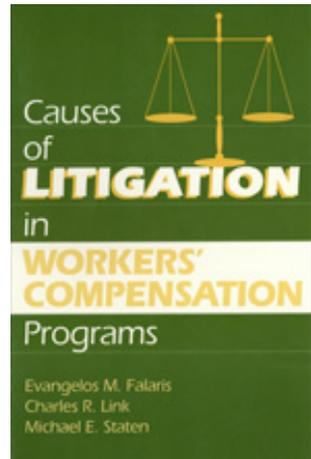

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Workers' Compensation and Market Efficiency

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Causes of Litigation in Workers' Compensation Programs

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Workers' Compensation and Market Efficiency

At the beginning of the twentieth century, industrial accidents were frequent.¹ In the days before public assistance programs provided a social safety net, injured workers suffered prolonged and severe income interruptions. Although the tort system was available for recovering damages from employers, workers found that, in many cases, employer negligence, necessary for establishing employer liability for the costs of an injury, was difficult to prove in court. Jury awards in favor of injured plaintiffs were haphazard, varied substantially in size, and almost always involved delays of many months between the time of injury and receipt of payment (Berkowitz and Berkowitz 1985).

In response to these conditions, workers' compensation laws were enacted in the majority of state legislatures between 1911 and 1920. Workers' compensation was conceived as a social insurance program that would preempt reliance on the legal tort system for handling disputes over job-related injuries. Reformers fashioned a "no-fault" system of compensation to injured workers that assigned strict liability to employers for the costs of job-related injuries. Strict liability is where there is no requirement for proof of negligence to establish liability. Through this approach, benefits were provided to all injured workers, without requiring a determination of fault. However, all workers were required to accept workers' compensation benefits as their exclusive remedy. Thus, a *quid pro quo* emerged. Workers received the guarantee of certain and timely compensation (in the form of income replacement plus medical costs) for their injuries on the job, without having to demonstrate employer negligence. In return, the statutes limited an employer's liability for injury costs to maximum amounts of compensation, removing the threat of larger jury awards. In principle, legal disputes over culpability were legislated out of the industrial accident arena.

However, time has proved the reformers too optimistic in the hope that the workers' compensation program would prove to be largely

self-administering. To some degree, litigation has been part of the system since its inception. To qualify for workers' compensation, an injury must be shown to be job related, thereby opening the door to dispute. Moreover, many jurisdictions link the payment of indemnity benefits to an assessment of physical impairment, which may also be disputed. According to estimates from the National Council on Compensation Insurance (NCCI), 23 percent of all 1984 claims for permanent partial disability were represented by an attorney. However, litigation rates varied widely across states. For example, the 1984 NCCI report noted that 47 percent of permanent partial claimants in Illinois hired an attorney but that only 9 percent of such claimants were represented by an attorney in Wisconsin (NCCI 1984).

In some states, the rate and, more importantly, the cost of contested cases grew dramatically between 1970 and 1990. In terms of absolute dollars, California's experience is by far the worst. In 1990, 45 percent of all workers' compensation indemnity cases in California were litigated, and 62 percent of these litigated cases involved disputes over the existence and extent of permanent disability (California Workers' Compensation Institute 1991, p. 2). More importantly, the California Workers' Compensation Institute estimates that the annual cost of workers' compensation *litigation* in that state increased from \$240 million in 1981 to \$1.5 billion in 1990. In contrast, the number of injuries resulting in lost time of one day or more increased by only 15 percent during the same period.

Standards for Measuring the Impact of Litigation on Program Effectiveness

The reformers who drafted the initial workers' compensation statutes early in the twentieth century were primarily concerned with income maintenance and fairness. The imposition of strict liability reflects the overwhelming judgment that a compensation system relying on the courts for awarding benefits would not accomplish these goals. Thus, it is reasonable to question the extent to which litigation *within* the workers' compensation system has compromised the program's effectiveness.

