

ARTICLE

CHECK PLEASE: USING LEGAL LIABILITY TO INFORM FOOD SAFETY REGULATION

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ABSTRACT

Food safety is a hotly debated issue. While food nourishes, sustains, and enriches our lives, it can also kill us. At any given meal, our menu comes from a dozen different sources. Without proper incentives to encourage food safety, microbial pathogens can, and do enter the food source—so much so that according to the Centers for Disease Control and Prevention (CDC), each year roughly one in six Americans (or forty-eight million people) gets sick, 128,000 are hospitalized, and 3,000 die of foodborne diseases. What is the optimal way to prevent unsafe foods from entering the marketplace?

Safety in the food system emerges from a delicate interplay of several sources—direct regulation, legal liability, and market response. And yet food safety is a largely unexplored area in legal scholarship. This Article fills this void by examining the contribution of legal liability first as an economic signal to deter firms from producing unsafe food and then as an indirect regulator promoting food safety. Two parts follow.

Part I examines the efficacy of legal liability to deter firms from producing unsafe food. I estimate an empirical model using all (320) publicly recorded foodborne illness settlements and verdicts in the U.S. from 2000–2011, to determine factors that

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influence the plaintiff win rate, resolution time, and plaintiff recovery.

Statistically significant results include: Plaintiffs who sue for foodborne illness injuries win more often and win more monetary damages when they settle. Cases are resolved faster and damages are higher when the plaintiff's attorney is ranked and an expert in the field. Interestingly, in states where punitive damage limits are in place, plaintiffs resolve their cases faster, they are more likely to win, and they collect more damages in general. When the plaintiff suffers the gravest injury (death), the case takes longer to resolve and damages are higher. Plaintiffs also win more damages when the injury takes place in a state that has an efficient public health reporting system.

The results suggest that as a cost of doing business, foodborne illness litigation sends a strong signal to firms to increase food safety practices—but only when cases settle and not necessarily when they reach a jury trial. The way in which the results highlight the existence of market failures in providing food safety—the transaction costs and the information costs preventing plaintiffs from suing in the first place and from recovering fully—presents valuable information for regulators.

Part II contributes to the understanding and active debate surrounding the interplay between legal liability and food safety regulation, suggesting the optimal way for these two deterrence mechanisms to interact. My solution is for regulation to be responsive to foodborne illness litigation. This Article advocates for empirically informed regulation and contributes to the literature of tort law, law and economics, and food safety. The new Food Safety Modernization Act (FSMA), promulgated by the U.S. Food and Drug Administration (FDA), has the potential to aid plaintiffs in overcoming causation and traceability concerns with their claims. Concrete recommendations seek to inform an audience of regulators currently drafting the final rules.

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I. INTRODUCTION: FOOD SAFETY FROM FARM TO FORK

Ensuring the safety of the increasing volume and diversity of food is an enormous challenge. Visit any grocery and you will find fruits and vegetables available at any point in the year, products sourced from all over the globe, and more and more food available on demand. From the farm to the fork, the food on your plate at any given meal has touched the hands of perhaps a dozen different shippers, regulators, and foreign ports of entry. Add to this the involvement of farmers, producers, distributors, restaurants, etc., and this leads to roughly fourteen million individuals plus four million additional jobs in related industries, together producing 20% of the U.S. gross national product.¹ These facts and others highlight the complexity of the U.S. food chain.

Regulating the safety of our food supply is as complex as the sourcing and delivery of food itself. After a product enters the stream of commerce, it is not a simple task to map which agency

1. See CTR. FOR FOOD SAFETY & APPLIED NUTRITION, 2009 STATE OF SCIENCE 8 (2009), available at <http://www.fda.gov/downloads/advisorycommittees/committeesmeetingmaterials/scienceboardtothefoodanddrugadministration/ucm222054.pdf>.

oversees its transshipment. The following paragraphs provide a glimpse into the regulatory framework in place.

Food safety laws exist at the federal, state, and local levels. At the federal level, food is regulated by twelve federal agencies in which the Food and Drug Administration (FDA), the United States Department of Agriculture (USDA), and the Environmental Protection Agency (EPA) take leading roles. The FDA regulates all domestic and imported food while the USDA regulates meat, poultry, and frozen, dried, and liquid eggs; the U.S. Department of the Treasury regulates the labeling of alcoholic beverages above 7% alcohol and tobacco; and the EPA regulates pesticide residues in foods and requirements for drinking water.²

Given the number of federal agencies sharing regulatory authority over food, the focus of this paper is on the FDA, a science-based regulatory agency within the Department of Health and Human Services. We focus on the FDA because many rules governing the new FDA regulations under the Food Safety Modernization Act (FSMA), which replaces the Food, Drug, and Cosmetic Act (FDCA), are still being drafted and have not been finalized—making it an opportune time to make policy recommendations. In addition, one cannot overlook the vast scope of FDA regulatory authority and the overwhelming number of products that the FDA regulates. For example, the FDA houses seven product-oriented centers and offices, its most active center being the Center for Food Safety and Applied Nutrition (CFSAN). Setting the regulation of food aside for a moment, the FDA is responsible for the safety of the nation's domestically produced and imported cosmetics, drugs, biologics, medical devices, and radiological products.³ This means that one quarter of every consumer dollar is spent on food, dietary supplements, and cosmetics regulated by the FDA.⁴ Of the quarter, "approximately 75 percent is spent on foods."⁵ CFSAN regulation occurs at the federal and state levels.⁶

CFSAN regulates \$466 billion in food—\$417 billion worth of domestic food and \$49 billion worth of imported foods (and over

2. *Id.*

3. *Id.* at 7.

4. *See id.* at 7–8 ("CFSAN, in conjunction with the nationwide field force of the Office of Regulatory Affairs (ORA) is responsible for the safety, nutrition and proper labeling of foods and cosmetics.")

5. *Id.* at 8.

6. *See id.* (observing that state level authorities receive "guidance, model codes, and other technical assistance from CFSAN").

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\$60 billion worth of cosmetics).⁷ In one form or another, regulation takes place at the port of entry, the manufacturing site, and the retail outlet.⁸ When it comes to regulating food at the port of entry and manufacturing levels, CFSAN regulates over 377,000 registered food facilities—154,000 registered domestic and 223,000 registered foreign facilities “that manufacture, process, pack, or hold food consumed by humans or animals in the U.S.” (in addition to several thousand cosmetic firms).⁹ When it comes to retail outlets—“restaurants, institutional food service establishments, or supermarkets, grocery stores, and other food outlets”—CFSAN takes a secondary role providing “guidance, model codes, and other technical assistance” to state, local, and tribal authorities.¹⁰ These CFSAN activities provide some regulation of food at the state, local, and tribal levels; however, more directly, most states have a health and safety act which can apply criminal, regulatory, and administrative sanctions on manufacturers that sell adulterated or contaminated food.

And while food safety laws are in place and the U.S. boasts that it provides residents with the safest food in the world, the food supply in the U.S. is by no means “perfectly” safe.¹¹ Regulations, which are intended to provide the proper incentives to prevent foodborne illness outbreaks, are not foolproof. “[The Centers for Disease Control and Prevention (CDC)] estimates that each year roughly 1 in 6 Americans (or 48 million people) gets sick, 128,000 are hospitalized, and 3,000 die of foodborne diseases.”¹² This Article addresses two questions. With new FDA regulations currently in the drafting phase, what regulatory improvements are necessary to make food safer for consumers? Are there other deterrence mechanisms at play and if so, what can direct regulators, such as the FDA, learn from other, indirect forms of regulation in place—such as legal liability (foodborne illness lawsuits) and market forces (loss of reputation, stock price effects, etc.)?

Anecdotal evidence shows that regulators can benefit from learning about the interplay between their regulatory efforts and

7. *Id.*

8. *Id.*

9. *Id.*

10. *Id.*

11. Jennifer Ackerman, *Food: How Safe?*, NAT'L GEOGRAPHIC MAG., May 2002, at 2, 9, 30.

12. See CTRS. FOR DISEASE CONTROL & PREVENTION, CDC ESTIMATES OF FOODBORNE ILLNESS IN THE UNITED STATES (2011), available at http://www.cdc.gov/foodborneburden/PDFs/FACTSHEET_A_FINDINGS_updated4-13.pdf.

other indirect forms of regulation such as legal liability and market mechanisms.¹³ For instance, in a perfectly competitive market, firms receive negative signals about their errors and the market corrects itself. In the context of food safety, for firms to alter corporate behavior to invest in food safety, manufacturers must face costs when they violate rules. (They must also be assured that they can reap the benefits of new innovation.) What are some of the negative signals (costs) that firms receive in order to modify their food safety practices? The costs are regulatory, market-oriented, and legal in nature.

Take for example the famous *E. coli* foodborne illness outbreak implicating Odwalla Inc. unpasteurized apple juice in 1996.¹⁴ The outbreak resulted in the death of one child and seventy injuries and ultimately led Odwalla, the producer, to discontinue the sale of unpasteurized juice.¹⁵ It also resulted in substantial monetary losses for Odwalla: a voluntary product recall (valued at \$12.5 million), a 17% drop in revenue during the first six months after the outbreak, a record \$1.5 million federal fine for interstate shipment of an adulterated food product (the largest fine ever assessed in a food case by the FDA), and twenty-one personal injury lawsuits.¹⁶

This example shows how direct regulation by the FDA combines with legal liability and market mechanisms to curtail firms from placing unsafe food in the marketplace. And yet, as CDC estimates reveal, foodborne illness outbreaks continue to occur, and gaps in food safety persist. What lessons can regulators learn from the Odwalla incident and others to fine-tune the balance of deterrence mechanisms that are at play? In the end, Odwalla received several different signals (regulatory, legal, and market) and the firm implemented positive food safety

13. See John C.P. Goldberg & Benjamin C. Zipursky, *The Easy Case for Product Liability Law: A Response to Professors Polinsky and Shavell*, 123 HARV. L. REV. 1919, 1941 (2010) (“[T]he risk of being exposed for lax or incompetent regulation by subsequent products liability litigation at times serves as an incentive for appropriate regulatory diligence.”).

14. Pam Belluck, *Juice-Poisoning Case Brings Guilty Plea and a Huge Fine*, N.Y. TIMES, July 24, 1998, at A12; see also Editorial, *Rotten Fruit, Black Crud and the End of Odwalla*, SEATTLE TIMES, Jan. 16, 1998, available at <http://community.seattletimes.nwsourc.com/archive/?date=19980116&slug=2728990>.

15. Belluck, *supra* note 14.

16. Jean C. Buzby et al., U.S. DEP’T OF AGRIC., AGRIC. ECON. REP. NO. 799, PRODUCT LIABILITY & MICROBIAL FOODBORNE ILLNESS 8 (2001), available at <http://www.ers.usda.gov/publications/aer-agricultural-economic-report/aer799.aspx>; see also Belluck, *supra* note 14 (noting that the \$1.5 million fine was the largest food safety fine assessed by the FDA).

changes.¹⁷ In many cases, however, firms and private markets do not receive adequate signals and fail to provide adequate food safety because market failures are present (such as the presence of information costs) or because detection is often difficult and the nature of contamination is complex.¹⁸ Regulators can learn from instances when different signals (regulatory, legal, and market) succeed and fail.

This Article examines the contribution of legal liability first as an economic signal to deter firms from producing unsafe food and then as an indirect regulator to regulate food safety alongside the FDA. Pure economic theory suggests that legal verdicts deter future conduct.¹⁹ Intuitively, based on the Odwalla outbreak, it appears that lawsuits do more than compensate consumers for economic losses from foodborne illnesses—they provide a potentially powerful economic signal to firms to invest more in food safety. Yet as a deterrence mechanism, legal liability can only go so far.

While one may hear that an outbreak of foodborne illness was followed by a recordbreaking verdict for the plaintiff, this is not the norm. Not every plaintiff makes it to trial. Market failures exist in that not all victims sue (lawsuits are long and expensive, and transaction costs are prohibitive), information (on traceability) is limited, and plaintiffs have to overcome causation. Some plaintiffs have cases resolved in confidential proceedings prior to filing; some have cases resolved through arbitration prior to trial and after filing.²⁰

In this way, high transaction costs and information costs may lead to less than desirable levels of food safety. Only when firms expect to bear the costs of injuries (as foodborne illness litigation-related costs) will they invest more resources in reducing contamination; at the same time, of course, firms need to be able to reap the benefits of investing.²¹

17. Belluck, *supra* note 14 (describing how Odwalla adopted stricter safety standards after sustaining losses in sales, fines, and civil liability).

18. See Goldberg & Zipursky, *supra* note 13, at 1932; see also Helen H. Jensen, *Food-System Risk Analysis and HACCP*, in *NEW APPROACHES TO FOOD-SAFETY ECONOMICS* 63 (G.J. Velthuis et al. eds. 2003).

19. See Richard A. Posner, *A Theory of Negligence*, 1 *J. LEGAL STUD.* 29, 32–33 (1972) (discussing how tort liability encourages producers to utilize safety precautions to avoid accidents by weighing the costs and benefits).

20. In many cases, these settlements may be lower than their initial demands. Settlements do not always transparently affect a firm's bottom line because there is no market mechanism as in the report of a jury verdict. See Robert J. Rhee, *Tort Arbitrage*, 60 *FLA. L. REV.* 125, 129–30 (2008).

21. See Denis W. Stearns, *On (C)redibility: Why Food in the United States May Never Be Safe*, 21 *STAN. L. & POL'Y REV.* 245, 252–53 (2010) (claiming that firms do not

This Article argues for empirically informed regulation—regulation that incorporates empirical findings about legal outcomes such as trials and settlements. The empirical study reported in this Article uses 320 publicly reported personal injury lawsuits involving domestically manufactured food from 2000–2011 using the Westlaw database.²² Confidential settlements are not included.²³ I specify three models to analyze factors that influence: (1) the speed at which a case is resolved (the “speed” model); (2) whether or not a plaintiff wins (the “win” model); and (3) how much she wins (the “award” model), all while controlling for state differences in public health administration and tort reform legislation.

All of the results in this section are statistically significant, with the degree of significance reported in the Appendix. The results suggest that firms may be better deterred by cases that make it to arbitration or settlement, versus cases that go to trial. While most cases in the database reach the verdict stage, plaintiffs win more often and win more monetary damages when they settle. Next, cases are resolved faster and damages are higher when the plaintiff's attorney is ranked and an expert in the field. Punitive damages play an interesting role—in states where punitive damage limits are in place, plaintiffs resolve their cases faster, they are more likely to win, and they collect more damages in general. When the plaintiff suffers the gravest injury (death), the case takes longer to resolve and damages are higher. Plaintiffs also collect more when the injury takes place in a state that has an efficient public health reporting system.

The results suggest that foodborne illness litigation sends a moderate signal to firms to increase food safety practices—but mostly through settlements. The data suggest that publicly

have incentives to invest in safety measures unless they face a risk of harming “a sufficiently large number of people”); see also Elise Golan et al., *Savvy Buyers Spur Food Safety Innovation in Meat Processing*, USDA ECON. RES. SERV., AMBER WAVES (Apr. 2004), <http://webarchives.cdlib.org/sw1vh5dg3r/http://ers.usda.gov/Amberwaves/April04/Features/SavvyBuyers.htm>.

22. Several sources of data were consulted in determining whether firms can be held legally accountable for outbreaks of foodborne illness. There is no national system documenting products liability cases. We used the Westlaw Personal Injury Jury Verdicts and Settlements Summaries (JV-PI). Within this database, we searched for verdicts/settlements involving personal injuries due to pathogen-contaminated food between 2000 and 2011. We reported cases that produced symptoms consistent with foodborne illness (gastrointestinal distress), that were linked to food, that claimed to have resulted from pathogens in food. Additional searches also contained searches for certain foodborne illnesses. The JV-PI database is available at <http://www.westlaw.com>.

23. If deterrence is not working optimally through reported cases, it may be working through confidential settlements, a study for future research.

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reported settlements send stronger economic signals to deter firms from producing unsafe food. The results also highlight the market failures that exist in food safety—the transaction costs and information costs preventing plaintiffs from suing and recovering fully—providing in and of itself valuable information for federal regulators. Plaintiffs win when they are able to hire reputable attorneys—and those attorneys usually take cases when plaintiffs are able to identify the pathogen, controlling for age and type of defendant.

My solution is that regulation should be empirically informed and responsive to the foodborne illness litigation—as it provides a glimpse into publicly available foodborne illness cases. With rapidly changing food consumption patterns, globalization, food delivery chains becoming more complex, and foodborne illnesses becoming more common,²⁴ this is the time to consider whether the pending FDA rules consider litigation outcomes. For example, regulations could benefit from several findings. The FSMA can potentially correct market failures in the delivery of safe food. We know that plaintiffs face high transaction costs and information costs in bringing cases forward. FDA regulations can aid plaintiffs in overcoming the main hurdles in their case—causation and traceability—by focusing resources on prevention (increasing inspections particularly at restaurants and increasing sanctions for importers) and response (coordinating efforts between federal and state public health reporting). Increasing the fines for violations is also recommended. The results can aid regulators as they draft the final rules in the legislation.

This Article is timely. Strikingly, food safety is a largely unexplored area in legal scholarship—in the areas of tort, food safety regulation, and the economics of litigation. As the literature review section of this paper will reveal, one reason tort scholarship and related discussions in law and economics have not focused on food safety is due to the lack of available data in this field—not only are food safety cases settled confidentially and therefore unavailable, but even those that are publicly available are commingled in larger categories of products liability or personal injury. This work fills many gaps in existing literatures.

To advance the argument, the Article proceeds in four parts. Part I describes the literature in the areas of tort and food safety

24. Stearns, *supra* note 21, at 256–62 (discussing how consumers cannot efficiently distinguish between safe and unsafe food products because of modern food markets, and discussing a recent increase in the percentage of U.S. poultry containing *Salmonella*).

regulation. Part II addresses foodborne illness litigation in practice. Part III examines foodborne illness litigation through an empirical examination of the cases. Part IV outlines my solution, followed by concluding remarks.

II. LITERATURE REVIEW

Strikingly, food safety is an unexplored area in legal scholarship. One novelty of this Article is that it combines two strands in the literature—tort law and food safety regulation. I will first present how my research builds upon and informs existing tort literature.

Can tort law or food safety regulation impact firm behavior in a socially desirable way by providing correct signals and adequate incentives to “deter” harmful conduct? In the paragraphs that follow, many theories are advanced to suggest that tort law has the ability to deter future wrongdoing given the right penalty structure (a combination of compensatory and punitive damages). Trial outcomes have higher deterrence value than public settlements—but this may not be the case when confidential settlements are concerned. For all of these scenarios, the prohibitively high costs that deter plaintiffs from bringing cases forward erode any deterrence value that legal liability has. Current food safety regulation has many shortcomings which hinder it from deterring firms’ future wrongdoing. Each of these theories will be reviewed in full.

