

Taxation by Litigation:

The Economics of Civil Justice Reform in Massachusetts

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The Beacon Hill Institute for Public Policy Research focuses on federal, state and local economic policies as they affect citizens and businesses, particularly in Massachusetts. The institute conducts research and educational programs to provide timely, concise and readable analyses that help voters, policy makers and opinion leaders understand today's leading public policy issues.

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Executive Summary

Tort law plays an essential role in the American civil justice system. Traditionally, tort law supplemented commercial prudence and government regulation in deterring wrongful behavior. Over the last half century, however, there has been a substantial expansion in producers' liability for damages purportedly sustained from the use of their products. The result is a reduction in the capacity of American business to create jobs and capital. Tort law has come to impose costs – implicit tort taxes – that penalize business for creating jobs and capital, with predictable negative effects on the economy.

Various states have initiated reform measures aimed at restoring tort law to its traditional role in the civil justice system. In Massachusetts, the legislature is considering the Civil Justice Reform Act (S-896). The legislation is an effort by its advocates to improve tort law by addressing standards of liability and other factors relating to principles of predictability and fairness within the current civil law system. *Taxation by Litigation: The Economics of Civil Justice Reform in Massachusetts* assesses the economic implications of the tort liability system and estimates the economic effects that adoption of the proposed act could be expected to exert.

The Beacon Hill Institute estimates that adoption of the act would create:

- **71,649 to 241,224 new jobs;**
- **\$9.3 billion to \$31.9 billion in new capital;**
- **\$2.4 billion to \$8.2 billion in new annual payrolls; and**
- **\$144.9 million to \$488 million in new annual tax revenues.¹**

Our estimates reflect the dramatic increase in tort costs that has occurred as a result of the expansion in the tort system. According to Tillinghast-Towers Perrin, the U.S. tort system cost \$161 billion in 1995, or 2.3% of gross domestic product (GDP), up from approximately .6% of GDP in 1950 and 1.4% in 1970 (though down from a peak of

¹ See Beacon Hill Institute, *Massachusetts Econometric Tax Model* (Boston: Beacon Hill Institute, February 1996).

2.5% of GDP in 1986).²

These data reflect a shift in the role of tort law in deterring wrongful behavior by producers. Under an earlier, traditional regime, tort law played a secondary role in deterring such behavior. Commercial prudence and insurance and, to a lesser degree, government regulation played the primary roles.

Under the existing, more expansive regime, tort law has come to play a far more prominent role, deterring not just wrongful behavior by producers, but production itself. Under this expansive regime, the costs imposed on producers seeking to protect themselves from increased liability amount to an implicit tax on sales or production.

In 1992, the average Massachusetts resident incurred 32% more in tort costs than the average American.

In 1994, federal individual income tax collections were \$550 billion. The \$151.5 billion in tort costs incurred in the same year could be interpreted as a 27.6% surtax on the federal income tax.

In 1992 (the latest year for which published data are available), Massachusetts tort costs totaled \$4.13 billion, or 2.55% of gross state product (GSP), amounting to a tort cost of \$687 for every Massachusetts resident. Assuming that Massachusetts tort costs fall entirely on residents, the average Massachusetts resident incurred 32% more in tort costs than the average American. We estimate that in 1995, Massachusetts tort costs were \$5.1 billion, or \$833 for every Massachusetts resident, accounting for 2.68% of GSP.

If revenue equal to 2.55% of GSP were raised explicitly through the Massachusetts tax on income taxable at 5.95%, it would be necessary to impose an additional tax rate of 5.24% on that income. Hence, the total tax burden from the combination of the explicit income tax and the implicit tort tax would approach 11.19% of taxable income. Adoption of the Civil Justice Reform Act would substantially reduce

² Tillinghast-Towers Perrin, *Tort Cost Trends: An International Perspective* (1995); and Insurance Information Institute, *The Fact Book 1997: Property/Casualty Insurance Facts* (New York: Insurance Information Institute, 1996), 62-63. These figures rely on data from A.M. Best, the principal publisher of insurance industry data, "several specialized studies" of self-insurance and Tillinghast-Towers Perrin's internal database of state-by-state medical malpractice costs.

this tax and, as shown, confer substantial economic benefits.

The reason is not hard to understand. Once tort law abandoned its traditional, contractual foundations in favor of the current expansive regime, it came to impose a strikingly high, even if implicit, tax on economic activity undertaken within Massachusetts. By raising the cost of living and by putting upward pressure on prices and state taxes, tort costs diminish Massachusetts' ability to compete for business and workers. Reducing tort costs would, by contrast, increase the state's competitiveness and its capacity to attract new business and to create jobs.

By raising the cost of living and by putting upward pressure on prices and state taxes, tort costs diminish Massachusetts' ability to compete for business and workers.

Overview

A sea change has taken place in the United States regarding the place of tort liability in the civil justice system. This change, which began in the 1950s, has brought about a substantial transformation not only in the civil justice system but also in the capacity of American business to create jobs and capital. In its modern incarnation, the tort system imposes an implicit tax – a “tort tax” – that penalizes business for creating jobs and capital, with predictable, negative effects on the economy.

Opponents and perceived victims of the expanded tort liability system have, with some success, initiated tort reform measures in various states. A Civil Justice Reform Act now before the Massachusetts legislature would, in accord with this trend, place new limits on the rights of tort plaintiffs under Massachusetts law. Our purpose here is to assess the economic implications of the tort liability system in Massachusetts and, concomitantly, to estimate the economic effects that adoption of the proposed Act could be expected to exert.

Table 1 summarizes the results of our analysis. There, we present a range of estimates of the economic effects of the Civil Justice Reform Act, showing a reduction in the implicit tort tax (I) to the current (1992) U.S. average; (II) by an estimated 26.6% reduction in tort filings;³ (III) to the 1970 Massachusetts level; and (IV) to the 1970 U.S. level. These scenarios show progressively larger economic effects.

Table 1 - Economic Effects of Tort Reform

	Scenario			
	I	II	III	IV
Reduction in Mass. Tort Costs to:	Current U.S. Average of 2.2% of GDP	Proportionate to Filings decrease of 26.6%	1970 Mass. Costs of 1.8% of GSP	1970 U.S. Costs of 1.4% of GDP
Equivalent Tax Impact (% point change)	-0.72	-1.39	-1.54	-2.36
Employment Impact	71,649	139,940	155,303	241,224
Capital Impact	\$9.3 billion	\$18.3 billion	\$20.4 billion	\$31.9 billion
Payroll Impact	\$2.4 billion	\$4.7 billion	\$5.2 billion	\$8.2 billion
Tax Revenue Impact	\$144.9 million	\$283.1 million	\$314.1 million	\$488.0 million

At the low end of the range (Scenario I), the Civil Justice Reform Act would cause a 0.72-percentage-point reduction in the tort tax. The result would be the creation of almost 72,000 new jobs, which is to say, a 2.38% increase in Massachusetts employment. The new jobs would be filled by Massachusetts residents who are currently unemployed and by the entry of persons (some of whom would come from out of state) into the Massachusetts labor force.

A further effect would be the creation of \$9.3 billion in new capital spending. The expansion in jobs would cause annual payrolls to expand by \$2.4 billion. The state would collect \$144.9 million annually in new tax revenue.

At the high end of the range (Scenario IV), the tort tax would fall by 2.36 percentage points. The result would be the creation of more than 241,000 new jobs and of about \$32 billion in new capital spending. The inescapable conclusion is that tort reform would confer substantial benefits, however estimated, on Massachusetts.

³ In Chapter IV, we estimate this percentage based on the decline in the number of tort filings in Cook County, Illinois in 1996.

The Tort Transformation

The reason is not hard to understand. Once tort law abandoned its traditional, contractual foundations in favor of its now expansive regime, it came to impose a strikingly high even if implicit tax on economic activity undertaken within Massachusetts. The severity of the economic consequences should surprise nobody.

The purpose of tort law is to deter wrongful behavior and to provide compensation to the victims of such behavior. Traditional tort law played a secondary role within our economy in serving this purpose. The primary roles were played by commercial prudence and by insurance, along with some support through government regulation. Deterrence and compensation were generally organized according to the contractual principles that govern commercial relationships.

Traditionally, a producer was liable for a consumer's injuries only if the injuries were attributable to the producer's wrongful behavior. Consumers depended largely on the producer's commercial sense as a deterrent to such behavior. The reason is that wrongful acts typically cost an enterprise more, through various forms of indemnification and through loss of reputation, than they save in production costs, and so are bad for business.

In this traditional framework, government remedies generally mirrored the contractual relationships that characterize normal commercial activity. Hence, workers compensation was introduced as an insurance program that indemnifies workers for injuries suffered on the job. The contractual principles that govern the provision of private insurance were imported into the provision of workers compensation, even if

the precise details of workers compensation differed from what market-based providers might have offered.

Playing its supporting role in this overall system of deterrence and compensation, tort law came into play in accidents, where the contractual principles that governed market relationships were not directly applicable. Automobile accidents were a principal example.

The doctrine of privity of contract restricted the range over which tort liability roamed. A manufacturer might sell a ski-like exercise apparatus and perhaps be liable for the buyer's injuries if he failed to caution the buyer about the proper use of the equipment. The manufacturer would not, however, be liable for injuries to a guest of the buyer who used the apparatus, or to a subsequent owner to whom the buyer had sold the apparatus, unless the product itself was defective.⁴

Today the same manufacturer faces a much-expanded range of liability, one that goes well beyond liability for product defects. A new expansive regime has elevated tort law in the American system of deterrence and compensation from a supporting role to one of star performer.

There are two ways to increase safety. One way, associated with the traditional, contractual principles of tort law, diverts economic resources from the business of repairing the harm done by unsafe products to that of producing safer products, leaving consumers with fewer injuries but also leaving overall economic activity undiminished.

⁴ In the event of injuries to those subsequent parties and in the absence of product defects, liability would reside with the customer and not with the manufacturer. The injuries in these two instances involved contractual relationships

Another way, associated with the modern, expansive principles of tort law, discourages the production of all products, including products aimed at increasing safety.

Tort law, as it has currently evolved, increases safety at the expense of economic activity and, hence, of jobs and investment. A reduction in Massachusetts tort costs would represent a shift toward a tort system that values both safety and economic activity.

Tort Costs

The economic consequences of the change in tort law have been dramatic. According to Tillinghast-Towers Perrin, a management consulting organization, the U.S. tort system cost \$161 billion in 1995, up from \$151.5 billion in 1994.⁵ In 1995, tort costs accounted for 2.3% of GDP, up from approximately .6% of GDP in 1950 and 1.4% in 1970, but down from a peak of 2.5% of GDP in 1986.⁶

In 1994, federal individual income tax collections were \$550 billion. The \$151.5 billion in tort costs incurred in the same year could be interpreted as a 27.6% surtax on the federal income tax.

If U.S. tort costs had remained at 1.4% of GDP, those costs would have been \$97 billion in 1994 rather than \$151.5 billion. Instead of representing a 27.6% surtax on the individual income tax, they would have represented only a 17.6% surtax. If tort costs had remained at 0.6% of GDP, as in 1950, they would have amounted to \$41 billion in

between the customer and his guest or the customer and the subsequent owner, and those relationships excluded the manufacturer in either case.

⁵ Tillinghast-Towers Perrin, *Tort Cost Trends*; and Insurance Information Institute, *The Fact Book 1997*, 62-63. See footnote 2.

⁶ *ibid.*

1994, representing but a 7.5% surtax.

The data compiled by Tillinghast-Towers Perrin pertain to the United States as a whole. Using a methodology similar to theirs, we calculate the cost of the tort system for each of the 50 states and the District of Columbia.

In 1992 (the latest year for which published data are available), Massachusetts tort costs totaled \$4.1 billion, or 2.55% of GSP, amounting to a tort cost of \$687 for every Massachusetts resident. Assuming that Massachusetts tort costs fall entirely on Massachusetts residents, the average Massachusetts resident incurred 32% more in tort costs than the average American. As a percentage of GSP, Massachusetts tort costs were 18.6% higher than tort costs as a fraction of GDP. We estimate that in 1995, Massachusetts tort costs were \$5.1 billion, or \$833 for every Massachusetts resident, accounting for 2.68% of GSP.

Considering the Tort Tax

Defenders of this state of affairs point out, correctly, that the increase in tort costs has brought certain benefits. With increased deterrence, there is a lessening of certain kinds of risks, at least those that are deterrable through the court system.

In thinking about accidents, however, it is vital to think about both sides of the equation – about the costs as well as the benefits of deterring harm. Automobile accidents exact a large toll each year in lives lost, people injured and property damaged or destroyed. It is reasonable for society to limit accidents in an efficient manner and degree. It is not reasonable, however, to seek to eliminate accidents. Why? Because

doing so would be too costly.

We could reduce substantially the number and seriousness of automobile accidents by imposing a highway speed limit of 25 miles per hour. However, people would almost universally object to such a measure because the cost of securing this degree of accident prevention would outweigh the value of the added safety thus gained.

In other words, and more generally, it is important to consider the cost as well as the benefit side of any system of accident deterrence. Since the costs of deterrence may well exceed the benefits, an understanding of the cost side is a necessary part of any effort to reach an informed judgment about desirable levels of and approaches to accident deterrence.

It is the cost side of the equation that is the central focus in this report. Tort liability adds to the cost of goods, in the same fashion as a tax, even though it is not explicitly levied as such. Massachusetts businesses and residents pay a number of explicit taxes, among them a 5% sales tax and a 5.95% tax on earned and certain unearned income. They also bear burdens through the tort system, as a form of implicit tort tax.

To the extent that state government incurs tort costs, and only to this extent, does the "tort tax" show up as an explicit part of the tax burden. By far the overwhelming part of tort liability is embedded in higher prices for the products people buy through regular commercial transactions. It has been estimated, for instance, that the price of stepladders is increased by 30% through the operation of tort liability, which renders

tort liability equivalent to a 30% tax on the sale of stepladders.⁷

We estimate the total tort tax liability in Massachusetts to be 2.55% of GSP. If revenue equal to this fraction of GSP were raised explicitly through the Massachusetts tax on income taxable at 5.95%, it would be necessary to impose an additional tax rate of 5.24% on that income. Hence, the total tax burden on this income from the combination of the explicit income tax and the implicit tort tax would approach 11.19% of taxable income.

The share of GSP accounted for by the cost of tort liability was .75 percentage point higher in 1992 than in 1970. This is equivalent to a 1.54 percentage point increase in the Massachusetts tax on earned income (as reflected in Table 1, scenario III).

To be sure, not all of the tort tax borne by residents of Massachusetts can be influenced by Massachusetts legislation. A portion of that tax burden is influenced by legislation in other states. In a scenario such as an accident involving a defendant based in Massachusetts and a plaintiff located elsewhere, a suit may be filed elsewhere if the plaintiff expects to receive a larger judgment in that alternative venue.

Some economic activity in Massachusetts is heavily oriented toward export, and, for such activity, Massachusetts can exert only a modest influence over the tort tax borne by its residents. But other economic activity is almost exclusively confined to the state's borders, and there the legislature can exert full control over the tax burdens borne by state residents. And, of course, there will be a variety of in-between cases, as in a spectrum and not a dichotomy, concerning the relative importance of export

⁷ Peter Huber, *Liability: The Legal Revolution and its Consequences* (New York: Basic Books, 1988), 3.

production in total state production.

Passage of the Civil Justice Reform Act would limit the tort liability of Massachusetts businesses and thus reduce the tort tax borne by Massachusetts residents. By translating tort reform into an equivalent change in the state income tax and by identifying the range into which that change is likely to fall, we can assess its effect on employment, as well as on other economic variables such as capital spending, payrolls, and tax collections.

The question, then, is not whether tort reform, considered as tax relief, would generate economic benefits, but what the magnitude of those benefits is likely to be. We use the Beacon Hill Institute's State Tax Analysis Modeling Program (STAMP), a recognized method for analyzing the effects of state tax-law changes on economic activity, to generate the range of estimates offered in Table 1.⁸

As applied to the Civil Justice Reform Act, STAMP finds the benefits to be substantial. This finding is consistent with data that show tort costs to be especially high for manufacturing and manufacturing to be a relatively important but declining sector of the Massachusetts economy. By raising the cost of living and by putting upward pressure on state taxes, tort costs diminish Massachusetts' ability to compete for workers and business. Reducing tort costs would have the effect, as shown, of increasing competitiveness and thus the state's capacity to create jobs and attract new business.

⁸ See Beacon Hill Institute, *Massachusetts Econometric Tax Model* (Boston: Beacon Hill Institute, February, 1996).

Chapter I - Introduction

The purpose of tort law is to deter wrongful behavior and to provide compensation to the victims of such behavior. Traditional tort law played a secondary role within our economy in serving this purpose. The primary roles were played by commercial prudence and by insurance, along with some support through government regulation. Deterrence and compensation were generally organized according to the contractual principles that govern commercial relationships.

Traditionally, a producer was liable for a consumer's injuries only if the injuries were attributable to the producer's wrongful behavior. Consumers depended largely on the producer's commercial sense as a deterrent to such behavior. This is because wrongful acts typically cost an enterprise more, through various forms of indemnification and through loss of reputation, than they save in production costs, and so are bad for business.

In this traditional framework, government remedies generally mirrored the contractual relationships that characterize normal commercial activity. Hence, workers compensation was introduced as an insurance program that indemnifies workers for injuries suffered on the job. The contractual principles that govern the provision of private insurance were imported into the provision of workers compensation, even if the precise details of workers compensation might have differed from what market-based providers might have offered.

Playing its supporting role in this overall system of deterrence and

compensation, tort law came into play in accidents, where the contractual principles that governed market relationships were not directly applicable. Automobile accidents are a principal example.

The doctrine of privity of contract restricted the range over which tort liability could roam. A manufacturer might sell a ski-like exercise apparatus and perhaps be liable for the buyer's injuries if he failed to caution the buyer about the proper use of the equipment. The manufacturer would not, however, be liable for injuries to a guest of the buyer who used the apparatus, or to a subsequent owner to whom the buyer had sold the apparatus, unless the product itself was defective.⁹

Today the same manufacturer faces a much-expanded range of liability, one that goes well beyond liability for product defects. A new expansive regime has elevated tort law in the American system of deterrence and compensation from a supporting role to one of star performer.

We proceed below by first noting the ideal place of tort liability (which we characterize as the "contractual regime") within an overall system of deterrence to accidents and compensation for accidents. We then describe the ways that tort liability has moved away from this ideal (leading to what we characterize as the "expansive regime") and illustrate the economic consequences of this expansion in the scope for tort liability.

For analytical purposes, we can characterize the expansion in tort liability as a form of taxation. To be sure, it is an implicit and not an explicit form of taxation.

⁹ In the event of injuries to those subsequent parties, liability, in the absence of product defects, would reside with the customer and not with the manufacturer. The injuries in these two instances involved contractual

Its implicit character, however, does not alter the economic consequences of the tort tax. Much of the growing interest in tort reform, as illustrated by a proposed Civil Justice Reform Act, reflects a belief that the burdens the tort tax imposes on Massachusetts residents are too high. We apply the Beacon Hill Institute's State Tax Analysis Modeling Program (STAMP) to the tort tax in Massachusetts as a way of assessing the economic consequences of tort taxation and tort reform in Massachusetts. This analysis, detailed in Chapter VIII and in Appendix A, shows that tort reform would confer substantial economic gains on the state.

relationships between the customer and his guest or the customer and the subsequent owner, and those relationships excluded the manufacturer in either case.

