenience, and to be conservative, we can say that *Illinois Brick* reduced private antitrust litigation by about twenty percent.

Table A.2 provides detail regarding the *Hanover Shoe* estimates. The table shows regressions with and without additional controls, with and without "no rule" as a separate category, and for three different time periods: five, seven, and ten years.[218] None of the estimates are statistically significant; most are negative or close to zero. Table A.3, which provides detail for *Illinois Brick*, tells a different story. All but one (or two) of the estimates are statistically significant (depending on the threshold level of significance), and all fall between −0.10 and −0.30, with a majority between −0.15 and −0.25.[219] Table A.3 shows that, for a number of different model specification and estimation windows, the estimated effect of the *Illinois Brick* rule on private antitrust litigation is consistently negative, statistically significant, and economically large.

As mentioned, in order for the difference-in-differences design to be valid, it must be the case that the treatment and control groups exhibit common trends

[218] The five-year estimates, which use data from 1966–1970, are probably the "cleanest" in the sense that they involve no variation in *Hanover Shoe* or *Illinois Brick* status other than the Supreme Court's *Hanover Shoe* decision in June 1968.

[219] Again, the five-year estimates, which use data from 1976–1980, are probably the cleanest in that they involve no variation in *Hanover Shoe* (clearly) or *Illinois Brick* status other than the Supreme Court's *Illinois Brick* decision in June 1977. These estimates paint a consistent picture: *Illinois Brick* reduced private antitrust litigation by eighteen to twenty-three percent.

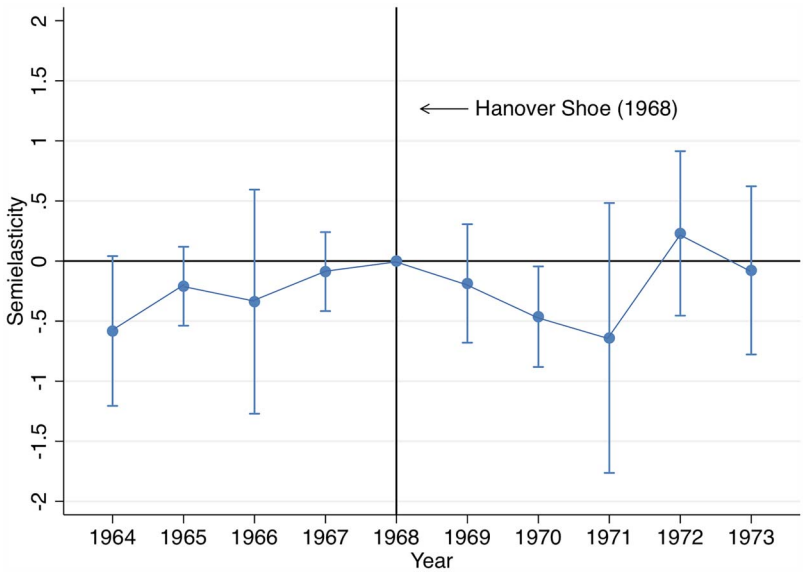



**Figure 5**. No Effect of *Hanover Shoe* on Private Antitrust Litigation

*Source*: AOUSC; author calculations.
*Notes*: This figure displays the yearly average treatment effect of the Supreme Court's *Hanover Shoe* decision on districts with the opposite rule relative to districts with the *Hanover Shoe* rule already in place. Reported coefficients are semielasticities, corresponding to the proportional change in the number of suits in response to a discrete change in the rule. Error bars represent 95 percent confidence intervals constructed using standard errors robust to within-district serial correlation. The coefficients before *Hanover Shoe* are not statistically significant, indicating that the common trends assumption holds. The coefficients after *Hanover Shoe* are also not statistically significant, indicating that the decision had no detectable effect on the frequency of private antitrust litigation.

prior to the treatment. This assumption is explored in Figure 5 for *Hanover Shoe* and in Figure 6 for *Illinois Brick*. The figures display yearly average treatment effects before and after the relevant Supreme Court decisions. (Basically, they show a comparison between the treatment and control groups leading up to, and following, the treatment.[220]) As Figure 5 shows, the estimated *Hanover Shoe* treatment effect is not statistically significantly in the years leading up to *Hanover Shoe*, which suggests the common trends assumption holds. Moreover, the figure provides a graphical representation of the main *Hanover Shoe* result: no difference between treatment and control groups following *Hanover Shoe*.

