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PERSONAL JURISDICTION AND PRODUCT LIABILITY

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ABSTRACT

This Article is the first sustained economic analysis of personal jurisdiction. It argues that plaintiffs should be able to sue where they purchased a product which caused injury. Such a rule allows manufacturers to set prices which take into account the quality of the forum state's courts. If the courts are biased against out-of-state corporations, have overly generous judges or juries, or apply substantive law which is excessively pro-consumer, manufacturers can, through contracts with distributors and retailers, charge a higher price to consumers in that state. This prevents judges and juries from engaging in interstate redistribution and gives states an incentive to provide efficient substantive rules and adjudicative institutions. In contrast, a rule which requires suit in a place more fully under the control of the defendant—such as the place of manufacture or the location of the distributor—would encourage manufacturers to select inefficiently pro-defendant jurisdictions for their activities. Because consumers are unlikely to know where products are manufactured or distributed and are unlikely to be able to evaluate the quality of the law in those states, it is implausible to think that the market would give manufacturers incentives to locate their jurisdiction-triggering activities in states with efficient laws and institutions. This analysis is particularly important because the Supreme Court has recently deadlocked on personal jurisdiction in product liability cases.

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I. INTRODUCTION

Twice in recent years, the Supreme Court has deadlocked on the stream of commerce theory of personal jurisdiction.¹ May a plaintiff in a product liability action sue the manufacturer in the state where the plaintiff purchased the product? Or is the plaintiff required to sue in the distributor's or manufacturer's home state? Or, to use the Supreme Court's metaphor, may the plaintiff sue wherever the stream of commerce has carried the product, or is the plaintiff restricted to suing where the defendant made or sold the product? While most courts and commentators have analyzed this issue through a rather sterile examination of the defendant's "contacts" with the forum state, this Article focuses on consequences. It concludes that allowing suit where the plaintiff purchased the product is superior from both an *ex ante* and an *ex post* perspective.

The *ex post* analysis is relatively straightforward and focuses on minimizing total litigation cost. Suit in the distributor's state is clearly inferior from this perspective. Neither witnesses to the design or manufacture of the product nor witnesses to the accident itself are likely to be located in the distributor's state. Similarly, neither the plaintiff's nor the defendant's preferred lawyers are likely to be located near the distributor, so litigating in the distributor's state is likely to require both costly travel and the duplicative expense of local counsel. As between suit where the product was sold (which is usually plaintiff's home state and where the product caused injury) and suit in the defendant's home state (which is usually where the product was designed and manufactured), it is unclear which will minimize total litigation costs. Suit in the plaintiff's home state is likely to reduce the plaintiff's litigation costs, but increase the defendant's litigation costs. Conversely, suit in the defendant's home state is likely to lower defendant's litigation costs, but increase plaintiff's.

Ex ante analysis is probably this Article's most original contribution. It focuses on the effect of jurisdictional rules on prelitigation behavior, including the manufacturer's design of the product, the manufacturer's choice of distributor, pricing, and incentives for state legislators and judges to formulate fair and efficient legal rules. If transactions costs were low, then a rule which required suit in the distributor's state would be superior, because the manufacturer would choose a distributor which maximized the sum of consumer and producer welfare taking into account both the

1. *J. McIntyre Mach., Ltd. v. Nicastro*, 131 S. Ct. 2780 (2011); *Asahi Metal Indus. v. Superior Ct. of Cal.*, 480 U.S. 102 (1987).

distributor's quality from a strictly business perspective (including the costs of shipping products to and from the distributor) and the legal characteristics of the distributor's state (including product liability law, choice of law, procedure, evidence, and jury bias). Competitive pressure from informed consumers would give manufacturers an incentive to choose a distributor in a state whose courts had procedural rules, juries, choice of law rules, and substantive rules (if choice of law favored the forum state) which provide optimal levels of product liability protection from both an insurance perspective (if consumers valued the insurance function of product liability law) and an incentives-to-make-safe-products perspective.

Nevertheless, the assumption of low transactions costs is a problematic lens through which to analyze this jurisdictional problem, because it is unlikely that consumers have sufficient information about different states' laws to put pressure on manufacturers to choose a distributor in a state with fair and efficient law. In addition, if transactions costs were low, there would be no need for product liability in the first place. Information is a transactions cost, and if consumers knew the safety precautions manufacturers had taken, manufacturers would take efficient precautions regardless of liability, and insurance could be provided cost-effectively through third parties. Even if consumers did not have perfect information about product safety, if transactions costs were low, manufacturers would voluntarily provide contractual warranties with terms mimicking current products liability law (or providing superior terms) in order to signal product safety.

Instead, analysis of stream-of-commerce jurisdiction should take into account more recent, high-transactions costs models of product liability which show that manufacturers have incentives to make choices that disadvantage consumers. For example, recent work by Kathryn Spier and Albert Choi suggests that, if there were no mandatory law of products liability, adverse selection problems would induce manufacturers to provide suboptimal warranties and to produce unsafe products.² Abraham Wickelgren reaches a similar conclusion focusing on the fact that safety investments are usually sunk costs at the time consumers purchase products. So, if there were no mandatory products liability, risk-neutral consumers would rationally decline warranties, which would give

2. Albert H. Choi & Kathryn E. Spier, *Should Consumers Be Permitted to Waive Products Liability? Product Safety, Private Contracts, and Adverse Selection* (Harv. Law & Econ., Discussion Paper No. 680; Va. Law & Econ., Research Paper No. 2010-11), available at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1680932.

manufacturers suboptimal incentives to produce safe products.³ Avery Katz also shows that market forces are unlikely to assure efficient warranties and safety precautions, because it is costly to read and understand warranties.⁴ As a result, it is usually rational for consumers not to read them. Unfortunately, if consumers do not read warranties, manufacturers do not have an incentive to provide effective warranties and thus, absent mandatory product liability law, manufacturers have insufficient incentive to produce safe products.

These models imply that, even if products liability were mandatory at the state level, if manufacturers could choose which state's laws applied, they would choose states with inefficiently lenient product liability protection. A jurisdictional rule that required the plaintiff to sue in the distributor's state or in the manufacturer's home state would effectively allow the manufacturer to choose which state's laws applied, because the manufacturer could strategically choose a distributor located in a state with pro-manufacturer procedures and adjudicators and lenient product liability law (or, more precisely, choice of law rules which selected lenient product liability law). Similarly, the manufacturer could locate its own activities—incorporation, headquarters, design, and manufacturing—in such a state. That is, a jurisdictional rule that required the plaintiff to sue in the distributor's state or the manufacturer's home state would encourage a socially destructive form of defendant forum shopping.

More perniciously, states might compete to attract distributors, incorporation, corporate headquarters, design facilities, and manufacturing plants by weakening their product liability law or otherwise tilting their procedural and choice-of-law rules to favor defendants. That is, forum shopping could lead to "forum selling." Under some circumstances, there might be jurisdictional competition and a race to the bottom.

In contrast, a rule that allowed injured consumers to sue where they purchased the product removes the incentive for manufactures to distort business decisions to manipulate the forum. It would also give states appropriate incentives to create fair procedural, choice of law, and

3. Abraham Wickelgren, *The Inefficiency of Contractually-Based Liability with Rational Consumers*, 22 J.L. ECON. & ORG. 168 (2006).

4. Avery Katz, *Your Terms or Mine? The Duty to Read the Fine Print in Contracts*, 21 RAND J. ECON. 518 (1990). See also Yeon-Koo Che & Albert H. Choi, *Shrink-Wraps: Who Should Bear the Cost of Communicating Mass-Market Contract Terms?* (Va. Law & Econ., Research Paper No. 2009-15), available at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1384682; Abraham Wickelgren, *Standardization as a Solution to the Reading Costs of Form Contracts*, 167 J. INSTITUTIONAL & THEORETICAL ECON. 30 (2011).

substantive law rules. One might think that states would have an incentive to favor plaintiffs, because most plaintiffs are local, while products liability defendants are likely to be large, out-of-state corporations. Nevertheless, this is not correct. A jurisdictional rule that allowed plaintiffs to sue where they bought the product (but not necessarily where the accident occurred) allows manufacturers to vary the price depending on the legal characteristics of the state where the product was sold. Prices would be higher in states with rules that favored plaintiffs. In-state purchasers would thus bear the cost of excessively stringent product liability law or antidefendant procedural rules or juries.

The argument for allowing suit where the product was sold is especially strong when the manufacturer is foreign. Product liability law in many foreign jurisdictions is less consumer friendly than in the United States, and contingent fees are seldom allowed. As a result, the costs of suing abroad and the low probability of fully compensatory damages mean that injured consumers are likely not to sue at all if the only available forum is outside the United States. This, of course, reduces the incentive of foreign manufacturers to design and produce safe products. In addition, it gives foreign companies a competitive advantage over American firms and encourages U.S. firms to relocate abroad.

This Article and an article written independently by Dustin Buehler at roughly the same time are the first sustained economic analyses of personal jurisdiction. Dustin Buehler argues that the high cost of jurisdictional disputes deters plaintiffs from filing meritorious law suits and thus undermines the deterrent function of the law.⁵ Richard Posner devotes less than one page to personal jurisdiction in *Economic Analysis of Law*, and he views the economic function of personal jurisdiction doctrine as minimizing total litigation costs.⁶ That is, he takes an ex post perspective. This is a notable contrast to most of his work, which focuses on ex ante incentives. Books and articles on the economics of procedure ignore jurisdiction completely.⁷ Alan Sykes argues that forum shopping by foreign plaintiffs distorts trade and investment patterns, because American firms operating abroad are subject to jurisdiction in the United States where liability is generally higher, thus giving foreign firms a cost advantage in

5. Dustin E. Buehler, *Jurisdictional Incentives*, 20 GEO. MASON L. REV. 105 (2012). The author thanks Yoed Halbersberg for bringing Dustin Buehler's article to his attention.

6. RICHARD A. POSNER, *ECONOMIC ANALYSIS OF LAW* 904 (8th ed. 2011).

7. See, e.g., ROBERT G. BONE, *CIVIL PROCEDURE: THE ECONOMICS OF CIVIL PROCEDURE* (2003); George Priest, *The Simple Economics of Civil Procedure*, 9 KAN. J.L. & PUB. POL'Y 389 (2000).

non-U.S. markets.⁸ Like this Article, Sykes takes an *ex ante* perspective. Nevertheless, because he is concerned with American firms which are indisputably subject to personal jurisdiction in the United States, his analysis focuses on *forum non conveniens* and the interpretation of the Alien Tort Statute, rather than on core personal jurisdiction doctrines.

This Article was inspired by scholarship on choice of law, which has been more influenced by economic analysis than the literature on personal jurisdiction.⁹ The analysis of price effects in Part IV owes much to Michael McConnell's analysis of choice of law in product liability cases.¹⁰ Erin O'Hara and Larry Ribstein devote some attention to jurisdiction in their work on choice of law because choice of law is determined, in large part, by the forum that is doing the choice of law analysis.¹¹ Their favored solution is enforceable forum-selection clauses, an approach criticized here. More generally, this Article was inspired by the many literatures on jurisdictional competition.¹²

The analysis in this Article applies primarily to injuries to the consumer. Product liability also protects third parties, and the case for restricting manufacturer choice of law and choice of forum is even stronger when third parties are involved. Even if transactions costs are low, the market will provide little incentive for manufacturers to select product liability law which provides efficient incentives to protect third parties.

Part II of this paper briefly surveys case law on personal jurisdiction in product liability disputes. Part III analyzes product liability and personal

8. Alan O. Sykes, *Transnational Forum Shopping as a Trade and Investment Issue*, 37 J. LEGAL STUD. 339 (2008). See also Jack L. Goldsmith & Alan O. Sykes, *Lex Loci Delictus and Global Economic Welfare: Spinozzi v. ITT Sheraton Corp.*, 120 HARV. L. REV. 1137 (2007).

9. Goldsmith & Sykes, *supra* note 8; Andrew T. Guzman, *Choice of Law: New Foundations*, 90 GEO. L.J. 883 (2002); Bruce L. Hay, *Conflicts of Law and State Competition in the Product Liability System*, 80 GEO. L.J. 617 (1992); Michael E. Solimine, *An Economic and Empirical Analysis of Choice of Law*, 24 GA. L. REV. 49 (1989).

10. Michael W. McConnell, *A Choice-of-Law Approach to Products-Liability Reform*, in NEW DIRECTIONS IN LIABILITY LAW, 37 PROC. ACAD. POL. SCI. 90 (Walter Olson ed., 1988).

