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# ***John R. Commons Lecture***

## **Lessons from Workers' Compensation for Tort Liability Reform**

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In recent years, there have been a number of major changes in workers' compensation benefit structures that provide natural experiments to examine this influence. Two such experiments occurred in Kentucky and Michigan. In July, 1980, Kentucky increased its maximum benefits amount from \$131 to \$217 a week. Similarly, Michigan increased its maximum benefit amounts in January 1982 from \$181 to \$307 per week. Analysis of these natural experiments makes it possible to distinguish the specific effects of workers' compensation and individual wage rates. In a study with Bruce Meyer and David Durbin, we found that there was considerable responsiveness of spell durations to the maximum benefit amounts.<sup>6</sup> Depending on the state and the empirical procedure used, the elasticity of the spell duration with respect to the maximum benefit amount ranges from .21 to .85. These results suggest that there is a very strong moral hazard effect of workers' compensation. Moreover, estimation of any costs of workers' compensation will be substantially lower than the costs that will ultimately be incurred, unless the changes in worker behavior are taken into account.

### Lesson 3: Liability benefits are valued by those who receive them. As a result, premiums greatly overstate the net costs to the firm.

This principle is not particularly subtle, but its implications are usually ignored. In the workers' compensation context, this link implies that workers will be willing to accept a lower wage to work on a hazardous job for which they will be covered by workers' compensation. Similarly, the provision of product liability for potentially hazardous products will increase the willingness of consumers to pay for the goods, since in effect they are purchasing both a product and an insurance policy. This notion was at least partially understood by some of the early proponents of strict liability, who viewed strict liability as serving a cost-spreading function whereby the cost of insurance would be borne by the product purchasers. This mechanism provides product users with a valued product attribute, namely insurance, for which they may be willing to pay a substantial sum.

In the case of workers' compensation, one can explicitly estimate the wage offset that has occurred as a result of the presence of workers' compensation benefits. Not only are workers willing to give up wages in return for higher workers' compensation benefits, but the extent of this wage reduction exceeds the total premiums paid by firms. As a result, the workers' compensation system more than pays for itself through this wage offset.<sup>7</sup>

Table 1

Workers' Compensation Premiums, Benefits, and Wage Offsets

Year	Total Premiums (\$ billions)	Total Payments (\$ billions)	Wage Reduction (\$ billions)
1976	10.9	7.6	20.3
1977	14.0	9.8	24.4
1978	16.6	11.6	26.8
1979	20.2	14.1	30.1
1980	22.0	15.4	30.1
1981	22.9	16.0	28.4
1982	22.5	15.8	25.3
1983	22.9	16.0	22.8

Source: Moore and Viscusi (1990). Calculations based on a wage reduction rate = .12 in 1976, decreases linearly by .008/year.

The extent of the wage offset is illustrated by the statistics in Table 1. Total workers' compensation premium levels appear in the first column of the table. These amounts exceed the benefits paid, which are in the second column. The final column of statistics gives the overall wage offset that has been estimated, based on the responsiveness of worker wages to the changes in the benefit amount. The extent of the wage offset is quite striking, as it is greater than the payment amount in every year. Moreover, the wage offset exceeds the total premium amount, except for 1983. The overall pattern is that as the benefit levels have risen, the rate of wage offset in response to workers' compensation has diminished. The extent of the wage reduction peaked in the 1979-1980 period.

The underlying economic rationale for this pattern of effects is based on individual valuation of insurance. Workers initially are willing to accept an offset that exceeds the expected benefits that they will reap since they value the insurance function of workers' compensation. For much the same reason, risk-averse consumers who purchase life insurance, home insurance, or automobile insurance are willing to pay more for this insurance than the expected amount that they will receive from this coverage. Because insurance provides income support when it is needed, individuals are by no means irrational in making these purchases.

It is unlikely that firms fully understand this wage offset mechanism, particularly since economists have documented it only recently. Firms, however, have not necessarily been irrational in opposing recent benefit increases. Workers' compensation more than pays for itself overall, but the recent

additions to benefits have not paid for themselves. The earlier inadequacies in benefits have been eliminated, and we are now reaching the point where the value that workers place on additional increases in benefits no longer outweighs their cost.

**Lesson 4: The optimal level of workers' compensation benefits provides for less than full earnings replacement and can be assessed based on an explicit empirical test.**

A long-standing issue in workers' compensation has been the extent to which benefit levels are inadequate. It has long been observed, for example, that workers' compensation provides for less than full earnings replacement for most workers, even after tax considerations are taken into account.