A. *The Deterrent Effect of Tort Law*

Tort liability is designed to shift the costs from the victims to the offenders and signal the potential wrongdoers to implement precautionary measures. From an economics perspective, the socially optimal goal of tort law is to draft laws that induce an injurer to take the appropriate level of care—care that minimizes the sum of the cost of taking care and losses incurred by victims.²⁵ The tort system can work as a deterrent if benefits from taking the socially appropriate level of care and making investments to reduce risk and external costs from harmful activities are internalized.²⁶ However, it should be noted that a

25. See A. Mitchell Polinsky & Daniel L. Rubinfeld, *The Welfare Implications of Costly Litigation for the Level of Liability*, 17 J. LEGAL STUD. 151, 154–56 (1988) (examining the most efficient level of care that minimizes costs to both manufacturers and victims).

26. Giuseppe Dari-Mattiaci & Francesco Parisi, *The Economics of Tort Law: A Précis*, in THE ELGAR COMPANION TO LAW & ECONOMICS 88 (Jurgen G. Backhaus ed., 2d

market failure exists in that plaintiffs do not always sue due to high information and transaction costs involved in litigation. When litigation costs are taken into account, only victims whose losses exceed their cost of litigation will sue.²⁷ If a plaintiff does not sue because he perceives the costs of litigation to be great, the injurer may have an incentive to take less care because he will not have to pay for all of the losses he causes; if, however, a plaintiff sues because he perceives the losses to exceed the cost of litigation, the injurer may take more care “because, by reducing the harm suffered by victim[s], he can reduce the number who sue.”²⁸

Describing the chronology of a legal dispute becomes instructive. A legal dispute occurs in stages which define the initial harm through the assertion of a legal claim, settlement bargaining, and trial. The party that allegedly suffered a harm decides whether or not to assert a legal claim. A rational person makes this decision by solving what Cooter and Rubinfeld term “a sequential game,” or a set of decisions made in a sequence, each decision balancing the immediate cost of hiring a lawyer and filing the claim against future benefits such as receiving proceeds from settlement or victory at trial.²⁹

In this way, tort law forces potential injurers or “tortfeasors” to take account of the accident costs they impose on others. In an ideal world, individuals who are engaged in risky activities will take efficient precautions by increasing their level of care (for example, a driver will drive slower) but only to the point that the

ed. 2005); Susan Rose-Ackerman, *Product Safety Legislation and the Law of Torts*, in *PRODUCT LIABILITY AND INNOVATION: MANAGING RISK IN AN UNCERTAIN ENVIRONMENT* 151, 152–54 (Janet R. Hunziker & Trevor O. Jones eds., 1994), available at <http://www.nap.edu/openbook/0309051304/html/151.html>.

27. See Keith N. Hylton, *Litigation Costs and the Economic Theory of Tort Law*, 46 U. MIAMI L. REV. 111, 122 (1991) (“If the anticipated damage award exceeds the cost of litigating, plaintiffs will have incentive to bring suit.”).

28. See Polinsky & Rubinfeld, *supra* note 25, at 151. Polinsky and Rubinfeld note that “the . . . problem now becomes one of minimizing the sum of the cost of care, the losses of the victims, and the cost of litigation. With these changes, it may no longer be desirable to set the level of liability equal to the victim’s loss[es].” *Id.* at 151–52. The authors show that “strict liability with compensatory damages generally” leads to a socially inappropriate level of care and to excessive litigation costs. *Id.* at 152. The optimal adjustment to compensatory damages, which may be positive or negative, takes into account the effects of liability on the injurer’s decision to take care, and on the victims’ decisions to sue. *Id.*

29. See Robert D. Cooter & Daniel L. Rubinfeld, *Economic Analysis of Legal Disputes and Their Resolution*, 27 J. ECON. LITERATURE 1067, 1084 (1989) (noting that when contingent fees are applicable, evidence shows that these fees can allow clients to signal the qualities of their cases and attorneys to signal the quality of their advice); see also Daniel L. Rubinfeld & Suzanne Scotchmer, *Contingent Fees for Attorneys: An Economic Analysis*, 24 RAND J. ECON. 343, 345–48, 354 (1993).

anticipated benefit from the additional precaution (the anticipated benefit in our example may be safely passing a bicyclist) is not outweighed by its cost. (In our example, the cost of slowing down does not mean purchasing a new steering system for instance, i.e., the cost of it is not prohibitive.)³⁰ In its purest form, the economic formula traditionally applied to explain this theory was elaborated by Judge Learned Hand, as to how the burden of taking precautions (B), the probability of harm (P), and the gravity of harm (L) interact.³¹ When potential tortfeasors take “optimal precautions,” they minimize the costs they impose on society, as calculated by the sum of the expected accident costs ($P*L$) added to the resources provided for precautions (B); in other words, $(P*L) + B$.³²

Before a trial even begins, the plaintiff files a claim, the defendant responds to that claim, and both the parties attend preliminary hearings with the judge, engage in pretrial discovery, and set trial dates.³³ With each of these pretrial steps, the judge tries to encourage the parties to bargain and settle the case out of court.³⁴ If parties cooperate and reach a bargain, parties have settled; failure to cooperate and reach a bargain results in an “adversarial trial.”³⁵ While the amount that the plaintiff expects to win is determined by the quality of the case, it is also determined to a great extent by the effort (or lack of effort) that each party expends at each stage of litigation.³⁶

A legal dispute is resolved efficiently when legal entitlements are allocated to the parties who value them the

30. Russell B. Korobkin & Thomas S. Ulen, *Law and Behavioral Science: Removing the Rationality Assumption from Law and Economics*, 88 CALIF. L. REV. 1051, 1096 (2000) (“Traditional law and economics suggests that precaution is efficient when its benefits outweigh its costs . . .”); Jeff Kerr, Comment, *Exxon Shipping Co. v. Baker: The Perils of Judicial Punitive Damages Reform*, 59 EMORY L.J. 727, 738 (2010).

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

32. RICHARD A. POSNER, *ECONOMIC ANALYSIS OF LAW* 214 n.2 (8th ed. 2011).

33. Cooter & Rubinfeld, *supra* note 29, at 1069.

34. *Id.* There are many rules and procedures governing litigation to increase the probability of settlement; for example, FED. R. CIV. P. 16(c)(2)(I). The rule also gives the court discretion to “direct the attorneys for the parties and any unrepresented parties to appear before it for a conference or conferences before trial for such purposes as . . . facilitating the settlement of the case.” FED. R. CIV. P. 16(a)(5). And in the advisory committee’s note to Rule 16, the Committee further points out that settlement should be facilitated early on since it eases crowded court dockets and results in savings to the litigants and the judicial system. FED. R. CIV. P. 16 advisory committee’s notes on 1983 Amendments. Similarly, Rule 68 imposes legal costs on parties who reject a settlement offer that later proves to be more favorable to them than the trial outcome. FED. R. CIV. P. 68.

35. Cooter & Rubinfeld, *supra* note 29, at 1069.

36. *Id.* at 1071.

most—legal liabilities are allocated to the parties who can bear them at the lowest cost, and the transaction costs of dispute resolution are minimized. When parties to a dispute cannot resolve their differences by private bargaining, and when negotiations fail, the courts dictate a resolution in the last stage of a legal dispute. The outcome of the trial (win for plaintiff or defendant), is the result of a complex interaction between the efforts that both parties invest into the trial and the underlying facts and the law of the case.

There is evidence that the imposition of civil liability has great deterrent effects.³⁷ For one, the American institutional setting assigns significant political power to the legal system whereby in many cases the authority to regulate safety reverts back to the courts.³⁸ As a result, society is left with legal liability as a deterrence and compensatory mechanism.³⁹ And yet there are instances when a defendant loses at trial and does not take necessary precautionary measures.

The level of damages determines the quantity of precautionary measures that are implemented by the losing defendant. For some cases, excessive damages have to be assessed before a defendant will implement precautionary measures. When legal liability is assessed, plaintiffs receive compensatory damages and, when available, punitive damages.⁴⁰ Punitive damages are assessed to punish the wrongdoer and may be necessary to assure that adequate precautionary measures are taken, or, as Seventh Circuit Court Judge Richard Posner argues, to correct less-than-socially-ideal verdicts.⁴¹ Food safety may fall into this subset of cases when considering the

37. See Neil K. Komisar, *Injuries and Institutions: Tort Reform, Tort Theory, and Beyond*, 65 N.Y.U. L. REV. 23, 62–65 (1990) (explaining how imposing “sizable punitive damages awards” serves to deter harmful conduct by manufacturers). For a contrasting view, see James B. Sales & Kenneth B. Cole, Jr., *Punitive Damages: A Relic That Has Outlived Its Origins*, 37 VAND. L. REV. 1117, 1158–64 (1984), which argues that punitive damages have a “minimum” or “unlikely” deterrent effect.

38. See Janice Kemp, *The Continuing Appeal of Punitive Damages: An Analysis of Constitutional and Other Challenges to Punitive Damages*, Post-Haslip and Moriel, 26 TEX. TECH. L. REV. 1, 10 (1995) (discussing the existence and extent of courts’ authority to assess punitive damages); Rose-Ackerman, *supra* note 26, at 152–54 (noting that courts serve an important role in the regulation of product safety).

39. “Ultimately all that is regulatory is legal in a democratic society.” Nesve A. Turan Brewster & Peter D. Goldsmith, *Legal Systems, Institutional Environment, and Food Safety*, 36 AGRIC. ECON. 23, 24 n.1 (2007). We restrict the notion of “regulatory” to those specific actions by government bureaucracies to increase the supply of safety. Alternatively, legal forces operate through the court system and market forces operate through the marketplace.

40. *Id.* at 28.

41. See POSNER, *supra* note 32, at 262.

description Posner provides. If the harm is difficult to detect or does not manifest until long after the harm occurs, this will lead to a divergence between private and social costs if the harm producer is thus able to escape liability sometimes, Posner argues.⁴² In this type of scenario, if the potential tortfeasor does not equate the amount he spends on precautions with a reduction in the probability of paying damages, the potential tortfeasor will not spend the socially optimal amount on precautions.⁴³ As a result, the level of care that is optimal for the tortfeasor and the level of care that is optimal for society are not aligned.⁴⁴ In this scenario, as Posner notes, punitive damages would not only be helpful, but they would also be “necessary” to realign costs for each.⁴⁵ While a *distributional* problem still remains in that some injured would get much more compensation than they need, and others would go uncompensated,⁴⁶ the publicity of the lawsuits in place could help to alleviate this distributional effect by raising the probability of detection. Once this has occurred, the amount of punitive damages should be decreased accordingly.

Even while plaintiff victories may have a deterrent effect, there is evidence first within medical malpractice law and second within tort law itself that legal liability may not be an effective deterrent. A reading of some medical malpractice cases illustrates how a plaintiff verdict may lead to an adverse result. For medical malpractice cases, evidence shows that the tort system may not be able to provide incentives to ensure an optimal level of safety. There is evidence that when doctors began to lose verdicts, defensive medicine (when physicians’ fear of medical liability leads them to use precautionary treatments with minimal expected medical benefit) developed.⁴⁷ Analogize this to food safety: if food manufacturers were to begin using precautionary measures to avoid liability, would they avoid traceability investments to avoid traceability?⁴⁸

42. See *Kemezy v. Peters*, 79 F.3d 33, 34 (7th Cir. 1996) (noting that awards of compensatory damages for “elusive or intangible” harms are “likely to fall short” of compensating plaintiffs’ injuries).

43. See *id.* at 35 (arguing that a tortfeasor will generally be “underdeterred” from committing concealable tortious acts).

44. See *id.* at 34 (noting that it is socially undesirable when the benefits from a tortfeasor’s tortious activity outweigh the expected costs).

45. See *id.* (“Punitive damages are necessary . . . to make sure that tortious conduct is not underdeterred, as it might be if compensatory damages fell short of the actual injury inflicted by the tort.”).

46. See POSNER, *supra* note 32, at 244.

47. Daniel Kessler & Mark McClellan, *Do Doctors Practice Defensive Medicine?*, 111 Q.J. ECON. 353, 354, 385–88 (1996).

48. See Brewster & Goldsmith, *supra* note 39, at 35.

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Strikingly, a reading of tort cases suggests that tort law is not an effective deterrent. Consider the following: in August 1997, “frozen ground beef patties produced at the Hudson Foods, Columbus, Nebraska plant were discovered tainted with *E. coli* O157:H7”; soon thereafter, Hudson announced a series of recalls that reached “25 million pounds, the largest meat recall in the U.S.”⁴⁹ After long and protracted litigation, a U.S. district court judge dismissed the charges against two former employees who were indicted under criminal charges by a federal jury for not being truthful about the source of the contamination and conspiring to falsify information during the USDA’s investigation.⁵⁰

If the courts are reluctant or unable to impose harsh penalties on the basis of punishing the innocent and violating the American constitutional setting with protected fundamental rights, acquittals of defendants can lead to incentive distortions and low safety.

In sum, there appears to be more evidence finding that tort law is ineffective at deterring firm behavior than evidence in its favor.

1. *Trials and (Publicly Reported) Settlements.* Despite evidence showing that tort law in general does not appear to be a good deterrent, whether a case is settled or litigated may have a different deterrent effect. The underlying difference is that there is a cost difference between settlement and trial. The law and economics literature addresses issues surrounding the selection of cases that are settled versus those that are brought to trial;⁵¹ however, few articles have examined the deterrence value of settlements versus verdicts.⁵²

Given that settlements outnumber trial verdicts, one may conclude that settlement is the “preferred” alternative to going to trial.⁵³ Even efforts to promote settlement, including the Civil

49. *Id.*

50. *Id.*

51. The early literature includes: William M. Landes, *An Economic Analysis of the Courts*, 14 J.L. & ECON. 61 (1971); John Gould, *The Economics of Legal Conflicts*, 2 J. LEGAL STUD. 279 (1973); Richard Posner, *An Economic Approach to Legal Procedure and Judicial Administration*, 2 J. LEGAL STUD. 399 (1973); William Baxter, *The Political Economy of Antitrust*, in *THE POLITICAL ECONOMY OF ANTITRUST: PRINCIPAL PAPER BY WILLIAM BAXTER* 3, 3–49 (Robert D. Tollison ed., 1980); Steven Shavell, *The Social Versus Private Incentive to Bring Suit in a Costly Legal System*, 11 J. LEGAL STUD. 333, 333–39 (1982).

52. Marc Galanter & Mia Cahill, “*Most Cases Settle*”: *Judicial Promotion and Regulation of Settlements*, 46 STAN. L. REV. 1339, 1381 (1994).

53. *Id.* at 1339.

Justice Reform Act's requirement that courts adopt techniques for expediting the litigation process, suggest that settlement is the preferred outcome.⁵⁴

To be sure, it is generally taken for granted that it is better for cases to settle out of court than to go to trial because the cost of settling a case is less than the cost of taking it to trial. (After all, settlements are clearly superior to trials if one's goal is to minimize transaction costs.) This begs the question: do settlements undermine or weaken the deterrent effect of legal norms? Further, does the fact that a settlement may be "confidential" affect the answer to the foregoing question?

Interestingly, the literature supports the view that trials and settlements have different deterrent effects—that is, whether a dispute goes to trial or is settled in and of itself results in different actions taken by the defendant regarding behavior that gave rise to the dispute.⁵⁵ The reason is that the defendant's payout from a settlement will be less than the defendant's payout from a verdict. For instance, for an out-of-court settlement to be possible, the injurer must expect to lose more from litigating than the amount the victim believes he can recover from litigating.⁵⁶ If the parties can agree on an amount that is within this settlement range, the amount will make both parties better off than the expected trial outcome (because at trial, one party will lose and one party will win).⁵⁷ If a potential injurer expects that a case will settle (meaning that he perceives he will lose more money from litigating than settling) then the result will be a settlement and the injurer will pay *less* (than going to trial) and will ultimately not take as much care as he would otherwise. To the extent that the verdict amount may have been the socially desirable amount, the settlement may not be the socially desirable outcome.⁵⁸ In this way, "[t]rials would lead to even greater care since the injurer's expected payment would be higher."⁵⁹ These effects

54. *Id.*

55. A. Mitchell Polinsky & Daniel L. Rubinfeld, *The Deterrent Effects of Settlements and Trials*, 8 INT'L REV. L. & ECON. 109, 112 (1988) (arguing that once deterrence is taken into account, trials may be superior despite their higher transaction costs).

56. *Id.* at 109–10.

57. *Id.* at 109, 112.

58. *Id.*

59. *Id.*; see also Philip J. Hermann, *Predicting Verdicts in Personal Injury Cases*, 475 INS. L.J. 505, 506 (1962) (noting that in a national study of 443 verdicts in cases involving back and neck injuries found that only one in six of the offers and demands were within 25% of the actual verdict).

“must be taken into account in any system designed to induce injurers to take socially appropriate care.”⁶⁰

If settlements deter less than trial outcomes, there is certainly a range within each category. Some settlements have little to no value in deterring future behavior while some settlements may have deterrence value. In a 1993 study by Marc Galanter and Mia Cahill, the authors argue that not every settlement promotes the best outcome.⁶¹ The authors argue that a mix of legal, sociological, and economic factors contributes to a party’s decision to settle and that these factors contribute to the benefits of settlement.⁶² Further, the authors argue that there is such a thing as a “good” settlement and a “bad” settlement and that not all settlements are alike.⁶³

If trial outcomes have more deterrence value (presumably because they result in higher monetary payouts), it would be helpful to know not only which cases go to trial, but also which cases win. George Priest and Benjamin Klein advanced a selection hypothesis to explain the selection of cases for trial from the underlying population of filed cases, based on the position of the legal standard, the degree of stake asymmetry, and the prediction of trial outcomes.⁶⁴ Their model concerns what cases go

60. See Polinsky & Rubinfeld, *supra* note 55, at 110, 114. Polinsky and Rubinfeld provide examples. *Id.* at 110–14. Assume an individual who suffers harm sues the injurer.

For an out-of-court settlement to be possible, the victim’s expected gain from going to trial must be less than the injurer’s expected loss from trial. . . . Thus, to the extent that a potential injurer anticipates that cases will settle, he will expect to pay less and will not take as much care as he would otherwise. . . . [However], suppose the settlement amount *exceeds* the victim’s harm (not including his litigation costs). Then, if all cases settle [at this amount], an injurer will pay more than the harm he causes and will take socially excessive care.

Id. at 109.

So settlements that are generally undesirable (because they lower the level of care) are valuable if they exceed the victim’s harm. *Id.* Now, consider another case where settlements will be valuable. “[S]uppose the settlement amount is *less* than the victim’s harm. Then, if all cases settle [at this amount,] an injurer will not pay for all of the harm he causes and will take socially inadequate care.” *Id.* (emphasis added). But these cases will generally go to trial. The “expectation of going to trial” makes the injurer’s expected payment higher and makes this outcome socially desirable. *Id.* In sum, “a necessary condition for trials to be socially valuable is that” when every individual who is harmed brings a suit, the settlement amount ought to have been less than each victim’s loss. *Id.* at 112. And, for trials to be socially optimal, the benefit associated with increased deterrence based on trials must exceed added litigation costs. *Id.*

61. Galanter & Cahill, *supra* note 52, at 1388.

62. *Id.* at 1350–51.