Chapter II - The Place of Tort Liability in the Economic System

The twin goals of deterring accidents and compensating for injuries are approached through a variety of related institutions in our society, of which tort liability is just one. It is important to realize that deterrence and compensation are addressed by an interrelated set of institutions and are not the province of tort liability alone. Ideally, each component of the system works in harmony with the other components, with each component operating in its areas of strength.

In our economy there are three institutional processes that operate to provide deterrence and compensation: the market system of profit and loss, government regulation, and tort liability. Each provides incentives to deter accidents and to offer compensation for accidents. A properly operating system of tort liability will complement and support the other two processes for deterrence and compensation, receding into the background in cases where the other processes are strong and coming into the foreground where they are weak.¹⁰

The market-based system of competitive enterprise offers a variety of incentives both to provide safety and to offer compensation for injury. A substantial amount of evidence now supports the proposition that the terms of employment across occupations reflect variations in occupational riskiness.¹¹

¹⁰ This perspective is articulated clearly in the report sponsored by the Committee for Economic Development, *Who Should be Liable? A Guide to Policy for Dealing with Risk* (New York: Committee for Economic Development, 1989).

¹¹ See, for instance, W. Kip Viscusi, *Risk by Choice: Regulating Health and Safety in the Workplace* (Cambridge, MA: Harvard University Press, 1983); and W. Kip Viscusi, *Fatal Tradeoffs: Public and Private Responsibilities for Risk* (New York: Oxford University Press, 1992).

Occupations prone to greater occupational injuries will offer higher wage rates for the same level of skills and talents than will safer occupations, because otherwise people will take employment in the safer occupations. This premium for occupational risk is an implication of the theory of market competition that is well documented by numerous empirical studies.

The wage premium creates an incentive for producers to provide safe workplaces while offering compensation for injury. The incentive for safety comes about because reductions in occupational riskiness lower the wages that employers will have to pay. Employers, driven by bottom line considerations of profit and loss, will seek to lower occupational risk to the extent that the cost of doing so is less than the value that employees place on the greater safety. The compensation for injury comes about because an employer's wage bill is increased by the premium that must be paid to attract labor to higher-risk activities.

To be sure, this feature of a market economy does not mean that such wage premiums are the only or the best way to provide deterrence and compensation. Wage premiums are a form of self insurance. All employees in the riskier activity receive the premium, but only some of those employees are injured. Programs of workers compensation, as well as other forms of insurance to cover such losses as medical costs and lost earnings, will often be preferred by workers to self insurance. To the extent that this is so, the same market-based incentives we have just

described will lead producers to support such insurance programs.¹²

Whether we are speaking of self insurance or group insurance, however, the central point is that our economic system of competitive enterprise offers employers incentives to deter accidents and to compensate for injuries – and to do both in an economically efficient manner. Deterrence and compensation operate through the contractual relationships that govern workplace relationships.

In some instances, these contractual relationships may not operate effectively to provide deterrence and compensation. These can include instances where the prospect of paying compensation for injury does not offer sufficient deterrence because the potential defendant is judgment-proof.¹³ When the potential damage that might be attributed to an action of the defendant is so large that the defendant cannot pay in any case, the market-based deterrence to avoid the accident on the part of the defendant is weakened. Government regulation may be warranted in these cases, as a complement to the market-based system of deterrence and compensation. Government regulation would thus support the contractually grounded system of deterrence and compensation in those cases in which the contractual governance of risk relationships is weak.

What is the place of tort liability in this system of deterrence and compensation? Tort liability has a clear place within the tripartite architecture of a

¹² This does not imply that all workplace accidents would be covered through such insurance. Issues of moral hazard are involved, which generally will lead to less than full coverage, in one fashion or another.

¹³ For a particular discussion with respect to the boundary between market processes and government regulation, see Steven Shavell, "Liability for Harm Versus Regulation of Safety," *Journal of Legal Studies* 13 (1984): 357-74.

market economy, because there are places where contractual principles are applicable neither directly through market processes nor indirectly through government regulation. For the most part, these involve accidents between strangers, the most common case being automobile accidents.¹⁴ Thus, tort law, in conjunction with the development of liability insurance, operates to govern human relationships in those areas where contract cannot serve as the governing principle.¹⁵

Behind this tripartite architecture of deterrence and compensation lies another very important principle for economic efficiency and fairness. This is that accidents typically involve two or more people. This often makes it difficult to speak of who causes the accident, because either party might have avoided the accident, though at different costs. There are clearly cases in which one person causes an accident, or at least is overwhelmingly the source of the accident as to render picayune any argument to the contrary. A pedestrian on a sidewalk who is hit on the head by a flowerpot falling from an apartment above is highly unlikely to have had an influence over the accident. However, a pedestrian crossing the street who is hit by a car most likely did have some influence. Just as drivers of cars can exercise care in driving, so can pedestrians exercise care in crossing the street.

In such cases as these, an important principle for efficiency and fairness is that the burden for avoiding accidents be placed on the party who is better placed

¹⁴ This point is nicely articulated in Michael I. Krauss, "Tort Law and Private Ordering," *St. Louis University Law Journal* 53 (1992): 423.

to avoid the accident.¹⁶ To some extent this is a matter of judgment, though often that judgment is straightforward. In principle, a pedestrian crossing the street at a green light who is hit by a speeding car that ignores the red light might have avoided getting hit by being continually observant for such aberrant driver conduct. But because it is surely unreasonable to expect pedestrians to have to conduct themselves in this way, we are warranted in placing the cause of the accident on the driver.

The situation is starkly reversed in the case of a pedestrian who was standing between two parked vans along the side of a street and who then stepped into the street without looking, only to be struck by a passing car where the driver was observing the speed limit. In principle, the driver could have anticipated that this might happen, and thus have driven five miles per hour down the street. But this too would be an unreasonable way to expect drivers to conduct themselves.

The difficult issues come about in a variety of intermediate cases in which either party could have avoided an accident by acting differently. In these cases, principles of efficiency and fairness generally call for liability to be placed on the party who is better placed to avoid the accident. If two men stuff a hot air balloon, which had gotten wet when they sailed through a rain storm, into a dryer at a laundromat, it is surely they who are best placed to avoid the accident

¹⁵ For an application of contractual principles to tort reform, see Paul Rubin, *Tort Reform by Contract* (Washington: American Enterprise Institute, 1993).

¹⁶ This principle of the least cost avoider is nicely articulated in Richard A. Posner, *Economic Analysis of Law*, 3d ed. (Boston: Little, Brown and Company, 1986).

that resulted when the dryer burst open with the men standing beside it.¹⁷

In principle, perhaps the owner of the laundromat might have monitored usage by customers more carefully, but it is surely also reasonable for the owner to assume that users are not ignorant. In this case, however, the balloon riders were awarded compensation. It is the award of compensation in such instances, as well as the expansion of tort liability into areas formerly covered by contract or regulation, that gives rise to concerns about an excessive expansion of the tort system.

In southeastern Massachusetts, for instance, a retailer is the defendant in a personal-injury suit brought by a woman who purchased cabinets from the store. Apparently, the woman's husband installed the cabinets by anchoring them in drywall instead of in sturdier studs found in the wall. Later, the cabinets fell on her head, causing her injury for which she seeks \$80,000 in damages. Explicit instructions and a videotape outlining installation procedures were included in the cabinet. Furthermore, a contractor had seen the cabinets after their installation and noted that they were improperly installed. In spite of her failure to heed the contractor's warning and her husband's failure to follow the directions for installation, the woman has sued the store that sold her the cabinets.

It is thus apparent that, in some cases, tort liability has upset the delicate balance of institutional processes that provide deterrence and compensation. Often,

¹⁷ This illustration appears in Andresky, Kuntz, and Kallen, "A World without Insurance?," *Forbes Magazine* (15 July 1985): 40-43. To be sure, had the dryer been produced defectively, and so have been subject to bursting upon normal and intended usage, this would have been an accident better avoided by the manufacturer.

tort liability is applied in cases in which the market system of profit and loss or government regulation – or neither alternative – would operate more efficiently. As we will see in the next chapter, the new preeminence of tort liability has adverse effects on the economic system.

Chapter III - The Transformation of Tort Liability: From Supporting to Leading Player

Tort liability has eclipsed its traditional function of deterring negligent behavior and of compensating the victims of wrongdoing. In this chapter, we describe the dimensions along which this transformation has taken place. In many ways, this transformation has shifted liability away from those who are best able to prevent accidents to those who are thought to be wealthier, and against whom compensation is awarded. This transformation acts as a tax, the proceeds of which subsidize economically inefficient conduct. The economic consequences of this transformation for residents of Massachusetts are examined in the next and subsequent chapters.

There is good reason to think that traditional doctrines and practices regarding tort liability, as noted in Chapter I, operated effectively to promote the general economic well-being. There is in this respect a considerable body of scholarship on the economic analysis of legal processes and institutions that examines and explains this property of traditional tort law.¹⁸ This body of scholarship explains how traditional principles and practices of tort liability operated to support principles that deterred accidents efficiently and awarded compensation justly in accordance with the interests and responsibilities of the various parties to an accident. Contemporary tort law has departed from these

¹⁸ For comprehensive treatises in this respect, see William M. Landes and Richard A. Posner, *The Economic Structure of Tort Law* (Cambridge, MA: Harvard University Press, 1987); and Steven Shavell, *Economic Analysis of Accident Law* (Cambridge, MA: Harvard University Press, 1987).

principles in several respects.

1. *From Negligence to Strict Liability.* Contemporary tort law has escaped its traditional grounds through the erosion of traditional negligence principles as a standard for assessing tort liability, and through the gradual disappearance of contributory negligence as a means of refusing recovery to a plaintiff. With respect to negligence, consider the illustration by Landes and Posner of economic efficiency with reference to the Hand Formula.¹⁹ Here someone is held liable for an accident if the cost of preventing the accident (C) is less than the expected cost of the accident, where the expected cost is the product of the damage that would accompany an accident (D) and the probability that an accident would result (P).

Consider the first two of the 14 cases they examine in their section on “Judicial Applications of the Hand Formula.” In *Hendricks v. Peabody Coal Co.*, an abandoned strip mine that had filled with water was used as a swimming hole. A 16-year old boy was injured when he dove into the water and hit a submerged shelf. The court ruled for the plaintiff, noting that “the entire body of water could have been closed off with a steel fence for between \$12,000 and \$14,000 . . . [T]he cost was slight compared to the risk to the children involved.” The cost to the defendant of avoiding the accident was low relative to the expected damage from an accident, as illustrated by the relationship $C < DP$. Landes and Posner state that “the court was on safe ground in concluding that the defendant had failed to use due care.”

By contrast, *Adams v. Bullock* illustrates, according to Landes and Posner, a

¹⁹ In this section, the authors borrow liberally from Landes and Posner, *The Economic Structure of Tort Law*, 96-107.

“situation where the cost of care is disproportionate to the expected accident cost, so that the failure to take care is not negligent.” A 12-year-old boy was swinging an eight-foot-long wire over the side of a bridge he was crossing, when the wire touched the defendant’s trolley wire beneath the bridge, burning the boy. In this case the court ruled that the accident was an “extraordinary casualty, not fairly within the area of ordinary prevision.” In terms of Landes and Posner’s interpretation of the Hand formula, the probability of that type of accident was so low that the expected value of the damage was less than the cost of preventing the accident, that is, $DP < C$.

In *Adams* the plaintiff was ruled liable, while in *Hendricks* the liability was placed on the defendant. Landes and Posner claim that this difference affirms the promotion of economic efficiency by appellate courts. To be sure, no suggestion is made that such computations are made explicitly. Rather, the suggestion is that in any effort to make sense of the stock of rulings, where sometimes the plaintiff wins and sometimes the defendant does, the relationship represented by the Hand formula can be used to explain the pattern of outcomes of the cases under traditional tort law.

Traditional negligence holds that a defendant is liable not for all accidents, but only for those accidents that the defendant could have averted at reasonably and commercially sensible expense in light of the harm that might result in the event of an accident and in light of the foreseeability or likelihood of an accident. In so doing, tort liability extended the principles governing generally contractual

relationships within commerce to unintentional, noncommercial relationships among strangers.

As a purely formal and analytical matter, there are circumstances under which negligence and strict liability are equivalent. Under negligence, a producer will undertake costlier, safer forms of production to the extent that the anticipated saving in liability costs exceeds the added cost of production. It is the same, in principle, with strict liability. Differences between the two arise in practice to a good extent because of the gradual erosion of contributory negligence as a line of defense under strict liability.²⁰

2. *Contributory Negligence and Accident Deterrence.* Accidents typically involve actions by two parties, either of whom might have prevented the accident. In *Hendricks* the accident could have been prevented had either the coal company fenced off the mine or had the boy refrained from diving into the pool. Similarly, the accident in *Adams* could have been prevented either by the trolley company's installing some kind of fencing over its electric lines or by the boy's not dragging a wire across the lines. The efficient avoidance of accidents requires that the burden of avoidance rest on the person who can more efficiently avoid the accident. To be sure, this may not always be easy to determine. Nonetheless, a defense of contributory negligence is an important component of an efficient approach to accident avoidance. It makes no sense to make one person spend a million dollars

²⁰ For a strong endorsement of strict liability only accompanied by strong lines of defense arising out of the plaintiff's conduct, see Richard A. Epstein, *A Theory of Strict Liability: Toward a Reformulation of Tort Law* (Washington: The Cato Institute, 1980).

to avoid an accident that the other party could have avoided for ten dollars.²¹

Consider two of the many cases discussed in Peter Huber's *Liability*, where plaintiffs received judgments in their favor.²² In *Trujillo v. Uniroyal* (608 F.2d 815 (1979)), a man had to inflate a 16.5 inch tire to 48 pounds to get it to hold to a 16 inch rim. While the car was being driven, the tire exploded, the car crashed, and the man was injured, for which he was compensated by a favorable verdict.

In *Moran v. Williams* (313 A.2d 527 (1974)), a teenager was burning a candle in a room. Wishing to give the room a more pleasing aroma, the teenager poured cologne over the candle, engulfing himself in flames. The cologne manufacturer was held liable for the teenager's burns because it failed to issue a warning about cologne's flammability. Both of these are accidents which it would be next to impossible for a producer to prevent and which could best have been avoided through a simple application of common knowledge of the external world by the plaintiffs.

3. *Joint and Several Liability*. Along with the erosion of traditional negligence and contributory negligence, which has had the effect of awarding compensation for conduct that promotes accidents but which the defendant could not have reasonably anticipated, has come a significant expansion in the set of parties who may serve as defendants, as well as in the liabilities with which they may be burdened. This too sometimes shifts the burden for avoiding accidents away from

²¹ All affected parties would be better off with liability placed on the least cost avoider. This is a straightforward implication of the Coase Theorem. See Ronald H. Coase, "The Problem of Social Cost," *Journal of Law and Economics* 3 (October, 1960): 1-44.

those who can avoid them relatively cheaply onto those who can do so only at greater expense, and at the same time spreads those burdens onto multiple parties.

4. *Retroactive Liability and the Growth of Knowledge.* A further expansion in the potential liability of producers arises from the demise of state-of-the-art defenses, and replacement with a form of retroactive liability based on contemporary knowledge. For instance, asbestos manufacturers have been held liable for failing to protect against risks that were known to no one in the world at the time. This principle of retroactive liability increases the cost of production. Producers can no longer base their anticipation of future liability costs on their beliefs about the characteristics of existing products, but must somehow take into account future advances in scientific knowledge. The increases in cost that this uncertainty entails have in a variety of cases led CEOs either to delay the introduction of new products or not to introduce them at all, according to a variety of surveys.²³

5. *Threats, Nuisances, and the Incentives to Sue.* In our system of civil justice, each party bears the costs of its side of a suit. True, contingency fees are common for plaintiffs in tort actions. Still, the legal fees are paid by winning plaintiffs for the entire set of plaintiffs through the contingency fee arrangement. This method for financing legal actions can under some circumstances lead to suits being filed as a form of fishing expedition. A suit may be filed for \$100,000 that is without merit in

²² See Huber, *Liability*. For a variety of issues on particular topics, see Peter W. Huber and Robert E. Litan, eds., *The Liability Maze: The Impact of Liability Law on Safety and Innovation* (Washington: The Brookings Institution, 1991).

practically anyone's estimation, but which may cost \$30,000 to defend. Settlement for \$10,000 may be superior to defending against the suit.

6. *Damage Awards and Deterrence.* The categories we have described above illustrate some of the dimensions along which liability for the prevention of accidents has often been shifted away from people who generally are in a better position to avoid the accident onto those who are in a poorer position. It is easy for a teenager to avoid engulfing himself in flames, as in *Moran*. All he has to do is to refrain from pouring cologne over a candle. How a manufacturer might prevent this is hard to say. Some might say a warning label should be attached. Yet someone who would read such a label would almost surely already possess that modicum of awareness of the external world that would lead him to refrain from pouring cologne over a candle in the first place.

This expansion in liability shifts economic resources toward the inefficient provision of safety and away from the production of a wide variety of more valuable products, including research and development into the production of new and improved products. For instance, in a survey of CEOs sponsored by the Conference Board, more than half of the respondents reported that liability concerns had led them to discontinue some product lines, nearly 40% reported that they had withheld new products, and 25% had discontinued product research.²⁴

²³ See, for instance, Richard J. Mahoney and Stephen E. Littlejohn, "Innovation on Trial: Punitive Damages versus New Products," *Science* 246 (15 December 1989): 1395-99.

²⁴ E. Patrick McGuire, *The Impact of Product Liability*, Research Report No. 908 (New York: The Conference Board, 1988).

While economists tend to apply some discount factor to the precision of survey results, under the presumption that actions are generally more reliable than words, such results are nonetheless useful as qualitative indicators of interests and concerns.

Consider two surveys of Massachusetts businesses taken by different organizations, the Massachusetts chapter of the National Federation of Independent Business (NFIB) and the Associated Industries of Massachusetts (AIM). The results of the surveys are strikingly similar and are shown in Table 18 and Table 19 in Appendix B.

Of firms responding to the NFIB survey, 26% had been defendants in suits, while 34.5% of the AIM respondents had been defendants in suits. AIM's survey suggests that larger firms (more than 100 employees) were more likely to be sued, as 65.4% of large firms were named. When asked how their business decisions had been affected by tort concerns, 26.8% of the AIM respondents said they discontinued or curtailed certain products and services. Of the NFIB respondents, 17% discontinued or put off introducing new products, 18% put off or shelved plans to expand, and 27% increased customer prices by at least 5%.

Concerning possible tort reform, again the results are strikingly similar. Among important tort reforms, 90% of the AIM respondents and 91% of the NFIB respondents say joint and several liability is important; 93.3% of the AIM respondents and 96% of the NFIB respondents say limiting frivolous lawsuits is important; 88.8% of the AIM respondents and 76% of the NFIB respondents agree

that allowing a state-of the-art defense is important. The two surveys agree on other aspects relating to tort liability as well, and suggest that the concerns addressed by proposals for tort reform are of broad interest throughout the Commonwealth.

Chapter IV - State Tort Reform Efforts

In growing recognition of the merits of a contractual regime and in an effort to recover some of those merits, many states have considered and enacted tort reform in recent years. As of October 1996, most states had enacted some form of tort reform.²⁵ The Insurance Information Institute has divided tort reform measures into three categories: Joint and Several Liability, Collateral Source Rule, and Damages. Table 2 shows state reforms enacted since 1986.

