



Products Liability and Product Safety: Japan and the U.S.

The Harvard community has made this article openly available. [Please share](#) how this access benefits you. Your story matters

Citation	J. Mark Ramseyer, Products Liability and Product Safety: Japan and the U.S.(Harvard John M. Olin Discussion Paper Series, No. 714, June (2012).
Published Version	http://www.law.harvard.edu/programs/olin_center/papers/pdf/Ramseyer_714.pdf
Citable link	http://nrs.harvard.edu/urn-3:HUL.InstRepos:30064398
Terms of Use	This article was downloaded from Harvard University's DASH repository, and is made available under the terms and conditions applicable to Other Posted Material, as set forth at http://nrs.harvard.edu/urn-3:HUL.InstRepos:dash.current.terms-of-use#LAA

ISSN 1936-5349 (print)
ISSN 1936-5357 (online)

HARVARD

JOHN M. OLIN CENTER FOR LAW, ECONOMICS, AND BUSINESS

PRODUCTS LIABILITY
AND PRODUCT SAFETY:
JAPAN AND THE U.S.

J. Mark Ramseyer

Discussion Paper No. 714

06/2012

Harvard Law School
Cambridge, MA 02138

This paper can be downloaded without charge from:

The Harvard John M. Olin Discussion Paper Series:
http://www.law.harvard.edu/programs/olin_center/

The Social Science Research Network Electronic Paper Collection:
<http://ssrn.com/>

Draft of June 1, 2012

J. Mark Ramseyer
Harvard Law School
Cambridge, MA 02138
ramseyer@law.harvard.edu
(617)496-4878

**Products Liability and Product Safety:
Japan and the U.S.**

By J. Mark Ramseyer*

Abstract: Consumers in wealthy countries like the U.S. and Japan usually know what they want, and how to obtain it. In such markets, the sellers who thrive should tend to be those who offer consumers the level of safety they want -- no matter what the law might be. For the most part, U.S. data confirm this essentially Coasian logic: a shift in the product liability rule from negligence to strict liability seems not to raise product safety. Unfortunately for the empiricist, however, the U.S. combines state-based liability standards with a national product market. This necessarily complicates the empirical task. Although Japan presents its own empirical difficulties, it does couple national law with a national market. In 1995, the Diet adopted strict products liability. Before, courts had adjudicated product disputes in negligence or contract; after 1995, they applied strict liability. As in the U.S., the level of product safety did not rise.

Curiously, Japan did not experience any of the perverse effects sometimes attributed to strict products liability in the U.S. either. This fact suggests that the perverse results may derive not from the liability rule itself, but from the interaction between the rule and several procedural devices peculiar to the U.S.

* Mitsubishi Professor of Japanese Legal Studies, Harvard University. I gratefully acknowledge the helpful comments and suggestions of Tom Ginsburg, John Haley, Dan Klerman, Salil Mehra, Curtis Milhaupt, Frank Upham, and participants in a workshop at Bar-Ilan University, and the generous financial assistance of the Harvard Law School.

Products Liability and Product Safety: Japan and the U.S.

© 2012 J. Mark Ramseyer. All Rights Reserved.

During the first half of the 20th century, U.S. judges adjudicated product-related disputes in either contract or negligence. Over the course of the 1960s and 1970s, they shifted to strict liability. Some observers celebrated the change. The new approach would give producers the right incentives, they argued. It would raise safety levels. It would provide social insurance.

Newspapers recounted other, less felicitous effects. Scholars continue to debate the magnitude of these effects, but in some sectors insurance rates seem to have spiked. Litigation costs seem to have driven some firms from the market. Some pharmaceutical companies seem to have stopped lines of research. Some children seem to have done without vaccines. Some products seem to have vanished outright.

Through the early 1990s, Japanese courts adjudicated product-related disputes through contract or negligence too. Then, in 1995 the Diet mandated strict products liability. As in the U.S., many observers celebrated the incentives they hoped the new approach would introduce. Many anticipated a world much safer for consumers.

Other observers just yawned. In due course, they found they had much to yawn about. Products did not become safer. Insurance rates did not spike. Firms did not leave the market. Industries did not disappear. And the health-care market? Governed by a national insurance regime (Ramseyer, 2009a, 2009b, 2010), in the health-care market nothing happened at all.

In the article that follows, I ask whether strict products liability increased product safety in Japan. It did not. By 1995 Japanese consumers were already rich enough voluntarily to demand safe products, and the switch from negligence and contract to strict liability did nothing to change the mix of products they bought. I then ask why strict liability did not bring the pernicious effects critics sometimes attribute to it in the U.S. The difference, I suggest (only suggest -- I do not purport to prove), may lie in the interaction between strict liability on the one hand, and several peculiarly American procedural devices on the other: civil juries, for example, elected state judges and class-action suits.

I begin by surveying the literature on products liability (Sec. I). I then turn to the law in Japan (Sec. II.A, B), and use several distinct data sets to explore the effect of the legal change on product safety (Sec. II.C). I examine its impact on claiming behavior and insurance rates (Sec. II.D). I explain the limits to these data (Sec. II.E). Finally, I speculate on the reasons why strict liability did not cause in Japan the perverse effects sometimes attributed to it in the U.S. (Sec. III.).

I. Studies in Products Liability

A. The Theory:

1. Introduction. -- For many scholars, the desirability of mandatory strict products liability turns on informational questions. Information is usually somewhat asymmetric, even in the best of worlds. A seller may know how safe his product is; the buyer may not know, in some worlds perhaps cannot know, and even in the most informationally unconstrained worlds is

unlikely to know with as much certainty as the seller. A buyer may know how safely he will use the product; the seller will stand in the analogously uninformed position. Some scholars will stress the extent of these asymmetries; others will explore the way parties routinely mitigate them.

Negotiation costs, commitment difficulties, and problems in the insurance market raise similar issues. Perhaps negotiation and communication is costly. Perhaps the parties have trouble making promises that the other finds credible. And perhaps a buyer cannot cost-effectively insure against injury. One scholar may stress the problem; another will explore mitigating strategies.

Consider, then, these various questions in more detail.

2. Voluntary bargains and mandatory terms. -- On the one hand, products liability law imposes a mandatory overlay on what fundamentally is a voluntary transaction between consenting adults. Classically, tort law governed quarrels between parties who could not have negotiated a bargain at the outset. It determined the relative rights of strangers. Where two parties did negotiate (or could have negotiated) a deal ex ante, contract law governed instead.

Unlike these classical tort disputes, most products liability claims concern the terms of an actual contract. For the most part (with obvious exceptions for the non-purchaser plaintiff), the claims touch quarrels between two parties tied directly or indirectly through a purchase. A consumer with a claim against Dell is generally someone who bought a Dell computer. He could have bought a Lenovo, or a Hewlett-Packard, or an Apple. He bought the Dell instead because it offered the portfolio of attributes closest to what he wanted -- closest to his preferred mix of price, processor speed, memory, reliability, and safety.

To be sure, buyers do not necessarily know much about the safety of a product -- but many have no reason to know. The consumer who picked the Dell over a Lenovo or H-P probably had no idea whether any of the computers was safer than any other. But why bother investigating? When was the last time anyone died from an exploding laptop? Fundamentally, products like home computers are safe. They seldom cause any accidents at all. Given that they cause so few injuries, most consumers realize they need not investigate a manufacturer's safety record -- and do not.

Where products do vary by safety, many consumers study a manufacturer's history. They ask their friends. They visit the local library. They subscribe to rating services. And because they base their purchases in part on a firm's reputation for safety, the firms that survive the market competition will tend to be those that invest in the level of safety consumers want to buy. When "consumers want safer products enough to be willing to pay for them," writes economist Paul Rubin (2010: 3), "businesses ... find providing safety profitable." From sheer self-interest, they offer "the level of safety that consumers desire."

Under these circumstances, argue many scholars, the level of product safety on the market will tend to approach the level that maximizes the collective welfare of the buyers and sellers. The point is loosely Coasian. The law could require a higher standard, or it could require a lower one. Consumers appreciate safety, but it is not free and what they pay for safety they could spend instead on other goods and services. As a result, the manufacturers that survive and thrive on competitive product, service, labor, and capital markets will tend to be the manufacturers who offer consumers the level of safety they want to buy.

3. Negotiation costs, informational asymmetries, commitment problems. -- Other scholars are far less sanguine. Some note, for example, that negotiations can themselves involve large costs. Avery Katz (1990) suggests that the simple cost of communicating can prevent buyers and sellers from reaching a mutually beneficial contract. "Because communicating and learning about specific contract language is costly, and because the decision to acquire warranty information necessarily precedes a sale," he reasons (*id.* at 536), "the prospect of moral hazard can deter market participants even from becoming informed about the terms of exchange."

William Landes and Richard Posner (1987) suggest that these negotiation costs can prevent consumers from negotiating the liability protection they want. Buyers, they reason, would often prefer (and would happily pay for) a bundled insurance-product package to an uninsured product. Given the trivial cost of many household goods, they could never cost-effectively negotiate such bundled insurance contracts. In effect, by mandating a bundled product-insurance package, strict liability economizes on negotiation costs while giving the parties the deal they both want.

Informational asymmetries also figure prominently in the discussions. Most sellers naturally have better information about the performance of that which they sell than their customers have. Most buyers have better information about the care they will exercise. Both aspects of the informational environment are asymmetric, and Andrew Daughety and Jennifer Reinganum (1995, 1190) use that asymmetry to model a world where the informational problems lead to "the provision of a product that is (on average) less safe than under full information."

Similarly, Albert Choi and Kathryn Spier (2010) reason that "[f]ree markets -- even those involving fully rational consumers -- may fail to operate efficiently when product safety is not directly observed by consumers at the time of purchase." What is more, even if a seller might choose to offer a warranty, "[d]istortions emerge ... when consumers vary in their likelihood of suffering harm and the market cannot engage in first-degree price discrimination" (*id.*, 2). A seller cannot always observe whether buyers take safety precautions, and some buyers are "intrinsically more accident prone than others." Given these attributes, "the unregulated private market will under-supply product safety" (*id.*, 3).

Abraham Wickelgren (2006, 168-69) ties the informational asymmetries to problems in promissory credibility. "[E]ven if consumers do correctly judge the risks of the products they buy," he explains, "if they cannot directly observe the safety characteristics of those products, then allowing firms and consumers to write their own liability rules will not necessarily lead firms to make efficient investments in product safety" To Wickelgren, the problem lies in the manufacturer's inability to commit credibility to producing safe products. If a buyer knew a product were safe, he might prefer a liability-free contract. But if he waives liability when he cannot reliably confirm a product's safety, then (in a world with a costly legal system) the seller will have less incentive to offer the (unobservably) safe product as promised. "Both parties would be better off if they could commit ex ante not to waive liability; but under contractually-based liability, such a commitment is not possible. Mandatory liability provides such a commitment." (170)

Noting these various possible problems, many scholars conclude that mandatory products liability improves social welfare. Daniel Klerman (2012, 18-19), for instance, writes that "[u]nderstanding warranties takes time and legal expertise." Given the costs, "it is seldom worthwhile for consumers to read voluntary warranties." Given the dearth of consumers who understand either the contract or the product, it is sometimes not worthwhile for sellers "to produce safe products."

4. Markets. -- At root, the question at stake -- "Is strict products liability generally efficient?" -- is not one that anybody will resolve at a theoretical level. Buyers and sellers transact in markets, and participants in market transactions often -- not always, but often -- devise ways to overcome informational problems and negotiation costs and to make their commitments credible. Most obviously, they learn from experience: they draw on their own past. As Alan Schwartz (1992: 828) reminds his readers, "[e]xperience probably is a good teacher respecting frequently purchased items."

On products they buy infrequently, buyers often obtain information through the competitive process itself. They "search for information about the attributes of expensive, dangerous, and infrequently purchased products" (*id.*). And when they want this information badly enough to pay for it, "markets respond by supplying this information" (*id.*). Sellers tout the merits their own product. They advertise the faults of their rivals' (Stigler, 1961). And independent entrepreneurs -- think Consumer Reports -- sell disinterested information about quality and safety for a price.

When consumers might not otherwise believe their claims, sellers can take deliberate steps to make those claims credible. They can invest in reputations for high levels of quality and safety (Klein & Leffler, 1981). They can offer money-back guarantees. They can add legally enforceable warranties of quality (Schwartz & Wilde, 1983: 1397).

Even when all buyers do not acquire information about product safety, sometimes only buyers on the margin need obtain it to shape market outcomes. In some markets, the buyers at the margin will compare competing products. They will then buy the goods that offer the most cost-effective level of quality. If enough such buyers compare quality, they may set the price and quality of the products offered to the rest. If the infra-marginal buyers share the preferences of those on the margin, all buyers will face a market in which sellers offer the quality they want at competitive prices (Schwartz & Wilde, 1983; Schwartz, 2008).

5. Insurance. -- The desirability of mandatory products liability law also turns on the efficiency with which courts can provide what is, after all, a bundled insurance policy. This insurance does not come free, of course. "A firm that compensates consumers for the harms its product causes will reflect the expected compensation cost in the purchase price," notes Alan Schwartz (1988: 362). As a result, part of that price will now constitute "an insurance premium."

Yet modern consumers in countries like the U.S. and Japan do not need products liability law to obtain the insurance coverage they want. For the most part, they can insure against medical expenses on their own. They can insure against disability. They can insure against death. Usually they cannot buy insurance against pain and suffering, but usually they do not want it.

Given the competitive nature of insurance markets, if consumers wanted a given insurance contract badly enough to pay for it, insurers would usually offer it voluntarily. The Japanese government, for example, supplies a nominally comprehensive national health insurance program. In fact, the purportedly comprehensive program saves money by excluding the most modern and effective (and expensive) treatments. Chemotherapy serves as a good example. The Japanese government will not fund the newest regimens. Rather than either take their chances on obsolete cancer treatments or buy the modern drugs out-of-pocket, many

Japanese purchase special "cancer insurance." If and when they develop cancer, they use that insurance to cover what the national program omits.¹

Landes & Posner to the contrary notwithstanding, if consumers want product sellers to bundle insurance against accidents, they need not negotiate the terms of the insurance. Instead, profit-maximizing sellers will offer it unilaterally. If sellers find it too bothersome to offer, they can collectively offer it through their trade association. As Richard Higgins (1978: 305) put it, "a voluntary association of producers that is concerned with establishing a standard level of quality (safety)" can profitably sell the service of "certifying and policing members, and convincing the public of the integrity of the certification." If sellers do not bundle insurance with a given product, perhaps sometimes they omit the insurance because their buyers do not want it.

The notion that sellers might occasionally bundle insurance with their product voluntarily is no abstract hypothetical. Sellers of small products in Japan sometimes do exactly that. Japanese smokers apparently worry that their disposable lighters will explode in their hands. Voluntarily and routinely, manufacturers package insurance with their lighters. Toy manufacturers bundle insurance. Fireworks manufacturers bundle insurance. Baby crib, tricycle, and ladder manufacturers bundle insurance. More generally, sellers who see a competitive advantage to bundling insurance opt into a voluntary program. They pay a fee to a central certifying organization. That organization then tests and monitors their product and insures its users against product-related injuries (Ramseyer, 1996).