63. *Id.* at 1346–50.

64. George L. Priest & Benjamin Klein, *The Selection of Disputes for Litigation*, 13 J. LEGAL STUD. 1, 6–30, 55 (1984).

to trial and what cases win.⁶⁵ They assert, “[f]or the rate of plaintiff verdicts to be an accurate measure of the influence of a legal standard of judicial or jury attitudes, or of the substantive fairness of any adjudicatory process, litigated disputes must be representative of the entire class of underlying disputes.”⁶⁶ However, there is a relationship between disputes that are settled and disputes that are litigated. In a study examining the determinants of settlement and litigation, Priest and Klein predict that factors tend to be purely economic, such as information that each party possesses about the likelihood of success at trial, as well as the expected costs to parties of litigation and settlement generally, and favorable or adverse outcomes.⁶⁷ Along the stages of litigation, litigants estimate their likelihood of success based on many factors including “legal precedent or judicial or jury bias.”⁶⁸ The authors conclude that in contrast to common perception, cases that are litigated (as opposed to being settled) are neither random nor representative of all disputes; moreover, plaintiff victories will approach 50% regardless of many factors—whether the legal standard is negligence or strict liability or whether judges or juries are hostile or sympathetic.⁶⁹

In other words, cases go to trial in which defendants and plaintiffs have a 50% probability of winning.⁷⁰ Importantly, when the core assumption—that plaintiff and defendant *stakes* in the outcome differ—is relaxed, the rate of success in litigation will differ from the 50% baseline.⁷¹

65. *Id.* at 6–7, 55.

66. *Id.* at 4.

67. *Id.*

68. *Id.*

69. *Id.* at 4–5.

70. Donald Wittman, *Is the Selection of Cases for Trial Biased?*, 14 J. LEGAL STUD. 185, 186 (1985); see also Donald Wittman, *Dispute Resolution, Bargaining, and the Selection of Cases for Trial: A Study of the Generation of Biased and Unbiased Data*, 17 J. LEGAL STUD. 313, 334 (1988) (demonstrating through equations how, as each party’s chance of winning at trial approaches 50%, the rate at which cases go to trial increases). Wittman notes that the Priest–Klein rule is biased when the parties disagree about the expected trial award. Wittman, *Is the Selection of Cases for Trial Biased?*, *supra*, at 190–93; see also Cooter & Rubinfeld, *supra* note 29, at 1074.

Disagreement concerns in part the meaning of “winning,” which is ambiguous in the context of trials. The plaintiff “wins” a civil suit, in one sense of the word, if the court awards damages or provides injunctive relief. Many civil suits, however, concern not the fact of the defendant’s liability but its extent. From this perspective, the plaintiff “wins” at trial only if the damage award is larger than the defendant’s settlement offer.

Cooter & Rubinfeld, *supra* note 29, at 1074–75.

71. Priest & Klein, *supra* note 64, at 20.

Stakes are most clearly symmetrical where the parties seek solely a dollar judgment in a dispute over activities in which neither party ever expects to engage again.⁷² If, on the other hand, one of the parties expects to continue the specific activity leading to the dispute, the judgment in the current case will affect future behavior and thus extend beyond the dollar amount alone.⁷³

Applying the Priest and Klein findings to this Article, foodborne illness cases present an example where stakes will differ. The empirical results will show that foodborne illness cases typically feature a single consumer suing a manufacturer (or restaurant or wholesaler) whose future practices will be affected by the outcome.⁷⁴ According to Joel Waldfoegel, stakes are higher for defendants in tort cases.⁷⁵ Evidence of this can be found in products liability cases, a subset of tort cases generally. Priest and Klein's empirical evidence, drawn from the Cook County Illinois Jury Verdict Reporter for contested civil cases tried to juries by case type from 1959 to 1979, shows that for products liability cases, defendant verdicts exceeded plaintiff verdicts—plaintiff verdicts were found in 42.8% of 477 cases.⁷⁶

72. *Id.* at 24–25.

73. *See id.*; *see also* Cooter & Rubenfield, *supra* note 29, at 1074 (noting that typically the probability of winning will increase for the party with a future interest in the victory, citing a Nash game in economics as an example).

74. *See* Priest & Klein, *supra* note 64, at 24–25.

75. Joel Waldfoegel, *The Selection Hypothesis and the Relationship Between Trial and Plaintiff Victory*, 103 J. POL. ECON. 229, 253 (1995). Waldfoegel examined cases involving contracts, property rights, and torts and found “that litigated cases are unrepresentative of filed cases, that plaintiffs have higher stakes in contract and property rights cases” and stakes are *higher for defendants* in tort cases. *Id.* at 253, 256. Specifically, he found in a sample of federal civil cases from the Southern District of New York, “less than a third of tort cases filed go to trial, and of those that do, the plaintiff wins about a third of the time.” *Id.* at 238, 242, 244.

76. *See* Priest & Klein, *supra* note 64, at 41 tbl.2, 42 (noting that “[d]uring the twenty-one year period . . . , the standard of liability for defective products changed . . . from negligence to strict liability, a standard adopted by the Illinois Supreme Court in 1965”). *But see* RICHARD A. EPSTEIN, *MODERN PRODUCTS LIABILITY LAW* 43 (1980) (asserting that new liability might have little incentive effect on manufacturers' behavior regarding existing long-lived products). When cases are divided at the date that the strict liability standard became effective, and regressions are run on these respective datasets, “the proportion of plaintiff recoveries in product liability actions under a negligence standard, 1959–65, is 39 percent; under the strict liability standard for the same time period it is 43.4 percent. This slight increase in the recovery rate is not statistically significant.” Priest & Klein, *supra* note 64, at 42. The results of these regressions are important for our study in that for our analysis of foodborne illness product liability cases our cases come from different states where changes in the standard may have taken place. If the change in standard took place, an increase in the rate of recovery under strict liability could be ascribed to the lessening of the plaintiff's legal burden. *Id.* at 42. If the plaintiff had less to bring forward, defendants should win more often. Priest and Klein also note that

This finding is consistent with their theoretical prediction that if one looks at litigated cases only, defendant verdicts will exceed 50% when the stakes are greater for the defendant.⁷⁷

There are many reasons for which the stakes for defendants may be higher than those for plaintiffs. An adverse judgment for a defendant restaurant, for example, may influence subsequent sales volume when fewer patrons decide to frequent the establishment.⁷⁸ Similarly, one adverse judgment against a restaurant, for example, may lead other similarly injured parties to sue, thereby increasing the plaintiffs' likelihood of success and settlement demands, placing pressure on the defendant.⁷⁹ "[I]t is often alleged that firms that deal over time with a substantial number of claimants invest to establish and preserve a reputation for tough bargaining to reduce further settlement demands."⁸⁰

Then again, money is not everything. The dollar judgment sought by the plaintiff may reflect only a small portion of the defendant's total loss if the plaintiff wins.⁸¹ In these disputes, "the stakes almost surely will differ between the parties."⁸² Clearly when defendants may lose more from an adverse verdict than a plaintiff stands to gain, the calculus that drives litigation and settlement decisions will change. Generally, defendants are willing to offer more when they face a greater chance of losing and are willing to offer less when they face a greater chance of winning.⁸³ As a result, more disputes with likely plaintiff verdicts will be settled and relatively more disputes with likely defendant verdicts will be litigated.⁸⁴ If we observe only litigated cases, defendant verdicts will exceed 50%.⁸⁵ The fifty percent rule breaks down, Cooter and Rubinfeld argue, when a defendant

[a]n alterantive hypothesis consistent with the data is that the shift [in the standard] made little difference in terms of outcomes, either because juries had themselves adopted a strict liability attitude toward product liability defendants before the change in legal standard, or because a strict liability standard cannot be distinguished from a negligence standard (for example, in design defect cases) because of the requirement of demonstrating the "defect" or because of the survival of affirmative defenses.

Id. at 43 n.82.

77. Priest & Klein, *supra* note 64, at 26.

78. *Id.* at 40.

79. *Id.*

80. *Id.*

81. *Id.*

82. *Id.* at 28.

83. *Id.* at 26.

84. *Id.*

85. *Id.*

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who wants to avoid the publicity of trial will settle cases that he has a high probability of winning.⁸⁶ Applying this to foodborne illness cases, when defendants fear the publicity of trial, they will likely settle despite the favorable odds of a defendant victory at trial.

2. *Confidential Settlements.* Evidence suggests that confidential settlements differ from publicly reported settlements. “Where information about the existence or terms of a settlement is prevented from public circulation, as by the typical agreement that the terms of settlement are confidential, the general deterrence effects are presumably weakened.”⁸⁷ Why is this so? One reason may be because this information does not circulate or cause the firm disrepute. In contrast, these awards may have a deterrent effect if one considers the size of the awards compared to verdicts and settlements. Evidence supports that while plaintiffs receive less in damages when they settle a case instead of taking it to a verdict, confidential settlements may result in higher awards for plaintiffs because of the importance to large corporate defendants in terms of maintaining reputation and limiting themselves from further liability.⁸⁸ These contrasting assertions necessitate further consideration.

The traditional economic model of settlement is based on the premise that the settlement value will be equal to the parties’ expected value to be achieved at trial, i.e., $EV = p * L$ (expected value = the probability of a plaintiff’s verdict * the monetary amount of such a verdict).⁸⁹ According to this model, “[t]he defendant will offer any amount less than the EV of the claim plus its litigation costs; the plaintiff is willing to accept any amount more than EV minus its own litigation costs.”⁹⁰ Under this model, it appears that the amount that a claimant would receive in settlement would be lower than that received from a jury verdict.⁹¹ It is due to things such as divergent estimates of p

86. Cooter & Rubinfeld, *supra* note 29, at 1074–75.

87. Galanter & Cahill, *supra* note 52, at 1382.

88. Scott A. Moss, *Illuminating Secrecy: A New Economic Analysis*, 105 MICH. L. REV. 867, 878–89 (2007).

89. *Id.* at 874 (citing Joseph A. Grundfest & Peter H. Huang, *The Unexpected Value of Litigation: A Real Options Perspective*, 58 STAN. L. REV. 1267, 1273 (2006)).

90. *Id.* at 874 (emphasis added).

91. See Grundfest & Huang, *supra* note 89, at 1272–73 (2006) (“The effects of risk or uncertainty are again expressed through changes in the relevant discount rate, with riskier lawsuits bearing a higher discount rate and therefore having a lower expected value.”).

and *L* (or “mutual optimism”) that cases do not settle.⁹² Once confidentiality is brought into play, settlement ranges expand because of the value which defendants place on it.⁹³ Defendants are more willing to settle because the reputational cost that comes with a public settlement is no longer present.⁹⁴ Recent literature suggests that higher-variance-creating variables are likely to reduce the costs of prosecuting and defending claims and that variance can increase pressure to settle.⁹⁵ If a settlement is not going to be successful, making a settlement confidential may increase the amount that the defendant may offer to pay.⁹⁶

Settling under a confidentiality agreement may result in a higher award for plaintiffs because of the importance to large corporate defendants of maintaining reputation and limiting themselves from further liability.⁹⁷ The incentive to keep the settlement confidential is high when plaintiffs stand to gain higher verdicts and when defendants stand to preserve their reputation.⁹⁸

For confidential settlements as well as public settlements, the issue of variability in trial outcomes and asymmetry of information both lend pressure to settle. A recent empirical study of jury trials found that trials often involve “high stakes . . . and novel legal issues or a unique set facts,” which lead to high uncertainty regarding the outcome.⁹⁹ For this reason, “they provide only a vague picture of how an ordinary case might fare at trial.”¹⁰⁰ Another study on securities class actions found that “trial verdicts provide little relevant basis for predicting case value: ‘If similar cases never go to trial, predictions of expected trial outcomes will have no factual grounding’ in verdicts.”¹⁰¹ Settlement occurs when both parties believe the outcome is better than a result they would achieve at trial.¹⁰² Therefore, settlements reflect parties’ expectations about the outcome of a

92. See Moss, *supra* note 88, at 875.

93. *Id.* at 878.

94. *Id.*

95. See Grundfest & Huang, *supra* note 89, at 1325.

96. See Moss, *supra* note 88, at 879–80.

97. Blanca Fromm, Comment, *Bringing Settlement out of the Shadows: Information About Settlement in an Age of Confidentiality*, 48 UCLA L. REV. 663, 675–76 (2001).

98. See *id.*

99. *Id.* at 669–70 (reviewing the empirical study by Samuel R. Gross & Kent D. Syverud, *Don't Try: Civil Jury Verdicts in a System Geared to Settlement*, 44 UCLA L. REV. 1 (1996)).

100. *Id.* at 670.

101. *Id.* at 671 (quoting Janet Cooper Alexander, *Do the Merits Matter? A Study of Settlements in Securities Class Actions*, 43 STAN. L. REV. 497, 567 (1991)).

102. *Id.* at 668; see also Alexander, *supra* note 101, at 502–04.

trial, and verdicts are not that useful of a comparison for evaluating *typical* cases.¹⁰³ However, there is conflicting evidence that verdicts are reliable, predictable, and consistent to indicate that using information about jury verdicts to predict trial outcomes is reliable as a reference for evaluating cases.¹⁰⁴

B. *The Deterrent Effect of Regulation*

What are the food safety regulations that are in place to protect our food channels and how effective are these regulations in deterring the production of unsafe food? This section outlines the array of policy tools in place to motivate firms to manufacture safe food: direct regulation, incentives found in the market, surveillance that takes place after a product has been placed in the market, and legal liability.¹⁰⁵ As noted in the previous section, the U.S. relies heavily on legal liability, so food safety is not just a regulatory but also a legal matter.¹⁰⁶ Previously in Part I, we

103. Carrie Menkel-Meadow, *Whose Dispute Is It Anyway?: A Philosophical and Democratic Defense of Settlement (In Some Cases)*, 83 GEO. L.J. 2663, 2672–74; Fromm *supra* note 97, at 668–70. *But see* PHILLIP J. HERMANN, BETTER, EARLIER SETTLEMENTS THROUGH ECONOMIC LEVERAGE: VOLUME I LITIGATION AND SETTLEMENT ECONOMICS § 3 (1989) (using empirical studies to prove that trial verdicts are a reliable predictor when evaluating cases).

104. *See* HERMANN, *supra* note 103, § 3 (conceding that there are critics of using jury verdict empirical studies, while still trying to persuade readers of the reliability of jury verdicts in predicting trial outcomes).

105. Brewster & Goldsmith, *supra* note 39, at 23 (analyzing the different mechanisms that drive the safety of the food system and its efficacy within a direct regulatory approach); Spencer Henson & Julie Caswell, *Food Safety Regulation: An Overview of Contemporary Issues*, 24 FOOD POL'Y 589, 593–97 (1999) (discussing the relationship and interaction between public and private food safety control systems); W. Kip Viscusi, *Toward a Diminished Role for Tort Liability: Social Insurance, Government Regulation, and Contemporary Risks to Health and Safety*, 6 YALE J. ON REG. 65, 79–82 (1989) (analyzing the effects of risk-reduction market incentives and tort liability with respect to reducing risky activity to society).

106. *See* Brewster & Goldsmith, *supra* note 39, at 25 (analyzing the interaction between the legal system and food safety and explaining that the judicial branch in the United States has been elevated to be “guardians of the individual rights” and “able to make fundamental changes in the law especially through judicial review”). Ultimately, all that is regulatory is legal in a democratic society. *See id.* at 29 (explaining that the American legal system blurs the allocation of policy responsibilities, due to the assignment of significant political power to the legal system which in turn forces regulatory changes). We restrict the notion of “regulatory” to those specific actions by government bureaucracies to increase the supply of safety. W. KIP VISCUSI, FATAL TRADEOFFS: PUBLIC AND PRIVATE RESPONSIBILITIES FOR RISK 158 (1995) (explaining that “[t]he government’s responsibility in generating and using risk information involves structuring a decision process” that is focused on deterring risk). Alternately, legal forces operate through the court system, and market forces operate through the marketplace. *See* Stearns, *supra* note 21, at 270 (arguing for more accountability in the chain of distribution in food products to increase food safety, thereby better syncing market actors with legal liability, implying the disconnect between the legal forces and market forces at work in the food distribution industry).

examined how tort liability can deter firms from providing unsafe food in the marketplace. We begin with a discussion of regulation generally before turning to the deterrent effect of federal regulation. Later, in Part IV, we combine the contribution of tort to direct regulation by the FDA.

Food safety regulations are difficult to make, for they involve “large scientific uncertainties regarding what is ‘safe,’ public perceptions of safety at odds with professional perceptions, various public values expressed through the political process, and difficult judgments of equity given that risk and benefit are borne by different groups.”¹⁰⁷ As difficult as regulations are to make, are they necessary?¹⁰⁸ Prominent scholars such as Cass Sunstein, John Braithwaite, Steven Shavell, and A. Mitchell Polinsky would all argue in favor of regulation as a necessary form of deterrence.¹⁰⁹ Shavell and Polinsky go so far as to rank the value of regulation as a deterrent above the value of legal liability as a deterrent.¹¹⁰ They state that, in the case of products liability lawsuits involving domestically manufactured food products, legal liability is unlikely to serve as a deterrent due to the high transaction and information costs that deter plaintiffs from bringing cases forward; moreover, *deterrence is possible due simply to market forces (loss of sales) and regulation.*¹¹¹ In contrast, Kip Viscusi would argue that much of the regulation currently in place is purely an overreaction to risks that involve low probabilities (for example, the risk of being in an accident related to a biological attack), that cannot be supported by conventional cost–benefit analysis.¹¹²

107. Chauncey Starr & Chris Whipple, *A Perspective on Health and Safety Risk Analysis*, 30 MGMT. SCI. 452, 452 (1984).

108. For a general discussion of regulatory theory and the most often cited justification for regulation, see STEPHEN BREYER, *REGULATION AND ITS REFORM* 15–34 (1982).

109. CASS SUNSTEIN, *RISK AND REASON: SAFETY, LAW AND THE ENVIRONMENT* 28–52 (2002); JOHN BRAITHWAITE, *RESTORATIVE JUSTICE & RESPONSIVE REGULATION* 30–34 (2002) (noting, in his discussion on responsive regulation, that regulation should follow a pyramid approach with increasing punishments based on the severity of the act). Restorative justice is suitable for a virtuous actor, deterrence for a rational actor, and incapacitation for an incompetent or irrational actor. *Id.* The regulator escalates the pyramid when cooperative or rational approaches fail. *Id.* Similarly, adequate enforcement of compliance with private regulation will depend on the attitude of regulated firms. *Id.* at 32–33; A. Mitchell Polinsky & Steven Shavell, *The Uneasy Case for Product Liability*, 123 HARV. L. REV. 1437, 1443–454 (2010) (noting that market forces and regulation are sufficient to form deterrence in products liability cases, but they do not reference foodborne illness cases as a separate category from products liability cases, disallowing a presumption that their results hold with respect to foodborne illness cases).