To clarify analysis of the “litigation problem” it is necessary first to define precisely the criteria used to evaluate the effectiveness of a workers’ compensation program. The original concerns of reformers regarding benefit adequacy and equity have persisted over time. Congress formed the National Commission on State Workmen’s Compensation Laws (1972) to evaluate the degree of income replacement provided by the network of state workers’ compensation laws. In developing a lengthy list of recommendations for state legislatures, the National Commission defined and applied adequacy and equity standards for evaluating a workers’ compensation system. Benefits paid and services provided under a workers’ compensation program were *adequate* if they were sufficient to meet the objectives of providing substantial protection against interruption of income.² An *equitable* system was defined by the National Commission as “delivering benefits and services fairly as judged by the program’s consistency in providing equal benefits or services to workers in identical circumstances and its rationality in providing benefits and services in proportion to the impairment or disability for those with different degrees of loss.”³

Two other evaluative criteria established by the National Commission are directly impacted by litigation. Injuries impose a cost on workers, on firms, and on society as a whole in that there is a reduction in the capacity for producing goods and services. Thus, an important dimension of any method of transferring income to injured workers is the program’s impact on *safety*, i.e., its effect on the incentives of both the employer and the employee to reduce the probability of accidents.

Still another area of concern recognized by the National Commission involves the *administrative costs* required to deliver benefits to injured workers. Ideally, benefits of a given quality would be delivered at the lowest possible administrative cost.⁴ Of course, a major component of these costs (summed across all parties involved) is the “frictional costs” associated with resolving disputes.

One way of evaluating the burden imposed by litigation is to consider the dollars that injured workers receive (as indemnity benefits, medical treatment, or rehabilitation) as a proportion of the total dollars paid by employers in the form of awards (indemnity, medical, rehabilitation) plus litigation costs. Measured in this way, California’s performance over the past two decades highlights the drag imposed by the growth in administration costs. In 1978, employers paid 32 cents in

legal costs for each dollar of benefits delivered to injured workers. By 1992, 78 cents in litigation expenses were paid by employers for each dollar awarded. Clearly, workers received a declining share of the total costs incurred by employers for injuries. A report from the California Workers' Compensation Institute found that "in 1978, employees received 76 cents of each dollar that employers paid for litigation plus awards, while attorneys received 13 cents and forensic physicians received eight cents. By 1992, those proportions shifted dramatically, with the injured worker being the big loser. In 1992, injured workers received only 56 cents of each dollar paid by employers for litigation and awards, while the forensic physicians' share tripled to 24 cents and the attorneys' share increased slightly to 17 cents" (California Workers' Compensation Institute 1993, p. 4).

It is conceptually helpful to combine the separate but related goals of safety and streamlined administrative costs under an umbrella concept termed the *efficiency* of the workers' compensation program. Efficiency is a concept that economists routinely apply in evaluating the performance of markets. Simply put, an efficient mechanism for organizing the production and distribution of goods and services is one that maximizes the value of the things we, as a society, can produce with our scarce resources.

While the efficiency of a workers' compensation system may have been recognized as an important consideration by the early reformers, the importance of efficiency has been substantially elevated over the past two decades. In large part, this is due to a growing body of economic analysis that has empirically quantified the effects of workers' compensation programs on safety incentives, injury rates, worker productivity, total labor costs, and the hiring/location decisions of firms. Discussions of empirical evidence on these issues can be found in Chelius (1977, 1983), Butler and Worrall (1985), and Worrall and Butler (1988).

Economic research has forced workers' compensation policymakers to recognize the trade-offs between competing goals of adequacy, equity, and efficiency. For example, raising weekly compensation payments to enhance benefit adequacy has been shown to lead to more reported injuries and more time off the job. On the other hand, restricted coverage of certain types of injuries or occupational diseases, in the interest of economizing on administrative costs and total com-

pensation payments, can reduce employers' incentives to prevent accidents.

Perhaps the best way to illustrate the concept of efficiency and related trade-offs is in the context of a simple model of the economics of job safety. Workers' compensation plays an important role in determining the amount of job safety that will be produced and consequently, the efficiency of the production of goods and services. Thus, the administrative rules established by a state to determine and deliver workers' compensation also influence the efficiency of production. The following section makes the concept of efficiency, and the trade-offs between safety and streamlined administration, more concrete by inserting workers' compensation into a simple model of the economics of job safety.

Workers' Compensation and the Economics of Job Safety

We must begin with an idea of what constitutes the most desirable or optimal amount of safety.⁵ Like any economic good, an increase in workplace safety, measured in terms of a reduction in the probability of injury, involves higher production costs. Of course, the safest (zero-risk) work environment would involve no human contact at all, but reducing labor involvement requires that greater quantities of other resources be substituted in order to manufacture the final product. This defines the terms of the trade-off. We can achieve more safety if we are willing to make do with less of other things. The higher costs of safer working conditions are reflected in a higher product price. The economically efficient amount of safety is the level that maximizes the subjective value that we collectively place on safety plus all the other goods and services we consume for a given expenditure.