Table 2 - State Tort Reform Efforts Since 1986

State	Joint and Several Liability	Collateral Source Rule	Damages			Legend
			Non-economic	Punitive	Product Liability	
Alabama		e	med*	h, i*		* Struck down by State Supreme Court or its equivalent.
Alaska	a	e, f	h	i		** Modified by State Supreme Court or its equivalent.
Arizona	b	e		d		med = Medical malpractice cases only.
Arkansas						a. Abolished or prohibited totally.
California	c			i, k	n	b. Abolished for defendants who are 50% or less liable.
Colorado	c	e, f	h	j, l, 35%	n	c. Abolished with exceptions for various types of cases.
Connecticut	d	e, f				d. Limited application.
Delaware					n	e. Admissible as evidence (sometimes with exceptions).
Florida	c	f	g*	i, j, l 35%	n	f. Offset provisions (amount paid by collateral sources can be deducted from award) sometimes limited.
Georgia	d	e*		h, l, 35%	n	g. Capped with no exclusion.
Hawaii	c	d	h			h. Capped with some exceptions.
Idaho	c	e, f	g			i. Specified standards of behavior (i.e., clear and convincing evidence) must be proved before punitive damages awarded.
						j. Award is limited to some proportion of compensatory damages or prohibited in absence of compensatory damages.

²⁵ See *The Fact Book* 1996, 62-63.

Illinois	c	f	g	i	m, n	
Indiana	d	e		i, j, k, l	m, n	k. Provides for bifurcation of trials, i.e., two trials – the first to determine liability and the second to determine damages.
Iowa	b	e		g, j, l 75%	m, n	l. The percentage of all punitive damages noted, or an amount at the court's discretion, must go into a specified state fund.

Table 2 continued - State Tort Reform Efforts Since 1986

State	Joint and Several Liability	Collateral Source Rule	Damages			Legend
			Non-economic	Punitive	Product Liability	
Kansas		d*	h	h, i	m, n	m. State-of-the-art defense accepted.
Kentucky	d	e*		i		n. Other modification.
Louisiana	a			c	m, n	
Maine						
Maryland			g**			
Massachusetts	c				m	
Michigan	d	e, f	med			
Minnesota	d	e, f	h	i, k		
Mississippi	d			i, k, j	n	
Missouri	d	e	med	k, l, 50%	m, n	
Montana	b	e, f	med	i, k	n	
Nebraska	c					
Nevada	c			h, i, j, k		
New Hampshire	b		g*	a	m	
New Jersey	d	f		h, i, j, k	m, n	
New Mexico	d				n	
New York	b, c			l, 20%		
North Carolina			g, i, j, k	n		
North Dakota	c	f	med	i, j, k	n	
Ohio	c	f*	med*	i	m, n	
Oklahoma				h, i, j, k, n		
Oregon	c	f	g	i, l, 60%	n	
Pennsylvania						
Rhode Island						
South Carolina				i		
South Dakota	d			i		
Tennessee					m	
Texas	b			h, i, j, k	m, n	
Utah	a			i, k, l 50%		
Vermont	a				n	
Virginia				g		
Washington	c		h*		n	

West Virginia						
Wisconsin	b		med	i		
Wyoming	a					
United States	36	19	13	29	25	

Source: American Tort Reform Association, Insurance Information Institute.

The Civil Justice Reform Act

Passage of the Civil Justice Reform Act now before the Massachusetts Legislature would mean Massachusetts would join states such as Illinois, Indiana, and Oregon that have undertaken tort reform. There are many ways that this act would shift tort liability in Massachusetts away from the expansive regime toward more of a contractual regime. A review of its provisions shows that the intention of the act is to restrict the circumstances under which a defendant can be held subject to tort liability, as well as to reduce the size of damage awards.

The act would eliminate joint and several liability for tortious conduct performed with the knowledge of the actor. Defendants would be liable only for the harm they caused. In this manner, Massachusetts would join the 36 states that have either barred joint and several liability or limited its application. Moreover, if a defendant were to show that the plaintiff was drunk or under the influence of drugs at the moment the harm occurred, the plaintiff would have to prove by clear and convincing evidence that the alcohol or drug use was not a proximate cause of the harm. In addition, the use of alcohol or drugs by a plaintiff would be a factor for consideration in the trier of fact's assessment of damages and contributory negligence. Even more, the trier of fact could use a motor vehicle violation such as speeding as evidence of contributory negligence in a tort suit.

The act would introduce a modified collateral source rule. This modification would not require the trier of fact to offset the damage award by the amount of collateral benefit, but it would be possible to do so under certain conditions. The act would also introduce the so-called "state-of-the-art" defense into Massachusetts jurisprudence. This defense changes the standard by which a manufacturer must abide in production. Currently, a manufacturer must anticipate developments and innovation in his field and conform his product to those standards. With a state-of-the-art defense, the manufacturer need only be aware of current standards in production.

The act would introduce a 15-year "statute of repose" for product liability claims. This would prohibit claims for damages brought more than 15 years after the introduction of the product into the stream of commerce, with exceptions granted for products that were sold with longer, written warranties and in instances where fraud was shown to have contributed to the harm. The statute of limitations on so-called "slip-and-fall" cases would be reduced from three years to one. The statute of limitations on Massachusetts' so-called "Blue Sky Laws" would be brought into conformity with federal standards, as would standards for liability.

The act would provide an incentive to settlement over litigation. Costs and fees in an action would be assessed against a party that refused a reasonable settlement offer, with the standard of reasonableness being taken from the actual judgment rendered if an offer of settlement is declined. The act would also increase the costs of filing frivolous suits. Sanctions could be imposed on parties and their

attorneys for either filing suits or offering defenses that were without merit.

Frivolous prisoner suits would be deterred by applying inmates' savings accounts to filing fees, and by allowing judges to reduce the number of days that have been credited to inmates' sentences.

Tort Reform in California and Illinois

California and Illinois have both undertaken substantial tort reform. In response to a growing malpractice crisis, the California Legislature passed the Medical Injury Compensation Reform Act of 1975 (MICRA).²⁶ The statute includes the following provisions:

- The implementation of the collateral source rule providing juries the discretion to consider collateral payments and, if appropriate, deduct some or all of those payments from the award given to the plaintiff. This provision was intended to distribute the cost of coverage among various insurance providers.
- The imposition of a \$250,000 limit on noneconomic (primarily pain and suffering) damages arising from a medical malpractice action. This provision was intended to afford greater stability to insurance providers in their assessment of risk.
- The payment of so-called “future damages” in excess of \$50,000 over a period of time instead of in one lump sum. This allows insurers to purchase annuities that subsidize the award over time and reduce costs.
- Amendment of the statute of limitations to within three years of the date of the injury or within one year after the discovery of the injury for adults. For children between ages six and 18, the action must be brought within three years of the commission of the act. For children under age six, the action must commence within three years of the commission of the act or the child's sixth birthday, whichever is later in time.
- Permission to insert binding arbitration clauses in written contracts for

²⁶ Stats. 1975, Second Ex. Sess. 1975-76, ch. 1, p. 3949 et seq.

medical services.

- Limitations on plaintiff's attorney's contingency fees to the following:
 1. No more than 40% of any award of \$50,000 or less.
 2. No more than 33.33% of the portion of an award between \$50,000 and \$100,000.
 3. No more than 25% of the portion of an award between \$100,000 and \$600,000.
 4. No more than 15% of the portion of an award over \$600,000.
- The plaintiff in a medical malpractice suit must give at least 90 days notice to the defendant before the suit is filed.

The Doctors' Company, an advocacy group that supports MICRA, reports some dramatic changes in California's liability climate following the enactment of MICRA.²⁷ Between 1976, the year of the statute's passage, and 1996, liability premiums in California fell by 54%. Moreover, between 1987 and 1996, the average cost of settling a medical malpractice suit in California fell by 38%, from \$172,978 to \$107,905. According to data from malpractice suits resolved during 1995 and 1996, the parties required an average of two years to settle a medical malpractice suit in California. In states without noneconomic caps on damages, the parties required an average of 2.6 years to settle their cases.

With respect to extremely large judgments, between 1985 and 1994, there were .56 verdicts of \$1 million or more for every 1,000 doctors in California. The national average over the same period was one-third higher, at .76 such verdicts for

²⁷ See The Doctors' Company, *Medical Liability – A Subject Ripe for Reform* (1997).

every 1,000 doctors.²⁸ At the same time, however, plaintiffs received on average 17% more compensation than they received before MICRA's enactment.

On March 9, 1995, the Illinois Legislature passed the Civil Justice Reform Act of 1995 (Public Act 89-7). The Illinois act encompasses several provisions contained in the proposed Massachusetts legislation, including the reform of product-liability litigation, extension of the application of statutes of repose and limitation, and identification of experts in some litigation.

In its advocacy of the 1995 legislation, the Illinois Civil Justice League (ICJL) relied on the findings of a study published by Northern Illinois University (NIU).²⁹ Lewis and Becerra, authors of the study, made several findings, including:

- Expensive and time-consuming tort suits reduced innovation and adversely affected the competitiveness of firms.
- The 41% increase in the rate of tort filings between 1987 and 1992 mirrored that of the United States.
- As the authors stated, "Illinois' court system is having difficulty in keeping up with the growth in civil cases."
- Each Illinois citizen paid more in tort costs than for income support, education, public protection, and justice combined.

In light of the scarcity of reliable data on jury awards, Lewis and Becerra employed data from Cook County, Illinois (which includes Chicago), and San Francisco, California. Those data revealed that the mean tort award rose from \$59,000 in 1960-64 to \$187,000 in 1980-84. With respect to the number of tort filings

²⁸ At the extreme high end of the spectrum was New Jersey, where there were 2.57 such verdicts for every 1,000 doctors.

for Illinois, Lewis and Becerra used data obtained from the National Center for State Courts (NCSC). In a 1992 report, the NCSC concluded that 9% of all civil suits filed in Illinois were tort suits.³⁰ In 1996, one year after the passage of Public Act 89-7, the ICJL reported that filings “in every major category of tort litigation, including product liability, medical malpractice, premises liability, and automobile litigation” fell by 26.6% in Cook County.³¹

Ostrom and Kauder analyzed the composition of all civil filings in general jurisdiction courts in 17 states – including both Illinois and Massachusetts. They found that tort cases represented 14% of all civil cases filed in those states.³² In Massachusetts, plaintiffs filed 372,139 civil cases in 1994.³³ Employing Ostrom and Kauder’s 14% finding, 52,099 of civil cases filed in Massachusetts in 1994 would have been tort cases. Consequently, if one applies the 26.6% decline in Cook-County filings in 1996 to Massachusetts, the proposed Civil Justice Reform Act would have lowered tort filings for 1996 to 38,241.

There is good reason to think that the effect of the Civil Justice Reform Act on tort filings in Massachusetts would be at least as significant as it was in Illinois. Many of the proposed reforms in Massachusetts mirror those that were enacted in Illinois. These include (1) the submission of an affidavit by a registered professional, (2) changes to joint and several liability, (3) changes to the statute of

²⁹ See John Lewis and Raquel Becerra, *A Study of the United States and Illinois Tort System* (Northern Illinois University: Center for Governmental Studies, January 1995).

³⁰ National Center for State Courts, *State Court Caseload Statistics: Annual Report 1987, 1989, 1991, 1992* (Leesburg, Virginia: National Center for State Courts, 1994).

³¹ Illinois Civil Justice League, *Advocate* (February 1997), 1.

repose, (4) standards for medical malpractice actions, and (5) amendments to the statute of limitations in premises liability cases. The proposed Massachusetts act is actually larger in scope than the Illinois act, making it likely that tort filings would decline even more sharply in Massachusetts than they did in Illinois. However, we do not make any such assumption in this report, but rather take the 26.6% decline in Illinois as one piece of plausible evidence about the probable impact of tort reform in Massachusetts.

This evidence is important insofar as the Civil Justice Reform Act might be expected to reduce the number of tort filings and concomitantly tort costs. However, it is necessary to understand what it means to bring about a meaningful “fall” in tort filings.

There is some “baseline” number of filings that will take place under current law and that depends on all the factors that influence tort filings, including but not limited to current tort law. The relevant question is how a change in tort law would cause the number of filings to deviate from this baseline. In regard to the proposed Civil Justice Reform Act, the question is by how much tort filings would fall *relative to the baseline*. If the baseline itself is falling, the question is how much faster tort filings would fall, and with what economic consequences, under tort reform.

Opponents of tort reform sometimes try to shift attention from this question to the separate and very different question concerning how the baseline is moving.

³² See Brian J. Ostrom and Neal B. Kauder, *Examining the Work of State Courts, 1994: A National Perspective from the Court Statistics Project* (State Justice Institute, 1995).

³³ *ibid*, 25.

Their unstated premise is that if the baseline is falling, then there is no value in changing the law in such a way that would cause tort filings to fall faster. The Massachusetts Bar Association (MBA) recently published a report critical of the Civil Justice Reform Act in which it asserted, in effect, just that.³⁴ Citing an overall decline in the number of tort filings in Massachusetts from 1986 to 1996, the MBA asserted that there was “no evidence to support the premise that there is a tort reform crisis.”³⁵

The MBA relied on data published by the Massachusetts Supreme Judicial Court (SJC) and taken from the National Center for State Courts (NCSC).³⁶ Such data show that the number of new tort filings in Massachusetts Superior Courts declined 13.7%, from 15,040 in 1986 to 12,982 in 1996.³⁷

The fact that filings have fallen by 13.7% is not the question, however. The question is what would have been gained if filings had fallen at a faster rate. And even if it somehow mattered that the baseline was falling, it would be important to know how the baseline for Massachusetts was moving relative to that for other states.

NCSC data in *State Court Caseload Statistics* suggest that Massachusetts is among the states with the highest overall number of tort filings.³⁸ For example, in 1990, Massachusetts ranked second (behind only California) with 76,806 tort filings.

³⁴ Massachusetts Bar Association, *Massachusetts Bar Association Position Paper* (March 12, 1997), 3.

³⁵ *ibid.*, 2.

³⁶ *Annual Report on the State of the Massachusetts Court System, Fiscal Year 1996 (1997)*, and Court Statistics Project Staff, *State Court Caseload Statistics, 1995* (National Center for State Courts, 1996).

³⁷ MBA Report, 2.

³⁸ *State Court Caseload Statistics, 198-99*.

In 1995, Massachusetts ranked fourth with 57,898 tort filings. Comparing per-capita tort filings across states, NCSC data suggest that from 1990 to 1995, Massachusetts had the highest per-capita rate of filings in every year except 1993.³⁹ For example, in 1995, Massachusetts had 9.53 filings per thousand people, or 25.7% more than New Jersey, the next-highest state with 7.58 filings per thousand people.

In another publication, the NCSC estimated tort filings (per 100,000 population) in general jurisdiction courts in 28 states, not including Massachusetts in 1993.⁴⁰ In that year, tort filings per 100,000 population ranged from a high of 819 for New Jersey to a low of 83 for North Dakota. Appendices 2 and 3 of their publication provide 1992 data for Massachusetts.⁴¹ These data yield an estimate of 368 tort filings per 100,000 population, a number that ranked higher than all but five of the 28 included states.

These NCSC data might lead one to the conclusion that the number of tort filings in Massachusetts is among the highest in the country. The MBA has reached an opposite conclusion, stating:

The National Center for State Courts has told the MBA that tort reform proponents have “misconstrued” NCSC data and that Massachusetts does not have the highest rate of tort filings in America. Rather, says NCSC, 10 states have higher filing rates and that Massachusetts “tort filing rates are typical, or in the middle range.”⁴²

³⁹ *ibid.*

⁴⁰ John A. Goerd, et al., “Litigation Dimensions: Torts and Contracts in Large Urban Courts,” *State Court Journal* 19 (1995): 5. According to its authors, this research represents “the most ambitious investigation thus far of civil justice in the United States.”

⁴¹ *ibid.*, 39-40.

⁴² *ibid.*, 3.

How is it possible to arrive at such disparate conclusions using substantially similar data? As the NCSC conceded, its data are flawed.⁴³ The NCSC collected its data from state trial courts of general jurisdiction.⁴⁴ Since the collection of information on civil filings frequently varies from state to state, such information may not accurately represent the universe of total tort cases.⁴⁵ A more serious flaw in the NCSC data arose from the fact that for many states, the tort data were incomplete, overinclusive, or both.⁴⁶ In fact, Massachusetts data were both incomplete *and* overinclusive.⁴⁷

It is thus apparent that any conclusions regarding baseline filings are unreliable as well as irrelevant. There is general agreement that tort filings have dropped in Massachusetts. Using NCSC data, we found that per-capita tort filings decreased by 25.4% from 1990 to 1995.⁴⁸ Now the question is whether and to what extent it is in the interest of Massachusetts residents to follow the example of Illinois in accelerating this process.

⁴³ *State Court Caseload Statistics*, 200.

⁴⁴ *ibid*, 198-99.

⁴⁵ For example, it might not be valid to compare the number of tort cases in the Circuit Court of Florida to the number of tort cases in the Superior Court of California or the Trial Court of the Commonwealth of Massachusetts.

⁴⁶ *State Court Caseload Statistics*, 200. For example, data from California, Hawaii, Idaho, Maryland, New Jersey, and Wyoming were incomplete, while data from Alabama and Utah were overinclusive.

⁴⁷ *ibid*.

⁴⁸ *State Court Caseload Statistics*, 198.

Chapter V - Tort Costs as Taxes

We have already characterized as an implicit tax the expansion in tort liability beyond that which would accompany a contractual tort regime. We identify expansive tort liability as an implicit tax not to embrace perplexing language, but because there are well-developed principles concerning the economic analysis of taxation that can be extended to the economic analysis of expansive tort liability. Our treatment of expansive tort costs as a form of taxation is an analytical tool that provides us with a proven instrument to analyze the economic consequences of tort reform in Massachusetts.

From Contractual Regime to Tort Tax

A simple example will help clarify the distinction between a tort cost as it might arise under the contractual regime and a tort cost as a tax. Suppose, then, that it comes to the attention of the legislature that there is an inordinate number of injuries resulting from the use of power lawnmowers. Somehow, lawnmower manufacturers have failed to install a safety device that would, at a small cost, prevent serious and costly injuries to their customers.

Acting on this information, the legislature makes lawnmower manufacturers liable for injuries suffered from the use of lawnmowers that come unequipped with this safety device. Lawnmower manufacturers accordingly add this safety device to their products and raise their prices to cover costs.

Ideally, under the contractual regime, there would be an expansion in the production of lawnmower safety devices and a decrease in the provision of emergency room services to lawnmower users. As mentioned, lawnmowers would become more expensive owing to the addition of the safety devices. At the same time, however, consumers would save money on emergency room visits and would apply the money thus saved to the increased purchase price of the lawnmowers.

Lawnmower production would remain unchanged. Resources would flow indirectly from the provision of emergency room services to the production of lawnmower safety devices. There would be no reduction in economic activity, inasmuch as the contraction in emergency-room services would be matched by an expansion in safety-device production. In the end, there would be a reduction only in toe injuries. Lawns would be kept as neatly trimmed as ever.

Now consider another example, one in which the legislature observes that some consumers still suffer injuries from the operation of power lawnmowers, even ones equipped with safety devices. Wanting to expand protection to the consumer, the legislature decides to hold both lawnmower manufacturers and safety-device manufacturers liable for injuries received by persons operating lawnmowers, even lawnmowers equipped with these devices.