[220] To be precise, they show estimated coefficients on interaction terms between year and treatment status—where treatment status here means whether the district was affected by the relevant Supreme Court decision—from Poisson regressions with district fixed effects. *See* ANGRIST & PISCHKE, *supra* note 192, at 237–39.

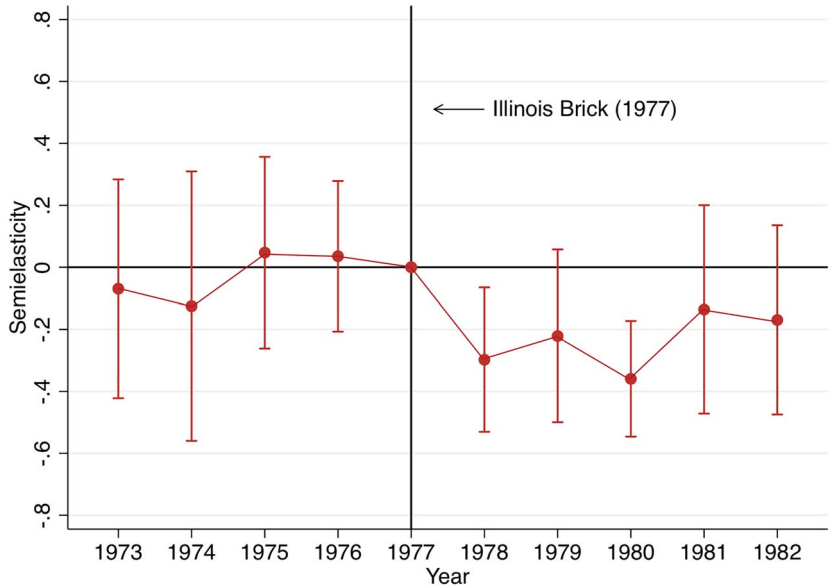



**Figure 6**. Negative Effect of *Illinois Brick* on Private Antitrust Litigation

*Source*: Federal Judicial Center IDB; author calculations.
*Note*: This figure displays the yearly average treatment effect of the Supreme Court's *Illinois Brick* decision on districts with the opposite rule relative to districts with the *Illinois Brick* rule already in place. Reported coefficients are semielasticities, corresponding to the proportional change in the number of suits in response to a discrete change in the rule. Error bars represent 95 percent confidence intervals constructed using standard errors robust to within-district serial correlation. The coefficients before *Illinois Brick* are not statistically significant, indicating that the common trends assumption holds. The coefficients after *Illinois Brick* are negative and statistically significant, indicating that the decision led to fewer private antitrust suits.

Figure 6, on the other hand, shows the negative effect of *Illinois Brick* on private antitrust litigation. There is a sharp and statistically significant drop in private antitrust suits (of about twenty percent or more, consistent with Table 1) at the time of the *Illinois Brick* decision. And the lack of any difference between the treatment and control groups in the years leading up to the *Illinois Brick* decision suggests the common trends assumption holds. Figures A.1 and A.2 provide further graphical evidence of the main results. Those figures display raw numbers of private antitrust suits per district per year, which have been grouped according to the rule in place before the relevant Supreme Court decision. Whereas Figure A.2 shows a sharp drop in suits in the districts affected by the *Illinois Brick* decision, relative to districts not affected, Figure A.1 shows no detectable effect of *Hanover Shoe*.

How do these results differ from prior empirical studies? Landes and Posner found that *Hanover Shoe* was a boon to private antitrust litigation but that *Illinois Brick* likely had little effect.[221] Snyder found that "the loss of indirect purchaser suits from restricting offensive passing-on is offset by stronger direct purchaser incentives under the rule restricting defensive passing-on."[222] That is, *Illinois* Brick may have reduced private antitrust litigation, but *Hanover Shoe* more than made up for it. However, Snyder's results were not statistically significant.[223] This study finds something different. It finds that *Hanover Shoe* had no detectable effect on private antitrust litigation, but *Illinois Brick* had a significant negative effect.

