From John Burton's Workers' Compensation Resources

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Featured Topics

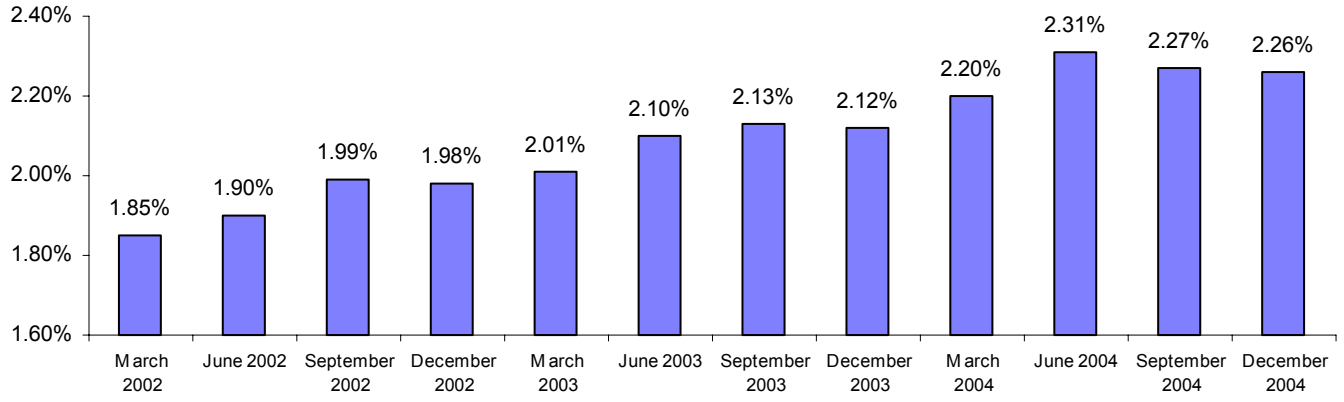
Summary of the Contents

The terrorist attacks in the United States, including the destruction of the World Trade Center in September 2001 and the Oklahoma City bombing in April 1995, had numerous adverse consequences. Lex K. Larson and Thomas A. Robinson provide the first comprehensive review of the workers' compensation cases that resulted from these attacks. Despite the general success of the claimants, Larson and Robinson express a concern that the compensability rules in some jurisdictions, such as Illinois, might not accommodate workers affected by future terrorist attacks.

The adequacy of workers' compensation cash benefits is examined by H. Allan Hunt in an article based on a recent report from a Study Panel of the National Academy of Social Insurance (NASI). Three approaches are used to assess benefit adequacy and the results suggest that cash benefits appear to be inadequate in many jurisdictions.

Workers' compensation costs as a percent of payroll for all non-federal employees declined to 2.26 percent in December 2004, continuing a two-quarter trend since the recent peak of 2.31 percent in June (as shown in the figure below). Employers' costs were still higher in December than at the recent low point of 1.85 percent of payroll reached in March 2002. Nonetheless, the employers' costs of workers' compensation for all non-federal employees of 2.26 percent in December were lower than the costs between 1991 and 1997.

Workers' Compensation Costs as a Percentage of Gross Earnings, All Non-Federal Employees, March 2002 - December 2004



Source: Figure I at page 26 of this issue.

Workers' Compensation and Terrorist Attacks

By Lex K. Larson and Thomas A. Robinson

I. INTRODUCTION[1]

The stark images of the indiscriminate destruction wrought by the September 11, 2001 attacks on the Pentagon and World Trade Center, as well as the crash that same morning of doomed Flight 93 in Shanksville, Pennsylvania, are etched indelibly into our minds. The same is true of the bombing, on April 11, 1995, of the Alfred P. Murrah Federal Building in Oklahoma City. 149 adults and 19 children were killed in the Oklahoma City bombing, and more than 3,000 persons were killed in the combined September 11, 2001 terrorist attacks.

These deadly explosions were both timed at the beginning of the working day, claiming their victims as they were beginning their daily work routines. Those who perished in the attacks and the many more who were injured in them had no reason to expect they were targets.

Many of those killed and injured in these tragic events were of course workers. One might anticipate that in the vast majority of claims arising from the September 11 terrorist attacks, workers' compensation benefits would be paid without much legal haggling, and the numbers appear to bear this out. Of the more than 10,000 claims filed, only a handful of disputes have reached the appellate courts.

II. THE PROBLEM OF COMPENSABILITY

A. Introduction

Very few of the contested claims arising from the September 11 attacks involve the basic issue whether

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Thomas A. Robinson is Copyrights Editor of Duke University Press. A graduate of Wake Forest University and Wake Forest University School of Law, he practiced law in North Carolina for ten years before returning to graduate school at Duke University Divinity School. Since 1986, he has assisted Lex K. Larson with Larson, *Workers' Compensation Law* and *Workers' Compensation, Desk Edition*. He is also a contributing editor of *Illinois Workers Compensation Handbook*; *New York Workers' Compensation Handbook*; *Workers' Compensation Survival Guide*; and *California Compensation Cases* (all from Matthew Bender & Co.) and the author of *Dispatches to the Front: Theological Reflections on Ordinary Time* (forthcoming from Complin Press, Chapel Hill, NC). He has lectured at a number of CLE courses and has testified before various North Carolina regulatory bodies. Tom and his wife, Jane, live in Durham, North Carolina.

I appreciate the analysis and insights that Lex and Tom provided in this article. I was privileged to know Lex's father, Arthur Larson, who was the greatest legal scholar of workers' compensation as well as an influential person on my political and legal philosophies. I commend Lex and Tom for continuing the legal treatise on workers' compensation begun by Arthur for the benefit of the current generation of scholars, policy makers, and practitioners.

John Burton

injuries from attacks of this nature are compensable. Those that did mostly involved injuries occurring outside the place of employment. As of January 1, 2005, there was not a single reported decision in which basic compensability was at issue for an employee who was inside the World Trade Center when the terrorist attack occurred. And as to the Oklahoma City bombing, there are no reported decisions addressing this issue at all.

Given this outcome, it may surprise the reader that there is, in the abstract, a serious question as to the compensability for deaths and injuries from terrorist acts of this kind. Almost every workers' compensation system compensates only for injuries "arising out of . . . the employment." Can an injury caused by a terrorist flying an airplane into a building be considered to arise from the employment? Not in any strict sense: the cause is an outside actor unrelated to the employer or the employment.

B. The Legal Backdrop

Generally, risks to a worker fall into one of three categories: risks associated with the employment, risks personal to the worker, and so-called "neutral" risks -- that is, risks unconnected with either the employment or the worker. Harms from the first category are universally compensable. Harms from the second category are generally noncompensable. It is within the third category that the difficulties arise. Since neutral risks are not associated with the employment, the employer understandably contends it should not have to bear the expense. The alternative, of course, is to place the burden on the employee.[2] The September 11 attacks are an example of such a "neutral" risk.[3]

A good illustration of the difficulties raised by "neutral" risks is the Illinois case of *Brady v. Louis Ruffolo & Sons Construction Co.*[4] The claimant received serious injuries when a truck loaded with gravel struck the employer's building while the claimant was working inside. Outside the building, approximately 50 feet away, was a designated truck route, which curved as it passed the employer's building, and the grade of the road surface sloped 30 degrees toward the building. Because of a rock quarry nearby, Route 53 was heavily used by gravel trucks. It was snowing on the day of the accident. The driver of an automobile lost control of his vehicle, skidded on the ice, and hit a truck which in turn crashed into the employer's building at the point where claimant was working. The appellate court affirmed denial of compensation, reasoning that the injuries did not arise out of the employment.

Similar questions are raised as to injuries by lightning strike, injuries by stray bullets from off the worksite, and the like. These kinds of risks are referred to as "neutral" risks, having no particular association with employment or personal character.

How different are the September 11 attacks from the above illustrations? Were all those claims paid simply because as a practical matter it would be politically unthinkable not to pay them? Or was there a sound legal basis for compensation?

What has happened is that in New York State and other jurisdictions, over the years, courts, uncomfortable in many instances with those kinds of outcomes, have developed various doctrines under which a work connection may be found for neutral risks. The three main doctrines are "Positional Risk," "Actual Risk," and "Increased Risk."[5]

Under the "Increased Risk" doctrine, an injury is considered to have a work connection if the work placed the employee at a greater risk of the particular neutral cause than is experienced by members of the public generally. In other words, the employment relation can be established by the *quantity* of the risk, and does not require a qualitative association. In states employing this doctrine, injury from a lightning strike will be compensable if the employment increased the risk of exposure.[6] The Increased Risk doctrine is recognized in all jurisdictions.

The "Actual Risk" doctrine goes beyond the Increased Risk doctrine, in that it is sufficient if the employment subjected the claimant to the actual risk that caused the injury.[7] For example, in a South Carolina case,[8] a firefighter sustained serious injuries due to complications from a brown recluse spider bite sustained as he was putting on his fire fighting boots. The court held that he could recover total and permanent disability benefits for this injury without showing that the employment placed him at greater risk of such a bite than that experienced by the general public.

The "Positional Risk" doctrine goes even further in that the injury will be compensable if the employment placed the employee in the particular place at the particular time when he or she was injured by some neutral force. This is in effect a "but for" test. Under this doctrine, injuries from stray bullets, roving lunatics, and the like, will generally be compensable. An example is a District of Columbia case[9] in which the claimant was awarded compensation after being assaulted presumably by a stranger in the employer's parking lot.