Although this replacement rate does not provide for complete insurance, less than full insurance is not optimal from an economic standpoint. First, there is the aforementioned problem of moral hazard. If higher benefit levels induce a problem of moral hazard, the optimal benefit level will be below the full replacement amount. Second, and more fundamental, even from the standpoint of worker preferences, the desired insurance amount will not provide for full earnings replacement. In the usual situation of property losses, full insurance is desirable. However, if an injury reduces the degree to which one can derive welfare benefits from expenditures, then the optimal replacement rate will be less than 1.0.

To assess these issues, I have relied on two sources of evidence. First, one can use information based on the workers' compensation tradeoff rate to assess whether benefit levels are too high or too low from the standpoint of insuring workers against income risks. Thus, we can tell from these tradeoffs whether we are in a situation of overinsurance or underinsurance, but we cannot tell from these tradeoff rates what the optimal level of insurance is.

Table 2 (page 9) summarizes the studies pertaining to this issue. These results are based on three different sets of survey data. In each case, I present the wage offset from \$1 of additional workers' compensation benefits that should be expected if insurance levels were optimal and insurance were available on an actuarially fair basis. The next row of the table provides the reference point tradeoffs, taking into account the fact that there are administrative costs associated with insurance, leading to insurance loading.

If workers are willing to accept more of a wage cut in response to workers' compensation benefits than these tradeoff

**Table 2**

**Summary of Wage-Workers' Compensation Tradeoff Results<sup>a</sup>**

	Quality of Employment Survey	University of Michigan Panel Study of Income Dynamics	Viscusi-O'Connor Chemical Worker Survey
Employment year	1976	1981	1982
Actuarially fair reference point tradeoff	-0.04	-0.05	-0.09
Reference point tradeoff with insurance loading	-0.05	-0.06	-0.11
Observed wage-workers' compensation tradeoff	-0.12	-0.08	-0.15
Observed wage-workers' compensation tradeoff/actuarially fair tradeoff	3.0	1.6	1.7
Observed wage-workers' compensation tradeoff/loading tradeoff	2.4	1.3	1.4
Implications for the level of social insurance	Inadequate	Inadequate, but Closer to Optimal	Inadequate, but Closer to Optimal

<sup>a</sup>These results are based on labor market estimates reported in Viscusi and Moore (1987) for the 1977 QES, Moore and Viscusi (1990) for the 1982 PSID, and Viscusi and Evans (1990) for the chemical worker survey.

levels, then it indicates a situation of underinsurance. Similarly, if the tradeoff rate is less than the reference point tradeoff rates, then we are in a situation of overinsurance. The results in the next row of the table for the observed tradeoff levels indicate that for all three sets of data the tradeoff rates indicate a situation of underinsurance.

The gap from the optimal insurance is, however, narrowing, based on the ratios of the observed tradeoff to the reference tradeoff levels presented in the last two rows of statistics in the table. From 1976 to the early 1980's we moved closer to a situation where the rate of tradeoff that was observed was more in line with what one would expect if insurance were being provided adequately. Since benefit levels increased

over this period, this result is consistent with what we would expect.

A second and more precise test that one can make is to estimate worker utility functions and calculate explicitly the optimal replacement rate under workers' compensation. I have done this in a recent paper with William Evans using a 1982 sample of chemical workers.<sup>8</sup> Our main results were that the optimal earnings replacement rate is .85 if we use the actuarially fair insurance as the reference point and .64 based on current loading rates. Since the primary earnings replacement rate specified in workers' compensation statutes is .67, the basic benefit formula is not too far out of line with the ideal social insurance amount.

These conclusions no doubt will be refined in future studies. Their major message, however, is twofold. First, the full insurance reference point for workers' compensation benefits is not appropriate. After an injury, the appropriate level of insurance even from the standpoint of the individual worker will provide for less than full insurance. Second, the extent to which there should be a departure from full insurance is not a matter of conjecture but can be determined quite explicitly using an empirical test that reflects the preferences of the workers themselves.

### **Lesson 5: Administrative compensation systems can be efficient in providing compensation with low administrative costs.**

Roughly 80¢ of every dollar of workers' compensation premiums reaches individuals as benefits. Very little of the premium is absorbed by overhead and similar expenditures. Although only one-fifth of the premium dollar goes toward administrative expenses, the worker often pays additional fees to a lawyer to represent the claim before a workers' compensation board or similar administrative body. Nevertheless, the system overall is highly effective in compensating victims.