110. Polinsky & Shavell, *supra* note 109, at 1453–59.

111. *See id.*

112. VISCUSI, *supra* note 106, at 149–59.

For argument's sake, assume that regulations contain a deterrent value. Is food safety regulation any different than regulation in general? When it comes to food safety, should we favor strong federal or state regulation of business, or deregulation altogether? Studies suggest that there is no single governance mechanism that works. When Ian Ayres and John Braithwaite state that "regulation occurs in many rooms," they are stating that regulations arise from many venues.¹¹³ Others have supported this proposition arguing that regulation is more than making rules and includes "rulemaking (standard setting), monitoring compliance, and enforcement" involving legislatures, agencies, the court system with involvement from firms, NGOs, and other non-state actors. An example of this occurs in the meat industry where food safety comes from an interplay of regulation and marketing incentives.¹¹⁴ This is all evidence of what Orly Lobel has termed a "new governance" that "promote[s] legitimate, effective, and active participation . . . by the private regulated parties themselves without devolving into deregulation."¹¹⁵ The replacement of traditional top-down regulation with more flexible and less state-centered forms of regulation—including self-regulation, co-regulation, management-based regulation, private systems of governance, and empirically informed regulation—challenges existing conceptualizations of regulation.¹¹⁶

113. IAN AYRES & JOHN BRAITHWAITE, *RESPONSIVE REGULATION* 3 (1992).

114. Tetty Havinga, *Private Regulation of Food Safety by Supermarkets*, 28 *LAW & POLY* 515, 516 (2006) (citing Sol Picciotto, *Introduction: Reconceptualizing Regulation in the Era of Globalization*, 29 *J.L. SOC'Y* 1, 1–4 (2002) (explaining the modern network society as having a complex relationship between the public realm and the private economic sphere)); see also Colin Scott, *Private Regulation of the Public Sector: A Neglected Facet of Contemporary Governance*, 29 *J.L. SOC'Y* 56, 59–66 (2002) (describing the methods and consequences of private sector regulation on the public sector). For the interplay of marketing incentives and regulation, see Michael Ollinger & Danna Moore, *The Interplay of Regulation and Marketing Incentives in Providing Food Safety*, *USDA ECON. RES. SERV.* (July 2009), <http://webarchives.cdlib.org/sw1vh5dg3r/http://www.ers.usda.gov/publications/err75/>.

115. See Orly Lobel, *New Governance as Regulatory Governance*, in *THE OXFORD HANDBOOK OF GOVERNANCE* 65 (David Levi-Four ed. 2012); see also Orly Lobel, *The Renew Deal: The Fall of Regulation and the Rise of Governance in Contemporary Legal Thought*, 89 *MINN. L. REV.* 342 (2004).

116. Havinga, *supra* note 114, at 515 (citations omitted); see also Darren Sinclair, *Self-Regulation Versus Command and Control? Beyond False Dichotomies*, 19 *LAW & POLY* 529, 533–37 (1997) (highlighting the inadequacies of traditional command and control policy, as well as a purely voluntary system, and advocating for a multi-instrument application that can accommodate a wide range of policy variables); Cass R. Sunstein, *Empirically Informed Regulation*, 78 *U. CHI. L. REV.* 1349, 1387–93, 1397–1410 (2011) (exploring social studies in which empirical findings about human behavior are incorporated into economic models affecting regulatory policy design and advocating for

In sum, food safety is regulated by the interplay of three primary actors: governmental agencies involved in rulemaking, monitoring, or enforcement; the food industry including farmers; and third parties such as private auditors, certifiers, retailers, and consumer organizations.¹¹⁷ Regulatory approaches can be empirically informed and range from public to private and from low-interventionist to highly prescriptive.

1. *Inspections, Raids, and Penalties.* When it comes to post-market surveillance mechanisms, what regulatory tools are available to target breaches in the production of safe food and how effective are these tools in deterring future wrongdoing? A distinction is made between direct and indirect regulation (food laws versus products liability laws)¹¹⁸ and between public and private food safety standards (food laws versus private certification schemes).¹¹⁹ The direct regulatory approach is utilized by U.S. government agencies to specially target breaches of safety by firms. Meanwhile, the indirect regulatory approach employs incentives to create an environment leading to reduced breaches of safety. Also, food safety measures can be implemented either before a breach or after.

At the federal level, there are domestic inspections of plants, meat inspection violations¹²⁰ and poultry violations,¹²¹ inspections on the border, and also administrative remedies.¹²² The FDA

appropriate private–public partnerships that allow for better adaptation to the social environment).

117. Havinga, *supra* note 114, at 517.

118. See Brewster & Goldsmith, *supra* note 39, at 24–35 (analyzing the differences between the British and U.S. regulatory programs and unpacking the theoretical underpinnings of each country’s approach toward regulation, noting their differences specifically in the use of direct and indirect regulation); see also Havinga, *supra* note 114, at 517–21 (discussing private food safety regulation and food safety regulation generally).

119. Henson & Caswell, *supra* note 105, at 593–97 (discussing the differences between private and public food safety regulation and describing the efficacy of each toward the other).

120. Federal Meat Inspection Act, 21 U.S.C. § 676 (2006) (concerning violations of the Act).

121. Poultry Products Inspection Act, 21 U.S.C. § 461 (2006) (concerning offenses and punishment); Egg Products Inspection Act, 21 U.S.C. §§ 1041–1043 (2006) (concerning enforcement provisions).

122. Federal Food, Drug, & Cosmetic Act, 21 U.S.C. § 333(a) (2006).

(1) Any person who violates a provision of section 301 shall be imprisoned for not more than one year or fined not more than \$1,000, or both.

(2) Notwithstanding the provisions of paragraph (1) of this section, if any person commits such a violation after a conviction of him under this section has become final, or commits such a violation with the intent to defraud or mislead, such person shall be imprisoned for not more than three years or fined not more than \$10,000 or both.

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exercises inspection authority through many regulatory devices, the most common of which is under section 704 of the FDCA, whereby the FDA may inspect a facility upon presentation of credentials and a Form 482 “Notice of Inspection.”¹²³ An inspection with presentation of credentials and no notice of inspection is also possible.¹²⁴ “If a company ‘consents’ to such an inspection, it generally forfeits any right it may have otherwise had to challenge the evidence FDA obtains from the inspection.”¹²⁵ Finally, the FDA can also exercise inspection authority by obtaining an administrative inspection warrant (AIW) from a federal magistrate judge (this is known as a “regulatory raid”).¹²⁶

While the story behind the Peanut Corporation of America (PCA) outbreak will be discussed later, a brief introduction to the case illustrates the use of a regulatory raid noted above. On January 30, 2009, the FDA’s Office of Criminal Investigations (OCI) began investigating PCA’s alleged distribution of *Salmonella*-tainted peanut products that reportedly caused severe illness and even eight deaths across forty-three states. A week later, the FBI joined the investigation and federal agents executed search warrants the next day at PCA’s Georgia plant and Virginia headquarters. A reporter noted seeing a set of bolt cutters, individuals carrying black brief cases, a trailer, vehicles entering the rear of the plant, and agents exiting the facility with boxes in hand.¹²⁷

Despite this example, the FDA rarely resorts to raids and it rarely resorts to criminal sanctions.¹²⁸ The FDCA provides misdemeanor and felony charges for cases of “adulterated” food, which includes selling contaminated food.¹²⁹ Misdemeanors can result in fines and up to a year in jail.¹³⁰ This issue came up recently in the 2011 outbreak involving Jensen Farms

Id. (concerning penalties, violation of section 331, second violations, and intent to defraud or mislead).

123. John R. Fleder, *Search Warrants—What Happens When the FDA Storm Arrives*, UPDATE, May/June 2009, at 46, available at <http://www.hpm.com/pdf/jrfsearchwarrants.pdf>.

124. *Id.* at 47.

125. *Id.*

126. *Id.* “FDC Act § 704 is silent on the issuance of AIWs.” *Id.* at 49 n.8; see also 21 U.S.C. § 374(a)(1)(A) (2006).

127. Jim Drinkard, *FBI Raids Georgia Plant at Center of Salmonella Scare*, HUFFINGTON POST (Feb. 2, 2009), http://www.huffingtonpost.com/2009/02/10/fbi-raids-georgia-plant-a_n_165564.html; Fleder, *supra* note 123, at 46.

128. Belluck, *supra* note 14.

129. 21 U.S.C. §§ 331, 333(a) (2006).

130. *Id.*

Cantaloupe in Colorado.¹³¹ One local newspaper was quoted saying, “To elevate prosecution to a felony, federal officials would likely have to find evidence that the Jensens knew that what they were doing was dangerous, or knew they had contamination and delivered melons anyway.”¹³²

Among the few food poisoning outbreaks that resulted in criminal conviction was the case against Odwalla (discussed earlier).¹³³ It seems unlikely that the cantaloupe outbreak will draw criminal charges, mainly because the FDA has not imposed criminal charges in twenty years.¹³⁴ Take the example of the PCA and the 2010 *Salmonella* outbreak traced to an Iowa farm.¹³⁵ As noted above, the FDA’s OCI executed search warrants to look into the Georgia plant that distributed peanuts implicated in the PCA outbreak.¹³⁶ PCA had a history of knowing that what they were doing was dangerous, or knowing that they had contamination and yet continued to make deliveries.¹³⁷ In the 2010 egg outbreak, no criminal charges emerged even though the investigation of the Iowa egg farm traced to the *Salmonella* outbreak found “decaying mice, chicken carcasses and flies” in great numbers.¹³⁸ Congressional hearings quickly followed the outbreaks and no criminal prosecutions resulted.¹³⁹ Prosecutions on these charges, and even lighter misdemeanor charges, would signal the importance of food safety and deter food companies from adulterating food in the future.

131. See Michael Booth & Jennifer Brown, *Criminal Charges Hard to Pin on Farm Where Listeria-Tainted Cantaloupes Originated*, DENVER POST, (Nov. 21, 2011 11:00 AM), http://www.denverpost.com/news/ci_19381057 (explaining the difficulty in bringing criminal charges in a case involving listeria-tainted cantaloupes).

132. *Id.*

133. *Id.*; see also Christopher Drew & Pam Belluck, *Deadly Bacteria a New Threat to Fruit and Produce in U.S.*, N.Y. TIMES, (Jan. 4, 1998), <http://www.nytimes.com/1998/01/04/us/deadly-bacteria-a-new-threat-to-fruit-and-produce-in-us.html?pagewanted=print&src=pm>.

134. Booth & Brown, *supra* note 131.

135. *Id.*

136. *Id.*

137. *Id.* (noting that PCA “repeatedly shipped products that had already tested positive for salmonella, sometimes seeking a second lab test to clear the peanuts”).

138. *Id.* (noting that “[t]he farm had received 426 positive results for salmonella between 2008 and 2010,” according to documents obtained).

139. *Id.* (discussing congressional hearings that have taken place); Ryan J. Foley, *Tony Wasmund, Manager of Egg Farm Behind Outbreak, Pleads Guilty to Bribing USDA Inspector*, HUFFINGTON POST (Sept. 12, 2012, 2:28 PM) http://www.huffingtonpost.com/2012/09/12/tony-wasmund-bribery-egg-farm-salmonella_n_1877784.html?view=print&comm_ref=false (reporting that the manager behind outbreak pled guilty on Sept. 12, 2012).

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The above examples demonstrate that infrequent use of raids and criminal sanctions may lead to lapses in food safety. However, the following shows how broad and aggressive regulatory responses can backfire. The case involved Supreme Beef, a meat packing business in Texas that repeatedly failed the USDA's *Salmonella* tests for hamburger meat (most of which was destined for the school lunch program during the Clinton Administration).¹⁴⁰ The USDA pulled their inspectors out of the plant—the result being that Supreme Beef could not sell their product.¹⁴¹ Supreme Beef claimed that the meat they were sent from the USDA-inspected slaughterhouse was contaminated before it arrived to its plant (that the USDA breached its own *Salmonella* performance standard used in the label “official USDA Mark of Inspection”) and that the USDA was violating Supreme's right to conduct business.¹⁴² The company fought the USDA to return its inspectors.¹⁴³

In December 2001, the USDA lost for a final time when the Fifth Circuit Court of Appeals decided to uphold a lower court ruling that the salmonella performance standard exceeded the USDA's statutory authority. . . . [T]he former Secretary of Agriculture Dan Glickman, considered this “a serious blow” to the USDA's regulatory authority.¹⁴⁴

In the above example, Supreme Beef effectively used the legal system to evade liability and to limit regulatory authority of government agencies. The government's case faltered when it was unable to prove the relationship between cause and effect—that Supreme Beef caused the *Salmonella* contamination with certainty.¹⁴⁵ This illustrates a key point—it is difficult to establish cause-effect liability for foodborne illness (thereby making it hard to achieve convictions). In the end, the court's inability to protect innocent consumers allowed the company its victory. Even worse, by setting precedent, this case altered the future regulatory authority of the USDA.¹⁴⁶

Another example that illustrates the limitations of the regulatory role in managing food safety risk in the U.S. is the ConAgra case in 2002. The case involved the Greeley Plant, a

140. Brewster & Goldsmith, *supra* note 39, at 29–30.

141. ERIC SCHLOSSER, FAST FOOD NATION 220 (2001).

142. Brewster & Goldsmith, *supra* note 39, at 30.

143. Supreme Beef Processors, Inc. v. U.S. Dept. of Agric., 275 F.3d 432, 436 (5th Cir. 2001).

144. Brewster & Goldsmith, *supra* note 39, at 29–30.

145. *Id.* at 30.

146. *Id.*

meat packing business in Colorado that was suspected of *E. coli* contamination of its ground beef.¹⁴⁷ The product was tested in early June 2002 and by the end of the month, a formal recall was in place.¹⁴⁸ The UDSA was criticized for delays in its notification process since at the time of the recall, “only 6,000 pounds of the 354,000 of recalled beef was recovered and the rest had been already consumed.”¹⁴⁹ One month later, “the recall was eventually expanded to 18.6 million pounds of ground beef, the second largest ground beef recall in the U.S. history.”¹⁵⁰

There are many competing interests at play. Given an environment of new and developing food risks emerging from the confluence of increased globalization, advanced food chains and new and emerging pathogens, the standard approaches used by government regulators have fallen short of what is necessary.¹⁵¹ When regulations fall short, the structure of the food safety system is such that it “motivate[s] . . . parties to seek legal solutions.”¹⁵² At the same time, rational economic actors cannot be expected to invest in improving the safety of the food products. Food producers are self-interested and will act accordingly. As Adam Smith stated (using the sale of food as an example) “it is not from the benevolence of the butcher, the brewer, or the baker, that we expect our dinner, but from their regard to their own self interest.”¹⁵³ In other words, food manufacturers, retailers, and restaurants need to be interested in food safety—they need to be economically motivated—to provide it. If regulators do not provide the economic incentives through inspections (and raids), perhaps litigation will provide the necessary incentives.

As a final example, consider the case of the PCA *Salmonella* outbreak in 2008 and 2009, noted earlier, which according to the final CDC update resulted in nine deaths and 714 confirmed *Salmonella* infections covering forty-six states,¹⁵⁴ and the focus of

147. *Id.*; Elizabeth Becker, *19 Million Pounds of Meat Recalled After 19 Fall Ill*, N.Y. TIMES (July 20, 2002), <http://www.nytimes.com/2002/07/20/us/19-million-pounds-of-meat-recalled-after-19-fall-ill.html>.

148. Brewster & Goldsmith, *supra* note 39, at 30.

149. *Id.*

150. *Id.*; Becker, *supra* note 147.

151. Brewster & Goldsmith, *supra* note 39, at 30.

152. *Id.*

153. ADAM SMITH, AN INQUIRY INTO THE NATURE AND CAUSES OF THE WEALTH OF NATIONS 14 (Edwin Cannan ed., Random House, Inc. 1937) (1776).

154. CTRS. FOR DISEASE CONTROL & PREVENTION, INVESTIGATION UPDATE: OUTBREAK OF SALMONELLA TYPHIMURIUM INFECTIONS 2008–2009, <http://www.cdc.gov/salmonella/typhimurium/update.html> (last updated Apr. 29, 2009); see also Abbie Boudreau & Scott Bronstein, *Poor Oversight Fueled Salmonella Outbreak, Critics Say*, CNN (Feb. 5, 2009, 2:06 AM), http://edition.cnn.com/2009/HEALTH/02/05/peanut_recall/index.html.

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one of our nation's largest recalls. The facts of the case reveal that inspections were infrequent and ineffective such that PCA was free to pursue its self-interest or higher profits.¹⁵⁵ The dirty conditions at the food production facilities were only revealed as a result of the outbreak having spurred an investigation. So much so that an inspector found, "The conditions at the plant, more circa 1955 than 2009, would have been enough to cause alarm in an industry where sanitation can be a matter of life and death."¹⁵⁶ Behind PCA's walls hid the array of poor work conditions and safety flaws, said employees, who lost their jobs when the plant closed.¹⁵⁷ As Stearns describes, the only incentive to "invest in modernizing the plant, in employee training, and in vigorous internal oversight" was the low probability that the shocking problems would be exposed.¹⁵⁸

In sum, the examples show that the FDA does not make full use of the tools at its disposal (raids and criminal penalties as the most severe). And even when it does, defendants are quick to utilize constitutional protections. Sadly, the examples presented illustrate how regulations only incentivize manufacturers to invest in what is necessary to avoid non-compliance (or getting caught), but no more. Combine this with a low probability of getting caught and this results in an incentive to make food less safe.¹⁵⁹ At a minimum, the literature on food safety regulation illustrates flaws with food safety regulation—flaws that could be more informed by an empirical analysis of litigation outcomes. What do the lawsuits regarding food safety have to say about regulatory gaps? The following section examines foodborne illness litigation as an introduction to the empirical model.

III. FOODBORNE ILLNESS LITIGATION: IN PRACTICE

What is it about foodborne illness lawsuits that makes them so different from the rest of personal injury, products liability, and torts cases in general? How does a plaintiff sue for foodborne illness and who is the defendant?

155. Stearns, *supra* note 21, at 251; Lyndsey Layton, *Peanut Executive Takes the Fifth*, WASH. POST, Feb. 12, 2009, at A2 (noting that Representative Henry Waxman, a Democrat from California, stated that PCA's internal records evidenced that it was more concerned with its bottom line than the safety of its customers).

156. Michael Moss, *Peanut Case Shows Holes in Safety Net*, N.Y. TIMES, Feb 9, 2009, at A1.

157. *Id.*

158. Stearns, *supra* note 21, at 251–52.

159. *Id.*

News about an outbreak travels quickly. In order to protect the lives and safety of others, public health officials do their best to transmit information regarding an outbreak to the public in a timely fashion. Before presenting the data on food safety cases, it is instructive to outline the steps involved in an outbreak, the decisions that victims and their attorneys make regarding the collection of evidence and discovery, and the litigation strategies involved. An understanding of these processes will better prepare one to understand how litigation can inform the new FDA regulations and how the FDA regulations can be used to correct market failures that exist in food safety.