Also deserving mention is the "Street Risk" doctrine, which is recognized in some form or other in all jurisdictions. That is, street or highway injuries to work-

ers such as traveling salespersons and delivery persons, whose duties increase their exposure to the hazards of the street, are considered to arise out of the employment. This is true although the nature of the risks is not peculiar to the employment. The Street Risk doctrine may be based on the increased risk concept, or the positional risk concept, or both. The concept of street risks has been broadened beyond the original idea of traffic perils and has been applied to almost any mishap whose locale is the street, including simple falls, stray bullets, falling trees, and even foul balls.[10]

The question arises: If compensation can be awarded to the victim of a stray bullet based upon the Street Risk doctrine or the Positional Risk doctrine, can these same theories also support awards of compensation in those instances in which the damaging projectile is not a stray bullet fired from a street gunman, but rather a terrorist's bomb or a hijacked airliner?

Consider two early bomb cases, the so-called Wall Street explosion case,[11] involving a bomb thrown into the street, and the *Dunham*[12] case, involving a bomb planted in an airplane. These two decisions indicate that the Street Risk doctrine is sufficiently elastic to embrace these sources of injury. In a more recent decision,[13] the Court of Appeals of Kentucky reversed a denial of benefits to the owner of a small coal company who sustained severe injuries in a vehicle bombing. Noting that Kentucky has adopted the Positional Risk doctrine, the court indicated that since the victim would not have been in the truck except for his employment, an award of workers' compensation benefits was required.

This pattern of compensability has generally been followed in those cases arising from the April 1995 bombing in Oklahoma City and the September 11, 2001 terrorist attacks. From a workers' compensation standpoint, therefore, the terrorist victims had at least one thing in common with the victims of, say, stray bullet cases: they were in the wrong place at the wrong time.

C. The September 11, 2001 Terrorist Attacks

According to the New York Workers' Compensation Board, as of June 17, 2004, 10,160 workers' compensation claims had been filed on behalf of those killed or injured as the result of the September 11, 2001 terrorist attacks in Manhattan.[14]

The basis for recovery under the Positional Risk doctrine is the notion that "but for" the employee's presence at or near the work site, he or she would not have been in a position to suffer injury or death. Hence the question arises: If the worker's position of danger was caused not by bad luck -- i.e., being in the wrong place at the wrong time -- but by the worker's affirmative action in taking on the risk of harm, should the worker's claim be denied? Several New York decisions have answered the question in the affirmative, particularly when the claim was not for an actual physical injury, but a claim for post-traumatic stress disorder. In one such stress case, benefits were accordingly denied to a Port Authority employee who was home on the morning of the attacks on the World Trade Center and who traveled to the epicenter, where his office had been destroyed, in order assist in rescue efforts.[15] The employee's decision to risk his life and health was his own.

Similarly, a New York senior business analyst, who obeyed his employer's order to evacuate its premises located four to five blocks from the World Trade Center, but who, rather than leave the area, instead walked to an adjoining public street in order to observe the destruction from the terrorist acts and who lingered some 20 to 30 minutes before deciding to head north out of lower Manhattan, was held not to have sustained a compensable post-traumatic stress injury.[16]

D. The 1995 Oklahoma City Bombing

In spite of the tremendous personal losses associated with the Oklahoma City bombing, only three workers' compensation decisions were reported during the nine years following the tragedy. None questioned the employers' basic liability for workers' compensation benefits.

E. Compensability in Jurisdictions Disfavoring the Positional Risk Doctrine

The high rate of claims payment in New York State is understandable, since it is among the more liberal jurisdictions as to compensability in neutral actor cases. New York courts had previously developed a "zone of danger" test in stray bullet cases, which, combined with the state's actual-risk theory, adds up to something very close to the Positional Risk doctrine.[17] The question remains: what about those states that have rejected the Positional Risk doctrine? Would claims arising from terrorist attacks in those states be compensable?

As previously mentioned, all jurisdictions abide by at least the Increased Risk doctrine. Assume the structure under terrorist attack is, like the World Trade Center, a national icon such as the Sears Tower in Chicago or the Super Bowl stadium. A strong argument can be made that workers in those structures are subjected to an increased risk of terrorist attack, compared to the

general public. One would think that here courts should have no trouble finding compensability. But recall the *Brady* case discussed above, where the injury was caused by a truck crashing into the place of employment. One is certainly left to wonder what would be required in Illinois to show an increase in risk if it was not established in *Brady*. The employee was working 50 feet from slick, snowy, and busy Route 53, a "designated truck route" that curved and sloped 30 degrees as it passed the employer's building. If he did not face greater risk than the general public, would an attorney working in the Sears Tower be considered to be subjected to any greater risk than the general public? To summarize, *Brady* is definitely a hurdle for a claimant seeking to recovery from a September 11-like attack, should the attack occur in Illinois.

And if instead of the Sears Tower, the building under attack is a nondescript three-story office building in small-town America, the case for compensability is even weaker. Consider a hypothetical attorney working as an associate in a small firm on the second floor of a nondescript three-story building in a moderate-sized town such as Durham, North Carolina. A terrorist has commandeered a small jet from nearby RDU International Airport. The terrorist has some skill in maneuvering the plane, although not enough to target any specific government or business site. He crashes the plane into the second story of the small building that houses the law firm, killing the attorney. Did this attorney's death arise from the employment?

Workers in office buildings usually could be considered to be at an increased risk compared to the public generally, assuming homes are a less likely target. But it can also be argued that there is no increased risk, in the sense that the attack could have occurred anywhere. It can be concluded that in jurisdictions which do not recognize Positional Risk, there is at least an issue as to compensability.

III. OTHER ISSUES

Various other legal issues have appeared in decisional law emerging from these horrific tragedies.

A. Stress Cases

A number of the reported decisions arising from these terrorist events involve claims of mental or emotional injury. For example, in the only reported decision from the Oklahoma City bombing involving a federal civilian employee,[18] McCauley, a Special Agent for the Bureau of Alcohol, Tobacco and Firearms (ATF) and Resident Agent in Charge of the Oklahoma City office, had just begun his work day in the Murrah Federal Building when Timothy McVeigh detonated his bomb. Although McCauley safely exited the building, he later claimed he suffered extreme trauma and stress in the aftermath of the tragedy, particularly in light of his efforts to rescue victims from the building. He filed a workers' compensation claim under the Federal Employees' Compensation Act (FECA)[19] for the post-traumatic stress disorder that he claimed he had suffered as a result of the bombing and he filed an additional complaint against the federal government under the Federal Tort Claims Act. The issue before the federal district court was not whether the FECA should provide coverage for the employee's alleged injury, but whether the FECA preempted the employee's separate action for stress-related injuries filed against the government under the Federal Tort Claims Act. The court held that it might, remanding the case for further determination of that issue.

Likewise, in *Davis v. Medical Arts Laboratory*,[20] involving a private employer, the employee contended her mental injury resulted from the effects of the Oklahoma City bombing. The employer contended that the worker's psychological condition was unrelated to the bombing and actually predated the April 1995 tragedy. The appellate court held that the medical report constituted sufficient evidence to support the lower court's finding that the worker's condition was personal and unrelated to her work.

In a case involving the World Trade Center incidents,[21] the compensation carrier was successful in resisting a claimant's attempts to amend her claim to add post-traumatic stress disorder and various additional injuries. A psychiatric evaluation indicated that the claimant's continuing claim of post-traumatic stress disorder was exaggerated and highly incredible, so it was appropriate for the Board to terminate the claimant's disability benefits.

Finally, in the only reported decision involving the ill-fated Flight 93 from Newark to San Francisco, which was hijacked and later crashed in Shanksville, Pennsylvania, a New Jersey appellate court held that a flight attendant, who was originally scheduled to work on the flight but who several days earlier requested and received the day off, could not recover workers' compensation benefits for post-traumatic stress syndrome.[22] The flight attendant had been assigned to fly a combination of flights for the month of September 2001, including Flight 93 on September 11. In early September, she requested that she be given September 11 off for personal reasons, and she was given the day off, without pay. She later filed a workers' compensation claim, alleging she had sustained post-traumatic stress syndrome (PTSS) having to do with overwhelming guilt

over the death of a co-employee who had taken her place. She was not on the job, nor "on the clock" at the time the hijackings occurred, but she contended that her job was so closely linked to the risks of hijacking and other catastrophes that she should be awarded benefits for her nervous condition. The appellate court disagreed, holding that her injury did not arise in the course of her employment: nothing happened while she was working that led to her present condition, and she was not even working at the time she heard the news of the crash.

B. Course of Employment

Compensability was at issue in a claim filed by a data analyst who worked at the World Trade Center and who was struck by debris when the second tower came down while the employee was still two blocks from the doomed structure.[23] Under the "going and coming" rule, ordinarily an employee is not considered to be within the scope of his or her employment while traveling to and from work. Notwithstanding, the appellate court held that, under New York case law, an exception could be made where the employee drew physically nearer to the workplace until he or she could be said to have entered a "gray area" where the risks of travel and the risks from work might be said to merge. In the face of the Board's award of compensation, the appellate court could not say that such a merger had not occurred in the case of the injured employee.