11. ERIN A. O'HARA & LARRY E. RIBSTEIN, *THE LAW MARKET* 67–70 (2009).

12. See, e.g., Daniel Klerman, *Jurisdictional Competition and the Evolution of the Common Law*, 74 U. CHI. L. REV. 1179 (2007). The literature on jurisdictional competition in corporate law is vast. See, e.g., FRANK H. EASTERBROOK & DANIEL R. FISCHEL, *THE ECONOMIC STRUCTURE OF CORPORATE LAW* 212–27 (1991); ROBERTA ROMANO, *THE GENIUS OF AMERICAN CORPORATE LAW* (1993); Lucian Arye Bebchuk, *Federalism and the Corporation: The Desirable Limits on State Competition in Corporate Law*, 105 HARV. L. REV. 1435 (1992); Marcel Kahan & Ehud Kamar, *The Myth of State Competition in Corporate Law*, 55 STAN. L. REV. 679 (2002). See also Doron Teichman, *The Market for Criminal Justice: Federalism, Crime Control, and Jurisdictional Competition*, 103 MICH. L. REV. 1831 (2005).

jurisdiction from an ex ante perspective, both when transactions costs are low and when they are high. Part IV focuses on the ex post perspective and discusses litigation costs. Part V focuses on foreign manufacturers, and Part VI fits the analysis into current Supreme Court doctrine. Part VII discusses the implications of interstate sales and arbitration, and Part VIII discusses complications introduced by the fact that product design does not vary by state. Part IX concludes.

II. CASE LAW

The U.S. Supreme Court has addressed personal jurisdiction in products liability cases four times in the last thirty-five years.¹³ Unfortunately, the most important recent decisions have split the Court and produced no clear holding. In analyzing the cases, it is helpful to consider seven possible places where a product liability suit might be brought against a manufacturer. They are listed below and arranged by jurisdictional plausibility, starting from the states where jurisdiction is undisputedly proper and ending in places where jurisdiction is clearly improper¹⁴:

1. *The state where the manufacturer is incorporated or headquartered.* It is undisputed that jurisdiction is proper here.

2. *The state where the manufacturer designed or manufactured the product.* Jurisdiction is almost certainly proper here, although the issue is very seldom litigated.

3. *The state to which the manufacturer shipped the product, including the state where the distributor is located.* Jurisdiction is probably proper here, although the issue is seldom litigated, and dicta in *J. McIntyre Machinery, Ltd. v. Nicastro*,¹⁵ the important 2011 Supreme Court case, hints that jurisdiction may be improper in the distributor's state. It is likely that litigation about jurisdiction in the distributor's state will become more common, because *McIntyre* has made suit in other fora more difficult.

4. *The state where the product was first sold to the end user, which might be a consumer or a business, even if the manufacturer did not sell or ship the product directly to this state, but rather the product was brought to*

13. *World-Wide Volkswagen Corp. v. Woodson*, 444 U.S. 286 (1980); *Asahi Metal Indus. v. Superior Ct. of Cal.*, 480 U.S. 102 (1987); *J. McIntyre Mach., Ltd. v. Nicastro*, 131 S. Ct. 2780 (2011); *Goodyear Dunlop Tires Operations, S.A. v. Brown*, 131 S. Ct. 2846 (2011).

14. This list will be referenced and further described below.

15. *McIntyre*, 131 S. Ct. at 2790.

the state by a distributor and / or retailer. This jurisdiction is the focus of litigation about the “stream-of-commerce” theory. Some justices and courts restrict such jurisdiction to situations where (1) many products of the same brand and model as involved in the lawsuit were also sold in the state, and / or (2) the manufacturer advertised in the state, designed the product especially for consumers in the state, or otherwise targeted the state.¹⁶

5. *The state where a substantial number of products of the same brand and model were sold to end users, even if the product at issue in the lawsuit was not purchased in the state.* Jurisdiction in such a state was assumed in dicta in *World-Wide Volkswagen Corp. v. Woodson*,¹⁷ although it is not clear that jurisdiction would be proper today.

6. *The state where the accident occurred.* The Supreme Court in *World-Wide Volkswagen* held that jurisdiction is not proper here, unless the manufacturer had other contacts with the state (such as incorporation, headquarters, manufacture, design, or sales).¹⁸

7. *The state where the plaintiff resides.* It is undisputed that jurisdiction is not proper here, unless the manufacturer had other contacts with the state (such as incorporation, headquarters, manufacture, design, or sales).

The basic framework for personal jurisdiction analysis was set out by the Supreme Court in *International Shoe Co. v. Washington*¹⁹ and *Hanson v. Denckla*.²⁰ In *International Shoe*, the Supreme Court held that the constitutional analysis of personal jurisdiction would be determined by examining whether the defendant has “certain minimum contacts with [the forum state] such that the maintenance of the suit does not offend ‘traditional notions of fair play and substantial justice.’”²¹ *Hanson v. Denckla* refined *International Shoe*’s minimum contacts approach by requiring that “there be some act by which the defendant purposefully avails itself of the privilege of conducting activities within the forum state.”²² This “purposeful availment” requirement focuses on whether the defendant has taken some action in the forum or directed toward the forum, such as shipping a product there or soliciting business there. The “unilateral

16. See *infra* text accompanying notes 32–41 for details.

17. *Woodson*, 444 U.S. at 297–98.

18. *Id.* at 295–98.

19. *Int’l Shoe Co. v. Washington*, 326 U.S. 310 (1945).

20. *Hanson v. Denckla*, 357 U.S. 235 (1958).

21. *Int’l Shoe*, 326 U.S. at 316 (quoting *Milliken v. Meyer*, 311 U.S. 457, 463 (1940)).

22. *Hanson*, 357 U.S. at 253.

activity” of the plaintiff or others is not sufficient to establish jurisdiction.²³

The Supreme Court first directly addressed personal jurisdiction in products liability cases in 1980 in *World-Wide Volkswagen*.²⁴ The Robinsons purchased an Audi from Seaway Volkswagen in New York, drove the car to Oklahoma, and got into an accident there. The Robinsons then brought a products liability action in Oklahoma state court against Audi (the German manufacturer), Volkswagen of America (the U.S. importer), World-Wide Volkswagen Corporation (the regional distributor, based in New York), and Seaway Volkswagen (the New York retailer). Seaway and World-Wide Volkswagen challenged personal jurisdiction and appealed the issue up to the U.S. Supreme Court. The Supreme Court, in a 7-2 opinion written by Justice White, held that an Oklahoma state court did not have personal jurisdiction over Seaway and World-Wide Volkswagen because they had not purposefully availed themselves of Oklahoma: they sold products only in the New York area. Even though it was foreseeable that a car sold in New York might be driven to Oklahoma, the Supreme Court held that foreseeability was not sufficient. In the Supreme Court’s memorable phrasing, a “seller of chattels” does not “appoint the chattel his agent for service of process.”²⁵ The Supreme Court thus made clear that personal jurisdiction is not proper in a state simply because an accident involving the product occurred there (state number six of the list described in the text accompanying note 14).

As important as that holding was dictum in which the Court sketched the “stream-of-commerce” theory of personal jurisdiction:

[I]f the sale of a product of a manufacturer or distributor such as Audi or Volkswagen [of America] is not simply an isolated occurrence, but arises from the efforts of the manufacturer or distributor to serve, directly or indirectly, the market for its product in other States, it is not unreasonable to subject it to suit in one of those States if its allegedly defective merchandise has there been the source of injury to its owner or to others. The forum State does not exceed its powers under the Due Process Clause if it asserts personal jurisdiction over a corporation that delivers its products into the stream of commerce with the expectation that they will be purchased by consumers in the forum State.²⁶

Whether this dictum should be given the force of law has been

23. *Id.*

24. *World-Wide Volkswagen Corp. v. Woodson*, 444 U.S. 286 (1980).

25. *Id.* at 296.

26. *Id.* at 297–98.

disputed for more than three decades. Audi and Volkswagen of America (the U.S. importer) assumed that personal jurisdiction over them was proper based on the stream-of-commerce theory or something similar; otherwise, they would also have challenged jurisdiction. Note that the dictum above addresses both the state where the product at issue in the lawsuit was sold (state number four of the list described in the text accompanying note 14) and the state where many similar products are sold, even if the product at issue in the lawsuit was not sold there (state number five of the list above). That is, jurisdiction over Audi and Volkswagen of America was assumed to be proper in Oklahoma not just when the car involved in the litigation was sold in Oklahoma, but also when, as in *World-Wide Volkswagen*, similar cars were sold by local retailers to *other consumers* in Oklahoma. On the one hand, jurisdiction on this basis seems fair, because if Audi and Volkswagen of America can expect to be sued in Oklahoma based on cars sold there, it is not much of an extra burden to expect them to defend suits in Oklahoma arising out of sales in New York. On the other hand, such suits do not fit neatly into the Supreme Court's division of personal jurisdiction into specific and general.²⁷ When there is general jurisdiction, jurisdiction is proper for all suits. General jurisdiction is usually only proper in states where the defendant is incorporated, headquartered, or has other "substantial and continuous contacts," such as a large manufacturing plant. General jurisdiction was, therefore, not a plausible basis for jurisdiction in *World-Wide Volkswagen*. Specific jurisdiction is personal jurisdiction arising out of contacts relating to the lawsuit itself and confers jurisdiction only in cases in which such contacts are present. Specific jurisdiction over Audi and Volkswagen of America seems implausible because the Robinsons' suit did not arise out of Audi's and Volkswagen of America's contacts with Oklahoma. Audi's and Volkswagen of America's only contacts with Oklahoma were retail sales in that state, and those contacts did not give rise to the Robinsons' suit because the Robinsons purchased their car in New York.

The Supreme Court next addressed personal jurisdiction in product liability cases in 1987 in *Asahi Metal Industries v. Superior Court of California*.²⁸ The case was substantially more complicated and split the Court. Gary Zurcher was injured while riding a Honda motorcycle in California. He filed a product liability action in California state court against Cheng Shin, the Taiwanese manufacturer of the rear tire tube.

27. Goodyear Dunlop Tires Operations, S.A. v. Brown, 131 S. Ct. 2846, 2851 (2011).

28. Asahi Metal Indus. v. Superior Ct. of Cal., 480 U.S. 102 (1987).

Cheng Shin sought indemnity in California state court from Asahi, the Japanese valve manufacturer. Zurcher settled with Cheng Shin, but Cheng Shin continued to prosecute its indemnity suit against Asahi. Asahi challenged jurisdiction and appealed the case up to the U.S. Supreme Court. Justice O'Connor announced the judgment of the Court. In a part of the opinion joined by all Justices except Justice Scalia, Justice O'Connor ruled that jurisdiction would "offend 'traditional notions of fair play and substantial justice'"²⁹ because the burden on Asahi in litigating in the United States was "severe,"³⁰ and California had no interest in the case because the California plaintiff had settled. This part of the opinion, while sufficient to decide the case, is of limited importance because most product liability cases in U.S. courts involve an active American plaintiff, and Justice O'Connor was careful to preserve jurisdiction in such cases because "often the interests of the plaintiff and the forum . . . will justify even the serious burdens placed on the alien defendant."³¹

Of more importance to later product liability cases is the part of the O'Connor opinion that was joined by three other Justices—Chief Justice Rehnquist and Justices Powell and Scalia. This part of the O'Connor opinion asserted that there was no jurisdiction over Asahi because merely placing a product in the "stream of commerce" is not sufficient to establish purposeful availment. Instead, there must be

[a]dditional conduct of the defendant [indicating] an intent or purpose to serve the market in the forum State, for example, designing the product for the market in the forum State, advertising in the forum State, establishing channels for providing regular advice to customers in the forum State, or marketing the product through a distributor who has agreed to serve as the sales agent in the forum State.³²

Justice O'Connor's approach to product liability cases has been dubbed the "stream of commerce plus" approach.

Justice Brennan wrote a concurrence which Justices White, Marshall, and Blackmun joined. This opinion reiterated Justice White's dictum in *World-Wide Volkswagen*, that placing a product in the stream of commerce is sufficient, as long as there is a "regular and anticipated flow of products" from the manufacturer to the forum state.³³ Justice Stevens also wrote a

29. *Id.* at 113 (quoting *Int'l Shoe Co. v. Washington*, 326 U.S. 310, 316 (1945)).

30. *Id.* at 114.

31. *Id.*

32. *Id.* at 112.

33. *Id.* at 117 (Brennan, J., concurring).

concurrence, explaining that the Court need not address the stream of commerce theory because the nearly unanimous part of O'Connor's opinion that focused on the fairness was sufficient to decide the case. Nevertheless, he opined that he "would be inclined to conclude that a regular course of dealing that results in deliveries of over 100,000 units annually over a period of several years would constitute 'purposeful availment' even though the item delivered to the forum State was a standard product marketed throughout the world."³⁴

Although a majority of the Court endorsed Justice White's view in *World-Wide Volkswagen* that placing a product in the stream of commerce is sufficient to establish jurisdiction, as long as the volume of products flowing into the forum state is high enough, since Justice Stevens did not join Justice Brennan's opinion and since Justice Stevens indicated that he did not think the Court should address the issue at all, lower courts did not interpret *Asahi* as establishing binding precedent on the issue of stream of commerce jurisdiction. Instead, most courts followed Justice O'Connor's more stringent "stream of commerce plus" approach, even though that part of the O'Connor opinion did not represent the view of a majority of the Court.