A. *When Foodborne Illness Strikes: Incident Reporting*

When a consumer becomes ill, she may or may not seek medical treatment, depending on the severity of the illness or access to medical care. According to the CDC, because most consumers do not equate a stomach virus with foodborne illness, health departments are slow to identify and investigate foodborne illness outbreaks.¹⁶⁰

An attorney is more likely to take the case of a foodborne ill patient if the victim/plaintiff is able to identify the pathogen (*E. coli* and the like) and the food item that was consumed.¹⁶¹ In most cases, this information is only available through laboratory tests—which means that the plaintiff must have reported the illness to a doctor or complained to authorities.¹⁶² There are two basic routes through which outbreaks are identified—either through a consumer complaint to a health department or through a medical report filed at a hospital.¹⁶³ According to a recent study of the state of Minnesota public health system, most reported outbreaks begin with a consumer filing a complaint to a local health department.¹⁶⁴ If the health department is able to respond quickly by sending investigators to the field, the consumer complaint may be the most efficient method of outbreak detection.¹⁶⁵ In the state of Minnesota, 80% of outbreaks are

160. CTR. FOR SCI. IN THE PUB. INTEREST, ALL OVER THE MAP: A 10 YEAR REVIEW OF STATE OUTBREAK REPORTING 5 (2011), available at <http://cspinet.org/new/pdf/allverthemap.pdf>.

161. See William D. Marler & David W. Babcock, *Litigating the Food Poisoning Case: The Importance of Prior Inspections and Investigations*, MARLERCLARK, (2005), <http://www.marlerclark.com/food-poisoning-litigation.pdf>.

162. CTR. FOR SCI. IN THE PUB. INTEREST, *supra* note 160, at 5.

163. *Id.*

164. *Id.*

165. *Id.*

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detected through consumer-complaint investigations.¹⁶⁶ An outbreak can also be detected by a laboratory after a medical practitioner performs a laboratory test on a patient.¹⁶⁷ Even in the case when a patient seeks medical treatment, “a physician *may or may not* order appropriate lab tests and even if ordered, positive results *may or may not* be forwarded to a public health agency.”¹⁶⁸ For instance, a physician is less likely to forward results to a public health agency if “the detected pathogen is not one of the reportable pathogens as defined by the state.”¹⁶⁹ As difficult as it may seem to identify a pathogen, identifying the pathogen is only one step to solving the outbreak. The next step is for field investigators to interview cases and gather suspect foods in order to identify the food that caused the outbreak. What makes matters more difficult is that there is often a “lag-time’ between onset of illness and notification to the health department . . . [This lag time can range] between two days (if a consumer reports directly to the health department) and roughly 19 days,” if reports are received through the laboratory-based route.¹⁷⁰ Identifying the food item is complicated by the fact that “consumers’ memory of what they ate falters; food is consumed or discarded; and additional persons may become ill from the same source.”¹⁷¹

166. *Id.* (citing John Li et al., *Evaluation of Statewide Foodborne Illness Complaint Surveillance System in Minnesota, 2000 Through 2006*, 73 J. FOOD PROTECTION 2059, 2061 (2010)).

167. *Id.*

168. *Id.*

169. *Id.*

CDC and the Council of State and Territorial Epidemiologists publish a list of nationally notifiable infectious conditions, those illnesses thought to be critical enough to public health to warrant notice to federal public health authorities. However, reporting of nationally notifiable disease to the CDC by the State is voluntary. Reporting is currently mandated (i.e., by state legislation/regulation) only at the state level. The list of diseases that are considered notifiable, therefore, varies slightly by state. These generally include *Salmonella* species (spp.), shiga-toxin producing *E. Coli*, *Shigella*, *Listeria monocytogenes*, *Clyclyspora*, *Vibrio* spp., and *Clostridium botulinum*.

Id. at 5 n.2.

170. *Id.* at 6 (citing Li et al., *supra* note 166, at 2062).

171. *Id.*; see also Stearns, *supra* note 21, at 249 & n.12.

[F]or the more common sources of foodborne illness, microbial pathogens, the incubation period is sufficiently long that, in most cases, more than one food item or exposure is implicated as a possible infection source. This means that, even after consuming a given food product and being made ill by it, the consumer has no reliable means of attributing the illness to the food. It is for this reason, mainly, that the vast majority of foodborne illness in the United States is, each year, attributable to unidentified food items.

Id.

Regardless of lag times, investigations may be stalled for other reasons. Even if the record of the illness reaches the health department, shortfalls in funding or staffing may prevent the agency from performing the necessary analysis or providing support to the investigating epidemiologists.¹⁷² There are situations where “[e]ven a culture-confirmed case may or *may not* be investigated to determine the food vehicle or exposure data,” and situations where “[a] state may or *may not* report the outbreak to the CDC.”¹⁷³ “Other foodborne illnesses may appear sporadic as only one or two people become ill in each state.”¹⁷⁴

While the state is acting to put a case together, a victim’s medical costs are rising to the point that she may begin to seek legal representation or be approached by legal representation. An attorney will examine the evidence and decide whether or not to take the case. Cases that are confirmed by the CDC are most promising in terms of plaintiff victory by virtue of more evidence implicating the defendant.

B. *Litigating a Foodborne Illness Claim*

Consumer suits over food poisoning have their origin in strict products liability.¹⁷⁵ In most jurisdictions a person injured by a product may base his or her recovery of damages on one or more theories of recovery: (1) negligence or (2) products liability, which can be based in negligence, strict liability, or breach of warranty depending on the jurisdiction.¹⁷⁶ In a September 2011 case submitted by Marler Clark, a leading foodborne illness law firm, on behalf of two plaintiffs who suffered from *Salmonella* poisoning, five claims were submitted: strict liability, breach of warranty, negligence and negligence per se, loss of consortium, and punitive damages.¹⁷⁷ To illustrate how a foodborne illness case could be brought in negligence or products liability, consider the following definitions.

According to the Restatement (Second) of Torts, negligence is a failure to behave with the level of care that someone of

172. CTR. FOR SCI. IN THE PUB. INTEREST, *supra* note 160, at 6.

173. *Id.*

174. *Id.*

175. Marler & Babcock, *supra* note 161, at 1 & 9 n.1 (citing Hoover v. Peters, 18 Mich. 51 (1869)); Wideman v. Keller, 49 N.E. 210, 210 (Ill. 1897); Race v. Krum, 118 N.E. 853, 854 (N.Y. 1918); Jacob E. Decker & Sons, Inc. v. Capps, 164 S.W. 2d 828, 829 (Tex. 1942).

176. See Thomas H. Koenig & Michael L. Rustad, *Reconceptualizing the BP Oil Spill as Parens Patriae Products Liability*, 49 HOUS. L. REV. 291, 346 (2012).

177. Complaint at 7–11, Byerly v. Cargill Meat Solutions Corp., No. 2:2011CV04227 (W.D. Mo. Aug. 25, 2011).

ordinary prudence would have exercised under the same circumstances. The behavior usually consists of actions, but can also consist of omissions when there is some duty to act (e.g., a duty to rescue if one is obligated to do so).¹⁷⁸ Proving a prima facie case of negligence requires establishing physical harm (actual damages), the existence of a legal duty to exercise reasonable care (duty), a failure to exercise reasonable care (breach), cause in fact of physical harm by the negligent conduct (but for causation), and a showing that the harm is within the scope of liability (proximate cause).¹⁷⁹ When determining whether reasonable care was taken, one may consider “the foreseeable likelihood that the person’s conduct will result in harm, the foreseeable severity of any harm that may ensue, and the burden of precautions to eliminate or reduce the risk of harm.”¹⁸⁰

The Odwalla case provides an example of this. While the company may not have known that the apples it used to produce unpasteurized apple juice were contaminated with *E. coli*, it did know that it was buying apples gathered from the ground in an orchard where animals might be present; therefore, one could argue that it *should have* known that the apples might be contaminated.¹⁸¹

A foodborne illness claim may also be brought forward as a products liability claim. There is no such thing as federal products liability law.¹⁸² However, many states have either enacted their own products liability statutes or adopted the U.S. Department of Commerce Model Uniform Products Liability Act (MUPLA).¹⁸³ As noted earlier, in most jurisdictions a person injured by a product may base his or her recovery of damages on products liability, which can be based in negligence, strict liability, or breach of warranty depending on the jurisdiction. When a products liability lawsuit involves negligence, it can be brought against the manufacturer, distributor, or designer of the product that is said to be unsafe.¹⁸⁴ Negligence could be in the

178. RESTATEMENT (SECOND) OF TORTS § 282 (1965).

179. WILLIAM L. PROSSER, HANDBOOK OF THE LAW OF TORTS 175, 311, 321 (4th ed. 1971).

180. RESTATEMENT (THIRD) OF TORTS § 3 (Proposed Final Draft No. 1, 2005).

181. Denis W. Stearns, *An Introduction to Product Liability Law*, MARLERCLARK (2001), <http://marlerclark.com/pdfs/intro-product-liability-law.pdf>.

182. Jean C. Buzby & Paul D. Frenzen, *Food Safety and Product Liability*, 24 FOOD POL’Y 637, 639 (1999).

183. Brian Daluiso, “*Is the Meat Here Safe?*” *How Strict Liability for Retailers Can Lead to Safer Meat*, 92 B.U. L. REV. 1081, 1117–18 (2012).

184. DAVID G. OWEN, PRODUCTS LIABILITY LAW 1001 (2d ed. 2008).

design or in the manufacturing of the product.¹⁸⁵ Companies also have a duty to the consumer to warn them of any dangers that could come from using their product.¹⁸⁶

In states where products liability is considered a strict liability offense, the level of care by the defendant is not considered. Strict products liability is liability without fault for an injury proximately caused by a product that is defective and not reasonably safe.¹⁸⁷ In establishing strict liability, the injured plaintiff need only prove that: (1) the product was defective; and (2) the product defect was the cause of the injury.¹⁸⁸ The level of care taken by the defendant is not considered—if there is a defect in the product that causes harm, the defendant will be liable for it. Liability can be attributed to all parties along a chain of production of any product for damage caused by the product—which means that in a case of a contaminated cantaloupe, the plaintiff may be able to sue the farmer, the distributor, and even the retailer.¹⁸⁹ In a products liability case, the first threshold is proving that the product is defective. Products liability can be attributed to a defect in design, manufacture, or marketing.¹⁹⁰ In the context of foodborne illness, design defects occur during the product creation.¹⁹¹ (For example, a piece of candy was not designed to dissolve well enough for ingestion by infants.) It is said that in this case, the design flaw makes the product unreasonably dangerous to use.¹⁹² Manufacturing defects can be described as defects that occur during the production such that only a few of a product line of products of the same type are flawed.¹⁹³ Finally, marketing defects are also called failure to warn defects in that the manufacturer has delivered improper instructions or has failed to warn consumers of latent dangers in the product.¹⁹⁴

From a strict liability standpoint, the difficult part of building a food poisoning case as a “defective product” case is

185. *Id.* at 60–61.

186. *Id.* at 63.

187. *See* RESTATEMENT (THIRD) OF TORTS: PRODS. LIAB. § 2 (1998).

188. *See, e.g.,* Greenman v. Yuba Power Prods., Inc., 377 P.2d 897, 899 (Cal. 1963) (“Plaintiff introduced substantial evidence that his injuries were caused by the defective design and construction The jury could therefore reasonably have concluded that the manufacturer negligently constructed the [product].”).

189. OWEN, *supra* note 184, at 1001.

190. *See* RESTATEMENT (THIRD) OF TORTS: PRODUCTS LIAB. § 2.

191. *Id.*

192. *Id.*

193. *Id.*

194. *Id.*

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the fact that in many circumstances, the implicated food item has been discarded.¹⁹⁵ This makes it hard to prove that the food the plaintiff consumed was contaminated and the source of the plaintiff's injuries. For instance, since the existence of *Salmonella* will make a product "defective" under statutory or common law definitions, the difficulty arises in proving "that the food your client consumed was in fact contaminated, and therefore the source of the client's injuries."¹⁹⁶

When a product has been discarded, in order to prove the manner of contamination in your client's case, it is helpful to locate any and all evidence of the food service establishment's prior history involving prior food poisoning incidents, prior accusations of food contamination, any "prior inspections of the facility and the establishment's food production and service procedures[,] . . . documentation of improper food handling procedures[,] . . . [and any] improper techniques and code violations."¹⁹⁷ An attorney can acquire these documents through discovery or through the use of federal or state Freedom of Information Act (FOIA) requests and can serve to pressure and position a defendant to an early and favorable settlement.¹⁹⁸ If any practices are discovered that are particularly egregious, such as examples of consistent improper food handling techniques, this may introduce a case for punitive damages, in states where such damages are available.¹⁹⁹

A situation can arise where a disastrous inspection document is found which "dissuades the defendant from contesting liability [at trial]."²⁰⁰ Equally likely, the defense counsel may be unwilling to admit the document to evidence,

195. See *supra* note 171 and accompanying text.

196. Marler & Babcock, *supra* note 161.

197. *Id.* Marler and Babcock note one case regarding a Chinese restaurant in Ohio implicated in an *E. coli* O157:H7 outbreak in 2002. This case was difficult in that no contaminated leftover food was found and, in addition, "the restaurant was buffet style, which complicated the identification of a single contaminated food." *Id.* The investigation found that many of the ill patrons were children, who may have consumed Jell-O. The question was: how did the Jell-O become the source of the *E. coli* outbreak? Luckily, a health department investigation report provided some insight in that according to the report, food handling errors had been previously discovered in the restaurant, such as "raw meat stored above the Jell-O in the refrigerator." *Id.* The conclusion was that the "likely source of *E. coli* [] in the Jell-O was from raw meat juices dripping on the Jell-O." *Id.* After this discovery, the defendant never contested liability. *Id.*

198. *Id.*

199. *Id.*

200. *Id.*

making it critical to possess the implicating documents.²⁰¹ The more information the better; procedurally, interrogatories and requests for production may produce the following: (1) the “defendant’s copies of any inspection reports from government agencies;” (2) “[d]ocumentation of any inspections by third parties, consultants, or commercial customers;” (3) “[c]ustomer complaint logs, incident reports, internal employee input or suggestion memos;” or (4) “[d]ocumentation regarding any previous food poisoning litigation.”²⁰²

In addition to the documents listed above, it is also necessary to collect inspection documents from all local and state regulators that frequent the establishment.²⁰³ This usually involves identifying the proper repository of public documents from any local, state, and/or federal agencies that have jurisdiction over the defendant in question and then using the appropriate FOIA documents to access the information.²⁰⁴

In addition to claims in negligence or products liability, victims may allege a breach of warranty of fitness, a claim governed by contract law. When a company manufactures and distributes a product they are giving a guarantee or warranty—either express or implied—that it will not cause harm due to defects.²⁰⁵ Products liability law can also be found in the Uniform Commercial Code (UCC), Article 2, adopted by most states to deal with the sale of goods, the most relevant statutes being the implied and express warranties of merchantability in the sales of goods, section 2-314 and section 2-315.²⁰⁶

Several defenses can be raised. The most common defenses include contributory negligence or comparative fault, depending on the statutes that exist in the state.²⁰⁷ The defense can also raise statutes of limitations, which govern products liability claims.²⁰⁸ There are exceptions for minors and where federal law trumps state law.²⁰⁹

201. *Id.*

202. *Id.*

203. *Id.*

204. *Id.*

205. Goldberg & Zipursky, *supra* note 13, at 1923–24.

206. See U.C.C. § 2-314 (2010) (concerning implied warranties, merchantability, usage of trade); U.C.C. § 2-315 (2010) (concerning implied warranties, fitness for particular purpose).

207. EPSTEIN, *supra* note 76, at 119; MARSHALL S. SHAPO, BASIC PRINCIPLES OF TORT LAW 127, 136–37 (1999).

208. Stearns, *supra* note 181 (“If the injured person is a minor the clock does not start to run on the limitations period until she turns eighteen years old.”).

209. AMERICAN LAW OF PRODUCTS LIABILITY 3D, § 47:64 (2012). The theory behind

IV. FOODBORNE ILLNESS LITIGATION: EMPIRICAL MODEL

Previous parts examined the benefits and shortcomings of deterring foodborne illness through indirect regulation (legal liability) and direct regulation (local, state and federal, FDA rules). According to theory, when a plaintiff wins a large tort verdict or settlement, the monetary damage will send a strong signal (as a litigation-related cost) to the firm to increase food safety protections and deter firms from producing unsafe food in the future. However, to test whether tort verdicts are deterring in this way, we need to know how often plaintiffs win and how much they recover. For this, we need to examine actual tort verdicts and settlements.

This section analyzes 320 cases filed between 2000 and 2011 that were settled or tried before juries in order to test established theories on how and when legal liability serves as an effective deterrent. A working hypothesis developed from the theory is that a tort verdict or settlement has deterrence value when a plaintiff wins and when the monetary verdict is large. Using this, I establish two empirical models to examine factors that contribute to a plaintiff's win and to the size of the verdict, respectively. I also establish a model to examine factors contributing to the speed at which a case is resolved.

The empirical results will inform the solution for improved (and empirically informed) federal regulation presented in Part V. As a preview, I use the empirical results to match the ways in which tort liability is or is not serving as a deterrent with what we know about the deterrence value of regulations. Knowing when legal liability falls short of serving as a deterrent is also useful in determining when and how regulation should correct this market failure by making improvements to the federal FSMA regulations.

The following paragraphs describe the methodology for collecting the case data, introduce summary statistics, submit the data to empirical logistic regression analysis, and present quantitative results.

A. *Methodology for Collecting Case Data*

A dataset of state and federal cases involving foodborne illness was collected to examine the amount plaintiffs received,

federal preemption is that, where a federal statute or regulation occupies an entire field of law, and subjects it to extensive regulation, there is no room left for state law to operate within that field. *See, e.g., English v. Gen. Elec. Co.*, 496 U.S. 72, 79 (1990).

when plaintiffs won, and the rate at which cases were resolved from 2000 to 2011. The collection of the data involved three key steps, the first of which was the collection of a set of case data for this time period. After cases were read and entered into the database, they were submitted to different tests of robustness for consistency and completeness leading to a final dataset of 320 cases. The final step involved collection of other factors for the dataset.

The case data was originally derived using search terms for products liability, strict liability, negligence, and contaminated food between January 1, 2000, and January 1, 2011.²¹⁰ Certain pathogen names were used for additional searches based on a list of top bacterial pathogens and viruses related to foodborne illness outbreaks.²¹¹ Accordingly, searches were conducted with the terms: food poisoning, *Salmonella*, hepatitis-A, norovirus, bacteria and food, and sick and hospitalized and food.²¹² These additional cases were added to the dataset for a total of 320 cases for the time period. Over half of the cases represented a “win” for the defense; these cases were identified as cases noting that zero dollars in damages were awarded to the plaintiff.