The main differences between the studies are the empirical methods. Landes and Posner conducted a time-series analysis,[224] and Snyder used pooled cross-section regressions.[225] This study uses the panel structure of the data and, in particular, a difference-in-differences design, to measure the effects of the decisions relative to an estimated counterfactual. The other significant difference is that this study uses newer administrative data (the IDB data) for the analysis of *Illinois Brick*. Among other advantages, the data allow for a finer classification of districts—at the monthly rather than annual level, which reduces measurement error.[226]

The results of this study indicate that the indirect purchaser rule reduced private antitrust litigation by about twenty percent. That estimate is robust to including different control variables and years of data, and it is confirmed by graphical evidence. The drop in private antitrust litigation, which is significant (statistically and practically), cannot be explained by fewer antitrust violations, given the bifurcation of the rule. Rather, it is evidence that, contrary to the Court's *Illinois Brick* decision, the rule did not "encourag[e] vigorous private enforcement of the antitrust laws."[227]

Although twenty percent is a significant reduction, it is a fraction of the drop in private antitrust suits shown in Figure 1. To be clear, the claim of this article is not that the indirect purchaser rule is responsible for the entire drop. That would be the kind of before-and-after analysis that this article warns against.[228] The drop in Figure 1 is about 60 percent from the peak in the late 1970s, three times the twenty percent that can be attributed to *Illinois Brick*. Other factors, such as economic conditions, public enforcement (from which private enforcement often takes the lead), and Supreme Court

[221] *See* Landes & Posner, *supra* note 16, at 628–34.
[222] Snyder, *supra* note 17, at 481.
[223] *Id.*
[224] *See* Landes & Posner, *supra* note 16, at 628–34.
[225] *See* Snyder, *supra* note 17, at 477.
[226] There are several other small differences between the approaches taken by Landes and Posner, *supra* note 16, and Snyder, *supra* note 17, and the approach taken here, such as the classification of districts, as noted *supra* note 191. But the major differences are the empirical methodologies.
[227] Ill. Brick Co. v. Illinois, 431 U.S. 720, 745–46 (1977).
[228] Indeed, that is the source of my critique of earlier studies. *See supra* pp. 4, 25–28, 36.

decisions like *Brunswick* and *Sylvania*, likely account for the remainder.[229] But the analysis shows that the indirect purchaser rule was not a boon to private antitrust enforcement, or ambiguous in its effect, as earlier studies claimed.[230]

## VI. CONCLUSION

The Clayton Act authorizes damages actions by "any person ... injured in his business or property by reason of anything forbidden in the antitrust laws."[231] But the Supreme Court in *Illinois Brick* construed that language to bar damages actions by indirect purchasers.[232] The Court gave three reasons for its rule: apportioning damages among direct and indirect purchasers was too complicated;[233] awarding damages to both direct and indirect purchasers risked multiple liability for defendants;[234] and dividing damages between direct and indirect purchasers diluted incentives to sue, thereby weakening private enforcement of the antitrust laws.[235]

The rationale for the Court's rule has eroded. First, there are straightforward ways to apportion damages among direct and indirect purchasers.[236] Lower federal courts now routinely determine indirect purchaser damages in state law cases that permit them.[237] Second, aside from the fact that concern over multiple liability begs the question (and is ironic in the antitrust context), multiple liability was not a real problem at the time of the *Illinois Brick* decision.[238] It has since become a problem due to the mismatch between the federal rule and some state antitrust laws.[239] Overturning *Illinois Brick* and adopting an alternative method to compute damages would avoid the problem.[240]

[229] *See supra* Section III.A.

[230] *See* Landes & Posner, *supra* note 16, at 628–34; Snyder, *supra* note 17, at 481.

[231] 15 U.S.C. § 15(a) (2012).

[232] Ill. Brick Co. v. Illinois, 431 U.S. 720, 729 (1977).

[233] *Id*. at 740–42.

[234] *Id.* at 730–31.

[235] *Id.* at 745–46.

[236] *See* Areeda & Hovenkamp, *supra* note 38, ¶ 346k1 (proposing to measure damages using lost profits for intermediaries and net overcharges for final purchasers).

[237] *See, e.g.*, *In re* Static Random Access Memory (SRAM) Antitrust Litig., 264 F.R.D. 603, 606 (N.D. Cal. 2009).

[238] *See* Harris & Sullivan, *supra* note 128, at 346 ("[T] here is not a single credible claim that any defendant was ever held to duplicative liability."). Justice Blackmun acknowledged this in handwritten notes taken before oral argument in *Illinois Brick*. *See* Gavil, *supra* note 62, at 594 (Blackmun writing "Multiple liability sounds good but ... No case").