Just last Term, the Supreme Court revisited the stream-of-commerce theory in *McIntyre*.³⁵ Again, no opinion garnered five votes. Nicastro injured his hand in New Jersey while using a machine manufactured in the United Kingdom by McIntyre Machinery, a U.K. corporation. McIntyre did not sell the product directly to Nicastro's New Jersey employer, but rather sold it through an American distributor based in Ohio. Nicastro sued McIntyre in New Jersey state court, and McIntyre challenged jurisdiction up to the U.S. Supreme Court. Justice Kennedy, in a plurality opinion joined by three other Justices, held that there was no jurisdiction over McIntyre because McIntyre did not engage in any "conduct purposefully directed at New Jersey"³⁶ and had not "targeted the forum."³⁷ Justice Kennedy interpreted the "purposeful availment" requirement narrowly to require action "directed" or "targeted" at the forum. The fact that the defendant engaged a distributor to market its products in the United States was not sufficient to establish jurisdiction because McIntyre's efforts were directed generally at the United States as a whole rather than being targeted

34. *Id.* at 122 (Stevens, J., concurring).

35. *J. McIntyre Mach., Ltd. v. Nicastro*, 131 S. Ct. 2780 (2011).

36. *Id.* at 2790.

37. *Id.* at 2788.

particularly at New Jersey. Whether Justice Kennedy's opinion is more stringent than Justice O'Connor's plurality opinion in *Asahi* is unclear. The fact that Justice Kennedy requires targeting the forum could lead to different results when the manufacturer advertises in regional or national media. Justice O'Connor might find such advertising sufficient to show that the manufacturer had "an intent or purpose to serve the market in the forum State,"³⁸ while Justice Kennedy might find such advertising insufficiently targeted to give rise to jurisdiction.

Justice Breyer wrote a concurring opinion, which Justice Alito joined. Justice Breyer thought this case was an inappropriate vehicle for clarifying the stream-of-commerce theory, because the sale to New Jersey was a "single isolated sale," so even under Justice White's dicta in *World-Wide Volkswagen* there would be no jurisdiction.³⁹ In addition, there was no "special state-related design, advertising, advice, [or] marketing," as required by O'Connor's *Asahi* plurality opinion.⁴⁰ Justice Ginsburg, in a dissenting opinion joined by Justices Sotomayor and Kagan, would have found personal jurisdiction to be proper. When a foreign corporation chooses a U.S. distributor to market to the entire United States, she would hold that the foreign corporation is subject to jurisdiction in any U.S. state where the product was sold.⁴¹

While the opinions in *McIntyre* focus on jurisdiction in the place where the product was sold to the end user, Nicastro's New Jersey employer, (state number four of the list described in the text accompanying note 14), Justice Kennedy and Ginsburg's opinion hint that jurisdiction might not be proper even in Ohio, the location of McIntyre's American distributor, even though McIntyre sold the product that injured Nicastro to the Ohio distributor and thus had a sustained commercial relationship with Ohio which was related to Nicastro's suit.⁴² Justice Kennedy's opinion contains the assertion that "a defendant may in principle be subject to the

38. *Asahi*, 480 U.S. at 112.

39. *McIntyre*, 131 S.Ct. at 2792 (Breyer, J., concurring).

40. *Id.*

41. *Id.* at 2800–01 (Ginsburg, J., dissenting).

42. See Patrick J. Borchers, J. McIntyre Machinery, Goodyear, and the Incoherence of the *Minimum Contacts Test*, 44 CREIGHTON L. REV. 1245, 1265 (2011) ("One could easily imagine a court reaching the conclusion that because Ohio was merely a way station for machines destined for other states, the English distributor did not target the Ohio market."). See also *id.* at 1275 n.229; Brief of Law Professors as Amici Curiae Supporting Respondents at 18–19 n.10, *J. McIntyre Mach., Ltd. v. Nicastro*, 131 S. Ct. 2780 (2010) (No. 09-1343) (although Petitioner could sue McIntyre's distributor in Ohio, "none of the Petitioner-side briefs concede that Ohio (or any other U.S. court) could obtain jurisdiction over *Petitioner*, despite *Petitioner*'s purposeful efforts to access the U.S. market for its products").

jurisdiction of the courts of the United States but not of any particular State.”⁴³ It is uncontroversial that a federal statute might authorize federal courts to take jurisdiction over a case for which no U.S. state would have jurisdiction. For example, a statute might authorize jurisdiction over an antitrust conspiracy among foreign producers which raised prices in the United States, even though the foreign producers would not have purposefully availed themselves of any particular U.S. state. Nevertheless, it would be odd for Justice Kennedy to have mentioned this idea in *McIntyre* unless he thought McIntyre would not be subject to personal jurisdiction in any U.S. state. Or perhaps Justice Kennedy simply had not thought of the possibility of jurisdiction in Ohio, the location of McIntyre’s U.S. distributor. Similarly, Justice Ginsburg, in her opinion, asks,

Is not the burden on McIntyre UK to defend in New Jersey fair, *i.e.*, a reasonable cost of transacting business internationally, in comparison to the burden on Nicastro to go to Nottingham, England to gain recompense for an injury he sustained using McIntyre’s product at his workplace in Saddle Brook, New Jersey?⁴⁴

This implies that she thought that the only alternative to suit in New Jersey was suit in the United Kingdom. Perhaps she simply had not thought about the possibility of suit in Ohio, but it is also possible that she had reason to believe that Justice Kennedy and other members of the Court would reject jurisdiction in Ohio. Similarly, Justice Ginsburg’s assertion that “[c]ourts, both state and federal, confronting facts similar to those here, have rightly rejected the conclusion that a manufacturer selling its products across the USA may evade jurisdiction in any and all States, including the State where its defective product is distributed and causes injury,”⁴⁵ seems to imply that she thinks Justice Kennedy would not allow suit in any U.S. state, including Ohio, the location of McIntyre’s American distributor.

The Supreme Court addressed personal jurisdiction in another product liability case in the 2010–2011 Term, but it is much less important.⁴⁶ A North Carolina resident was injured in a bus accident in France and sued three foreign subsidiaries of Goodyear USA in North Carolina state court. On appeal, the North Carolina Supreme Court upheld general jurisdiction based on the fact that a small number of tires manufactured by the foreign subsidiaries was sold in North Carolina. The U.S. Supreme Court

43. *McIntyre*, 131 S. Ct. at 2789.

44. *Id.* at 2800–01 (Ginsburg, J., dissenting).

45. *Id.* at 2801.

46. *Goodyear Dunlop Tires Operations, S.A. v. Brown*, 131 S. Ct. 2846 (2011).

unanimously reversed, holding that the North Carolina Supreme Court had confused the requirements of general and specific jurisdiction because general jurisdiction requires “continuous and systematic general business contacts,” not just a few isolated sales.⁴⁷ In addition, specific jurisdiction was lacking, because “the episode-in-suit, the bus accident, occurred in France, and the tire alleged to have caused the accident was manufactured and sold abroad.”⁴⁸ In so holding, the Court reinforced the view that jurisdiction in the plaintiff’s home state, absent other contacts, is not proper (state number seven of the list described in the text accompanying note 14).

III. EX ANTE ANALYSIS

A. EX ANTE ANALYSIS: LOW TRANSACTIONS COSTS

This subsection analyzes personal jurisdiction under the assumption of low transactions costs. It provides a foundation for the more realistic analysis in the next subsection of jurisdiction when transactions costs are high. When reading this subsection, it should be remembered that consideration of high transactions costs substantially changes the analysis and conclusions.

According to the Coase Theorem, if transactions costs were zero, jurisdictional rules would not matter because the parties would negotiate to an efficient solution no matter what rules the Supreme Court had set for personal jurisdiction. Manufacturers and consumers would simply negotiate a contract before sale setting out optimal liability rules and an efficient dispute resolution mechanism. Most probably, the contract would state that the manufacturer is not liable for any product defects because such liability would serve no purpose. Liability would not be necessary to ensure safe design and manufacture, because zero transactions costs imply perfect information, so the consumer would have full information about product defects and could choose products accordingly. Similarly, liability would not be needed to serve an insurance function because zero transactions costs implies that the consumer could buy full insurance through a third-party insurer at a zero-profit price.

The analysis of zero transactions cost is, therefore, not very illuminating for personal jurisdiction law. In addition, it is extremely unrealistic. In the real world, consumers have imperfect information about

47. *Id.* at 2857 (quoting *Helicopteros Nacionales de Colombia, S.A. v. Hall*, 466 U.S. 408, 416 (1984)).

48. *Id.* at 2851.

product safety, can never fully insure, and when they do insure must pay a price which reflects administrative overhead, moral hazard, and adverse selection. In addition, parties cannot generally contract out of product liability, because waivers of product liability are not enforceable.⁴⁹

An analysis of a somewhat more realistic world of low transactions costs is more illuminating. Consider a world in which manufacturers cannot waive or modify product liability law by contract, so some state's product liability law will apply. Nevertheless, manufacturers can affect which state's product liability law will apply, either by writing an enforceable forum-selection or choice-of-law clause or by structuring their conduct to limit the states where they are subject to personal jurisdiction.

Forum-selection clauses and personal jurisdiction affect product liability law in four ways. First, even though a state will not necessarily apply its own product liability law to a dispute, states have different choice of law rules, so where a case is litigated affects which state's substantive law applies. Second, most choice-of-law methodologies are relatively malleable, and many commentators have noted that judges frequently conclude that choice-of-law principles require application of the forum state's substantive law.⁵⁰ Third, the forum applies its own procedural rules, such as evidentiary rules and standards for summary judgment, and these affect liability even though they are not formally part of product liability law. Fourth, where the case is litigated determines judicial selection methods and the composition of the jury, and these can also have a substantial effect on liability.⁵¹

Consider first the possibility that manufacturers could use forum-selection and choice-of-law clauses to control where litigation will take place and which state's product liability law will apply. As a threshold matter, it should be noted that it is not clear that such clauses will be

49. RESTATEMENT (THIRD) OF TORTS: PRODUCTS LIABILITY § 18 (1998).

50. See, e.g., Patrick J. Borchers, *The Choice of Law Revolution: An Empirical Study*, 49 WASH. & LEE L. REV. 357, 366 (1992); Goldsmith & Sykes, *supra* note 8, at 1137 ("[T]he modern rules have one unmistakable consequence: they make it more likely that the forum court will apply local tort law to wrongs that occurred in another jurisdiction."); Michael E. Solimine, *An Economic and Empirical Analysis of Choice of Law*, 24 GA. L. REV. 49, 85, 87-88 (1989); Stuart E. Thiel, *Choice of Law and the Home-Court Advantage: Evidence*, 2 AM. L. & ECON. REV. 291 (2000). But see SYMEON C. SYMEONIDES, *THE AMERICAN CHOICE-OF-LAW REVOLUTION: PAST, PRESENT AND FUTURE* 273-364 (2006); Christopher A. Whytock, *Myth of Mess? International Choice of Law in Action*, 84 N.Y.U. L. REV. 719, 764-69 (2009).

51. Eric Helland & Alexander Tabarrok, *The Effect of Electoral Institutions on Tort Awards*, 4 AM. L. ECON. REV. 341 (2002); Alexander Tabarrok & Eric Helland, *Court Politics: The Political Economy of Tort Awards*, 42 J.L. & ECON. 157 (1999).

enforceable in the typical case where the manufacturer sells the product through a distributor and / or retailer. In such situations, one might think that there is no direct contractual relationship between the manufacturer and consumer and thus no way for the manufacturer to create a binding contract with the consumer. Although I have found no cases directly addressing this issue, some courts enforce terms and conditions found inside product packaging. Gateway, for example, includes an arbitration clause in a printed contract that it places in boxes containing computer equipment. The agreement states that if the consumer does not return the computer within a set number of days (for example, five or thirty days), the agreement becomes binding. While the Seventh Circuit has held that such agreements are valid,⁵² at least one district court has held that they are not.⁵³ Reported cases dealing with such agreements have dealt with arbitration clauses in consumer products sold directly by the manufacturer to the consumer. Nevertheless, the contract principles applied in such cases would have equal force to a forum-selection or choice-of-law clause in a product sold via a distributor or retailer.

If forum-selection and choice-of-law clauses were enforceable, one might think that manufacturers would choose the forum and law which had the most defendant-friendly procedures and product liability law, even if a different forum or law were more efficient. If transactions costs are low, however, this is not the case. If consumers are aware of the clauses and understand the applicable law, then they will take that information into account when purchasing the product. They will be willing to pay less for products if the applicable law and forum are defendant friendly. Similarly, if competing products are otherwise similar in quality and price, they will choose the product that has more plaintiff-friendly choice-of-law and choice-of-forum clauses. This will put pressure on manufacturers to include fairer terms. In a low-transactions-cost world, this pressure will induce the manufacturer to choose efficient choice-of-law and choice-of-forum terms. If consumers are willing to pay more for plaintiff-friendly terms than they cost the manufacturer, then manufacturers have an incentive to include such terms because they can make a profit offering them. If so, such terms would be efficient. On the other hand, if plaintiff-friendly terms cost the manufacturer more than they are worth to consumers, then such terms would be inefficient and manufacturers will not offer them. As a result, if transactions costs are low, then manufacturers would have an incentive to

52. *Hill v. Gateway 2000, Inc.*, 105 F.3d 1147, 1150 (7th Cir. 1997).

53. *Klocek v. Gateway, Inc.*, 104 F. Supp. 2d 1332, 1341 (D. Kan. 2000).

select efficient terms.