Under certain conditions, a free market is capable of providing the optimal amount of safety without government regulation. To see this, begin by imagining a world, long since past, of strict *caveat emptor* in regard to employer-employee obligations in the event of industrial accidents. That is, the firm bears no legal liability for job hazards. In such a world, would a firm have any financial incentive to prevent accidents? The answer is yes, and under certain (restrictive) conditions, a

firm might bear all of the costs of worker injuries. Assume a competitive labor market in which employers vie for qualified workers. Lost-time accidents impose costs on employers in several ways. At the most fundamental level, even minor accidents disrupt a worker's productivity. Injuries that require recovery time away from the job deny the firm the output that the worker would have contributed. Interviewing, hiring, and training replacements impose additional costs. So, even without liability to compensate the injured worker, the firm bears some costs of the accident.

Hazardous worksites impose other, potentially greater costs on a firm. Assume that workers, over time, become fully informed about the working conditions and relative risk of job sites. In a competitive labor market, workers will demand and employers must pay compensating wage differentials for riskier jobs. Risk-neutral workers who are fully informed will demand extra compensation equal to the expected costs associated with the risk of injury in particular jobs (risk-averse workers will demand compensation in excess of expected injury costs). Higher wages for riskier jobs force firms to "internalize" the expected injury costs. That is, firms will consider these costs along with all other production costs when making choices about the amount of output to produce and the mix of inputs to employ.

Employers will typically choose from a variety of options for reducing the expected costs of worker injuries. A firm might automate production in order to use less labor and thus incur less risk of injury. Alternatively, a business might find that installation of safety features or procedures may reduce the risk of injury and lower the compensating wage differential demanded by workers. The point is that a firm in such a market will prevent accidents when prevention is cheaper than paying higher wages to workers to cover the expected costs of injuries. The business bears all of the costs of industrial accidents, and such costs are reflected in the price of the final product. Wealth-maximizing firms in such competitive markets will produce the optimal amount of final product and job safety.

Of course, the real world is not so neatly defined. Optimal production of safety in the "let-the-worker-beware" system described depends critically on workers who are sufficiently informed about job hazards to demand higher wages and are sufficiently mobile to incur no costs of switching jobs. Otherwise, the firm faces less market pressure to pay

compensating differentials and has a reduced incentive to prevent accidents. Consequently, some of the costs of production remain "external" to the firm; workers (and society) incur the costs, but the firm does not. More of the final output is produced and sold at a lower price than would occur if the firm internalized the injury costs. Less safety is produced than would be true if the firm fully compensated injured workers.

Given this less-than-perfect result in a less-than-ideal world, a case can be made for government intervention in the marketplace. The most fundamental form of intervention is the establishment of property rights on behalf of workers that impose liability on employers for injuries resulting from job-site hazards. In principle, the firm's legal liability for injuries at least partially replaced compensating wage differentials as the mechanism forcing it to internalize injury costs. When liable for accident compensation, a wealth-maximizing firm would incorporate into its decisionmaking the expected costs to be paid when an injured worker sues for damages; this would occur just as surely as if the firm were paying higher wages for riskier jobs.

However, prior to the early twentieth century, when the tort system was the legal remedy for injured workers in the United States, the plaintiff (worker) was required to demonstrate some degree of negligence on the part of the employer. As discussed, the difficulty of establishing employer negligence caused awards to vary substantially above and below the actual costs incurred by the injured worker and resulted in considerable uncertainty regarding the probability of recovering any settlement at all. From the standpoint of economic efficiency, the advantage of workers' compensation programs was in the strict liability provisions. The greatly increased probability of having to compensate injured workers required firms to internalize injury costs far more reliably than when payment was subject to the vagaries of the courts.⁶

The extent of the employer's liability for the cost of injuries should be reflected in accident rates. States that require larger compensation payments to injured workers should experience lower injury rates, other things being equal. Interestingly, empirical studies that have related differences in workers' compensation benefit rates across states to differences in injury rates often reveal a positive association. However, this is not because higher benefits have somehow compromised safety, nor is it likely due to greater risk taking by workers. Instead,

most studies that relate accident rates to benefit levels have focused on nonfatal injuries, for which a significant moral hazard effect exists. That is, workers receiving more generous benefits are more likely to report injuries and to claim that injuries occurring off the job were actually job-related (Smith 1990). Also, returning to work after an injury is less attractive when benefits are higher. One recent study estimates that the time off the job increases by 3 percent for each 10 percent increase in workers' compensation benefits (Viscusi 1991, p. 78).