[239] *See* Cirace, *supra* note 15, at 287–288. *See also, e.g.*, *In re* Flash Memory Antitrust Litig., 643 F. Supp. 2d 1133, 1155–56 (N.D. Cal. 2009).

[240] *See* Areeda & Hovenkamp, *supra* note 38, ¶ 346h ("[L]ost profit damages for the intermediary and overcharge damages for the consumer are not in any way duplicative.").

What about the claim that dividing damages between direct and indirect purchasers dilutes incentives to sue, thereby weakening private antitrust enforcement? The economic logic of the claim is questionable. Although it is of course true that allowing more plaintiffs and dividing damages between them lowers individual incentives to sue, that does not imply that the overall probability of suit is greater under a rule that assigns direct purchasers exclusive rights to sue, because different parties will have different incentives to sue conditional on damage awards. For example, a direct purchaser may not want to sue an important supplier. The overall probability of suit will depend on the set of parties allowed to sue and their profit incentives, including, but not limited to, damage awards.

This article presented new evidence that the indirect purchaser rule reduced private antitrust litigation by twenty percent, which is contrary to prior empirical studies and contrary to the Supreme Court's hypothesis that the rule would increase overall incentives to sue. It made that finding using the fact that a handful of federal judicial districts adopted the rule ahead of the Supreme Court. Those districts, which exhibited prior trends in private antitrust litigation that were parallel to the districts affected by the Court's decision, were a control group. A treatment group, made up of districts affected, exhibited a sharp decline in private antitrust suits filed in federal courts relative to the control group. The drop could not be explained by fewer violations, due to a feature of the rule (its bifurcation).

The indirect purchaser rule, now more than 40 years old, was back in the headlines last year in *Apple Inc. v. Pepper*. A group of consumers nearly had their class action antitrust lawsuit against Apple dismissed on the theory that the consumers were not direct purchasers under *Illinois Brick*.[241] Although a narrow majority of the Justices of the Supreme Court voted to let the case proceed, it was a "near miss" that renewed debate over the rule. The Apple case highlights the importance of private antitrust enforcement as a supplement to public enforcement in the context of growing market power and dominance by technology companies. When *Apple* was decided, the choice was not between a private suit by consumers and a private suit by app developers, or between a private suit by consumers and a government suit. It was between a private suit by consumers and no suit at all. The same was true in *Ticketmaster* and in the Microsoft follow-on litigation.[242]

The rule should be abandoned. It has no basis in the text or legislative history of the Clayton Act. It frustrates the purposes of the Hart-Scott-Rodino Act, which authorized state attorneys general to sue *parens patriae* and recover damages on behalf of citizens of their states for violations of the federal antitrust laws.[243] And it is bad antitrust policy, furthering neither of the "twin

[241] Apple Inc. v. Pepper, 139 S. Ct. 1514, 1519 (2019).
[242] *See* Hovenkamp, *The Rationalization of Antitrust*, *supra* note 12, at 941.
[243] 15 U.S.C. § 15(c) (2012).

antitrust goals of ensuring recompense for injured parties and encouraging the diligent prosecution of antitrust claims."[244]