Observers who have been dismayed by the high fraction of tort liability awards devoted to litigation expenses, particularly for toxic tort claims, have viewed administrative compensation mechanisms as an attractive alternative because of the lower administrative costs.

The relative efficacy of workers' compensation in transferring social insurance dollars to injured parties stems largely from the program's acute injury orientation. As workers' compensation has begun to deal increasingly with diseases, for which causality is much more difficult to ascertain, the same kinds of problems that have led critics of product liability to urge adoption of a workers' compensation-type system

for product-related diseases have also hindered the efficacy of workers' compensation. Litigation costs involving disease are high, and few cases of occupational disease are covered by the program. Indeed, the workers' compensation system has remained relatively efficient administratively largely because the lion's share of the diseases caused by job exposures have been excluded from coverage. In contrast, the majority of all product liability cases in Federal courts now involve asbestos and similar diseases for which the litigation costs are likely to be particularly high. Such cases would also pose severe problems for a workers' compensation-style approach as well. Indeed, the product liability compensation funds for asbestos and Dalkon Shield are performing much more poorly than workers' compensation.

The general applicability of the workers' compensation experience to the product market is also not direct even for accidents. There are, of course, some parallels. In each case there is a market exchange involving a firm and an individual exposed to the risk. There also may be a price or wage adjustment to account for the insurance being provided. There is, however, one critical difference between the situations. Firms exert a substantial degree of control over the actions of workers. They assign workers to jobs, control the work environment, specify the job tasks, assign the co-workers whose actions are likely to affect the worker, and generally monitor worker actions as well as all other activities relating to safety. Firms also can monitor whether most "job" injuries occurred on the job.

The producers of products do not have this control function. They do not supervise the product in use, and they do not even know how the product will be used. They are unaware of the specific attributes of the individual who will be using the product or whether it will be used in conjunction with some other product. In many instances, it is not even known whether an individual was using a particular product at the time of an accident. An enterprising homeowner who slipped on a ladder doing weekend painting may complain that the ladder collapsed under him, but no one will know whether the ladder did in fact collapse or whether the injury was even incurred while the ladder was in use.

Because of these difficult monitoring problems, ultimately any product injury administrative compensation scheme of a scale comparable to workers' compensation would not be a traditional liability system in which there is an effort to establish a financial link of the benefits paid to the firms producing the particular products. Instead, it would more closely resemble a social insurance effort because of the difficulty of ascertaining causality.

## Lesson 6: Health risks and their associated diseases pose major difficulties irrespective of the liability mechanism.

Compensation of all job-related cancers of asbestos workers would cost over 10 times as much as compensating only those cases of cancer specifically attributable to asbestos exposures—if they could be identified. Even in a program with as broad a sweep as workers' compensation, health risks pose major problems because of the diverse sources of causality, which may not be limited to the job environment. Unless we devote the resources to ascertaining the extent of causality, as does the tort liability system, we must ultimately compensate all diseases that are possibly job-related. The only mechanism that can address health risks successfully will be a broadly based social insurance effort, but this can be handled outside the context of tort liability regimes. Moreover, its costs will be substantial and its safety incentives will be negligible.

## The Interaction Between Product Liability and Workers' Compensation

Workers' compensation is relevant to assessments of tort liability not only because of the lessons it provides but also because of the systems' interactions. On page 13, Table 3's summary of the disposition of product liability claims for injuries arising out of the job and for consumer products indicates the similarities and differences in the two classes of claims. More than one out of every eight product liability claims in the sample is for a job-related injury. The fraction may be even greater today since the data pertain to claims closed in 1977. Almost one-fourth of all job-related claims are dropped without ever going to court or receiving an out-of-court settlement. Of the claims that are not dropped, the great majority (89 percent) are settled out of court. The small portion of litigated claims consists largely of cases in which the plaintiff loses (69 percent), as most of the successful claims are resolved at the settlement stage.