In a New Jersey case,[24] a construction worker's injury occurred not at or near the World Trade Center, but in an automobile accident near a construction site on Long Island. Because the terrorist attacks caused the emergency closing of all bridges and tunnels between New York and New Jersey, the worker and several co-workers were unable to return to their New Jersey homes at the end of the scheduled workday. Their supervisor gave them instructions to leave the site for an early dinner. When returning from a local eatery to the work site, the worker was seriously injured in an automobile accident. The Appellate Division had denied his claim, holding that the worker was neither required by his employer to be away from his place of employment nor engaged in the direct performance of his employment duties at the time of the auto accident. The state high court reversed: since the workers were all participating in an employer-directed activity, their injuries arose out of and in the course of employment.

In *White v. Fuju Bank, Ltd.*[25] an employee who worked at the World Trade Center applied for workers' compensation benefits following the terrorist attack. Her employer's workers' compensation carrier initially accepted the claim and a Workers' Compensation Law Judge issued a decision that the claimant had suffered a work-related injury. Ten months later, the carrier stopped paying benefits and requested that the matter be reopened, arguing that a medical evaluation report indicated that the claimant was not in the World Trade Center building at the time of the attack, but rather near the basement door and elevator in a subway station some distance away. The appellate court refused to overturn the award of benefits: the medical report indicating the claimant's whereabouts at the time of her injury existed prior to the law judge's decision, and the carrier's failure to appeal from that decision was not excusable.

C. Definition of Employee

In *Chalcoff v. Project One*,[26] the issue was whether the deceased worker was an employee or an independent contractor of Marsh and McLennan, one of the major tenants in the World Trade Center. Because the totality of the evidence tended to show that the deceased functioned not as an employee but as a consultant, Chalcoff's widow was denied benefits.

D. Which Parties Should Share Death Benefits

In a handful of cases, the issue was whether one or more parties was entitled to share in the death benefit provided by the New York Workers' Compensation Law. Dependent benefits were denied to the mother and half siblings of a 27-year-old woman killed in the World Trade Center when the mother filed inconsistent affidavits as to her household expenses and otherwise failed to show that the household was dependent upon the deceased daughter's income.[27]

In two other cases, the appellate court reluctantly allowed so-called "deadbeat dads" to share in the workers' compensation death benefit award for persons killed in the terrorist attack. In *Caldwell v. Alliance Consulting Group, Inc.*,[28] the appellate court observed that New York parents who fail to provide for or who abandon their child or children are disqualified by statute from inheriting from a child who dies intestate and from receiving the proceeds of an action for the wrongful death of the child, but that the state legislature had provided no comparable exclusion in the Workers' Compensation Law. Without a clear intention from the legislature, the courts were powerless to deny the claims for benefits. *Crisman v. Marsh & McLennan Cos., Inc.*[29] is factually similar to *Caldwell*: again, the court held that N.Y. Workers' Comp. Law § 16 (4-b) plainly and unequivocally provided for payment of a death benefit to the deceased's "surviving parents."

E. Employers Excused from Late Payment

The New York courts have shown flexibility in excusing statutory penalties imposed on an employer or carrier for delays in paying benefits where the delays were the result of the September 11 attacks. For example, in *Anderson v. Central N.Y. DDSO*,[30] a workers' compensation carrier issued a payment under a Workers' Compensation Law Section 32 waiver agreement four days late because its business operations had been interrupted by the September 11, 2001 terrorist attack. Normally in this situation a 20 percent statutory penalty applies. The appellate division ruled that the Board had the authority to excuse the carrier from this penalty and remitted back to the Board for a consideration of whether the carrier's late payment should be excused under the circumstances.

IV. CONCLUSION

The assortment of issues discussed in the preceding section tend to revolve around the peculiar facts of those cases. The question of positional/increased risk with which this article opened is, of course, more basic.

It has occurred to the authors that we might be considered heartless wretches for even bringing up that basic question. Please be assured that in no way do we wish to deny compensation to victims of terrorist attacks. Our feeling, rather, is that a thorough understanding of the legal ambiguities can pave the way for positive changes in the law. We favor the Positional Risk doctrine when applied to truly neutral risks: if every jurisdiction were to adopt it, compensability for workers who are victims of terrorism would be universally assured.

ENDNOTES

1. The article is adapted from the recently revised Chapter 9 of *Larson's Workers' Compensation Law* (12 vol. Lexis Publishing (hereinafter "*Larson*"), with permission from Lexis Publishing.

2. A possible third solution is to place the burden on society by means of a special legislative fund such as that created pursuant to the Air Transportation Safety and System Stabilization Act of 2001, passed by Congress in the wake of the September 11 attacks. *See* Pub. L. No. 107-42.

As of January 1, 2005, there were no reported decisions involving the possible interaction between the Air Transportation Safety and System Stabilization Act of 2001 ("the Stabilization Act") (Pub. L. No. 107-42) and the various state workers' compensation acts. The Stabilization Act, among other things, directs the Justice Department to establish a no-fault scheme to provide compensation to individuals (or their relatives) who were physically injured or killed as a result of the terrorist-related aircraft crashes of September 11, 2001. In order to receive any compensation from the statutory Fund, the applicants must give up the right to sue the airlines, the federal government, and various other potential defendants. The Stabilization Act also provides that collateral sources of compensation must be deducted from any award to be received from the Fund. The treatment of workers' compensation benefits was described by Lloyd Dixon and Rachel Kaganoff Stern, *Compensation for Losses from the 9/11 Attacks* (RAND Institute for Civil Justice, 2004) at 17-18:

> The September 11 Victim Compensation Fund considered the workers' compensation benefits that were paid before it made an award as a collateral source and deducted those benefits from its award. Benefits that were expected to be paid after the VCF award was paid, and that were contingent on the actions of the beneficiary (e.g., remarriage) and thus could not be predicted, were not deducted from the VCF award.

3. The discussion here assumes there is no work connection between the bomber or terrorist and the victim. There may of course be such a connection: for example, in *Graybeal v. Board of Supervisors*, 216 Va. 77, 216 S.E.2d 52 (1975), a prosecuting attorney was severely injured as the result of a bomb placed at his residence by an individual whom the attorney had successfully prosecuted for second-degree murder more than five years earlier. Since the targeting of the attorney sprang from his employment, compensation was allowed as an employment-related assault.

See Larson, Chapter 8, Section 8.01.

4. 143 Ill. 2d 542, 161 Ill. Dec. 275, 578 N.E.2d 921 (1991), *aff'd* 192 Ill. App. 3d 1, 139 Ill. Dec. 5, 548 N.E.2d 441 (1989).

5. Two other doctrines, the "Peculiar Risk" doctrine, and the requirement of proximate causation, are now largely obsolete.

6. For a typical increased-risk lightning award, see *Bauer's Case*, 314 Mass. 4, 49 N.E.2d 118 (1943).

7. John Burton has suggested that "An alternative term for this test (and one that helps clarify the meaning) is the normal risk doctrine: the risk may be no greater than the risks faced by the public, but it is compensable if it is a normal risk of the job." Steven L. Willborn, Stewart J. Schwab, and John F. Burton, Jr., *Employment Law: Cases and Materials (Third Edition)* (LexisNexis 2002), p. 930.

8. *Simmons v. City of Charleston*, 349 S.C. 64, 562 S.E.2d 476 (Ct. App. 2002).

9. *Clark v. District of Columbia Dep't of Employment Servs.*, 743 A.2d 722 (D.C. 2000).

10. See *Larson*, Chapter 6, for a detailed discussion of the street risk rule.

11. *Roberts v. Newcomb & Co*., 234 N.Y. 553, 138 N.E. 443, 444 (1922).

12. *Dunham v. Industrial Comm'n*, 16 Ill. 2d 102, 156 N.E.2d 560 (1959).

13. Daugherty v. J. E. & K. Enterprises, No. 89-CA-002427-WC, 1990 Ky. App. LEXIS 65 (Ky. Ct. App. 1990).

14. As reported in a Memorandum to the Members of the U.S. House of Representatives Subcommittee on National Security, Emerging Threats, and International Relations, dated September 2, 2004, from Kristine K. McElroy, Professional Staff Member. According to the Memorandum, information supplied to the subcommittee by the New York Board indicated that 90 percent of all World Trade Center claims had been resolved by September 2, 2004.

A number of firms were particularly devastated by the attack. For example, 658 employees at the investment firm of Cantor Fitzgerald died in the collapse of the World Trade Center towers.

15. *Duff v. Port Auth*., 787 N.Y.S.2d 175 (App. Div. 2004). Claimant worked as a property manager for the Port Authority in an office on the 86th floor of One World Trade Center. Although he was scheduled to work on September 11, 2001, claimant remained at home that morning waiting for workers who were scheduled to complete repairs to his bathroom. He received a frantic phone call indicating one of the towers had been hit and then hurried to the World Trade Center site and was present when the second tower fell. It was undisputed that he breathed large amounts of smoke and dust at the site and that he returned each day throughout the following week to assist in the rescue attempts. Claimant's claim for post-traumatic stress disorder was initially accepted, but later rejected, by the workers' compensation carrier. Following a hearing, a workers' compensation judge awarded benefits. The Workers' Compensation Board reversed and the appellate court affirmed the reversal, holding substantial evidence existed to support the Board's decision. In particular, claimant went to the site of the terrorist attack on his own and not at the direction of his employer. His decision to risk his life was his own.