By contrast, the insurance that courts provide through strict products liability law is not something that they can provide with anything approaching the efficiency of the private market. After surveying the several empirical studies on point, A. Mitchell Polinsky and Steven Shavell (2010: 1470) estimate that "for each dollar that an accident victim receives in a settlement or judgment, it is reasonable to assume that a dollar of legal and administrative expenses is incurred." Kip Viscusi (1988: 177) finds that "only 37.5 cents of every product liability insurance premium dollar goes to claimants." Roughly consistent with these estimates, the Insurance Information Institute (2010: 167) reports that in 2008 insurers spent an amount equal to 65.4 percent of the incurred product liability losses in defending and containing those claims. In 2006, they spent 134.6 percent.²

To put it all more colloquially, the only insurance contract that courts seem able to provide is a "bad deal." If the law requires manufacturers to bundle insurance with a product, manufacturers will add the cost of the insurance to the price they charge. Because the courts mediate the compensation only at apparently great cost, the law forces consumers to buy an insurance contract that is expensive -- an insurance contract that they would rarely choose to buy on their own.

Necessarily, these inefficiently expensive mandatory insurance contracts will reduce the volume of products consumers buy. If a seller could insure a buyer as cheaply as that buyer could insure himself, buyers might not much care whether a seller bundled the insurance or not. But sellers seem unable to insure buyers cheaply through the courts. Hence the sometimes-heard

¹ <http://www.ganhoken-erabi.com/hikaku.html> (discussing coverage of cancer insurance); see generally Ramseyer (2011).

² Some observers estimate the administrative costs of products liability higher still. Paul Rubin and Joanna Shephard (2007: 221) claim that the legal and administrative expenses come to 3-1/2 times the amount a tort claimant receives in compensation. In the market for pharmaceutical vaccines, Richard Manning (1994: 273) finds that "between five and seven dollars is expended in the process of transferring each dollar of compensation from manufacturers to injured consumers."

criticism in the U.S.: strict products liability can cause observed safety levels to fall. Courts cause, in Polinsky & Shavell's (2010: 1471) words, "prices to rise too much and consumers to purchase too little." Because "many of these [newer] goods and services would reduce risk," as Paul Rubin & Joanna Shephard (2007: 222) put it, "increasing tort liability [can] actually lead to increased, not reduced accident risk."

B. The Empirics:

1. No general increase in safety. -- To date, empirically inclined scholars of U.S. product liability law generally reach a consistent conclusion: strict products liability has not appreciably raised product safety. Although the U.S. is safer than it was a half century ago, it is not safer because of strict liability. It is safer because people are richer, and rich people demand safer goods than poor people. Explains Kip Viscusi (1985: 531), there is a "positive income elasticity of demand for good health."

Richard Higgins (1978) began the empirical investigation into the effect of more stringent liability standards. He asked whether the adoption of strict products liability led to lower home accident rates. He found no consistent evidence. Given that perhaps 30 percent of home accident deaths involve products (Viscusi, 1985: 528), if the law increased product safety it should lower accident rates. Apparently, it did not. The law affected safety, concluded Higgins, only in relation to consumer education levels. It had no consistently significant effect. Viscusi (1985) asked whether product safety regulation (as opposed to liability law) lowered home accident rates. It did not. Regulation brought no significant benefit either.

2. Decreased safety in some industries. -- (a) Small planes. Although strict products liability apparently does not generally raise safety, in some discrete sectors it seems to have had a non-trivial negative effect. Take the market for small planes. Almost all accidents (75-100 percent) in these planes are caused by pilot error (Martin, 1991: 493; Nelson & Drews, 2008: 426), but "90% of all accidents involving a fatality or serious injury result in a lawsuit against aircraft manufacturers" (Nelson & Drews, 2008: 426). To cover the cost of the litigation, manufacturers hiked the price of new planes. In 1977, liability expenses came to \$1,420 per plane. By 1986, they had soared to \$75,000-\$80,000 (id., at 428).

As the price of new planes rose, consumers made do with older planes or built their own. In 1978, manufacturers sold 17,811 new planes. In 1994 they sold only 928 (id., at 428). Yet from 1971 to 2000 the number of "amateur-built aircraft" climbed 674 percent (id., at 427).

Older planes are not as safe as new, and homemade planes are not as safe as the professionally built. After exploring the evidence, Nelson & Drews (2008: 436) conclude that the law straightforwardly lowered product safety: "[T]he decrease in new plane shipments resulted in an additional 22,534 accidents and 7,887 fatalities over the period 1981-2005."

(b) Vaccines. Empiricists tell a similar story about vaccines. Among childhood vaccines, one of the most effective and safe has been the DPT (diphtheria, pertussis, tetanus). Nevertheless, over the 1980s the plaintiffs' bar began to sue the manufacturers of the vaccine for purported side effects. The "diphtheria and tetanus components of the DPT vaccine are generally considered very safe," writes Richard L. Manning (1994: 257). But the pertussis component was "suspected of carrying a small risk of very serious side effects" (id.). Only suspected -- physicians disagreed about whether the "severe reactions associated with the pertussis vaccine [were] causal in nature or merely coincidental" (id., at n. 14). Given the enormous cost of

litigation, however, the price of the DPT vaccine soared anyway. From under \$10 in 1980, it rose to more than \$150 by 1987 (Helland & Tabarrok, 2006: 16). Some firms left the market, and some children did without.

The phenomenon repeated itself with several other vaccines. Because of strict products liability (more precisely, because of the apparent inefficiency in the court-mediated insurance effectively mandated by strict products liability), the "wholesale price of the oral polio vaccine is estimated to be more than 300 percent higher than it would have been under traditional negligence rules" (Manning, 1994: 273). Because of the legal rule, "the measles, mumps, and rubella vaccine prices are on the order of 50 percent higher than they otherwise would have been" (id.). Prices rise. Again, some children do without.

(c) Bendectin. Perhaps the most unambiguously tragic result occurred with Bendectin. Merrell had introduced the drug in 1956 to ease morning sickness. Pregnancy routinely causes mild discomfort, but with 0.3 to 2 percent of new mothers it can cause severe nausea and vomiting (Eliakim, 2000). In extreme cases, it can kill -- as it killed Charlotte Bronte in 1855.

In the early 1980s, plaintiffs' attorney Melvin Belli masterminded a massive litigation campaign against its manufacturer Merrell Dow. Bendectin, he argued, caused birth defects. In truth, Belli had no evidence that it injured anyone at all. Many women have morning sickness, many women took Bendectin, and babies occasionally have birth defects. Predictably given these odds, some women who took Bendectin gave birth to babies with birth defects. As witness, Belli had a physician who had written an article asserting that Bendectin caused these defects. Alas, the doctor had faked his data (Huber, 1993: 126). Bendectin caused no harm.

Notwithstanding the science, however, because of litigation costs Merrell Dow pulled Bendectin from the market. Women with morning sickness now have nothing comparable to which to turn. Worse, pharmaceutical firms have stopped almost all research in contraceptive or pregnancy-related drugs (Viscusi & Moore, 1993: 162). Write several public-health scholars (Wing, et al., 2010: 825, 828), "[n]o drug with an obstetric indication has been approved since 1995":

Essentially, despite a record of safety that speaks to no measurable reproductive risks to the mother or the developing fetus, a number of nonmeritorious lawsuits alleging causality in fetal malformations were filed and went to trial. Because of the relatively high frequency with which nausea and vomiting of pregnancy are encountered, the risks of nonmeritorious litigation and its costs were prohibitive. The manufacturer of Bendectin subsequently went out of business as a result of the costs of litigation defense, leading other drug developers to be wary of drug development for obstetric indications.

3. Reform. -- Change this law -- "reform" tort -- and some of these problems should disappear. However tentatively and controversially, some empiricists find that they do: damage caps and restrictions on products liability litigation and punitive damage awards reverse the slide that strict products liability seems to have begun. Conclude Rubin & Shepherd (2007: 220), "tort reforms in the states between 1981 and 2000 are associated with an estimated 24,000 fewer accidental deaths."

Yet the evidence remains ambiguous. Tort law is state law in the U.S., a creature of state legislatures and courts. Because the U.S. presents manufacturers with a national market, however, most do not separately design products for particular states. Unfortunately, this

combination of multiple (and sometimes conflicting) state laws and a fundamentally national market muddies the empirics.

II. Strict Products Liability in Japan

A. Introduction:

For the effect of products liability on product safety, Japan arguably offers a cleaner test. Rather than a federal regime, it imposes on the national market a national legal system. It does not enact tort law in sub-national legislatures, and neither does it adjudicate tort disputes through sub-national courts. Instead, the one national Diet enacts statutes, and one national corps of appointed judges interprets them. In part precisely to maintain that national uniformity, a personnel office in Tokyo rotates judges across the country on a regular basis.³

Before 1995, courts held product liability claims to a contract or negligence standard. That year, they switched to strict liability. The new standard applied to the entire national market. Did it raise safety standards, as its proponents argued that it would? Did it lower safety, as may have happened in at least some industries in the U.S.? Or did it not change much of anything at all, as Coase would seem to predict?

Several scholars have suggested that manufacturers responded to the new law in Japan by making products safer. In 1998, for example, Luke Nottage and Yoshitaka Wada (1998: 49; see also Nottage, 2004: 195-97) reported that Japanese manufacturers redoubled their efforts to increase safety:

[The new statute] has had an impact on manufacturers, which have responded with a range of measures. There are efforts to improve product safety at the level of the individual firm; new committees and guidelines on improving labeling and instructions instituted by industrial associations; more monitoring of accidents by associations Individual firms are expanding their legal section personnel to deal with PL issues.

Several years later, Nottage (2004: 196) again claimed that "manufacturers [in Japan] have become much more conscious of PL issues and accordingly have adopted counter-measures to improve product safety." In fact, he continued (*id.*, at 198), there is "clear evidence of widespread attempts by manufacturers to improve their product safety and complaint handling procedures, initiated mainly over 1994-6."

Indeed, did manufacturers improve product safety in the wake of the statute? Consider first the substance of the legal change (Sec. B.). Then turn to the evidence on accident rates (Sec. C.).

B. The Law:

³ Ramseyer & Rasmusen (2003). By Japanese civil procedural rules, subject-matter jurisdiction is not a question. The courts have it. Neither is personal jurisdiction a question. The courts have this too. Venue can lie at a corporate defendant's principal place of business (Minji so sho ho [Code of Civil Procedure], Law No. 109 of June 26, 1996, Sec. 4(d)), but it can lie at the place of the tort (Sec. 5(i)) or at the place of expected contractual performance (Sec. 5(a)) as well. Crucially, if a court finds venue improper, it does not dismiss a case. Instead, it just transfers it to the right court (Sec. 16). Note that Japan does not use civil juries.

1. Tort law. -- Since 1896, Japanese courts have decided tort cases by the terms of the Civil Code.⁴ Modeled after the Prussian equivalent, the statute mandates for torts a negligence regime (Sec. 709):

He who infringes a right or legally protected interest of another, either intentionally or negligently, must compensate that person for any damages he causes.

To determine whether a defendant has acted negligently, the courts often (not always) adopt a test close to Learned Hand's formula in Carroll Towing.⁵ Due care is the care that "a person of ordinary care would show under the circumstances," explained the Supreme Court,⁶ and those circumstances typically require people to weigh risks, costs, and benefits. In a medical malpractice case, for instance, the Court told physicians to balance the gains from the treatment against its likely side effects: "At issue is the physician's care in balancing the illness and its effective treatment on the one hand, and the attendant risks on the other."⁷

Against this background of negligence-based tort liability, the Diet imposed on product claims in 1994 a strict-liability regime.⁸ It modeled the law on the European Community directive of 1985.⁹ At the heart of the statute lay Section 3:

A manufacturer must pay compensation for any damages to the life, health, or property of another person, if those damages were caused by a defect in a product that it manufactured, processed, or imported

The rule governed disputes over products sold after July 1, 1995.¹⁰ As with its European antecedent, it did not apply to services.

2. Complications. -- If buyers and sellers in Japan did tend to negotiate mutually beneficial transactions before 1995, then for all the reasons noted earlier (Sec. I.A.), data on product safety would show no clear shift in 1995. For several reasons, however, even if informational and other problems prevented those mutually beneficial bargains, the data might still show less of a shift than one would otherwise expect. Most obviously, negligence and strict liability create similar incentives toward efficient behavior. The statute shifted the tort rule in courts from negligence to strict liability -- yet the similarity in the incentives created by the two rules remains one of the best-known findings in the entire corpus of law & economics.

Second, sophisticated manufacturers had anticipated the change for some time. Scholars and legislative committees had studied a possible shift to strict products liability for years (Hamada, 1995: 6). By the time the Diet passed the statute in 1994 (effective 1995), it surprised very few CEOs.

Third, negligence under the Civil Code could sometimes approach strict liability in practice. Take a 1994 dispute over a Panasonic television set that caught fire. The Osaka District Court went out of its way to insist that it did not hold Panasonic to strict liability. All the

⁴ Minpo [Civil Code], Law No. 89 of Apr. 27, 1896.

⁵ *United States v. Carroll Towing Co.*, 159 F. 2d 169, 173 (2d Cir. 1947).

⁶ *Fukuyama v. Nakamura*, 17 Daihan minroku 617, 622 (Sup. Ct. Nov. 1, 1911).

⁷ *Kuni v. Haegawa*, 547 Hanrei jiho 38, 39 (Sup. Ct. Feb. 6, 1969).

⁸ *Seizobutsu sekinin ho* [Products Liability Act], Law No. 85 of July 1, 1994, effective July 1, 1995.

⁹ Council Directive of 25 July 1985 (OJ L 210, 7.8.1985, p. 29).

¹⁰ *Seizobutsu sekinin ho*, supra note, at App. Sec. 1.

same, it declared that the firm had a duty to sell television sets that were safe under normal use; that a television which catches fire is not safe; and that -- given the fire -- it would "presume" that Panasonic had produced the set negligently. Panasonic could avoid liability only if it proved that it had not been negligent. Unable to rebut the presumption, Panasonic lost.¹¹

Fourth -- and conversely -- strict liability under the new statute could in turn resemble negligence. Whether a design was "defective" under Section 3 turned on its reasonably intended use. "Reasonableness," however, introduced a cost-benefit analysis close to the negligence rule itself (Tsusho, 1994: 96). The point is not unique to Japan. As Gary Schwartz (1988: 369-70) noted two decades ago:

Liability for manufacturing defects is truly "strict" because a plaintiff need only show that a firm failed to comply with its own standard to prevail Liability for design and warning defects has significant negligence aspects, however, because the plaintiff must show that the defendant's conduct fell below a legally prescribed standard: A firm's design is defective only if the design generated costs net of benefits

Fifth, if a product did not perform as promised, a seller was liable under contract anyway. Sellers and buyers do not discuss everything about a product, of course, but Japanese courts sometimes declared safety an "implied" contract term. Its absence would then constitute a "hidden defect." The analysis turned on Sections 570 and 566 of the Civil Code:

Sec. 570: If the object of a sales contract contains a hidden defect, the provisions of Sec. 566 shall apply [by analogy].