## APPENDIX

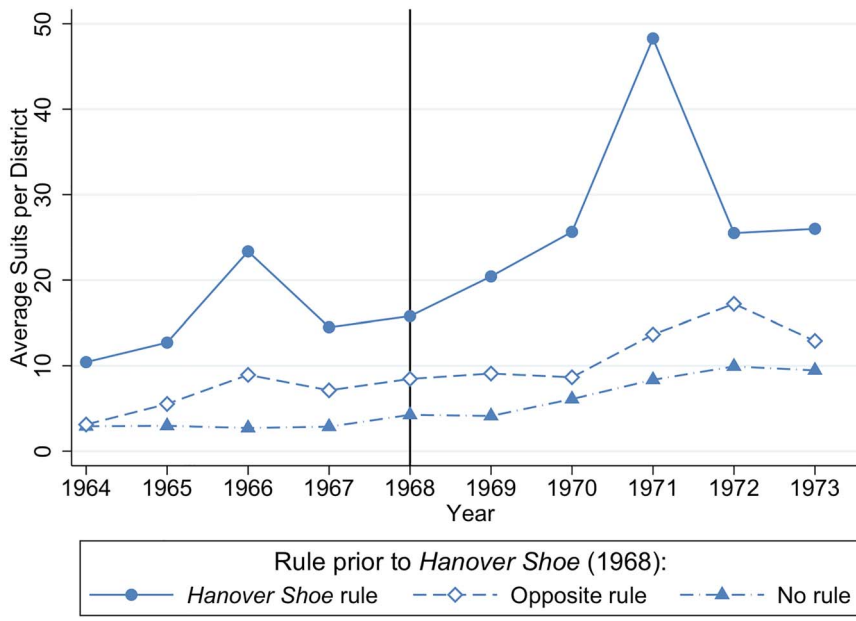



**Figure A.1**. Private Antitrust Suits by Prior Rule (*Hanover Shoe*)

*Source*: AOUSC; author calculations.
*Note*: This figure displays average private antitrust lawsuits per district per year, grouped according to the rule in place prior the *Hanover Shoe* decision in 1968. Districts with the *Hanover Shoe* rule already in place correspond to a "control" group, while districts with the opposite rule or no rule correspond to "treatment" groups. The control group appears to have two years (1966 and 