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LAWYERS, LIABILITY, AND LAW REFORM: EFFECTS ON AMERICAN ECONOMIC GROWTH AND TRADE COMPETITIVENESS

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I. INTRODUCTION

This Article addresses in simple analytic terms the strong allegations of recent years that various features of our modern legal system—an oversupply of lawyers, increased litigiousness, expanded standards of liability, and growth in governmental regulation—have reduced economic growth and harmed American competitiveness in foreign and domestic trade. Over the past few years, steadily accelerating complaints have been raised about lawyers and about the structure and substance of American law, especially modern tort and environmental law. It is well known that, over the past three decades, the absolute number of lawyers and the proportion of lawyers per capita have increased substantially in the United States. 1 Over the same period, courts have significantly expanded standards of tort and environmental liability, increasing the liability exposure of virtually everyone in the society, but especially of manufacturers, insurers and governmental entities. 2 Similarly, both state and federal governments have expanded direct regulation of the environment and, in more limited cases, of safety with respect to specific products. 3 These legal developments have increased insurance costs and non-insured liability payouts as well as the costs of regulatory compliance. Not surprisingly, there has been increasing criticism of lawyers and serious opposition to the developing direction of the law. The most outspoken critics claim variously that the expansion of liability and regulation levies a huge tax on American enterprise, 4 reduces economic growth, 5 and, more generally, diminishes U.S. trade competitiveness. 6 Lawyers, obviously, are the instruments through which this damage is inflicted.

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1. See infra text accompanying note 38.


Recently, these complaints have been raised with increasing empirical sophistication. Several authors have argued that the large number of lawyers in the United States (the United States has more lawyers than any other country in the world) directly impedes economic development. In the most prominent of these studies, for example, Professor Stephen P. Magee estimates that the number of lawyers in the United States is 40% greater than optimal for economic growth. He estimates that this excess supply of lawyers reduces U.S. Gross Domestic Product by somewhere between $300 and $660 billion per year (1990$). Separately, though in a similar vein, the renowned economist Dale Jorgenson and Professor Peter Wilcoxen estimate that U.S. environmental regulations diminish Gross National Product .191 percentage points per year, more than 10% of the share of total governmental purchases of goods and services. Other empirical estimates of the costs imposed by our modern legal system are somewhat more casual, but of equally astounding magnitudes.

The sharp differences between the United States and virtually all other developed nations in terms of the number of lawyers and of the expansion of tort and environmental liability have generated increasing concerns about the effects of these features of our legal system on U.S. competitiveness abroad. Some authors claim that the mere mention of U.S. product liability law “instills fear into” executives of both foreign and domestic firms. They assert that modern U.S. law reduces the ability of U.S. firms to compete effectively in overseas markets and, simultaneously, creates an obstacle to the ability of foreign firms to provide low cost products and services to U.S. customers. Although other commentators believe that effects on trade are modest, even some who defend the general impact of product liability law on competitiveness complain about the stifling effects of modern U.S. law on innovation. The problems suggested by these studies have prompted calls for widespread reform. For example, concern about the oversupply of lawyers led the Dean of the

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9. Jorgenson & Wilcoxen, supra note 5, at 315. Unlike Magee, Jorgenson and Wilcoxen are measuring only the costs of regulation, not the benefits, about which they are agnostic.
10. See Huber, supra note 4, at 4 ($80-380 billion costs). These studies and many more that I do not cite are effectively criticized in Marc Galanter, Too Many Lawyers? Too Much Law?, 71 DENV. U.L. Rev. 77 (1993).
11. Hagglund & Igbanugo, supra note 6, at 347.
University of Texas Law School to propose reducing law school admissions by 10-15%; for similar reasons, the Louisiana state legislature recently entertained proposals that would have shut down the state’s two public law schools altogether.\(^{15}\) Others have proposed scaling back environmental controls\(^{16}\) or substantially changing tort law, such as by placing strict limits on punitive damages\(^{17}\) or amending substantive standards of liability.\(^{18}\) Still others, however, have opposed systematic reform, defending our system of law and regulation as well as the current stock of U.S. lawyers.\(^{19}\)

This Article attempts to cut through what has become an increasingly acrimonious debate on these issues to define basic principles from which to evaluate the effects of differing magnitudes of lawyers on a society’s economy as well as the effect of differing forms of law and regulation on foreign and domestic competitiveness. It argues, first, that, notwithstanding increasingly refined empirical demonstration, there is no adequate theory for measuring the effect of the magnitude of lawyers on economic growth. Because the number of lawyers itself derives from and does not determine the substance of the law, the most plausible general conclusion is that lawyers \textit{always} contribute toward an increase in national wealth, except under very specific conditions. It follows from this conclusion that, for the United States and for most modern nations, the number of lawyers is probably insufficient, rather than excessive. The more important question, however, is not whether lawyers are too many or too few, but whether the substance and structure of the legal regime enhances or diminishes societal welfare.

The Article next addresses how to evaluate the substance of the law in terms of its effect on national wealth, economic growth, and competitiveness. It clarifies when and under what conditions the law—whether in the form of environmental regulation or products liability law—increases or diminishes national wealth and harms or helps the competitiveness of U.S. manufacturers in foreign or domestic trade. The Article shows why the reform of punitive damages is of significantly greater import with respect to the competitiveness of U.S. manufacturers in foreign trade than other tort reform issues. It also shows how modern doctrines of procedure and jurisdiction can substantially distort competitiveness and reduce national wealth, though courts have typically ignored such concerns. Finally, the Article discusses the issue of the reform of tort law and punitive damages. It explains how the increasing refusal of foreign courts to enforce U.S. tort

\(^{15}\) Arthur S. Hayes, \textit{Texas Law School Enrollment is Targeted}, \textit{Wall St. J.}, Sept. 29, 1992, at B9. Very recently, the \textit{National Law Journal} reported polls showing increasing popular concern about the number of lawyers in this society. Randall Samborn, \textit{Anti-Lawyer Attitude Up}, NAT. L.J., August 9, 1993, at 1 (“From 1986 to 1993, the percentage of people saying there are too many lawyers, increased from fifty-five percent to seventy-three percent.”).

\(^{16}\) \textit{See}, e.g., Stewart, \textit{supra} note 3.


\(^{18}\) \textit{See}, e.g., Stayin, \textit{supra} note 6, at 207-10.

law judgments actually benefits Americans in the aggregate, though damaging to U.S. manufacturers. It also evaluates reform proposals from the goal of increasing national wealth.

Part II reviews and criticizes the various empirical studies regarding the alleged excessive supply of lawyers and evaluates the claim that excessive lawyers harm economic growth. Part III describes the effects of modern U.S. tort law and environmental regulation on foreign and domestic competitiveness. Finally, Part IV summarizes the reforms necessary to increase the wealth of all nations including the United States and, at the same time, to improve American competitiveness.

II. THE ANALYTICS OF THE ALLEGED OVERSUPPLY OF LAWYERS

This Part criticizes recent studies claiming to demonstrate that the number of lawyers in the United States is excessive and substantially diminishes U.S. economic growth. The Part argues that there are no sensible economic grounds for such a conclusion and, indeed, in terms of economic analysis, there are strong reasons to believe that there is probably an undersupply, rather than an oversupply, of lawyers in the United States and other modern countries. Section A reviews the current studies. Section B explains why the number of lawyers in a society is only likely to become "excessive" in economic terms where courts are substantially and unexpectedly restricting the law, rather than expanding it as has been characteristic of the past three decades. The Section implies, thus, that the critics have the relationship exactly backwards. Section B, however, also explains the more important point that, even if the substantive law or the system of regulation diminishes economic growth, the role of lawyers is likely to remain positive for a society, reducing the impact of the diminution. Though there may be instances in which the activities of lawyers contribute nothing to society, the conditions for such effects are very difficult to define and are unlikely to hold for the broad range of legal services provided in the United States today.

A. The Modern Debate over Lawyers and Economic Growth

The growing debate over the relationship between the number of lawyers in a country and that country's rate of economic growth was initiated by Mancur Olson in his book *The Rise and Decline of Nations*. Olson proposed the striking theory that differential rates of national economic growth over time were determined by the extent to which the energies of a country's citizens were devoted to productive as opposed to redistributive ("rent-seeking") activities. In several passages, he suggested that much of the effort of lawyers might best be regarded as rent-seeking, rather than as contributing real production to the society.20

Olson's suggestion was first sharpened and formalized by Magee, Brock and Young who purported to demonstrate that the United States

suffers from an oversupply of lawyers that has substantially retarded economic growth. These authors studied the relationship between the number of lawyers and rates of change in Gross National Product for thirty-four countries during the period 1960-1980. For each country, they compared average changes in Gross National Product per capita to the ratio of lawyers to physicians. They found that GNP growth declined sharply as the lawyer/physician ratio increased. Countries with relatively low lawyer/physician ratios such as Saudi Arabia, Korea and Japan (.09) had relatively high per capita rates of GNP growth (Japan, 7.1%) while countries with relatively high lawyer/physician ratios, such as Chile (2.14) and Nepal (2.07) had relatively low per capita GNP growth rates (1.6% and .2%, respectively). The United States had among the highest of lawyer/physician ratios (1.29) and relatively modest per capita GNP growth over the period (2.3%).

Some years later Murphy, Shleifer and Vishny addressed the issue with greater comparative precision. Building on Robert Barro's highly regarded growth model, they compared relative college enrollments in engineering versus the law with rates of growth of per capita Gross Domestic Product for ninety-one and, separately, fifty-five larger countries. They hypothesized that countries with relatively higher proportions of engineering students would have relatively higher growth rates reflecting investments in physical and human capital; in contrast, countries with relatively higher proportions of law students, reflecting rent-seeking opportunities, the reverse. They found a positive and significant relationship between the number of engineering students and economic growth; a negative, but statistically insignificant, relationship between economic growth and the number of law students.