Sec. 566: If the object of a sales contract is encumbered [by a competing legal claim], if the buyer does not know [of that competing claim], and if [that claim] prevents him from fulfilling the purpose of the contract, he may void the purchase. If the buyer cannot void the purchase, he may demand compensation for his damages.

Take a family that bought a toy archery set. When the suction cup at the end of one of the arrows came off, a daughter blinded her brother. The family collected from the retailer, the retailer collected from distributor, the distributor collected from the wholesaler, and the wholesaler sued the manufacturer for indemnity. The manufacturer had an obligation to sell a safe archery set, the court reasoned. Because the set -- in retrospect -- had not been safe, the manufacturer was liable.¹²

Last, sometimes courts just duck fine distinctions entirely. The strict liability rule may require a negligence analysis, and the negligence rule may approach strict liability. Both have similar efficiency characteristics. Given the interpretive overlap and essential similarity between the two, modern courts sometimes just ignore the new statute and stay with what they know. Rather than learn the new rules, they apply the Civil Code. When the defendant sold him contaminated dumplings, a plaintiff sued in both contract and products liability.¹³ The district court held the defendant liable (in 2010) in contract without bothering to apply the products liability statute. When a plaintiff sued a cosmetics firm under both tort and products liability, the district court held the firm liable (in 2001) in negligence without worrying about products

¹¹ Taishi kensetsu kogyo, K.K. v. Matsushita denki sangyo, K.K., 1493 Hanrei jiho 29 (Osaka D. Ct. Mar. 29, 1994).

¹² K.K. Tokiwa shoji v. Yamamoto, 1196 Hanrei jiho 132 (Osaka D. Ct. Feb. 14, 1986).

¹³ [No names given], 1332 Hanrei taimuzu 193 (Osaka D. Ct. July 7, 2010).

liability.¹⁴ And when a plaintiff sued Fuji Heavy Industries (Subaru) over an engine-compartment fire, the district court held the firm liable (in 2007) without even distinguishing the different legal regimes.¹⁵

C. Product Safety:

1. All non-traffic accidents. -- To explore the possible impact of the 1995 statute on product safety, start with a simple replication of Richard Higgins' (1978) study. In 1978, Higgins asked whether strict liability reduced accidental home deaths in the U.S. He found no consistent evidence that it did. Instead, safety was simply a normal good: as Americans grew richer, they demanded and obtained safer products.

In Figure 1, I give the number of non-traffic accidental deaths in Japan from 1950 to 2010 (number on left axis), and rates per 100,000 population (right axis). The data reflect the annual vital statistics collected by the Ministry of Health, Labor & Welfare. They show a steady decline over the four decades from 1950 to about 1990, and a sharp increase in the two decades since.

[Include Figure 1 about here.]

The reasons for the initial fall in the number of deaths and its later rise are easy to surmise. As in the U.S., the demand for safety rises with income. During the first decades after the war, per capita income in Japan rose steadily and rapidly. Increasingly, consumers demanded and obtained safer products and safer homes. As they did, the number and rate of non-traffic-related accidents fell. From 30.4 deaths per 100,000 population in 1950, they fell to 11.9 deaths per 100,000 in 1987.

With the increase in wealth, however, came a demographic shift. As Japanese grew richer, they lived longer lives and bore fewer children. The median age began to climb sharply, and with it the rate of accidental deaths. By 2010, those rates had returned to those of 1954

Japanese live long today because scientists have eliminated the diseases that killed them a half century ago. In 1943, for instance, tuberculosis killed 170,000 Japanese (Ikeda, et al., 2003). Thanks to pharmacological progress, the disease now kills only 2,000-3,000 people a year. Much the same could be said of most of the other diseases that assaulted the Japanese population a half-century ago.

Yet notwithstanding modern medicine, eventually people do die, and in a world where medicine has tamed killers like tuberculosis, accidents are like cancer, strokes, and heart disease: they kill those who weather everything else that nature sends their way. A Japanese woman may have survived the American bombing raids in the early 1940s. She weathered the post-war food shortage. She avoided tuberculosis. Now in her late 80s, she will slip in the kitchen and fall. She will break her hip, and after a few weeks in the hospital will die – of the 27,642 non-traffic accidental deaths in 2004, 6,412 involved falls. She may slip in the bathroom, and drown in the tub – 5,584 of the accidental deaths involved drowning. Or she may choke on her food – 8,645 of the deaths involved suffocation (Jinko dotai, 2004: v. III tab. 2).

Overwhelmingly, these accidental deaths kill the elderly. Of the 27,632 accidental deaths in 2004, 42.1 percent involved men and women age 80 or more, and 79.7 percent involved those 60 or more. Of the 6,412 falls, 45.2 percent were 80 or more, and 81.1 were 60 or more. Of the 5,584 drownings, 32.6 percent were 80 or more, and 77.5 percent were 60 or more. Of the 8,645

¹⁴ [No name given] v. Ion keaa, K.K., 1765 Hanrei jiho 67 (Tokyo D. Ct. May 22, 2001).

¹⁵ Y.G. Hikari kyuso saabisu v. Fuji jukogyo, K.K., 1994 Hanrei jiho 65 (Tokyo D. Ct. Apr. 24, 2007).

asphyxiations, 53.6 percent were 80 or more, and 88.6 percent were 60 or more (Jinko dotai, 2004: v. III tab. 2)

These Figure 1 accidental deaths for the last two decades need not have resulted from defective products. Although they will indeed include most deaths caused by product defects, they will include much more as well. When an elderly woman falls and breaks her hip, she does not likely fall because she climbed a defective ladder or sat in a defective chair. She falls because she was old and unsteady. When she chokes on a dumpling, she does not choke because the dumpling was defective. She chokes because her reflexes no longer work as they once did.

Including as it does deaths from non-defective products, Figure 1 covers a broader swath than one would like for this study, but nonetheless makes a basic point: aggregate accident data show no sign that product safety increased after the 1995 statute. For the first four decades after World War II, accident rates fell steadily. After the late 1990s, they began to climb. The question at stake in this study is whether accident rates fell with the passage of the 1995 statute. According to Figure 1, the answer is no.

Note that the data do not reflect any changes in reporting rates. In the rest of this Section II.C, I introduce data that more closely capture the rates of accidents specifically tied to products covered by the 1995 statute. Those times series, however, cover periods over which reporting rates varied – generally, reporting rose over the period in question. That change in reporting patterns obviously reduces the helpfulness of the data. Figure 1 avoids that problem: the data reflect vital statistics collected by the Ministry of Health, Labor & Welfare through procedures that stayed largely unchanged.

2. Accidents related to consumer purchases. -- (a) Accidents. Turn to accidents specifically related to consumer purchases. In Figure 1 I report all non-traffic-related accidental deaths. To explore the effect of the 1995 statute more precisely, in Figure 2 I report the number of injuries related to consumer purchases.

[Include Figure 2 about here.]

(i) Consumer-reported. Figure 2 shows two lines. On one, I give the number of purchase-related injuries reported by consumers themselves to the Japanese network of "Consumer Centers." Recently restructured as "Citizens' Life Centers," the outlets coordinate the national government's ostensible efforts to promote product safety.

The government began these centers in 1970 (Kokumin, 2010: i), and increased their number steadily over the course of the next several decades: to 290 centers by 1988, 330 in 1997, 380 in 1999, and 485 in 2008 (Kokumin, 1988: 4; 1997: 1; 1999: I; 2008: 6). Other than advice about the how to assert a claim against a manufacturer, consumers receive no tangible benefit from reporting an injury to a center (Kokumin, 1988: 88-89). Given that the government sponsored the 1995 statute, its probable bias would lie in favor of identifying an increase in product safety.

(ii) Hospital-reported. On the second line in Figure 2, I give the number of purchase-related injuries reported to the consumer-center network by a group of participating hospitals. In 1988, 9 hospitals reported to the network. The reporting group increased to 17 hospitals over the next five years, but thereafter remained largely unchanged. Another three hospitals joined between 1993 and 1998, but the number then stayed at 20 through 2009 (Kokumin, 1988: 88-89; 1994: 89; 2009: 94; 2010: 51).

(b) Significance. Beginning in the mid-1990s, consumers sharply increased the number of injuries they reported to these centers. They reported a relatively constant number of injuries from 1985 (1640 injuries) to 1991 (1650). They then sharply raised that number: to 1,834 in 1992, to 3,934 in 1995, and to 5,035 in 1997. Although they continued to report increasing numbers of injuries thereafter, the rate of that increase slowed.

I have no reason to think Japanese consumers began to buy more dangerous products in the mid-1990s (though given the apparent fall in product safety in some sectors after the introduction of strict products liability in the U.S., that is an obvious possibility). Because of the increase in the number of consumer centers, they probably just reported more of their accidents. For purposes of this study, however, the relevant point is more basic: the time series gives no evidence that product safety rose with the introduction of strict products liability in 1995.

Hospitals also increased the number of injuries they reported in the mid-1990s. Again, the increase probably reflects an increase in reporting. From 1988 to 1993, the number of hospitals cooperating with the network rose from 9 to 17, and the number of injuries they reported climbed in rough proportion: from 3,363 to 7,786. By 1998, 20 hospitals participated, and they reported 9,585 injuries. The number of hospitals remained unchanged thereafter, and annual injuries fluctuated between 10,155 (in 1999) and 8,260 (in 2008). Relevant to this study: the hospital figures show no evidence that the 1995 statute increased product safety.

(c) Inquiries (rather than injuries) related to product purchases. To explore more fully the impact of reporting behavior on the Figure 2 numbers, in Figure 3 I give the number of inquiries to the consumer-center network over the same period. On one line, I report total inquiries; the amounts appear on the left axis. On the other line, I report inquiries specifically about health and safety; the numbers appear on the right axis. Note that only a very few of the inquiries to the consumer centers concern health and safety: for example, in 1996 the centers received 351,139 inquiries, but only 14,462 concerned either health or safety.

Because the Figure 3 inquiries will reflect the accessibility and visibility of the consumer centers, they provide a way to evaluate the changing pattern of injuries reported in Figure 2. Crucially, note that both the number of health-&-safety inquiries (Fig. 3) and the number of reported injuries (Fig. 2) increase over this period.

[Include Figure 3 about here.]

The total inquiries reported in Figure 3 present their own puzzle. After 2002, they climb very steeply, and after 2004 fall just as abruptly. According to the consumer centers themselves, they received an unusually large number of what they considered "groundless" inquiries during these years. For comparative purposes, in Figure 4 I drop those inquiries that the centers considered baseless. Although this does reduce the magnitude of the 2004 spike, the number of inquiries still climbs sharply from 2002 to 2004.

[Include Figure 4 about here.]

To clarify further the extent to which the changes in Figure 2 reflected changes in reporting, in Figure 4 I index all lines at their 1987 values. More specifically, in Figure 4 I give indexed values of (a) the total inquiries line from Figure 3, with the "groundless" 2002-04 inquiries dropped; (b) the health and safety inquiries from Figure 3; and (c) the purchase-related injuries reported by participating hospitals to the consumer centers from Figure 2. This Figure 4 suggests two observations. First, the reported injuries track the number of health and safety inquiries. Second, until 2000, the reported injuries track the number of total inquiries as well.

Apparently, the change in the number of injuries in Figure 2 primarily reflects changes in the reporting behavior. Again, however, note the converse: the data provide no evidence that product safety increased after the adoption of strict liability in 1995.

(d) Product mix -- (i) Consumer-reported v. hospital-reported. Although the number of injuries reported by consumers and hospitals increase in tandem over the years at stake, the two groups do report different injuries. Table 1 details the two sets of reports. To the consumer centers, people most often complain about "health products" -- quintessentially rashes and allergic reactions caused by cosmetics. Given that they have no serious medical problem, they probably skip any visit to a doctor and "cure" their rash by switching make-up brands.

[Insert Table 1 about here.]

People instead go to a hospital for serious injuries they cannot cure themselves. They see a physician if they break a hip falling down the stairs ("indoor facilities"), for example. They see one if they fracture a leg skiing ("education and entertainment"). Given that the stairs and skis performed exactly as promised, however, they probably skip any report to the consumer centers.

(ii) Japanese hospitals v. U.S. hospitals. Yet if Japanese hospitals report different injuries from consumers, they do report roughly the same injuries as American hospitals. The U.S. data (Table 2) reflect accident reports filed by 66 participating hospitals to the National Electronic Injury Surveillance System (NEISS).¹⁶ In Table 2, I list those products (not necessarily defective products) that caused the most accidents in 2009. By far the most common injuries involved stairs and railings: about 2.6 million injuries. Other common accidents involved bicycles, beds, chairs, desks, and sports equipment.

[Insert Table 2 about here.]

The Japanese data (Table 3) reflect the accident reports filed by the 20 participating hospitals to the national consumer center network (the data behind Figures 2-4). These hospitals blamed a similar mix of products as the American hospitals. Again, the most common source of injury was a staircase. Other injuries involved bicycles, beds, chairs, desks, and various toys.

[Insert Table 3 about here.]

Whether in the U.S. or Japan, the same products cause most of the injuries. They are not new, experimental, high-technology items. They are everyday goods that consumers have used for decades. They injure people regardless of whether they have a defect. After all, consumers everywhere trip on stairs, roll off their beds, fall from their chairs, and crash their bicycles. They trip, roll, fall and crash whether the stairs, beds, chairs, and bicycles are defective or no.

Although the Japanese hospitals report a similar mix of injuries as the American hospitals, they report many fewer. I doubt that the difference reflects fewer accidents in Japan. Japanese and Americans buy similar products (though the safety of those products is obviously the question at stake in this article), and bring to their use similar levels of education and similar degrees of technological sophistication.

Instead, the difference in the number of reported accidents probably reflects the different patterns of medical care. At root, injured Japanese and Americans consult different medical institutions. American consumers turn to physicians with "admitting privileges" at local hospitals. If they see a doctor, the visit appears on a hospital record.

¹⁶ More specifically, the data are from the NEISS, sponsored by the Consumer Product Safety Commission, the Division of Hazard and Injury Data Systems, and the Center for Disease Control. NEISS compiles reports on injuries from a network of 66 participating hospitals.