1971) affected by outliers. This can also be seen in the error bars in Figure 5, *supra*.

[244] Kansas v. UtiliCorp United, Inc., 497 U.S. 199, 226 (1990) (White, J., dissenting) (expressing frustration at the majority's expansion of the indirect purchaser rule); Landes & Posner, *supra* note 16, at 605 ("Private antitrust enforcement is traditionally viewed as having two objectives: to compensate victims of antitrust violations and to deter the commission of such violations.").

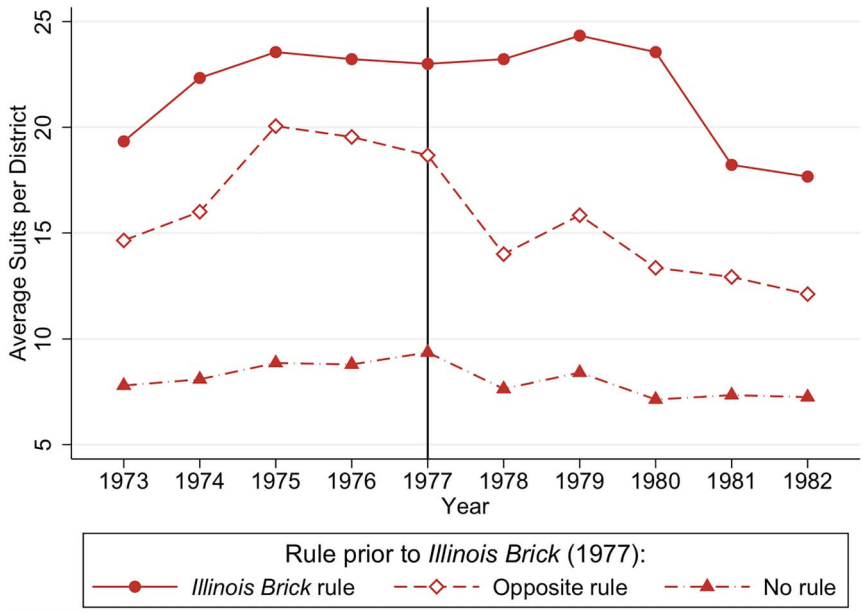
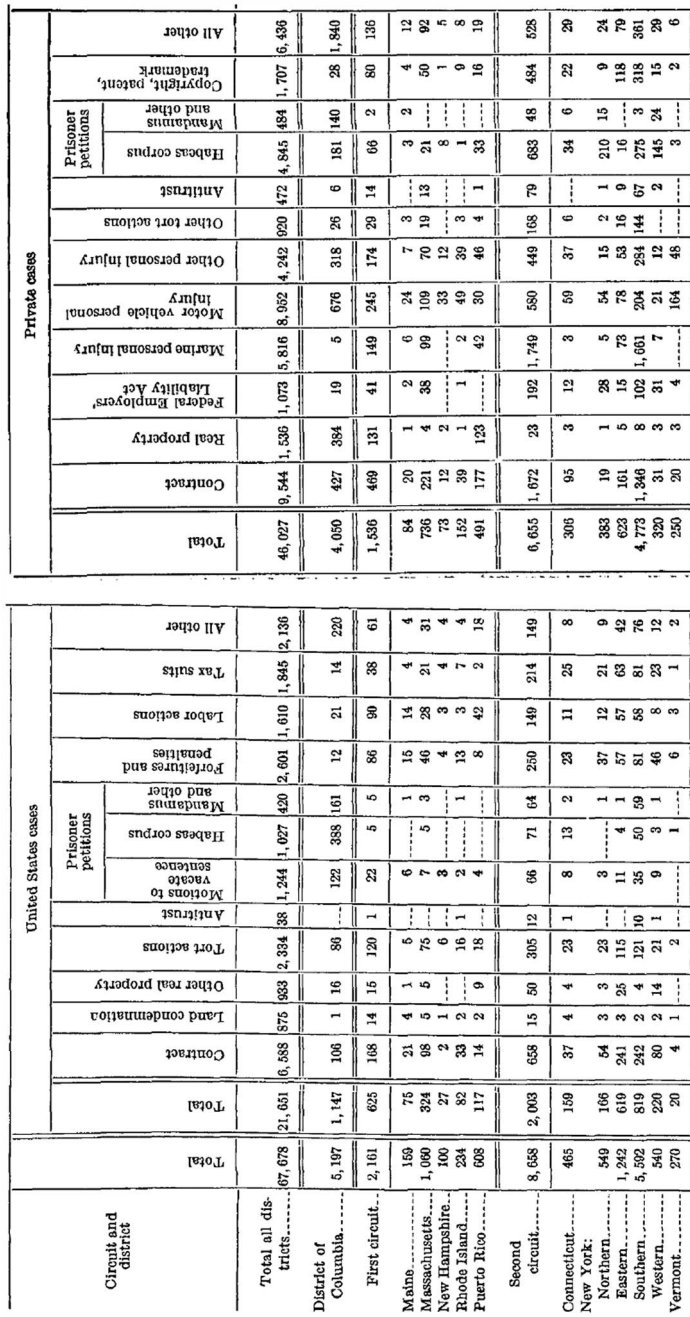