Of course, efficient choice-of-law and choice-of-forum terms might be ones which provide little or no product liability protection. There is a debate in the literature on whether mandatory product liability is efficient. Alan Schwartz, for example, argues that liability for defective products should be governed by “free contract,”⁵⁴ whereas Landes and Posner argue that a regime of mandatory product liability is more efficient.⁵⁵ Thus, Schwartz would predict that, if transactions costs were low, manufacturers would use forum-selection and choice-of-law clauses to select states with manufacturer-friendly laws, such as North Carolina, which is the only state that has not adopted strict liability for defective products, or Idaho and Kansas, which limit noneconomic damages (for example, pain and suffering) to \$250,000.⁵⁶ On the other hand, Landes and Posner would predict that manufacturers would select states with more balanced laws. The point is that if transactions costs are low and forum-selection and choice-of-law clauses are enforced, efficient law will be selected regardless of personal jurisdiction doctrine.

It is puzzling that manufacturers do not routinely use forum-selection and choice-of-law clauses. Whether one takes the view that manufacturers would choose efficient law (as argued in this subsection for low transactions costs) or that manufacturers would choose the most defendant-friendly law (as discussed in the next subsection), manufacturers would still have an incentive to select the law and the forum before sale rather than letting the forum and applicable law be determined after an accident has occurred through the interaction of personal jurisdiction law, plaintiff's choice of forum, and the forum's choice-of-law rules. Perhaps manufacturers (wrongly?) assume that such clauses would be unenforceable.

If forum-selection and choice-of-law clauses are not enforceable when manufacturers are not in a direct contractual relationship with consumers, the analysis has greater implications for personal jurisdiction doctrine.

54. Alan Schwartz, *The Case Against Strict Liability*, 60 *FORDHAM L. REV.* 819, 837 (1992).

55. See generally William M. Landes & Richard A. Posner, *A Positive Economic Analysis of Products Liability*, 14 *J. LEGAL STUD.* 535 (1985). See also A. Mitchell Polinsky & Steven Shavell, *The Uneasy Case for Product Liability*, 123 *HARV. L. REV.* 1437 (2010); J. Mark Ramseyer, *Product Liability and Product Safety: Japan and the U.S.* (Harv. Law Sch. Ctr. for Law, Econ., & Bus., Discussion Paper No. 714, 2012). See also more recent game theoretic literature discussed in the next subsection. See *infra* Part III.B.

56. *Tort Reform Record*, ATRA 35, Dec. 22, 2011, available at http://www.atra.org/sites/default/files/documents/record_12-22-11.pdf.

Under the assumption of low transactions costs, the best jurisdictional rule would be the one which gave the defendant the most control over where it was sued. The analysis would then be much like the analysis above of enforceable forum-selection and choice-of-forum clauses. Defendants would have an incentive to structure their conduct so that plaintiffs would have to sue in the forum that provided the most efficient law. If a defendant structured its conduct so that inefficiently pro-defendant law applied, it would be leaving money on the table, because it could adjust its conduct so that a more plaintiff-friendly forum applied. As a result, it could charge a price which more than compensated it for its higher costs. For the same reason, in a competitive environment, manufacturers whose conduct selected fora with more efficient law would have an advantage over their competitors.

The argument in the prior paragraph is easiest to explain if one assumes that a defendant's conduct identifies a single forum where it can be sued. This is not usually true, but it greatly simplifies the exposition. The complications introduced by plaintiff choice among multiple fora are discussed below. Suppose, for example, the manufacturer sells all its products through a single distributor, and that the plaintiff can only sue in the state where the distributor is located (state number three of the list described in the text accompanying note 14). Then the manufacturer can relatively easily choose the forum by choosing a distributor in that state. Consider, for example, McIntyre, the U.K. manufacturer in the important 2011 Supreme Court case. It could plausibly have chosen a distributor in any American state. There is no apparent reason for it to have chosen a distributor in Ohio. Perhaps there are geographic advantages to a distributor located in the Midwest, although one could also imagine that a distributor located near an Atlantic port would have minimized transportation costs.⁵⁷ If transactions costs are low, one would expect the manufacturer to choose a distributor located in a state with efficient procedural rules and choice-of-law rules which selected efficient substantive law. As noted above, if it chose a distributor in a state with inefficient law, it would be leaving money on the table. The manufacturer could charge higher prices or gain market share by switching to a distributor in a state with more efficient law. Of course, switching distributors may have costs—in which case, if switching costs are sufficiently high, it would be inefficient to switch—but

57. Perhaps McIntyre chose Ohio because Ohio has enacted a comprehensive set of tort reform laws, including limits on punitive and noneconomic damages, partial abrogation of joint and several liability, abolition of the collateral source rule, a ten-year statute of repose, and interlocutory appeals of class certification decisions. *Tort Reform Record*, *supra* note 56.

the basic point remains valid. If transactions costs are low and suit will be in the state where the distributor is located, then manufacturers will have incentives to structure their activities to de facto select efficient law.

As noted above, the analysis is more complicated when one takes into account the fact that the plaintiff is likely to have a choice of several possible fora. A personal jurisdiction jurisprudence that allows suit in the distributor's state is also likely to allow suit where the manufacturer is incorporated or headquartered, and where the product is designed or manufactured (states numbers one, two, and three of the list described in the text accompanying note 14). The analysis in the prior paragraph is unaffected if these other states are unattractive to the plaintiff, either because they are very inconvenient or because they have laws that are more pro-defendant. This, for example, was probably the situation in *McIntyre*.⁵⁸ The manufacturer was incorporated and headquartered in England, and did its design and manufacturing there. From an American plaintiff's perspective, litigation in any U.S. state is more attractive than suit in England. Conversely, in situations where the manufacturer is incorporated or headquartered in a more plaintiff-friendly state, or where product design or manufacture was in a more plaintiff-friendly state, then the manufacturer's choice of a distributor will not affect the law applied to a particular case because the plaintiff will always sue in that more plaintiff-friendly state. More generally, a jurisdictional rule that allows suit in the distributor's state will have an effect on the law actually applied only when the plaintiff finds it attractive to sue there because of convenience and / or favorable law. That is, the option to sue in the distributor's state will be important when the manufacturer is incorporated and headquartered in a pro-defendant state, and where product manufacture and design also takes place in such a state.

While a rule that allowed suit in the distributor's state facilitates manufacturer choice of forum and law, and thus (under the assumption of low transactions costs) efficient product liability law, other rules are likely to be less efficient. For example, a jurisdictional rule that allows plaintiffs to sue where they are injured or reside (states numbers six and seven of the list described in the text accompanying note 14) gives the manufacturer almost no control because plaintiffs are free to live or use products wherever they want. Such a jurisdictional rule would thus give the manufacturer almost no ability to choose efficient law. Since consumers can live in any state, the law of states with less efficient law will sometimes

58. *J. McIntyre Mach., Ltd. v. Nicastro*, 131 S. Ct. 2780 (2011).

apply. Similarly, a jurisdictional rule that allows plaintiffs to sue where they or others purchased the product (states numbers four and five of the list described in the text accompanying note 14) gives the manufacturer very little control because a manufacturer would have to give up consumers in a state in order to avoid jurisdiction there. A jurisdictional rule which allowed suit in the place of incorporation, headquarters, manufacture, or design gives the manufacture somewhat more control. On the other hand, to the extent that there are business reasons unrelated to product liability to locate these activities elsewhere—for example, favorable corporate law, access to managerial or engineering talent, or proximity to raw materials—manufacturers are unlikely to adjust these activities in order to influence the forum for product liability disputes. As a result, if transactions costs are low, a rule which allows personal jurisdiction in the state where the distributor is located (but not where the product was sold, or where the accident took place, or where the plaintiff resides) is likely to result in application of the most efficient substantive and procedural rules.

Analysis so far has ignored the ex post costs of litigating in a particular forum—for example, the cost of hiring lawyers in that forum or travel to that forum for trial. The implications of low transactions costs, however, are the same. The manufacturer has an incentive to choose a forum which minimizes those costs, both the costs borne by the consumer and those borne by the manufacturer. Fully informed consumers will take the inconvenience of the forum into account when selecting products, so manufacturers can charge higher prices or get a larger market share by choosing a forum which is convenient to consumers. As noted above, a personal jurisdiction rule that allows suits in the state where the distributor is located is likely to give the manufacturer the most flexibility in choosing the relevant law and thus most likely to be efficient when taking into account both the law and convenience. Perhaps a manufacturer might choose multiple distributors, so that jurisdiction is always possible in a state convenient for consumers.

The manufacturer's incentive to choose a forum offering efficient law also gives states an incentive to create efficient law. If states want to attract businesses—whether it is corporate headquarters, design or manufacturing facilities, distribution centers, or simply litigation—they have an incentive to make their law attractive to manufacturers. As argued above, if transactions costs are low, the manufacturer has an incentive to choose a forum with efficient law, so state legislatures and courts, to the extent that they take into account the welfare of their citizens, have an incentive to provide laws which encourage optimal safety investments and accurate but

cheap litigation.

B. EX ANTE ANALYSIS: HIGH TRANSACTIONS COSTS

The previous part assumed the transactions costs were zero or low. Nevertheless, even the assumption of low transactions costs is unrealistic. It assumes that consumers take into account the likely forum for product liability litigation in deciding how much they are willing to pay for a product or in choosing one product over another. This requires more knowledge than even the most sophisticated purchasers are likely to have. First, it requires that consumers accurately predict the place where they would be likely to sue if they were injured. Accurately predicting the forum requires reading and understanding forum-selection clauses, predicting their enforceability, and / or understanding personal jurisdiction statutes and constitutional jurisprudence as they would apply to the competing products they are considering purchasing. If jurisdiction was in the distributor's state, the consumer would have to figure out before purchase where the distributor was located, even if the distributor was located in a different state from the one in which the consumer was planning to purchase the product. Second, for market forces to work properly, consumers must accurately predict applicable law. This would require reading and understanding choice-of-law clauses, predicting their enforceability, and / or understanding choice-of-law doctrine as it would apply to the different products they were considering buying. Third, an efficient market requires consumers to have detailed knowledge of the laws and procedures of the relevant states so that they could figure out how each state's laws and procedures impact the amount they would be willing to pay for the product and so that they could make informed choices between competing products. This is absurd. Very few tort professors could tell you whether Ohio or Colorado has more favorable product liability law, much less put a dollar amount on the difference. In addition, it is simply not worth anyone's time to figure out the relevant laws and their impacts. The probability of an actionable accident for any mass-produced product is negligible, so it would be irrational for any consumer to spend the time to read a forum-selection clause much less research the relevant state's laws or try to calculate how those laws affect their valuation of the product.

An assumption of zero or low transactions costs is also inconsistent with modern products liability law. If consumers are sophisticated enough to figure out the applicable law and its implications, they could also analyze warranties. But if they could do that, there is little need for product liability, as manufacturers would have incentives to mimic efficient product

liability law through voluntary product warranties. More recent game theoretic models of product liability show that mandatory products liability may be efficient, but only when transactions costs are high. Transactions costs are likely to be high for several reasons. Understanding warranties takes time and legal expertise, so it is seldom worthwhile for consumers to read voluntary warranties, and manufacturers have little incentive to offer efficient warranties or to produce safe products.⁵⁹ Choi and Spier argue that, if there were no mandatory products liability, adverse selection problems are likely to undermine the market for voluntary warranties.⁶⁰ Consumers who are more likely to be careless (and thus more likely to be involved in product-related accidents) are more likely to value generous warranties. As a result, a manufacturer that offered a generous warranty is likely to attract a disproportionate share of careless consumers, thus making the generous warranty very expensive and driving more careful consumers to manufacturers offering less generous terms. In equilibrium, manufacturers are likely to offer warranties with inefficiently stingy terms. The stingy warranty terms will give manufacturers insufficient incentives to design and manufacture safe products, so the adverse selection problem is likely to lead to unsafe products. Mandatory product liability cures the adverse selection problem and restores the incentive to produce safe products. Wickelgren argues that commitment problems will undermine the market for voluntary warranties.⁶¹ Since safety investments are made well before the consumer purchases the product, they are unaffected by a consumer's choice to waive product liability (if such waivers were legally enforceable). Therefore, if manufacturers offered consumers a sufficiently large price reduction to sign such waivers, consumers would rationally agree to them. Nevertheless, if manufacturers anticipate that consumers will waive product liability, then their incentive to create safe products will be undermined. Like Choi and Spier, Wickelgren therefore concludes that mandatory, nonwaivable, product liability may be efficient.

Despite their differences, the Choi and Spier, and Wickelgren papers concur in concluding that high transactions costs are the best justification for mandatory product liability. In addition, they all suggest that, even if each state made product liability law mandatory, manufacturers would have an incentive to structure their activities to select states which would provide lenient (pro-manufacturer) product liability laws and procedures. This is

59. Katz, *supra* note 4. See also Che & Choi, *supra* note 4; Wickelgren, *supra* note 4.

60. Choi & Spier, *supra* note 2, at 3.

61. Wickelgren, *supra* note 3.

clearest for Choi and Spier. For Wickelgren, the analysis is more complex. If manufacturers could not ask consumers to waive product liability, they would have an incentive to ask consumers to agree to choice-of-law and choice-of-forum clauses that would select the most pro-manufacturer law. This would have a similar effect, assuming that such clauses were enforceable.