16. *Betro v. Solomon Smith Barney*, 8 A.D.3d 847, 779 N.Y.S.2d 147 (2004). Affirming a decision of the Workers' Compensation Board that the injury did not arise out of and in the course of the employment, the court indicated that under all the circumstances, the claimant's injuries occurred on a public street, away from the place of employment, and were therefore outside the course of that employment.

Medical experts agreed that claimant suffered from the stress disorder, and a WCJ awarded compensation benefits. The Workers' Compensation Board reversed, finding, as a matter of law, that an insufficient nexus existed between the exit route taken by claimant and his employer's premises. The appellate court agreed with the Board. There was substantial evidence supporting the Board's determination that claimant's observation of the destruction was voluntarily extended by claimant's lingering at the site. While his post-traumatic stress disorder may have arisen from his proximity to the tragic attack, it was not sufficiently associated with his employment to support the claim. Without the establishment of a nexus between the disorder and the employment, there could be no recovery.

17. *See Filitti v. Lerode Homes Corp.*, 244 N.Y. 291, 155 N.E. 579 (1927).

18. *McCauley v. United States*, 58 F. Supp. 2d 1232 (D. Kan. 1999).

19. 5 U.S.C. Section 8101, *et seq*.

20. 952 P.2d 52 (Okla. Ct. App. 1997).

21. *Valentin v. THB Intermediaries Corp*., 10 A.D.3d 826, 782 N.Y.S.2d 297 (2004).

22. *Stroka v. United Airlines*, 364 N.J. Super. 333, 835 A.2d 1247 (2003), *cert. denied*, 179 N.J. 313, 845 A.2d 138 (2004).

23. *Tompkins v. Morgan Stanley Dean Witter*, 1 A.D.3d 695, 766 N.Y.S.2d 923 (2003).

24. *Sager v. O.A. Peterson Constr. Co.,* 182 N.J. 156, 862 A.2d 1119 (2004).

25. 8 A.D. 3d 817, 777 N.Y.S.2d 821 (2004).

26. 12 A.D.3d 872, 784 N.Y.S.2d 738 (2004).

27. *Umanzor v. General Telecom*, 9 A.D.3d 591, 780 N.Y.S.2d 45 (2004).

28. 6 A.D.3d 761, 775 N.Y.S.2d 92, *appeal denied*, 3 N.Y.3d 604, 784 N.Y.S.2d 6, 817 N.E.2d 824 (2004).

29. 6 A.D.3d 899, 774 N.Y.S.2d 887 (2004).

30. 2 A.D.3d 1011, 769 N.Y.S.2d 623 (2003).

See also Johnson v. Shelmar Corp., 2 A.D.3d 1010, 768 N.Y.S.2d 407 (2003). Settlement funds were mailed to the claimant on September 24, 2001. The claimant requested the imposition of a 20 percent penalty on the ground that the payment was made more than 10 days after the filing of the notice of approval, in violation of N.Y. Workers' Comp. Law § 25(3)(f) and N.Y. Comp. Codes R. & Regs. tit. 12, § 300.36 (g). The court held that the payment was timely, but that even if it had not been, the board could have exercised its discretion to suspend or modify the application of its rules, as the delay was caused by the terrorist attacks on September 11, 2001.

Benefit Adequacy in U.S. Workers' Compensation Programs

by H. Allan Hunt

There are three major objectives for modern workers' compensation programs: prevention of workplace injuries and illnesses, replacement of wages lost due to workplace injuries and illnesses, and rehabilitation from workplace injuries and illnesses. Workers' compensation programs seek to prevent disabling injuries through financial incentives to employers. They replace the wages of injured workers who lose time on the job, and they seek to rehabilitate injured workers so that they can return to their work and their lives. This article deals only with the second issue: wage replacement by workers' compensation programs. A recent National Academy of Social Insurance (NASI) Report by the Study Panel on Benefit Adequacy of the Workers' Compensation Steering Committee addresses this matter in considerable detail (See Hunt 2004) and this article is based on that work.

WORKERS' COMPENSATION WAGE REPLACEMENT

Each U.S. state has its own workers' compensation program, and the benefit levels are set by the respective state statutes. The dominant wage-replacement formula among the state workers' compensation programs in the U.S. is two-thirds of gross earnings (36 states), generally subject to a maximum and minimum. (U.S.D.O.L. 2004) Two additional states set the replacement rate at 60 percent of gross earnings; another three states at 70 percent. Three other states have multiple replacement rates of gross wages depending upon the family circumstances of the worker, the wage level, or the length of the disability. Another six states replace a percentage of net, or after tax, earnings. This reflects concerns about the distorting impact of tax rates on wage replacement (See Victor and Fleischman 1989), as well as the possible impact of the lost work-time on non-wage compensation.

Typically, the benefit maximum is set at 100 percent of the state average weekly wage, but ranges up to twice that level. All workers' compensation benefits are tax free, so the value of these benefits in purchasing power is more generous than it appears at first glance. However, the effect of the maximum benefit is to cut replacement rates for those above the maximum earnings level (frequently set at the average wage). Contrarily, the effect of a minimum benefit can be to "over compensate" low-wage workers in some cases.

APPROACHES TO MEASURING ADEQUACY

Three distinct approaches have been employed to measure benefit adequacy in workers' compensation programs. The oldest approach is the "statutory benefits" method. This consists of comparing the benefits that are specified by statute for the different injury severities. Thus, benefits for temporary total disability (TTD) are tabulated and indexed, either against other

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Allan Hunt, a native of Wisconsin, was educated at the University of Wisconsin, Lehigh University, and the University of California at Berkeley, where he earned his Ph.D. in Economics in 1974. He has been employed at the W. E. Upjohn Institute for Employment Research in Kalamazoo, Michigan since 1978 and was appointed to his current position as Assistant Executive Director in 1989.

Dr. Hunt's research career has involved him in the areas of workers' compensation programs, disability prevention and management, employment and training policy, and the employment impacts of technological change. He has studied, consulted, and written about workers' compensation systems in Australia, Canada, and the United States. He recently conducted a "Core Review" of workers' compensation service delivery for the government of British Columbia, and participated with the Office of Workers' Compensation Policy in the U.S. Department of Labor on a study of the Federal Employees Compensation Act. He currently serves as Vice-Chair of the Steering Committee on Workers' Compensation for the National Academy of Social Insurance.

He has over 29 years of experience in workers' compensation policy issues and is the author or editor of nine books and numerous commissioned reports and articles. I have known Allan for most of this extended period of contributions to workers' compensation, have admired his scholarly approach, and appreciate his willingness to prepare this important article.

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states or against some absolute standard. (See Thomason, Schmidle, and Burton 2001, Appendix D.)

The second method is based upon the *Workmen's Compensation and Rehabilitation Law (Revised)*, referred to as the *Model Act (Revised)* adopted by the Council of State Governments in 1974. The *Model Act (Revised)* was heavily influenced by *The Report of the National Commission on State Workmen's Compensation Laws* (1972), which represented a consensus among stakeholders as to desirable changes to workers' compensation programs in the states.

The third method is based upon the actual wage losses suffered by injured workers. Thus, it relies upon empirical data about the workers' compensation wage-replacement benefits that are received and estimates of the wages that are lost by workers' compensation claimants. The adequacy of benefits can then be evaluated against the standard of the statutory replacement rate. The NASI study panel used two-thirds of gross wages as the primary test of adequacy (Hunt 2004).

Statutory Benefit Results

Figure 1 shows the national average expected TTD benefit relative to the poverty threshold for a family of four. Temporary total claims are the most common wage-loss claims in workers' compensation, accounting for about 66 percent of such claims and 26 percent of wage-loss benefits. (Williams, Reno, and Burton 2004, p.7) Expected wage-replacement benefits are estimated, based upon a common distribution of injuries, and incorporate the specific statutory provisions of each state. These state-by-state estimates are then cumulated in a weighted average to represent the national average benefit. The figure indicates that the expected average weekly benefit for TTD rose from 80 percent of the poverty level in 1972 to about 107 percent of the poverty level for a family of four in 1998. This is certainly progress, but against a very low standard of adequacy.