210. The search on Westlaw Combined Jury Verdicts and Settlements database (JV-ALL) was (“product liability” “strict liability” negligence) & ((contaminated tainted coli listeria norovirus salmonell! “for human consumption” “food poisoning” virus) & (eating eaten ingest! bite! ate consumed consuming)) & DA(AFT 12/31/1999). The search returned 132 results total, and after omitting 19 noncontamination-related results, 113 cases were entered into the database. Next for robustness sake, we added the additional search term “food poisoning.” This search yielded 112 results, and after omitting for duplications and for non-food contamination cases, an additional 17 cases were added to the spreadsheet. Finally, we conducted a search for individual pathogens. Many cases appeared, but most were duplicates already in the spreadsheet, or medical cases unrelated to food contamination. The results were as follows: “Listeria:” 2 cases total, both already in spreadsheet. “Salmonella:” 12 cases total, all already in spreadsheet. “E.Coli:” 24 cases total, 9 repeat, 12 medical unrelated, 3 other unrelated. “Vibrio:” 0 cases. “Staphylococcus:” 19 cases total, 18 medical unrelated, 1 other unrelated (tattoo). “Campylobacter:” 0 cases. “Toxoplasma:” 0 cases “Botulism:” 1 case total, 1 case already in spreadsheet. “Clostridium botulinum:” 3 cases total, 3 medical unrelated “B.Cereus:” 0 cases. “Hepatitis A:” 16 total cases, 2 new cases, 6 already in spreadsheet, 7 medical unrelated, 1 other unrelated. “Listeriosis:” 0 cases. “Gastroenteritis:” 24 cases total, 5 already in database, 16 medical unrelated, 3 other unrelated. “Norovirus:” 0 cases. The JV-ALL database is available at <http://www.westlaw.com>.

211. The Center for Science in the Public Interest conducted a 10-year study in which they found that “the most frequently identified and reported bacterial pathogens were *Salmonella* spp. . . . , *Clostridium* spp. . . . , *Staphylococcus* spp., *Bacillus* spp., *E. coli* spp., and *Campylocater*. Viruses were also noted—norovirus in particular accounted for a significant number of outbreaks. See CTR. FOR SCI. IN THE PUB. INTEREST, *supra* note 160, at 8.

212. The exact search terms on JV-ALL were: “food poisoning”, salmonell!, hepatitis-A, norovirus, bacteria and food, and (sick ill hospitalized) & food. The JV-ALL database is available at <http://www.westlaw.com>.

Key pieces of information on the case were collected: case name, date, jurisdiction (state), citation, a summary of the facts, plaintiff name, defendant name and type of defendant (manufacturer, distributor, and restaurant), the likely pathogen, time to resolve the dispute, whether or not the case was tried at the state or federal level, damages, cause of action, plaintiff's attorney, the age of the plaintiff, plaintiff's death, defendant headquarters (state), the type of defendant, defendant's attorney, and whether the plaintiff's or defendant's attorney was an expert in the field and/or ranked, and other variables.²¹³

While the cases collected for this study represent all cases related to foodborne illness found in the Westlaw database, a few limitations to this data need to be disclosed. The cases in this study do not represent the universe of cases on foodborne illness. Cases make it into Westlaw by reporters and cases

213. Key facts regarding the variables include the following. Whether or not the case was tried at a state court or federal court was recorded (state court=1, federal court=0). We collected the damages amount for every case. When the damages are \$0, the verdict, settlement, or mediation ruled on behalf of the defendant. In the dataset, the damages term is a positive, continuous variable. The case summaries do not provide a breakdown of the damages. However, foodborne illness cases (and personal injury cases generally) typically request compensatory damages (economic damages and general, or noneconomic damages). Economic damages are those for which money has been, or will be, paid, and for which money has been, or will be, lost, e.g., medical bills (both past and future), lost wages (both past and future), lost earning capacity, and property damages. While past economic damages are typically not disputed, noneconomic damages are always in dispute. See Shapo, *supra* note 207, at 339–40, 349, 356. These damages include such things as: (1) pain and suffering; (2) mental anguish and emotional distress; (3) loss of enjoyment of life; and (4) the reasonable fear of future illness. General damages also include loss of consortium claims, i.e., a claim asserted by the spouse or child of the injured person alleging injury to their relationship and the loss of love and affection. Punitive damages are controversial, but also relatively rare. *Id.* at 363–64. We collected information on the plaintiff and defendant. On behalf of the plaintiff we collected: plaintiff's name, name of plaintiff's attorney, and the age of the plaintiff. To capture severity of the plaintiff's injury we coded for death (death=1, no death=0). On behalf of the defendant we collected: defendant name, defendant headquarters (state), the type of defendant (Restaurant=3, Manufacturer=1, Distributor=2), and name of defendant's attorney. Information on the likely pathogen was collected: the pathogen (*E.coli*, etc.) and if available, the type of food product (in the literature it is called the "vehicle"). To capture if we felt there was an internationally sourced food product involved in the case, we coded for international (Yes=Y, No=N, Unsure=U). Finally, case resolution information was collected: type of resolution (verdict=3, settlement=2, arbitration=1), damages amount, time to resolution (in years and months) and filing to trial (in months) based on dates provided in the summary. Based on the fact pattern we were able to collect information on the cause of action for a given case. We coded for cause of action (Negligence=1, Products Liability=2, Negligence plus Products Liability=3, Other=4 (breach of warranty)). Most of the cases in the dataset stated the case was being brought in negligence or products liability with many stating both causes of action. The cause of action is either Negligence (coded =1), Products liability (coded=2), Products Liability and Negligence (coded=3), or other (coded=4). We coded for awarded damages in dollars.

need to be filed to get into the reporters. Yet not all foodborne illness cases are reported and not all foodborne illness cases result in a filing because many are settled out of court. So, for starters, the number going to Westlaw may be small. The number may be even smaller due to variations in state reporting mechanisms.

The dataset was tested for consistency and completeness in order to discern whether the original search missed any relevant cases. For instance, we discovered early on that many cases confidentially settle prior to filing and we examined this in depth. A confidential settlement could mean that the case would never be recorded in the Westlaw database or in a court reporter and would mean that the number of reported cases in this study underrepresents the number of cases that are settled per year.²¹⁴ After analyzing the number of confidential settlements that the most prominent foodborne illness attorney in the United States litigates, we conclude that our dataset of reported cases is smaller than the number of cases during this period, but not alarmingly so.

We also wanted to check that our dataset contained cases related to the top ten outbreaks during this time period.²¹⁵ The result was a series of lists: CDC Top Ten Based on *Illnesses*,²¹⁶

214. To gather a sense for the number of cases that potentially settle before filing—what we call the “Marler Clark effect”—we collected the cases and press releases that the law firm Marler Clark reveals on its website for the time period in question, 2000–2011.

Since 1993, the Marler Clark attorneys have represented thousands of clients in litigation against restaurants and food companies whose food was identified as the source of illness. Since that time, the law firm has represented victims of a great many E. coli, Salmonella, hepatitis-A, or other foodborne illness outbreak across the country.

MARLERCLARK, <http://www.marlerclark.com> (last visited Nov. 4, 2012). We counted 305 cases and/or press releases from the Marler Clark website, many of which were labeled “confidential” or “undisclosed”. *Case News: Food Poisoning Cases & Other Law Firm News*, MARLERCLARK, http://www.marlerclark.com/case_news/C88 (last visited Sept. 4, 2012); *Press Releases*, MARLERCLARK, http://www.marlerclark.com/press_releases/C89/2011. This finding suggests that our dataset of reported cases is smaller than the number of cases during this period.

215. Using the CDC Foodborne Outbreak Online Database, a search was conducted for all states, all locations, all etiologies (the cause or origination), confirmed etiological statuses, and the years of 2000 to the last year in the CDC database, 2008. The outbreaks with the ten highest amounts of illnesses were compiled along with all the information included in its CDC entry. The CDC Foodborne Outbreak Online Database is available at <http://www.cdc.gov/foodborneoutbreaks/>.

216. CDC Top Ten Based on Number of Illnesses during 2000–2011: (Date of Outbreak and Number of Illnesses in parentheses): May 2006 (1644), Apr. 2008 (1500), Apr. 2006 (1200), Jan. 2003 (964), Sept. 2002 (950), June 1998 (916), May 2001 (886), Nov. 2003 (880), Apr. 2005 (872), and Jan. 2001 (811). For more information, see the CDC Foodborne Outbreak Online Database, *supra* note 215.

CDC Top by *Hospitalizations*,²¹⁷ and CDC Top Ten Based on *Deaths*.²¹⁸ Of the top ten outbreaks for illnesses, hospitalizations, and deaths, only two, the outbreaks with the third and fourth highest death totals, were confirmed to be in our database of cases. It is possible and likely that many of the cases we are missing were confidentially settled. Again, we conclude that our dataset of reported cases is smaller than the number of cases during this period, but not alarmingly so.²¹⁹ To be sure, future work is needed to examine confidential settlements.

For the empirical analysis, we need to be able to capture state differences relevant to the analyses at hand such as differences in tort reform²²⁰ and differences in their public health reporting ability (including collaboration with national food safety initiatives and agencies).²²¹ States also vary to the

217. CDC Top Ten Based on Number of Hospitalizations during 2000–2011: (Date of Outbreak and Number of Hospitalizations in parentheses) Apr. 2008 (308), Sept. 2008 (166), Aug. 2006 (129), July 2004 (129), Oct. 2003 (128), Feb. 2007 (108), Aug. 2006 (103), Oct. 1998 (101), Aug. 2008 (71), and Mar. 1998 (60). For more information, see the CDC Foodborne Outbreak Online Database, *supra* note 215.

218. CDC Top Ten Based on Number of Deaths during 2000–2011: (Date of Outbreak and Number of Deaths in parentheses) Oct. 1998 (21), Sept. 2008 (9), July 2002 (8), May 2000 (7), Jan. 2003 (7), Feb. 2004 (6), Aug. 2006 (5), Jan. 2010 (5), Nov. 2001 (4), Oct. 2003 (3), June 2007 (3), and Aug. 2008 (3). For more information, see the CDC Foodborne Outbreak Online Database, *supra* note 215.

219. At the same time, many of the CDC outbreaks could not be confirmed because the entry for the outbreak was often missing an important piece of information, such as the vehicle. In addition, the summary of the facts from the cases in our database was often missing the vehicle, the date of the incident, and the etiology. Without these three pieces of information, it was not possible to confidently confirm a match. For more information, see the CDC Foodborne Outbreak Online Database, *supra* note 215.

220. Since not every state allows a plaintiff to collect punitive damages for foodborne illness, we needed to incorporate limits to noneconomic and punitive damages for cases other than medical malpractice for each state. Data on damage limits was supplemented by information from the American Tort Reform Association's summaries of the states' recent reforms of noneconomic and punitive damages limits. AM. TORT REFORM ASS'N, TORT REFORM RECORD 19, 34 (June 28, 2012), www.atra.org/sites/default/files/documents/record%207-1-12_0.pdf. For both types of damages, a "0" signifies that there is no limit, a "1" indicates that there is a limit or a higher standard of evidence, and a "2" means that the state has declared the limits unconstitutional. Other information was collected such as the year of the most recent statute or change to the states stance towards damages, the citation of the statute, as well as full and concise statements of the damage limit taken directly from the sources. LAWRENCE J. MCQUILLAN & HOVANNES ABRAMYAN, U.S. TORT LIABILITY INDEX: 2010 REPORT, *available at* http://www.doh.state.fl.us/Workforce/Workforce/Council_Materials/Tort_Liability_Index_2010.pdf.

221. Two variables were collected measuring the degree to which states report and investigate foodborne illness cases were collected: (1) the state grade in their reporting ability (available through Citizens for Science in the Public Interest state gradings), CTR FOR SCI. IN THE PUB. INTEREST, *supra* note 160, at 2–3; and (2) collaboration with the FDA. The FDA participates in the Foodborne Diseases Active Surveillance Network

extent that plaintiffs are allowed to use consumer protection statutes to file civil suits for foodborne illness.²²² These statutes are available as a means for recovery in only a handful of states.²²³

In sum, the 320 cases collected for this study represent all cases related to foodborne illness found in the Westlaw database. Undoubtedly, the cases in this study do not represent the universe of cases on foodborne illness because not all foodborne illness cases are reported (for every one case there are 30 that go unreported),²²⁴ and not all foodborne illness cases result in a filing because many are settled out of court. So the number going to Westlaw will be small.

B. Descriptive Statistics

Several descriptive statistics were tabulated: (1) the type of defendants; (2) the type of resolution; and (3) the time to resolution.

(FoodNet), a surveillance network established in 1995 which focuses on sporadic foodborne illness as a partner in collaboration with CDC, USDA, and ten state health departments: Connecticut, Georgia, Maryland, Minnesota, New Mexico, Oregon, Tennessee, and sections of California, Colorado, and New York. *Foodborne Diseases Active Surveillance Network (FoodNet): About FoodNet*, CTRS. FOR DISEASE CONTROL & PREVENTION, <http://www.cdc.gov/foodnet/about.html> (last visited Sept. 4, 2012). The purpose of FoodNet is to:

Determine the burden of foodborne illness in the United States . . . Monitor trends in the burden of specific foodborne illness over time . . . Attribute the burden of foodborne illness to specific foods and settings . . . [And to] [d]isseminate information that can lead to improvements in public health practice and the development of interventions to reduce the burden of foodborne illness.

Id.

FoodNet provides stable surveillance for a variety of pathogens and syndromes, data for updating the overall burden estimate, and mechanism for rapid institution of surveillance of new and emerging enteric pathogens. *FoodNet Surveillance*, CTRS. FOR DISEASE CONTROL & PREVENTION, <http://www.cdc.gov/foodnet/surveillance.html> (last visited Jan. 23, 2013). FoodNet has provided documentation to support FDA regulations by publishing over fifty-five manuscripts in the peer reviewed medical literature. *About FoodNet*, CTRS. FOR DISEASE CONTROL & PREVENTION, <http://www.cdc.gov/foodnet/about.html> (last visited Sept. 4, 2012).

222. TORT LAW DESK REFERENCE: A FIFTY STATE COMPENDIUM 115, 735, 1018 (Morton F. Daller ed., 2011).

223. *Id.* The Tort Law Desk Reference cites each state's consumer protection statute and was used for some of the information about damages. The URL for each state is provided along with the amount of illegal practices listed in the statute. The names of the statutes vary—for instance, Colorado has the “Consumer Protection Act” and New York has the “Consumer Protection From Deceptive Acts and Practices.” A review of all states' online consumer protection statutes revealed that Wisconsin was the only state for which the statute could not include food as a protected product.

224. Interview with Elaine Scallan, Assistant Professor of Epidemiology, Colorado School of Public Health, in Boulder, Colo. (Oct. 1, 2011).

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The 320 defendants in the dataset were comprised of 44 distributors, 45 manufacturers, and 231 retail outlets or restaurants. The average monetary damage amount for a case involving a restaurant was \$328,486 with a minimum of \$0 and a maximum of \$25.2 million. This number was somewhat skewed however, because of a class action lawsuit which settled for over \$25 million.²²⁵ Of these 251 cases against restaurants, 160 cases (or 67% of the total) were resolved by jury verdict, 58 (25%) were settled, and 14 (6%) were resolved through arbitration.

The average resolution for cases involving distributors was \$343,999 with a minimum of \$0 and a maximum of \$4.75 million. Of the 44 cases against distributors, 29 cases (or 66% of the total) went to trial and reached a jury verdict, 12 (27%) were settled, and 3 (7%) went to arbitration.

The average resolution for cases involving manufacturers was \$284,394 with a minimum of \$0 and a maximum of \$3 million. Of the 45 cases against manufacturers, 16 (or 36% of the total) went to trial and reached a jury verdict, 21 (48%) were settled, and 7 cases (16%) were resolved through arbitration. Interestingly, 88% of cases against manufacturers resulted in monetary damages awarded to the plaintiff, as opposed to 59% of cases against distributors and 61% of cases against restaurants.²²⁶

Turning to the type of resolution, of the 320 cases, 24 ended through arbitration, 91 were settled, and 205 resulted in jury verdicts. Of the 24 arbitration cases, 33% of the cases resulted in \$0 damages (victory for defense) and the average damage amount (including the zeros) was \$11,222 with a minimum of \$0 and a maximum of \$140,000. Of the 91 settled cases, 3% of the cases resulted in \$0 damages and the average damage award was \$662,359 with a minimum of \$0 and a maximum of \$13.5 million. Of the 205 verdict/trial cases, 60% of the cases resulted in \$0 damages and the average damage amount was \$211,289 with a minimum of \$0 and a maximum of \$25.2 million. The jury verdict average was skewed because of the large verdict mentioned earlier, namely a class action award of \$25 million.

225. Reno Hilton Resort Corp. v. Verderber, 106 P.3d 134, 135 (2005) (a class action lawsuit resulting in a \$25,050,000 verdict).

226. There are 133 cases for which damages were \$0. These cases are present in arbitrations, settlements, and trial verdicts. See *infra* Table 1.

Table 1: Cases sorted by Arbitration, Settlement and Verdict

Case Characteristics	Arbitration	Settlement	Verdict
Damages = \$0 (defense verdict)	8	3	122
Damages > \$0 (plaintiff verdict)	16	88	83
Damages > \$100,000	1	29	18
Number of Observations	24	91	205

To summarize the descriptive results, while more cases reach the verdict stage, the data suggest that plaintiffs fare better when they settle—they receive higher damages. Observing the case characteristics, of the 320 cases in the dataset, 205 reach the verdict stage. Of these, 122 cases (59%) resulted in victories for the defense. Plaintiffs lost their cases and received no monetary compensation. Meanwhile, 91 cases reached the settlement stage and only 3 (3%) plaintiffs received no monetary compensation. Moreover, those that settled generally received higher damages. 29 out of 91 cases that settled (32%) received damages exceeding \$100,000. For cases that reached the verdict stage, only 18 out of 205 total verdicts (8%) received damages exceeding \$100,000.

Finally, in terms of the length of resolution, on average, it took 3.35 years (minimum was 1 year and maximum was 14 years) for cases to be resolved from the time of the incident until the final resolution, whether through a verdict, settlement, or arbitration. Generally, cases that went to trial took the longest to resolve, averaging 3.66 years before a final verdict. Cases that were settled took 2.93 years to come to a final conclusion. Interestingly, one settlement took 10 years to reach its final resolution. Finally, cases that went to arbitration took 2.25 years to resolve. Combined with earlier results that show arbitration results in the lowest monetary sum paid per lawsuit, this provides a strong incentive for companies facing litigation to arbitrate.

Interestingly, the 42 cases for which “negligence” was the designated cause of action took the longest to resolve, an average of 3.54 years. For the 118 cases for which “products liability” was the designated cause of action, the average was 3.39 years. For

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the 151 cases for which products liability and negligence were the causes of action, the average was 3.21 years. And for the 29 cases for which “other” was the designated cause of action, the average time to resolution was 4 years.

Cases involving lawsuits against manufacturers and restaurants took the least time to resolve (3.20 years on average, and 3.36 years on average, respectively) compared to cases involving lawsuits against distributors (3.43 years on average).

The average damages award was \$324,557 with a minimum of \$0 and a maximum of \$25.2 million. The damage award varied with the plaintiff's age and severity of injury. If the plaintiff was a minor, the average award climbed to \$709,289, with a minimum of \$0 and a maximum of \$13.5 million. If the plaintiff died, the damages award climbed again to an average of \$1,326,926, with a minimum of \$0 and a maximum of \$13.5 million.