As a result, the price of lawnmowers rises again, this time to cover the cost of additional measures that manufacturers, including safety-device manufacturers, take in order to protect themselves from liability. As in the first example,

emergency room visits may decrease. But, as opposed to the first example, the production of lawnmowers and of safety devices will also decrease.

The addition to the price of lawnmowers that results from this expansion in liability causes customers to buy fewer lawnmowers and causes lawnmower manufacturers to buy fewer safety devices. Jobs and investment in the lawnmower and safety-device industries will shrink, reflecting an across-the-board decline in economic activity. Lawns will grow longer.

Emergency room visits will decrease in this example, insofar as the increased cost of lawnmowers induces people to cut their lawns less frequently and thus to suffer fewer accidents. At the same time there may be more injuries and emergency room visits insofar as people try to get more life out of their older and increasingly unsafe lawnmowers, as an alternative to purchasing the newer, more expensive version.

The second example illustrates the transition from a contractual to an expansive regime. That the expansion in liability in the second example amounts to the imposition of a kind of tax can be seen by imagining that the legislature did in fact impose a new tax on lawnmower and safety device production. Again, the price of lawnmowers and of safety devices would rise, causing consumers to buy fewer lawnmowers. Economic activity, as reflected in jobs and investment, would shrink.

The result is a narrower range and a smaller volume of products. Lawnmower manufacturers, facing a shrinking market for their product, offer less

variety to their customers. Grass seed producers provide fewer varieties that offer faster growth. Golf courses catering to a lower-income clientele are shut down.

Under the expansive regime, it is the shrinkage of economic activity that becomes the principal method of increasing safety. We get more safety by letting our grass grow longer, by closing playgrounds and by removing diving boards from swimming pools. We could just as well increase safety by lowering highway speed limits to 25 miles per hour or by banning high-fat foods. The “safe” economy becomes the one in which there is the least economic activity.

It is in this way that tort law becomes an implicit or hidden tax, which like any other tax, causes production, job creation and capital spending to fall. Consumers are left with less of everything to consume, except safety and other amenities such as leisure that are difficult to tax and that do not require labor and capital for their production.

Tort Taxes versus Explicit Taxes

Revenue-generating taxes are imposed explicitly, as when the state of Massachusetts taxes retail sales, exempting food and prescription drugs, at 5% or cigarettes at 76 cents per pack. The tort tax generates no revenue for governments, and the tax base and tax rate are determined not so much through legislation as through litigation. As compared with a contractual tort regime, an expansive tort regime nonetheless acts as a tax on market transactions, the proceeds for which are distributed among plaintiffs, attorneys, and other participants in the tort process.

It has been estimated, to consider another example, that the price of stepladders is increased by about 30% through tort liability.⁴⁹ What we refer to as a tort tax would not be this 30%, but would be the difference between the price of stepladders under a contractual regime and the higher price under an expansive regime.⁵⁰

In any case, an expansion in tort tax liability exerts economic consequences in the same fashion as would an expansion in a revenue-generating tax. An increase in the tort tax on stepladders will operate in the same fashion as the imposition of an excise tax on stepladders. The price of stepladders paid by consumers will rise and the prices received by producers will fall, with the distribution of this tax wedge depending on elasticity conditions regarding supply and demand. Consumers will reduce their purchases of ladders, including their replacement of old ladders. Employment among producers of ladders will fall, and production might move out of state.

With this formulation of an expansive tort regime as involving the imposition of implicit taxes upon commercial transactions, with the proceeds transferred to various participants in the tort process, we can begin to appraise the economic consequences of the Civil Justice Reform Act. What is involved in that appraisal is an estimation of the actual reduction in the tort tax that tort reform would offer, along with a means for assessing the economic consequences of that tax reduction.

⁴⁹ Huber, *Liability*, 3.

The tort tax is not a single tax but a set of taxes whose rates vary across activities. For instance, in a survey of Chief Executive Officers (CEOs) in Pennsylvania, Peter Linneman and Daniel Ingberman found that product liability raised stronger concerns with the CEOs of manufacturing firms than with the CEOs of service firms.⁵¹

Among other things, Linneman and Ingberman asked the CEOs to estimate the percentage increase in costs over the preceding three years that they attributed to product liability. While the average increase in cost was estimated to be 6% for all firms, the increase was estimated to be 50% larger, or 9%, for manufacturing firms. In another study of the effect of tort liability on cost, David McIntosh and David Murray found that tort liability increased costs in a large urban hospital by 5.3%.⁵² Of this increase, 3.9% was attributed to the practice of defensive medicine and 1.4% to higher prices for insurance and legal fees.

Thomas Campbell, Daniel Kessler, and George Shepherd examined eight kinds of tort reform, six that decreased tort liability and two that increased tort liability.⁵³ The reforms that decreased tort liability were caps on attorney fees, reform of the collateral source rule, damage caps, the use of periodic rather than lump-sum payments, reform of joint and several liability, and reform of punitive damages. The two reforms that increased tort liability were a shift from

⁵⁰ This would be so under conditions of constant cost, and further amplification would be necessary otherwise.

⁵¹ Peter Linneman and Daniel E. Ingberman, "Product Liability Law: The Economic Impact on Pennsylvania" (University of Pennsylvania: Wharton School, 1989).

⁵² David M. McIntosh and David C. Murray, "The High Cost of Medical Liability," *Hudson Briefing Paper No. 163* (Indianapolis: The Hudson Institute, April 1994).

contributory to comparative negligence and the award of prejudgment interest to the plaintiff.

Campbell, Kessler and Shepherd estimated models of productivity (output per worker) and employment (jobs) for 17 industries, and found that those reforms that decreased liability were associated with increases in productivity and employment, while those reforms that increased liability were associated with decreases. They also found considerable variation across industries, which is consistent with the thesis that the tort tax differs across industries, activities, and transactions. For instance, they found that a marginal decrease in tort liability increased output per worker by 3.1% in retail trade, by 7.9% in business services, and by 8.9% in amusement and recreation services.

The surveys reported in Appendix B show that the mean estimate among AIM members in Massachusetts is that tort liability increases their costs by 5.5%. The distribution of the estimated increase in costs is highly skewed in the upward direction, as indicated by the median estimate of 2%. This divergence of the mean from the median results because there are some firms or industries for which tort costs are particularly high.

NFIB members similarly estimated their liability costs. Most respondents placed their general liability costs at between \$1,000 and \$5,000 per year, the same amount that most respondents gave for product liability. Sixty-four percent of AIM members think Massachusetts has higher tort costs than other states. Moreover,

⁵³ Campbell, Kessler, and Shepherd, "The Causes and Effects of Liability Reform: Some Empirical Evidence,"

66% of NFIB members say general liability costs have increased over the last five years, while 63% say product liability costs have increased.

The tort tax acts much like a regime of general sales taxes supplemented by surtaxes that vary from transaction to transaction. The transaction whereby a stepladder is sold may be subject to a 30% tort tax, whereas the transaction whereby a book is sold would seem surely to carry a much lower tax. Transactions between physicians or hospitals and patients surely entail a heavier tort tax than transactions between ballroom dance studios and their customers.

Absolute versus Relative Substitution

The expansive tort regime affects activity throughout the economy, but it affects some sectors of the economy more strongly than others. Thus, we can think of the tort tax as possessing two components. One component is a uniform tax on all transactions. The other component is a set of differential surtaxes across industries and activities.

The tort tax exerts two different effects, one that can be called absolute substitution and another that can be called relative substitution. Absolute substitution is the substitution that takes place when the tax-rate increase cuts across all sectors of the economy. Relative substitution takes place when the tax-rate increase is specific to a particular sector.

Suppose that the tort tax applicable to Sector I rises by 1 percentage point,

from 2% to 3%, while that applicable to Sector II rises by 2 percentage points, from 2% to 4%. Absolute substitution is the substitution that accompanies the 1-percentage-point rise suffered by Sector I and the first 1-percentage-point rise suffered by Sector II. It is identical to the substitution that results from a rise in the general sales tax, where some of the goods subject to this tax increase also find themselves subject to specific excises applicable only to them.

A rise in the general sales tax affects neither the stock of money nor the volume of production in the economy. It reduces the volume of privately available production while concomitantly generating an increase in publicly available production as the revenues are spent publicly. The revenues from a general tort tax are not, of course, spent publicly. Yet the analytical principles are the same, except that in this case the revenues are allocated among the participants in the tort process.

Where the general sales tax substitutes public production for private production, the general tort tax substitutes tort-directed safety for contract-directed safety. But the consequences for production and employment are the same. Both taxes exert second-order, negative effects on production and employment. By driving a “wedge” between what consumers spend and firms receive net of the tax, both taxes inflict “dead-weight” efficiency losses on the economy.

The reason is that, by reducing net receipts, both taxes cause firms to reduce production to the point that their net receipts are large enough to defray their production costs. The tort tax induces firms to substitute “safety” for production,

and, therefore, for jobs and capital spending. For a given stock of productive resources, production falls and to a degree that exceeds what would have been agreed to contractually.

The relative substitution effect of the tort tax injects sector-specific effects on top of the general effect just noted. It is the effect, in the foregoing example, of the additional 1-percentage-point tax hike suffered by Sector II alone. It is identical to the effect that would result if government imposed a specific excise tax on some goods (for example, cigarettes) while raising the general sales tax applicable to all goods.⁵⁴

The relative substitution effect is the shift of production from the higher-taxed to the lower-taxed sector. This feature of the tort tax has implications for resource allocation and consumer welfare, as it further distorts the structure of production within the economy by retarding the consumption of high-taxed activities relative to low-taxed activities.

The relative substitution effect operates to the advantage of specialized inputs in the low-taxed areas, for these will now experience increases in employment opportunities and, in the short run, in wages, the return on capital and other benefits (called “quasi-rents” by economists). Consumers of the low-taxed goods gain as prices fall.

On the other hand, the relative substitution effect operates to the

⁵⁴ Actually, this is the way general sales taxes pretty much work, in that the tax is generally imposed on material goods and not on services. And even with respect to material goods, a number of states exempt such things as groceries or medicines.

disadvantage of specialized inputs in the high-taxed areas, which experience decreases in the same opportunities and benefits. Consumers of the high-taxed goods lose as prices rise.⁵⁵

These effects are obviously significant to the affected consumers and input suppliers. They should likewise be significant to policy makers who would be concerned about the distributional consequences of raising excise taxes on such products as gasoline, liquor or cigarettes.

For practical purposes, however, we can safely ignore the relative substitution effects of the tort tax for the purposes of this analysis. The reason is that these effects are mutually canceling at the level of state-wide aggregation. Shifts of resources out of high-taxed sectors are matched by shifts of resources into low-taxed sectors. We may thus limit our attention to absolute substitution in modeling the effect of a rise in the tort tax on the state economy.

Part of any increase in the tort tax may therefore be treated as a rise in a general sales tax. The literature on public finance shows that a tax hike of this kind is equivalent to a rise in a proportional tax on income.⁵⁶ By increasing the cost of

⁵⁵ To be sure, if all consumers were to consume all products in the same proportion, the relative substitution effect would exert no differential effects across consumers. It would impose equal burdens on all consumers. (Otherwise, it will impose weaker burdens on those consumers who consume relatively heavy amounts of the low-taxed products.) Similarly, if all factor inputs were unspecialized, i.e. in perfectly elastic supply, the relative substitution effect would have no influence on relative factor returns.

⁵⁶ See, for instance, Peter Mieszkowski, "Tax Incidence Theory," *Journal of Economic Literature* 7 (December, 1969): 1103-24; and Richard A. Musgrave, *The Theory of Public Finance: A Study in Public Economy* (New York: McGraw-Hill, 1959), 348-53. The reasoning is much the same as how a tax on corporate income is transformed into a general tax on capital. See also Arnold C. Harberger, "The Incidence of the Corporation Income Tax," *Journal of Political Economy* 70 (June 1962): 215-40. For further elaborations of Harberger's formulation, see Charles E. McLure, Jr. and Wayne R. Thirsk, "A Simplified Exposition of the Harberger Model," *National Tax Journal* 28 (March, 1975): 1-27; and J. Gregory Ballentine, "The Incidence of a Corporation Income Tax in a Growing Economy," *Journal of Political Economy* 86 (October, 1978): 863-75.

labor, a tax hike of this kind causes employment, production and payrolls to fall.

Given a constant supply of money, a fall in production manifests itself in a rise in prices and wages and a fall in measured "real" gross state product. Some observers would interpret this as a fall in state "competitiveness."

Chapter VI - The Massachusetts Economy and its Competitiveness

While competitiveness depends on much more than just tort costs or taxes, part of the impetus for tort reform in Massachusetts stems from concerns about the state's competitiveness. Massachusetts finds itself in an increasingly competitive environment with respect to its ability to attract capital and workers. The surrounding New England states – Connecticut, Maine, New Hampshire, Rhode Island and Vermont – are a source of competition. Not only does Massachusetts compete with these states for export-based industry, it also competes with them for local, service-based employment, for instance, retail trade and construction.

A second group of economic competitors consists of the traditional industrial states: Illinois, Michigan, New Jersey, New York, Ohio, and Pennsylvania. Massachusetts competes with these states in manufacturing and trade. A third group of competitors consists of the high-tech states: Arizona, California, Maryland, Minnesota, North Carolina, Texas, and Washington. Massachusetts competes against these states in newer technology industries – biotechnology, computers (both hardware and software) and telecommunications. The international sector makes up the rest of Massachusetts' competition.

For most purposes, the competitor states are grouped into three general classes: New England, industrial, and high tech. In 1995, these 19 states (including Massachusetts) were home to 162 million of the United States' total population of 263 million.

In Massachusetts, rarely does a political season go by that the voters do not hear about the state's high taxes and high costs of doing business. The reason is straightforward: Businesses tend to locate where expected profits are greatest. Taxes are a cost of doing business; therefore, higher taxes lead to lower profits and less economic expansion.

To be sure, tax considerations alone do not determine locational choices. Taxes are generally a relatively small part of business costs. For most businesses, a 10% increase in taxes will exert less negative impact than a 10% increase in labor costs, because the increase in labor costs will reduce net earnings by a greater amount than the same percentage increase in taxes. What is relevant for competitiveness, however, is the impact at the margins of decision. While, on average, changes in labor costs may weigh more heavily than changes in taxes, at the relevant margins of choice both affect competitiveness.

An article in the *Boston Business Journal* quotes Dan Stephan, a partner with the California Business Intelligence Service, a site consultant firm, as identifying the following factors as important in the decision about where to locate a plant: a qualified work force, the area's high-tech image, labor costs, space costs, cost of living, general attractiveness of the area, and proximity to both a major airport and the firm's research labs.⁵⁷ According to Stephan, "taxes ranked seventh on the usual list of siting criteria for most high-tech companies."⁵⁸ The then-current exchange rate between the U.S. dollar and the Japanese yen is also mentioned as a

reason for Japanese desire to site new plants in the United States.

Calzonetti and Walker performed an analysis of a “nationwide” survey of new manufacturing plants that started operations from 1978 through the mid-1980s.⁵⁹ Questionnaires were sent to 2,710 manufacturers who opened new plants, from which 739 responses were received.⁶⁰ The responses differed according to region and whether the new plant was a branch plant of an existing firm or the sole plant of a new or existing firm. Two types of location searches were examined: regional searches and local searches. Table 3 reports the results for regional searches, while Table 4 does the same for local searches.

Table 3 - Important Factors in Regional Search Plant Location

Single Plant Establishments				Branch Plants			
	Single most important	Very important	Total		Single most important	Very important	Total
Markets	32	27	59	Markets	21	28	49
Labor	19	40	59	Taxes	2	39	41
Land	4	50	54	Labor	11	29	40
Personal Reasons	16	34	50	Land	3	32	35
Taxes	3	37	40	Education	1	31	32
Resources	3	32	35	Non-tax Incentives	1	31	32
Proximity to Suppliers	1	30	31	Resources	8	15	23
Electricity	2	28	30	Electricity	0	20	20
Education	4	25	29	Proximity to Suppliers	1	15	16
Amenities	5	24	29	Personal Reasons	2	12	14

⁵⁷ McCright, John S, “Japanese Chip Maker Eyes Boston,” *Boston Business Journal* (September 9, 1994), 9.

⁵⁸ *ibid.*

⁵⁹ F.J. Calzonetti and R. Walker, “Factors Affecting Industrial Location Decisions: A Survey Approach,” in *Industry Location and Public Policy*, Henry Herzog, Jr., and Alan Schlottmann, eds. (Knoxville, TN: University of Tennessee Press, 1991), 135.

⁶⁰ *ibid.*

Table 4 - Important Factors in Local Search Plant Location

Single Plant Establishments				Branch Plants			
	Single most important	Very important	Total		Single most important	Very important	Total
Markets	52	268	320	Nonunion Labor	8	82	90
Highways	17	257	274	Markets	25	52	77
Nonunion Labor	25	227	252	Land Cost	0	73	73
Vacant Site	33	199	232	Wages	0	73	73
Livability	20	210	230	Highways	9	60	69
Wages	6	211	217	Property Tax	2	57	59
Land Cost	16	190	206	Livability	4	52	56
Skilled Workers	12	157	169	Water	3	48	51
Water	7	143	150	Inducements	3	48	51
Previous Location	89	55	144	Vacant Site	7	43	50

These results show that proximity to markets is generally the most important influence in locational choices. While taxes are never listed as the principal consideration, they are invariably listed as important for regional searches. Marginal changes in tax rates influence location decisions in the expected manner, with increases reducing locational attractiveness and impeding competitiveness.

Tort costs manifest themselves explicitly as well as implicitly in the cost of locating and producing in Massachusetts. Consider Table 5, which shows that Massachusetts has among the highest automobile and homeowners insurance costs in the nation. Whether this is because Massachusetts has bad drivers and high home values is uncertain, but surely businesses take this into consideration when locating economic activity. As for hospital costs and taxes, while both are in the top quartile, neither heads the list. Wages, although not shown here, are high as well.

If cost of living is a consideration for a firm's site-selection decisions, the data suggest Massachusetts is at a competitive disadvantage since an expansive tort law regime can manifest itself in higher wages and prices and thus in a higher cost of living. Thus, tort law becomes a factor, at least indirectly, in a firm's site-selection decision. By the same token, tort reform would reduce the cost of living and increase the state's attractiveness as a site for doing business.

Focusing on Massachusetts' business climate, Moore and Moscovitch investigated the state's ability to: (1) expand and retain employment, (2) attract new firms in growth industries, and (3) nurture resource and development.⁶¹ Moore and Moscovitch cited several areas of concern that could affect growth in Massachusetts. Specifically, surveyed executives mentioned cumbersome regulatory processes; the high cost of doing business in the state including labor costs, electricity, health care, and property taxes; a poorly-educated work force lacking basic skills; infrastructure condition; and a perceived hostility toward business. Given the responses to the AIM and NFIB surveys, one must surmise that this perceived hostility derives in part from current tort law.

Moore and Moscovitch mentioned some of the state's strengths, including a large research base, many highly-skilled and highly-educated workers, recent regulatory reforms, infrastructure upgrades in progress, and the state's cultural and natural resource advantages. Moreover, Massachusetts' role as an industrial state brings agglomeration efficiencies and economies of scale.