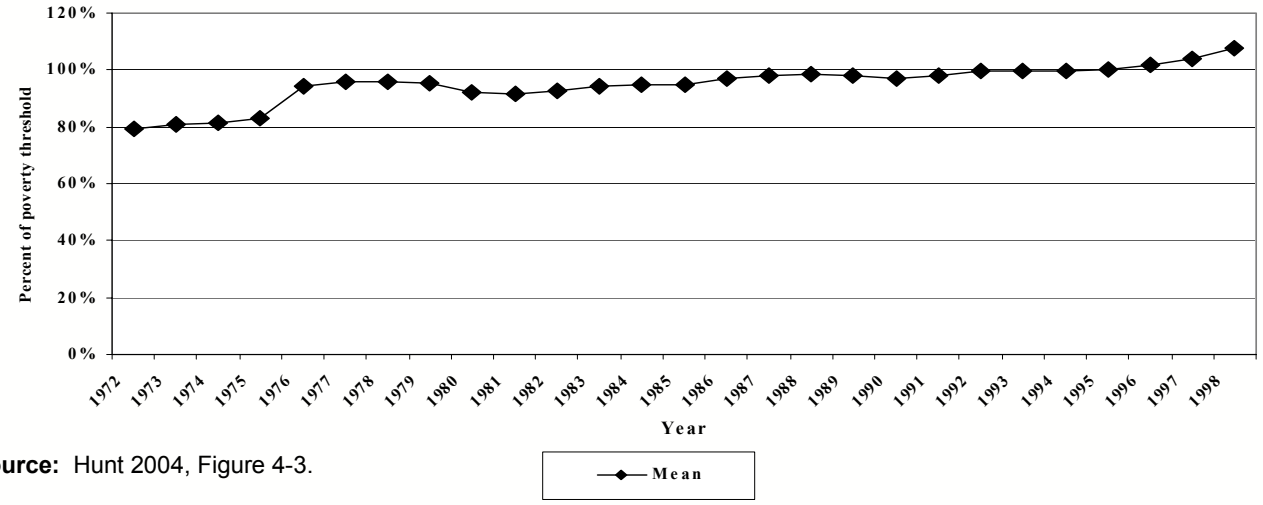
The NASI Study Panel also found that benefits varied widely by jurisdiction. There were 16 states with an average weekly wage-replacement benefit below the poverty line in 1998 while 11 states had average benefits above 120 percent of the poverty line. Of course, not all injured workers were employed full-time at the time of their injury, which would account for some slippage in the average benefit. But this is not a sterling performance against what must be regarded as a very low level of adequacy.

Model Act Results

The second way that the NASI study looked at the issue of adequacy was by comparing benefits in U.S. jurisdictions to the *Model Act (Revised)* of the Council of State Governments. The method is to measure the cost of statutory benefits for a standard distribution of injuries in each workers' compensation jurisdiction, then estimate the cost of benefits as they would be under the *Model Act (Revised)*, and express the state result as a proportion of the Model Act benefit cost. A weighted average of those results across all the states yields an average U.S. workers' compensation benefit relative to the *Model Act (Revised)*.

Figure 2 breaks down the national comparison with the *Model Act (Revised)* by severity of injury or type of claim. The top line of Figure 2 represents TTD benefits.

Figure 1
Average Weekly Benefit for TTD Benefits Relative to the Poverty Threshold, 1972-98



Source: Hunt 2004, Figure 4-3.

Over the entire period, these benefits rose from about 60 percent of the *Model Act (Revised*) to nearly 90 percent. Clearly this represents a substantial improvement in the adequacy of TTD benefits, assuming one accepts the *Model Act (Revised)* as a relevant standard.

The second line in Figure 2 represents permanent partial disability (PPD) benefits. These are benefits paid for permanent impairments that do not completely prevent work for pay. Such claims account for 33 percent of all wage-loss cases, but 62 percent of all wage-loss benefits. (Williams, Reno, and Burton 2004, p. 7) As a proportion of the *Model Act (Revised)*, average PPD benefits in U.S. workers' compensation systems rose from 43 percent to a little bit over 50 percent in the 1970s and then fluctuated through the years with no discernible trend. So, by this standard, PPD benefits would be judged to be inadequate. This is important because of the additional evidence available from the wage-loss studies to be reviewed later in this article.

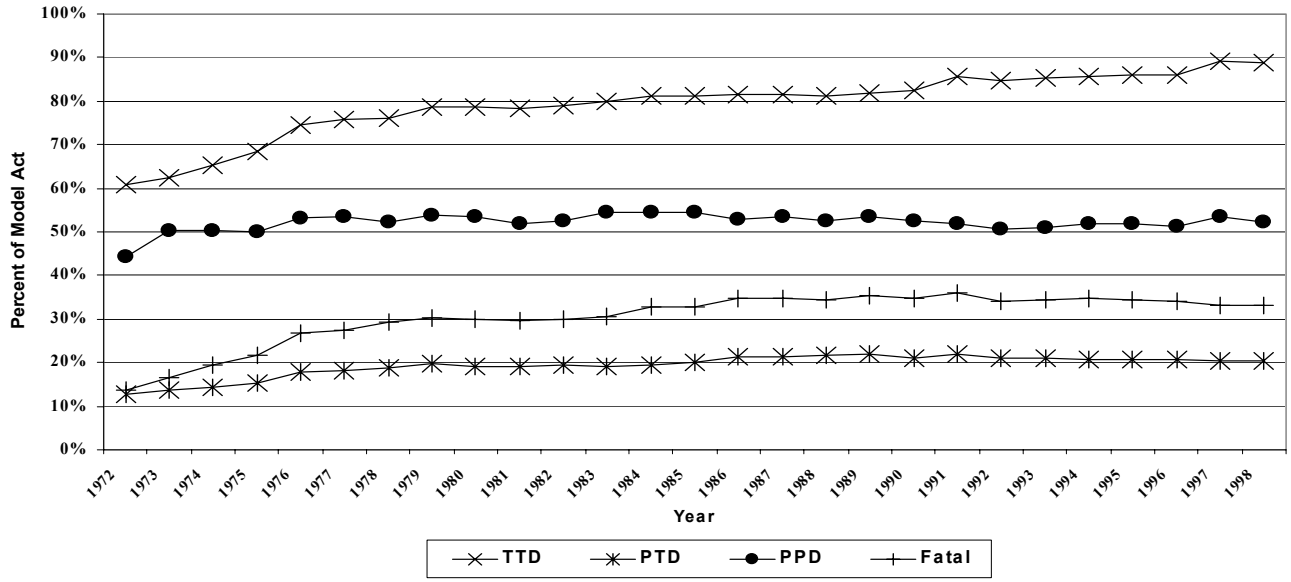
The bottom line in Figure 2 represents permanent total disabilities (PTD), while the second line from the bottom represents fatal claims. PTD and fatal claims together account for 1 percent of all wage-loss claims and 12 percent of all wage-loss costs. (Williams, Reno, and Burton 2004, p. 7) The permanent total benefits are at the lowest benefit level, at about 20 percent of the benefits specified in *the Model Act (Revised*) with no discernible trend since the mid 1970s. Benefits for fatal claims fare somewhat better, rising from 13 percent to 33 percent of *Model Act (Revised)* levels over the 26-year observation period. However, the overall judgment must be that these benefits are inadequate by the standard of the *Model Act (Revised).*

Wage-Loss Studies

The third method reviewed by the NASI Study Panel was wage-loss studies. Berkowitz and Burton initiated this line of research back in the 1970s. They conducted a National Science Foundation funded study of PPD benefits in 10 states. It included the first wage-loss study of workers' compensation benefits in California, Florida, and Wisconsin. (Berkowitz and Burton 1987) By tracking injured worker earnings (from Social Security earnings records) two years before and five years after a compensable injury, and comparing them to workers' compensation benefit payments, they found that workers' compensation benefits replaced an average of 75 percent of lost earnings in Wisconsin, 59 percent in Florida, and 46 percent in California. Wage replacement rates showed great variation by age, by type of injury, and by disability rating. There was also a substantial difference in replacement rates between claims that were contested and those that were not.

There have been two innovations in the more recent wage-loss studies. The first is that these studies have used unemployment insurance earnings data to capture the actual earnings of injured workers both before and after the injury. And second, they have used comparison group methodologies to estimate the lost earnings of workers after the injury. Berkowitz and Burton used hypothetical wage progressions based on age-earnings profiles in California.

Figure 2
Expected Statutory Benefits Relative to the Model Act, by Type of Benefit, 1972-98



Source: Adapted from Hunt 2004, Figure 4-9.

Table 1

Ten-Year Earnings Losses and Replacement Rates for PPD Claimants

	NM	WA	CA	WI	OR
Potential earnings ($)	167,244	250,251	238,262	222,055	197,737
10-Year Losses ($)	34,314	41,220	61,767	49,477	39,202
Total Benefits ($)	15,832	16,734	22,612	14,452	16,636
Proportional wage loss (%)	20	16	25	23	20
Pre-tax replacement rate (%)	**46**	**41**	**37**	**29**	**42**

SOURCE: Adapted from Reville, Boden, Biddle, Mardesich (2001a), p. 50.

Table 1 shows the findings for 10 years of projected earnings losses, workers' compensation benefits, and wage-replacement rates for PPD claimants in five states: New Mexico, Washington, California, Wisconsin, and Oregon. The potential earnings row represents the earnings of the comparison group. That is the estimate of what injured workers would have earned in the absence of injury. The 10-year losses represent the difference between what injured workers actually earned and what the comparison group earned, projected for 10 years after the year of injury.

Of course, the biggest challenge in estimating wage loss is determining what injured workers would have earned if they hadn't been injured. Bob Reville, in particular, has made this a focus of his studies sponsored by the California Commission on Health and Safety and Workers' Compensation. (Peterson et al. 1998; Reville et al. 2001b; Reville et al. 2002) They matched injured workers to comparison workers with similar earnings at the same firms before the injury, and tracked their post-injury earnings using quarterly unemployment insurance earnings data. Thus, they used the actual earnings of the comparison workers to estimate what the earnings of the injured workers would have been in the absence of the injury.