In a more recent, though incompletely explained, study, Professor Magee presents a different comparison with more vivid results. Magee compares growth in per capita Gross Domestic Product to the number of lawyers per 1,000 white collar workers for fifty-four countries over a twenty-five-year period. In this study, the relationship is not continuously negative as in his earlier findings. Instead, as the number of lawyers per 1,000

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21. MAGEE ET AL., supra note 7, at 111.
22. Id. at 119. The authors employed the lawyer/physician ratio in order to control for differing stages of economic development within countries.
23. Oddly, although the authors present a detailed table of data, they do not include figures for Saudi Arabia or Korea. Other peculiarities of their data are described in Galanter, supra note 10.
24. MAGEE ET AL., supra note 7, at 118-21.
25. Murphy et al., supra note 7, at 503.
27. Murphy et al., supra note 7, at 524-25.
28. This study appears to have been first presented in a letter to the editor in the Wall Street Journal. Stephen P. Magee, How Many Lawyers Ruin an Economy? WALL ST. J., Sept. 24, 1992, at A17. It has since been replicated in Magee, Optimum, supra note 7.
white collar workers increases from zero,\textsuperscript{29} economic growth increases. The increase in growth reaches a maximum at twenty-three lawyers per 1,000 white collar workers.\textsuperscript{30} After that point, as the lawyer/white collar worker ratio increases still further, economic growth declines. According to the study, the United States for this period possessed thirty-eight lawyers per 1,000 white collar workers, well toward the end of the declining curve.

Professor Magee's estimate of the actual loss to the U.S. economy from the oversupply of lawyers derives from this finding. First, he infers that the United States possesses roughly 40\% more lawyers than is optimal for economic growth.\textsuperscript{31} According to Professor Magee, these lawyers "subtract value from the economy."\textsuperscript{32} Second, he concludes that, if the United States were to eliminate these lawyers, it could achieve a rate of economic growth equal to that of countries with the optimal supply (twenty-three lawyers per 1,000 white collar workers), which is 12\% higher than current U.S. Gross Domestic Product for the period. Magee estimates from this figure that the United States loses between $300 and $640 billion per year (1990\$) because of its excess supply of lawyers. More precisely, according to Professor Magee, every excess lawyer himself or herself diminishes U.S. productivity by at least $1 million per year:

Forty percent of US lawyers comes to about 300,000 too many lawyers. Since they are knocking off $300 billion, this means that the average of the 40 percent excess lawyers each knock $1 million off of US gross domestic product every year.\textsuperscript{33}

Professor Magee's results, as might be expected, have been subjected to strenuous criticism. In a \textit{Wall Street Journal} article, Professor Epp reports the results of his work with Professor Galanter, presented more extensively in this volume.\textsuperscript{34} Epp and Galanter have shown that the international measures of the number of lawyers on which Professor Magee relies are substantially deficient. Better measures do not confirm the sharp relationship of decline in economic growth with increases in the number of lawyers. They also emphasize that Professor Magee neglects careful measurement of the contribution of lawyers to an economy, an element of the analysis that Magee concedes in theory, but dismisses given his empiri-

\textsuperscript{29} In the studies published to date of lawyers as a proportion of white collar workers, Magee does not present his figures, so that it is not clear which country most closely represents the zero lawyer/white collar worker ratio of the graph.

\textsuperscript{30} Magee, \textit{Optimum}, supra note 7, at 670. Magee's approach is damaged because he does not reconcile why his studies show economic growth increasing over a certain range as the lawyer to white collar worker ratio increases, while economic growth declines continuously with increases in the lawyer to physician ratio. \textit{MAGEE, ET AL.}, supra note 7, at 118-19.

\textsuperscript{31} That is, the fifteen extra lawyers per 1,000 white collar workers (thirty-eight minus twenty-three) equals just less than 40\% of thirty-eight.

\textsuperscript{32} Magee, \textit{Optimum}, supra note 7, at 673.

\textsuperscript{33} \textit{Id.} at 673-74. Professor Magee's $300 billion figure derives from the use of Professor Galanter's data; Magee's own data suggest a $640 billion loss. Magee employs other data to distinguish from among the $640 billion loss, $300 billion lost due to excessive numbers of general lawyers and an additional $300 billion lost due to excessive lawyers in the Congress. \textit{Id.}

\textsuperscript{34} Charles R. Epp, \textit{Let's Not Kill All the Lawyers}, \textit{WALL ST. J.} July 9, 1992, at A13; Galanter, \textit{supra} note 10, at 81-83.
cal findings. Separately, Professor Cross has criticized Magee's studies on empirical grounds, and has presented additional information suggesting a positive relationship between the number of lawyers per country and various measures of political and human rights.

As we have seen, much of the debate over the alleged oversupply of lawyers has turned on the details of the empirical findings. The next Section argues that the empirical studies themselves neglect simpler and more basic propositions that suggest that the inquiry itself is misdirected. None of the authors has presented a sensible principle for determining how to evaluate in economic terms when the number of lawyers in a society becomes "excessive." Section B addresses this issue with the hope of redirecting the debate. It describes what an "excessive" supply of lawyers means in economic terms, why it is highly unlikely that the current supply of lawyers in the United States is "excessive" economically, why it is misleading to claim without more that any supply of lawyers reduces rather than increases economic growth, and why the more significant issues with respect to economic growth are issues of law reform, rather than the magnitude of the lawyer stock.

B. The Economics of the Alleged Oversupply of Lawyers

What does it mean for a country to have an oversupply of lawyers? How might such an oversupply diminish economic growth? There is no question that the number and proportion of lawyers in the United States has increased dramatically over the past three decades. In 1960, there were roughly 286,000 lawyers in the United States, equal to 1.58 per 1,000 citizens; in 1970, 355,000, equal to 1.73 per 1,000; in 1980, 542,000, equal to 2.38 per 1,000; and, the most recent figure, in 1988, 723,000, equal to 2.95 per 1,000. Over the same period, U.S. economic growth has been modest at best. The average annual percentage increase in real per capita Gross Domestic Product (1987$) between 1960-70 was 2.55%; 1970-80, 1.72%; and 1980-90, 1.68%. The critics assume that lawyers (or at least those that are excessive) are engaged in essentially redistributive activities, not contributing to national economic growth. This assumption implies that, as the number of lawyers increases relative to other more productive occupations or increases over time, harm to economic growth increases. It might seem to follow directly from these propositions that the steadily decreasing rate of per capita Gross Domestic Product growth is related to the steadily increasing number and proportion of lawyers.

35. Magee, Optimum, supra note 7, at 670.
36. Cross, supra note 19, at 645.
38. Derived from Bureau of the Census, U.S. Department of Commerce, Statistical Abstract of the United States 1992 Table 2, at 8, Table 314, at 192 (1992). Note that this statistic reports lawyers per 1,000 citizens rather than per 1,000 physicians or white collar workers as in the Magee studies discussed. E.g., Magee, Optimum, supra note 7, at 672-73.
39. Derived from Bureau of the Census, supra note 38, at 431 (Table 678).
40. See sources cited supra note 7.
I believe that such an analysis, however, is simplistic. To the contrary, in economic terms, the number of lawyers in the United States today is almost certainly insufficient, rather than excessive. Indeed, although one must be somewhat less confident about the conclusion, it is entirely possible that, even ignoring whether the expansion of liability has benefitted or harmed social welfare, social costs would be reduced if the United States had more, rather than fewer, lawyers. As a general matter, except under very precise specifications, lawyers will benefit, rather than harm, an economy. Indeed, without more, it is plausible that those countries (including the United States) identified by the critics as suffering high proportions of lawyers and low rates of economic growth, would have had even lower rates of economic growth if they had fewer lawyers. The critics of lawyers are employing a normatively charged definition of "excessive" unusual to economic analysis. Clarifying the economic analysis of when the stock of lawyers might be regarded as excessive will indicate why their criticism is misdirected.

In economics, the stock of any commodity can be regarded as "excessive" if the price that the commodity attracts in a competitive market is less than production costs. As an example, whatever inventories remain today of mechanical calculating machines are surely "excessive" according to this economic definition because the price a machine would command (except perhaps to a collector) would be set with respect to our now much cheaper electronic calculators, thus, much less than the costs of producing the original machine. As another example, the stock of housing in a given location can be regarded as "excessive" in economic terms if, to secure a sale, the price of the house must be dropped below the sum of the costs of inputs: the price of land and the costs of construction.

As in the calculating machine and housing examples, the number of lawyers is "excessive" where the earnings that lawyers receive are less than the full costs incurred in becoming lawyers. For the evaluation of lawyers, the calculating machine and housing examples must be adjusted because a lawyer's services are not sold at a one-time price, but generate a stream of earnings over time. More precisely, legal education can be regarded as an investment similar to other investments that might, but might not, increase a person's wealth. The return on the investment equals the difference between the income of individuals with and without legal education. The costs of the investment are law school tuition plus the foregone earnings from postponing entering the workforce for three years of study. Lawyers are "excessive" in the economic sense if the returns on the investment in legal education are less than returns from other available investments.

Under what conditions would the number of lawyers be likely to become excessive? We might first think about this question from the stand-

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41. In fact, the price would have to be substantially cheaper because of the much lower relative efficiency of mechanical to electronic calculators.

point of the individual making the investment in legal education. As in other unrestricted markets, individuals choose to make investments according to the returns they expect to receive. A decision to pursue a career requires an estimate of the likely future demand for and thus return from professional training. It follows that the number of lawyers will be "excessive" in the standard economic sense chiefly where there has occurred some reduction in the demand for lawyers that was unexpected by those selecting legal training.43

Is it likely that the stock of lawyers in the United States today is excessive in this sense of the term? Almost surely not. As a general matter, since 1970 the legal and regulatory regime has been expanded, not restricted and, indeed, has been expanded dramatically.44 There perhaps have been some specific legal specialties that have suffered decline such as antitrust law; similarly, there have been greater and lesser waves of demand over the last two decades for merger and acquisition work. These variations, however, are hardly of the magnitudes of excess suggested by the critics of the number of lawyers.45 Moreover, there are very few lawyers so specialized in a subfield that they are unable to shift to substitute fields where demand for their specialty has diminished. Of course, the number of lawyers in the United States might be excessive even given the expansion of liability if the rate of expansion were less than expected by those entering law school. But this is unlikely to be true either; indeed, the source of the great criticism of modern developments in the law is the dramatic and unexpected character of the expansion of liability.46

Scholars have developed other methods for estimating these dimensions of change in the law and in the supply of lawyers. In a highly interesting study, Peter Pashigian estimates returns to legal study from 1929-1970 by deriving a figure representing the equilibrium number of lawyers, defined in terms of the number that, if achieved, would reduce returns from investment in legal education to competitive rates.47 Professor Pashigian's estimates show that the equilibrium level of lawyers exceeded the actual level increasingly from the late 1950s through 1970. According to his estimate, in 1970 the actual earnings of lawyers were 29% higher than the equilibrium level,48 indicating a severe deficiency of lawyers. More recently, Sherwin Rosen has shown that the demand for lawyers in the 1980s increased at even higher rates than during the 1970s, and that lawyers' earnings increased substantially more than increases in the earnings of all college graduates.49 These findings are further evidence that,

43. Though unnecessary for this analysis, the reference to the demand for lawyers should be interpreted broadly to acknowledge that law training and practice create a form of versatility, applicable in many non-law occupations. Sherwin Rosen, employing Current Population Survey statistics, reports that, in 1987, 28.5 percent of lawyers were employed in non-legal industry occupations. Rosen, supra note 37, at 220 (Table 1).
44. See generally Priest, Invention, supra note 2.
45. See Magee, Optimum, supra note 7, at 667 (40% excess).
46. See sources cited supra note 6.
47. Pashigian, supra note 42, at 55-63.
48. Id. at 75 (Table 7).
49. Rosen, supra note 37, at 297-38.
today and over the period studied by the critics, the United States has suffered from a deficiency of lawyers, not an excess.