⁶¹ Craig Moore and Edward Moscovitch, "The New Economic Reality: Massachusetts Prospects for Long-Term Growth" (Boston: Massachusetts Taxpayers Foundation, May 25, 1994).

Table 5 - Various Costs by State

State	Average Cost to Hospitals Per Patient Day, 1994 \$	Rank	Automobile Insurance Average Cost, 1994 \$	Rank	Homeowners Insurance Average Cost, 1991 \$	Rank	State and Local Revenue Per Capita, 1991 \$	Rank
Alabama	781	37	524	34	462	11	2,281	47
Alaska	1,263	3	720	14	na	na	11,445	1
Arizona	1,091	7	731	12	358	34	2,881	24
Arkansas	724	40	507	37	418	19	1,973	51
California	1,301	2	781	8	539	3	3,378	10
Colorado	993	15	721	13	448	15	3,059	17
Connecticut	1,121	5	863	6	494	7	3,393	9
Delaware	1,042	11	776	9	330	42	3,530	7
Dist. of Columbia	1,304	1	924	4	na	na	3,530	8
Florida	975	18	656	19	366	29	2,908	21
Georgia	797	36	564	28	449	14	2,687	31
Hawaii	958	20	962	2	na	na	4,098	4
Idaho	679	43	445	46	280	47	2,464	41
Illinois	988	16	587	25	363	30	2,841	27
Indiana	955	21	529	32	393	23	2,605	36
Iowa	672	44	422	48	338	41	2,884	23
Kansas	715	41	459	45	443	16	2,800	29
Kentucky	748	38	526	33	424	17	2,473	40
Louisiana	929	23	767	10	527	4	2,680	32
Maine	802	34	471	42	370	28	2,756	30
Maryland	981	17	712	16	360	32	3,085	15
Massachusetts	1,036	12	938	3	548	2	3,308	11
Michigan	929	24	665	17	375	26	3,036	19
Minnesota	695	42	620	22	370	27	3,571	6
Mississippi	584	47	557	29	526	5	2,073	50
Missouri	915	25	549	30	404	22	2,241	48
Montana	470	51	460	44	358	35	2,454	42
Nebraska	606	46	436	47	357	39	2,905	22
Nevada	1,016	13	748	11	391	24	3,102	13
New Hampshire	825	32	617	24	468	9	2,648	33
New Jersey	934	22	964	1	452	13	3,662	5
New Mexico	1,047	10	628	21	418	18	3,017	20
New York	854	30	870	5	459	12	4,378	2
North Carolina	806	33	462	43	377	25	2,426	43
North Dakota	515	48	368	51	350	40	2,881	25
Ohio	1,008	14	517	35	362	31	2,619	34
Oklahoma	848	31	503	39	476	8	2,513	38
Oregon	1,077	8	566	27	295	45	3,064	16
Pennsylvania	892	26	657	18	325	44	2,606	35
Rhode Island	970	19	861	7	513	6	2,824	28
South Carolina	876	28	582	26	463	10	2,420	44
South Dakota	470	50	396	50	358	36	2,310	46
Tennessee	870	29	500	40	408	21	2,170	49
Texas	1,055	9	714	15	592	1	2,597	37
Utah	1,115	6	540	31	283	46	2,501	39
Vermont	651	45	503	38	412	20	3,038	18
Virginia	885	27	515	36	357	38	2,845	26
Washington	1,206	4	654	20	357	37	3,271	12
West Virginia	727	39	619	23	326	43	2,417	45
Wisconsin	802	35	496	41	274	48	3,094	14
Wyoming	504	49	422	49	359	33	4,247	3

United States	930	na	650	na	420	na	na	na
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Massachusetts' Decline as a Manufacturing State

For many years, observers of the state's business scene have noted the decline in importance of traditional manufacturing jobs. Table 6 shows that from 1983 to 1996, U.S. manufacturing employment increased at a .2% annual rate while Massachusetts manufacturing employment decreased at a 2.5% annual rate, resulting in a 27.7% total decrease in manufacturing employment. During that time, Massachusetts manufacturing employment dropped from 23.8% of all jobs to 14.7% of all jobs.

Massachusetts is moving away from manufacturing and toward services. This trend is consistent with the hypothesis that Massachusetts is a high-tort-tax state, that tort law operates as a tax on production and that this tax falls particularly heavily on manufacturing.

Table 6 - United States and Massachusetts Employment, 1983 and 1996

Nonagricultural Employment in Thousands	United States 1983	United States 1996	Mass. 1983	Mass. 1996	U.S. Annual Growth Rate %	Mass. Annual Growth Rate %
Construction	4,460.8	5,400.0	69.2	93.1	1.5	2.3
Manufacturing	17,837.6	18,300.0	613.2	443.6	0.2	-2.5
Transportation, Utilities and Communication	4,924.3	6,300.0	117.6	127.5	1.9	0.6
Trade	20,181.7	28,100.0	571.6	697.8	2.6	1.5
Finance, Insurance and Real Estate	5,363.0	7,000.0	165.7	203.8	2.1	1.6
Services	18,943.4	34,300.0	668.6	1,053.1	4.7	3.6
Government	16,167.5	19,400.0	370.2	395.0	1.4	0.5
Total	87,878.3	119,300.0	2,576.1	3,015.4	2.4	1.2

Table 7 shows disaggregated 1993 employment levels for various sectors of the

state's economy. As noted above, manufacturing employment accounts for 443,600 jobs, down from 613,200 in 1983. The percentage of jobs in manufacturing, 14.71%, is similar to the national average. Of the manufacturing jobs, the biggest employers are electronic and electric machinery, industrial and nonelectric machinery, and instruments, closely followed by printing and publishing each with roughly 2% of total employment. Manufacturing jobs tend to be higher paying jobs, and at one time more stable, yielding a national average wage of between \$11.58 and \$12.93 an hour in 1995, as well as causing a multiplier effect, that is, creating other jobs to support the manufacturing process.

Of the nonmanufacturing jobs, service-related employment accounts for the largest portion. More than one out of three jobs fall into this sector. This sector is not monolithic, however, but is composed of three disparate subgroups: business services, health services, and other services. Particularly, health services have been, and continue to be, a growing part of the state's economy. More than 320,000 workers, almost 11% of all Massachusetts' workers, are employed in this area. This too is a relatively high-wage sector paying an average of \$12.45 an hour in 1995. This is one service sector that, as we show below, suffers from particularly high tort costs.

The service sector is not in every instance a low-wage sector. While the service sector is often described as consisting of fast-food workers, it includes such specialties as engineering, accounting and legal services, and private educational institutions that help produce trained, educated students.

Because of this, service-sector wages approach manufacturing wages with

greater and greater frequency. For instance, business services paid an average wage of \$10.69 an hour in 1995 and no doubt many specialties paid more on average than manufacturing.

The next largest block, trade employment, accounts for 23.1% of all jobs in Massachusetts. Wholesale trade accounts for 5.6% while retail trade accounts for 17.5% of all jobs. Notice the large discrepancy between the average wages here. Retail wages averaged \$7.69 an hour, while wholesale trade wages were \$12.43 an hour, comparable to manufacturing wages. Tort costs tend to be low in the trade sectors.

Government employment accounts for 13.1% of all Massachusetts employment. Local government accounts for the bulk of these employees, approximately 9%, and includes teachers, police, fire, and public works employees. State government and the federal government each employ just less than 60,000 workers in Massachusetts. Wages were not available for government workers, but most likely are about average.

Tort costs to municipalities and the state, frequently paid through self insurance, diminish the funds available to pay salaries and put upward pressure on taxes. This diminishes the state's ability to compete for high-quality government workers and for new businesses.

Table 7 - Massachusetts Employment by Sector, 1996

	Employment thousands	Percent of Total	Average Hourly Earnings 1995 \$
Nonmanufacturing			
Construction	93.1	3.09	15.08
Finance, Insurance, Real Estate	203.8	6.76	12.33
Services Total	1053.1	34.92	11.39
Business Services	195.8	6.49	10.69
Health Services	322.2	10.69	12.45
Other Services	535.1	17.75	na
Trade Total	697.8	23.14	na
Wholesale Trade	168.9	5.60	12.43
Retail Trade	528.9	17.54	7.69
Transportation, Utilities, Communication	127.5	4.23	14.23
Government Total	395.0	13.10	na
Federal Government	57.1	1.89	na
State Government	58.7	1.95	
Local Government	279.2	9.26	na
Total Nonmanufacturing	2571.8	85.29	na
Durable Manufacturing			
Lumber and Wood	3.8	0.13	10.12
Furniture and Fixtures	4.3	0.14	9.82
Stone, Glass, Clay	8.9	0.30	12.41
Primary Metals	9.7	0.32	14.62
Fabricated Metals	36.7	1.22	12.12
Industrial and Nonelectric Machinery	65.4	2.17	13.24
Electronic and Electric Machinery	61.3	2.03	11.67
Transportation Machinery	18.4	0.61	16.75
Instruments	52.2	1.73	12.71
Miscellaneous	16.7	0.55	10.06
Total Durable Manufacturing	277.4	9.20	12.93
Nondurable Manufacturing			
Food and Kindred	20.2	0.67	10.94
Textile Mill Products	15.1	0.50	9.41
Apparel	14.7	0.49	7.64
Pulp and Paper Products	19.7	0.65	14.23
Printing and Publishing	48.9	1.62	12.33
Chemical Products	15.6	0.52	15.63
Rubber Products	26.0	0.86	10.92
Leather Products	4.6	0.15	8.17
Other	1.4	0.05	na
Total Nondurable Manufacturing	166.2	5.51	11.58
Total Employment	3015.4	100	na

Chapter VII - Estimating the Tort Tax in Massachusetts

While the tort tax varies across activities and industries, a first approximation of its economic consequences can be constructed by treating it as a general tax on income. Tort reform that restricted the expansive tort regime would thus be equivalent to a reduction in the rate at which income is taxed.

Before we can estimate the economic impact of the tort tax on residents of Massachusetts, however, we must provide a basis for determining those alternative tax rates. The problem is that the tort tax is only an implicit tax whose rate is subject to estimation, unlike the explicit taxes that are imposed by legislatures. Nonetheless, there do exist some external sources that allow us to place some boundaries on the size of the tort tax.

Our task has two parts. We need to establish a reasonable estimate of the present tort tax under the contemporary expansive regime, and we need to provide a reasonable estimate of what the tort tax would be under the alternative regime that would be established under the Civil Justice Reform Act, a regime that would conform more closely to what we have called the contractual regime. Once we have determined the actual rate of tort tax and the alternative rate that would be attained through tort reform, we can assess the economic consequences of the tax reduction that tort reform would entail. We do so first with respect to the United States as a whole, and then consider Massachusetts in particular.

National and International Tort Costs

We start with the study of tort costs conducted by Tillinghast-Towers Perrin, which estimates that the U.S. tort system cost \$151.5 billion in 1994 and \$161 billion in 1995.⁶² These figures rely on data from A.M. Best, the principal publisher of insurance industry data, “several specialized studies” of self-insurance and Tillinghast-Towers Perrin’s internal database of state-by-state medical malpractice costs.

Table 8 shows the breakdown of national tort costs for 1994 and for 1995. Of \$151.5 billion in total tort cost in 1994, the direct insurance cost component is the largest by far: \$115.7 billion, or 76.3% of total tort cost. Self-insurance accounts for \$23.2 billion, or 15.3% of total tort cost, while medical malpractice accounts for \$12.7 billion, or 8.4% of total tort cost. Of this total cost figure, 54% went for attorney fees and administrative expenses, with the remaining 46% awarded to plaintiffs, roughly evenly split between compensation for economic loss and awards for pain and suffering.

From 1994 to 1995, tort costs increased by 6.3%, accounting for 2.3% of GDP in 1995, up from approximately .6% of GDP in 1950, 1.4% of GDP in 1970, though down from a peak of 2.5% of GDP in 1986.⁶³ The Tillinghast-Towers Perrin study reports that “over the last 64 years [1930 to 1994], U.S. tort costs have increased by almost four hundredfold – from less than half a billion dollars in 1930 to \$151.5

⁶² See Tillinghast-Towers Perrin, *Tort Cost Trends*.

⁶³ *ibid.*

billion in 1994. Tort cost growth has far outstripped economic growth since 1930, with GDP increasing about one hundredfold.”⁶⁴

Table 8 - National Tort Costs

Tort Component	1994 \$ billions	1995 \$ billions
Insurance	115.7	na
Self Insurance	23.2	na
Medical Malpractice	12.7	na
Total Tort Cost	151.5	161
Percentage of GDP	2.2%	2.3%

It is interesting to note what is not included in the Tillinghast-Towers Perrin estimate of tort cost. The Tillinghast-Towers Perrin study does not include “costs incurred by federal and state courts in administering actual suits.” Nor does it include indirect costs such as “unnecessary and duplicative medical tests or the disappearance of certain products or whole industries because of high product liability cost.”⁶⁵

At \$151.5 billion in 1994, tort costs absorbed 2.2% of U.S. gross domestic product (GDP). The Tillinghast-Towers Perrin study estimates that tort costs were 1.4% of GDP in 1970 and 0.6% in 1950.⁶⁶ Either of these figures could conceivably serve as a benchmark for gauging the size of the tort tax. In 1950 the shift to an expansive tort regime was barely under way, while in 1970 it was in full force. The Civil Justice Reform Act makes no explicit effort to restore some particular tort

⁶⁴ *ibid.*

⁶⁵ *ibid.*

⁶⁶ *ibid.*

system of the past, even if its provisions would clearly reduce the tort tax.

If 1970 were taken as the benchmark, the tort tax would be reduced by 0.8% of GDP. This is the difference between the 2.2% share in 1994 and the 1.4% share in 1970. Similarly, the tort tax would be reduced by 1.6% of GDP in returning to a 1950 benchmark. While we adopt 1970 but not 1950 as one of our benchmarks below, it is perhaps noteworthy, as Table 9 shows, that the other nations that were surveyed by Tillinghast-Towers Perrin have present levels of tort costs that are generally bracketed by the shares attributed to tort costs in the United States in 1950 and 1970.

Table 9 - International Tort Costs, 1994

Country	Tort Cost as Percent of GDP
United States	2.2
Belgium	1.4
Italy	1.3
Germany	1.3
Spain	1.2
Switzerland	0.9
United Kingdom	0.8
France	0.8
Canada	0.8
Australia	0.7
Japan	0.5
Denmark	0.4

A consideration of these tort costs led one commentator, Michael Porter in *The Competitive Advantage of Nations*, to argue that

it is time for a systematic overhaul of the U.S. product liability system, since the effect of the current system is often stifling to innovation. Other nations have product liability systems which protect the consumer without tying innovation up in knots. Rapid screening of lawsuits, reasonable caps on damage awards, and mandated resolution procedures short of a full trial

would be promising steps.⁶⁷

State Tort Costs

The data compiled by Tillinghast-Towers Perrin pertain to the United States as a whole, but a good portion of tort liability is determined at the state level where individual states can differ in their levels of tort tax. While states vary in the levels of their tort taxes, it should be noted that those tax levels are not wholly under the control of the individual states.

Massachusetts can exert only partial control over its tort tax. Its degree of control over the tort tax rises the more fully transactions are confined within the state. To the extent exports to other states are involved, Massachusetts comes to have less control over its tort tax. In those cases in which exports are significant, tort reform that decreases liability within Massachusetts will lead to some substitution of suits filed elsewhere for suits filed in Massachusetts.⁶⁸ The Civil Justice Reform Act will clearly lower tort liability in Massachusetts, but the full extent to which this will happen will depend on the degree to which tort filings are taken elsewhere, as against being abandoned.

Using methodology similar to the Tillinghast-Towers Perrin study, we calculate the cost of the tort system for each of the 50 states and the District of Columbia. The most recent published estimate of GSP is for the year 1992. Table 10

⁶⁷Michael Porter, *The Competitive Advantage of Nations* (New York: The Free Press, 1990), 729.

shows the estimates of tort cost by state for 1992. Table 11 shows the components of tort cost in 1992. Table 12 and Table 13 provide similar estimates for 1995 based on a prediction of 1995 GSP. The tort cost results do not differ significantly.

For 1992, Table 10 shows that total tort costs for the United States were approximately 2.2% of GDP, or \$129 billion out of nearly \$6 trillion in GDP. This amounts to \$519 for every American. For the same year, Massachusetts tort costs totaled \$4.1 billion, or 2.55% of the \$161 billion GSP, amounting to a tort cost of \$687 for every Massachusetts resident. The average Massachusetts resident thus pays 32% more for tort costs than the average American. As a percentage of GDP, Massachusetts tort costs are 18.6% higher than the rest of the country's, and eighth highest in the nation as a percentage of GSP. This does not augur well for the state's competitiveness.

Table 11 shows the component breakdown of tort costs. To estimate total tort cost, we take the sum of insurance premiums for various types of liability insurance from the Insurance Information Institute's annual fact book.⁶⁹ For Massachusetts, the premiums are: private automobile liability (\$1.97 billion), commercial automobile liability (\$425 million), a percentage of homeowners, farm owners, and multiperil insurance (\$462 million), medical malpractice (\$29 million) and other liability, including product (\$652 billion).

Combining the paid premiums with \$590 million in self insurance (estimated

⁶⁸ Conversely, tort reform in other states that is not accompanied by reform in Massachusetts will shift liability suits into Massachusetts that would otherwise have been filed elsewhere.

following Tillinghast-Towers Perrin's study where self insurance is 5% of personal premiums and 30% of commercial premiums) yields \$4.1 billion in total tort cost.

As in the Tillinghast-Towers Perrin study, we do not include court costs, litigation costs, unnecessary medical procedures, or the disappearance of products or whole industries.

We extend the analysis to 1995 to ensure that our methodology provides accurate estimates of tort costs. The results are shown in Table 12. We estimate national tort costs to be \$157.6 billion in 1995, slightly less than Tillinghast-Towers Perrin's estimate of \$161 billion. Thus in 1995, tort costs accounted for 2.21% of GDP, and in Massachusetts, 2.68% of GSP, the fifth highest percentage in the nation. This amounts to an \$833 cost for every Massachusetts resident. Table 13 shows the components of tort cost by type for 1995 including a separate category for product liability premiums. The 1995 results are little different from the 1992 results.

Massachusetts Tort Tax

Having calculated the tort costs for all 50 states and for the District of Columbia, we can now calculate the Massachusetts tort tax.⁷⁰ Once we have calculated the tort tax under the contemporary expansive regime, we can use it in the next chapter to estimate what the tort tax would be under the alternative scenarios posed by the Civil Justice Reform Act.

As mentioned in Chapter IV, the tort tax can be viewed as a tax on labor

⁶⁹ See *The Fact Book 1996*.

income. In order to derive the tort tax, we built on the methodology used by the Tillinghast-Tower Perrin study to calculate tort costs. Tort costs in Massachusetts account for about 2.55% of 1992 GSP. In 1992, Massachusetts

⁷⁰ See Appendix A for a detailed derivation of the tort tax.