If the high-transactions costs analyses of products liability are correct, then the implications for personal jurisdiction are the opposite of those discussed above for zero or low transactions costs. Giving manufacturers more control over where they will be sued is likely to result in less efficient law and more dangerous products. If choice-of-law and forum-selection clauses are enforced, then manufacturers would choose pro-defendant substantive and procedural law and would choose fora that were convenient for defendants, but inconvenient for plaintiffs.⁶²

If choice-of-law and forum-selection clauses are not enforced, personal jurisdiction rules that push consumers to sue in the distributor's state are likely to lead to the worst outcomes. Manufacturers would choose distributors located in states with pro-manufacturer product liability laws and procedures, and, as a result, would have insufficient incentives to design and manufacture safe products.

In addition, personal jurisdiction in the distributor's state might lead to other inefficiencies. For example, in order to select favorable law, a foreign manufacturer might choose a distributor located far from ports, thus driving up transportation costs. Or, a manufacturer might choose to market its product through a distributor when, on a purely business basis, it would be more efficient for the manufacturer to sell the product directly to consumers or directly to retailers in the same state as consumers. Nevertheless, since direct sales would result in jurisdiction in the consumer's state (and thus potentially in every state), manufacturers would have incentives to make sales through a distributor because that could insulate the manufacturer from suit in all but one state—the distributor's state—and by selecting the right distributor, the manufacturer can assure

62. Empirical evidence from other kinds of contracts is mixed. Florencia Marotta-Wurgler found that only 28 percent of contracts for online products had forum-selection clauses and that such clauses almost always designated the defendant's headquarters state as the forum. Florencia Marotta-Wurgler, "Unfair" Dispute Resolution Clauses: *Much Ado About Nothing?*, in *BOILERPLATE: THE FOUNDATION OF MARKET CONTRACTS* 45, 50, 63 (Omri Ben-Shahar ed., 2007). The choice of the defendant's headquarters state as the forum could indicate that such clauses are being used to favor defendants over plaintiffs. On the other hand, as discussed below, jurisdiction in the defendant's headquarters state might also reduce total litigation costs and thus be efficient. See *supra* Part IV.

that the distributor's state has favorable law.

While personal jurisdiction rules pushing consumers to sue in the distributor's state are likely to have the worst implications, rules requiring suit where the manufacture is headquartered or incorporated, or where the product was designed or manufactured, could have similar effects. Manufacturers would have incentives to locate these activities in the states with the most pro-defendant product liability laws and procedures. Not only would this result in inefficiently low incentives to design and manufacture safe products, but it could also result in location decisions that were inefficient from a business perspective. For example, design facilities might be located in places with less favorable access to engineering talent, or manufacturing plants might be located farther from parts suppliers.

The potential to influence such locational decisions would also give states incentives to weaken their product liability laws and make their procedures more pro-defendant. A state that was eager to attract new distribution centers or manufacturing plants or design facilities would have an incentive to weaken its product liability laws and procedures to attract companies. That is, giving defendants the ability to "forum shop" through their locational decisions gives states an incentive to "forum sell" by weakening their laws. Under Spier and Choi's adverse-selection model, states would select inefficiently weak product liability law and procedure, but there would still be some protection from unsafe products. Under other models of product liability, competition between states could lead to a race to the bottom in legal protections against unsafe products.

In fact, a state that wanted to attract distributors might amend its long-arm statute not to provide jurisdiction in product liability cases when the only contact the defendant has with the state is that the manufacturer sold the product to a distributor located there. So, for example, the long-arm statute might state that there is jurisdiction only when the product is manufactured or designed in the state, or the manufacturer is incorporated or headquartered in the state. Similarly, a state that wanted to attract design or manufacturing facilities might amend its long-arm statutes not to provide jurisdiction in product liability cases when the only contact the defendant has with the state is design or manufacturing facilities there. It is possible that such statutes could be seen as violating the Due Process or Commerce Clauses, although such theories have never been tested; courts have only analyzed statutes that assert jurisdiction that is too broad, not long-arm statutes that are too short.

In contrast, a rule that facilitated suit in the place where the consumer

(whether an individual or a business user of the product) purchased the product would give manufacturers no ability to select pro-defendant laws and fora and no incentive to distort location decisions. It is unlikely that a manufacturer would forgo the market in a state in order to avoid product liability suits there. Thus, a jurisdictional rule that channeled product liability suits into the state where the product was sold to the consumer would give manufacturers little ability to influence the forum and little incentive to distort other business decisions.

In addition, as Michael McConnell argued in the choice-of-law context, a jurisdictional rule that allowed suit where the product is purchased would give states an incentive to provide efficient law and procedure.⁶³ One might think that states would provide pro-plaintiff law—because plaintiffs are usually state residents, while defendant manufacturers are frequently from out of state—but this is incorrect. If a state provided product liability laws or procedures that were very costly, manufacturers would find a way to pass the cost on to consumers in that

63. McConnell, *supra* note 10. McConnell argues that the law of the place of purchase should apply in product liability cases, because other rules give states incentives to generate inefficient substantive law. *Id.* McConnell's argument is, in fact, stronger for personal jurisdiction (that is, suit in the place of purchase) than for choice of law (applicable substantive law is law of the place of purchase). As Bruce Hay points out, it is not clear that choice-of-law rules other than law-of-the-place-of-purchase would, in fact, lead to inefficient law. Hay, *supra* note 9. Hay argues that under the governmental interest rule, courts are likely to apply substantive law other than forum law, if that law is more favorable to the plaintiff than forum law, and if either the plaintiff or defendant is from the state with the more favorable law. *Id.* This will often remove the incentive for states to generate pro-plaintiff substantive law, because a state with pro-plaintiff law will always have it applied to its manufacturers (whether the plaintiff is in state or out of state), while a state with more pro-defendant law will sometimes apply the more pro-defendant law to its manufacturers, thus attracting more business to the state. A similar argument might be made if plaintiffs had the option of suing either in their home state or the defendant's state. A rational plaintiff might then always choose to sue in the state with the more pro-plaintiff procedures. This could be seen as removing the incentive for states to generate pro-plaintiff procedures, because a manufacturer in the more pro-plaintiff state would always be subject to the more pro-plaintiff procedures, while a manufacturer in the pro-defendant state would sometimes be subject to the more pro-defendant procedures, thus attracting business to the more pro-defendant state. Nevertheless, this argument is unpersuasive, because in-state plaintiffs could only take advantage of the pro-plaintiff procedures of the defendant's state by suing out of state. This suggests two reasons why states would be unlikely to try to attract business by making their procedures pro-defendant: (1) In-state consumers would find it inconvenient and costly to have to sue out of state in order to get the benefit of more pro-plaintiff procedures, and (2) in-state lawyers would lose a lot of business, because plaintiffs with a choice would sue in the defendant's state. As a result, both in-state consumers and lawyers would oppose pro-defendant procedures that would push litigation out-of-state. The possibility of consumer and lawyer opposition is not relevant to Hay's choice-of-law argument because a court in one state can apply another state's substantive law. Thus, consumers could get the benefit of defendant state's pro-plaintiff substantive law by suing in their own state, but having their own state courts apply defendant's substantive law under the governmental interest choice-of-law rule.

state. As a result, excessively pro-plaintiff laws and procedures would harm in-state consumers. Legislators and state judges would thus have little incentive to provide inefficiently pro-plaintiff laws and procedures. Instead, since in-state consumers (who are mostly in-state residents) would both pay the costs of the product liability protection afforded by state law and get its benefits, state legislators and judges would have an incentive to provide laws that supplied an efficient balance between consumer protection and cost.

The ability of manufacturers to adjust prices on a state-by-state basis is the key to the argument in the prior paragraph. When a manufacturer sells directly to consumers in the state or to a distributor that deals only with one state, it is easy to see how the manufacturer could vary prices. When the manufacturer sells to a distributor or retailer (for example, Wal-Mart) that then sells to consumers in multiple states, the situation is more complicated. For prices to vary, the manufacturer would need contractual provisions that specifically addressed the issue. For example, the manufacturer might sell to the distributor or retailer at a price that reflected liability risks in pro-plaintiff states and then rebate some of the price to the distributor or retailer if the distributor or retailer could prove that the products were actually sold to consumers in less pro-plaintiff states. Or, distributors might pay in two installments, the first reflecting liability risk in pro-defendant states and an additional installment if the product was actually sold in high-liability states. Such arrangements would, of course, require the distributor to track the states where products were eventually sold, which could get complicated if the good passed through several middleman (for example, a national distributor and then a regional wholesaler and then a local retailer). If product liability risk were low or if the differences between states were small, it would not be worthwhile for manufacturers and their distributors to incur that additional expense. On the other hand, if product liability risks are high and there is substantial variation among states in liability rules and procedures, then manufacturers will find it worth the cost to implement such pricing schemes. In equilibrium, states would likely choose product liability laws and procedures that were relatively similar (because the cost-benefit tradeoffs are unlikely to vary much from state to state), so one would not expect manufacturers to actually implement programs of differential pricing. Nevertheless, the ability of manufacturers to implement such prices is essential to restrain states from the temptation to enact products liability laws and procedures that favor in-state consumers at the expense of out-of-state manufacturers. If the two-part pricing schemes discussed above were

impractical, manufacturers might instead vary prices to wholesalers and retailers based on predictions of the place the goods were likely to be sold. Such predictions might be based on historic data that wholesalers and retailers provided or outside market research.

It should be noted that the forum assumed in the prior paragraphs is the state where the product was *first* sold to a consumer *in the ordinary course of business*. This is the only sale for which price adjustments are plausible. If a consumer resold to another consumer or to a reseller, the forum for product liability suits should still be the place where the product was sold to the first consumer because it is implausible to think that the manufacturer would have a contract with the first consumer that allowed the price to change when the product was sold to another consumer (or to a reseller).

It should also be noted that throughout this Article the term "consumer" applies both to individuals and to businesses. So, in *McIntyre*, the first consumer of the machine that injured Nicastro was Nicastro's employer. As a result, Nicastro would have to sue where Nicastro's employer purchased the product.⁶⁴

For the purposes of this Article, the place of purchase is where the product came into the consumer's possession. So if the Ohio distributor shipped the product to New Jersey, Nicastro could sue in New Jersey. Since the distributor knows where the product is shipped, it can adjust the price accordingly.

An implication of the jurisdiction-in-the-place-where-the-product-was-sold approach is that if the consumer purchased the product in one state but was injured in another state, the consumer would have to sue in the state where she purchased the product. Sometimes doing so would present difficult issues of proof, because it might not be apparent where a particular product was sold. On the other hand, if state-by-state differences in product liability were large and proof difficulties became common, manufacturers might use information technology to track where each product was sold (or require their distributors and retailers to do so). States

64. If a business consumer made large purchases of dangerous products, the assumption of high transactions costs might not apply. Business consumers, for example airlines, that bought large quantities of higher risk products, would plausibly have an incentive to research the likely forum and its legal characteristics, if the jurisdictional rule were that suit was in the place of manufacturer, distribution, incorporation, or headquarters. Such business consumers would also have the ability to bargain with manufacturers so that price reflected expected liability. For such consumers, it would be sensible to enforce contractual forum-selection clauses.

might also presume that a product was purchased in the state of injury or in the state where the plaintiff resides, unless the manufacturer proves otherwise.

Although a jurisprudence which allowed consumers to sue in the state where they purchased the product would probably also allow suits in other fora—such as where the manufacturer was headquartered or incorporated, or where the product was designed, manufactured, or in the distributor's state⁶⁵—allowing suit where the product was sold is likely to lead to litigation primarily in that state. Consumers generally prefer to sue in their home state, and most consumers purchase their products in their home state, so a rule that *allows* plaintiffs to sue where they purchased their products is for incentive purposes equivalent to a rule that *mandates* suits in that state.

The potential for price adjustments also helps justify the Supreme Court's decision in *World-Wide Volkswagen*, rejecting jurisdiction in the state where the accident took place (state number six of the list described in the text accompanying note 14). If jurisdiction is based on the place of the accident, there is no way that a manufacturer can adjust prices so that consumers pay more when liability risk is higher because manufacturers cannot control where a product will be used. So, if the rule were that an injured person could sue where the injury was suffered, there would be less incentive for states to moderate their product liability laws and procedures. Nevertheless, the price mechanism might still work reasonably well because most products are likely to cause injury in the state where they were sold. On the other hand, for products, such as cars, that are durable and mobile and for which there is a lively resale market, prices are unlikely to adjust properly because the correlation between place of sale and place of suit is likely to be weak.

Similar arguments help explain why jurisdictional rules allowing suit where the plaintiff resides (state number seven of the list described in the text accompanying note 14) would be inefficient. Because there is no necessary connection between the place of purchase and the plaintiff's residence, prices would not properly adjust to reflect the different levels of product liability protection offered by different states. As a result, states would have an incentive to provide excessively pro-consumer product liability laws and procedures. By doing so, states could redistribute wealth from out-of-state manufacturers and consumers to their own citizens.

