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## Product Liability and Regulation: Establishing the Appropriate Institutional Division of Labor

By W. KIP VISCUSI\*

Society has several institutional mechanisms that promote the control of product health and safety risks and compensation of the income losses that these risks generated. For risks traded in the market, economic forces at work foster each of these objectives. Social insurance programs, such as worker's compensation, promote the compensation objective directly and influence safety incentives through the merit-rating procedure. Two additional institutional mechanisms, which are the focus of this paper, are tort liability and regulation. Each of these institutions has assumed a more active role in the last two decades and has been the focus of considerable academic and policy debate.

What is most noteworthy about these discussions is that both policymakers and economic analysts generally view each institution as the only societal response to the risk. In the field of legal scholarship, this narrow approach has been termed the "tortcentric" perspective by Richard Stewart (1987a, b). Such a piecemeal approach may be necessary in some cases as an analytic convenience, but it neglects potentially important interactions of the two systems. In this paper I explore the nature of the institutional interactions in Section I and examine the ap-

propriate institutional design in Section II. The general conclusion is that risk regulation should play a dominant role in augmenting market incentives for risk reduction and that the scope of product liability remedies should be scaled back to reflect its subsidiary role.

### I. The Overlap Between Regulation and Product Liability Law

Both risk regulation policies and product liability law have as an objective the control of product safety risks. In the case of risk regulation, neither the general regulatory agencies nor the special mission agencies make any specific allowance for the role played by the tort liability system in promoting safety incentives.

To the extent that product liability lawsuits play a role, it is often the opposite of what is desirable. Prominent lawsuits against products often prompt additional regulation that will bolster the incentives being provided by the courts. In the case of asbestos, for example, the wave of asbestos litigation was followed by tightened OSHA regulation of asbestos, with an average cost per life saved of \$89 million. In addition, EPA has proposed asbestos regulation with a cost of \$104 million per life saved. Rather than substituting for regulation, product liability lawsuits may generate additional regulation.

Compliance with government regulation likewise does not ensure that the product will not be the subject of product liability suits. Regulatory compliance is admissible as a defense, but is not conclusive. For example, the National Traffic and Motor Vehicle Safety Act explicitly states that compliance "does not exempt any person from liability under common law." Regulatory compliance

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is not entirely irrelevant, as companies may introduce evidence of compliance to show that the product has a favorable risk-utility balance and as a consequence should not be considered defective.

Although regulatory compliance at best provides weak support for the product manufacturer's defense, regulatory violations have a much more influential impact in demonstrating manufacturer negligence. Some courts have concluded that such violations constitute evidence of negligence per se. One such instance involved an oral contraceptive manufacturer's failure to include the patient package insert mandated by the FDA. Moreover, it is generally accepted that courts cannot set safety standards lower than those of a legislative body, which all but ensures that product liability and regulatory enforcement sanctions will both be operative for firms that violate regulations. In cases of noncompliance, product liability costs augment the inadequate incentives for compliance created by the regulatory enforcement mechanism. In this class of instances, the institutional mechanisms complement one another.

The extent of the overlap is suggested by data on closed product liability claims presented in Table 1. These breakdowns were generated using Insurance Services Office data on over 10,000 product liability claims closed in 1977, described more fully in my papers (1986, 1988). The first two columns of data are the summary columns pertaining to whether or not the claimant alleged that there were regulatory violations. The final three columns pertain to the type of violations that were alleged: violation of Consumer Product Safety Act (CPSC) standards, violation of Occupational Safety and Health Act (OSHA) standards, or violations of other standards (for example, state, federal, or municipal regulations).

Overall, regulatory violations are cited by claimants in 19 percent of product claims and 28 percent of job-related product liability claims. The expanded scope of government regulations over the past decade no doubt has increased the institutional overlap, which was already substantial a decade ago. Just under half of the violations are for OSHA and CPSC standards, with the mix

TABLE 1—THE EFFECT OF REGULATORY VIOLATIONS ON THE DISPOSITION OF CLAIMS

Variable Category	Violations: Fraction in the Category				
	None	Any	CPSC	OSHA	Other
<b>Product Injuries</b>					
Claims	.81	.19	.06	.02	.11
Successful Claims	.76	.81	.80	.83	.82
Claims Dropped	.20	.13	.13	.13	.13
Settled out of Court	.77	.83	.81	.85	.84
Claimant Wins Court Case	.41	.33	.29	.19	.36
<b>On-the-Job Injuries</b>					
Claims	.72	.28	.04	.08	.16
Successful Claims	.60	.72	.66	.71	.74
Claims Dropped	.28	.15	.23	.15	.13
Settled out of Court	.65	.75	.74	.77	.75
Claimant Wins Court Case	.25	.40	0	.40	.43

for these two institutions following the expected patterns for job-related and off-the-job injuries.