In our dataset, defendants used ranked law firms more than plaintiffs. In the 320 cases, plaintiffs firms were ranked nationally or locally, 10% of the time, compared to defendants firms which were ranked 17% of the time.

C. Results

I analyzed over 300 foodborne illness cases filed between 2000 and 2011 to determine whether legal liability serves as an effective deterrent for future wrongdoing. A working hypothesis developed from the theory was that tort verdicts and settlements have deterrence value when a plaintiff wins and when the monetary verdict is large. Three empirical models are specified to examine factors that contribute to the plaintiff win and the size of the verdict. The “speed” model examines what determines the speed at which a case is resolved; the “win” model examines what determines whether or not a plaintiff wins; the “payback” model examines what determines how much a plaintiff recovers in monetary terms. The following paragraphs briefly describe the results from the models specified above. Table 1 in the Appendix contains detailed empirical results.

I developed six testable hypotheses using the descriptive results from above. They are: (1) *State Theory*—state legislative limits on damages lead plaintiffs to forum shop and recover in some states more than others; (2) *Deep Pocket Theory*—some defendants are easier to sue because they have deeper pockets (more financial resources and/or insurance to cover claims); (3) *Elite Firm Theory*—if the plaintiff/defendant is represented by a leading law firm, then the plaintiff/defendant case is likely to

win a greater sum;²²⁷ (4) *Pathogen Theory*—some cases may be more severe than others due to the pathogen and some types of pathogens are more severe than others, leading to higher damages; (5) *Strong Case Theory*—plaintiffs who suffer serious injuries and/or die have conceivably stronger cases leading to more damages; (6) *Damage Caps Theory*—damages will be lower when caps are in place. I examine the results from the empirical models and determine whether evidence can be found in favor of these hypotheses. The model results are as follows.

The first model is the “**speed**” model. I specified an ordinary least squares (OLS) model²²⁸ to determine how quickly a case gets resolved. The dependent variable, “time to resolve,” is a continuous variable measured in years. The independent variables are: type of food consumed, year of the case, whether the plaintiff died, the type of defendant involved, method in which the case was resolved, whether the case was tried in state court, whether the plaintiff/defendant hired an attorney with previous experience litigating foodborne illness cases, cause of action, legislative limits on noneconomic damages, legislative limits on punitive damages, whether the plaintiff’s/defendant’s firm is ranked, whether the plaintiff is a minor, and the state ranking for foodborne illness reporting.²²⁹ The results from this

227. Attorney ability is likely to vary. Some attorneys may be more experienced and therefore better able to estimate the probability that a client will win a case at trial and the damages that will be paid, or the settlement that will be reached. Other attorneys may be better at preparing a case, negotiating a settlement, or arguing a case at trial. The probability of winning may depend on the ability of the attorney. *Cf.* Cooter & Rubinfeld, *supra* note 29, at 1071 (noting that the amount that plaintiffs expect to win is in part determined by the efforts the parties devote to winning).

228. *See, e.g.*, DANIEL A. POWERS & YU XIE, STATISTICAL METHODS FOR CATEGORICAL DATA ANALYSIS 24 (2000).

229. The independent variables in this regression (and in the other regressions to follow): *Vehicle* is the type of food consumed if identified (=1), if unknown or multiple foods but no one identified (=0), *Year* of the case (0 to 11, beginning with 2000=0), *Die* is whether the plaintiff died (=1) or not (=0), *Def* is the defendant type noted as whether a manufacturer (=1), distributor (=2), or retailer/restaurant (=3), *VSA* is whether the trial went to arbitration (=0), settlement (=2), or trial, (=3). *Dstate* is whether the case was tried in a state court. *PlawExpert* is whether the plaintiff hired an attorney that had previous experience with this sort of case (previous experience is noted as trying/settling 2 or more cases in our dataset), (=1) or not (=0). The same is for *DlawExpert*. *Coa* denotes the cause of action as Negligence (=0), Products liability (=2), Products liability and Negligence together (=3), and Other (=4), *Lnonec* denotes limits on noneconomic damages noted as limits (=1) and no limits (=0), *Lpun* denotes limits on punitive damages noted as limits (=1) and no limits (=0). *PFirmRank* is whether the firm is ranked, either locally or nationally and it is noted as ranked (=1) and not ranked (=0); the same is true for the variable *DfirmRank*. *Minor* denotes whether the plaintiff is under 18 years of age and is noted as minor (=1) or not minor (=0). *Stategrade* looks at the state ranking for food safety preparedness and is noted when a state is ranked with an “A” (=1) and if ranked below “A” (=0).

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model suggest that lawsuits are resolved at a slower pace when years go by, when the case involves a plaintiff who has suffered the gravest injury. Lawsuits are resolved at a faster pace when the plaintiff's lawyer is an expert in litigating foodborne illness cases and locally or nationally ranked, when the defendant's lawyer is ranked, and when the state has limits on punitive damages. These are all statistically significant results.

The next model is the “**win**” model. This model examines what factors determine whether a plaintiff wins in terms of receiving a monetary damage amount. If the plaintiff files a lawsuit, the plaintiff may be compensated at the end of the trial through a verdict or during the trial as a settlement. For our purposes, a plaintiff either wins a case or does not win a case (nonzero damages represents a plaintiff verdict and zero damages represents a defense verdict). Since the dependent variable is dichotomous, I use logistic regression (LOGIT).²³⁰ The independent variables are the same as those listed above for the “speed” model. The results suggest that a plaintiff is less likely to win a monetary award if the case goes to verdict, and more likely to win if punitive damage limits are in place and if the plaintiff is a minor. These are all statistically significant results.

The final model, the “**payback**” model, examines what factors determine the dollar amount that a plaintiff recovers. Since the dependent variable is the “monetary damages amount”—a continuous variable measured in dollars—an OLS model is specified. The independent variables are the same as in the previous models. The results suggest that the longer a suit takes to get resolved, the higher the damages. Damages increase when a plaintiff dies, when the state in which the illness occurred has a higher (better) grade for public health reporting, when the state has a limit on punitive damages, and when the plaintiff's firm is ranked. These are all statistically significant results.

The statistical regression results provide evidence supporting three of the six hypotheses. First, the *Elite Firm Theory* holds that if the plaintiff/defendant is represented by a leading firm then the plaintiff/defendant case is more likely to win a greater monetary sum. The “payback” and “speed” models show that when a plaintiff hires an elite firm, the case is resolved at a faster rate and with a higher level of damages. Next, the *Strong Case Theory* holds that plaintiffs that suffer serious injuries and/or die have stronger cases leading to more damages.

230. See, e.g., POWERS & XIE, *supra* note 228, at 49–50.

The “payback” and “speed” models show that if a plaintiff dies, the case will take longer to resolve but the award will be higher than most. Finally, the *Damage Caps Theory* states that damages will be lower when caps are in place. When punitive damages limits are in place, cases are resolved faster, more plaintiffs win (perhaps because there are fewer issues to resolve); however, plaintiffs receive *more* in damages, not *less*. Perhaps when plaintiffs are barred from claiming punitive damages they make a stronger case for higher compensatory damages—evidence supporting a substitution of compensatory damages for punitive damages.

V. A SOLUTION FOR IMPROVED FOOD SAFETY REGULATION

The Food Safety Modernization Act (FSMA) was introduced during a low in the modern era of food safety regulation when the public was crying for more regulations.²³¹ The current delay in implementing the FSMA makes this an opportune time for policy recommendations.

The empirical results from the analysis of 320 foodborne illness cases provide guidance for regulators—particularly in the areas of prevention and response. The case analysis provides support for empirically founded regulatory improvements. Note that many of the suggestions articulated below merely support current efforts and do not require any new regulations per se. This bodes well for both camps—those who disfavor more regulation and those who support the new FSMA rules.²³²

231. See *How Do You Fix Our Ailing Food Safety System?: Hearing Before the Subcomm. on Health of the H. Comm. on Energy and Commerce*, 110th Cong. 1 (2009) (statement of Caroline Smith DeWaal, Director of Food Safety, Center for Science in Public Interest) (decrying “long-standing deficiencies that are causing a crisis in consumer confidence”); *The Salmonella Outbreak: The Role of Industry in Protecting the Nation’s Food Supply: Hearing Before the Subcomm. on Oversight and Investigation of the H. Comm. on Energy and Commerce*, 110th Cong (2009) (statement of A. D. David Mackay, CEO, Kellogg Co.) (addressing Kellogg’s role in the PCA peanuts *Salmonella* outbreak, and arguing that the “recent outbreak illustrated that the U.S. food safety system must be strengthened”); Ben Feller, *White House: Stricter Food Safety Rules Coming*, FOXNEWS.COM, (Jan. 30, 2009), http://www.foxnews.com/printer_friendly_wires/2009Jan30/0,4675,ObamaSalmonella,00.html (noting promises of “stricter oversight” and a “stricter regulatory structure” in response to PCA salmonella outbreak).

232. See Doug Powell, *Five Years After E. Coli Outbreak, Salinas Valley Farmers Struggle to Rebound*, BARFBLOG (Nov. 27, 2011, 12:18 AM), <http://bites.ksu.edu/blog/151633/11/11/27/five-years-after-e-coli-outbreak-salinas-valley-farmers-struggle-rebound>.

“It was just more regulations. More inspections. More paperwork. More filings. More fees,” said Chris Bunn, part of a four-generation Salinas Valley farming family of California lettuce and spinach. Now in his 60s, he quit two years after the 2006 outbreak. “I miss it terribly,” Bunn said. “It was a wonderful business.”

A. *Toward More Responsive, Empirically Informed Regulation*

The balance between regulation and deregulation is a delicate one and it involves many of the elements of “new governance” listed earlier. My empirically based solution involves more “responsive” regulation—namely, that federal regulators will base their decision to regulate upon the conduct of the entities that they oversee (in this case, lawsuits regarding these entities).²³³ Firms can also be proactive. If firms are able to attribute the benefits of innovation, legal liability can also spur food safety innovation as firms recognize the costs related to litigation. If, for example, citizens or corporations are effectively regulating themselves, then law enforcers will be less likely to escalate intervention.²³⁴ Governments will escalate to somewhat more punitive approaches only when dialogue fails and when the more modest forms of punishment fail. Applying this to food safety, regulation should be responsive to market forces and litigation outcomes, being mindful that there are no guarantees that government intervention will improve upon the unregulated market.²³⁵ The balance, then, between regulation and deregulation is a delicate one.

The FSMA rules and any improvements to them should be responsive to the failures in obtaining legal redress for foodborne illness and in government regulation of food manufacturers, distributors, and retailers noted in the literature review, the descriptive review of cases, and the empirical analysis.

The empirical results suggested that there are market failures in the provision of legal redress for foodborne illness. One such market failure is market access—the data suggests that cases rarely go to trial. For cases that do go to trial, our data suggests that defendants utilize ranked law firms more than plaintiffs: plaintiffs firms were ranked 10% of the time, compared to defendants firms which were ranked 17% of the time. This

Id.

For the opposite view, see David Acheson, *FSMA Delay Spurs Curious Partnerships and Regulation Pleas . . . But They Are Likely to Have Zero Impact*, LEAVITT PARTNERS, (Sept. 6, 2012), <http://leavittpartnersblog.com/2012/09/fsma-delay-spurs-curious-partnerships-and-regulation-pleas-but-they-are-likely-to-have-zero-impact/> (noting the strong alliance between different interest groups toward more, not less, regulation).

233. AYRES & BRAITHWAITE, *supra* note 113, at 29; *see also* John Braithwaite, *Responsive Regulation and Developing Economies*, 34 *WORLD DEV.* 884, 884–86 (2006); John Braithwaite, *Rewards and Regulation*, 29 *J.L. SOC'Y* 12, 14, 19 (2002).

234. AYRES & BRAITHWAITE, *supra* note 113, at 29.

235. John M. Antle, *Benefits and Costs of Food Safety Regulation*, 24 *FOOD POL'Y* 605, 606 (1999) (outlining the concepts and methods that can be used to quantify the benefits and costs of food safety regulations).

suggests that plaintiffs may not be receiving the best representation possibly because plaintiffs face transaction costs and information costs that prevent them from bringing cases forward. Even when plaintiffs bring their cases forward, causation is difficult to establish due to the fact that plaintiffs seldom have in their possession the food article that made them ill. Instead, their attorneys have to use inspection history of the firm in question and other devices to prove causation and name the pathogen. The empirical findings (from the “payback” model) also suggest that plaintiffs fare better with respect to receiving higher monetary damages in states that have favorable state rankings for food safety preparedness. It could be that in these states, more resources are devoted to incident reporting and investigation leading to more evidence for the plaintiff to use in her case. If legal remedies motivate firms to take food safety precautions, it is only when plaintiffs come forward and win—which means naming the pathogen. When firms bear the costs of injuries through monetary verdicts, they are more likely to invest more resources in reducing contamination (assuming that firms can reap the benefits of food safety innovation).

With these results in mind, can the FSMA help plaintiffs increase their access to the legal system and once there, to improve their efforts in proving causation and increasing their recovery—if and when their cases merit recovery? There are in fact ways in which the FSMA rules show promise in correcting some of the market failures in food safety and ways in which the FSMA regulations could be improved. The FDA regulations can aid plaintiffs in overcoming the main hurdles in their case—causation and traceability—by focusing federal resources on **prevention** (increasing inspections and sanctions) and **response** (coordinating efforts between federal and state public health reporting). Each will be discussed in turn.

1. *Increased Prevention Efforts.* When it comes to preventive efforts, one recommendation is to increase the visibility and responsibility of food inspections (hiring more inspectors). The literature review highlighted cases where regulation had failed through poor inspection. The empirical results show that of the 320 cases, most involved restaurants as the defendant. In a study performed by the Center for Science in the Public Interest, foodborne illness outbreaks were found to most commonly occur in restaurants and other food

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establishments, followed by private homes, and workplaces.²³⁶ Restaurants are implicated as the primary source for outbreaks due to the fact that restaurants handle a high quantity of food and use a variety of preparation methods leaving plenty of opportunity for contamination.²³⁷

A recent investigation in Dallas found that over 200 Dallas restaurants had not received an inspection in at least two years.²³⁸ One restaurant industry expert noted that the Dallas findings are typical of big cities around the country where cities cut back on inspectors and are unable to maintain inspection workloads.²³⁹ Evidence of this is found in a recent article showing that “two years ago, Dallas had 23 restaurant inspectors,” but after inspectors left and were not rehired “[t]oday Dallas has 13 inspectors to inspect more than 6,000 restaurants.”²⁴⁰

Local and state regulators are not the only ones to blame—the FDA has also been faulted for state inspections.²⁴¹ What the FDA can do is to ensure that states have completed the number of inspections assigned to them and to monitor the inspections as required by law.²⁴² The current practice is for federal regulators to delegate the inspection of plants that pack and process food to the states—yet federal regulators are failing to monitor state inspections.²⁴³ Evidence shows that this delegation of oversight, fueled by a lack of federal resources, is widespread.²⁴⁴ Over one-half of FDA inspections were conducted by state officials in fiscal 2009, up from 42% in 2005.²⁴⁵ Inspections that are not conducted properly can expose consumers to life-threatening foodborne illness.

236. CTR. FOR SCI. IN THE PUB. INTEREST, *supra* note 160, at 9.

237. *Id.*

238. Scott Friedman, *NBC 5 Investigation: Hundreds of Dallas Restaurants Not Inspected in Years*, NBCDFW.COM (Apr. 27, 2012, 1:58 AM), <http://www.nbcdfw.com/news/health/NBC-5-Investigation-Hundreds-of-Dallas-Restaurants-Not-Inspected-in-Years-140572833.html>; *see* Dallas City Code 17-10.2(f)(4) (requiring inspections every 6 months at a minimum).

239. Friedman, *supra* note 238 (referencing a conversation with food safety expert Peter Snyder).

240. *Id.*

241. Dina ElBoghady, *FDA Faulted Over State Inspections*, WASH. POST, Dec. 15, 2011, at A2.

242. *Id.*

243. *See id.*

244. *Id.*

245. DEPT OF HEALTH & HUMAN SERVS., OFFICE OF INSPECTOR GEN., VULNERABILITIES IN FDA'S OVERSIGHT OF STATE FOOD FACILITY INSPECTIONS 14 (2011), available at <https://oig.hhs.gov/oei/reports/oei-02-09-00430.pdf>; *see also* ElBoghady, *supra* note 241.

As mentioned earlier in connection with the discussion on deterrence and the role of raids, the *Salmonella* outbreak connected to peanuts processed in a Georgia plant occurred after the plant had passed multiple inspections by state officials working on the FDA's behalf. In that same year, the FDA was reportedly working with forty-one states, "eight [of which] did not complete 10 percent of the 2,170 inspections they were responsible for that year."²⁴⁶ To be sure, improvements in food safety will not come from increasing state inspections alone; it is critical that FDA regulators increase their oversight of state inspections, implementing state recommendations when needed.

It has been noted that the FSMA mandate to increase the frequency of inspections both in the United States and abroad will be costly and that the cost will be a challenge.²⁴⁷ Building partnerships will provide the FDA an ability to meet this frequency with limited funding. For instance, FSMA section 209 provides the FDA with the authority to provide grants to state, local, tribal, and territorial partners.²⁴⁸ These partnerships will help the FDA to achieve the increased frequency of inspections. FSMA section 307 allows the FDA to accredit third parties for certification, and section 306 provides the FDA with the authority to create agreements with foreign governments for FDA inspections in those countries.²⁴⁹ It also provides the National Oceanic and Atmospheric Administration (NOAA) with the authority to inspect seafood facilities abroad. All of these various partnerships will enable the FDA to increase its capacity for inspections. It is also important for the FDA to engage in risk analysis. The FDA should prioritize its more limited resources on the riskiest areas. In its inspections, the FDA should rely on its partner agencies to inspect those facilities and products with a lower risk; and it will focus its own resources on the highest risk inspections. A determination of the level of risk will depend on: (1) the inherent risk of the food product; (2) inherent risks in the food processing; (3) the facility's compliance history; and (4) food

246. ElBoghdady, *supra* note 241.

247. CONG. BUDGET OFFICE, COST ESTIMATE FOR FOOD SAFETY MODERNIZATION ACT 4, 6, 10 (2010), <http://www.cbo.gov/sites/default/files/cbofiles/ftpdocs/117xx/doc11794/s510.pdf>; *FSMA Implementation: Prioritizing Partnerships and Risk*, LEAVITT PARTNERS (2012), <http://leavittpartners.com/wp-content/uploads/2012/02/Food-Safety-Website-FSMA-Implementation-Scorecard-v4-1.20.12.pdf>.

248. FDA Food Safety Modernization Act, Pub. L. No. 111-353, § 209, 124 Stat. 3885, 3945 (2011) (codified at 21 U.S.C. § 399c); Leavitt Partners, *supra* note 247.