By contrast, Japanese consumers choose between a physician on staff at a hospital and a physician who owns a private clinic (often with several beds for in-patients). In 2002, the physicians at the 9,120 hospitals in Japan saw 3.33 million patients. Those at the 94,800 clinics saw 3.45 million (Kosei, 2002: 91; Nihon ishi, 2006: 600). A consumer is most likely to turn to a clinic for his less severe injuries. Many will go to a hospital only if their clinic doctor finds the injury too complex to handle and forwards them to a hospital for tertiary care. Unless a patient sees a doctor at a hospital, however, his visit will not appear on hospital records -- and the consumer center statistics. If his medical care begins and ends at a small clinic, nothing will appear on this data.

3. Accidents specifically caused by products. -- Although Figures 2 through 4 cover injuries caused by all consumer purchases, the 1995 product liability statute does not cover all purchases. It covers products, and excludes services. In Figure 5, I partition the inquiries by whether they concerned products or services. If the 1995 statute promoted safety, then the number of product-related inquiries should have fallen relative to the number of service-related inquiries. It did not.

[Include Figure 5 about here.]

Instead, according to Figure 5 both product- and service-related inquiries increased at about the same pace. Both remained stable until the mid-1990s, and then both began to climb steadily. Again for comparative convenience, in Figure 6 I index the two time series by 1987 values. The two lines track each other closely. Note that the changes in reporting behavior discussed with Figures 2 through 4 would not affect the number of product inquiries relative to the number of service inquiries.

[Insert Figure 6 about here.]

4. Accidents caused by specifically defective products. -- Not all accidents involve consumer purchases; not all purchases involve products; and not all products are defective. Figure 7 sorts product-related deaths and serious injuries by whether they were caused by a defect. Figure 8 indexes those numbers at 1994 values.

[Insert Figures 7 and 8 about here.]

The data come from the National Institute of Technology and Evaluation (NITE). Loosely affiliated with the Ministry of Economy, Trade & Industry (METI), the Institute has purported to collect data on all serious product-related injuries since 1994. In 2005, it learned of 575 accidents from manufacturers, 196 from local governments, 135 from the consumer center network, and 1,916 from the news media. For each accident, it investigated the cause.

According to NITE, product defects cause very few serious injuries. In a typical year less than half of the accidents cause any personal injury, and only a quarter involve a product defect (NITE, 2008: 5). By 2008, NITE had completed its investigation of 1,960 of the 2005 accidents. It found that a product defect had caused 401. Users themselves had caused 955 through their inattention or improper use (NITE, 2008: 13). Defective products caused 3 deaths in 1994, 1 in 1996, and 4 in 1997, and 1 in 2006. They caused 16 major injuries in 1994, 23 in 1995, 21 in 1997, and 27 in 2006.

For the most part, the number of deaths and serious injuries caused by defects and the number caused by other factors move in tandem (see Figs. 7, 8). Were the 1995 statute to have raised product safety, the number of injuries caused by defective products would have fallen. It

did not.¹⁷ The data are obviously limited by the fact that they include only one year (1994) before the statute took effect. Most basically, however, they provide no support for any claim that the statute raised product safety levels.

As a government regulatory agency, NITE will obviously have its own biases. Whatever those biases might be, however, I know of no reason they would involve minimizing the effect of the 1995 statute. After all, the government championed the passage of the statute. Nonetheless, its own data suggest that the statute had no effect: product safety did not improve appreciably after 1995.

D. Claiming Behavior:

1. Introduction. -- The figures above suggest that Japanese consumers rarely suffer serious losses from defective products. They rarely suffer serious losses now, and they rarely suffered serious losses before the 1995 statute. Japanese are rich, and generally demand and obtain safe products.

Consistent with this hypothesis, court records and insurance data suggest Japanese consumers rarely file product liability claims. When they do, they often recover. Courts award successful plaintiffs generous amounts. But as one might expect in a world with generally safe products, Japanese consumers seldom assert product liability claims -- either in court or out.

To explore litigating behavior in Japan, I turn first to officially reported court opinions. To cover cases that do not result in reported opinions, I add information about products liability cases that did not generate such a published opinion (Sec. D.2., below). To study total (litigated and settled) claiming behavior, I examine the liability insurance industry (Sec. D.3.).

2. Litigated disputes.¹⁸ -- (a) The data. To locate published opinions, I search for "products liability" (seizobutsu sekinin) in the "Hanrei taikai" district court opinion database. Consider this a Japanese equivalent to Lexis/Nexis. The search yields a set of 63 opinions. I report selected summary statistics in Table 4. Note that the modal number of published opinions on product liability in any given year is 2; the mean is 3.5

[Insert Table 4 about here.]

Because most court cases in Japan do not generate a reported opinion, this search will understate the amount of litigation. In 2004, for example, the Hanrei taikai database included 1,358 civil district court opinions of any kind. The district courts actually issued 71,428 opinions that year (44,711 if I exclude default judgments). The parties settled another 51,331 suits before final judgment (Shiho tokei, 2004: tab. 20).

On its website, the consumer center network lists all products-liability suits about which it obtained information. It learned about some cases through the news media, and about some through the parties themselves. In other words, the network does not just include in its dataset those cases that yield published opinions. Instead, it includes any court case that reaches its attention. All told, it lists 142 cases. I report selected summary statistics in Table 5. The modal number of product liability cases in any given year is 6; the mean is 8.4.

¹⁷ Though the number of injuries caused by defective product did fall relative to the number caused by misuse. The number caused by defects held constant from 1994 to 2000, where the number caused by misuse rose dramatically (and inexplicably) from 1994 to 1995.

¹⁸ Other studies of litigation in Japanese products liability disputes include Abe (2004), Naikakufu (2006), Nottage (2004).

[Include Table 5 about here.]

Plaintiffs did sue and collect on products liability claims before the 1995 statute. Hideyuki Kobayashi (1990: 30) estimates that by 1990 the courts had already published about 140 products liability opinions. Others place the number of pre-statute product liability published opinions at 150.¹⁹ Kobayashi (*id.*) writes that most of the cases involved tort (Civil Code, Sec. 709) rather than contract (Sec. 570).²⁰ Given the search results in Table 4, these numbers are obviously something of a puzzle: apparently, very few of the cases include the phrase "products liability."

(b) Outcomes. Tables 4 and 5 suggest several observations. First, claimants file very few suits. In any given year they file fewer than 10 product liability suits that result in a published opinion (Table 4), and no more than 20 suits that come to the attention of the consumer center network (Table 5). The consumer centers will not learn of all suits filed, of course. Even so, the number is small. Of the suits filed, plaintiffs seem to litigate about 65 percent to a final judgment, and courts seem to publish about 45 percent of the final opinions. Suppose reporters publish the same percentage of product liability cases as of other civil cases. If court reporters publish 1,358 of the 44,711 non-default judgments in a year (Subsec. (a), above), then the 10 annual product liability opinions imply an annual universe of 330 cases. Commercial court reporters, however, stay in business by selling subscriptions. Because products liability litigation is so unusual, they almost certainly publish a higher fraction of the opinions than in other fields. If so, then the number of cases decided annually probably falls far short of 330.

Second, plaintiffs win a majority (39/56) of the published product liability opinions. This does not mean they necessarily win a majority of the cases they litigate. In medical malpractice cases, they win about 40 percent of the cases they file, but a higher fraction of the cases with published opinions (Ramseyer, 2010: 626).

Third, in wrongful death claims, successful product liability plaintiffs collect about 61 million yen (Table 4). At the 2012 exchange rate of 80 yen/\$, this comes to \$760,000. In Japanese medical malpractice cases, successful wrongful death claimants similarly collect about 50 million yen (Ramseyer, 2010: 645). In U.S. medical malpractice cases, successful wrongful death claimants collect \$200,000-\$300,000 (Vidmar, 2005: 340). In general, Japanese product liability plaintiffs collect about half of what they initially demand.

Fourth, judges take about two-and-a-half years to decide a products liability case (Table 5). They take the same amount of time whether the plaintiff wins or loses. In medical malpractice cases, judges similarly take a little over two years (Ramseyer, 2010: 673).

Fifth, plaintiffs disproportionately file their product liability suits in Tokyo: 44 of the 142 suits in Tokyo District Court. By contrast, plaintiffs file about 20 percent of all civil claims more in Tokyo. They do, though, similarly file about 40 percent of the medical malpractice suits in Tokyo (Ramseyer, 2010: 627).

Last, plaintiffs in Tokyo demand and collect larger amounts than plaintiffs elsewhere. The product liability plaintiffs demanded a mean 290 million yen in Tokyo, but only 47.5 million

¹⁹ Hayashida (1995: 91) estimates the number of reported opinions on products liability under the Civil Code at 150. The case comment at 1493 Hanrei jiho 29, 34 similarly estimates 150, and includes citations to a large number of such cases.

²⁰ The litigation could also involve Civil Code, Sec. 717, if the suit is over a dangerous product. See *Akaho v. Koshin sangyo, K.K.*, 427 Hanrei jiho 11 (Nagano D. Ct. Matsumoto Branch Off. Nov. 11, 1965) (portable propane tank treated as fixture for purposes of Sec. 717).

elsewhere. They collected a mean 23.3 million yen in Tokyo, but only 16.8 million elsewhere. On the one hand, this may reflect selection bias: a claimant may be more likely to retain a well-known (and high-priced) Tokyo lawyer when he has suffered severe damages, and that lawyer may then sue near his office. Given that most large Japanese firms have substantial contacts with Tokyo, venue will not likely prevent litigation there.²¹ On the other hand, the higher stakes could also reflect higher Tokyo incomes. Because courts do value human life and injuries by income foregone, injuries to Tokyo residents will generate higher claims than injuries elsewhere.

3. Insurance. -- (a) Introduction. Insurance rates reflect the low amounts Japanese firms pay on products liability claims. Should a firm want to insure against products liability, it will buy its coverage on a private market. Typically, insurers quote rates that depend on industry, coverage, and annual sales. The Mitsui-Sumitomo insurance firm (Mitsui, 2010), for example, offers coverage to manufacturers, retailers, restaurants, and other service establishments. Retailers and firms in the service sector are not subject to the 1995 Products Liability Act, of course, but they do remain liable under tort and contract law. The Mitsui-Sumitomo firm offers all of them coverage. It excludes claims related to nuclear radiation, asbestos, and intentional or grossly negligent conduct, and covers claims against exported products through separate contracts.

(b) Price of coverage. The Mitsui-Sumitomo (2010) brochure gives several examples of the prices it charges. At the time of the brochure in 2010, a construction firm with annual sales of 500 million yen could buy coverage for 293,000 yen. Under the contract, Mitsui-Sumitomo would pay up to 50 million yen for personal injury per claimant, 300 million yen for total personal injury claims per year, and 30 million yen for total property damage claims per year.

On Table 6, I collect price quotations from a variety of insurers. In the last column, I infer the implied rate per million yen in annual sales. This per-million yen rate starts at 150 yen for 100 million yen total personal injury coverage for a supermarket. It peaks at 2,700 yen for 100 million yen coverage for an automobile repair shop.

[Insert Table 6 about here.]

The Japan Chamber of Commerce (2011; JCC) coordinates products-liability insurance coverage for its small- and medium-sized member firms. The contracts themselves are sold by commercial insurance firms. Manufacturers may obtain this JCC-mediated coverage if they have 300 or fewer employees, or 300 million yen or less in paid-in capital. Wholesalers may join if they have 100 or fewer employees or 100 million capital or less, retailers if they have 50 or fewer employees or 50 million capital or less, and service industries if they have 100 or fewer employees or 50 million yen capital or less.

The Okinawa Chamber of Commerce (2011; OCC) details the rates for qualifying small firms (it uses the same size cut-offs as the JCC). Table 7 gives the rates per million yen in annual sales. These Chamber-of-Commerce-mediated rates fall slightly below those offered on the private market directly (Table 6). Apparently, the Chambers of Commerce negotiate preferential rates for their members. For example, a supermarket could obtain 100 million yen coverage at 150 yen (per million yen sales) on the private market, but at 87 yen through the OCC. A carpenter could obtain coverage at 364 yen on the private market, but at 211 yen from the OCC. A glass products manufacturer could obtain it at 412 yen from the private market, but at

²¹ See note 3, *supra*.

173 yen through the OCC. A plastics manufacturer could obtain it at 415 yen on the private market, but at 241 yen through the OCC. And an automobile repair shop could obtain it at 2,700 yen on the private market, but at 1,221 yen from the OCC.

[Insert Table 7 about here.]

(c) Number of claims. Japanese firms do pay many more claims than appear in court statistics. The discussion above suggests that Japanese consumers file at most 300 products liability suits a year, and probably many fewer. According to Figure 9, insurers actually pay 500 to 1,100 claims a year. As detailed above (Subsec. (a)), the Figure includes claims against retailers and service-sector firms -- companies not within the scope of 1995 statute. Because large firms probably tend to self-insure, the Figure excludes many claims against the larger companies.

[Insert Figure 9 about here.]

E. Limitations and Implications:

Products are safe, claims are few, and liability insurance is cheap. Products are safe now, and products were safe before the 1995 statute. A plastic-goods manufacturer can buy insurance on the private market at 400 yen per million yen in sales. If it sold a gadget for 1000 yen, the price would include products liability coverage costing 0.4 yen. In U.S. dollars, if it sold a gadget for \$12, the price would include insurance costs of 0.5¢. In a world of 0.5¢ premiums on \$12.00 products, law professors do not bemoan out-of-control liability. Economists do not bewail a crisis in the insurance market.

To be sure, the data have clear limits. Figure 1 covers all accidental deaths not attributable to a traffic accident, whether caused by something a consumer bought or no. Figure 2 includes only those injuries caused by a consumer purchase, but covers years during which reporting rates changed. Figures 3 and 4 offer a way of measuring those reporting rates, but the problem remains. Figures 5 and 6 compare inquiries relating to products (covered by the statute) with inquiries relating to services (not covered). If the act increased safety levels, then the former should fall relative to the latter. Figures 7 and 8 distinguish those injuries caused by product defects from those caused by improper use, but reach back only to 1994. Tables 4 and 5 detail litigated cases, but do not cover disputes settled without a court filing. Tables 6 and 7 report liability insurance rates, but omit the effective rates paid by firms that self-insure. Figure 9 gives the number of products liability claims paid by all insurers, but again omits claims paid by firms that do not buy insurance coverage.

Each data source has its limits, but those limits differ from source to source -- and all data point toward two conclusions: (a) the 1995 statute did not increase product safety; and (b) Japan is not experiencing a products liability crisis. Nottage & Wada (1998: 49) write that Japanese firms greeted the 1995 statute with elaborate new policies and procedures: "new committees and guidelines on improving labeling and instructions instituted by industrial associations." Indeed, they report, "[i]ndividual firms are expanding their legal section personnel to deal with PL issues." Yet these firms have not introduced products that were safer than the products they sold before. Before the statute, they were already selling safe products anyway. And for the items they do sell, they can still buy liability coverage at trivial prices. With insurance coverage nearly free, why would anyone have bothered to adopt "new policies and guidelines" or to expand its "legal section personnel"?