The critics of the number of lawyers in the United States, of course, are not employing the term "excessive" in this standard economic sense. For example, when Professor Magee claims that 40% of U.S. lawyers are excessive, he does not mean that lawyers' current earnings are less than the costs of the investments in legal training. Instead, Magee and the other critics are using the term "excessive" as a normative allegation that the work of 40% of modern U.S. lawyers is reducing rather than increasing economic growth. According to this usage, these lawyers are engaged in efforts that are redistributive—transferring money from one individual or entity to another—without any productive contribution to the U.S. economy.

The standard economic analysis of "excessive" supply, however, helps to indicate the problematic character of the critics' allegation. To begin the analysis, the Pashigian and Rosen studies, as described earlier, make clear that U.S. lawyers today are earning greater than competitive returns, which is to say that the demand for legal services exceeds the equilibrium level of supply. What is the source of this demand? At the most general level, of course, the demand for legal services is determined by the character of the legal system. For example, the greater the requirements of governmental regulation, the greater the demand will be for lawyers to aid in compliance. Similarly, an expansion of standards of liability will create greater opportunities for recovery of loss and, thus, the greater employment of lawyers skilled at seeking or opposing recovery.

According to this approach, it is immediately evident that the critics' focus on the number of lawyers misses an important point. The number of lawyers in any society will be determined by the need for legal services and the opportunities for legal redress created by that country's legal system. The number of lawyers will simply reflect the character of the legal system. Thus, it is not the number of lawyers itself that increases or diminishes economic growth, but the legal system in which those lawyers operate. A country's legal system may encourage economic growth or diminish it. The supply of lawyers, for better or worse, will be no more than derivative of the needs and opportunities created by a country's legal system.

This point is obvious, but it reveals the misleading character of the critics' attack on lawyers. It makes no sense to claim that each lawyer or each "excessive" lawyer diminishes economic growth by $1 million per year, even putting aside the likely exaggeration of the estimate. If a country's legal system is characterized by excessive redistributitional opportunities, the fault is that of the legal system, not of the lawyers working within it. Indeed, given the character of the legal system, one cannot conclude that lawyers' services themselves are unproductive.

50. Following OLSON, supra note 20, at 65-66, 70.
51. I shall address more fully how a legal system might diminish national wealth and economic growth in the next Section.
Some have argued that the number of lawyers itself can contribute to the transformation of the legal system so that it becomes more redistributive in character. It has become a commonly heard criticism of the plaintiffs' bar that, variously, the existence of more lawyers, more aggressive lawyers, or lawyers bringing more innovative cases will itself stimulate judges to expand the law in redistributive ways. There is no strong evidence of such an effect, and the basic mechanism of such influence remains unexplained. In the United States, judges define standards of law and must justify those standards in their opinions. It is difficult to understand how those justifications are influenced by the number of lawyers or even by the number of lawyers raising particularly innovative arguments. Moreover, in an adversary system, each case involves two parties presenting opposing theories of decision. By definition, therefore, judges are presented theories that would expand the law equal in number to theories that would restrict it.

Let us examine more carefully the normative characterization of lawyers' services in the context of a redistributive legal system. Imagine, for example, that some features of a country's legal system diminish economic growth because they create excessive redistributional opportunities. Does it follow that the number of lawyers in that country is excessive? Surely, this is the sense in which the critics of the number of lawyers employ the term.

This question cannot be answered generally. To determine the effect of lawyers in even a clearly redistributive legal system requires a much more precise specification of how the legal system impairs economic growth. There are many ways in which some characteristics of a legal system may impair economic growth, but where the contributions of lawyers to that legal system are productive and increase national wealth. In such contexts, to reduce the number of lawyers would further reduce economic growth, rather than increase it.

A prominent recent example of the point is suggested by an extraordinary book by Hernando de Soto, *The Other Path*. De Soto describes the legal regime of Peru, claiming that it derives from a tradition of redistributive mercantilism designed to preserve the wealth of those with assets
by preventing competitive entry by fledgling entrepreneurs.\textsuperscript{55} De Soto and his group found that, to comply fully with the laws and regulations of Peru would require ten months at a cost equal to thirty-two times the monthly minimum wage to start a business; eighty-three months to obtain a permit to build housing on state-owned waste land; forty-three days to open a retail store; seventeen years to open a market; and twenty-seven months to gain an otherwise unused transport concession.\textsuperscript{56} Regrettably, de Soto does not report the number of lawyers in Peru, nor has the case of Peru appeared in the various comparative studies of the relationship between lawyers and economic growth. Magee, Brock and Young have reported statistics on three South and Central American countries whose legal regimes may resemble Peru's:\textsuperscript{57} Argentina, Costa Rica and Chile, all of which have relatively high proportions of lawyers and relatively low economic growth.\textsuperscript{58} Indeed, in both of Magee's studies, Chile represents the single worst example, with the highest proportion of lawyers and among the lowest rate of economic growth.\textsuperscript{59}

The important question suggested by the critics with respect to the evaluation of lawyers, however, is this: If a country with a legal system like that in Peru is characterized by a relatively high proportion of lawyers and a relatively low rate of economic growth, can it be concluded that the number of lawyers in the country is excessive? As de Soto emphasizes, there may be no question that the system of law and regulation impairs economic growth. There may also be no question that, reflecting this legal system, the proportion of lawyers is relatively high. Does it follow that the number of lawyers is excessive?

In a case like Peru, the answer must be no, suggesting a serious shortcoming in the inferences of those that are critical of relatively high proportions of lawyers. In a country like Peru, the efforts of lawyers may well reduce social costs by facilitating compliance with the regulations in effect. Put more simply, without lawyers, the extended periods of time found necessary by de Soto to obtain required permits might have been even longer. Without lawyers, economic growth—however low—might even have been lower.

The basic proposition of the critics is that a correlation between high proportions of lawyers and low rates of economic growth suggests redistribution, rather than production. Putting aside the broader question of other determinants of economic growth and the manifold empirical problems with the studies, there remains a broader conceptual failing to

\textsuperscript{55} Hernando de Soto, The Other Path 201-29 (1989). The broader point of the book is his illustration of how the capitalistic impulses of the poor have encouraged them to break the restrictive regulatory regime in various ways, vastly increasing their welfare and the nation's output.

\textsuperscript{56} Id. at 133-46.

\textsuperscript{57} De Soto represents that the Peruvian problems that he discusses are characteristic of other Latin American countries. Id. at xxiii. The point is not important, however; the Peruvian case is merely meant to be suggestive.

\textsuperscript{58} Magee et al., supra note 7, at 119 (Figure 8.2).

\textsuperscript{59} Id.; Magee, Optimum, supra note 7, at 673-73 (reproducing Epp's figures).
this conclusion. Even if we accept that a correlation between a high proportion of lawyers and low rates of economic growth demonstrates the existence of a redistributive legal regime, it does not follow that the efforts of lawyers within such a regime are redistributive, rather than productive. It is necessary to define with much greater precision how the legal regime operates redistributively before the normative judgment about lawyers can be defended. The issue is very complicated, but the aggregate judgment of Magee and other critics of lawyers is surely indefensible.

Although I do not pretend a complete analysis of this problem, we might distinguish at the outset two separate ways in which a legal system can operate to redistribute income, rather than to produce it. As we shall see, in both cases, the normative characterization of lawyers' services is quite problematic. First, imagine a complicated regulatory regime such as that in Peru in which the redistributive features of the law are built into the structure of regulation. Here, the efforts of lawyers who make the law and enforce the regulations may be regarded as redistributive rather than productive. Nevertheless, as explained above, the efforts of lawyers who facilitate compliance with the regulations are engaged in productive, rather than redistributive, activity. To return to the economic definition of an "excessive" supply of lawyers, because of the extraordinary scale economies of legislative activity, the private demand for legal services is likely to principally represent a demand for aid in compliance with regulation, rather than the production of it. It follows that, if returns on investment in legal education are greater than competitive—as in the United States over the last two decades—then the number of lawyers in the society is insufficient, and economic growth would be enhanced if there were more lawyers, rather than fewer.

A second way in which a legal system can operate redistributively rather than productively, however, is by creating opportunities for litigation which has no productive effect. For example, some critics of modern tort law have emphasized it possesses features of a "lottery," generates windfalls, or resembles warfare. Each of these metaphors suggests chiefly redistributive, rather than productive, effects. Ignoring recreational benefits, gambling represents an investment of effort that provides no additional value in terms of resources to an economy and thus is entirely redistributive. Similarly, warfare reduces productive investments for the purpose of achieving redistributive ends.

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60. In Professor Magee's most recent paper, he includes calculations of effects on economic growth according to the number of lawyers in national legislatures. Magee, Optimum, supra note 7, at 675-76. Even this measure is too crude. Those lawyers advocating redistributive regulation may impair economic growth; those lawyers opposing such regulation, however, improve it.