Table 10 - State Tort Costs, 1992

State	Population	GSP \$ millions	Total Tort Cost \$ thousands	Total Tort Cost/GSP %	Total Tort Cost/Pop \$
Alabama	4,040,587	78,137	1,481,986	1.90	367
Alaska	550,043	25,957	305,683	1.18	556
Arizona	3,665,228	74,060	2,143,189	2.89	585
Arkansas	2,350,725	43,994	964,887	2.19	410
California	29,760,021	787,896	16,125,958	2.05	542
Colorado	3,294,394	82,463	1,910,330	2.32	580
Connecticut	3,287,116	98,873	2,737,863	2.77	833
Delaware	666,168	23,666	545,098	2.30	818
District of Columbia	606,900	40,441	397,730	0.98	655
Florida	12,937,926	268,609	6,993,531	2.60	541
Georgia	6,478,216	153,534	3,107,180	2.02	480
Hawaii	1,108,229	33,203	864,329	2.60	780
Idaho	1,006,749	20,860	424,207	2.03	421
Illinois	11,430,602	294,449	5,761,548	1.96	504
Indiana	5,544,159	121,647	2,275,505	1.87	410
Iowa	2,776,755	59,547	1,147,666	1.93	413
Kansas	2,477,574	56,164	893,295	1.59	361
Kentucky	3,685,296	75,561	1,492,207	1.97	405
Louisiana	4,219,973	96,245	2,145,911	2.23	509
Maine	1,227,928	24,085	542,938	2.25	442
Maryland	4,781,468	116,169	3,031,719	2.61	634
Massachusetts	6,016,425	161,966	4,132,226	2.55	687
Michigan	9,295,297	204,421	4,421,870	2.16	476
Minnesota	4,375,099	110,276	2,386,622	2.16	546
Mississippi	2,573,216	44,298	844,951	1.91	328
Missouri	5,117,073	111,604	2,271,765	2.04	444
Montana	799,065	15,227	328,612	2.16	411
Nebraska	1,578,385	37,213	635,979	1.71	403
Nevada	1,201,833	36,816	767,229	2.08	638
New Hampshire	1,109,252	25,524	571,771	2.24	515
New Jersey	7,730,188	223,146	5,584,337	2.50	722
New Mexico	1,515,069	31,863	617,455	1.94	408
New York	17,990,455	497,555	11,701,491	2.35	650
North Carolina	6,628,637	159,637	2,944,760	1.84	444
North Dakota	638,800	13,057	232,692	1.78	364
Ohio	10,847,115	241,604	4,671,511	1.93	431
Oklahoma	3,145,585	60,188	1,187,468	1.97	378
Oregon	2,842,321	62,724	1,435,655	2.29	505
Pennsylvania	11,881,643	266,969	6,739,762	2.52	567
Rhode Island	1,003,464	21,582	564,103	2.61	562
South Carolina	3,486,703	69,810	1,360,778	1.95	390
South Dakota	696,004	15,131	261,477	1.73	376
Tennessee	4,877,185	108,894	1,874,005	1.72	384
Texas	16,986,510	416,867	8,773,548	2.10	517
Utah	1,722,850	35,590	634,189	1.78	368
Vermont	562,758	11,844	285,365	2.41	507
Virginia	6,187,358	153,808	2,879,057	1.87	465
Washington	4,866,692	127,578	2,686,093	2.11	552
West Virginia	1,793,477	30,699	825,264	2.69	460
Wisconsin	4,891,769	109,517	2,024,656	1.85	414
Wyoming	453,588	13,186	173,491	1.32	382
United States	248,709,873	5,994,154	129,110,943	2.15	519

Table 11 - Components of Tort Cost, 1992

State	Private Auto Liability Premiums \$ thousands	Commercial Auto Liability Premiums \$ thousands	Homeowners / Farm owners / Multiperil Liability Premiums \$ thousands	Other Liability Premiums \$ thousands	Medical Malpractice Premiums \$ thousands	Self Insurance Cost \$ thousands
Alabama	539,409	180,485	156,284	237,407	84,589	283,812
Alaska	123,601	31,831	32,810	49,609	13,689	54,144
Arizona	1,052,923	161,472	233,703	233,371	110,255	351,465
Arkansas	425,367	127,757	105,566	123,384	27,266	155,546
California	7,351,421	1,422,046	1,765,190	2,464,821	529,646	2,592,834
Colorado	932,458	142,660	209,875	250,203	73,845	301,289
Connecticut	1,186,561	231,669	296,836	452,053	108,624	462,119
Delaware	232,106	53,919	59,157	89,026	19,327	91,563
Dist. of Col.	94,007	23,810	39,806	112,557	34,999	92,551
Florida	3,534,412	650,602	776,780	800,338	193,181	1,038,218
Georgia	1,305,655	348,121	333,041	403,228	163,268	553,868
Hawaii	416,786	77,609	95,840	125,512	19,027	129,555
Idaho	179,386	47,535	45,978	64,153	15,443	71,712
Illinois	2,021,433	479,185	607,069	1,237,283	309,223	1,107,356
Indiana	1,029,587	268,730	251,603	342,958	36,080	346,547
Iowa	407,060	133,636	121,840	221,443	50,129	213,558
Kansas	386,691	98,292	97,277	134,329	29,201	147,505
Kentucky	710,268	146,962	163,592	177,226	56,156	238,003
Louisiana	973,529	259,186	235,697	281,188	57,407	338,905
Maine	229,365	64,568	58,159	64,326	29,468	97,052
Maryland	1,462,892	282,694	331,857	338,323	128,473	487,480
Massachusetts	1,972,558	425,310	462,019	652,865	29,394	590,080
Michigan	2,099,438	322,296	483,823	625,709	178,042	712,562
Minnesota	1,023,983	209,037	260,889	445,625	60,612	386,476
Mississippi	345,608	125,505	91,741	116,204	24,289	141,604
Missouri	924,309	227,609	243,605	365,100	107,016	404,126
Montana	128,616	44,914	34,967	42,062	17,520	60,534
Nebraska	248,307	80,071	68,657	109,663	19,674	109,607
Nevada	383,463	58,458	84,423	89,923	30,974	119,988
New Hampshire	266,605	59,200	63,334	86,137	10,282	86,213
New Jersey	2,135,863	733,762	595,582	840,434	260,485	1,018,211
New Mexico	309,989	64,110	69,074	77,086	9,308	87,888
New York	4,151,423	1,044,822	1,221,445	2,138,712	808,012	2,337,077
North Carolina	1,414,658	352,677	323,986	293,475	99,095	460,869
North Dakota	86,905	28,097	24,680	37,468	12,062	43,481
Ohio	1,929,586	434,127	499,470	714,869	251,220	842,239
Oklahoma	565,141	133,910	132,223	166,822	15,614	173,758
Oregon	709,723	143,156	158,911	164,708	41,819	217,338
Pennsylvania	2,960,299	661,085	734,927	1,056,601	221,526	1,105,325
Rhode Island	265,702	56,600	62,493	83,354	10,967	84,986
South Carolina	725,982	162,231	154,033	128,566	10,109	179,857
South Dakota	101,133	38,992	28,010	35,762	10,847	46,733
Tennessee	755,302	241,133	200,668	251,573	89,776	335,553
Texas	4,052,684	845,302	966,221	1,319,597	223,887	1,365,857
Utah	294,233	61,933	69,482	85,276	21,773	101,492
Vermont	97,421	30,588	30,250	61,903	11,755	53,448
Virginia	1,388,555	282,388	316,893	344,779	96,898	449,544
Washington	1,308,627	220,019	295,261	339,074	100,687	422,425
West Virginia	383,955	81,291	89,903	98,081	36,027	136,007
Wisconsin	844,525	220,265	219,861	337,367	63,582	339,056
Wyoming	63,504	18,036	18,395	32,484	8,611	32,461
United States	56,533,014	12,639,693	14,023,182	19,344,017	4,971,159	21,599,877

Table 12 - State Tort Costs, 1995

State	Population	Estimated GSP \$ millions	Tort Cost \$ thousands	Tort Cost/Est. GSP %	Tort Cost/Pop \$
Alabama	4,154,500	93,062	1,843,450	1.98	444
Alaska	589,100	30,915	364,699	1.18	619
Arizona	4,187,800	88,207	2,591,535	2.94	619
Arkansas	2,403,700	52,398	1,228,989	2.35	511
California	33,680,400	938,397	17,893,044	1.91	531
Colorado	3,496,500	98,215	2,471,274	2.52	707
Connecticut	3,390,700	117,759	3,087,297	2.62	911
Delaware	714,900	28,187	672,733	2.39	941
District of Columbia	591,300	48,166	445,834	0.93	754
Florida	14,726,000	319,918	9,646,972	3.02	655
Georgia	7,171,500	182,861	3,707,658	2.03	517
Hawaii	1,196,600	39,545	1,006,180	2.54	841
Idaho	1,030,800	24,845	533,452	2.15	518
Illinois	11,606,100	350,693	6,849,454	1.95	590
Indiana	5,641,400	144,884	2,853,692	1.97	506
Iowa	2,746,000	70,921	1,349,983	1.90	492
Kansas	2,577,500	66,892	1,213,595	1.81	471
Kentucky	3,707,700	89,994	1,909,674	2.12	515
Louisiana	4,163,000	114,629	2,930,183	2.56	704
Maine	1,297,800	28,686	593,399	2.07	457
Maryland	5,208,900	138,359	3,287,602	2.38	631
Massachusetts	6,199,100	192,904	5,164,623	2.68	833
Michigan	9,515,800	243,469	5,222,271	2.14	549
Minnesota	4,629,700	131,340	2,880,595	2.19	622
Mississippi	2,597,100	52,760	1,090,851	2.07	420
Missouri	5,309,000	132,922	2,833,938	2.13	534
Montana	793,300	18,136	418,734	2.31	528
Nebraska	1,594,200	44,321	821,183	1.85	515
Nevada	1,447,400	43,848	1,099,523	2.51	760
New Hampshire	1,233,800	30,399	655,068	2.15	531
New Jersey	8,006,100	265,770	7,423,637	2.79	927
New Mexico	1,656,600	37,949	828,091	2.18	500
New York	18,547,100	592,596	13,680,553	2.31	738
North Carolina	7,076,800	190,130	3,776,670	1.99	534
North Dakota	629,500	15,551	286,128	1.84	455
Ohio	10,996,700	287,754	5,592,088	1.94	509
Oklahoma	3,149,500	71,685	1,559,068	2.17	495
Oregon	2,989,700	74,705	1,721,411	2.30	576
Pennsylvania	12,095,400	317,964	7,637,594	2.40	631
Rhode Island	1,040,800	25,705	759,140	2.95	729
South Carolina	3,728,500	83,145	1,678,222	2.02	450
South Dakota	708,000	18,021	344,509	1.91	487
Tennessee	5,083,400	129,694	2,414,377	1.86	475
Texas	18,312,500	496,495	11,567,916	2.33	632
Utah	1,848,800	42,388	905,263	2.14	490
Vermont	598,600	14,106	328,825	2.33	549
Virginia	6,718,000	183,188	3,540,683	1.93	527
Washington	5,313,500	151,947	3,195,524	2.10	601
West Virginia	1,720,600	36,563	1,032,681	2.82	600
Wisconsin	5,042,000	130,436	2,425,776	1.86	481
Wyoming	432,400	15,705	220,193	1.40	509
United States	263,296,100	7,139,133	157,585,835	2.21	599

Table 13 - Components of Tort Cost, 1995

State	Private Auto Liability Premiums \$ thousands	Commercial Auto Liability Premiums \$ thousands	Homeowners/Farm owners/Multi-peril Liability Premiums \$ thousands	Product Liability Premiums \$ thousands	Other Liability Premiums \$ thousands	Medical Malpractice Premiums \$ thousands	Self Insurance \$ thousands
Alabama	674,793	200,559	295,465	26,658	279,621	91,924	366,354
Alaska	133,139	30,629	58,304	3,883	68,611	15,048	70,133
Arizona	1,223,873	179,228	424,650	23,702	290,098	113,487	449,984
Arkansas	519,033	145,936	198,081	15,394	144,451	28,984	206,094
California	7,578,363	1,361,803	2,891,878	256,637	2,680,533	587,656	3,123,829
Colorado	1,137,760	159,994	402,922	30,096	322,767	86,114	417,736
Connecticut	1,217,200	228,995	494,983	47,290	555,090	84,972	543,739
Delaware	260,615	53,950	107,837	7,297	121,089	21,863	121,946
Dist. of Col.	95,953	20,415	69,996	2,437	138,266	44,635	118,767
Florida	4,478,880	778,861	1,579,229	77,394	1,020,436	451,452	1,712,172
Georgia	1,463,399	357,592	598,763	58,687	501,124	200,073	728,093
Hawaii	435,784	81,918	162,485	15,131	145,590	21,945	165,272
Idaho	223,586	52,216	86,189	5,940	70,924	18,837	94,597
Illinois	2,409,791	514,647	1,096,495	140,415	1,269,102	392,317	1,419,004
Indiana	1,234,049	287,064	459,719	44,547	377,740	38,149	450,573
Iowa	477,559	143,162	214,826	28,915	230,773	45,567	254,748
Kansas	489,148	116,081	195,188	31,940	165,528	38,631	215,710
Kentucky	889,581	161,542	311,810	19,829	204,748	68,307	322,165
Louisiana	1,295,176	282,580	474,427	26,442	370,069	70,675	481,489
Maine	239,331	59,860	95,897	5,227	79,641	29,289	113,443
Maryland	1,531,757	260,129	537,807	29,844	355,796	140,608	572,269
Massachusetts	2,212,291	472,622	834,915	69,499	690,707	153,652	884,589
Michigan	2,268,917	353,324	847,062	74,587	760,467	193,836	917,914
Minnesota	1,256,145	224,418	464,734	53,646	423,509	45,444	458,143
Mississippi	411,532	137,634	175,024	12,237	144,564	48,446	209,860
Missouri	1,130,457	237,568	456,872	50,939	425,506	124,807	532,595
Montana	164,114	49,158	67,428	3,310	54,971	19,087	79,753
Nebraska	299,354	86,163	130,740	14,351	141,883	21,783	148,692
Nevada	527,988	72,695	180,158	10,153	125,068	40,639	183,461
New Hamp.	277,863	60,472	105,852	8,336	88,891	20,696	113,654
New Jersey	3,079,082	736,233	1,199,201	99,008	970,603	284,043	1,339,511
New Mexico	396,821	65,204	135,069	8,480	94,538	17,151	127,979
New York	5,058,857	1,105,673	2,204,230	170,086	2,261,305	905,071	2,880,402
North Carolina	1,762,318	371,039	616,135	51,404	350,302	120,692	625,472
North Dakota	103,309	33,734	45,785	3,689	42,884	13,734	56,727
Ohio	2,252,945	441,824	903,039	103,065	832,041	262,536	1,059,174
Oklahoma	695,906	143,695	252,212	21,669	198,888	26,963	246,698
Oregon	805,606	141,210	280,272	20,283	200,876	40,092	273,164
Pennsylvania	3,237,432	658,230	1,232,150	112,659	1,105,567	197,103	1,291,556
Rhode Island	344,564	61,118	123,137	12,170	96,938	15,975	121,212
South Carolina	793,985	174,309	272,365	22,410	171,482	11,802	243,671
South Dakota	132,033	40,140	55,250	6,134	46,844	12,996	64,108
Tennessee	950,570	256,313	390,126	35,018	302,353	137,325	479,997
Texas	5,187,037	962,709	1,877,244	137,379	1,488,496	315,950	1,915,050
Utah	409,654	72,394	147,340	17,404	104,043	31,591	154,428
Vermont	115,240	29,589	52,223	4,294	66,363	9,613	61,116
Virginia	1,597,553	291,846	575,744	35,038	442,063	115,154	598,439
Washington	1,521,781	223,434	522,250	38,312	369,689	97,863	520,058

West Virginia	463,030	83,092	168,519	8,810	121,705	49,736	187,525
Wisconsin	958,578	239,124	389,039	54,842	356,707	67,643	427,486
Wyoming	85,015	21,101	35,440	2,446	33,498	10,697	42,693
United States	66,508,747	13,323,226	25,496,507	2,159,363	21,904,748	6,002,653	28,193,244

taxable income accounted for about 48.7% of GSP. Thus, if revenue equal to this fraction of GSP were raised explicitly through the Massachusetts tax on income taxable at 5.95%, it would be necessary to impose an additional tax rate of 5.24% on that income. Hence, the total tax burden on income from the combination of the explicit income tax and the implicit tort tax approaches 11.19% of taxable income.⁷¹

The share of GSP accounted for by the cost of tort liability was .75 of a percentage point higher in 1992 than in 1970. This is equivalent to a 1.54 percentage point increase in the Massachusetts tax on earned income (an increase of 29.4% of the explicit rate of 5.95%).

National Input-Output Accounts

To ascertain which sectors of the economy face high tort costs, we investigate another data source. Recall that tort costs are comprised of insurance premiums and a self-insurance component. We can assess the relative cost of the insurance component by looking at national input-output accounts.

The most recent national input-output accounts were published in 1995 using 1987 U.S. data.⁷² The input-output accounts are a listing, by standardized industrial classification (SIC) code, of the aggregate amounts of each commodity used in the production process for 4-digit SIC coded industries. The use table for

⁷¹ For a detailed description of the derivation of the tort tax see Appendix A. The number reported in the text is roughly equal to $2.6/.49$.

industries delineates the total cost of resources used by all companies in the entire sector, say wholesale trade, along with the value of each commodity used by that sector. This allows one to determine how much of each type of resource is used by each industry or end user, sorted by SIC code.

Table 14 shows that in 1987 national insurance usage costs for all economic sectors totaled \$83 billion out of \$4.5 trillion, or 1.83%, of total costs. Although these figures do not include self insurance, they provide confirmation that tort costs are close to 2.2% of GDP.

Among the sectors with the highest costs are: agricultural products, forest and fisheries, real estate and rental, automobile repair and services, transportation and warehousing, finance and insurance, and state and local government enterprise. Federal government nondefense purchases incur high insurance costs, as well.

Certain kinds of manufacturing exhibit lower but still relatively high costs. Costs for wholesale and retail trade are predictably low. Examining final users of goods and services, we see that 2.66% of personal consumption expenditures go for insurance.

Finally, Table 15 examines input-output sectors at the 4-digit level and shows the 25 sectors with the highest insurance costs as a percentage of total costs. Topping the list is water supply and sewerage with an astounding 13.25%

⁷² The 1995 edition of the benchmark input-output table includes the latest published data available, so inferences must be made using admittedly old data. The magnitude of the project, however, does not allow

of total costs directed toward insurance payments.

statistics provides the ability to update the data any quicker.