Regulatory violations enhance the chance of a successful claim, as one might expect given the legal framework that is applicable. For off-the-job injuries, claims with alleged regulatory violations have a 5 percent greater chance of receiving some positive awards and for job-related claims there is a 12 percent differential. This greater effect for job-related claims may be due in part to the greater marginal improvement that is possible for a claims group with a lower rate of success. The success rate for job-related product claims is below that for off-the-job injury since third-party suits are often inappropriate, and are simply used as a means to evade the requirement that workers' compensation be the exclusive remedy against one's employer.

The influence of regulatory violations on the disposition of claims is illustrated by the data in Table 1, as well as by the regression results in Table 2. In each case, the dependent variable was regressed on a constant, the size of the bodily injury loss, and either a dummy variable for any regulatory violation or a series of three dummy variables for whether the violation was for CPSC standards, OSHA standards, or standards of some other governmental body. Since the unit of observation is the individual claim, the dependent variable is a 0-1 dummy vari-

TABLE 2—REGRESSION ESTIMATES OF THE EFFECT OF REGULATORY VIOLATIONS

Dependent Variable	Violations: Coefficients			
	Any	CPSC	OSHA	Other
<b>Product Injuries</b>				
Drop Claim	-0.521 <sup>a</sup> (0.078)	-0.268 <sup>a</sup> (0.102)	-0.248 (0.171)	-0.314 <sup>a</sup> (0.110)
Settle Claim	0.370 <sup>a</sup> (0.070)	0.185 <sup>a</sup> (0.072)	0.135 (0.150)	0.262 <sup>a</sup> (0.099)
Out-of-Court Settlement	0.224 <sup>a</sup> (0.033)	0.304 <sup>a</sup> (0.045)	-0.134 <sup>a</sup> (0.069)	0.070 (0.047)
Claimant Wins Court Case	0.089 (0.227)	0.298 (0.291)	-0.156 (0.490)	-0.060 (0.323)
<b>On-the-Job-Injuries</b>				
Drop Claim	-0.803 <sup>a</sup> (0.157)	-0.175 (0.229)	-0.382 (0.214)	-0.646 <sup>a</sup> (0.235)
Settle Claim	0.502 <sup>a</sup> (0.133)	0.248 (0.199)	0.362 <sup>a</sup> (0.186)	0.161 (0.190)
Out-of-Court Settlement	0.219 <sup>a</sup> (0.100)	0.198 (0.145)	0.023 (0.135)	0.131 (0.142)
Claimant Wins Court Case	0.810 <sup>a</sup> (0.345)	-1.516 <sup>a</sup> (0.660)	0.356 (0.463)	1.375 <sup>a</sup> (0.428)

Note: Standard errors are shown in parentheses.

<sup>a</sup>Coefficients that are statistically significant at the 5 percent level, one-tailed test.

able in all but one case, and logit estimation is employed. Standard OLS methods are used for the one continuous variable pertaining to the size of the out-of-court settlement (i.e., the natural logarithm of the bodily injury payment).

The pattern of results in Tables 1 and 2 is quite similar. Claimants will be more reluctant to drop a claim if their probability of success in court is enhanced by a regulatory violation. For product injuries, the drop probability is .07 lower if some regulatory violation has been alleged, and all but the OSHA regulatory violation variable is statistically significant (5 percent level) with the expected sign. For on-the-job injuries, the drop probability difference is .13 when there are regulatory violations, and all but the CPSC regulatory violation variable are negative and statistically significant. The weakness of the OSHA variable for off-the-job injuries and the CPSC variable for job-related injuries is expected given the emphasis of these policies.

The effect of regulatory violations on out-of-court settlements depends on whether it boosts the amounts defendants offer by more than the increase in the claimant's reservation settlement amount. With symmetric payoffs, there will be no effect. Payoff asym-

metry may be introduced if firms will face additional lawsuits involving the product if there is a successful court case against it. Firms will also have relatively higher payoff levels to the extent that claimant risk aversion reduces the certainty equivalent of an expected court award, as in my earlier paper (1988).

The empirical results suggest that regulatory violations are consequential and that they have a relatively greater effect on the willingness of firms to settle such cases than on claimant reservation prices. Out-of-court settlements are 6 percent greater for product claims and 10 percent greater for on-the-job injuries when there are regulatory violations. All of the eight regulatory coefficients have a positive effect on the probability of an out-of-court settlement, with five of them being statistically significant.

Regulatory violations similarly should have a positive effect on the level of out-of-court settlements since settlements should be a weighted average of firms' offer amounts and the reservation settlement level, each of which will be increased by regulatory violations. The aggregative regulatory violation dummy variables perform as expected, but the other more refined variables perform less strongly and in one case, the OSHA variable in the product injury equation, has an unexpected sign.