65. These are states numbers 1–3 of the list described in the text accompanying note 14.

Similar arguments also explain why it would not be wise to allow consumers to sue in a state where the manufacturer sold large numbers of products of the same brand and model, unless plaintiffs also purchased their product in that state (state number five of the list described in the text accompanying note 14). While suit in such a state might seem fair, because the defendant could reasonably anticipate being sued there, the price mechanism would not work. The consumer would be able to purchase the product at a low price in a low-liability state and then sue in a state where liability was more extensive if the accident happened to take place there. This is arguably what happened in *World-Wide Volkswagen* itself.

This method of analysis also helps choose among the competing versions of the “stream-of-commerce” theory. Should jurisdiction be proper where the product was sold only when large numbers of the product were actually sold in the state, as Justices White’s and Breyer’s opinions suggest? Or only when the manufacturer specifically markets to or targets the state, as Justices O’Connor’s and Kennedy’s opinions require? Or whenever even a single product is sold in the state, as Justice Ginsburg’s opinion might allow? To the extent that price adjustments are possible when even a single product is sold into the state, the analysis here favors Justice Ginsburg’s approach. So, for example, if New Jersey had relatively pro-plaintiff product liability laws and procedures, McIntyre and its U.S. distributor could charge a higher price to Nicastro’s employer, even if that company was McIntyre’s only New Jersey customer. Allowing jurisdiction in such a state would thus prevent the negative aspects of defendant forum shopping discussed above (selection of the most pro-defendant state and distortion of other business decisions) and encourage states to provide efficient product liability laws and procedures (because in-state consumers would both get the benefits of those laws and bear their costs).

Analysis so far has focused on the final manufacturer. Product liability cases sometimes involve component manufacturers as well. For example, *Asahi* involved suits against part suppliers. The analysis here could be applied without modification to part suppliers. Suit would still be appropriate where consumers (that is, purchasers of the final product) made their purchase. If that forum is problematic, the part supplier could ask for a price adjustment from the final manufacturer or could insist in its contracts that the final manufacturer not sell products (directly or through intermediaries) into the problematic state. In this way, the relationship between the part supplier and the final manufacturer would be similar to the relationship between the final manufacturer and the distributor. In both relationships, the parties can deal with the issue through contractual price

adjustments, if differences in state courts are significant enough to make such contracts worth the cost. On the other hand, it may be unrealistic to expect component manufacturers to draft such contracts. Especially where components are relatively inexpensive, it is likely that the costs of contracting for price adjustments would outweigh the benefits. In such circumstances, it might make sense to immunize the component manufacturer from stream-of-commerce jurisdiction. Jurisdiction over the component manufacturer is unnecessary to the consumer's full recovery, except in the rare case in which the final manufacturer is insolvent, because the injured consumer can get full damages from the final manufacturer, even if the problem was actually caused by the component manufacturer.⁶⁶ Even if the injured consumer cannot get jurisdiction over the component manufacturer in the state where the consumer purchased the product, the manufacturer can still sue the component manufacturer for indemnity or contribution in the component manufacturer's home state. If the final manufacturer would prefer to be able to sue for contribution or indemnity in the same court in which it is sued, the final manufacturer can put consent to such jurisdiction in its contract with the part manufacturer.

One potential critique of the *ex ante* approach might be that the incentive effects of jurisdictional rules are simply too small to affect prelitigation behavior or prices. While this is plausible, it should be noted that empirical studies of tort reform suggest that changes in legal rules can result in nontrivial price changes.⁶⁷ Similarly, studies of regulation more generally suggest that prices do vary on a state-by-state basis depending on the legal climate in each state.⁶⁸ Furthermore, it should be noted that, in

66. See RESTATEMENT (THIRD) OF TORTS: PRODUCTS LIABILITY, §§ 1, 20 (1998).

67. Ronen Avraham, Leemore S. Dafny & Max M. Schanzenbach, *The Impact of Tort Reform on Employer-Sponsored Health Insurance Premiums* (Dec. 30, 2010), J.L. ECON. & ORG. ADVANCE ACCESS (forthcoming) (manuscript at 17, 27 tbl.1), doi: 10.1093/jleo/ewq017 (finding that tort reform reduces health care premia by 2.1 percent); Eric Helland & Alexander Tabarrok, *Product Liability and Moral Hazard: Evidence from General Aviation*, J.L. & ECON. (forthcoming) (manuscript at 20) (on file with author) (finding that a statute exempting small aircraft more than eighteen years old from product liability suits reduced aircraft prices by \$911, which is about 1 percent); Patricia H. Born & W. Kip Viscusi, *The Distribution of the Insurance Market Effects of Tort Liability Reforms*, in BROOKINGS PAPERS ON ECONOMIC ACTIVITY: MICROECONOMICS 55, 83 (Martin Neil Baily et al. eds., 1998) (determining that damage reforms reduce liability insurance premia 5.8 percent to 8.4 percent. Note that, since liability is a small part of product prices, a 5.8 to 8.4 percent decrease in liability insurance premia is likely to be a much smaller effect on product prices).

68. Lee Benham, *The Effect of Advertising on the Price of Eyeglasses*, 15 J.L. & ECON. 337, 343-44 (1972) (determining that state restrictions on advertising increase prices by 25 percent or more); Mark Bergen et al., *When Little Things Mean a Lot: On the Inefficiency of Item-Pricing Laws*, 51 J.L. & ECON. 209, 220-231 (2008) (finding that state-item pricing laws increase prices twenty cents to twenty-five cents per item); Judith A. Chevalier & Finoa M. Scott Morton, *State Casket Sales Restrictions: A*

equilibrium, the jurisdictional rule advocated here would encourage all states to enact efficient procedural and substantive rules, so interstate variation would be small. As a result, the absence of interstate price differentials would not be a reason to disregard the ex ante analysis, but rather could be a sign that properly designed jurisdictional rules had already had beneficial ex ante effects. To the extent that current law has—at least until last year's decision in *McIntyre*—generally allowed suit in the state where the product was sold, the lack of interstate price variation may reflect the salutary ex ante effects of *World-Wide Volkswagen* and *Asahi*.

As noted above, even if there were substantial interstate variation in the law and procedure, when products are very safe and the probability of product liability suits is thus very low, manufacturers are unlikely to incur the cost of differential state-by-state pricing. This, however, reintroduces incentives for states to be inefficiently pro-plaintiff. Consumers in a state that had high recoveries would benefit, and only some of the cost would be passed back to those consumers through higher prices. It is true that prices would fail to adjust only when the risk of product liability suit was very low. Nevertheless, since there are many such products, total product liability judgments and settlements from low risk products could be substantial. As a result, states might still have an incentive to be inefficiently pro-plaintiff. Nevertheless, as discussed in Parts VII and VIII, this residual pro-plaintiff bias is likely to be offset by the pro-defendant biases introduced by interstate sales and standardized products. While it is impossible to know whether these effects would perfectly offset each other, since the effects are small, they are unlikely to give state legislators and judges significant incentives to be either pro-plaintiff or pro-defendant.

Even if one were skeptical that manufacturers would differentially price or that state legislators or judges would take such differential pricing into account when crafting procedural or substantive rules, a jurisdictional rule that allowed suit where the product was purchased would still have substantial benefits. It would eliminate the incentive of manufacturers to

Pointless Undertaking?, 51 J.L. & ECON. 1, 9 (2008) (explaining that state restrictions on casket sales increase the price of caskets by \$261, but decrease the cost of funeral services by \$252); Reint Gropp, John Karl Scholz & Michelle J. White, *Personal Bankruptcy and Credit Supply and Demand*, 112 Q.J. ECON. 217, 243 (1997) (finding that low-asset households in states with generous bankruptcy exemptions pay 13 percent higher interest rates on car loans); Theodore E. Keeler et al., *Do Cigarette Producers Price-Discriminate by State? An Empirical Analysis of Local Cigarette Pricing and Taxation*, 15 J. HEALTH ECON. 499 (1996) (finding interstate differences in cigarette prices depending on state taxes and other factors); John E. Kwoka, Jr., *Advertising and the Price and Quality of Optometric Services*, 74 AM. ECON. REV. 211, 216 (1984) (explaining that states without restrictions on optometry advertising have prices 20 percent lower than those with restrictions).

base locational decisions about distribution or manufacturing on legal rather than business factors, and it would give states no incentive to try to attract distribution centers or manufacturing plants by inefficiently weakening consumer protections. Nevertheless, jurisdictional rules that allowed suit in the place of injury or where the plaintiff resides would have similar benefits, so if differential pricing and its beneficial effects on state lawmaking were considered implausible, there would be no reason to favor jurisdiction in the place of sale over jurisdiction in the place of injury or plaintiff's residence. In fact, the latter jurisdictions might be superior, because litigation costs would be slightly lower, since the number of cases in which both consumer and manufacturer would have to litigate away from their home state would be reduced. Under the jurisdiction in the place-of-sale rule, such suits would be uncommon, but would sometimes be necessary—for example when a consumer bought the good in one state and moved to another state before injury, and neither the state of purchase nor the state of residence were the manufacturer's home state. Similarly, jurisdiction in the place of purchase would require both plaintiff and defendant to litigate out of state when a consumer bought the good second hand from an original purchaser who purchased the good in another state and the manufacturer was located neither in the state of original purchase nor the plaintiff's residence.

In sum, when transactions costs are high, jurisdictional rules that facilitate manufacturer control over the forum and thus over applicable law and procedure are likely to result in inefficiently pro-manufacturer law and in distortion of business decisions. This suggests that forum-selection and choice-of-law clauses should not be enforceable and that jurisdictional rules that require suit where the product was distributed, designed or manufactured, or where the manufacturer is incorporated or headquartered, are inadvisable. In contrast, a rule that allows suit where the product was sold to the consumer would result in no distortion of business decisions and in efficient law, because manufacturers could adjust their prices to reflect the quality of each state's laws. A rule that allowed suit where the product caused injury, or where the plaintiff resided, or where many similar products were sold, however, could lead to inefficiently pro-plaintiff law, because local judges, juries and legislators could favor in-state interests, and manufacturers would have difficulty using differential pricing to ensure that state residents bore the cost.

IV. EX POST ANALYSIS

So far, this Article has focused on the ex ante effects of jurisdictional

rules—the way rules would affect a manufacturer's decisions about the location of its distributor, manufacturing plants and design facilities, and the way rules affect the incentives of state legislators and judges. Nevertheless, the most immediate effect of jurisdictional rules is on litigation costs. Consideration of litigation costs favors jurisdiction in the state where the plaintiff lives or where the defendant is headquartered. Suit where the plaintiff lives is likely to minimize the cost of discovery and court attendance for the plaintiff. Similarly, plaintiffs who sue where they live are likely to need only one set of lawyers. On the other hand, if plaintiffs must sue in other jurisdictions, they will have to incur substantial travel expenses whenever their presence in the forum is needed or advisable (for example, as a witness at trial and perhaps for discovery or pretrial motions). Similarly, plaintiffs who sue in another state will often hire two sets of lawyers. They are likely first to contact a lawyer in their own state. That lawyer is likely to remain on the case, but will also probably hire local counsel in the state where the litigation is taking place. Local counsel is necessary where the lawyer in the plaintiff's state is not licensed to practice in the forum. Even if the plaintiff's first lawyer could litigate alone in the forum state, hiring local counsel is advisable because in-state lawyers are likely to have better information about judges and to relate better to local juries.

Unfortunately, the defendant's costs are likely to be a mirror image of the plaintiff's. A defendant's litigation costs are ordinarily minimized when suit is in the state where the defendant is based. Suit in other locations is likely to require travel by executives to the forum state and the hiring of duplicative local counsel.

The analysis is slightly more complicated where the accident giving rise to suit was in neither the plaintiff's nor the defendant's state. In those situations, some discovery is likely to be necessary in the state where the accident took place. Nevertheless, suit where the plaintiff lives or the defendant is headquartered is still likely to be cheaper than suit in the state where the accident took place. This is because the additional expense of discovery in the accident state is likely to be less than the additional cost of suit in a state that would require both plaintiff and defendant to hire local counsel and to travel for trial and other litigation tasks. Similarly, when the defendant manufactures or designs the product in a different state than where it is headquartered, suit in the design or manufacturing state is likely to result in higher litigation costs for the defendant than suit in the defendant's headquarters state, without any corresponding reduction in plaintiff's litigation costs.

Suit in the distributor's state is likely to result in the highest litigation costs for both plaintiff and defendant, because it is likely to require both sides to hire duplicative local counsel and to travel. In addition, very little if any evidence is likely to be found in the distributor's state, so suit there is unlikely to reduce discovery costs.

The ex post analysis thus strongly suggests that suit should be either in the state where the plaintiff lives or in the state where the defendant is headquartered. Nevertheless, the Supreme Court has effectively barred suit based solely on the plaintiff's residence, so unless the plaintiff's residence happens to be the location of some other "minimum contact" that the Supreme Court would consider a valid basis for jurisdiction, jurisdiction is implausible in the state where the plaintiff resides. Fortunately, plaintiffs usually buy their products in the state in which they reside (or take shipment there, which, for jurisdictional purposes, has the same effect). Thus, a rule that allowed suit where the plaintiff purchased the product is likely in nearly all cases to have the same beneficial effect on litigation costs as a rule that allowed suit where the plaintiff resided.