Table 14 - Insurance and Legal Costs by Input-Output Sector, 1987

Input-Output Sector	Total Cost of Resources Used \$ millions	Insurance Cost \$ millions	Legal Cost \$ millions	Insurance Cost as a percent of TC
01 - Livestock	87,484	438	38	0.50
02 - Other Agricultural Products	86,742	1,797	42	2.07
03 - Forestry and Fishery Products	7,456	102	13	1.37
04 - Agricultural, forestry and fishery services	22,201	80	197	0.36
05 - Iron and ferroalloy ores mining	1,523	5	3	0.32
06 - Nonferrous metal ores mining	5,284	18	17	0.35
07 - Coal mining	25,452	31	21	0.12
08 - Crude petroleum and natural gas	84,228	18	88	0.02
09 - Stone and clay mining and quarrying	10,288	5	16	0.05
10 - Chemical and fertilizer mineral mining	2,676	1	3	0.03
11 - New construction	617,050	1,965	1,064	0.32
12 - Maintenance and repair construction	1,763	2	0	0.10
13 - Ordinance and accessories mfg.	31,438	32	269	0.10
14 - Food and kindred products mfg.	325,972	355	331	0.11
15 - Tobacco mfg.	26,383	37	18	0.14
16 - Broad and narrow fabrics mfg.	38,244	41	67	0.11
17 - Misc. textile goods and floor covering mfg.	15,982	24	24	0.15
18 - Apparel mfg.	64,184	76	129	0.12
19 - Miscellaneous fabricated textile product mfg.	16,987	26	29	0.15
20 - Lumber and wood products mfg.	72,327	195	118	0.27
21 - Wood containers mfg.	547	1	2	0.09
22 - Household furniture mfg.	18,419	31	61	0.17
23 - Office furniture and fixtures mfg.	18,358	27	42	0.14
24 - Paper and allied products mfg.	81,982	216	104	0.26
25 - Paperboard containers and boxes mfg.	25,511	47	44	0.18
26 - Printing and publishing mfg.	137,104	261	959	0.19
27 - Chemicals and sel. chemical product mfg.	97,887	185	219	0.19
28 - Plastics and synthetic material mfg.	40,672	77	56	0.19
29 - Drugs, cleaning and toilet preparations mfg.	69,242	83	187	0.12
30 - Paints and allied products mfg.	12,072	6	33	0.05
31 - Petroleum refining and related products mfg.	137,871	361	42	0.26
32 - Rubber and misc. plastics product mfg.	85,572	181	172	0.21
33 - Leather tanning and finishing mfg.	2,222	3	3	0.11
34 - Footwear and other leather product mfg.	6,478	7	19	0.11
35 - Glass and glass product mfg.	16,085	26	35	0.16
36 - Stone and clay product mfg.	43,732	91	92	0.21
37 - Primary iron and steel mfg.	68,091	138	93	0.20
38 - Primary nonferrous metals mfg.	56,376	112	72	0.20
39 - Metal container mfg.	11,904	20	10	0.17
40 - Heating, plumbing, and metal products mfg.	43,930	84	102	0.19
41 - Screw machine product mfg.	31,974	57	41	0.18
42 - Other fabricated metal product mfg.	44,424	85	100	0.19
43 - Engines and turbine mfg.	14,096	22	27	0.15
44 - Farm and garden machinery mfg.	10,977	18	22	0.16
45 - Construction and mining machinery mfg.	15,777	40	35	0.25
46 - Materials handling mach. and equip. mfg.	7,194	14	20	0.19
47 - Metal working machinery and equip. mfg.	21,227	46	72	0.22
48 - Special industry machinery and equip. mfg.	16,254	28	48	0.17
49 - General industrial machinery and equip mfg.	23,236	40	65	0.17
50 - Misc. machinery mfg., except electrical	20,003	28	85	0.14
51 - Office computing and accounting mach. mfg.	55,820	76	339	0.14
52 - Service industry machines mfg.	22,409	31	54	0.14

53 - Electric industrial equip. and apparatus mfg.	22,665	41	82	0.18
54 - Household appliances mfg.	15,361	23	29	0.15
55 - Electric lighting and wiring equipment mfg.	17,615	27	73	0.15
56 - Radio, television, and comm. equipment mfg.	40,700	59	134	0.15
57 - Electronic components and accessories mfg.	48,654	70	189	0.14
58 - Misc. electrical equipment and supplies mfg.	20,823	45	138	0.21

Table 14 continued: Insurance and Legal Costs by Input-Output Sector, 1987

Input-Output Sector	Total Cost of Resources Used \$ millions	Insurance Cost \$ millions	Legal Cost \$ millions	Insurance Cost as a percent of TC
59 - Motor vehicles and equipment mfg.	203,105	487	270	0.24
60 - Aircraft and parts mfg.	82,128	113	279	0.14
61 - Other transportation equipment mfg.	24,082	29	43	0.12
62 - Scientific and controlling instrument mfg.	85,463	158	319	0.19
63 - Optical, ophthalmic, and photo equip. mfg.	19,725	50	66	0.26
64 - Miscellaneous mfg.	33,089	71	189	0.21
65 - Transportation and warehousing	285,768	2,055	987	0.72
66 - Communications, except radio and television	161,127	65	556	0.04
67 - Radio and television broadcasting	29,396	4	342	0.01
68 - Electric, gas, water, and sanitary services	211,182	2,071	281	0.98
69 - Wholesale and retail trade	844,444	1,026	15,813	0.12
70 - Finance and insurance	459,462	4,809	4,605	1.05
71 - Real estate and rental	705,419	16,027	2,934	2.27
72 - Hotels, personal and repair services	93,790	99	734	0.11
73 - Business and professional services	488,874	1,139	3,690	0.23
74 - Eating and drinking places	209,394	33	1,666	0.02
75 - Automobile repair and services	130,704	2,263	396	1.73
76 - Amusements	78,192	77	613	0.10
77 - Health, educational, social services and npos	491,189	1,938	2,312	0.39
78 - Federal government enterprises	45,396	43	0	0.10
79 - State and local government enterprises	69,484	492	311	0.71
82 - Government industry	466,785	0	0	0.00
84 - Household industry	7,709	0	0	0.00
85 - Inventory valuation adjustment	-17,817	0	0	0.00
Final Uses				
91 - Personal consumption expenditures	3,072,252	81,638	31,069	2.66
92 - Gross private fixed investment	732,891	0	0	0.00
93 - Change in business inventories	28,037	0	0	0.00
94 - Exports	348,572	2,592	496	0.74
95 - Imports	-490,442	-3,078	-59	0.63
96 - Federal govt. purchases, national defense	292,052	36	345	0.01
97 - Federal government purchases, nondefense	92,875	1,710	503	1.84
98 - State and local govt. purchases, education, hospitals and welfare	218,272	666	618	0.31
99 - State and local government purchases, other	278,320	161	1,130	0.06
All Final Uses	4,572,829	83,724	34,102	1.83

Table 15 - Highest Insurance Costs as Percentage of Total Costs, 1987

Input-Output Sector	Industry Title	Total Cost of Resources Used \$ millions	Insurance Cost \$ millions	Insurance Cost as a percent of TC
680301	Water supply and sewerage systems	3,360	445	13.25
680302	Sanitary service, steam supply, irrigation	7,902	623	7.89
750001	Automotive repair and leasing, without drivers	45,455	2,233	4.91
20600	Agriculture, oil bearing crops	11,729	543	4.63
700500	Insurance agents and brokers	48,876	1,482	3.03
20300	Agriculture, tobacco	1,909	58	3.03
710100	Real estate and rental, owner occupied dwellings	325,144	9,705	2.98
650701	Freight forwarders and other trans. services	10,312	286	2.78
910000	Personal consumption expenditures	3,072,252	81,638	2.66
20201	Agriculture, food grains	6,974	165	2.36
20202	Agriculture, feed grains	30,164	707	2.34
650702	Arrangement of passenger transportation	7,708	178	2.31
30002	Commercial fishing	3,116	69	2.20
970000	Federal government purchases, nondefense	92,875	1,710	1.84
710201	Real estate	347,225	6,322	1.82
730107	Equipment rental and leasing services	28,588	503	1.76
700200	Finance and insurance, credit agencies, not banks	33,018	554	1.68
20100	Agriculture, cotton	4,817	73	1.51
700100	Banking	192,444	2,656	1.38
20401	Agriculture, fruit	7,115	96	1.35
20502	Agriculture, sugar crops	1,888	24	1.28
20503	Agriculture, miscellaneous crops	582	7	1.24
790100	Local government passenger transit	4,822	59	1.23
770503	Religious organizations	23,610	289	1.22
630200	Ophthalmic goods mfg.	1,540	18	1.19

Chapter VIII - Estimating the Economic Effects of Tort Reform

Tort reform along the lines proposed in the Civil Justice Reform Act would reduce tort costs and the tort tax in Massachusetts. In this chapter, we report the results of our use of the Beacon Hill Institute State Tax Analysis Modeling Program (STAMP) to estimate the effect of tort reform on economic activity in Massachusetts.⁷³ In particular, we investigate the effect tort reform would have on Massachusetts employment, capital stock, payroll and state tax revenue.

Table 16 shows four possible changes in the Massachusetts tort tax under the Civil Justice Reform Act. Under the first scenario, tort reform would reduce tort

Table 16 - Massachusetts Tort Tax

Scenario	I	II	III	IV
	Current U.S. Average of 2.2% of GDP	Proportionate to Filings Decrease of 26.6%	1970 Mass. Costs of 1.8% of GSP	1970 U.S. Costs of 1.4% of GDP
Current MA Tort Tax	5.24%	5.24%	5.24%	5.24%
New Tort Tax	4.52%	3.84%	3.70%	2.87%
Tort Tax Reduction	-.72%	-1.39%	-1.54%	-2.36%

costs in Massachusetts to the current national average, which would be 2.2% of GSP. The tort tax would fall .72 percentage points, from 5.24% to 4.52%.

The second scenario follows from our discussion of tort reform in Illinois, and assumes that tort costs would fall in proportion to the reduction in tort filings. This option would lower tort costs by 26.6% to 1.87% of GSP. The tort tax would fall 1.39 percentage

⁷³ See Appendix A for full details of the model and estimations.

points, from 5.24% to 3.84%.

The third scenario assumes that tort reform reduces tort costs to the same relative position they occupied in Massachusetts in 1970, which was 1.8% of GSP. The tort tax would fall 1.54 percentage points, from 5.24% to 3.70%.

The fourth scenario assumes that tort costs would be reduced to the national average within the United States in 1970, which would have comprised 1.4% of GSP in Massachusetts. The tort tax would fall 2.36 percentage points, from 5.24% to 2.87%.

Table 17 reports the effect of tort reform on economic activity in Massachusetts. The first row shows the four different possible scenarios involving effects of the Civil Justice Reform Act on tort costs and on the tort tax in Massachusetts. The second row shows the tax impact of the four scenarios as reflected by the reduction in tort costs. Under scenario I, tort reform leads to a 0.72 percentage point reduction in the state income tax, while scenario IV leads to a state income tax reduction of 2.36 percentage points. BHI's STAMP model provides a means of projecting the economic impact of these tax reductions (explained in Appendix A). For instance, STAMP predicts that a one percentage point decrease in the state income tax rate would increase employment in Massachusetts by 3.26%.

Table 17 - Economic Effects of Tort Reform

	Scenario			
	I	II	III	IV
Reduction in Mass. Tort Costs to:	Current U.S. Average	Proportionate to Filings	1970 Mass. Costs	1970 U.S. Costs
Equivalent Tax Impact (% point change)	-0.72	-1.39	-1.54	-2.36
Employment Impact	71,649	139,940	155,303	241,224
Capital Impact	\$9.3 billion	\$18.3 billion	\$20.4 billion	\$31.9 billion

Payroll Impact	\$2.4 billion	\$4.7 billion	\$5.2 billion	\$8.2 billion
Tax Revenue Impact	\$144.9 million	\$283.1 million	\$314.1 million	\$488.0 million

The third row of Table 17 shows the increased employment that would stem from tort reform. In Scenario I, the low-impact scenario, employment rises by 71,649. In Scenario IV, the high-impact scenario, employment rises by 241,224.

These figures should be seen against a current employment base of some three million. Even in the low-impact scenario, tort reform would increase employment by 2.38%, and by more than half of the present amount of unemployment in Massachusetts. In the high-impact scenario, tort reform increases employment by 8%.

To be sure, this impact is more than double the current rate of unemployment in Massachusetts. But to note this is simply to recognize that tort reform would not just reduce the amount of unemployment within Massachusetts, but would bring people into the labor force who are not currently looking for work. It would also attract people from outside Massachusetts, due to various forces for economic relocation that would operate favorably to Massachusetts.

The fourth and fifth rows of Table 17 show the effect of tort reform on capital investment and payrolls in Massachusetts. Tort reform would increase both payroll and the stock of capital in Massachusetts. It would also increase government revenues, as the final row of Table 17 shows. Tort reform would provide the economic stimulus that ordinary tax reductions generally give, only it would do so without bringing about any reduction in government revenues.

The projections summarized in Table 17 show that tort reform would spread substantial economic benefits throughout Massachusetts. More capital would be invested in enterprises situated in Massachusetts. Those enterprises would employ more people and have larger payrolls. The resulting increases in individual earnings and business profits would increase tax revenues received by governments throughout Massachusetts.

Appendix A: Beacon Hill Institute's STAMP Model

The BHI Tax Model

As discussed in Chapter IV of this report, treatment of the “tort tax” as an equivalent state tax on earned income – provided a model is available which estimates economic effects of tax law changes on the state economy – is a sound, intuitively plausible, and theoretically defensible approach. Chapter VII of this report detailed the translation of the tort tax into an equivalent state tax on earned income. In order to complete the assessment of impacts on basic characteristics of the state economy, changes in the tort tax were applied within the context of the BHI Tax Model. This appendix discusses the basic structure of that model and provides an example of the mode of calculation of economic impacts based on current estimates of the model's coefficients.

The BHI State Tax Analysis Modeling Program (STAMP) estimates the effects of state tax-law changes on the state economy.⁷⁴ It determines how a proposed tax-law change affects the average marginal tax rate (*AMTR*) paid by state taxpayers and shows how the change in this tax rate affects, among other variables, the state's aggregate employment level, average wage rate, capital stock and tax revenues.

The BHI model is an econometric model that specifies a set of “structural equations” for the economy. From these equations, the “reduced form” equations that explain the behavior of the economic indicators that the model is intended to predict – employment, capital investment, and the wage rate – are derived and estimated.

In analyzing the effects of a change in tax policy, the model first determines how a tax-law change affects the marginal tax rate (the increase in tax liability that results from a one-dollar increase in the tax base). Second, it uses the estimated “reduced form” coefficients to simulate how a change in the marginal tax rate affects economic decisions such as those to work, consume, produce and invest. Finally, it determines how changes in these decisions affect key economic variables such as employment, investment, labor and capital income, the wage rate, the return to capital, production and state tax revenues.

The model consists of a labor sector comprised of utility maximizing households and a capital sector comprised of profit maximizing firms. From household utility maximization subject to a budget constraint, labor supply is derived as a function of the wage rate, labor endowment, unearned income, government transfer payments, the federal marginal tax rate on labor income and the state marginal tax rate on labor income. From the profit maximizing behavior of firms, labor and capital demand are derived as functions of the cost of labor (wages plus the cost of unemployment insurance), the cost of capital, and the U.S. unemployment rate.

The supply of capital is assumed to be perfectly elastic. The resulting system of three simultaneous equations is solved for equilibrium reduced form equations for the endogenous variables determined in the system: employment, the wage rate, and the capital stock. Each of these is derived as a function of the following exogenous variables:

- * the “labor endowment” (working-age population) of the state economy E ;
- * state after-tax unearned income Y_{ui} ;
- * state after-tax government transfer payments G_{tr} ;

⁷⁴ For the full derivation of the model, see Beacon Hill Institute, *Massachusetts Econometric Tax Model*.

- * the federal income tax rate t_f ;
- * the state income tax rate t_s ;
- * the U.S. unemployment rate ψ ;
- * the state unemployment insurance tax rate v ;
- * the components of the cost of capital to firms. These include the discount (interest) rate i , the replacement rate d , the present value of depreciation allowed for tax return purposes for \$1 of capital c , and the total tax rate on capital τ (including federal and state tax on dividends and capital gains t_k , and federal and state tax on corporate income t_{fc} and t_{sc} . Tax rates are measured in percentage points).

The model includes the components of the cost of capital instead of the actual cost since we want to isolate the role of total tax rate on capital τ . We include the unemployment rate of the United States in order to reflect the effect of the nationwide business cycle on employment. Combining the labor and capital sectors, the model shows how changes in state corporate or personal tax rates affect business decisions to add plant and equipment, create jobs, and pay taxes. It thus incorporates estimates of the “dynamic” effects of tax-law changes on tax revenues in determining how tax revenues respond to tax-law changes.

The BHI model is *macroeconomic* in that it shows how tax policy affects aggregate economic variables such as wages, employment, the capital stock, and tax revenue and in that it accounts for the interaction of major economic sectors (households, business and government). It is also *microeconomic* in that it is based on the economic calculus of the individual household and firm and in that it assumes “equilibrium” in the markets for labor and capital.

A Labor Market Clearing Model

By this we mean that labor markets clear: wage rates (represented here by the

estimated “average” wage rate for all labor) adjust until the supply of labor equals the demand for labor. Suppose, for example, that there is a decrease in the demand for Massachusetts computers, causing a temporary excess of supply over demand for Massachusetts computer workers. Then wage rates for these workers will fall until the number of such workers that Massachusetts computer makers are willing to hire just equals the number of such workers who want to work. The wage rate that “clears” the market for computer workers is the “equilibrium” wage rate.

This feature marks another distinction between the BHI model and other models that assume *disequilibrium* in labor markets. These models, based on the writings of economist John Maynard Keynes, assume that wage rates are “rigid” – slow to adjust to changes in supply or demand. A fall in demand for goods (including computers and other goods) causes a persistent oversupply of labor to emerge. This state of affairs leads to a further fall in the demand for goods, as workers left unemployed by the shrinkage in jobs find themselves with less disposable income. The fall in the demand for goods, in turn, leads to further job losses in a rippling “multiplier” effect that leaves the economy in a persistent economic slump.

While Keynesian models might be appropriate for certain purposes such as analyzing policy changes at the national level, they are inappropriate for analyzing state tax-law changes. State economies are generally smaller and highly integrated into the national economy. An economy like that of the United States is large and not so highly integrated into the world economy. If workers in a state find themselves temporarily unemployed at overly high (and “rigid”) wage rates, they are likely to migrate to other

states rather than linger in the given state as part of a persistent labor glut. On the other hand, U.S. workers are unlikely to migrate to other countries when faced with the same conditions.

Furthermore, the whole notion of wage rigidity that provides the cornerstone of disequilibrium models is highly controversial. One characterization of these models is that they assume a form of irrationality on the part of workers – a “money illusion” that causes them to misinterpret wage cuts that are occurring generally throughout the economy as specific to their own jobs.

The Markets for Goods and Capital

We assume market clearing for goods and capital, just as we do for labor. This is sensible in that goods and capital are even more mobile than labor. Firms in any given state produce goods that are consumed in other states, and state residents consume goods that are produced in other states. As a result, the demand for individual goods by consumers in a state is not generally equal to the supply of those goods produced by producers in the state. Similarly, stock issued by corporations in a state (equivalently, capital goods demanded by those corporations) is not necessarily bought by in-state savers, just as stock bought by (capital supplied by) savers in the state is not necessarily issued (used) by in-state corporations. We assume that the supply of capital to firms in a state is perfectly elastic, meaning that firms can obtain whatever level of capital they need at the market price for capital r .

Modeling the Behavior of Households and Firms

The BHI model is grounded in the economic calculus of the household and of the firm. Households maximize utility subject to their budget constraints. Firms maximize profits subject to the costs of labor and capital. All decision-makers are thus assumed to be rational, optimizing economic agents. There is no wage “rigidity” traceable to misperceptions on the part of households or firms about the meaning of labor-market disequilibria.

Households: Decision on Labor Supply

Household utility (by which we mean, roughly, satisfaction) is a function of the amount of consumption and of leisure that households enjoy. The greater the household’s consumption and leisure, the greater its utility.