III. Speculations on the American Contrast

No one in Japan -- not manufacturers, not the chambers of commerce, not the corporate bar -- claims products liability has created a crisis. Firms in Japan are not abandoning markets over liability risks. Pharmaceuticals are not pulling their vaccines. Industries are not vanishing.

The Japanese legislature adopted a strict products liability regime in 1995, but Japan avoided almost all of the pathologies attributed to American products liability law by its critics. The scope of those pathologies is not the issue here: critical scholars describe U.S. products liability as a disaster; other scholars describe its negative effects as more modest. Instead, the issue is why Japan avoided any of those pathologies at all -- disastrous or modest.

The probable reason (only probable -- I speculate here) is simple: the most pernicious effects of product liability litigation in U.S. do not result from the substantive law alone. Although scholars like Paul Rubin (2005: 225) do blame the apparent American disasters on "the replacement of contractual liability with tort liability," Japan replaced contract with strict liability to no ill effect. The U.S. disasters probably result instead from what Gary Schwartz (1991: 29) called the "interaction" between substantive law and several distinctly American procedural devices.

First, where Japanese courts try civil cases before professional judges, American courts try them before lay juries. In this, Japan is no outlier. Today, even most common-law countries avoid the civil jury. New Zealand "has relegated [it] to only one or two cases per year" (Cameron, Potter & Young, 2000). Canada retains it "in some jurisdictions in name only," and in other jurisdictions has abolished it entirely (Bogart, 2000). Even in the U.K., "less than one percent of civil trials" use juries, and in personal injury cases plaintiffs have no right to a jury trial at all (Lloyd-Bostock & Thomas, 2000).

The civil jury is central to the problems identified by the critics of U.S. products liability. The most aggressive attorneys do not file products liability cases randomly. Instead, they pick the courts where they know juries award the most inflated recoveries. Plaintiffs' attorney (and now convicted felon) Richard (Dickie) Scruggs called them "magic" jurisdictions (Boyer, 2008):

The trial lawyers have established relationships with the judges that are elected; they're State Court judges; they're populists. They've got large populations of voters who are in on the deal, they're getting their piece in many cases. And so, it's a political force in their jurisdiction, and it's almost impossible to get a fair trial if you're a defendant in some of these places. ... The cases are not won in the courtroom. They're won on the back roads long before the case goes to trial. Any lawyer fresh out of law school can walk in there and win the case, so it doesn't matter what the evidence or law is.

These "magic" juries come from very poor communities, and they do not just dispense high awards. Instead, they award the highest amounts against those from out-of-town (Helland & Tabarrok, 2003: 38; 2006: chs. 2, 3). Consider the simplest, starkest comparison from Eric Helland and Alexander Tabarrok (2003, 2006). They note first that defendants in traffic accidents are mostly local, while those in products liability disputes come from other states. They then compare jury verdicts in wealthy and poor communities. They find that plaintiffs in well-to-do counties (those with a poverty rate below 5 percent) recover a mean \$244,000 in automobile accident cases and \$1.18 million in product liability. Those in poor counties (poverty rates above 25 percent) recover \$760,000 (3.1 times as much) in automobile accidents but \$6.74 million (5.7 times as much) in products liability. Juries in Scruggs' (very poor) "magic"

jurisdictions do not just award large amounts. They award spectacularly large amounts against defendants who come from the outside.

Second, where Japanese courts use only judges appointed by the national government, American plaintiffs try many products liability cases before popularly elected state judges. Who decides whether a judge keeps his job matters. Successful legislators answer to their local constituents -- and so do elected judges. If a jury wants to take wealth from an out-of-state corporate defendant to give to its neighbors, some successful state judges seem only too happy to oblige. As one retired justice of the West Virginia Supreme Court put it (Helland & Tabarrok, 2006: 71):

As long as I am allowed to redistribute wealth from out-of-state companies to injured in-state plaintiffs, I shall continue to do so. Not only is my sleep enhanced when I give someone else's money away, but so is my job security, because the in-state plaintiffs, their families, and their friends will reelect me.

Out-of-state corporations do not vote. Local juries do. Kip Viscusi (1991: 56) quotes another state judge to the same effect:

I may not always congratulate myself at the end of the day on the brilliance of my legal reasoning, but when I do such things as allow a paraplegic to collect a few hundred thousand dollars from the Michelin Tire company -- thanks to a one-car crash of unexplainable cause -- I at least sleep well at night. Michelin will somehow survive (and if they don't, only the French will care), but my disabled constituent won't make it the rest of her life without Michelin's money.

The electoral mechanism affects outcomes. Suppose, Eric Helland and Alexander Tabarrok (2006: 88-90) ask, one shifts a routine case from a state court where judges are selected in a non-partisan fashion to one where they face partisan elections. The expected award will increase by 23 percent. Indeed, they write (*id.*, 92):

In cases involving out-of-state defendants and in-state plaintiffs, the average award (conditional upon winning) is \$362,988 higher in partisan states than in nonpartisan states; \$230,092 of the larger award is due to a bias against out-of-state defendants, and the remainder is due to generally higher awards against businesses in partisan states.

Third, the American class action may magnify the effect that redistributive juries and judges can together have. The magnitude of the effect is both controversial and outside the scope of this paper. Potentially, however, the class action increases the ability of an attorney to extort settlements in meritless cases from risk-averse managers. Obviously, pooling one meritless claim with 999 other similarly misguided claims should not increase its expected value. One thousand times zero is still zero. And pooling a claim with positive but only trivial value with 999 other similar cases should not create a large expected value either.

Apparently, however, some corporate managers will not bet their firm -- even when the bet would be an extraordinarily good one. If a plaintiff class brings a suit big enough to bankrupt the firm if it wins, many managers will try to settle even when the class has only miniscule odds of winning. As Judge Richard Posner put it, "because of the astronomical damages potential of many class action suits, a grant of certification may place enormous pressure on the defendant to settle even if the suit has little merit."²² Ultimately, he claims, "[c]ertification as a class action

²² McReynolds v. Merrill Lynch, Pierce, Fenner & Smith, 2012 U.S. App. 3683 at 3 (7th Cir. 2012).

can coerce a defendant into settling on highly disadvantageous terms regardless of the merits of the suit."²³

The American civil procedural system sometimes lets attorneys use civil juries to extract large payments from out-of-state defendants; elected judges sometimes acquiesce to the scheme; and the class action may magnify the combined effect of those two factors. Like the civil jury and judicial elections, the class action is a creature almost exclusively of the American legal system. Although some European countries have considered adopting it, to date primarily only a few Canadian provinces, Australia, and Brazil have done so (Rowe, 2001: 157-59). From time to time, the Japanese legal professoriate has promoted the idea. The Diet has consistently demurred.

IV. Conclusion

Informational asymmetries may or may not make it hard for manufacturers and consumers to cut their preferred deals. Negotiating costs may or may not aggravate their difficulties further. But notwithstanding such possible problems, those manufacturers that thrive in competitive markets should tend to be those that offer consumers the products closest to what they want. For rich consumers, those will tend to be safe products.

Both the U.S. and Japan have mostly competitive markets, and both have mostly (by international and historical standards) rich consumers. In both countries, consumers will mostly want safe products. Even without strict products liability, manufacturers should tend to offer that safety. Legislatures or courts may dictate strict products liability, but those manufacturers will have little reason to raise safety standards. After all, they were mostly selling safe products anyway.

According to the data above, when the Japanese legislature imposed strict products liability in 1995, manufacturers did not raise product safety. I survey a wide range of proxies for product safety in Japan. In none of them do I find any evidence that safety increased with the statute. Instead, products were safe before 1995, and stayed safe after 1995.

Although Japan adopted a products liability standard much like that in the U.S., it did avoid the harmful effects sometimes attributed to U.S. products liability law. The apparently different outcomes in the two countries probably stem from the interaction between that law and several distinctly American civil procedural rules: civil juries, elected state judges, and class actions. Combined with strict products liability, perhaps these procedural devices enable some attorneys to use the courts for extortionate purposes. By avoiding civil juries, appointing judges through a national government, and requiring individuals to prove their own cases, Japan skirts these effects. Strict liability did not improved product safety in Japan -- but neither did it let attorneys use the courts to extort pay-offs from corporate defendants.

²³ CE Design Ltd. V. King Architectural Metals, Inc., 637 F.3d 721, 722 (7th Cir. 2011). Critics of contemporary class actions include, e.g., Alexander (1991), Romano (1991), Blair v. Equifax Check Servs., 181 F.3d 832, 834 (7th Cir. 1999) (Easterbrook, J.). Scholars who find these criticisms exaggerated include Bai, Cox & Thomas (2010); Eisenberg & Miller (2010).

Bibliography

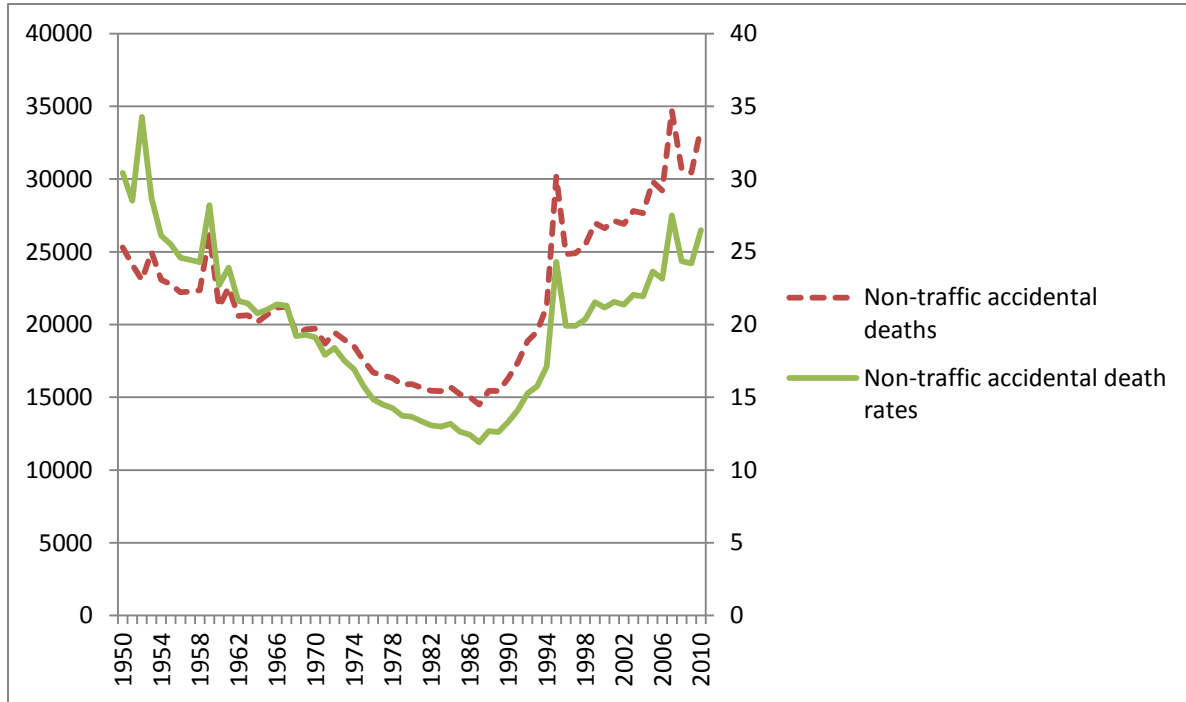
- Abe, Michiaki. 2004. Seizobutsu sekinin ho ni yoru hanrei no doko [The Direction of Products Liability Act Cases]. *Hosei kenkyu* 71: 235.
- Alexander, Janet Cooper. 1991. Do the Merits Matter? A Study of Settlements in Securities Class Actions. *Stan. L. Rev.*, 43: 497.
- Bai, Lynn, James D. Cox & Randall S. Thomas. 2010. Lying and Getting Caught: An Empirical Study of the Effect of Securities Class Action Settlements on Targeted Firms. *U. Penn. L. Rev.* 158: 1877.
- Bogart, W.A. 2000. "Guardian of Civil Rights ... Medieval Relic": The Civil Jury in Canada. In Vidmar (2000).
- Boyer, The Bribe, *New Yorker*, May 19, 2008.
- Cameron, Neil, Susan Potter & Warren Young. 2000. The New Zealand Jury: Towards Reform. In Vidmar (2000).
- Choi, Albert & Kathryn Spier. 2010. Should Consumers Be Permitted to Waive Products Liability? Product Safety, Private Contracts, and Adverse Selection. Sept. 2010. SSRN: 1680932
- Coase, R.H. 1960. The Problem of Social Cost. *J. Law & Econ.* 3: 1.
- Cohen, Thomas H. 2005. Federal Tort Trials and Verdicts, 2002-03. *Bur. Justice Statistics Bulletin*, Aug. 2005.
- Craig, Andrew. 1991. Product Liability and Safety in General Aviation. In Huber & Litan (1991), at 456.
- Croley, Steven P. & Jon D. Hanson. 1990. What Liability Crisis? An Alternative Explanation for Recent Events in Products Liability, *Yale J. Reg.*, 8: 1.
- Daughety, Andrew F. & Jennifer F. Reinganum. 1995. Product Safety: Liability, R&D, and Signaling. *Am. Econ. Rev.* 85: 1187-1206.
- Eisenberg, Theodore & Geoffrey Miller. 2010. Attorneys' Fees and Expenses in Class Action Settlements: 1993-2008. *J. Empirical Legal Stud.*, 7: 248.
- Eisenberg, Theodore & Geoffrey P. Miller. 2004. Attorneys Fees in Class Action Settlements: An Empirical Study. *J. Empirical Legal Stud.*, 1: __ (2004)
- Eliakim, R., Abulafia, O., & Sherer, D. M. (2000). "Hyperemesis gravidarum: A current review". *American Journal of Perinatology* 17 (4): 207-218.
- Fitzpatrick, Brian T. 2010. An Empirical Study of Class Action Settlements and Their Fee Awards. *J. Empirical Legal Stud.*, 7: __.
- Galanter, Marc. 1998. An Oil Strike in Hell: Contemporary Legends About the Civil Justice System. *Ariz. L. Rev.*, 40: 717.
- Geistfeld, Mark A. 2009. Products Liability. In Michael Faure, ed., *Tort Law and Economics*. Cheltenham: Edward Elgar (Encyclopedia of Law & Economics, 2d ed.).
- Geistfeld, Mark. 1995. Manufacturer Moral Hazard and the Tort-Contract Issue in Products Liability. *Int'l Rev. L. & Econ.*, 15: 241-257.
- Hamada, Koichi. 1995. Product Liability Rules: A Consideration of Law and Economics in Japan. *Japanese Econ. Rev.*, 46: 2-22.
- Hayashida, Manabu. 1995. *PL ho sinjidai* [New Era of Products Liability Law]. Tokyo: Chuo kyoron sha.
- Helland, Eric & Alexander Tabarrok. 2003. Race, Poverty, and American Tort Awards: Evidence from Three Data Sets. *J. Legal Stud.*, 32: 27-58.