**Figure A.2**. Private Antitrust Suits by Prior Rule (*Illinois Brick*)

*Source*: Federal Judicial Center IDB; author calculations.
*Note*: This figure displays average private antitrust lawsuits per district per year, grouped according to the rule in place prior the *Illinois Brick* decision in 1977. Districts with the *Illinois Brick* rule already in place correspond to a "control" group, while districts with the opposite rule or no rule correspond to "treatment" groups.



| Circuit and district | United States cases | | | | | | | | | | | | Private cases | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Total | Total | Contract | Land condemnation | Other real property | Tort actions | Antitrust | Prisoner petitions: Motions to vacate sentence | Prisoner petitions: Habeas corpus | Prisoner petitions: Mandamus and other | Forfeitures and penalties | Labor actions | Tax suits | All other | Total | Contract | Real property | Federal Employers' Liability Act | Marine personal injury | Motor vehicle personal injury | Other personal injury | Other tort actions | Antitrust | Prisoner petitions: Habeas corpus | Prisoner petitions: Mandamus and other | Copyright, patent, trademark | All other |
| Total all districts | 67,678 | 21,651 | 6,588 | 575 | 933 | 2,334 | 38 | 1,244 | 1,027 | 420 | 2,601 | 1,610 | 1,845 | 2,136 | 46,027 | 9,544 | 1,536 | 1,073 | 5,816 | 8,952 | 4,242 | 920 | 472 | 4,845 | 484 | 1,707 | 6,336 |
| District of Columbia | 5,197 | 1,147 | 106 | 1 | 16 | 86 | --- | 122 | 388 | 161 | 12 | 21 | 14 | 220 | 4,050 | 427 | 384 | 19 | 5 | 676 | 318 | 26 | 6 | 181 | 140 | 28 | 1,840 |
| First circuit | 2,161 | 625 | 168 | 14 | 15 | 120 | 1 | 22 | 5 | 5 | 86 | 90 | 38 | 61 | 1,536 | 469 | 131 | 41 | 149 | 245 | 174 | 29 | 14 | 66 | 2 | 80 | 136 |
| Maine | 159 | 75 | 21 | 4 | 1 | 5 | --- | 6 | --- | 1 | 15 | 14 | 4 | 4 | 84 | 20 | 1 | 2 | 6 | 24 | 7 | 3 | --- | 3 | 2 | 4 | 12 |
| Massachusetts | 1,060 | 324 | 98 | 5 | 5 | 75 | --- | 7 | 5 | 3 | 46 | 28 | 21 | 31 | 736 | 221 | 4 | 38 | 99 | 109 | 70 | 19 | 13 | 21 | --- | 50 | 92 |
| New Hampshire | 100 | 27 | 2 | 1 | --- | 6 | --- | 3 | --- | --- | 4 | 3 | 4 | 4 | 73 | 12 | 2 | --- | --- | 33 | 12 | --- | --- | 8 | --- | 1 | 5 |
| Rhode Island | 234 | 82 | 33 | 2 | --- | 16 | 1 | 2 | --- | 1 | 13 | 3 | 7 | 4 | 152 | 39 | 1 | 1 | 2 | 49 | 39 | 3 | --- | 1 | --- | 0 | 8 |
| Puerto Rico | 608 | 117 | 14 | 2 | 9 | 18 | --- | 4 | --- | --- | 8 | 42 | 2 | 18 | 491 | 177 | 123 | --- | 42 | 30 | 46 | 4 | 1 | 33 | --- | 16 | 19 |
| Second circuit | 8,658 | 2,003 | 658 | 15 | 50 | 305 | 12 | 66 | 71 | 64 | 250 | 149 | 214 | 149 | 6,655 | 1,672 | 23 | 192 | 1,749 | 580 | 449 | 168 | 79 | 683 | 48 | 484 | 528 |
| Connecticut | 465 | 159 | 37 | 4 | 4 | 23 | 1 | 8 | 13 | 2 | 23 | 11 | 25 | 8 | 306 | 95 | 3 | 12 | 3 | 59 | 37 | 6 | --- | 34 | 6 | 22 | 29 |
| New York: | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Northern | 549 | 166 | 54 | 3 | 3 | 23 | --- | 3 | --- | 1 | 37 | 12 | 21 | 9 | 383 | 19 | 1 | 28 | 5 | 54 | 15 | 2 | 1 | 210 | 15 | 9 | 24 |
| Eastern | 1,242 | 619 | 241 | 3 | 25 | 115 | --- | 11 | 4 | 1 | 57 | 57 | 63 | 42 | 623 | 161 | 5 | 15 | 73 | 78 | 53 | 16 | 9 | 16 | --- | 118 | 79 |
| Southern | 3,592 | 819 | 242 | 2 | 4 | 121 | 10 | 35 | 50 | 59 | 81 | 68 | 81 | 76 | 4,773 | 1,346 | 8 | 102 | 1,661 | 204 | 234 | 144 | 67 | 275 | 3 | 318 | 361 |
| Western | 540 | 220 | 80 | 2 | 14 | 21 | 1 | 9 | 3 | 1 | 46 | 8 | 23 | 12 | 320 | 31 | 3 | 31 | 7 | 21 | 12 | --- | 2 | 145 | 24 | 15 | 29 |
| Vermont | 270 | 20 | 4 | 1 | --- | 2 | --- | --- | 1 | --- | 6 | 3 | 1 | 2 | 250 | 20 | 3 | 4 | --- | 164 | 46 | --- | --- | 3 | --- | 2 | 6 |

**Figure A.3**. Example of AOUSC Historical Table

*Source*: 1965 ADMIN. OFFICE OF THE U.S. COURTS. ANN. REP. 182 tbl.C3.

**Table A.1.** Summary Statistics

| | Min. | Median | Max. | Mean | Std. Dev. | Obs. |
|---|---|---|---|---|---|---|
| *AOUSC district-year data (1964–73)* | | | | | | |
| Private antitrust cases | 0 | 3 | 434 | 9.7 | 24.5 | 850 |
| Government antitrust cases | 0 | 0 | 64 | 0.8 | 3.6 | 850 |
| Private nonantitrust civil cases | 57 | 342 | 5066 | 631.3 | 843.2 | 850 |
| *IDB district-month data (1973–82)* | | | | | | |
| Private antitrust cases | 0 | 0 | 49 | 1.05 | 1.93 | 10,800 |
| Government antitrust cases | 0 | 0 | 4 | 0.03 | 0.20 | 10,800 |
| Private nonantitrust civil cases | 1 | 36 | 618 | 60.9 | 71.4 | 10,800 |

*Source*: AOUSC; Federal Judicial Center IDB; author calculations.