However, households have only limited resources with which to enjoy consumption and leisure. These resources consist of (1) their endowment E of time potentially usable for leisure and valued at the after-tax wage rate, (2) their after-tax unearned income Y_u and (3) the amount of government transfer payments G_{tr} that they receive. We compute (1) by multiplying E by $w(1 - t_f)(1 - t_s)$, where w is the “real” inflation-adjusted wage rate and t_f and t_s are the average marginal tax rates on federal and state labor income, respectively. The sum of (1), (2) and (3) constitutes the household’s budget.

Households allocate their budget between consumption and leisure, valued at the after-tax wage rate, in such a way as to maximize utility. In maximizing utility, the

household expands the amount of its budget allocated to consumption and leisure until the additional utility from an extra dollar's worth of either good is the same.

The household adjusts its consumption and leisure in response to changes in its budget constraint and in the price of leisure, measured as $w(1 - t_f)(1 - t_s)$. An increase in its budget, as through an increase in after-tax unearned income Y_u , causes consumption and leisure to expand. A fall in the price of leisure, as through a rise in t_s , causes the household to expand leisure. (The rise in t_s causes the after-tax wage rate $w(1 - t_f)(1 - t_s)$ to fall, making work less rewarding and, hence, leisure less expensive.) An expansion of leisure manifests itself as a decrease in the supply of labor. Labor supply (a "structural" equation), as derived from the household's maximization calculus, is:⁷⁵

$$(1) \quad \text{LnL} = a_0 + a_1 \ln E + a_2 \ln G_r + a_3 \ln Y_u + a_4 t_f + a_5 t_s + a_6 \ln w$$

$$(a_1 > 0, a_2 < 0, a_3 < 0, a_4 < 0, a_5 < 0, a_6 > 0).$$

Firms: Decision on Labor Demand

Producers use two primary production factors, labor L and capital K . They are assumed to maximize profit (equal to the value of production less the cost of production) by expanding the use of labor and capital until the cost of hiring another unit of labor equals the value of its marginal product MPL and the cost of hiring another unit of capital equals the value of its marginal product MPK . The cost of labor is the pretax wage rate w plus the cost of unemployment insurance wv and the value of the marginal product of

⁷⁵Equation (1) is equivalent to (A1.11) in Appendix 1 in *Massachusetts Econometric Tax Model* where a detailed derivation is provided.

labor is the value of the additional production from the employment of another unit of labor. The cost of capital is r , and the value of the marginal product of capital is the value of additional production from employing another unit of capital. We obtain the following structural equations for labor and capital demand:⁷⁶

$$(2) \quad \ln L = \lambda_0 + \lambda_r \ln r + \lambda_w \ln w + \lambda_\Psi \ln \Psi + \lambda_v v$$

$$(\lambda_r < 0, \lambda_w < 0, \lambda_\Psi > 0, \lambda_v < 0)$$

$$(3) \quad \ln K = \theta_0 + \theta_r \ln r + \theta_w \ln w + \theta_\Psi \ln \Psi + \theta_v v$$

$$(\theta_r < 0, \theta_w < 0, \theta_\Psi < 0, \theta_v < 0)$$

Determination of Equilibrium Employment, Capital, and Wage Rate

Simultaneously solving the labor supply equation (1), the labor demand equation (2), and the capital demand equation (3), for L , K , and w , we obtain the following reduced-form equations:⁷⁷

$$(4) \quad \ln w = \gamma_0 + \gamma_r \ln r + \gamma_e \ln E + \gamma_g \ln G_{tr} + \gamma_y \ln Y_u + \gamma_f t_f + \gamma_s t_s + \gamma_\Psi \Psi + \gamma_v v$$

$$(\gamma_r < 0, \gamma_e < 0, \gamma_g > 0, \gamma_y > 0, \gamma_f > 0, \gamma_s > 0, \gamma_\Psi < 0, \text{ and } \gamma_v < 0)$$

$$(5) \quad \ln L = \delta_0 + \delta_r \ln r + \delta_e \ln E + \delta_g \ln G_{tr} + \delta_y \ln Y_u + \delta_f t_f + \delta_s t_s + \delta_\Psi \Psi + \delta_v v$$

$$(\delta_r < 0, \delta_e > 0, \delta_g < 0, \delta_y < 0, \delta_f < 0, \delta_s < 0, \delta_\Psi < 0, \text{ and } \delta_v < 0)$$

$$(6) \quad \ln K = \phi_0 + \phi_r \ln r + \phi_e \ln E + \phi_g \ln G_{tr} + \phi_y \ln Y_u + \phi_f t_f + \phi_s t_s + \phi_\Psi \Psi + \phi_v v$$

$$(\phi_r < 0, \phi_e > 0, \phi_g < 0, \phi_y < 0, \phi_f < 0, \phi_s < 0, \phi_\Psi < 0, \text{ and } \phi_v < 0)$$

As indicated in (4), the coefficient that links the wage rate to the state tax rate (known as the “elasticity” of w with respect to t_s) is positive, that is, $\gamma_s > 0$. An increase in t_s

⁷⁶Equations (2) and (3) are equivalent to (A1.18) and (A1.19) in Appendix 1 in *Massachusetts Econometric Tax Model* where a detailed derivation is provided.

and hence a decrease in the after-tax wage rate would decrease the supply of labor, resulting in an excess demand for labor at the initial (before-tax) wage rate. Therefore, for the labor market to be in equilibrium, the before-tax wage rate rises. As the before-tax wage rate rises, the demand for labor decreases and so does equilibrium employment. This negative effect of t_s on the equilibrium employment of labor is indicated by a negative coefficient on t_s in (5). The reduced need for labor implies a reduced need for capital, resulting in the negative coefficient on t_s in (6).

Estimating the Massachusetts Tort Tax

Using the most recent published data on gross state product (GSP), which is 1992, we can calculate the tort tax. The derivation of the tort tax is straight forward. It is calculated by dividing two ratios: tort costs as a fraction of gross state product divided by taxable income as a fraction of gross state product.

Our calculation of the tort tax is a three-step process. In the first step we calculate tort cost as a fraction of GSP. In 1992, Massachusetts tort costs, as calculated in Chapter VII, were \$4.132 billion, while Massachusetts GSP was \$161.966 billion.

Let A = Tort Costs
 B = GSP
 C = Taxable Income

Then

$$\frac{A}{B} = \frac{4.132\text{billion}}{161.966\text{billion}} = 2.55\% .$$

⁷⁷Equations (4), (5), and (6) are equivalent to (A1.20) (A1.21), and (A1.22) in Appendix 1 in *Massachusetts Econometric Tax Model*.

In the second step, we calculate taxable income as a fraction of GSP. In 1992 taxable income was \$78.887 billion.

$$\frac{C}{B} = \frac{78.887\text{billion}}{161.966\text{billion}} = 48.7\%.$$

In the final step we divide the two ratios calculated above by dividing tort costs as a fraction of gross state product by taxable income as a fraction of gross state product. Thus, the Massachusetts tort tax is calculated as follows:

$$\frac{\frac{A}{B}}{\frac{C}{B}} = \frac{2.55\%}{48.7\%} = 5.24\%.$$

In Chapter VIII, we considered four possible scenarios for tort reform and how the change in the tort tax associated with each scenario would affect economic activity in Massachusetts. Here, we calculate the new tax rate for each scenario. In each, the denominator, Taxable Income/GSP, remains unchanged. The ratio is equal to 48.7%. Only the numerator changes with each scenario.

Scenario I: This scenario assumes tort reform would reduce tort costs in Massachusetts to the national average of 2.2% of GDP. Therefore we assume that tort costs would be lowered to 2.2% of GSP. The new tax rate is:

$$\frac{2.2\%}{48.7\%} = 4.52\%.$$

Thus, 5.24% - 4.52% = .72 percentage point decline in the tort tax rate.

Scenario II: This scenario assumes that tort filings would fall in the same proportion, 26.6%, as those in Illinois. In order to obtain the new tax rate we multiply the percentage drop in tort filings by the numerator (Tort Costs/GSP).

$$(1-.266)*2.55\% = 1.87\%.$$

The new tax rate is:

$$\frac{1.87\%}{48.7\%} = 3.84\%.$$

Thus, 5.24% - 3.84% = 1.39 percentage point decline in the tort tax rate (difference due to rounding).

Scenario III: This scenario assumes that tort cost decreased to the 1970 Massachusetts level of 1.8% of GSP. Therefore we assume that tort costs would be lowered to 1.8% of GSP. The new tax rate is:

$$\frac{1.8\%}{48.7\%} = 3.70\%.$$

Thus, 5.24% - 3.70% = 1.54 percentage point decline in the tort tax rate.

Scenario IV: This scenario assumes that tort costs would be lowered to the 1970 national level of 1.4% of GDP. The new tax rate is:

$$\frac{1.4\%}{48.7\%} = 2.87\%.$$

Thus, $5.24\% - 2.87\% = 2.36$ percentage point decline in the tort tax rate (difference due to rounding).

Estimating the Effects of a Tort Tax Reduction

As discussed in the body of this report, the economic effects of the proposed Civil Justice Reform Act are best captured by translating the expected changes in the tort tax into an equivalent tax on labor income. Based on the most recent STAMP model estimation for Massachusetts, changes in the marginal state tax rate on labor income will have statistically-significant effects on employment and the capital stock. No significant impact on the wage rate is projected to occur. The computation of major economic impacts flowing from a reduction in the tort tax is outlined below for one case: reducing the Massachusetts tort tax from its present level to the U.S. average.

Baseline Wage Rate, Employment and Capital

Baseline employment in Massachusetts for 1996 was

$$L_{96} = 3,015,400 .$$

Data from *New England Economic Indicators* on the average wage and salary during the first two quarters of 1996 was used to generate an estimated 1996 baseline wage of

$$w_{96} = \$34,002 .^{78}$$

Assuming growth in the capital stock followed that of employment and wages, we project 1996 baseline capital stock at

$$K_{96} = \$247,789.6 \text{ million.}$$

Effect on Equilibrium Employment

The change in the tort tax is projected to affect equilibrium employment, L . Using the results of the employment equation in column (2) of Table (1), the change in employment due to reduction in the tort tax would be:

$$\begin{aligned}\Delta \ln(L_{NEW}) &= -0.0326 \cdot \Delta(t_s) \\ &= -0.0326 \cdot (-.72) \\ &= .0235 .\end{aligned}$$

Extending this result, employment would be:

$$\begin{aligned}\ln(L_{NEW}) &= \ln(L_{NEW}) + \Delta \ln(L_{NEW}) \\ &= \ln(3,015,400) + (0.0235) \\ &= 14.943\end{aligned}$$

or

$$L_{NEW} = 3,087,049.$$

Thus, the change in employment attributable to the reduced tort tax is

⁷⁸ Joshua Gleason, ed., *New England Economic Indicators* (Boston: Federal Reserve Bank of Boston, January 1997), 16.

$$L_{NEW} - L_{96} = 3,087,049 - 3,015,400$$

$$= 71,649.$$

Effect on Capital Stock

Using the results from the capital stock equation, the change in the tort tax rate would have the following impact on the capital stock in Massachusetts:

$$(22) \quad \Delta \ln(K_{NEW}) = -0.0513 * \Delta t_s$$

$$= -0.0513 * (-0.72)$$

$$= 0.0370.$$

This implies that the capital stock under the new policy would be:

$$(23) \quad \ln(K_{NEW}) = \ln K_{96} + \Delta \ln(K_{NEW})$$

$$= \ln(\$247,789.6 \text{ million}) + 0.0370$$

$$= 26.273$$

or

$$K_{NEW} = \$257,131.6 \text{ million}$$

$$(24) \quad K_{NEW} - K_{96} = \$257,131.6 \text{ million} - \$247,789.6 \text{ million}$$

$$= \$9,342.0 \text{ million.}$$

Effect on Tax Revenue

Based on the employment and wage projections for 1996, a comparison of payroll under the current system and under the new system allows the derivation of the impact of

the policy on tax revenue. The projected increase in employment due to reduction in the tort tax is 81,700. Since our estimation showed no significant effect of the tort tax on the wage rate, the average wage is assumed to remain at the current level. Consequently, the tort tax impact on payroll is projected to be

$$\begin{aligned}w_{96} * (L_{NEW} - L_{96}) &= \$34,002 * 71,649 \\ &= \$2,436.2 \text{ million.}\end{aligned}$$

Using the Massachusetts statutory tax rate on labor income of 5.95%, this additional payroll is expected to generate additional tax revenue to the Commonwealth of Massachusetts of

$$\$2,436.2 \text{ million} * 5.95\% = \$144.9 \text{ million.}$$

Summary

Reducing the tort tax in Massachusetts from its current level to the U.S. average would lead to 71,649 additional jobs in the state, as well as more than \$9 billion in additional investment. The additional employment would result in nearly \$2.5 billion in new Massachusetts payroll, and contribute an additional \$144.9 million in state tax revenue.

Three other possible scenarios have been discussed in this report in addition to the scenario described above, (I) reduction of tort costs to the current U.S. average. They are: (II) reduction of tort costs by the estimated 26.6% reduction in filings; (III) reduction of tort costs to the 1970 Massachusetts level; and (IV) reduction of tort costs to the 1970 U.S. level. Table 17 provides the results of the four scenarios.

Appendix B: Massachusetts Tort Survey Results

Table 18 - Results of NFIB Tort Survey, 1996

Question	%	Yes %	No %	Undecided %
1a. Have you been named in a suit?		26	71	3
1b. How was the case decided?				
a. Plaintiff withdrew	7			
b. Plaintiff dropped me from suit	4			
c. Judge dismissed case	5			
d. Judgment in favor of plaintiff	12			
e. Judgment in my favor	20			
f. Out of court settlement	39			
g. Other	13			
1c. How much did it cost to defend yourself?				
a. Less than \$500	33			
b. \$500-\$999	5			
c. \$1000-\$2999	14			
d. \$3000-\$4999	7			
e. \$5000-\$9,999	19			
f. \$10,000-\$19,999	12			
g. \$20,000-\$50,000	7			
h. More than \$50,000	3			
2. What type of business do you run?				
a. Construction	15			
b. Manufacturing	15			
c. Transportation/Communication	1			
d. Wholesale	6			
e. Retail	19			
f. Agriculture	0			
g. Financial Services	4			
h. Services	15			
i. Professional Services	17			
j. Other	8			
3a. Have concerns about liability costs/exposure affected your business directly?		72	21	7
3b. If yes, in what way has your business been affected in the last five years?				
a. Discontinued or put off introducing new product or service	17			
b. Increased customer prices by at least five percent	27			
c. Put off or shelved plans to expand	18			
d. Put off replacing or hiring new employees	27			
e. Other	11			
4a. Does your business currently carry general liability insurance?		97	3	0
4b. If yes, how much is your premium?				
a. \$0-\$500	6			
b. \$500-\$1,000	16			
c. \$1,000-\$5000	43			
d. \$5,000-\$10,000	17			
e. \$10,000 or over	18			

Table 18 continued: Results of NFIB Tort Survey, 1996

Question	%	Yes %	No %	Undecided %
4c. Has this cost changed in the past five years?				
a. Decreased	6			
b. Stayed the same	28			
c. Increased by less than 25%	47			
d. Increased by 25%-50%	16			
e. Increased by 50%-100%	3			
f. More than doubled	0			
5a. Does your business currently carry product liability insurance?		44	50	6
5b. If yes, how much is your premium?				
a. \$0-\$500	9			
b. \$500-\$1,000	16			
c. \$1,000-\$5,000	45			
d. \$5,000-\$10,000	15			
e. \$10,000 or over	15			
5c. Has this cost changed in the past five years?				
a. Decreased	8			
b. Stayed the same	29			
c. Increased by less than 25%	46			
d. Increased by 25%-50%	14			
e. Increased by 50%-100%	3			
f. More than doubled	0			
6. Have you discontinued liability insurance coverage for your business in the past five years due to premium costs?		10	80	10
7. Do you think the Massachusetts law should be modified to eliminate "joint and several liability"?		91	4	5
8. Do you support a statutory products liability standard that requires a product to conform only to the state-of-the-art existing at the time the product was first sold?		76	9	15
9. Should the judge and jury in a liability suit be told of all compensation received by the plaintiff for other sources for the same injury?		92	4	4
10. Would you support sanctions for those filing frivolous actions?		96	2	2

Table 19 - Results of AIM Tort Survey, 1995

Question	All Firms %	Mfg. Firms %	Nonmfg. Firms %	Small Firms %	Medium Firms %	Large Firms %	1994 Survey %	
1. Has your company been a defendant in a product liability or tort suit in the past five years?								
Yes	34.5	33.8	42.1	30.0	21.4	65.4	na	
No	64.6	66.3	57.9	70.0	78.6	34.6	na	
2. Have liability concerns led you to discontinue products or services, or curtail product development activities?								
Yes	26.8	26.9	26.3	39.3	16.7	30.8	34.0	
No	73.2	73.0	73.7	60.7	83.3	69.2	66.0	
3. Estimate the percentage added to the cost of your products/services to cover liability insurance costs.								
Mean	5.5	5.7	4.7	9.2	3.0	1.2	7.9	
Median	2.0	1.6	3.0	3.0	2.0	1.0	2.0	
Mode	1.0	1.0	1.0	0.0	1.0	1.0	2.0	
4. How has this percentage changed over the past five years?								
Increased	35.1	31.7	50.0	33.3	24.2	52.6	47.0	
Decreased	1.4	1.7	0.0	0.0	3.0	0.0	12.0	
No Change	63.5	66.7	50.0	66.7	72.7	47.4	41.0	
5. Compared to other states, Massachusetts liability costs are:								
Much higher	6.6	8.3	0.0	5.9	3.8	11.8	2.0	
Higher	57.4	56.3	61.5	58.8	57.7	58.8	57.0	
Similar	36.1	35.4	38.5	35.3	38.5	29.4	35.4	
Lower	0.0	0.0	0.0	0.0	0.0	0.0	2.0	
Much lower	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
6. What liability reforms would be beneficial to your operation?								
a. A limit on awards for punitive and noneconomic damages.								
Important	73.5	74.2	70.6	na	na	na	62.0	
Somewhat important	21.7	21.2	23.5	na	na	na	26.0	
Not important	4.8	4.5	5.9	na	na	na	12.0	
b. A limit on frivolous lawsuits.								
Important	81.3	80.0	86.7	na	na	na	68.0	
Somewhat important	12.0	13.3	6.7	na	na	na	18.0	
Not important	6.7	6.7	6.7	na	na	na	15.0	
c. A reform of joint and several liability measures.								
Important	58.6	55.4	71.4	na	na	na	39.0	
Somewhat important	31.4	33.9	21.4	na	na	na	35.0	
Not important	10.0	10.7	7.1	na	na	na	26.0	
d. Allowance of state-of-the-art defense.								
Important	75.0	75.8	71.4	na	na	na	39.0	
Somewhat important	13.8	13.6	14.3	na	na	na	31.0	
Not important	11.3	10.6	14.3	na	na	na	30.0	

Table 19 continued: Results of AIM Tort Survey, 1995

e. The establishment of uniform national product liability standards to replace various state standards.								
Important	67.9	68.1	66.7	na	na	na	61.0	
Somewhat important	20.2	21.7	13.3	na	na	na	26.0	
Not important	11.9	10.1	20.0	na	na	na	14.0	
f. A limit on testimony of "expert" witnesses.								
Important	20.0	15.0	40.0	na	na	na	na	
Somewhat important	54.7	58.3	40.0	na	na	na	na	
Not important	25.3	26.7	20.0	na	na	na	na	
Sample size	136	97	39	45	57	31	na	

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