The Boden and Galizzi study of wage-loss in Wisconsin used a slightly different methodology. (Boden and Galizzi 1998, 1999) They used a multiple regression model to estimate lost wages for injured workers as a function of a set of worker characteristics. This method isn't as simple and transparent to policymakers, but probably does a better estimation job and is not subject to the criticism that many injured workers go unmatched, especially at smaller firms.

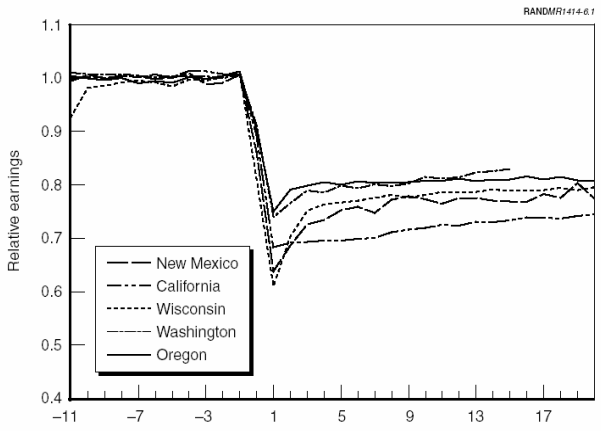
Jeff Biddle of Michigan State University also conducted a wage-loss study in the state of Washington as part of a broader "legislative audit" of workers' compensation for the Washington Legislative Commission. (Biddle 1998) Most recently, data from these studies were all drawn together, and the methods used in the different states carefully harmonized in a study sponsored by the New Mexico Workers' Compensation Administration. This study compared the wage-loss results for PPD claims in five states (Reville et al. 2001a).

The total benefits row shows the average total workers' compensation wage replacement benefits paid to the injured workers. The proportional wage loss represents the 10-year losses as a fraction of the potential earnings. So for instance, in New Mexico, the injured workers on average lost 20 percent of their wages for a 10-year period. Losses were slightly higher in California and Wisconsin and slightly lower in Washington.

The last line of the table shows the pretax replacement rate: workers' compensation benefits paid as a percentage of wage losses. Forty-six percent of the losses were replaced by workers' compensation benefits in New Mexico, 42 percent in Oregon, 41 percent in Washington, 37 percent in California, and 29 percent in Wisconsin. By the standard of two-thirds gross wage replacement, these wage-replacement rates for PPD workers' compensation claims are clearly seriously inadequate. However, it should also be noted that PPD benefits are one of the most contentious areas in workers' compensation programs. Employer advocates argue that two-thirds replacement of gross wage loss is not appropriate for PPD claims, since such claims may involve disputes over etiology, disability causation, or even the existence of disability itself.

Figure 3 provides more detail on what's going on. It shows the earnings of the injured workers relative to the comparison group in each of these five states for roughly three years before the injury and four years after the injury. Before the injury, the earnings tracked

Figure 3
Relative Earnings of PPD Claimants as a Proportion of Comparison Workers



Source: Reville, et al, 2001a, p. 48.

very closely in all states except Wisconsin; injured workers earned the same as the comparison workers. However, in the calendar quarter of the injury, injured worker earnings dropped to between 60 and 75 percent of the comparison worker earnings.

After the injury quarter, earnings of injured workers bounce back; rapidly for two quarters, and then much more slowly. Nineteen quarters (nearly five years) following the injury, aggregate earnings are still only 75 to 80 percent of the comparison group. So nearly five years after the injury, injured workers with PPD claims in these five states are still suffering aggregate wage losses of approximately 20 to 25 percent. Since it could be expected that the bulk of the workers' compensation benefits would have been paid in the first three to four years after injury, the result is a mismatch between wages lost and workers' compensation benefits paid, resulting in inadequate wage replacement.

CONCLUSIONS

The first conclusion that the NASI Study Panel reached is that wage-loss studies are the preferred method to assess the adequacy of workers' compensation benefits. Comparing the outcomes for injured workers to their uninjured cohorts provides a readily understandable labor market context for these questions. However, we need more of these studies; from systems with different methods of assessing disability, different benefit formulae, and different legal environments.

In the limited number of states where such studies have been conducted (five to date), wage-replacement rates have been found to be considerably below those stated in the statutes for permanent partial disabilities. This is evidence of the inadequacy of wage-replacement benefits. However, employer representatives dispute the relevance of the two-thirds gross wage-replacement formula in PPD cases.

We only have two state studies of TTD benefits, which is the benefit received by the bulk of short-term injured workers. These studies, in Wisconsin and Washington, suggest that the adequacy of workers' compensation wage-replacement benefits declines with the duration of disability. It appears that at least a significant minority of extended TTD claimants also experience inadequate wage-replacement benefits. (See Boden and Galizzi 1999; Biddle 1998)

In addition, the analytical method used in the wage-loss studies completed to date implicitly weights workers' compensation cases by their cost. In other words, more expensive claims count for more than less expensive claims. But is the appropriate question, "What proportion of all injured workers' lost wages is replaced?" or is it, "What proportion of injured workers receive adequate wage replacement?" The studies completed to date answer the first question (at least for PPD claims), but do not answer the second.

Nevertheless, the conclusion is that workers' compensation benefits appear to be inadequate using the historical standard of two-thirds gross wage replacement. They also appear to be inadequate when compared to provisions of the *Model Act (Revised),* a statement of "best practice" adopted by the Council of State Governments in 1974. We need additional research to specify which workers and which types of injuries receive inadequate compensation so that policy solutions can be tailored to specific situations. In addition, it is well to remember that there are two approaches to improving the adequacy of wage-replacement compensation. One involves increasing the level of workers' compensation benefits; but the other involves reducing wage losses. With the latter approach, both injured workers and their employers gain.

ENDNOTES

1. The National Commission on State Workmen's Compensation Laws urged the adoption of the 80 percent of net formula in the belief that it would increase the average benefit, partly to compensate for the growth of non-wage benefits since the origin of these programs in the early years of the 20th century. (See Hunt, 2004)

2. See Barth and Niss, 1999, and Barth et al., 2002, for more information on current practices in compensating permanent partial disabilities.

3. This reflects the duration of disability, as well as the severity of injury. The average duration of disability payment for claims with at least seven lost work days is estimated at 80 days, or 16 weeks for 12 states in the CompScope study. (Telles et al., 2003, p. 62)

4. This may be slightly unfair. While four of the five states use two-thirds gross replacement, California and Wisconsin also specify low maximum weekly benefits for PPD. Washington has a unique PPD compensation determination system that is not based upon pre-injury earnings. See Barth and Niss (1999) for a full discussion.

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Workers' Compensation Costs for Employers 1986 to 2004

By John F. Burton, Jr.

The Bureau of Labor Statistics (BLS) recently released information on the employers' costs of workers' compensation in December 2004. Similar information is available for private sector employers for each March between 1986 and 2001, as shown in Tables 1 and 2. The tables also provide information on the employers' costs of workers' compensation for each March between 1991 and 2001 for state and local government employers and for all non-federal employees.

The BLS has published data on the employers' costs of workers' compensation in the private sector, the state and local government sector, and for all non-federal employers on a quarterly basis since March 2002, as shown in Tables 3 and 4. These quarterly data have been used to calculate the annual averages of workers' compensation costs for 2002, 2003, and 2004 included in Tables 3 and 4.

Tables 1 to 4 present information on two measures of the employers' costs of workers' compensation: in costs per hour worked (which is how the BLS reports the data) and in costs as a percentage of payroll (which were calculated for this article). Information on the BLS survey and the methodology used to prepare the information in this article are contained in Appendix A.

ANNUAL DATA

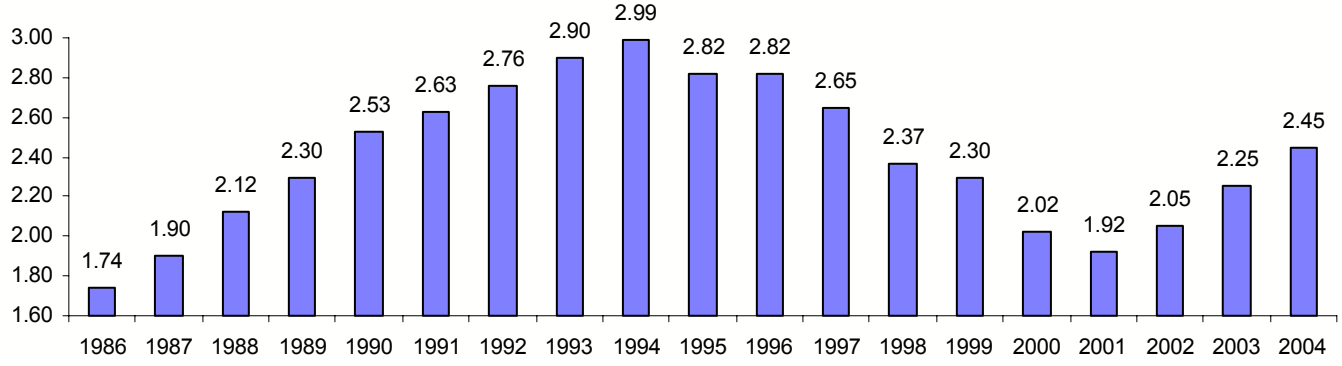
The subsequent analysis uses the BLS March data (from Tables 1 and 2) as the measures of workers' compensation costs through 2001 since those are the only data for those years. For 2002 to 2004, the analysis relies on the annual averages of BLS data (from Tables 3 and 4) as the measure of workers' compensation costs for those years. Since costs have been increasing since March 2002, the annual averages for 2002, 2003, and 2004 exceed the employers' costs during March in those years (as shown in Tables 3 and 4), which means there is a discontinuity between the data through 2001 and the data for the last three years.