This pattern of claims disposition is somewhat different than of all products. The principal characterization of the differences is that job-related claims are more likely to be dropped and more likely to be litigated, both of which are expected effects since the stakes involved in job-related claims are much greater. In terms of claims disposition, the drop rate for job-related claims is 6 percent higher than for other products claims, and the settlement rate is 10 percent lower. Whereas

Table 3

### Distribution of Litigation Characteristics

	All Products Claims	Claims for Job Injuries
Claim dropped (fraction)	.19	.24
Claim settled out of court (fraction)	.77	.68
Claim settled, conditional on not being dropped (fraction)	.95	.89
Claim goes to court verdict (fraction)	.04	.08
Plaintiff success rate in court (fraction)	.37	.31
Average bodily injury loss (\$)	13,723	51,800
Average bodily injury payment (\$)	9,995	25,645

Source: Based on calculations by the author using the Insurance Services Office (1977), *Product Liability Closed Claims Survey*. For further discussion of the sample and statistical procedures, see Viscusi (1986, 1989, 1991b).

4 percent of other products claims are litigated, 8 percent of job-related claims go to a court verdict.

The dollar magnitudes involved are impressive. The average bodily injury loss for job-related claims is \$51,800, and the average bodily injury payment including cases with zero award is \$25,645 (each of these figures is in 1977 dollars). Each of these amounts is triple the value for products claims in general. The loss figures represent the reports by the insurance companies of the combined total medical expenses, wage losses, and other financial losses associated with the claim. To translate the dollar amounts into current dollars, one should roughly double these loss and payment amounts.

The tendency for job-related claims to be the subject of a product liability suit more often than other products claims is not unexpected given the factors that affect the loss levels of the claims that are filed. The general presumption in the law is that for job-related claims, workers' compensation is the exclusive remedy for seeking redress from one's employer. Third-party product liability suits will consequently exclude a group of potential defendants (employers). The prospects of plaintiff success will consequently be lower and the litigation costs will be higher than for product liability claims in general. Victims of job injuries will be less likely to pursue

job-related claims than comparable product claims since the inability to sue one's employer reduces the likelihood that the claim will be successful. The substantial costs involved in subrogation actions also will tend to limit these suits to the larger claims, and workers may be reluctant to press product liability claims unless they can receive more than their workers' compensation benefits.

There is substantial interdependence of the various legal actions arising out of job injuries. Almost one-fourth of all job-related product liability claims are the result of subrogation actions in which employers or insurers are seeking reimbursement for their payment of workers' losses.<sup>9</sup> The dollar amount of the liens against the insured average just under \$10,000. Since only 23 percent of all claims are the subject of subrogation actions, this average includes three-fourths of the observations in which the value of liens is zero. The resulting average lien figure is in keeping with the sample's average loss levels.

The defendant counterpart of the subrogation variable is indemnification actions. Whereas the subrogation variable captures claims in which the insurer who is the defendant in the case is the target of a claim by an employer or other insurer, indemnification pertains to the situation in which the insurer who is the defendant in this claims case is seeking indemnification, contribution, or subrogation from another party. Almost one-fourth of plaintiffs' actions are subrogation actions and almost an equal number of the insurance companies initiated indemnification or subrogation actions of their own. Similarly, in 24 percent of the cases there are cross complaints involved. The extent of overlapping and multiple lawsuits for job-related product liability claims is quite substantial.

Less than half of the claims by workers are subject to sole remedy rules whereby the state has adopted the sole remedy rule and the employee most likely would seek compensation from workers' compensation or the employer for that type of claim. As expected, a higher percentage (69 percent) of cases that were dropped were covered by the sole remedy rule.

The extent of the overlaps among these workers' compensation variables and the relationship among the five workers' compensation variables are summarized by the cross tabulations appearing in Table 4 (page 15). Each row of the table gives the sample group for which the conditional value was obtained—for example, cases involving a subrogation action. For each entry, information is given in the columns of the table on the conditional fraction of other workers' compensation measures that are pertinent. For example, for 69 percent of the claims involving a subrogation action, there is an

**Table 4**

Overlaps of the Workers' Compensation Doctrine Variables

Conditional Group	Mean Value of Variable for Group*				
	Subrogation Actions	Non-zero Value of WC lien	Indemnification Action	Cross Complaints	Sole Remedy Rule
Full Sample	0.23	0.57	0.33	0.24	0.46
Subrogation actions	1.00	0.87	0.69	0.15	0.48
Non-zero value of workers' compensation lien	0.35	1.00	0.44	0.26	0.50
Indemnification action	0.47	0.77	1.00	0.34	0.48
Cross complaints	0.14	0.63	0.47	1.00	0.56
Sole remedy rule	0.24	0.62	0.35	0.29	1.00

\*Mean values correspond to the fraction of the values of the variable that equal 1.

indemnification action as well. Since the workers' compensation lien measure is on a continuous scale rather than being dichotomous, for the sake of comparability a new variable (non-zero value of workers' compensation lien) has been created that takes on a value of 1 if there is a lien and 0 otherwise.