**Table A.2.** Effect of *Hanover Shoe* Rule on Private Antitrust Litigation

| | Five-year (1966–70) | | | Seven-year (1965–71) | | | Ten-year (1964–73) | | |
|---|---|---|---|---|---|---|---|---|---|
| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) |
| *Hanover Shoe* rule | −0.038 | −0.171 | −0.098 | −0.184 | −0.308 | 0.164 | 0.022 | −0.061 | 0.079 |
| | (0.128) | (0.126) | (0.157) | (0.314) | (0.313) | (0.122) | (0.253) | (0.180) | (0.206) |
| No rule | | −0.362**[1] | −0.305+[1] | | −0.328**[1] | −0.104[1] | | −0.204+ | −0.203 |
| | | (0.135) | (0.162) | | (0.111) | (0.134) | | (0.122) | (0.148) |
| Other controls | No | No | Yes | No | No | Yes | No | No | Yes |
| District fixed effects | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Year fixed effects | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Observations | 425 | 425 | 425 | 595 | 595 | 595 | 850 | 850 | 850 |

*Source:* AOUSC; author calculations.

*Notes:* This table displays Poisson regression estimates of the effect of the *Hanover Shoe* rule on the number of antitrust lawsuits filed in federal courts. Reported coefficients are semielasticities, corresponding to the proportional change in the number of suits in response to a discrete change in the rule. The base category in columns (1), (4), and (7) is no rule or the opposite rule. The base category in all other columns is the opposite rule. The unit of observation is district-year. Standard errors robust to within-district serial correlation in parentheses. All regressions include district and year fixed effects. "Other controls" include government antitrust cases, private nonantitrust civil cases, and, for the seven- and ten-year estimates, whether the district adopted the *Illinois Brick* rule. Stars correspond to statistical significance at the following levels: $^{+}p < 0.10$, $^{*}p < 0.05$, $^{**}p < 0.01$, $^{***}p < 0.001$.

[1] These four coefficients require careful interpretation. Although the coefficients are estimable, they do not represent direct difference-in-differences comparisons between no rule and the opposite rule. The reason is that there is no within-district variation in no rule versus the opposite rule (the base category) in the five- or seven-year windows. The coefficients instead represent the difference between the difference-in-differences estimate for the *Hanover Shoe* rule relative to the opposite rule and the difference-in-differences estimate for the *Hanover Shoe* rule relative to no rule.

**Table A.3.** Effect of *Illinois Brick* Rule on Private Antitrust Litigation

| | Five-year (1976–80) | | | Seven-year (1975–81) | | | Ten-year (1973–1982) | | |
|---|---|---|---|---|---|---|---|---|---|
| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) |
| *Illinois Brick* rule | −0.185* | −0.227** | −0.224** | −0.226** | −0.313*** | −0.303*** | −0.126 | −0.216* | −0.195+ |
| | (0.084) | (0.088) | (0.086) | (0.081) | (0.096) | (0.092) | (0.092) | (0.106) | (0.102) |
| No rule | | −0.113 | −0.113 | | −0.220** | −0.234** | | −0.190* | −0.203** |
| | | (0.077) | (0.079) | | (0.085) | (0.085) | | (0.076) | (0.075) |
| Other controls | No | No | Yes | No | No | Yes | No | No | Yes |
| District fixed effects | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Month-by-year fixed effects | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Observations | 5,400 | 5,400 | 5,400 | 7,560 | 7,560 | 7,560 | 10,800 | 10,800 | 10,800 |

*Source:* Federal Judicial Center IDB; author calculations.
*Notes:* This table displays Poisson regression estimates of the effect of the *Illinois Brick* rule on the number of private antitrust lawsuits filed in federal courts. Reported coefficients are semielasticities, corresponding to the proportional change in the number of suits in response to a discrete change in the rule. The base category in columns (1), (4), and (7) is no rule or the opposite rule. The base category in all other columns is the opposite rule. The unit of observation is district–month-by-year. Standard errors robust to within-district serial correlation in parentheses. All regressions include district and month-by-year fixed effects. "Other controls" include government antitrust cases and private nonantitrust civil cases. Stars correspond to statistical significance at the following levels:
$^{+}p < 0.10$, $^{*}p < 0.05$, $^{**}p < 0.01$, $^{***}p < 0.001$.