Workers' Compensation Costs as a Percent of Payroll

For reasons explicated in the concluding section, I believe the most useful measure of employers' expenditures on workers' compensation is workers' compensation costs as a percent of payroll.

Private Sector Employees. The employers' costs of workers' compensation as a percent of gross earnings (payroll) for private sector employees from 1986 to 2004 are shown in Figure A and in Panel A of Tables 1 to 4. Employers' expenditures on workers' compensation in private industry represented 1.74 percent of payroll in 1986, increased in each of the next eight years until peaking at 2.99 percent of payroll in 1994, and then declined for seven years until reaching 1.92 percent of payroll in 2001. Costs subsequently began to increase, reaching 2.05 percent of payroll in 2002, 2.25 percent of payroll in 2003, and 2.45 percent of payroll in 2004.

Figure A
Workers' Compensation Costs as a Percentage of Gross Earnings, Private Industry Employees, 1986-2004



Source: Tables 1, 2, 3 and 4.
Note: Data for 2002 - 2004 are annual averages; data for earlier years are for March.

Table 1 - Total Remuneration, Wages and Salaries, and Workers' Compensation, March 1986-1993
(In Dollars Per Hours Worked)

	Panel A: Private Industry Employees	**1986**	**1987**	**1988**	**1989**	**1990**	**1991**	**1992**	**1993**
(1)	Total Remuneration	13.25	13.42	13.79	14.28	14.96	15.40	16.14	16.70
(2)	Gross Earnings	10.90	11.08	11.32	11.72	12.24	12.55	13.06	13.43
(3)	Wages and Salaries	9.67	9.83	10.02	10.38	10.84	11.14	11.58	11.90
(4)	Paid Leave	0.93	0.93	0.97	1.00	1.03	1.05	1.09	1.11
(5)	Supplemental Pay	0.30	0.32	0.33	0.34	0.37	0.36	0.39	0.42
(6)	Benefits Other Than Pay	2.36	2.35	2.47	2.56	2.72	2.85	3.07	3.26
(7)	Insurance	0.73	0.72	0.78	0.85	0.92	1.01	1.12	1.19
(8)	Retirement Benefits	0.50	0.48	0.45	0.42	0.45	0.44	0.46	0.48
(9)	Legally Required Benefits	1.11	1.13	1.22	1.27	1.35	1.40	1.47	1.55
(9A)	Workers' Compensation	(0.19)	(0.21)	(0.24)	(0.27)	(0.31)	(0.33)	(0.36)	(0.39)
(10)	Other Benefits	0.02	0.02	0.02	0.02	*	*	0.02	0.04
(11)	Workers' Compensation as Percent of Remuneration	1.43%	1.56%	1.74%	1.89%	2.07%	2.14%	2.23%	2.34%
(12)	Workers' Compensation as Percent of Gross Earnings	1.74%	1.90%	2.12%	2.30%	2.53%	2.63%	2.76%	2.90%

	Panel B: State and Local Employees	**1991**	**1992**	**1993**
(1)	Total Remuneration	22.31	23.49	24.44
(2)	Gross Earnings	17.48	18.40	19.07
(3)	Wages and Salaries	15.52	16.39	17.00
(4)	Paid Leave	1.75	1.80	1.86
(5)	Supplemental Pay	0.21	0.21	0.21
(6)	Benefits Other Than Pay	4.84	5.08	5.36
(7)	Insurance	1.63	1.84	2.02
(8)	Retirement Benefits	1.85	1.82	1.87
(9)	Legally Required Benefits	1.34	1.40	1.44
(9A)	Workers' Compensation	(0.26)	(0.28)	(0.30)
(10)	Other Benefits	0.02	0.02	0.03
(11)	Workers' Compensation as Percent of Remuneration	1.17%	1.19%	1.23%
(12)	Workers' Compensation as Percent of Gross Earnings	1.49%	1.52%	1.57%

	Panel C: All Non-Federal Employees	**1991**	**1992**	**1993**
(1)	Total Remuneration	16.45	17.27	17.88
(2)	Gross Earnings	13.30	13.89	14.29
(3)	Wages and Salaries	11.81	12.33	12.68
(4)	Paid Leave	1.16	1.20	1.22
(5)	Supplemental Pay	0.33	0.36	0.39
(6)	Benefits Other Than Pay	3.16	3.38	3.59
(7)	Insurance	1.10	1.23	1.32
(8)	Retirement Benefits	0.65	0.67	0.70
(9)	Legally Required Benefits	1.39	1.46	1.53
(9A)	Workers' Compensation	(0.32)	(0.35)	(0.38)
(10)	Other Benefits	0.02	0.02	0.04
(11)	Workers' Compensation as Percent of Remuneration	1.95%	2.03%	2.13%
(12)	Workers' Compensation as Percent of Gross Earnings	2.41%	2.52%	2.66%

Notes: See table on page 20.

Sources: Data in rows (1), (3) to (5), and (7) to (10) of Panels A, B, and C:
1986-1990: U.S. Department of Labor, 2000a, Tables 140, 150, 158, 165, 169
1991-1993: U.S. Department of Labor, 2000a, Tables 1, 3, 5, 17, 19, 21, 33, 35, 37, 49, 51, 53, 65, 67, 69, 81, 83, 85, 97, 99, 101, 112, 114, 116, 126, 128, 130

Table 2 - Total Remuneration, Wages and Salaries, and Workers' Compensation, March 1994-2001
(In Dollars Per Hours Worked)

	Panel A: Private Industry Employees	1994	1995	1996	1997	1998	1999	2000	2001
(1)	Total Remuneration	17.08	17.10	17.49	17.97	18.50	19.00	19.85	20.81
(2)	Gross Earnings	13.69	13.81	14.19	14.69	15.19	15.62	16.37	17.16
(3)	Wages and Salaries	12.14	12.25	12.58	13.04	13.47	13.87	14.49	15.18
(4)	Paid Leave	1.11	1.09	1.12	1.14	1.16	1.20	1.28	1.37
(5)	Supplemental Pay	0.44	0.47	0.49	0.51	0.56	0.55	0.60	0.61
(6)	Benefits Other Than Pay	3.39	3.29	3.31	3.29	3.31	3.38	3.48	3.65
(7)	Insurance	1.23	1.15	1.14	1.09	1.10	1.13	1.19	1.28
(8)	Retirement Benefits	0.52	0.52	0.55	0.55	0.55	0.57	0.59	0.62
(9)	Legally Required Benefits	1.60	1.59	1.59	1.62	1.63	1.65	1.67	1.73
(9A)	Workers' Compensation	(0.41)	(0.39)	(0.40)	(0.39)	(0.36)	(0.36)	(0.33)	(0.33)
(10)	Other Benefits	0.04	0.03	0.03	0.03	0.03	0.03	0.03	0.02
(11)	Workers' Compensation as Percent of Remuneration	2.40%	2.28%	2.29%	2.17%	1.95%	1.89%	1.66%	1.59%
(12)	Workers' Compensation as Percent of Gross Earnings	2.99%	2.82%	2.82%	2.65%	2.37%	2.30%	2.02%	1.92%

	Panel B: State and Local Employees	1994	1995	1996	1997	1998	1999	2000	2001
(1)	Total Remuneration	25.27	24.86	25.73	26.58	27.28	28.00	29.05	30.06
(2)	Gross Earnings	19.71	19.48	20.16	20.90	21.53	22.19	23.08	23.94
(3)	Wages and Salaries	17.57	17.31	17.95	18.61	19.19	19.78	20.57	21.34
(4)	Paid Leave	1.94	1.95	1.99	2.06	2.11	2.17	2.26	2.34
(5)	Supplemental Pay	0.20	0.22	0.22	0.23	0.23	0.24	0.25	0.26
(6)	Benefits Other Than Pay	5.57	5.38	5.56	5.69	5.76	5.81	5.97	6.13
(7)	Insurance	2.15	2.03	2.07	2.09	2.15	2.22	2.38	2.56
(8)	Retirement Benefits	1.90	1.78	1.90	1.95	1.94	1.91	1.84	1.73
(9)	Legally Required Benefits	1.49	1.55	1.56	1.61	1.63	1.64	1.70	1.78
(9A)	Workers' Compensation	(0.31)	(0.31)	(0.31)	(0.30)	(0.30)	(0.30)	(0.31)	(0.34)
(10)	Other Benefits	0.03	0.02	0.03	0.04	0.04	0.04	0.05	0.06
(11)	Workers' Compensation as Percent of Remuneration	1.23%	1.25%	1.20%	1.13%	1.10%	1.07%	1.07%	1.13%
(12)	Workers' Compensation as Percent of Gross Earnings	1.57%	1.59%	1.54%	1.44%	1.39%	1.35%	1.34%	1.42%