61. Obviously, this is an empirical question though the direction of effect is plausible.

62. Huber, supra note 4, at 109-10. As will be explained more fully in the next Section, I disagree with this characterization of modern tort law, though I will show how some features of the law do not enhance national welfare or economic growth, as suggested by this criticism.
Nevertheless, even if a legal system possessed features that resembled the redistributive aspects of gambling or warfare, the normative judgment with respect to the role of lawyers remains complicated. For example, even if those efforts of lawyers in pursuing lottery-like lawsuits are redistributive, the efforts of lawyers opposing the suits are normatively productive because raising the costs of bringing redistributive lawsuits will reduce their number. Similarly, while warfare in the aggregate is counterproductive, deterring warfare is productive and enhances welfare. Surely, the world would be richer and economic growth higher if neither the former Soviet Union nor the United States had invested to create massive military reserves. From the standpoint of either one of the countries, however, the investment was normatively productive because the investment restrained one country from employing its military force against the other. Again, aggregate characterizations of lawyers' efforts as redistributive, such as those of Professor Magee and the other critics, are simplistic.

Returning to an economic analysis, even with respect to clearly redistributive features of a legal system, where returns to lawyers are greater than competitive, one cannot conclude that more lawyers will hurt, rather than help, economic growth. Without more precise specification, the costs of production in any industry are lowest where returns to investment in production are competitive. Thus, in general, if there were more lawyers rather than fewer, the extent of redistributive investments would decline.

Of course, at a much more general level, if a way existed to eliminate all purely redistributive characteristics of a legal system, national wealth would increase. This is only to say that, if there were a way to eliminate the threat of war, the resources invested in military armaments could be diverted to more socially useful ends. The point, however, is that the important issue for national wealth and economic growth is not the number of lawyers, but the nature of law reform. Aggregate characterizations of the effort of lawyers as redistributive are not helpful because they do not generate useful suggestions for reform. Indeed, the next Part shows that the gross distinction of this literature between redistributive versus productive efforts is far too crude. It is possible with much greater detail to describe the effects of modern tort and environmental law on national wealth and economic growth and, in turn, on the competitiveness of U.S. producers.

III. LEGAL SYSTEMS, NATIONAL WEALTH AND INTERNATIONAL COMPETITIVENESS

The previous section showed that the number of lawyers in a country derives from the nature of that country's legal system. It follows that more important than the simple count of lawyers is the evaluation of how the design and definition of a legal system contribute to or diminish national wealth and the international competitiveness of U.S. producers. The critics of lawyers are not ignorant of this point. Although the relationship is seldom emphasized, the complaint about the alleged oversupply of lawyers in the United States frequently represents a thinly disguised criticism of
the expansion of tort and environmental liability since the 1970s. At base, these studies imply that the expansion of tort and environmental liability has both increased the demand for lawyers and impaired U.S. economic growth and international competitiveness.

This Part evaluates how different levels of environmental regulation and different elements of modern tort law (including products liability law and damages measures) affect national wealth and, thus, economic growth and, in turn, influence the relative competitive position of U.S. producers. There is little novelty to the analysis, but simple economics aids in evaluating the various conflicting claims about the effects of modern law. As we shall see, the simple dichotomy between redistribution and production characteristic of the literature criticizing lawyers does not aid analysis. "Redistribution" may appropriately describe the ambitions of litigants, but the term does not advance identification of how to reform our modern legal regime to increase national wealth and competitiveness.

It is important at the outset to define the relationship between national wealth, economic growth, and international competitiveness. National wealth is defined as the value of the composite resources available to the society, including both physical and human capital resources. National wealth increases—the economy grows—as new resources are discovered or as available resources are employed more productively. The international competitiveness of a country's producers is related to increases in national wealth, but is not identical. A nation's wealth can be increased by international trade where foreign markets place higher values on the nation's resources than the nation's citizens themselves. Thus, the national wealth of the United States increases where U.S. producers sell products or services in foreign markets at prices higher than their costs of production. This does not mean, however, that the United States would benefit from maximizing foreign sales or enhancing international competitiveness at any cost. Obviously, foreign trade could be vastly increased if American-made products or American-owned resources were sold at below market prices or below true cost. Such sales, however, would reduce national wealth, not increase it. International trade benefits national wealth only to the extent that foreign markets place equal or higher values on resources owned or produced in the United States than do U.S. citizens themselves. The continuous reallocation of resources toward higher-valued uses constitutes economic growth.

Much of the discussion of international competitiveness has focussed on the increasing U.S. trade deficits of recent years. As a general matter, attention to trade balances is not helpful for the analysis of the effects of legal controls on national wealth. For example, a country may incur a massive trade deficit yet still increase its national wealth. The trade deficit only records the relationship between the prices of resources purchased abroad and the prices of those sold abroad. To the extent that U.S. citi-

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63. For a valuable demolition of myths about the trade balance, competitiveness and the law, see Litan, supra note 13.
zens purchase products or services from foreign producers at prices less than the same products or services would cost at home, national wealth increases because the current level of wealth in the United States is capturing a larger set of resources.

In the most basic sense, the legal regime—whether environmental regulation or tort law—affects national wealth and international competitiveness as it allocates resources toward or away from more valuable uses. For this analysis, it is useful to ignore the source of the legal control—that is, whether the control derives from a governmental agency or a court-imposed liability judgment—in favor of distinguishing between laws and regulations which chiefly affect consumers of a product who are able to freely buy or refuse to buy it and laws and regulations which affect a broader population exposed to byproducts of the production process. Examples of controls which affect the production process, but without direct effect on product consumers, are emission constraints, water pollution discharge limitations, occupational safety and health regulation, and the like. In contrast, examples of controls or liability triggered by characteristics of a particular product thus affecting consumer choices are product liability judgments or the direct regulation of product safety characteristics. As we shall see, although the evaluation of effects on national wealth are not importantly different as between these forms of regulation, there are important differences with respect to implications for international competitiveness.

A. Controls on the Production Process

Analysis of the effects of controls on the production process is straightforward, but provides a helpful introduction to the more complicated issues regarding the regulation of product characteristics. I will refer to such controls generically as forms of environmental regulation, which most are, though they may be directed at problems such as occupational health and safety. As reported earlier, Jorgenson and Wilcoxen estimate that environmental regulations diminished U.S. Gross National Product from 1973-85 by .191 percentage points per year. These regulations affected resource allocation by compelling substitution toward less polluting inputs, by inducing investment in pollution abatement technol-

64. Richard B. Stewart has named this the distinction between "product" and "process" regulation. Stewart, supra note 3, at 2042. See also Litan, supra note 13 (employing a similar distinction); Richard B. Stewart, International Trade and Environment: Lessons From the Federal Experience, 49 WASH. & LEE L. Rev. 1329, 1333-37, 1340-45 (1992) (concerning the distinction in the context of pollution).

65. This definition may differ from Stewart's. See sources cited supra note 64. For example, Stewart defines hazardous waste discharge controls as a form of process regulation. Stewart, supra note 3, at 2042. According to the distinction I will follow, if the controls relate to byproducts of the production process, they will be regarded as a form of production process regulation; on the other hand, if they relate to characteristics of the product itself requiring different levels of post-manufacture control, i.e., the disposal of batteries, fluorocarbons, or chemicals, they will be regarded as a form of product characteristic regulation, which consumers may wish to purchase or not.

66. Jorgenson & Wilcoxen, supra note 5, at 315.
ogy, and by requiring changes in the production process to reduce emissions. The U.S. industries most severely affected were coal mining, motor vehicles, petroleum refining, primary metals, and pulp and paper. While the magnitude of the diminution in Gross National Product is clearly substantial, the authors concede that their estimate does not take into account any offsetting benefits from the regulations. Under what conditions will environmental regulations or other controls on the production process increase or diminish national wealth and U.S. competitiveness?

At the simplest level, environmental controls increase national wealth to the extent that the net value of resources under the controlled allocation is greater than their value prior to the controls. Obviously, pollution or other damage to the environment imposes costs on a society. For example, recent reports have estimated serious damage to life expectancy from airborne pollutants. Somewhat less directly, citizens of every society value cleaner air and water; the weekends and vacations spent in the mountains and countryside or the increasing preferences for a smoke-free environment are obvious illustrations. As with any resource, however, these preferences must be exercised subject to cost constraints. Few can afford to commute from the mountains; our cities cannot afford to remove all particulates from the air or to make urban rivers as pure as spring water.

For purposes of national wealth, the issue is not simply how to eliminate or even reduce such costs, but whether resources can be reallocated so that the net of environmental values less related production costs is greater after the reallocation than before. With respect to national wealth, environmental purity is an input into production no different than other more obvious forms of material and labor. If the quality of the environment is too low, the wealth of the society will be too low. Conversely, if there are excessive investments in environmental purity, national wealth declines. The objective is to achieve the optimal level of environmental quality: all investments in environmental quality for which the benefit from the investment is greater than the cost.

Environmental controls affect international competitiveness, obviously, because higher levels of environmental control increase production costs, increase prices and, thus, reduce sales. In terms of national wealth, however, if these controls make the level of domestic environmental quality optimal, then national wealth is maximized. If the level of environmental control is too low, costs and prices will be lower and sales higher—the nation's producers may appear more competitive—but national wealth will decline. Maintaining an excessively low level of environmental quality

67. Id. at 315-16.
69. Obviously, statistics such as changes in Gross Domestic Product do not adequately capture effects on aesthetic values. Cost-benefit analysis is probably the most helpful tool for such analysis, but many benefits of environmental control cannot adequately be estimated in monetary terms alone.
is the equivalent of selling a national resource at a price below its true costs of production. Conversely, if environmental controls are excessively high—that is, if the costs of the controls exceed the benefits—national wealth will decline as sales decline. Environmental controls that are excessively high represent the society's purchase of the resource of environmental quality at a price greater than its worth.

There is extensive rhetoric in the modern debate over international competitiveness about the unfair trade advantages of countries that impose lower levels of environmental controls on their domestic producers than those prevalent in the United States. Some commentators, for example, have endorsed the North American Free Trade Agreement (NAFTA), but only on the condition that Mexico increase the level of internal Mexican environmental regulation.70 The aggregation of interests involved in the success of NAFTA is a complicated matter, but on its face, such a position, if implemented, may well reduce rather than increase the national wealth of the United States. Because of greater environmental regulation, the costs of producing certain products—those whose production generates pollution in some form—may well be higher in the United States than in Mexico. As a consequence, Mexican producers are able to sell such products at prices less than U.S. producers. These higher costs of U.S. production, however, represent the higher value that U.S. citizens place on environmental quality than Mexican citizens and are appropriately included in the price of products manufactured in the United States.