- Helland, Eric, & Alexander Tabarrok. 2006. *Judge and Jury: American Tort Law on Trial*. Oakland: Independent Institute.
- Higgins, Richard S. 1978. "Producers' Liability and Product Related Accidents. *J. Legal Stud.*, 7: 299-321.
- Huber, Peter W. 1993. *Galileo's Revenge: Junk Science in the Courtroom*. New York: Basic Books.
- Huber, Peter W., & Robert E. Litan, eds. 1991. *The Liability Maze: The Impact of Liability Law on Safety and Innovation*. Washington, D.C.: Brookings Institution.
- Ikeda, Kazuo, Yoko Nadaoka & Shusuke Kurashina. 2003. *Jinko dotai tokei kara mita 20 seiki no kekkaku taisaku* {Tuberculosis Policy in the 20th Century, as seen through Vital Statistics. *Tokyo ken'anken se nenpo*, 54: 365-69.
- Insurance Information Institute. 2011. *The Insurance Fact Book, 2010*. [No place given]: Insurance Information Institute.
- Katz, Avery. 1990. *Your Terms or Mine? The Duty to Read the Fine Print in Contracts*. *RAND J. Econ.*, 21: 518-37.
- King, John. 2009. *They'll Take Small Victories in Struggling Mississippi County*. *CNN U.S.*, Sept. 25, 2009.
- Klein, Benjamin & Keith B. Leffler. 1981. *The Role of Market Forces in Assuring Contractual Performance*. *J. Pol. Econ.*, 89: 615-41.
- Klerman, Daniel. 2012. *Personal Jurisdiction and Product Liability*. *S. Cal. L. Rev.* (forthcoming).
- Kobayashi, Hideyuki. 1990. *Seizobutsu sekinin sosho* [Products Liability Litigation]. Tokyo: Kobundo.
- Kokumin seikatsu sentaa, ed. Annual publication. *Shohisha seikatsu nempo* [Consumer Living Annual]. Tokyo: Kokumin seikatsu sentaa.
- Kosei rodo sho, ed. 2002. *I Kanja chosa* [I Patient Survey]. Tokyo: Kosei tokei kyokai.
- Kosei rodo sho, ed. Various years. *Jinko dotai tokei* [Vital Statistics]. Tokyo: Kosei tokei kyokai.
- LaFountain, Robert C. & Neal B. Kauder. 2005. *An Empirical Overview of Civil Trial Litigation*. *Caseload Highlights*, 11: 1 (National Center for State Courts).
- Lloyd-Bostock, Sally & Cheryl thomas. 2000. "The Continuing Decline of the English Jury. In Vidmar (2000).
- Luke Nottage & Yoshitaka Wada, *Japan's New Product Liability ADR Centers: Bureaucratic, Industry, or Consumer Informalism?*, 6 *ZJapanR* 40 (1998).
- Manning, Richard L. 1994. *Changing Rules in Tort Law and the Market for Childhood Vaccines*. *J. Law & Econ.*, 37: 247-75.
- Martin, Robert. 1991. *General Aviation Manufacturing: An Industry Under Siege*. In Huber & Litan (1991), at 478.
- Masuda, Jun. 2000. *Saishin: PL kankei hanrei to jitsumu (dai 2 ban)* [Latest: Products Liability Case Law and Practice (2d Ed.)]. Tokyo: Minji ho kenkyu kai.
- Mitsui Sumitomo kaijo kasai hoken, K.K. 2010. *Seisanbutsu baisho sekinin hoken* [Products Liability Insurance], Apr. 1, 2010.
- NITE. See *Seikatsu fukushi*.
- Naikakufu kokumin seikatsu kyoku. 2006. *Seizobutsu sekinin ho no un'yo jokyo to ni kansuru jittai chosa* [Empirical Investigation into the Enforcement of the Products Liability Act]. Unpublished, July.

- National Electronic Injury Surveillance System. 2009. NEISS Data Highlights. Available at www.cpsc.gov/library/neiss.html
- Nelson, Randy A. & James N. Drews. 2008. Strict Product Liability and Safety: Evidence from the General Aviation Market. *Econ. Inquiry*, 46: 426-437.
- Nihon ishikai, ed. 2006. *Nihon ishikai nenji hokoku sho* [Japan Medical Association Annual Report]. Tokyo: Tokyo hoki shuppan.
- Nottage, Luke. 2004. *Product Safety and Liability Law in Japan*. London: RoutledgeCurzon.
- Okinama Chamber of Commerce. 2011. www.oki-shokoren.or.jp/kyosai/pl/pl.html.
- Polinsky, A. Mitchell & Steven Shavell. 2010. The Uneasy Case for Product Liability. *Harv. L. Rev.*, 123: 1437.
- Priest, George L. 1985. The Invention of Enterprise Liability: A Critical History of the Intellectual Foundations of Modern Tort Law. *J. Legal Stud.*, 14: 461-527.
- Priest, George L. 1992. Can Absolute Manufacturer Liability be Defended?, *Yale J. Reg.*, 9: 237.
- Ramseyer, J. Mark & Eric B. Rasmusen. 2003. *Measuring Judicial Independence: The Political Economy of Judging in Japan*. Chicago: University of Chicago Press.
- Ramseyer, J. Mark & Minoru Nakazato. 1999. *Japanese Law: An Economic Approach*. Chicago: University of Chicago Press.
- Ramseyer, J. Mark. 1996. Products Liability through Private Ordering: Notes on a Japanese Experiment, *U. Pa. L. Rev.* 144: 1823.
- Ramseyer, J. Mark. 2009a. The Effect of Cost Suppression Under Universal Health Insurance on the Allocation of Talent and the Development of Expertise: Cosmetic Surgery in Japan. *J. Law & Econ.*, 52: 497.
- Ramseyer, J. Mark. 2009b. Universal Health Insurance and the Effect of Cost Containment on Mortality Rates: Strokes and Heart Attacks in Japan. *J. Empirical Legal Stud.*, 6: 309.
- Ramseyer, J. Mark. 2010. The Effect of Universal Health Insurance on Malpractice Claims: The Japanese Experience. *J. Legal Analysis*, 2: 621.
- Ramseyer, J. Mark. 2012. *Business Organizations*. New York: Aspen Publishers.
- Romano, Roberta. 1991. The Shareholder Suit: Litigation without Foundation? *J. L., Econ., & Org.*, 7: 55-88.
- Rowe, Thomas D. Jr. 2001. Foreword: Debates over Group Litigation in Comparative Perspective: What Can We Learn from Each Other, *11 Duke J. Comp. & Int'l L.*, 11: 157.
- Rubin, Paul H. 2005. Public Choice and Tort Reform. *Public Choice*, 124: 223-236.
- Rubin, Paul H. & Joanna M. Shepherd. 2007. Tort Reform and Accidental Deaths. *J. Law & Econ.*, 50: 221.
- Schwartz, Alan & Louis L. Wilde. 1983. Imperfect Information in Markets for Contract Terms: The Examples of Warranties and Security Interests. *Vir. L. Rev.* 69: 1387-1485.
- Schwartz, Alan. 1988. Proposals for Products Liability Reform: A Theoretical Synthesis. *Yale L.J.*, 97: 353-419.
- Schwartz, Alan. 1992. The Case Against Strict Liability. *Fordham L. Rev.*, 60: 819.
- Schwartz, Alan. 2008. How Much Irrationality does the Market Permit? *J. Legal Stud.*, 37: 181-160.
- Schwartz, Gary T. 1991. Product Liability and Medical Malpractice in Comparative Context. In Huber & Litan (1991), at 28.

- Seikatsu fukushi gijutsu sentaa, ed. Annual publication. Jiko joho shushu seido hokokusho [Report on the Collection System for Accident Information]. Tokyo: Dokuritsu gyosei hojin Seihin hyoka gijutsu kiban kiko.
- Stigler, George S. 1961. The Economics of Information. *J. Pol. Eco.*, 69: __.
- Tsusho sangyo sho, ed. 1994. Seizobutsu sekinin ho no kaisetsu [Commentary on Products Liability Act]. Tokyo: Tsusho sangyo chosa kai.
- Uchida, Takashi. 2007. Minpo II [Civil Code II]. Tokyo: University of Tokyo Press.
- Vidmar, Neil, Paul Lee, Kara MacKillop, Kieran McCarthy & Gerald McGwin. 2005. Uncovering the "Invisible" Profile of Medical Malpractice Litigation: Insights from Florida. *DePaul L. Rev.*, 54: 315-356.
- Vidmar, Neil, ed. 2000. World Jury Systems. Oxford: Oxford Scholarship Online.
- Viscusi, W. Kip & Michael J. Moore. 1993. Product Liability, Research and Development, and Innovation. *J. Pol. Econ.*, 101: 161-84.
- Viscusi, W. Kip. 1985. Consumer Behavior and the Safety Effects of Product Safety Regulation. *J. Law & Econ.*, 28: 527-53.
- Viscusi, W. Kip. 1988. Liability for Occupational Accidents and Illnesses. In Robert E. Litan & Clifford Winston, eds., *Liability: Perspectives and Policy*. Pp. 155-83. Washington, D.C.: The Brookings Institution.
- Viscusi, W. Kip. 1991. *Reforming Products Liability*. Cambridge: Harvard University Press.
- Viscusi, W. Kip. 2001. The Challenge of Punitive Damages Mathematics. *J. Legal Stud.*, 30: 313-50.
- Wickelgren, Abraham L. 2006. The Inefficiency of Contractually-Based Liability with Rational Consumers. *J.L. Econ. & Org.*, 22: 168.
- Wing, Deborah A., Barbara Powers & Durlin Hickok. 2010. "U.S. Food and Drug Administration Drug Approval: Slow Advances in Obstetric Care in the United States". *Obstetrics & Gynecology* 115: 825-33.

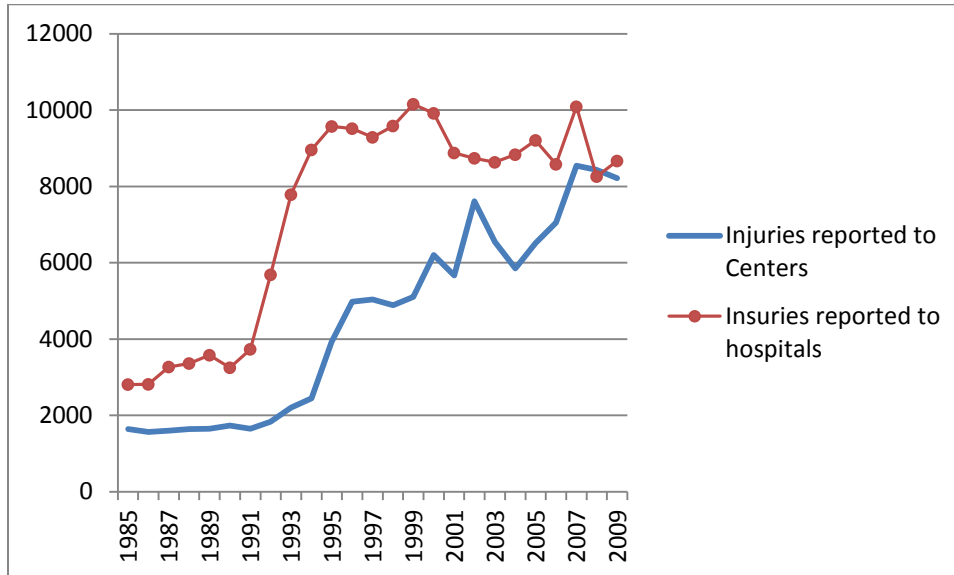
**Figure 1: Non-Traffic Accidental Deaths --
Numbers and Rates (per 100,000)**



Notes: Number of deaths on left axis, rates per 100,000 on the right.

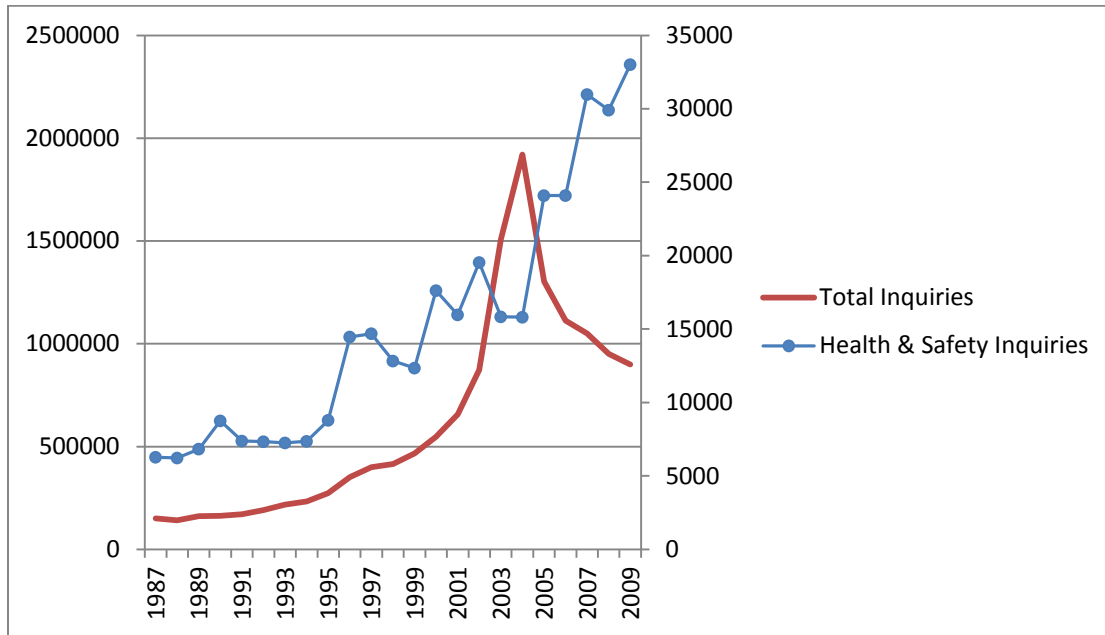
Source: Kosei rodo sho, ed., Jinko dotai tokei [Vital Statistics] (Tokyo: Kosei tokei kyokai, various years).

**Figure 2: Purchase-Related Injuries
Reported to Consumer Centers and Hospitals**



Source: Kokumin seikatsu sentaa, ed., Shohisha seikatsu nempo [Consumer Living Annual] (Tokyo: Kokumin seikatsu sentaa, various years).