Clearly, incentives matter when considering the impact of workers' compensation programs on both employer and employee behavior. The NCCI has estimated that, from 1978 to 1988, workers' compensation premiums increased by 48.4 percent due to benefit changes, and by an additional 30.1 percent due to changes in worker behavior arising from the altered benefit structure (Viscusi 1991, p. 78).

The question posed earlier remains, however: what impact have benefit levels had on the employer's incentive to prevent accidents? By focusing on work-related *fatalities* in order to eliminate the moral hazard problems, empirical studies have shown that, in the absence of workers' compensation, the risk of job-related fatalities in the United States would be 20-27 percent higher than current levels. This result validates the prediction that (strict) liability for injury costs imposed by workers' compensation does promote investment in safety (Moore and Viscusi 1990) and the efficient production of goods and services.

How does litigation influence efficiency? The impact derives from two separate but related effects. First, the friction imposed by litigation drains scarce resources from other employment as they are used to resolve disputes. Consequently, as litigation costs rise, other things held constant, society has less overall output available for consumption.

This is not to say that all litigation is undesirable, for disputes do arise and resolution is necessary to achieve the desired level of safety. Recall that to be eligible for workers' compensation, an individual must demonstrate an injury to be work-related; this claim is a potential source of dispute. Also, criteria for determining the amount of indemnity compensation may require judgments about physical impairment, the potential loss of use of body parts and systems, or the loss of wage-earning capacity, all of which create an incentive for workers to overstate and for employers to understate the degree of injury. To the extent

that a state's administrative rules create these incentives, efficiency requires some form of litigation to bring actual compensation as close to the true cost of injury as the statutes allow.

Certainly, as discussed in the economic model of job safety, as the costs of dispute resolution rise, other things will not remain constant. Litigation costs resemble a tax on labor, effectively increasing the price of labor relative to other inputs that might be used in the production process. Over time, a wealth-maximizing firm experiencing rising workers' compensation costs will reduce its reliance on labor in favor of other, relatively less costly, inputs. The incentive to avoid the "litigation tax" will be greatest for the types of jobs that most frequently generate disputes over injuries. The substitution incentive is operative at all times but will have different impacts across states, depending upon whether the state's administrative framework promotes or deters disputes.

Consequently, the second effect of rising costs of litigation may be a distortion of safety incentives, leading to the overproduction of safety and underproduction of other goods and services. Injuries will likely be reduced over time for two reasons. Firms will invest in equipment, training, and procedures to lower the probability of injuries that spawn litigated claims. Alternatively, firms may simply cut back employment (to achieve less exposure) in risky jobs. In other words, workers' compensation statutes can cause the market to generate too little employment in some occupations, because the cost of resolving injury disputes inflates the cost of labor and distorts the safety incentives. On the other hand, attempts to rein in litigation costs by limiting coverage of controversial types of injuries run the risk of compromising (sacrificing) the deterrent function that workers' compensation serves when it links the cost of injury to the party generating the risk.

What Causes Disputes?

Disputes arise if there is doubt that the injury is job-related. Disputes also arise when the extent of disability is difficult to measure, since total compensation payments are typically a function of time off

the job or reduced earnings capacity. These two broad categories of issues constitute the large majority of all litigation.⁷

How does the administrative structure of a workers' compensation system influence the number of disputes? Perhaps the best illustration is in the context of the rules for compensating permanent disability. Although only about 20-25 percent of all work-related injuries in the United States involve a permanent disability, payments to these workers accounted for 65 percent of all indemnity benefits in 1982 (Berkowitz and Burton 1987, p. 38). The various state jurisdictions are not uniform in defining precisely the objectives of their provisions for compensating permanent disabilities. Consequently, the costs of permanent partial disability as well as the frequency of disputes vary widely across states.

Some terminology is helpful for understanding the issues. Berkowitz and Burton (1987, chapter 1) define impairment and disability as the two concepts fundamental to the theory of compensating permanent disabilities. Impairment refers to anatomical, physiological, intellectual, or emotional abnormality or loss resulting from an injury. In contrast, a disability is "the inability or limitations in performing social roles and activities such as in relation to work, family, or to independent community living" (Berkowitz and Burton 1987, pp. 6-9). They distinguish conceptually between two types of disability, work and nonwork. A work disability involves the loss of actual earnings or earnings capability as a consequence of impairment. A nonwork disability involves limitations in performing social roles and activities, as a result of impairment.