Should the United States impose environmental values on Mexican citizens that the Mexicans themselves do not find worth their cost?71 It is straightforward that imposing such values will reduce the wealth of Mexico in the same way that excessive levels of environmental regulation in the United States would reduce U.S. national wealth. Regardless of principle, will the United States benefit? The answer depends upon the markets in which United States and Mexican producers of affected products compete. As a general matter, to the extent that the costs of Mexican products increase because of such environmental controls, the sales of competing U.S. products will increase. With respect to sales in Mexico and in other non-U.S. markets, the increase in sales of U.S. producers will represent a clear gain to U.S. national wealth, albeit at the expense of Mexican national wealth.

To the extent that United States and Mexican producers compete for sales to U.S. citizens, however, the imposition of U.S. environmental controls in Mexico will diminish, rather than increase, U.S. national wealth, and at no net gain to Mexico's citizens. As described above, a country benefits by obtaining equivalent resources at the lowest possible price. To the extent that Mexican products are sold at artificially higher prices because of environmental regulations that the Mexicans themselves do not

71. I put aside any question of the democratic adequacy of Mexican political institutions.
value, U.S. consumers lose because the prices that they must pay are higher. Put differently, the imposition in Mexico of U.S. environmental regulations compels U.S. consumers of Mexican products to pay for a level of environmental quality in Mexico greater than the value that Mexicans place on that resource themselves. Here, U.S. producers are made more competitive against the Mexicans, but at the expense of U.S. consumers. As a consequence, both United States and Mexican national wealth decreases, though there are redistributive gains to U.S. producers.

Note that this analysis must distinguish between environmental pollution that affects only Mexicans and pollution that affects U.S. citizens as well. For example, to the extent that Mexican-generated pollutants affect U.S. citizens—say, with respect to production near the border—it is entirely appropriate to compel Mexican producers to comply with U.S., not Mexican, standards of environmental quality. Again, where U.S. citizens suffer the consequences, their values with respect to the appropriate level of environmental quality ought to control because it is their environment that is being employed as an input to Mexican production. In contrast, to the extent that the pollutants affect only Mexican citizens—for example, with respect to production near Mexico City or farther south—the environmental values of Mexico's citizens should control. It would diminish the wealth of both the United States and Mexico if higher U.S. standards were somehow imposed in this context.

Has the expansion of U.S. environmental regulation harmed U.S. competitiveness? The answer must be yes since U.S. environmental regulations are stricter than those of most other countries. Moreover, the growth in environmental regulation is one likely source of increase in the number and proportion of lawyers over the past decades because of the increasing necessity of ensuring compliance. Here, however, it is clear that the critics miss the point with their gross indictment of the number of lawyers and their crude differentiation between productive and redistributive efforts. Obviously, if the level of environmental regulation is either too low or optimal, the lawyers employed for purposes of compliance increase national wealth. To the extent that the level of environmental regulation is too high, there is admittedly a redistributive effect: consumers who place higher than market values on environmental quality obtain the resource by paying only an average price. Nevertheless, is the number of lawyers excessive? Are those lawyers whose efforts reduce the costs of compliance engaged in non-productive, redistributive activity? Given the regulation, surely not. Given the regulation, the efforts of lawyers to reduce compliance costs increases national wealth.

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73. See Jorgenson & Wilcoxen, supra note 5, at 315-16 (estimating the magnitude of the effect).

Similarly, the focus on competitiveness misses the point. Again, environmental controls may harm competitiveness, yet still increase national wealth as long as the benefits of those controls exceed their costs. Where environmental controls are set at the optimal level, the reduction in U.S. competitiveness and the continued employment of lawyers will increase national wealth rather than reduce it. On the other hand, if U.S. consumers, because of environmental controls, are in effect paying higher prices for environmental purity than its value to them, national wealth diminishes. Correcting that problem may secondarily improve competitiveness and reduce the demand for lawyers, but the source of the problem is not the number of lawyers, but the incorrect translation of consumer preferences for environmental quality into the appropriate level of regulation.  

B. Controls on Consumer Products and Services

The analytical framework for determining the implications for the competitiveness of U.S. product and service manufacturers of liability and regulation is similar to that for environmental regulation, though several considerations are more complicated. The control of product characteristics—through products liability judgments and specific product safety regulation—of course, has been the most sharply criticized feature of modern law. No one can doubt that an extraordinary expansion of products liability has occurred since the 1970s in all jurisdictions of the country. In response, products have been designed so that they are less susceptible to injurious accidents. In addition, that component of production costs represented by liability payouts and insurance premiums has increased dramatically for virtually all U.S. products and services.

These developments have impelled vituperative criticism with respect to effects on U.S. competitiveness. Although the conceptual basis of much of the criticism is not well worked out, the claims have been broadcast widely enough that they merit careful review. For example, it has been alleged that U.S. products liability law imposes costs on U.S. businesses “that are three to eight times higher than comparable costs for foreign competitors.” These higher costs derive from several sources. First, it is claimed that, because United States and foreign producers sell relatively larger proportions of their products in their own domestic markets, “it translates into higher overhead for U.S. firms simply because of the higher cost of doing business in the United States.” Second, U.S. manufactur-

75. For cost-benefit estimates of the effects of environmental regulation, see G.B. CHRISTIANSEN & T.H. TIETENBERG, DISTRIBUTIONAL AND MACROECONOMIC ASPECTS OF ENVIRONMENTAL POLICY, IN 1 HANDBOOK OF NATURAL RESOURCES AND ENERGY ECONOMICS 345 (Allen V. Kneese & James L. Sweeney eds., 1985).
76. See, Priest, Invention, supra note 2, at 518.
78. See Priest, Risk Control, supra note 2, at 207.
79. Cortese & Blaner, supra note 6, at 180. Other authors support the claim of higher costs, but attribute them to the interaction of U.S. product liability and workers' compensation costs. See, e.g., Stayin, supra note 6, at 193.
80. Cortese & Blaner, supra note 6, at 181. See also Stayin, supra note 6, at 199.
ers incur higher costs than foreign competitors "because of their earlier domination of many industries." The imposition by courts of "long-tail" liability on products manufactured many years earlier, "exposes U.S. businesses to the additional overhead costs of insuring against liability from these older products." Third, these legal differences are exacerbated because of the overly litigious attitudes of U.S. consumers in contrast to "the fatalistic attitude [toward loss] of Europeans" or the anti-litigation attitudes of Japanese. Finally, it is alleged that there are systemic jurisdictional disadvantages to U.S. manufacturers: "A U.S. business is always subject to U.S. product liability laws, even when doing business in a foreign country with foreign citizens." In contrast, "[f]oreign manufacturers . . . are not equally subject to the jurisdiction of U.S. courts, and therefore, may not be subject to U.S. product liability laws—even when their products are sold in the United States." As a consequence of these various causes, U.S. manufacturing competitiveness is alleged to be seriously impaired.

The next two subsections evaluate these claims. Subsection 1 addresses how the expansion of products liability in the United States since the 1970s has affected product design and development including the costs of maintaining product liability insurance. It also discusses the implications of these developments for national wealth. Subsection 2, discusses how these developments affect the relative competitiveness of U.S. manufacturers and the evaluation of the role of lawyers.

1. How the expansion of products liability affects product safety, product loss insurance and national wealth

The broad expansion of products liability since the late 1960s and 1970s has been justified as attaining two goals: to improve the level of product safety and to provide greater compensation to consumers for product-related losses. Liability judgments were the means to attain both goals: safety, by establishing financial incentives to encourage greater manufacturer investments; and compensation, by encouraging manufacturers to provide consumers with a form of product loss insurance with the proportionate premium built into the product price.

81. Cortese & Blaner, supra note 6, at 181.
82. Id. See also Stayin, supra note 6, at 199.
83. Cortese & Blaner, supra note 6, at 184.
84. Id. at 180.
85. Id. See also Stayin, supra note 6, at 201-02.
86. See Cortese & Blaner, supra note 6, at 180-81; Stayin, supra note 6, at 193; Hagglund & Igbanugo, supra note 6, at 358-61.
87. For a now classic statement of enterprise liability rationale, see Escola v. Coca Cola Bottling Co., 150 P.2d 436, 440-42 (Cal. 1944) (en banc) (Traynor, J., concurring). See also Greenman v. Yuba Power Products., Inc., 377 P.2d 897 (Cal. 1963) (en banc). These developments are described in Priest, Invention, supra note 2.
a. Product safety

Few would doubt that, as liability standards have been expanded since the 1970s, manufacturers have been led to make greater investments in order to reduce the extent of product-related injuries. As with the impact of environmental regulations on national wealth, however, analysis does not end with the observation of greater manufacturer investments in safety. Rather, it is necessary to evaluate the relationship between the benefits of these investments and their costs. From an economic view, manufacturer investments in product design are inputs toward safety, but not exclusive inputs. Manufacturer investments are both complements and substitutes of consumer investments. Consumers may make allocative investments to reduce the probability of a product-related loss in various ways, including choosing a product suitable for the consumer's needs and using the product in a way that optimizes safety, both with respect to the method and frequency of use. At the margin, consumer investments in safety will be determined in response to manufacturer investments: the greater the level of manufacturer safety-related investments, the less careful consumers must be, and the reverse.

From the standpoint of national wealth, the level of optimal product safety—like the level of optimal environmental quality—is the point at which the costs of further investments in safety are exactly equal to expected benefits. At any point less—where benefits are greater than costs—the wealth of the nation could be increased by further safety-related investments. Conversely, at any point beyond, the costs invested in safety garner a lower return, reducing national wealth.

It is obvious that tort liability will encourage a manufacturer (or any other economic actor) to make safety-related investments in order to avoid subsequent liability for loss. Nevertheless, it is well established in the law and economics literature that there is a limit to the extent to which manufacturers will invest to increase the level of safety. Since it is presumed that manufacturers seek to maximize profits, a manufacturer can be predicted to continue investments toward greater product safety only to the point at which further safety-related investments are more expensive than paying damage judgments (whether directly or through insurance) for losses that still occur. Obviously, it is not feasible economically (or even possible) to prevent all product-related losses. As a consequence, it is unavoidable that a manufacturer (or a society) must, at some point, determine where to end further safety-related investments.