The final empirical issue—the effect on the probability that a claimant will win a court case—is more difficult to assess since only 4 percent of the claims in the sample reached a court verdict. The only statistically significant effects are the expected positive effects of both the aggregative violation variable and the “other violation” variable and the negative effect of the CPSC variable on claimant success for on-the-job injuries. The unexpected CPSC effect may reflect some omitted aspect of this narrowly defined case group.

Overall, regulatory violations do have a significant effect on the outcome of product liability claims. The direction of the effect follows the pattern one expects for economic variables that enhance the prospects of a claim, with the results following the litigation patterns described in my papers (1986,

1988). Regulatory violations enhance the prospect of a claim's success and appear to affect the firm's expected losses more than the claimant's expected gains. Regulatory violations reduce the probability that a claim will be dropped, increase the likelihood of an out-of-court settlement, increase the size of such settlements, and enhance the claimant's prospects in court actions.

## II. Restructuring the Institutional Interactions

To better promote efficient levels of risk and insurance, I propose the following modification of the tort liability structure. Firms should be exempted from potential liability in court actions if they can demonstrate either compliance with a government regulation that leads to an efficient degree of safety, or the use of a hazard warnings program that leads the market to promote an efficient level of risk. More generally, the risk-utility test applied in product liability tests could be amended to exempt all products for which manufacturers can demonstrate that the risk level is efficient.

Consider first the objective of providing an efficient level of product safety. For products traded in the market, economic forces will be the principal force generating safety incentives for perceived risks. Merit rating for social insurance will also be instrumental for products used in the workplace, as my recent research with Michael Moore (1988) indicates that occupational fatalities would be about 45 percent greater in the absence of workers' compensation.

If these incentives are not adequate, risk-regulation programs that in effect provide a minimum safety constraint are well-suited to the task since these policy mechanisms are targeted explicitly at firms' safety decisions. Most government regulations are designed to promote a level of safety that is more stringent than the economically efficient risk level so that regulatory compliance is often an indication of adequate product safety levels.

Regulatory constraints do not provide any incentives once compliance has been achieved. In terms of institutional overlap, this on-off character of regulatory incentives is one advantage over injury taxes and pollu-

tion tax approaches, since there is no combined effect of regulatory incentives and product liability incentives once compliance at an efficient safety level is reached. For firms out of compliance with the regulation, which is often the case, one can view product liability awards against noncomplying firms as providing an additional compliance incentive. Under the current legal framework, once compliance has been achieved with an adequate standard, firms will face the prospect of additional tort liability. These potential costs will create inefficient incentives for safety, leading firms to produce safety above the level of the regulatory standard.

One cannot rely on tort liability in lieu of regulation since product liability incentives are ill-suited to the task. Not all injured parties file claims, and court awards are far below what is required to promote efficient safety incentives. In the case of fatalities, the courts' valuation of the appropriate compensation for wrongful death is more than an order of magnitude below the value of life that is appropriate from the standpoint of injury prevention. Society should rely on regulation rather than tort liability to address any market failures.

The other policy objective is that of efficient insurance of accident victims. The emergence of the strict liability doctrine was due in large part to a belief by some legal scholars that firms should act as insurers of product losses by incorporating the cost of insurance in the product price and spreading these costs among all consumers.

This approach, while not without superficial appeal, has several shortcomings. First, the rationale was developed before the advent of medicare and medicaid, the increase in workers' compensation benefit levels, and the extensive health and life insurance coverage of the American work force. Since there is generally no offset from product liability awards for social and private insurance coverage, a greater danger than inadequate insurance may be that these awards will lead to overinsurance and an efficiency loss. Second, it is generally inefficient to insure each risk separately on a product-by-product basis. This basic principle of insurance

coverage has been noted since the classic paper by Robert Eisner and Robert Strotz (1961), who observed that consumer's purchase of flight insurance is irrational. Third, the high transactions costs associated with litigation comprise a much greater percentage of compensation than do standard insurance loading costs so that the courts should be viewed as a very inefficient insurer. Fourth, shifting all of the cost of product risks to the manufacturers reduces the consumer's incentive to take care, which may be particularly important when it is property damage rather than one's life that is at risk. Finally, when there are important problems of ascertaining causality, as in the case of toxic hazards, court awards that do not scale the awards based on the product's probabilistic contribution to the adverse outcome will not generate the correct incentives.

Some of these economic issues have been raised with respect to other proposals to deal with the product liability crises. Proposals have been made to cap awards, to abolish strict liability, and to replace the entire tort liability system with an administrative compensation mechanism. My proposal is more limited in that it is only intended to reduce the overlap between regulation and product liability once firms have met an efficient safety standard. The impetus for this proposal is not generated by a desire to reduce the product liability burden but stems from an attempt to establish a coordinated strategy that recognizes the role of the multiple institutions at work. The presence of multiple institutions affecting safety, not just one,

defines the nature of firm's economic environment and should begin to be recognized by economists and legal scholars.

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