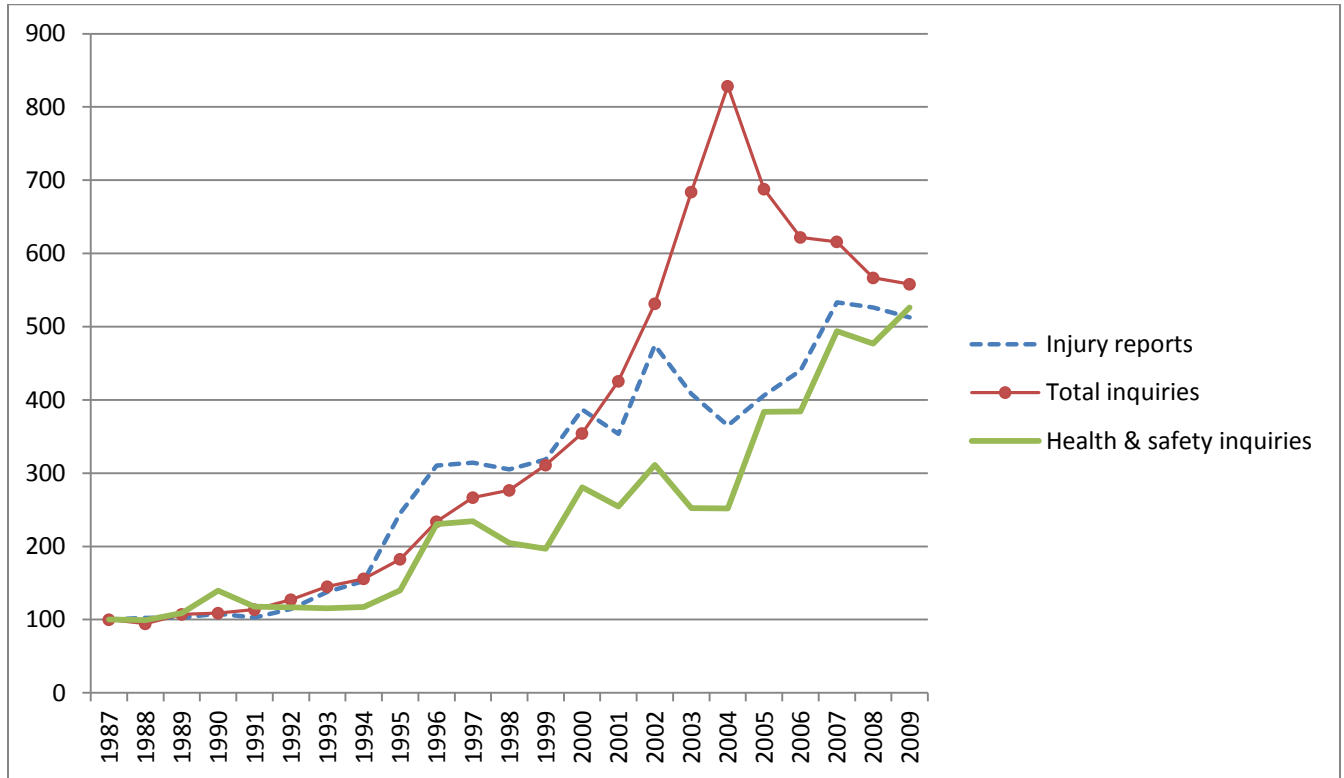
**Figure 3: Inquiries to the Consumer Centers,
Total and Health & Safety**



Notes: Units for total inquiries on the left axis, and health & safety inquiries on the right. Inquiries are to the Citizens' Life Centers (kokumin seikatsu sentaa).

Source: Kokumin seikatsu sentaa, ed., Shohisha seikatsu nempo [Consumer Living Annual] (Tokyo: Kokumin seikatsu sentaa, various years).

Figure 4: Reported Injuries, Health & Safety Inquiries, and Total Inquiries to Consumer Centers, Indexed at 1987 = 100



Source: Kokumin seikatsu sentaa, ed., Shohisha seikatsu nempo [Consumer Living Annual] (Tokyo: Kokumin seikatsu sentaa, various years).

Table 1: Injuries, by Reporting Institution

	Injuries reported by centers			Injuries reported by partic'g hospitals		
	1994	1995	1996	1994	1995	1996
Health products	749	1087	1374	418	429	405
Services	478	572	766	9	7	4
Food	413	832	983	224	225	262
Clothing	192	297	424	136	177	133
Household goods	191	362	536	2233	2451	2600
Vehicles	83	146	166	969	999	1006
Education & entertainment	67	168	158	2054	2128	2035
Indoor facilities	67	110	197	2066	2182	2118
Outdoor facilities	28	39	52	582	638	584
Machines	8	23	11	136	149	193
Light, heat, water	4	22	26	63	75	88
Other	8	19	31	69	113	88
Total	2278	3677	4724	8959	9573	9516

Notes: Change in sector categories prevents comparison across broader range of years. "Health products" include cosmetics and pharmaceuticals. "Education & entertainment" include sports equipment. "Indoor facilities" include stair cases. "Outdoor facilities" include roadways.

Source: Kokumin seikatsu sentaa, ed., Shohisha seikatsu nempo [Consumer Living Annual] (Tokyo: Kokumin seikatsu sentaa, various years).

**Table 2: United States --
Products Generating the Most Injuries Reported by Hospitals**

Product	Actual Injuries	Estimated Injuries
Stairs & railings	71,950	2,639,931
Beds	19,351	644,175
Desks & tables	18,698	627,934
Bicycles & accessories	15,709	544,470
Chairs	15,940	536,825
Basketball	15,344	501,251
Football	14,188	451,961
Bathroom equipment	10,293	380,900
Exercise equipment	9,727	349,543
Doors	10,087	340,670
Baseball, softball	7,610	286,798
Clothing	7,527	276,631
Cans, containers	7,301	269,438
ATVs, minibikes	5,914	254,054
ladders, stools	6,434	246,733
Toys	7,941	242,731
Playground equipment	8,404	237,184
Windows, glass doors	6,050	219,047
Soccer	6,628	208,214

Notes: The "actual" figures are the numbers reported by participating hospitals. The "estimated" figures give the estimated national total based on a weighted extrapolation from the actual figures.

Source: National Electronic Injury Surveillance System, ed., NEISS Data Highlights (2009). Available at www.cpsc.gov/library/neiss.html.

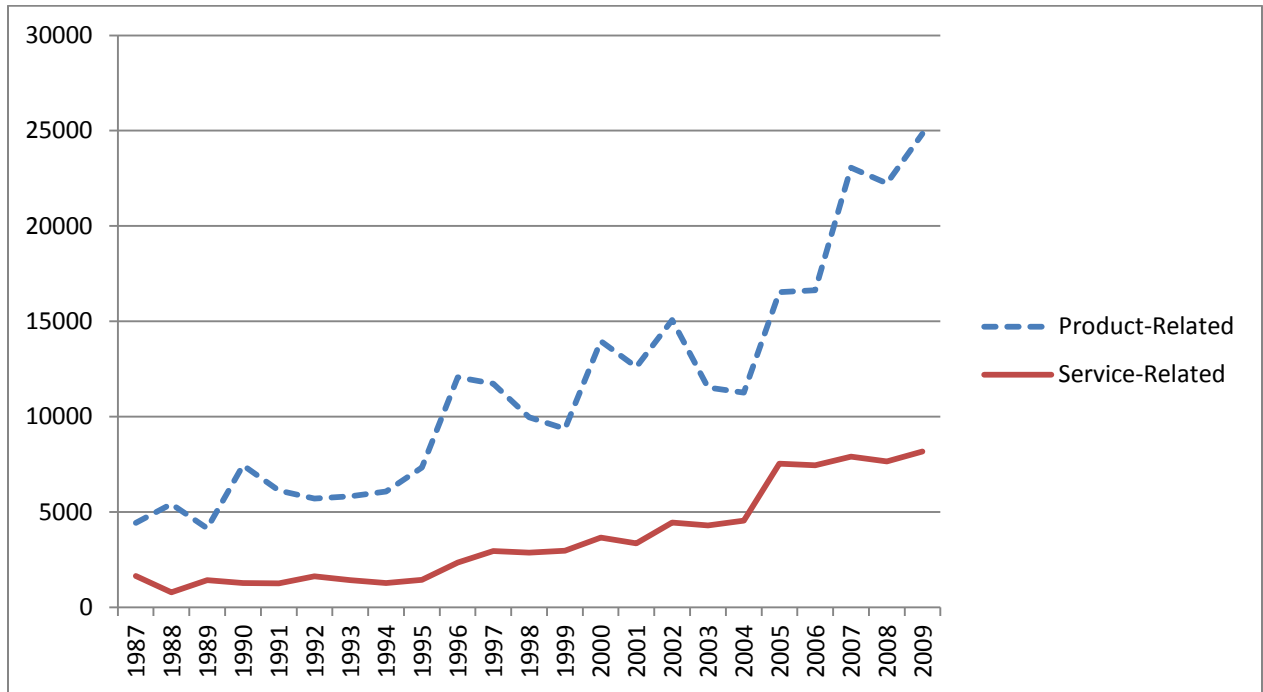
**Table 3: Japan -- Ten Products
Generating the Most Injuries Reported to Hospitals**

Product	1991	1994	1995	1996	1999	2002	2005	2008
Stairs	360	772	764	736	807	699	831	752
Bicycles	216	618	605	558	636	530	605	512
Toys	177	-	-	-	245	345	353	275
Skis	133	179	216	310	368	-	-	-
Bathroom equipment	99	194	213	227	-	-	-	-
Doors	90	-	-	-	-	218	280	257
Roads, paths	83	255	297	219	2000	-	-	-
Chairs	83	179	198	195	243	229	239	254
Knives	77	248	268	253	249	244	317	382
Tobacco	72	219	266	187	212	255	-	-
Automobiles	-	220	267	311	257	294	343	271
Beds	-	215	221	-	245	-	249	224
Dishes	-	-	-	-	-	199	-	-
Desks & tables	-	-	-	-	-	-	255	281
Sliding doors & windows	-	-	-	-	-	206	229	-
Bed assessories	-	-	-	-	-	-	-	199

Notes: For each year, the source reports the 10 products generating the most injuries. A dash ("-") does not indicate 0; rather, it indicates that the product did not fall within the top-10 that year.

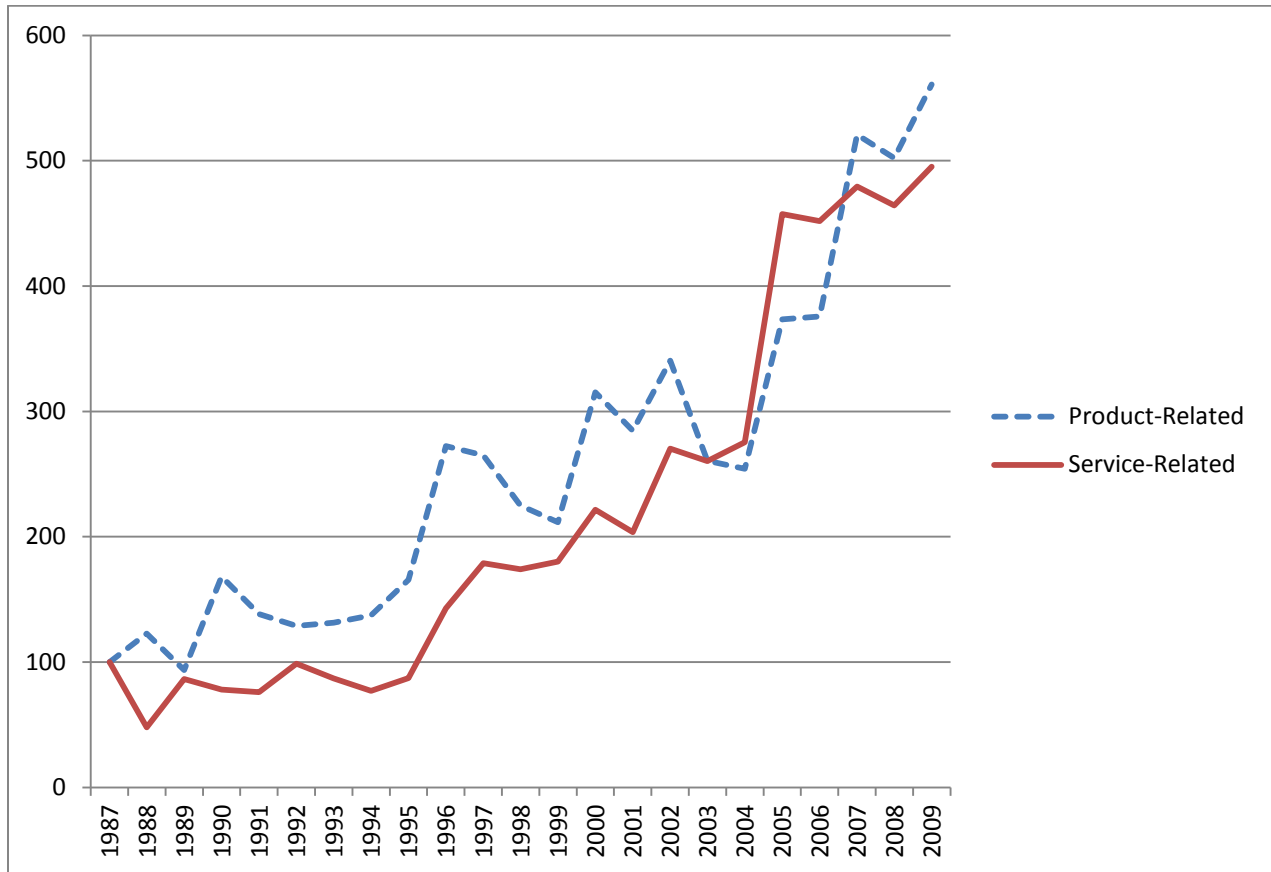
Source: Kokumin seikatsu sentaa, ed., Shohisha seikatsu nempo [Consumer Living Annual] (Tokyo: Kokumin seikatsu sentaa, various years).