Which type of disabilities are workers' compensation laws intended to compensate? The answer is not clear-cut. However, according to Berkowitz and Burton, the National Commission on State Workmen's Compensation Laws (1972) concluded that one of the basic objectives of a modern workers' compensation program is the substantial protection against loss of income. Consequently, workers' compensation benefit payments should be tied to the extent of work disability. Nevertheless, some states accommodate nonwork limitations in their calculations of permanent partial benefits, widening the potential area for dispute.

Even confining the calculations to work disability leaves the issue of determining compensation far from settled. The problem is that work

disability is difficult to measure. "The extent of a worker's disability depends not only on the extent of his or her functional limitations but also on other influences. For example, the loss of actual earnings or decrease in earnings capacity (work disability) depends not just on functional limitations, but on the worker's personal characteristics (age, education, experience, and other factors), the labor market conditions in which he must compete for employment, and the sources of assistance available to him" (Berkowitz and Burton 1987, p. 9).

Almost all states tackle the problem of measuring lost earnings capacity by evaluating impairments, as an observable proxy for the degree of work disability. Some states, such as Delaware, also make payments for the impairment itself, independent of its impact on earnings. However, the decision about the amount of permanent partial benefits to be paid is typically made after the medical condition has stabilized but before most or all of the actual wage loss for which the benefits are intended occurs. In short, "permanent partial benefits are largely based on proxies for the expected wage loss that are assessed on an *ex ante* basis, before the wage loss actually occurs" (Burton 1983, p. 27).

By definition, estimates of lost wages will be subjective and, consequently, disputable. This feature of permanent partial disability compensation is at the root of the litigation problem. States vary substantially with respect to the guidelines adopted for estimating lost wages but generally may be sorted into three categories. In one category are states that base estimates of permanent disability solely on impairment ratings. The second category includes states that attempt to estimate lost earnings capacity. The third, a small group of states, uses the actual wage loss to determine benefits. These approaches, along with the administrative framework set up to oversee the system, heavily influence the frequency of litigation.⁸

We have found the workers' compensation literature to be lacking in empirical work that examines the reasons for litigation within state jurisdictions and that has adequate data to control for various influences. The analysis provided in the following chapters makes such a contribution. We investigate the compensation experience of workers who had lost-time injuries in Delaware and Michigan. Both states were considered to be relatively litigious through the early 1980s, although under markedly different administrative structures, with an impairment

approach in Delaware and a wage-loss approach in Michigan. Using detailed information on worker characteristics, indemnity benefits received, and the nature of disputed cases, we identify factors that affect the probability of a case becoming contested and those factors influencing whether the case is settled prior to an administrative hearing. For Delaware, we also examine the factors that underlie the size of indemnity payments to injured workers in contested and uncontested cases, to determine whether litigation substantially increases the amount collected, other things remaining equal.

NOTES

1. "Industrial accident rates reached their all-time peak in the first decade of this century. In 1907 over 7,000 workers were killed in just two industries, railroading and coal mining" (Berkowitz and Burton 1987, p. 17).

2. It is typical today for state compensation laws to require that medical costs be paid in full and that injured workers be compensated for lost wages at a rate equal to two-thirds of their gross weekly wage, subject to a statewide maximum. Workers' compensation benefits are not taxable. Viscusi and Moore (1987) estimate that, nationwide, the average wage replacement rate for injured workers is 55 percent of income before taxes and represents 83 percent of after-tax income.

3. For further discussion of alternative definitions of equitable benefits, see Burton and Berkowitz (1987), pp. 25-28.

4. Berkowitz and Burton (1987, p. 27) refer to this concept as "panoramic efficiency."

5. For an excellent discussion of social policy toward job safety and the economics of available policy tools, see Smith (1976).

6. Since indemnity payments do not necessarily fully replace lost wages for injured workers, some degree of compensating wage differentials remains in the labor market. The limited liability imposed by workers' compensation statutes has prevented the sort of escalation in punitive damages imposed on firms by the courts in product liability suits.

7. For example, in California during 1992, disputes over permanent disability accounted for 35 percent of all litigation costs for employers and employees. Disputes over causation accounted for another 31 percent of all litigation costs. All other sources of disputes comprised the remaining third (California Workers' Compensation Institute 1993, p. 8).

8. For an interesting contrast of two approaches with strikingly different litigation rates within one state, see Boden (1988).