All the variables overlap, but there are no perfect correlations. Some of the most prominent linkages are the following. About half of all claims in which the defendant is seeking indemnification, contribution, or subrogation from some other party are also situations in which the defendant is a target of other subrogated claims by an employer or other insurer. The reverse linkage is even stronger, as 69 percent of the cases in which the defendant is the target of subrogation claims by an employer or insurer also involve an indemnification suit by the defendant against some other party. In some, but not all cases, these suits involve the same pair of parties, as the frequency of cross complaints reaches a high value of 34 percent in the case of claims involving indemnification actions. The presence of a subrogation action by the workers' compensation carrier or employer greatly increases the likelihood that there is a reported value of the workers' compensation lien against the insured since the workers' com-

pensation lien variable represents the magnitude of the subrogation action when this dollar value is known. The relative variance of the data in the last column of Table 4 indicates that the applicability of a sole remedy rule has little effect on the presence of other various interactions between workers' compensation and tort liability. The primary interactions appear to be among cross complaints, indemnification actions, subrogation actions, and the scaled variant of subrogation actions, which is workers' compensation liens.

These institutional overlaps are of substantial consequence for legal policy reform. Some observers have recommended the abolition of subrogation actions for job-related injuries.<sup>10</sup> Policy proposals such as this do not represent minor tinkering with arcane legal doctrines but instead would engender a fundamental transformation in the functioning of the tort liability and workers' compensation system.

A frequently cited basis for abolishing subrogation actions and other interactions of this type is that there are substantial litigation costs involved in such measures. What these reform proposals neglect, however, is that legal activities of this type may have a potential deterrence role as well. In particular, to the extent that their objective is to better link the financial costs of an accident with the party responsible for the risk, they will consequently generate incentives for safety. Given the extremely powerful influence on fatality rates of workers' compensation incentives mechanisms, and the relatively large scale overall of subrogation and indemnification actions, there could potentially be a significant loss in deterrence if such measures were abolished.

## Conclusion

For the increasing number of situations in which a product liability claim is filed for job-related injuries, both workers' compensation and tort liability have important roles to play. These social institutions do not operate in parallel, but instead have overlapping responsibilities and effects.

The extent of the overlap suggests that there is a dual compensation mechanism for which the coordination problems are fundamental. Roughly one-fourth of all claims are the result of subrogation actions against the insured. In almost an equal number of cases the insurer defending the case has initiated an action against the employer or some third-party insurer. In many other cases, workers have received compensation through private or governmental sources.

Any discussion of tort liability reform for job-related accidents must take into account the role of workers' compensation. Moreover, since job-related claims are an important

component of the total product liability burden, both in terms of the number of claims and their magnitude, any comprehensive program for tort liability reform must examine the workers' compensation-product liability linkage.

In addition, the performance of workers' compensation highlights several key lessons for tort liability more generally. Safety incentives matter, and the expected benefits provided to the injured are valued by those exposed to the risk and will lead to at least a partial financial offset. Although compensation structures modeled on workers' compensation will not solve the problems posed by toxic torts, the lessons learned from workers' compensation may better inform participants in the tort liability reform debate about the economic ramifications of liability systems.

## Notes

1. See Moore and Viscusi (1989, 1990).
2. This estimate is based on Viscusi and Moore (1989) and on the National Institute for Occupational Safety and Health that 6,901 workers were killed every year in job-related accidents over the 1980-1984 period.
3. Evidence of the impact of OSHA is based on Viscusi (1986), pp. 567-580.
4. In 1987, for example, workers' compensation premiums were \$23.4 billion. See the Insurance Information Institute (1988).
5. *Chicago Tribune*, August 7, 1988, Section 2, pp. 1-2.
6. See B. D. Meyer, W. K. Viscusi, and D. L. Durbin (1990).
7. See Moore and Viscusi (1990).
8. W. K. Viscusi and W. Evans (1990).
9. See Weiler (1986), Abraham (1986), and Keeton (1971) for discussions of subrogation provisions.
10. See Weiler (1986).

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