**Figure 5: Health & Safety Inquiries
Relating to Products and Services**



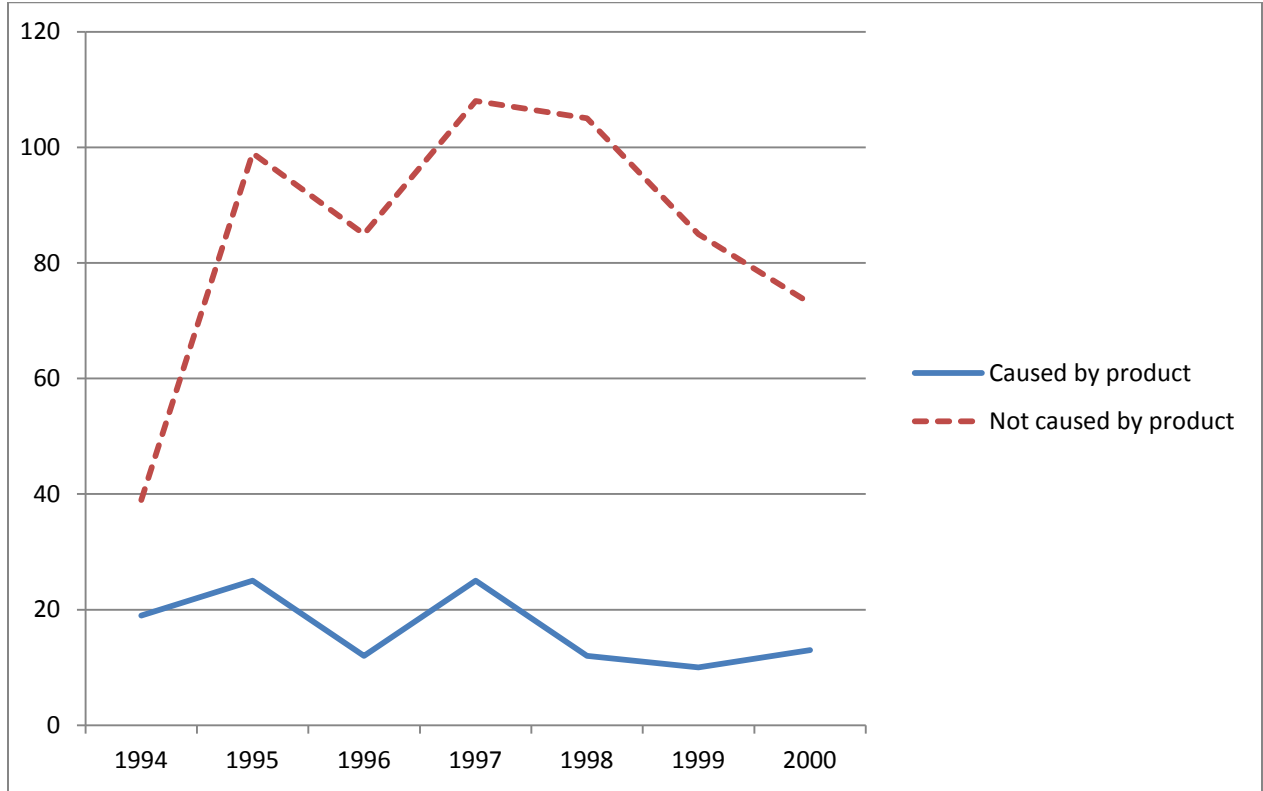
Source: Kokumin seikatsu sentaa, ed., Shohisha seikatsu nempo [Consumer Living Annual] (Tokyo: Kokumin seikatsu sentaa, various years).

Figure 6: Health & Safety Inquiries
Relating to Products and Services,
Indexed at 1987 = 100



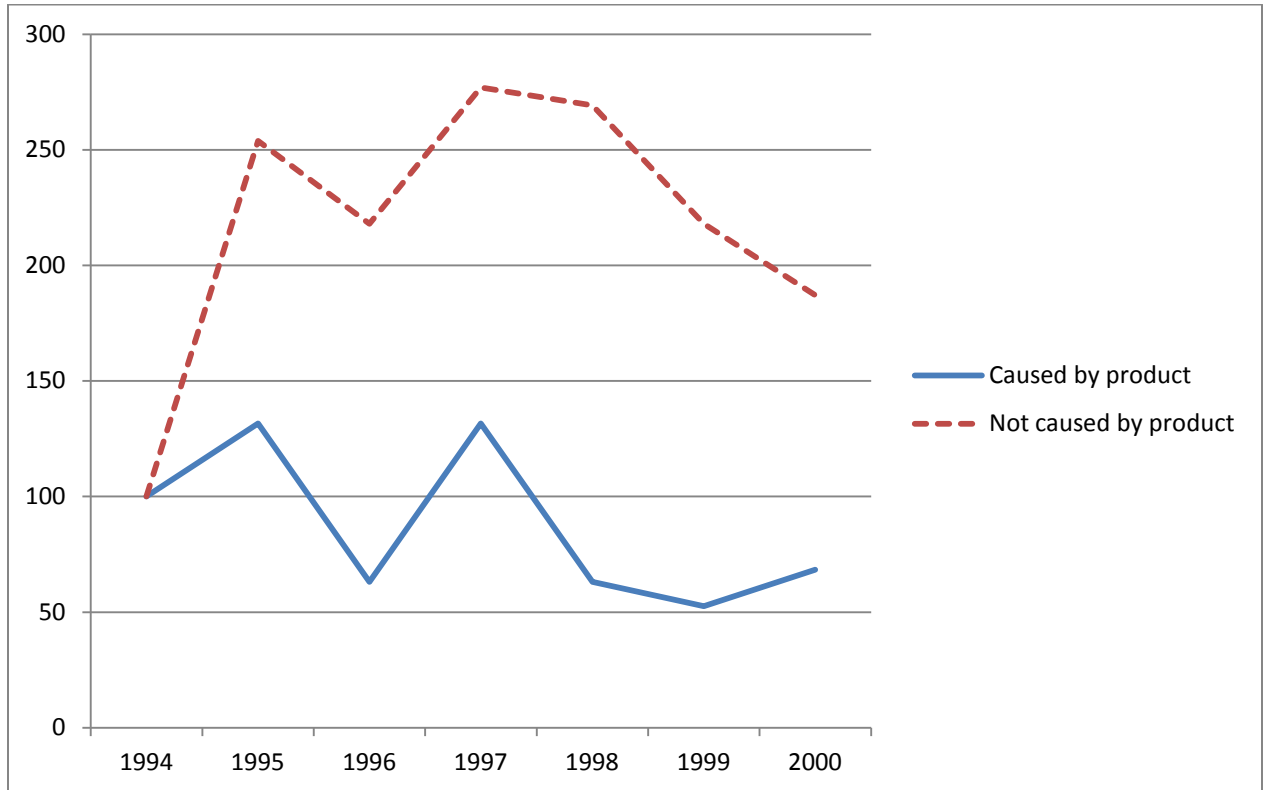
Source: Kokumin seikatsu sentaa, ed., Shohisha seikatsu nempo [Consumer Living Annual] (Tokyo: Kokumin seikatsu sentaa, various years).

**Figure 7: Deaths and Major Injuries
Caused by Defective Products**



Source: Seikatsu fukushi gijutsu sentaa (NITE), ed., Jiko joho shushu seido hokokusho [Report on the Collection System for Accident Information] (Tokyo: Dokuritsu gyosei hojin Seihin hyoka gijutsu kiban kiko, various years).

Figure 8: Deaths and Major Injuries
Caused by Defective Products,
Indexed at 1994 = 100



Source: Seikatsu fukushi gijutsu sentaa (NITE), ed., Jiko joho shushu seido hokokusho [Report on the Collection System for Accident Information] (Tokyo: Dokuritsu gyosei hojin Seihin hyoka gijutsu kiban kiko, various years).

Table 4: Published Opinions in Products Liability Cases

A. Published Opinions:

<u>Claim year</u>	<u>No. claims</u>	<u>No. plaintiff recovery</u>
1993	1	1
1994	0	
1995	1	1
1996	3	2
1997	2	1
1998	5	3
1999	5	4
2000	9	7
2001	7	6
2002	4	2
2003	4	3
2005	9	6
2006	2	1
2007	2	1
2008	0	
2009	2	1

B. Summary Statistics:

Amount awarded/Amount claimed, where plaintiff recovers: 0.4661

Recovery amounts, where plaintiff recovers:

Low: 41,250
Mean: 27,393,432
High: 177,088,636

Recoveries for wrongful death, where plaintiff recovers:

Low: 5,500,000
Mean: 60,563,922
High: 177,088,636

Source: District Court opinions recovered under a search for "products liability" (seizobutsu sekinin) in Daiichi hoki shuppan, ed., Hanrei taikei [Systematized Court Opinions] (Tokyo: Daiichi hoki shuppan, 2011) (electronic data base).

Table 5: Products Liability Cases Filed

A. Claims filed:

Claim year	Number claims	Plaintiff recovery	Plaintiff loss	Settlement
1995	1	0	1	0
1996	2	0	0	2
1997	6	2	1	3
1998	11	2	3	6
1999	10	4	5	1
2000	10	4	2	4
2001	12	6	5	1
2002	11	4	3	4
2003	12	5	3	4
2004	20	10	5	5
2005	13	5	6	2
2006	7	1	4	1
2007	8	2	2	4
2008	6	1	2	2
2009	6	1	2	2
2010	6	0	0	0
2011	1	0	0	0

B. Summary statistics:

1. Litigation:

Fraction litigated, if filed:

0.648

Fraction published, if litigated:

0.451

2. Plaintiff recovery:

Fraction with plaintiff recovery, if litigated:

0.522

Fraction with plaintiff recovery, if published opinion:

0.683

Fraction with plaintiff recovery, if not published:

0.380

3. Amount recovered:

Amount recovered, if plaintiff successful:

Low: 30,000

Mean: 19,100,000

High: 117,000,000

Mean recovery, if published opinion:
22,500,000
Mean recovery, if not published:
14,200,000

4. Delays:

Time to judgment:
Low: 0.42 years
Mean: 2.52 years
High: 6.58 years
Mean delay, if plaintiff recovers:
2.61 years
Mean delay, if plaintiff loses:
2.45 years

C. District Court:

Tokyo	44 cases
Osaka	22
Nagoya	12
Kobe	6
Kagoshima	5
Sendai	5
Hiroshima	4
Kyoto	4
Nara	4
Yokohama	3
Other	33

Source: District Court cases recovered from website for
Kokumin seikatsu sentaa,
http://www.kokusen.go.jp/pl_1/index.html.

**Table 6: Products Liability Insurance Coverage
from Commercial Carriers**

Insured	Annual sales (¥million)	Coverage (¥million)	Annual Premium	Implied Rates
Supermarket	200	100	30,050 ²	150
Household goods	300	500	49,860 ⁶	166
Textiles	150	50	29,100 ³	194
Food retail	300	500	67,010 ⁶	223
Carpentry	200	100	72,740 ²	364
Glass products	300	100	123,500 ³	412
Plastics manu'g	200	100	82,990 ²	415
Toy manufacturing	1000	100	510,000 ⁵	510
Plastic products	200	300	102,120 ⁶	510
Chemical retail	300	500	154,610 ⁶	515
Construction	500	300	293,000 ¹	586
Food production	200	300	192,510 ⁶	963
Restaurant	500	300	501,170 ⁶	1,002
Restaurant	300	300	333,130 ⁶	1,110
Elec equip retail	200	100	231,770 ²	1,159
Bakery retail	300	100	351,970 ⁴	1,173
Restaurant	100	300	124,560 ⁶	1,246
Plumber	300	100	388,620 ⁴	1,295
Machine tools	200	300	271,930 ⁶	1,360
Auto repair	100	100	270,000 ⁵	2,700

Notes: "Implied rates" are per 1 millin yen in annual sales.
"Coverage" is total personal injury claims paid per year.

Sources:

¹ Mitsui-Sumitomo: Mitsui Sumitomo kaijo kasai hoken, K.K.,
Seisanbutsu baisho sekinin hoken [Products Liability Insurance],
Apr. 1, 2010.

² Kyoei fire: www.kyoeikasai.co.jp/pdf/corp/liability/pl.pdf

³ Sonpo Japan: www.sompo-japan.co.jp/hinsurance/risk/relief/sh_seizou/index.html

⁴ Daido fire: www.daidokasai.co.jp/product/hojin_compensate.php

⁵ Tokyo marine: www.tokiomarine-nichido.co.jp/hojin/baiseki/seisanbutsu/index.html

⁶ Mitsui-Sumitomo: www.ms-ins.com/houjin/product/biz-protector/hokenryou.html.

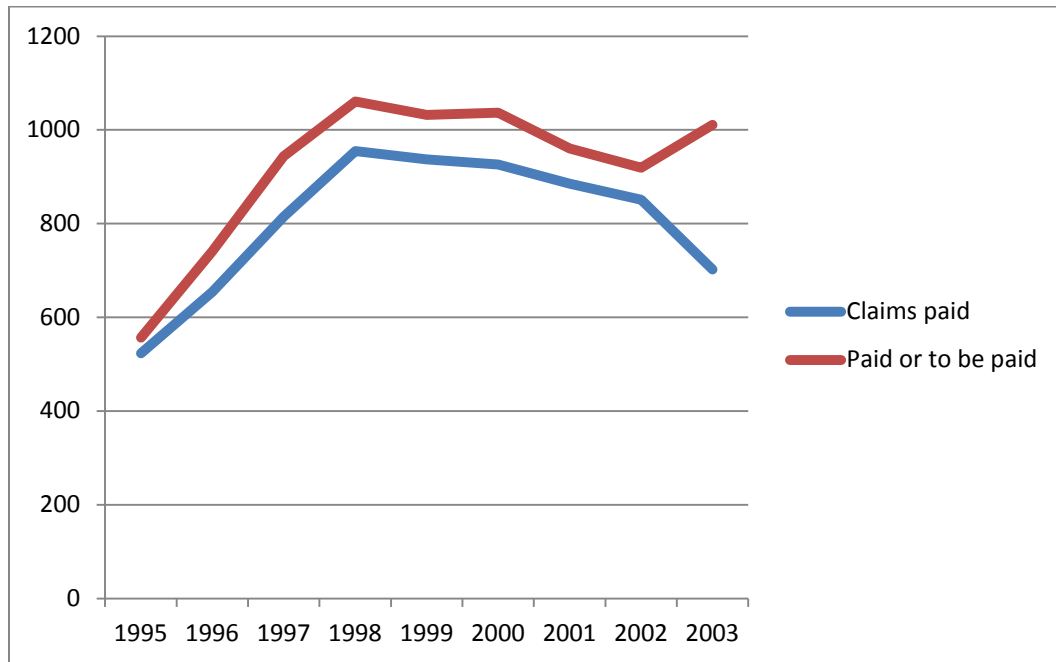
Table 7: Insurance Rates for Small Firms
-- Chamber of Commerce Rates

Industry	Coverage	
	100 million	300 million
Supermarket	87	129
Textiles manufacture	95	144
Food retail	107	164
Household goods retail	124	187
Household goods manufacture	133	200
Ceramic product manufacture	158	236
Construction materials manufacture	164	228
Glass products	173	267
Carpentry	211	279
Plastic manufacture	241	357
Shoes manufacture	268	418
Electronic parts manufacture	311	462
Bakery manufacture	317	493
Food production	338	521
Machinery production	435	613
Restaurant	548	854
Chemical product manufacture	549	808
Carpentry tool manufacture	605	908
Bakery retail	826	1308
Athletic equipment manufacture	1073	1696
Auto repair	1221	1656

Notes: Rates are per 1 million yen in annual sales.
 "Coverage" is total personal injury claims paid per year.

Source: Okinama Chamber of Commerce: www.oki-shokoren.or.jp/kyosai/pl/pl.html (2011).

Figure 9: Number of Claims Paid under Products Liability Coverage



Note: The table gives the number of claims paid (or about to be paid) under products liability insurance contracts. The contracts are available only to small- and medium-sized firms, but are offered to all such firms even if they do not sell products covered by the Act.

Source: Tokyo kaijo nichido kasai hoken, K.K., PL kanren jiko sosho no genjo [The Circumstances of Products Liability Accidents and Litigation] (Tokyo: Tokyo kaijo nichido kasai hoken, K.K., 2010).