If damages measures are perfectly compensatory, then manufacturers will be induced to invest in safety exactly to the point at which the costs of further investment are equal to benefits, the optimal point in terms of

88. For a crude comparison of product design before and after the expansion of liability standards, see Priest, supra note 77.
national wealth. This optimal point will be reached, in general, without regard to the definition of the liability standard. If there were no manufacturer liability, then market forces would encourage optimal manufacturer investments. On the other hand, if there were absolute manufacturer liability, it would remain cheaper for manufacturers to end safety-related investments at the optimizing point, paying damages for remaining losses.91

I have emphasized the assumption of perfectly compensatory damage measures. The assumption is important because in a liability system damages constitute the price mechanism for informing manufacturers of the value of further investments in safety. Obviously, if damages measures were lower than compensatory, the price signal to manufacturers would suggest that the costs of injuries were lower than they actually were. Market forces may still lead manufacturers to optimal investments in safety, but there is a risk, as with any undervaluation of a resource, that the signals provided by the liability system would lead to underinvestments in safety, reducing national wealth.

Conversely, where damages measures are greater than compensatory, the liability system is placing a greater price on the resource than its value. Here, national wealth will clearly decline. Where damages measures are greater than perfectly compensatory, manufacturers will be induced to make greater investments in safety than are socially optimal.

There are two prominent ways in which damages measures may fail in this regard. First, under U.S. law, damages for personal injury are determined by the sum of lost income, medical expenses and pain and suffering. Damages can be greater than compensatory if any of these damages elements is exaggerated, either by expansive predictions of future wage or medical expense losses or by excessive calculations of pain and suffering.

Second, damages judgments are greater than compensatory where exemplary damages are levied, such as punitive damages. There are circumstances in which punitive damages can serve a positive, wealth enhancing, role. Where the detection of either the occurrence of loss or the appropriate attribution of its source is incomplete, a punitive levy can restore total damages to the aggregate compensatory level. For example, if some set of product-related injuries were detected only once every three times they occurred, a punitive levy of treble damages would adjust the aggregate damages total to the appropriate compensatory level.92 Obviously, this is not likely to be a common occasion; especially following the expansion of manufacturer liability, consumers are probably more rather than less likely to attribute harm to a manufacturer than to other possible sources. Punitive levies may be justified on these grounds, however, where manufacturers have concealed research indicating product-related harms or fraudulently altered test results to secure regulatory approval.93

91. See id.
92. See id. at 77-78.
93. For a broader discussion of punitive damages in products liability contexts, see George L. Priest, The Current Insurance Crisis and Modern Tort Law, 96 Yale L.J. 1521 (1987)
The only other role for punitive damages in the context of product manufacture is substantially more problematic in terms of national wealth. Many have defended punitive damages levies on manufacturers essentially as a method of *in terrorem* deterrence, arguing that, in contexts of egregious departures from normal safety standards, manufacturers ought to be charged more than compensatory damages for a loss in order to discourage similar behavior in the future. Here the punitive levy is employed to reorient a manufacturer's priorities or judgment.94

This justification is problematic because it is typically articulated with seeming obliviousness to the deterrent role of compensatory damages. According to economic analysis, the levy of *compensatory* damages serves a deterrent function toward encouraging safety, indeed, a deterrent function precisely measured to attain the socially optimal level of deterrence. Because manufacturers are profit-maximizers, compensatory damages will lead them to invest exactly the socially optimal amount in safety so that consumer and societal welfare is maximized. A further levy of punitive damages will surely increase the level of deterrence. The additional deterrence, however, will in general reduce national wealth by encouraging excessive manufacturer investments in safety.

This *in terrorem* deterrence justification for punitive damages derives from behavioral assumptions that at base are contradictory or, at the least, build upon psychological response assumptions that are very fragile. To find that a manufacturer deserves liability for punitive damages implies that the manufacturer—however otherwise acting to maximize profits—somehow failed to respond to the strong financial incentives created by compensatory damages to make investments in safety to the socially optimal point. On the other hand, to believe that the punitive damages levy will enhance welfare implies that the manufacturer will switch and become responsive to a different (admittedly greater) financial incentive.

With respect to the broader ambition of employing punitive damages as a general social deterrent, the assumptions become even more fragile. Are there many manufacturers who are likely to be ignorant of the financial incentives created by compensatory damages, sensitive to the financial incentives created by punitive damages, but who in response will invest in safety to the socially optimal point determined by the compensatory, rather than the punitive, incentive? Perhaps, but, to date, there are no data supporting the effectiveness of punitive damages in encouraging optimal safety in product manufacture. The more likely effect is to reduce national wealth by encouraging excessive manufacturer investments.

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94. For a more complete discussion, see Ellis, *supra* note 93. Others defend punitive damages on moral and retributive rather than economic grounds. Punitive damages levied for retributive purposes represent a cost inflicted by the society on itself. As with warfare, retribution diminishes a nation's wealth.
b. Product insurance

As described above, except for the levy of greater than compensatory damages, there is a maximum amount beyond which a manufacturer will not make further investments in product safety. Increasing levels of manufacturer liability beyond this maximum will shift liability costs to manufacturers leading them, in essence, to provide insurance for product-related losses. Again, the founders of our modern tort law regime understood this would occur and believed that the provision of compensation insurance for product losses would benefit the society. The expansion of liability in order to increase levels of consumer compensation remains one of the great humanitarian gestures of the post-War era, but there is wide agreement today that it has harmed, rather than helped, consumers in the aggregate. These points have been developed more extensively elsewhere, but, briefly, insurance delivered through the tort system imposes excessive levels of administrative costs, provides a form of insurance coverage that consumers do not value (in particular, coverage of pain and suffering losses), and systematically discriminates against the relatively low income of the population of product consumers (because they must pay the same product insurance premium as the high income, but receive lost income and pain and suffering coverage at a much lower level). Ignoring the redistributional harm to the poor, I have separately estimated that insurance provided through the tort system is between 64% and 134% more costly than comparable first-party insurance coverage. These greater insurance costs themselves reduce national wealth. In addition, there are strong reasons to believe that many products have been driven from the market because of the adverse insurance effects of the expanded U.S. products liability.

2. How the expansion of products liability affects U.S. competitiveness

The evaluation of the effects on competitiveness of the expansion of products liability is different from the expansion of environmental regulation. The effects of environmental regulation are chiefly domestic. As described earlier, environmental regulation represents the purchase of some level of environmental quality by U.S. residents. Product safety and insurance are similar with respect to U.S. consumers. But, for foreign consumers, the effects are different, because foreign consumers may or may not wish to purchase the same level of product safety and insurance purchased by Americans. It is this difference that has motivated the great concern about the effects of the expansion of products liability on U.S. trade competitiveness.

95. See Priest, Invention, supra note 2, at 463.
96. See Priest, Insurance Crisis, supra note 92, at 1534-39.
97. See generally id.
98. Id. at 1556.
The previous subsection described three effects of the expansion of products liability: 1) compensatory damages encourage manufacturer investments toward the optimal level of product safety for U.S. consumers; 2) damages beyond compensatory, including punitive damages, encourage investments in safety greater than the optimal; and 3) the expansion of liability induces the provision of insurance for product-related losses at a cost substantially greater than its benefits. How do these effects influence U.S. trade competitiveness? First, there is no reason to believe that levels of product safety generated by compensatory damages, however optimal for U.S. consumers, correspond to levels optimal in different international markets. As with environmental quality, U.S. consumers are likely to demand greater levels of safety than most foreigners. U.S. manufacturers, of course, could design and sell products in foreign markets with appropriately different safety characteristics, and some probably do. Segregating products according to levels of safety, however, diminishes advantages from economies of scale in production, increasing costs and reducing foreign sales of U.S. manufacturers.

There are no grounds, however, to criticize this source of the reduction in U.S. trade. It enhances the wealth of the United States to attain the optimal level of product safety for U.S. consumers. Put differently, U.S. consumers would be worse off if products were designed to correspond to any other safety level. The adverse effect on U.S. trade from the inability to take advantage of manufacturing scale economies is attributable to the dominance of U.S. consumers among the world-wide consumer population, not to U.S. products liability law.

In contrast, the second effect of the expansion of liability—greater than optimal safety because of the imposition of greater than compensatory damages, including punitive damages—both harms U.S. consumers directly and exacerbates the effects of differential international demand for safety. U.S. consumers are harmed because exemplary damages encourage manufacturers to make safety-related investments whose costs exceed their benefits. U.S. trade is harmed because these excessive manufacturer investments will likely generate even lower levels of value to foreign consumers. The levy of exemplary damages in the products context, thus, imposes a double harm on U.S. national wealth.

The third effect of the expansion of liability—the provision of insurance for product-related losses—may well reduce national wealth for sales within the United States, but may have no adverse effect on U.S. trade depending upon the legal regime in force in the context of losses suffered by foreign consumers. If foreign consumers are constrained to recover according to the law of the country in which the product was sold, and that country has not—as most have not—expanded products liability to shift insurance burdens to manufacturers, then U.S. manufacturers need not attach an insurance premium to the price of products sold in foreign markets. The same product may be sold in the United States at a price that includes insurance, but in a foreign market at a lower price without the same compensation insurance package. As long as these jurisdictional
constraints are preserved, then the expansion of liability to provide consumers insurance will have no adverse effect on U.S. trade though, again, it reduces U.S. wealth by providing insurance to U.S. consumers at a cost greater than its value to them.

This analysis suggests that the various popular criticisms of the effects of modern liability on trade competitiveness are grossly imprecise. For example, it was claimed that U.S. manufacturers face higher costs of production than foreign manufacturers because of U.S. standards of liability.99 This claim may be accurate in part, but the source of higher U.S. manufacturing costs must be clearly denominated before criticism is appropriate. U.S. manufacturers may face higher production costs in general because U.S. consumers demand higher levels of product safety and quality than foreign consumers. This difference provides no grounds for the criticism of U.S. law, as long as that law is equally applied to foreign manufacturers with respect to their sales within U.S. markets.100 Whatever the market, consumers should receive the level of product safety and quality optimal for them.