249. FDA Food Safety Modernization Act, Pub. L. No. 111-353, §§ 306-307, 124 Stat. 3885, 3958-60 (2011) (codified at 21 U.S.C. §§ 384c-384d); Leavitt Partners, *supra* note 247.

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safety programs in the country where the food was produced. The top ten food pathogens, and the cost burden of foodborne illnesses connected with food products, will also likely be relevant factors. And yet, as noted earlier, while it is important for the FDA to use its resources wisely to increase inspections, it is equally critical to increase monitoring of inspections delegated to states and local governments.

Since inspections are to be increased both in the United States and abroad, it is perhaps timely to discuss to what extent importer liability issues are at stake. What deters importers from importing questionable foods? How many lawsuits are directed towards importers? Analyzing the cases in the database reveals that no cases are tied or linked to a foreign-sourced product. While few domestic firms are held accountable, even fewer foreign firms are held accountable for contamination of food products. A recent report published by the FDA provides an update on FSMA implementation.²⁵⁰ While it is not comprehensive, it provides some of the major steps taken by agencies to implement the FSMA.²⁵¹ While none of the foods examined in the empirical study was a foreign product, it is important to note that the FSMA has increased protections for food imports.²⁵²

For instance, in July 2011, the FDA received authority to suspend the registration of food facilities in order to prevent importing and exporting to the United States.²⁵³ If a food facility's safety measures fail, that facility is expected to file a report with the FDA and voluntarily recall the product or take other measures to ensure the food is not sent to consumers.²⁵⁴ The FDA may suspend a facility's registration if the food it has produced or distributed has "a reasonable probability of causing serious adverse health consequences or death to humans or animals."²⁵⁵ Furthermore, the FDA was granted the authority to detain food products with its administrative powers for up to thirty days if it has reason to believe they are misbranded or adulterated.²⁵⁶ The

250. See FOOD & DRUG ADMIN., FDA FSMA PROGRESS REPORT: MAY – JULY 2011, available at <http://www.fda.gov/downloads/Food/FoodSafety/FSMA/UCM261733.pdf>.

251. *Id.*

252. *Id.*

253. FDA Food Safety Modernization Act, Pub. L. No. 111-353, § 102, 124 Stat. 3885, 3887 (2011) (codified at 21 U.S.C. § 350d); see also FOOD & DRUG ADMIN., *supra* note 250.

254. FOOD & DRUG ADMIN., *supra* note 250.

255. FDA Food Safety Modernization Act, Pub. L. No. 111-353, § 102, 124 Stat. 3885, 3887 (2011) (codified at 21 U.S.C. § 350d).

256. FDA Food Safety Modernization Act, Pub. L. No. 111-353, § 207, 124 Stat. 3885, 3944 (2011) (codified at 21 U.S.C. § 334); FOOD & DRUG ADMIN., *supra* note 250.

products are not to be sold or distributed while the agency decides whether the products should be seized or subjected to a federal injunction prohibiting their distribution.²⁵⁷ On May 5, 2011, the FDA issued two interim final rules. The first requires that a person providing prior notice of imported food *must* provide the name of the country where the food was refused entry, even for animal food.²⁵⁸ The second provides criteria for the administrative detention of food.²⁵⁹ Under this rule, the “FDA may order administrative detention if there is reason to believe that an article of food is misbranded or adulterated.”²⁶⁰

Regarding food safety training and inspections, as of July 1, 2011, the FDA, the USDA, and the National Institute of Food and Agriculture (NIFA) signed into force an agreement to create a competitive grant program for projects such as food safety training.²⁶¹ The FDA held its third public meeting on June 6, 2011.²⁶² In this meeting, enforcement, frequency and targeting of facility inspections, the manner of inspections, and how to improve the reportable food registry were discussed.²⁶³

One may ask how far inspection authority should go, for instance—is it feasible to install video monitors at food manufacturing plants so that real-time video streaming can take place? I caution against regulations that would make firms fearful of liability such that they take the “safe” or “defensive” route that some physicians have taken when it comes to tort reform. Some regulations are welcome, some are not. Among the ones that are disfavored are regulations that limit competition on the basis of quality and safety and forestall investment and innovation.²⁶⁴ Moreover, food producers need to be able to invest

257. *Id.*

258. Information Required in Prior Notice of Imported Food, 76 Fed. Reg. 25,542 (May 5, 2011) (codified at 21 C.F.R. § 1.281).

259. Criteria Used to Order Administrative Detention of Food for Human or Animal Consumption, 76 Fed. Reg. 25,538 (May 5, 2011) (codified at 21 C.F.R. § 1.393).

260. *Id.* at 25,538.

261. Memorandum of Understanding Between the U.S. Food & Drug Admin. and the U.S. Dep’t of Agric. Research, Educ., & Econ. (July 1, 2011), <http://www.fda.gov/AboutFDA/PartnershipsCollaborations/MemorandaofUnderstandingMOUs/DomesticMOUs/ucm261929.htm>; FOOD & DRUG ADMIN., *supra* note 250.

262. FOOD & DRUG ADMIN., *supra* note 250.

263. Minutes of Public Meeting on the FDA Food Safety Modernization Act: A Focus on Inspections and Compliance 6–7 (June 6, 2011), <http://www.fda.gov/downloads/Food/FoodSafety/FSMA/UCM262519.pdf>; FOOD & DRUG ADMIN., *supra* note 250.

264. The Pure Food and Drug Act of 1906 (and its sister provision, the Federal Meat Inspection Act) are both as notable for handing national food companies a competitive advantage over local and regional companies as they are for preventing state health departments from imposing tougher safety regulations than those proposed on the federal level. CLAYTON A. COPPIN & JACK HIGH, *THE POLITICS OF PURITY: HARVEY WASHINGTON*

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in safety and innovation knowing that they can reliably appropriate the benefits of their investments. Regarding incentives for promoting food safety technologies, on May 23, 2011, the FDA established a docket to “obtain information about preventive controls and other practices used by facilities to identify and address hazards associated with specific types of food and specific processes.”²⁶⁵ The purpose of the docket was to provide information and guidance on the best preventive controls.²⁶⁶

Aside from the discussion concerning inspection authority, another recommendation is to increase traceability standards such that foodborne illness can be traced to particular food. This requires imposing detailed recordkeeping requirements related to distribution, a difficulty noted in the literature review and empirical results.²⁶⁷ More often than not, a consumer is unable to track the food item that contributed to her illness, leading to a delay in solving the outbreak and, when a lawsuit is involved, a lower likelihood of a settlement or plaintiff verdict at trial. A final recommendation is to expand strict liability to other elements on the distribution chain. In Colorado, for example, retailers are excluded from liability.²⁶⁸ Together, these recommendations increase preventive tools to deter firms from food safety violations.

2. *Increased Response Efforts.* In order for regulation to be more (empirically) informed and responsive to market and legal outcomes, regulators need to respond in a more timely fashion to outbreaks and increase their foodborne illness detection and protection efforts.

First, federal efforts to respond to breaches in food safety need to be expedited. Experience has shown that industry solutions alone are not often the best social outcomes. For

WILEY AND THE ORIGINS OF FEDERAL FOOD POLICY 6, 81–82 (4th ed. 2002) (“[B]uried in the disputes over federal regulation is a conflict between local and national food companies. In various ways, federal regulations conferred competitive advantage on national firms.”).

265. Preventive Controls for Registered Human Food and Animal Food/Feed Facilities; Request for Comments, 76 Fed. Reg. 29,767, 29,768 (May 23, 2011); FOOD & DRUG ADMIN., *supra* note 250.

266. Preventive Controls for Registered Human Food and Animal Food/Feed Facilities; Request for Comments, 76 Fed. Reg. at 29,768.

267. Sometimes causation can be so difficult that the food product consumed at a restaurant is never found. *See, e.g.*, CTRS. FOR DISEASE CONTROL & PREVENTION, *supra* note 154 (noting the difficulty of locating the source of the contaminated peanuts in the PCA outbreak).

268. COLO. REV. STAT. ANN. § 13-21-402 (2011).

example, in the wake of the Dole spinach outbreak in 2006, the industry's first response was to seek federal regulation, in hope that by doing so, needed investments would not be cost prohibitive.²⁶⁹ When government regulators stalled, United Fresh Produce Association and others "took advantage of the delay and preempted mandatory regulation by drafting the National Leafy Greens Marketing Agreement (LGMA)."²⁷⁰

In the end, standards were set lower than regulation would have warranted.²⁷¹ "[T]he LGMA had the effect of leveling the playing field for the rest of the market, and so ensuring that all would bear similar costs in meeting improved but still lower safety requirements."²⁷² The requirements were in fact "less stringent than what would have likely resulted if market participants [in the leafy green industry] had been forced to compete in an open market on the basis of improved safety and innovation."²⁷³ Suppliers compete, for example, when they sell to distributors and retailers. It is not uncommon for large buyers to impose requirements of fresh produce providers, "using their own economic leverage as a means of requiring a safer product."²⁷⁴ "[C]ontractually imposed standards [are] more stringent than the LGMA best practices," and have been termed "supermetrics."²⁷⁵

"[T]he coordinated suppression of quality standards" was foreseen by Nobel Prize-winning economist George Akerlof.²⁷⁶ In his article, *The Market for Lemons*, he states, "there is incentive for sellers to market poor quality merchandise, since the returns for good quality accrue mainly to the entire group . . . rather than to the individual seller."²⁷⁷

Second, the level of foodborne illness detection and protection needs to be harmonized and increased. Just as states receive varying amounts of federal assistance for foodborne illness response, states also vary in their effectiveness in responding to outbreaks (see, for example, the state grading

269. See Stearns, *supra* note 21, at 264.

270. *Id.* at 264 & n.72.

271. *Id.* at 264.

272. *Id.*

273. *Id.* at 265.

274. *Id.*

275. *Id.* at 265 & n.4.

276. *Id.* at 266.

277. George A. Akerlof, *The Market for "Lemons": Quality Uncertainty and the Market Mechanism*, 84 Q.J. ECON. 488, 488 (1970). "[I]f everyone in an industry pays to the same extent when unsafe or poor quality goods are sold, a greater profit can be made by competing on price rather than quality, so long as the consumer cannot tell the difference." Stearns, *supra* note 21, at 266.

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system). The state grading system that was used in the empirical model highlighted one finding. The state grade was significant in that plaintiffs from states that were more efficient in their state reporting received higher damages. Presumably this means that the state had a budget to perform field interviews at a faster rate and conduct a more thorough investigation—thereby leading to more documentation for the plaintiff to establish causation.

The FSMA establishes a framework for an integrated food safety system.²⁷⁸ An integrated food safety system could leverage state and federal resources to raise the level of foodborne illness detection and protection for consumers across the country. The framework includes authorizing \$24 million a year to assist surveillance activities at the state level by coordinating federal, state, and local disease reporting systems, improving tools for identifying disease, and increasing state participation in national networks.²⁷⁹ The FSMA also instructs the Secretary of Health and Human Services to develop and implement strategies for enhancing food safety and defense capacities at the state and local level to accelerate surveillance and outbreak investigations and share information more rapidly with the food industry, health care providers, and the public.²⁸⁰ Resources should be focused in these areas.

As far as coordination of efforts is concerned, the FSMA instructs the CDC to improve the collection, analysis, reporting, and usefulness of data on foodborne illnesses through better coordination with states, more rapid sharing of information, and improving food attribution in the reporting of outbreaks.²⁸¹ It requires the FDA and the CDC to improve epidemiological tools available to the states.²⁸² Within a year, the law directs the federal government to name five state health departments as regional Centers of Excellence to serve as resources for public health officials in response to outbreaks.²⁸³

State-based reporting is essential to identifying food and hazard combinations and for this reason, the FSMA addresses strengthening state-based reporting systems for outbreak

278. FDA Food Safety Modernization Act, Pub. L. No. 111-353, 124 Stat. 3885 (2011) (codified in scattered sections of 21 U.S.C.).

279. FDA Food Safety Modernization Act, Pub. L. No. 111-353, § 205, 124 Stat. 3885, 3937 (2011) (to be codified at 21 U.S.C. § 2224).

280. *Id.*

281. *Id.*

282. *Id.*

283. FDA Food Safety Modernization Act, Pub. L. No. 111-353, § 210, 124 Stat. 3885, 3950 (2011) (to be codified at 42 U.S.C. § 280g–16).

reporting.²⁸⁴ “Solved outbreaks”—those in which the food and hazard are identified—provide the best data available to the food industry and regulators on what are the most important hazards to address in food safety plans. The empirical findings show that the disparity in reporting standards between states is significant. This result can be used to inform regulation—notably, if FSMA is able to provide for enhanced surveillance, this could reduce the disparities reporting between different states and allow for better targeting food safety inspections.

VI. CONCLUSION

In an era where many governance forces exist to regulate firm behavior and where no particular regulation mechanism works best, federal regulation can gain from being more responsive (and reactive) to market forces and legal outcomes.

This Article illustrates how legal liability alone can serve as an economic signal to deter firms from producing unsafe food and how legal liability can also serve as an indirect regulator promoting food safety. From the liability and deterrence literature, legal verdicts have the power to incentivize food safety precautions. Firms will optimize their decisions when faced with a low cost of adopting a precaution and a high cost of a lawsuit. However, lawsuits are not a “sure thing” as far as food safety is concerned.

Many factors prevent plaintiffs from bringing their foodborne illness cases forward. In an empirical examination of all foodborn illness cases between 2000 and 2011, I highlight relevant market failures preventing plaintiffs from recovering for their injuries. One market failure is market access—a plaintiff’s inability to bring a case forward. A widely viewed justification for regulation is to correct market failures. This Article shows how an empirical examination of foodborne illness trials and settlements can be used to fine-tune food safety regulation by correcting market failures. For instance, improved federal regulations could lower information costs preventing plaintiffs from suing.

At the same time, regulations could increase the transactions costs for firms should they violate food safety regulations. The FSMA provides more tools (than the former FDCA) for local, state, and federal government officials to inspect firms and penalize wrongdoers. Faced with new federal

284. See CTR. FOR SCI. IN THE PUB. INTEREST, *supra* note 160, at 13.

regulations and fines, firms may opt for more food safety precautions. While the FSMA may not need to incentivize some firms to adopt food safety technologies (notably those that have already adopted them or do so as part of industry standards), the FSMA could have an effect on small and medium-sized firms.²⁸⁵

Ultimately, making serious strides in preventing foodborne illness requires the commitment of many relevant players: consumers, physicians, food manufacturers, restaurants, distributors, state and local health departments, federal food safety agencies, Congress, and state legislatures. As newspaper headlines report continued delays with FDA rulemaking and funding for food safety efforts in the United States and abroad,²⁸⁶ my findings suggest that food safety requires improvement in terms of inspections, if nothing else.

This Article contributes to the understanding and active debate surrounding the interplay between legal liability and food safety regulation. To date, delays with FSMA proposed rules continue. It is quite likely that the precautionary rules will not be adopted until the middle of 2013.²⁸⁷ For this reason, this is an opportune time to consider the empirically founded recommendations provided above.

285. Interview with Fred Martinez, FDA Retail Manager, FDA Denver Regional Office, in Denver, Colo. (Oct. 11, 2011). See also Acheson, *supra* note 232 (discussing an unlikely alliance between food safety advocates and industry in seeking FSMA regulatory implementation). Leavitt Partners notes that the most progressive companies are already moving with FSMA preventive control preparation (because they want to be ahead and because FSMA preventive control requirements make sense for protecting a company's brand). Other firms have been waiting—either because they have not wanted to take FSMA seriously when they have to or because they simply have not seen FSMA coming. *Id.*

286. See, e.g., Brady Dennis, *FDA Begins Implementing Sweeping Food Safety Law*, WASH. POST (Jan. 4, 2013), http://articles.washingtonpost.com/2013-01-04/national/36209422_1_food-safety-food-borne-grocery-manufacturers-association/2; Julian Pecquet, *FDA Official: GOP Amendment Could Gut Preventative Food Safety Effort*, THEHILL.COM (June 7, 2011), <http://thehill.com/blogs/healthwatch/food-safety/165087-fda-official-gop-amendment-could-gut-prevention-based-food-safety-effort>.

287. See Acheson, *supra* note 232 (“[G]etting the rules out is merely the first step in a very long road.”). The FDA Rulemaking Process involves several steps the first of which is to publish a notice of the proposed rule or an interim final rule. This is followed by a period of public comment (lasting 30–120 days). 5 U.S.C. § 553(b)–(d) (2006). The final rule is published only after the FDA has considered any revisions based on comments prior to publishing the final rule. 5 U.S.C. § 553(c) (2006). Implementation of the final rule takes up to a year for large businesses and three years for small businesses. See Acheson, *supra* note 232. By my calculation, at the time of this writing, the proposed rules are delayed by 12 months.

VII. EMPIRICAL APPENDIX

This Appendix on the following page presents tabular results for three empirical models examining the following questions: (1) what determines the speed at which a case is resolved (the “speed” model); (2) what determines whether or not a plaintiff wins (the “win” model); and (3) what determines how much a plaintiff recovers in monetary terms (the “payback” model).

Appendix. Logistic and OLS Regression Results for Three Models

***Significant at the 1% level; *Significant at the 5% level.
Standard Errors in Parentheses*

Variable	(1) “Speed” Model (OLS Regression)	(2) “Win” Model (Logistic Regression)	(3) “Payback” Model (OLS Regression)
Vehicle (Food Ingested)	0.060 (0.180)	-0.103 (0.287)	0.040 (0.168)
Year	0.107** (0.027)	-0.073 (0.44)	-0.000 (0.025)
Death Reported	1.561** (0.399)	-0.687 (0.684)	0.769* (0.387)
Defendant Type	-0.117 (0.118)	0.048 (0.205)	-0.059 (0.110)
Verdict, Settlement, Arbitration	0.649** (0.134)	-1.512** (0.283)	0.027 (0.129)
Defendant’s State	0.097 (0.175)	0.099 (0.282)	0.145 (0.165)
Plaintiff’s Lawyer an Expert	-0.563* (0.305)	-0.301 (0.493)	0.003 (0.289)
Defense Lawyer an Expert	0.267 (0.218)	0.080 (0.353)	0.057 (0.217)

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Cause of Action	0.030 (0.111)	-0.240 (0.183)	-0.054 (0.107)
Limits on Noneconomic Damages	0.005 (0.219)	0.039 (0.353)	-0.195 (0.204)
Limits on Punitive Damages	-0.654** (0.152)	0.639* (0.261)	0.252* (0.140)
Plaintiff's Firm Ranked	-0.611** (0.275)	0.284 (0.466)	1.000** (0.258)
Defendant's Firm Ranked	-0.417** (0.223)	-0.238 (0.363)	0.294 (0.222)
Plaintiff a Minor	0.058 (0.243)	0.139** (0.488)	-0.015 (0.200)
State Health System Grade	-0.035 (0.238)	-0.136 (0.381)	0.491* (0.236)
Resolved in Years	—	-0.087 (0.094)	0.158 ** (0.059)
Constant	1.913** (0.542)	4.849** (1.03)	3.520** (0.506)
Observations	320	320	320
Adjusted R2	0.24	0.19	0.24