It is possible that suit in the state where the defendant is headquartered would result in lower total litigation costs. That is, suit in the defendant's state might reduce the sum of both plaintiff's and defendant's litigation costs. This might be the case because defendants are more likely to be repeat litigators. Therefore, they might be able to achieve economies of scale by having only one set of lawyers who become experts about the manufacturer's business and about particular alleged product defects. As a result, concentrating all suits in the manufacturer's headquarters might lower costs. In contrast, litigation where the plaintiff resides would require educating local counsel in each state about the manufacturer's business and the alleged defects at issue. Even plaintiffs might benefit from a reduction in litigation costs from centralizing litigation in the defendant's state because plaintiffs' lawyers in that state might develop expertise about manufacturers there and the alleged defects of their products, thus reducing the cost of suing there.

On the other hand, potential plaintiffs are likely to perceive out-of-state litigation as a significant hardship. Even if that hardship did not have a monetary cost as high as the defendant's costs of traveling to the plaintiff's forum, that hardship might be more consequential for the litigation. Plaintiffs are likely to have greater difficulty selecting and monitoring lawyers in other states. Advice and monitoring by plaintiff's in-state lawyer is likely to be helpful in this regard, but may not completely

solve the problem. More importantly, the hardship of litigating out of state may deter plaintiffs from suing in the first place. This, of course, would reduce manufacturers' incentives to produce safe products and would encourage them to locate their activities (for example, incorporation or manufacturing) far away from their customers in order to deter suit. In this way, the ex post analysis (which focuses on litigation costs) and the ex ante analysis (which focuses on manufacturer's prelitigation behavior) reinforce each other. By raising plaintiff's litigation costs ex post, requiring suit where the manufacturer is headquartered or incorporated, or where it located its design, manufacturing, or distribution activities, is likely to have detrimental effects ex ante.

V. FOREIGN MANUFACTURERS

This Article has, so far, focused on American manufacturers. Nevertheless, as the United States increases its imports from China and other nations, it is important also to consider the effect of jurisdictional rules on foreign defendants. Most of the arguments presented in this Article are even stronger when one considers foreign manufacturers.

Requiring suit where the defendant is headquartered or incorporated would give a substantial advantage to manufacturers in countries which have relatively weak product liability law, such as China and most of the developing world.⁶⁹ This might encourage U.S. companies to relocate there. More plausibly, it would give a competitive advantage to foreign producers.⁷⁰ Similarly, if suit were in the place where the product was designed or manufactured, this would give a cost advantage to American firms which moved their design and manufacturing operations offshore.

A jurisdictional rule that required suit where the distributor was located would encourage foreign manufacturers to choose distributors located abroad, as this could completely immunize them from jurisdiction in the United States. Similarly, states that wanted to attract distributors for foreign products might enact long-arm statutes that did not make doing

69. JIANSHENG LI, LAW ON PRODUCT QUALITY CONTROL AND PRODUCT LIABILITY IN CHINA 467 (2006) (considering that although Chinese law formally provides for full compensation, "it is [a] very common occurrence that, in the Chinese tort cases, the amount of compensation was generally too low and that the compensation obtained by the victim was lower than the actual loss") (footnote omitted).

70. Paul D. Carrington, *Business Interests and the Long Arm in 2011*, 63 S.C. L. REV. 637, 639-40 (2012); Sykes, *supra* note 8. Sykes analyzes a somewhat different situation—where the accident occurs overseas and an American defendant, but not a foreign defendant could be sued in the United States—but the effect of putting American companies at a competitive advantage is the same.

business with a local distributor a basis for jurisdiction. Such an approach would immunize a foreign manufacturer from suit in the United States.

Consideration of litigation costs strongly militates against a rule that required suit in the country where manufacturers are headquartered or incorporated or where they design or manufacture their products. Such a rule would require an American plaintiff to sue abroad. This would so dramatically increase the cost of litigation that it would likely deter all but the highest-stakes cases. In addition, to the extent that many foreign jurisdictions—especially China and other developing countries—have weak product liability laws, application of such laws would substantially reduce the incentive of foreign manufacturers to produce safe products.⁷¹ In addition, even if foreign jurisdictions applied American law to a product liability suit brought by an American plaintiff, the procedures in nearly all foreign jurisdictions are likely to deter suit. Most importantly, discovery in most non-U.S. jurisdiction is very limited. In addition, very few countries outside the United States allow lawyers to be paid by contingent fees.⁷² As a result, Americans suing abroad would have to be able to fund litigation out of their own assets.

Some members of Congress have attempted to address this problem through legislation, although the legislation has not passed. The Foreign Manufacturers Legal Accountability Act of 2011 would require foreign manufacturers of products imported into the United States to designate registered agents in the United States who can accept service of process on their behalf.⁷³ More importantly, it also requires foreign manufacturers to consent “to the personal jurisdiction of the State and Federal courts of the State in which the registered agent is located.”⁷⁴ While this provision would ensure that foreign manufacturers are subject to suit somewhere in the United States, it would not prevent such manufacturers from selecting agents in the most pro-defendant state.⁷⁵ A better statute would require

71. LI, *supra* note 69, at 466–68; LUKE NOTTAGE, *PRODUCT SAFETY AND LIABILITY LAW IN JAPAN: FROM MINAMATA TO MAD COWS* 20, 74–75, 114, 148–49 (2004) (describing how U.S. substantive law and procedure generally provide more certain and more generous recoveries than Japanese or E.U. law).

72. See LI, *supra* note 69, at 468 & n.212; NOTTAGE, *supra* note 71, at 74.

73. Foreign Manufacturers Legal Accountability Act of 2011, H.R. 3646, 112th Cong. § 3(a) (2011); S. 1946, 112th Cong. § 5(a) (2011). See also the nearly identical H.R. 4678, 111th Cong. § 3 (2010); S. 1606, 111th Cong. § 5 (2009).

74. H.R. 3646, 112th Cong. § 3(c)(1); S. 1946, 112th Cong. § 5(c)(1).

75. The proposed statutes would require the agent to be located in a state “with a substantial connection to the importation, distribution, or sale of the products.” H.R. 3646 § 3(a)(2)(A); S. 1946

consent to suit in any state where the product is sold.

VI. RELATIONSHIP TO SUPREME COURT DOCTRINE

The analysis here fits well with the Supreme Court's emphasis on "purposeful availment." Although the Supreme Court has never really defined what it means by purposeful availment, it has explained that a key goal of that requirement is to "allow[] potential defendants to structure their primary conduct with some minimum assurance as to where that conduct will and will not render them liable to suit."⁷⁶ That justification is consistent with the *ex ante* approach taken by this Article and suggests the following criterion for purposeful availment. An action by a defendant in the forum state or affecting people in forum state constitutes purposeful availment if it benefits the defendant and refraining from that action would not significantly affect people in other states. So, for example, driving in the forum state to deliver goods to a neighboring state is purposeful availment because it is action in the forum state that benefits the defendant and that the defendant could avoid by sending its drivers on a route which avoided that state. While driving around a state might slightly affect the price of goods in the destination state, that effect is not likely to be significant. Similarly, delivering goods or services to consumers in the forum state is purposeful availment because it affects people in the forum state and benefits the defendant, but refraining from serving the state would have minimal effects on people in other states.⁷⁷ Conversely, causing injury through a defective product in the forum state is not purposeful availment, because defendants cannot control where consumers take their goods. As a result, the only way that a manufacturer could avoid causing injury in the forum state is by not selling the good anywhere in the United States (or indeed anywhere in the world), which would affect people in all fifty states.⁷⁸ Similarly, an ex-husband does not purposefully avail himself of the

§ 5(a)(2). Nevertheless, since the foreign manufacturer could choose a distributor in just about any state, this restriction would not significantly constrain foreign manufacturers.

76. *Burger King Corp. v. Rudzewicz*, 471 U.S. 462, 472 (1985) (quoting *World-Wide Volkswagen Corp. v. Woodson*, 444 U.S. 286, 297 (1980)).

77. Thus, this interpretation of purposeful availment is consistent with *McGee v. Int'l Life Ins. Co.*, 355 U.S. 220, 224 (1957) (holding that personal jurisdiction was proper over a life insurance company that issued a policy to a resident of the forum state).

78. Thus, this interpretation of purposeful availment is consistent with *World-Wide Volkswagen Corp. v. Woodson*, 444 U.S. 286, 299 (1980) (holding that personal jurisdiction is not proper over a distributor and retailer that sold a car outside of the forum state, although the driver drove the car to the forum). One might think that the distributor and retailer could avoid jurisdiction in Oklahoma (or some other state) by contracting with the purchaser that the car never be driven to Oklahoma. Not only would

forum state when his ex-wife moves there, because there is nothing an ex-husband can do to prevent his ex-wife from moving to the forum state, and, in any case, the ex-husband gets no benefit from his ex-wife's living in the forum state.⁷⁹

On this interpretation of purposeful availment, selling goods to a distributor who sells them to the forum state is purposeful availment. Such a sale has effects in the forum state, especially if the product causes injury. The sale also benefits the defendant because it presumably brings some profit. In addition, the defendant could refrain from the action without affecting people in other states by instructing the distributor not to sell into the forum state. So, for example, if the defendant in *McIntyre* really did not want to be subject to jurisdiction in New Jersey, it could have instructed its distributor not to sell any machines to New Jersey. By giving the distributor general instructions to maximize sales or to sell to anyone in the United States, the defendant is purposeful availing itself of the benefits of selling to each state to which products are sold.

More generally, the approach taken in this Article is consistent with the Supreme Court's emphasis on "fair play and substantial justice."⁸⁰ Because manufacturers can charge prices that take into account whether the forum state is pro-plaintiff or biased against out-of-state corporations, and because those prices will be paid by in-state residents, there is no unfairness in subjecting the defendant to suit in that state. Similarly, if suit in a particular state is inconvenient, the defendant can raise its prices in that state to compensate it for those increased costs. In extreme cases, defendants who do not want to be subject to jurisdiction in a particular state can, under the above definition of purposeful availment, refrain from

this be a very strange contract, it would not really protect the retailer and distributor because covenants do not run with chattels, so such a contract would not bind subsequent purchasers of the car.

79. Thus, this interpretation of purposeful availment is consistent with *Kulko v. Superior Ct. of Cal.*, 436 U.S. 84 (1978). The only Supreme Court case with which the definition in the text might not be consistent is *Hanson v. Denckla*, 357 U.S. 235 (1958). If the trustee in that case wanted to avoid jurisdiction in Florida, it could have insisted that Mrs. Donner put a clause in the trust authorizing the trustee to resign if Mrs. Donner or the beneficiaries lived or moved to Florida. Or, it could have insisted that Mrs. Donner include a forum-selection clause in the trust. The Supreme Court does not seem to have considered these possibilities and instead focused on the fact that Mrs. Donner's move to Florida and the location of the beneficiaries was beyond the trustee's control. *Id.* at 253–54. That focus on the trustee's control is consistent with the approach taken here, although its application seems flawed. In addition, even under the approach advocated here, the result in *Hanson* could be justified by Delaware's primary supervision over the trust, a fact that the Supreme Court did not take into account. AUSTIN WAKEMAN SCOTT ET AL., *SCOTT AND ASCHER ON TRUSTS* 648–49, 3125, 3127–29 (5th ed. 2010).

80. *Int'l Shoe Co. v. Washington*, 357 U.S. 310, 316 (1945); *Asahi Metal Indus. v. Superior Ct. of Cal.*, 480 U.S. 102, 113 (1987); *J. McIntyre Mach., Ltd. v. Nicastro*, 131 S. Ct. 2780, 2787 (2011).

actions that would subject them to jurisdiction in that state without significantly affecting operations in other states.

The analysis here is also one that could plausibly garner a majority of the Supreme Court. Just last year, the Supreme Court split on stream-of-commerce jurisdiction in *McIntyre*.⁸¹ Only four Justices—Kennedy, Roberts, Scalia, and Thomas—took a position that is flatly inconsistent with the analysis here because they would bar suit where the plaintiff (or plaintiff's employer) purchased the product, unless the manufacturer "targeted" the forum. Three Justices—Ginsburg, Sotomayor and Kagan—dissented, arguing that plaintiffs should almost always be able to sue where the product was purchased. Justices Breyer and Alito refused to take a definitive position because they thought the case too atypical and thus not appropriate for final resolution of the constitutionality of stream of commerce jurisdiction. Given Justice Breyer's pragmatic bent, the *ex ante* approach advanced by this Article might appeal to him.