In contrast, to the extent that manufacturing costs in the United States are higher than abroad because of the imposition of greater than compensatory damages recoveries, including punitive damages recoveries, then U.S. manufacturing costs are artificially higher for reasons that, in the aggregate, provide no demonstrable benefit to consumers.101 The wealth of U.S. consumers would increase and U.S. trade competitiveness would increase at no loss to consumers if punitive damages levies were curtailed.

Finally, to the extent that total product costs are higher for U.S. manufacturers because of the provision of insurance compelled by expanded standards of products liability, sales will decline. There will be no general effect on competitiveness, however, as long as foreign manufacturers are subject to identical standards for sales within the United States and as long as foreign consumers cannot generally recover in U.S. courts for product-related losses. This is not to deny that, within the United States, U.S. consumers as well as U.S. and foreign manufacturers lose from the compulsion of expanded standards of manufacturer liability to provide tort law product insurance. Because that insurance imposes costs greater than benefits, U.S. national wealth would increase by constraining liability. Nevertheless, this insurance generates no clear loss to U.S. competitiveness.

For the same reason, the allegedly greater litigiousness of United States than of foreign consumers will not generally affect U.S. competitiveness. As long as foreign manufacturers are equally subject to U.S. litigiousness with respect to their sales in U.S. markets, and as long as U.S. manufacturers are free of such litigiousness for their sales in foreign mar-

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99. Cortese & Blaner, supra note 6, at 179-80.
100. For some problems in this regard, see infra text accompanying notes 112-20.
101. Again, exceptions are cases in which the punitive levy restores total damages to an aggregate compensatory level. See supra text accompanying note 91.
kets, there will be no differential effect on trade competitiveness. Whether differential litigiousness exists, of course, is hotly contested. 102 Obviously, where there are greater opportunities for recovery through the legal system, citizens are more likely to exercise them and, thus, to appear litigious. As with criticisms of the number of lawyers, however, the source of the problem is not some collection of individual attitudes or predispositions, but rather the character of the legal system. The best way to establish an appropriate level of national litigiousness is to establish a legal system that encourages optimal—but not greater than optimal—investments in environmental quality and product safety.

One further common complaint about modern U.S. law—the complaint about "long-tail" liability—is generally without merit, at least with respect to competitiveness. Long-tail liability for products manufactured years before will not generally affect current product prices in competitive markets. Prospective liability for products manufactured years before resembles a sunk cost—it is no more than an expense against assets—and cannot be taken into account in determining the price to be charged for new products. The price of new products may include a premium for expected long-tail liability attaching to those products themselves. But that premium must be added to the price of products sold in the United States by both domestic and foreign manufacturers. 103 Admittedly, the assets of manufacturers of durable products may decline and even decline drastically as long-tail liability expands. That liability, however, cannot generally affect current product prices, thus, it cannot affect competitiveness. In a competitive market, a manufacturer must set a product price at least equal to all expected costs related to that product. Competition prevents setting the price higher to recoup other losses or attain monopoly returns.

This conclusion, however, should not be read as an endorsement of long-tail liability, but only that long-tail liability—as long as it is applied equally to durable products whether manufactured in the United States or elsewhere—will not generally affect competitiveness. From the standpoint of national wealth, long-tail liability is probably harmful. The principal problem of long-tail liability is that it holds manufacturers liable according to current safety standards for design and manufacturing decisions made many years before. Except where manufacturers might have responded to current safety innovations by cost-effectively improving earlier products, long-tail liability converts the manufacturer into an insurer with respect to previous sales. As with other forms of insurance, long-tail liability insurance is excessively costly because it is delivered through the tort system, 104 thus, national wealth declines.

Finally, as reported earlier, some critics of the modern expansion of liability complain that rules of jurisdiction and choice of law are heavily slanted against U.S. manufacturers. Many claim that foreign consumers can always recover against U.S. manufacturers in U.S. courts under U.S.

102. See Galanter, supra note 10.
103. But see infra text accompanying notes 112-20.
104. For a discussion of tort law insurance, see supra text accompanying note 96.
standards of liability and damages, but that U.S. consumers can never re­
cover against foreign manufacturers selling in U.S. markets. As a con­
extquence, U.S. trade is said to be badly damaged.105

These claims are exaggerated, but there remain serious grounds for
concern on this point. There are many examples of judicial rulings in
product cases on issues involving jurisdiction and choice of law that inflict
harm on U.S. trade without any clearly offsetting advantages. Since U.S.
rules of jurisdiction and choice of law do not overtly address trade effects,
these problems may accelerate in the future.

In terms of principle, the analysis is straightforward and resembles the
analysis of the regulation of environmental quality. Consumers of differ­
ent nationalities are likely to prefer or be able to pay for different levels of
product safety. It will enhance the wealth of any nation for its citizens to
receive exactly the level of safety optimal for them. To impose a higher
level of safety than optimal will reduce their aggregate wealth because it
compels them to purchase product characteristics whose costs are greater
than the benefits to them.

As a general proposition, this suggests that lawsuits involving product­
related losses should be controlled by standards of liability and measures
of damages in effect in the jurisdiction in which the consumer purchased
the product. The law of the national market will provide the best evidence
of the level of product safety optimal for the consumers of that nation. To
apply any different, higher standard of liability will compel consumers to
purchase a level of product quality greater than they value.

It is not surprising that many foreign consumers of U.S. products seek
to file suit in U.S. courts for product-related losses, given the expansion of
liability in the United States, especially relative to standards applicable in
other countries. Foreign consumers can expect stricter standards of man­
ufacturer liability and more expansive measures of damages in U.S. courts
than in their own courts. As a general matter, rules of jurisdiction in the
United States allow suit, variously, in the venue in which the product was
manufactured or in which the manufacturer is incorporated or doing busi­
ness, though limited by procedural doctrines, such as forum non conveniens.

The approach of U.S. courts has been inconsistent with respect to
entertaining suits by foreign consumers against U.S. manufacturers. The
Texas Supreme Court, for example, held for many years that Texas law did
not recognize the doctrine of forum non conveniens, thus allowing suits
under U.S. law by foreign consumers against U.S. corporations.106 To al­
low such suits, however, damages U.S. trade without aggregate benefit to
consumers in foreign nations. Allowing suits by foreign consumers under
U.S. law compels U.S. manufacturers to conform products sold in foreign
markets to U.S. standards of product safety and to accompany the sale of
these products with U.S. levels of compensation insurance. Both the level

105. See sources cited supra note 6.
106. Dow Chemical Co. v. Alfaro, 786 S.W.2d 674, 674-77 (Tex. 1990), cert. denied, 489
of safety and the extent of insurance coverage, however, are typically greater than those demanded by foreign consumers. If foreign consumers demanded U.S. levels of product safety and insurance, their domestic law would more closely resemble U.S. law. The point is painfully obvious with respect to European countries, all of which provide extensive government supported health and medical compensation systems, rather than relying on manufacturers to finance medical care for product-related losses. Put in economic terms, therefore, to impose U.S. law on sales in foreign markets imposes an additional price that foreign consumers must pay for safety and insurance that is greater than its value to them.

Similar issues are often raised in cases involving choice of law questions. For example, in *Kozoway v. Massey-Ferguson, Inc.*, a Colorado federal district court selected application of the strict liability standard of Iowa over the negligence standard of Alberta, Canada in a suit brought by a Canadian farmer against a U.S. manufacturer.\(^\text{107}\) The court sought to identify the jurisdiction with "the most significant relationship" to the injury. The product was designed and manufactured in Iowa, but sold in Canada where the injury occurred. The court applied Iowa law on the grounds that Iowa products liability law provided greater remedies to consumers than did the law of Canada. According to the court,

The United States has a legitimate interest in assuring that domestic law is applied when a foreign plaintiff claiming to have been injured by an American corporation chooses a court in this country in seeking redress. . . . Canada provides no strict products liability remedy and creates the bar of assumption of risk to preclude recovering even for negligently inflicted injuries. . . . Moreover, the existence of unlimited punitive and exemplary damages in Iowa, illustrates that state's policy to deter, punish and make an example of, certain dangerous corporate conduct.\(^\text{108}\)

This decision, too, though beneficial to the plaintiffs in the case, harms Canadian consumers in general and harms U.S. trade. If consumers in Canada desired or thought that they might benefit from American standards of manufacturer liability or unlimited punitive damages, their legislatures or their courts could adopt those principles.\(^\text{109}\) For a U.S. court to provide for Canadians a set of legal standards that Canadians themselves do not appear to desire has the effect simultaneously of raising costs in Canada and reducing U.S. trade competitiveness. Canadian manufacturers will gain because they do not have to include American liability

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108. *Id.* at 644.

109. In addition to limitations on substantive liability and punitive damages, the Supreme Court of Canada has imposed a limitation on pain and suffering recoveries starkly below that of the U.S. *See Andrews v. Grand & Toy Alberta Ltd.*, 2 S.C.R. 229 (1978) (finding $100,000.00 (Canadian) as the upper limit to be awarded for non-pecuniary damages); *Thornton v. School Dist. No. 57 (Prince George)*, 2 S.C.R. 267 (1978) (limiting damages for pain and suffering, loss of amenities and shortened expectation of life to $100,000.00 (Canadian)); *Arnold v. Teno*, 2 S.C.R. 287 (1978) (ceiling of $100,000.00 (Canadian) for pain and suffering, inflation-indexed from 1978).
costs in the prices of their products; American manufacturers lose commensurately; Canadian consumers lose because they face fewer affordable choices. The State of Iowa may well possess a policy to deter "dangerous corporate conduct," but, except perhaps for criminal activity, that state's policy must be designed—however mistakenly with respect to strict liability and unlimited punitive damages—for the benefit of Iowa and U.S. consumers who pay for it in the price of the products sold domestically.

Other courts have refused to entertain suits by foreign consumers under U.S. law, although traditional grounds for decisions regarding jurisdiction and venue are not generally sensitive to the trade and welfare issues discussed here. For example, the California Supreme Court recently denied jurisdiction in a suit brought by foreign purchasers of artificial heart valves against a California manufacturer that designed, manufactured, tested, and packaged the product in California. According to the court, the jurisdictional issue was to be determined by evaluating the private interests of the litigants and the public interest of the state in entertaining the litigation. The manufacturer had conceded service in the foreign country, leading the court to view the private interests of the litigants in terms of enforcing the judgment and gaining access to witnesses and proof as roughly equivalent with respect to jurisdiction. The court, however, found that the state's public interest in terms of reducing court congestion and "concern for the community", tilted in favor of suit in the foreign jurisdiction where the product was sold, rather than in California. The court emphasized the burdens on California courts in terms of congestion from the trial of complex product liability actions and distinguished the state's interests in recovery by its own citizens as opposed to foreign citizens.