VII. INTERSTATE SALES AND ARBITRAGE

A key assumption in this analysis, especially in Part III.B, was that consumers made their purchases in the state in which they reside. If consumers often travel to other states to make their purchases, a jurisdictional rule that encourages suit in the state where the product was purchased is not quite as desirable. In particular, such a rule might not prevent jurisdictional competition that led to substantive laws and procedures that were insufficiently consumer protective. For example, if New Jersey has procedures and substantive laws that are more pro-defendant than New York's, prices in New Jersey are likely to be lower than in New York. As a result, consumers in New York City might travel to northern New Jersey to buy products. New York retailers might then put pressure on the New York legislature to weaken consumer protection in order to keep sales (and sales tax) in state.

Similar problems might arise if arbitrageurs saw a profit opportunity in the difference between New Jersey and New York prices. For example, someone might buy products at retail in New Jersey and then resell them on eBay to consumers in New York. Because the manufacturer has no control over eBay resellers, there is no way that it can contractually adjust the price so that the person purchasing the resold product in New York pays the higher price reflective of New York's more protective laws. Like the

81. *McIntyre*, 131 S. Ct. at 2780–2806.

possibility of travel to purchase in New York, the possibility of eBay (or other) arbitration could lead to pressure on New York to weaken its consumer protections.

Although interstate sales and arbitration are real possibilities, they are unlikely to be sufficiently common to undermine the beneficial effects of the jurisdiction-in-place-of-purchase rule for two reasons. First, outside the northeast, most people live too far from state borders to make cross-border purchases practical. In the northeast, there are several large cities—including New York, Philadelphia, and Washington, D.C.—located near state borders, so interstate travel for consumer purchases is plausible in these areas. In the west, however, most large cities—including Los Angeles, Houston, and Phoenix—are over a hundred miles from the nearest state border. Cross-border travel for lower prices is therefore implausible. Second, price differentials are likely to be small. The studies cited above suggest that prices differences are likely to be 1 or 2 percent.⁸² People are unlikely to find it worthwhile to travel substantial distances to save 1 or 2 percent. Similarly, arbitrageurs are unlikely to find it profitable to resell products when price differentials are that small. Credit card fees alone would eat up most of the profit. The fact that prices differ across state borders for a variety of products—including cigarettes, eyeglasses, and burial caskets—also suggests that cross-border purchases and arbitration are likely to be relatively unimportant.⁸³

In addition, as pointed out toward the end of Part III.B, the jurisdiction-in-the-place-of-sale rule may have a slight pro-plaintiff bias because the prices of only some goods are likely to adjust to reflect interstate differences in law. The pro-defendant bias introduced by the possibility of interstate sales and the pro-plaintiff bias caused by nonadjusting prices might offset each other and give state judges and legislators roughly efficient incentives with respect to procedural and substantive rules relevant to product liability.

Nevertheless, to the extent that cross-border purchases are still considered a significant problem, they could be solved by a slightly different jurisdictional rule—suit in the state where the purchaser resided at

82. See *supra* note 67 and text accompanying. Total product liability costs provide an upper bound for price differentials. Data on such costs are hard to find, and costs vary considerably by industry. One study estimated that product liability costs ranged from 0.33 percent of sales for machine tools to 2 percent for chemicals to over 10 percent for aircraft. PETER REUTER, RAND CORP., *THE ECONOMIC CONSEQUENCES OF EXPANDED CORPORATE LIABILITY: AN EXPLORATORY STUDY* 12–14 (1988).

83. See *supra* notes 67–68 and accompanying text.

the time of purchase. So, for example, if a New Yorker traveled to New Jersey to purchase a car, and there was later an accident caused by a product defect, the New Yorker could sue in New York state court. If there was a significant difference between New York and New Jersey procedural and substantive law, manufacturers could respond by contracting with distributors and retailers to charge different prices based on where the consumer resided. To implement such differential pricing, retailers in New Jersey would need to identify consumers' residences and charge different prices. While this might seem impractical, retailers already routinely ask credit-card customers to show their identification at the time of purchase, and check-out computers could easily be programmed to charge a different price depending on the consumer's residence. Consumers are already familiar with prices that vary depending on their residence when they buy online and face shipping charges that vary with location. Whether differential pricing was worth the extra cost would, of course, depend on the size of interstate differences in expected liability.

One drawback of the proposed jurisdiction-in-the-state-where-the-purchaser-resided rule is that it is not a rule that the Supreme Court has ever considered. Nevertheless, it could be reconciled with the interpretation of purposeful availment in the previous section because a manufacturer who did not want to be subject to suit in New York (or any other state) could contract with retailers not to sell to consumers from New York.

Arbitrage is unlikely to be a significant problem because the arbitrageur (but not the manufacturer) would be subject to suit in the higher liability state. For example, if an arbitrageur purchased goods in New Jersey and then resold them in New York, the arbitrageur would be subject to suit in New York for those sales, but the manufacturer would not. If New York courts were significantly more pro-plaintiff than New Jersey courts, an injured consumer would find it advantageous to sue the arbitrageur in New York rather than to sue the manufacturer in New Jersey. Under product liability law, sellers, including resellers, as well as manufacturers are liable,⁸⁴ so (assuming the arbitrageur had sufficient resources), the consumer could get a full recovery from the arbitrageur. The arbitrageur would presumably then sue the manufacturer in New Jersey for contribution, but New Jersey courts would likely apply their own, less generous procedures and laws to such claims, and the arbitrageur would therefore not get fully reimbursed. Of course, if the arbitrageur did not have sufficient resources, a consumer would not find it profitable to sue the

84. RESTATEMENT (THIRD) OF TORTS: PRODUCTS LIABILITY §§ 1, 20 (1998).

arbitrageur. Nevertheless, the threat of such a suit is likely to deter well-financed arbitrage operations and thus keep the arbitrage problem relatively small.

VIII. STANDARDIZED SAFETY PRECAUTIONS

Jennifer Arlen's work on medical malpractice suggests another reason that jurisdiction in the place of purchase might not have the beneficial effects suggested in Part III.B.⁸⁵ Manufacturers design their products for the national (or international) market. Interstate variations in liability are therefore unlikely to affect product design. Even if a populous state, such as California or New York, were to completely abolish product liability, it is unlikely that manufacturers would design less safe products just for those markets or that they would lessen the safety of products designed for all markets. This, however, makes it possible for states to free ride on each others' laws. A state could abolish its product liability protections in order to lower the prices its consumers pay, secure in the knowledge that the safety of products would remain unchanged. While a state that abolished product liability would also thereby eliminate compensation for product injuries to state residents (at least if they bought their goods in state), the monetary gains to state residents from lower prices might outweigh the loss in expected recoveries. Monetary gains from lower prices would be larger than the loss of compensation if manufacturers passed on the entire cost of liability to in-state residents. Since the entire cost would include both liability payouts to in-state residents and litigation costs, the total amount consumers would save through lower prices would exceed the total amount that in-state consumers would have recovered through product liability judgments and settlements. As a result, a state would have an incentive to abolish product liability, because it could thereby increase the wealth of in-state residents without affecting safety. Nevertheless, since all states would have a similar incentive to abolish product liability, the ultimate result would be that manufacturers would have less incentive to produce safe

85. Jennifer Arlen, *Contracting over Liability: Medical Malpractice and the Cost of Choice*, 158 U. PA. L. REV. 957, 992–1000 (2010); Jennifer Arlen & W. Bentley MacLeod, *Malpractice Liability for Physicians and Managed Care Organizations*, 78 N.Y.U. L. REV. 1929, 2000–02 (2003). See generally Abraham Wickelgren, *supra* note 3 (making a similar argument). The argument in these articles is a little different from that made in this section because the articles discuss individual incentives to waive liability at the time of contracting, rather than the incentive of states to have product liability in the first place. The author thanks James Spindler for pointing out that the same arguments that suggest that individual waivers may lead to inefficiently low levels of precaution also suggest that state-by-state lawmaking about product liability could lead to the same inefficiency in a world where manufacturers design for national or international markets.

products and accident rates would rise. That is, the suit-in-place-of-purchase jurisdictional rule could lead to a race to the bottom, just like suit in the place of manufacture or distribution.

While this is a theoretically correct argument, it seems very unlikely that a rule that allowed suit in the place of purchase would lead to a race to the bottom. A key assumption in the previous paragraph was that manufacturers passed on the *entire* cost of liability to in-state residents. As noted in Part III.B, it is likely that manufacturers of products with low product liability risk would not find it worthwhile to price differentially by state. As a result, manufacturers would pass on only a fraction of the total cost of liability to in-state residents. This would reduce or remove the incentive of states to eliminate product liability because eliminating product liability would reduce to zero compensation received by in-state residents, but would only reduce the prices of high-risk products.

Risk aversion is another reason that states would be unlikely to abolish product liability. Risk-neutral consumers would prefer lower prices and no compensation in the event of injury to higher prices with compensation through the product liability settlements and judgments. In contrast, risk-averse consumers might prefer the latter. While consumers might do better to privately insure against product harms, some elements of damages—such as pain and suffering awards—are not covered by private insurance. In addition, legislators would rationally anticipate that some consumers would not privately insure, so taking account those uninsured consumers' welfare would provide an additional reason to retain product liability law.

In addition, as pointed out toward the end of Part III.B, the jurisdiction-in-the-place-of-sale rule may have a slight pro-plaintiff bias because the prices of only some goods are likely to adjust to reflect interstate differences in law. The pro-defendant bias introduced by standardized products and the pro-plaintiff bias caused by nonadjusting prices might offset each other and give state judges and legislators roughly efficient incentives with respect to procedural and substantive rules relevant to product liability.

If one still thought that a race to the bottom was a serious problem, the solution might be to allow jurisdiction in the place where the plaintiff resides at the time of suit. As noted above, such a jurisdictional rule would introduce a larger pro-plaintiff bias than suit in the place of purchase because states could use high liability to benefit state residents, but manufacturers could not pass on the whole cost to in-state residents, because some people would have purchased goods out-of-state while still

retaining the right to sue in their home state. The pro-plaintiff bias of this rule could offset the pro-defendant bias introduced by the free-rider problem discussed in this section, thus giving states roughly the proper incentives to implement efficient laws and dispute resolution institutions. Suit in the place where the plaintiff resides would also have the advantage of lowering litigation costs, especially for second-hand goods, because injured consumers would not have to sue out of state in cases where the products were originally purchased in a different state. Suit in the place of injury would have similar beneficial effects—offsetting the pro-defendant bias from standardized goods and reducing litigation costs—because, when consumers are injured by products, it is almost always where they reside.⁸⁶ Of course, as discussed in Part II, jurisdiction in the place where the plaintiff resides or was injured would be difficult to reconcile with Supreme Court precedent.

IX. CONCLUSION

This Article suggests a novel way of analyzing personal jurisdiction in product liability cases. Instead of focusing on the defendant's contacts or intentions, it focuses on real-world consequences. How would jurisdictional rules affect manufacturer decisions about the location of their distributors, the safety of products, and prices? How would jurisdictional rules affect the content of product liability law and the fairness of civil procedure? What jurisdictional rules would increase litigation costs and which would decrease them? This Article concludes that a rule that allows plaintiffs to sue where they purchased the product is likely to lead to the best results. It would not allow manufacturers to strategically structure their activities—for example, their choice of distributor or the location of their manufacturing or design facilities, and so forth—to compel plaintiffs to sue where product liability law and adjudicative institutions are most favorable to manufacturers. Allowing manufacturers to, *de facto*, choose the forum not only leads to low plaintiff recoveries, but would give manufacturers insufficient incentives to design safe products. It might even give states incentives to water down their product liability law and enact procedural “reforms” that advantage defendants in order to attract business. In contrast, a rule that allows plaintiffs to sue where they purchased the product would remove defendants’ ability to strategically affect the forum. Nevertheless, it would not lead to excessively pro-plaintiff liability law,

86. *World-Wide Volkswagen Corp. v. Woodson*, 444 U.S. 286 (1980), where the consumer was injured while driving out-of-state, is a relatively rare case.

because manufacturers retain the ability to vary the price of products depending on the law in the state where the product was sold. As a result, states would have an incentive to choose efficient product liability and procedural law because in-state residents would both get the benefits of such laws and pay prices that reflected the cost of the resulting liability.

The analysis in this Article also has implications for personal jurisdiction law more generally. Its *ex ante* approach generally supports the Supreme Court's "purposeful availment" requirement because such an approach helps ensure that in-state residents bear the cost of courts that are excessively pro-plaintiff or biased.

This analysis also has implications for the enforcement of arbitration and forum-selection clauses in cases involving consumers. For several decades, the Supreme Court has been very aggressive in enforcing such clauses.⁸⁷ The analysis here suggests that approach may be a mistake. Because consumers are unlikely to read such clauses or to understand their implications, manufacturers have incentives to draft them in a way that favors themselves and that undermines incentives to make safe or desirable products.

87. *Carnival Cruise Lines, Inc. v. Shute*, 499 U.S. 585, 593 (1991) (holding that forum-selection clause printed on a cruise ticket was enforceable); *CompuCredit Corp. v. Greenwood*, 132 S. Ct. 665, 673 (2012) (holding that the Federal Arbitration Act requires the enforcement of an arbitration agreement in a credit-card application); *AT&T Mobility LLC v. Concepcion*, 131 S. Ct. 1740, 1753 (2011) (holding that an arbitration agreement prohibiting class actions was enforceable despite a contrary state statute).