The outcome, of course, is consistent with the argument here concerning maximization of the national wealth both of citizens of the foreign country and of the United States. To compel U.S. manufacturers to sell products abroad that comply with U.S., rather than foreign, standards of safety and insurance reduces both foreign and U.S. national wealth. Obviously, however, these grounds were not explicitly adopted by the California Supreme Court nor, to date, have they been adopted by any other court. Moreover, however salutary the outcome, the deleterious effects on all parties (except, of course, the individual plaintiff) of allowing suits by foreign consumers in U.S. courts do not change with the level of a state's civil court congestion.

Both in this country and abroad, the legal principles for resolving jurisdiction, venue, and choice of law issues were developed at a time during which the substantive law of nations—especially civil law—was more closely identical across the various commercial nations. Where substantive law does not importantly differ across nations, considerations of access and process may well deserve commanding weight. In contrast, where the

substantive law of one country differs substantially from that of others, the impact on the comparative welfare of nations must be carefully considered. Today, the civil law of the United States—especially products liability law—is dramatically different both doctrinally and in effect from the law of any other nation. Even nations that have adopted the strict liability standard for product defects, such as the EEC nations, have no experience with products liability judgments that remotely approximates that of the United States. As a consequence, it is imperative for U.S. courts to carefully evaluate the effects on the wealth of both the United States and affected foreign markets of entertaining suits by foreign consumers.

Although this development has not been widely noted, in recent years the courts of foreign countries have increasingly observed the substantial differences between U.S. products liability law and their own domestic law and have invoked these differences as grounds for protecting domestic manufacturers in suits brought by or from judgments sought to be enforced by U.S. consumers. Again in principle, foreign producers selling products in the United States should be subjected to U.S. standards of liability. As reported earlier, some critics of modern law have claimed that “[f]oreign manufacturers . . . are not equally subject to the jurisdiction of U.S. courts, and therefore, may not be subject to U.S. product liability laws . . . .” This claim is an exaggeration, although many problems persist. As a general matter, foreign manufacturers selling in the United States are fully subject to U.S. law in suits brought by U.S. consumers. The principal problem, however, relates to whether a successful damages judgment can be effectively collected. If foreign manufacturers possess sufficient assets in the United States, consumers may be fully protected. Where the assets of foreign manufacturers lie abroad, however, there may be severe collection limitations.

The United States is not a signatory of any treaty or convention with respect to the enforcement of foreign judgments. General principles of comity may recommend enforcement in a foreign jurisdiction of a judgment rendered in the United States. Principles of comity, however, are always weighed against the public policy of the home jurisdiction. Increasingly, foreign courts are holding that recognition and enforcement of U.S. judgments must be constrained because of the conflict between the standards of law and damages measures in the United States and the law and damages of the home nation. For example, very recently, the German Federal Court of Justice (Germany’s highest court for civil and commercial matters) denied recognition of substantial portions of a U.S. civil dam-

113. Cortese & Blaner, supra note 6, at 180.
An American plaintiff had sued a German defendant for sexual assault and recovered a civil judgment of $750,260, comprising $150,260 for medical expenses, $200,000 for pain and suffering and $400,000 for punitive damages. The German court upheld the medical expense and pain and suffering portions, but denied enforcement entirely of the punitive damages component on the grounds that it was incompatible with German public policy. Since there are much stronger reasons supporting punitive damages in a sexual assault claim than in a products liability claim, the decision of the German court would appear to signal its refusal to enforce American punitive damages judgments in all instances.

The German court's refusal to enforce an American punitive damages judgment has important implications for U.S. trade competitiveness and national wealth. The decision seriously damages the competitiveness of U.S. manufacturers. Perhaps surprisingly, however, the decision may increase U.S. national wealth. First, in principle, to the extent that foreign manufacturers are protected from U.S. punitive damages judgments, then U.S. manufacturers face severe competitiveness problems in U.S. markets. U.S. manufacturers must design their products to comply with U.S. products liability standards reflecting U.S. judgments. This means that, to the extent that greater than compensatory damages—like punitive damages—are awarded, U.S. manufacturers must invest in safety at levels greater than optimal for consumers. In addition, given expanded standards of liability, U.S. manufacturers must insure consumers and pass the proportionate insurance premium along in the product price.

To the extent that foreign manufacturers can discount the collectibility of U.S. products liability judgments, however, their prices can be set commensurately lower. If they do not face equal prospects of punitive damages levies, then they need not invest in excessive levels of safety, as must U.S. manufacturers. In addition, to the extent that other forms of

118. Zekoll, supra note 114, at 644. An intermediate German appellate court had allowed enforcement of only $70,000 of the pain and suffering component and $55,065 of the punitive damages component because it viewed the punitive damages as a form of compensation for attorney's fees. Id. For further discussion of this decision, see Patrick J. Nettesheim & Henning Stahl, Bundesgerichtshof Rejects Enforcement of United States Punitive Damages Award, 28 TEX. INT'L L.J. 415 (1993). For a comprehensive discussion of developments of this nature in Europe, see Alberto Saravalle, I Punitive Damages nell Corti Europee e nei Tribunali Arbitrali, 29 RIVISTA DI DIRITTO INTERNAZIONALE PRIVATO E PROCESSUALE (forthcoming 1993).
119. In the context of sexual assault, compensatory damages alone would be an inadequate remedy since the ambition of the law is not, as in products liability, to create incentives for the potential tortfeasor to attain the socially optimal level of safety, but rather to establish punitive incentives to stop the activity altogether. See Richard A. Posner, ECONOMIC ANALYSIS OF LAW 208-10 (4th ed. 1992). In Doe v. Schmitz the German defendant had been sentenced to a criminal penalty, but escaped to Germany to avoid detention. See Zekoll, supra note 114, at 644.
120. See Zekoll, supra note 114, at 659-59; Nettesheim & Stahl, supra note 117, at 425.
121. Because they do not possess sufficient assets in the U.S. to allow collection or their domestic courts refuse to enforce U.S. judgments.
damages are uncollectible\textsuperscript{122} or costly to collect, the level of insurance that foreign manufacturers must provide is less, and the price, commensurately less. Obviously, the ability to sell products at lower prices provides a substantial competitive advantage to foreign manufacturers in U.S. markets.

Thus, although the German court's refusal to enforce the American judgment substantially harms the competitiveness of U.S. manufacturers, it is likely to increase the wealth of the United States by benefiting U.S. consumers in the aggregate.\textsuperscript{123} As explained earlier, punitive damages judgments in products cases and the product insurance compelled by expanded manufacturer liability, harm U.S. consumers because their costs greatly exceed their benefits. To the extent that U.S. consumers are able to purchase products with optimal rather than excessive investments in safety and without product insurance, U.S. consumers are better off, and the wealth of the nation increases, albeit here at the expense of U.S. manufacturers.

Put differently, the refusal of the German court to enforce American punitive damages judgments represents a form of tort reform for America that benefits U.S. consumers in the aggregate. Subject to decisions such as that of the German court, American consumers are able to obtain products better designed for their needs at more affordable prices. Regrettably, of course, the benefit to U.S. consumers results from the decline in competitiveness of U.S. manufacturers. The better option, obviously, is American tort reform, which would benefit both U.S. consumers and manufacturers.

Once again, it can be seen that condemnation of the number of lawyers or of their redistributive efforts is not helpful. The damage imposed upon national wealth and competitiveness stems not from lawyers, but from the definition of legal standards and the determination of damages, including punitive damages, that systematically raise product prices without commensurate gain to consumers. The number of lawyers and the level of legal services demanded in the United States is surely affected by the opportunities for litigation, but for every lawyer seeking redistribution, there is a lawyer opposing it. The reform of the law to more closely correspond to standards that would increase national wealth might eliminate both of these lawyers. Law reform within the United States is surely the optimal approach.

\textsuperscript{122} The intermediate German appellate court had denied enforcement of 65 percent of the American pain and suffering award, though the award was reinstated by the Federal Court of Justice. See Zekoll, supra note 114, at 657-59; Nettesheim \& Stahl, supra note 117, at 416-25.

\textsuperscript{123} Again, I am referring here only to the effect of the decision on products liability, not as, in the case itself, on the deterrence of sexual abuse, undoubtedly harmed by the decision.
IV. How to Reform the Law to Increase National Wealth, Economic Growth and U.S. Trade Competitiveness

The implications of the previous discussion with respect to the direction of modern tort reform are straightforward:

1. First, national wealth and economic growth can best be achieved by defining standards for environmental quality and product safety that are optimal for consumers.
   a. Standards of environmental quality should be established as precisely as possible at the point at which the costs of higher environmental quality are equal to the benefits, but not beyond that point.
   b. Optimal standards of product safety can be attained by defining damages in product cases as carefully as possible at the compensatory level, constraining excessive damages judgments, and limiting punitive damages to contexts in which the punitive levy will restore aggregate damages to the compensatory level, such as cases involving fraud or concealment.

2. With respect to product defects, the standard of liability should be defined to remove or reduce all insurance features. I have addressed this question in greater detail elsewhere, but it implies establishing a standard according to which a manufacturer is liable only for those product-related accidents which it could practicably and cost-effectively have prevented by identifiable manufacturer investments.124 In all other contexts, and especially in contexts in which it is argued that manufacturers should insure consumers, liability should be denied, removing the costly and ineffective insurance premium from the product price.

3. Product liability standards should be imposed according to the law of the market in which the product was purchased. Foreign manufacturers selling in U.S. markets should be held liable to U.S. standards. U.S. manufacturers selling abroad should be held liable to foreign standards in foreign courts. The refusal of foreign courts to enforce U.S. judgments should be informative as to the effects of modern U.S. tort law on the welfare of consumers. Nevertheless, if the principles with respect to liability standards, set forth in paragraphs 1 and 2 above are implemented, there will be no persuasive grounds for foreign courts to deny enforcement of U.S. judgments, and the otherwise deleterious effects on U.S. trade competitiveness of disparate judicial enforcement will disappear.