	Panel C: All Non-Federal Employees	1994	1995	1996	1997	1998	1999	2000	2001
(1)	Total Remuneration	18.30	18.21	18.68	19.22	19.76	20.29	21.16	22.15
(2)	Gross Earnings	14.58	14.62	15.05	15.59	16.11	16.57	17.33	18.14
(3)	Wages and Salaries	12.95	12.98	13.36	13.85	14.30	14.72	15.36	16.07
(4)	Paid Leave	1.23	1.21	1.24	1.27	1.30	1.34	1.42	1.51
(5)	Supplemental Pay	0.40	0.43	0.45	0.47	0.51	0.51	0.55	0.56
(6)	Benefits Other Than Pay	3.72	3.59	3.64	3.63	3.66	3.73	3.83	4.00
(7)	Insurance	1.37	1.28	1.27	1.23	1.25	1.29	1.36	1.46
(8)	Retirement Benefits	0.73	0.70	0.75	0.75	0.75	0.76	0.77	0.78
(9)	Legally Required Benefits	1.58	1.58	1.59	1.62	1.63	1.65	1.67	1.73
(9A)	Workers' Compensation	(0.39)	(0.38)	(0.38)	(0.38)	(0.35)	(0.35)	(0.33)	(0.34)
(10)	Other Benefits	0.04	0.03	0.03	0.03	0.03	0.03	0.03	0.03
(11)	Workers' Compensation as Percent of Remuneration	2.13%	2.09%	2.03%	1.98%	1.77%	1.72%	1.56%	1.53%
(12)	Workers' Compensation as Percent of Gross Earnings	2.67%	2.60%	2.52%	2.44%	2.17%	2.11%	1.90%	1.87%

Notes: See table on page 20.

Sources: Data in rows (1), (3) to (5), and (7) to (10) of Panels A, B, and C:
1996-1999: U.S. Department of Labor, 2000a, Tables 1, 3, 5, 17, 19, 21, 33, 35, 37, 49, 51, 53, 65, 67, 69, 81, 83, 85, 97, 99, 101, 112, 114, 116, 126, 128, 130
2000: U.S. Department of Labor, 2000b, Tables 1, 3, and 5.
2001: U.S. Department of Labor, 2001, Tables 1, 3, and 5.

Table 3 - Total Remuneration, Wages and Salaries, and Workers' Compensation, Quarterly March 2002-December 2003
(In Dollars Per Hours Worked)

Panel A: Private Industry Employees		March 2002	June 2002	Sept. 2002	Dec. 2002	2002 Average	March 2003	June 2003	Sept. 2003	Dec. 2003	2003 Average
(1)	Total Remuneration	21.71	21.83	22.01	22.14	21.92	22.37	22.61	22.84	22.92	22.69
(2)	Gross Earnings	17.86	17.94	18.05	18.16	18.00	18.26	18.41	18.59	18.61	18.47
(3)	Wages and Salaries	15.80	15.90	16.00	16.08	15.95	16.15	16.31	16.46	16.49	16.35
(4)	Paid Leave	1.44	1.44	1.45	1.47	1.45	1.47	1.46	1.48	1.48	1.47
(5)	Supplemental Pay	0.62	0.60	0.60	0.61	0.61	0.64	0.64	0.65	0.64	0.64
(6)	Benefits Other Than Pay	3.86	3.89	3.95	3.98	3.92	4.11	4.20	4.25	4.31	4.22
(7)	Insurance	1.40	1.42	1.45	1.46	1.43	1.52	1.57	1.59	1.62	1.58
(8)	Retirement Benefits	0.63	0.62	0.63	0.64	0.63	0.67	0.67	0.68	0.70	0.68
(9)	Legally Required Benefits	1.80	1.82	1.84	1.85	1.83	1.89	1.93	1.95	1.96	1.93
(9A)	Workers' Compensation	(0.35)	(0.37)	(0.38)	(0.38)	(0.37)	(0.40)	(0.41)	(0.42)	(0.43)	(0.42)
(10)	Other Benefits	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
(11)	Workers' Compensation as Percent of Remuneration	1.61%	1.69%	1.73%	1.72%	1.69%	1.79%	1.81%	1.84%	1.88%	1.83%
(12)	Workers' Compensation as Percent of Gross Earnings	1.96%	2.06%	2.11%	2.09%	2.05%	2.19%	2.23%	2.26%	2.31%	2.25%

Panel B: State and Local Employees		March 2002	June 2002	Sept. 2002	Dec. 2002	2002 Average	March 2003	June 2003	Sept. 2003	Dec. 2003	2003 Average
(1)	Total Remuneration	31.29	31.20	31.89	32.32	31.68	32.62	32.99	33.62	33.91	33.29
(2)	Gross Earnings	24.83	24.72	25.17	25.46	25.05	25.66	25.96	26.26	26.43	26.08
(3)	Wages and Salaries	22.14	22.00	22.40	22.68	22.31	22.85	23.14	23.42	23.56	23.24
(4)	Paid Leave	2.43	2.45	2.49	2.49	2.47	2.51	2.52	2.55	2.58	2.54
(5)	Supplemental Pay	0.26	0.27	0.28	0.29	0.28	0.30	0.30	0.29	0.29	0.30
(6)	Benefits Other Than Pay	6.46	6.47	6.72	6.85	6.63	6.96	7.02	7.36	7.48	7.21
(7)	Insurance	2.82	2.85	2.96	3.02	2.91	3.12	3.16	3.32	3.39	3.25
(8)	Retirement Benefits	1.74	1.72	1.81	1.84	1.78	1.85	1.86	1.99	2.03	1.93
(9)	Legally Required Benefits	1.84	1.84	1.89	1.92	1.87	1.93	1.94	1.98	1.99	1.96
(9A)	Workers' Compensation	(0.34)	(0.35)	(0.36)	(0.37)	(0.36)	(0.36)	(0.37)	(0.38)	(0.38)	(0.37)
(10)	Other Benefits	0.06	0.06	0.06	0.07	0.06	0.06	0.06	0.07	0.07	0.07
(11)	Workers' Compensation as Percent of Remuneration	1.09%	1.12%	1.13%	1.14%	1.12%	1.10%	1.12%	1.13%	1.12%	1.12%
(12)	Workers' Compensation as Percent of Gross Earnings	1.37%	1.42%	1.43%	1.45%	1.42%	1.40%	1.43%	1.45%	1.44%	1.43%

Panel C: All Non-Federal Employees		March 2002	June 2002	Sept. 2002	Dec. 2002	2002 Average	March 2003	June 2003	Sept. 2003	Dec. 2003	2003 Average
(1)	Total Remuneration	23.15	23.20	23.44	23.66	23.36	23.93	24.19	24.48	24.59	24.30
(2)	Gross Earnings	18.91	18.92	19.09	19.24	19.04	19.39	19.57	19.76	19.80	19.63
(3)	Wages and Salaries	16.76	16.78	16.93	17.06	16.88	17.17	17.35	17.52	17.56	17.40
(4)	Paid Leave	1.59	1.59	1.60	1.62	1.60	1.63	1.63	1.64	1.65	1.64
(5)	Supplemental Pay	0.56	0.55	0.56	0.56	0.56	0.59	0.59	0.60	0.59	0.59
(6)	Benefits Other Than Pay	4.24	4.26	4.35	4.41	4.32	4.54	4.64	4.73	4.78	4.67
(7)	Insurance	1.61	1.63	1.67	1.69	1.65	1.77	1.81	1.86	1.88	1.83
(8)	Retirement Benefits	0.80	0.78	0.80	0.82	0.80	0.85	0.86	0.88	0.90	0.87
(9)	Legally Required Benefits	1.80	1.82	1.85	1.86	1.83	1.89	1.93	1.95	1.96	1.93
(9A)	Workers' Compensation	(0.35)	(0.36)	(0.38)	(0.38)	(0.37)	(0.39)	(0.41)	(0.42)	(0.42)	(0.41)
(10)	Other Benefits	0.03	0.03	0.03	0.04	0.03	0.03	0.04	0.04	0.04	0.04
(11)	Workers' Compensation as Percent of Remuneration	1.51%	1.55%	1.62%	1.61%	1.57%	1.63%	1.69%	1.72%	1.71%	1.69%
(12)	Workers' Compensation as Percent of Gross Earnings	1.85%	1.90%	1.99%	1.98%	1.93%	2.01%	2.10%	2.13%	2.12%	2.09%

Notes: See table on page 20.

Sources: Data in rows (1), (3) to (5), and (7) to (10) of Panels A, B, and C:

March 2002: U.S. Dept. of Labor, 2002a, Tables 1, 3, and 5.
June 2002: U.S. Dept. of Labor, 2002b, Tables 1, 3, and 5.
September 2002: U.S. Dept. of Labor, 2002c, Tables 1, 3, and 5.
December 2002: U.S. Dept. of Labor, 2003a, Tables 1, 3, and 5.
March 2003: U.S. Dept. of Labor, 2003b, Tables 1, 3, and 5.
June 2003: U.S. Dept. of Labor, 2003c, Tables 1, 3, and 5.
September 2003: U.S. Dept. of Labor, 2003d, Tables 1, 3, and 5.
December 2003: U.S. Dept. of Labor, 2004a, Tables 1, 3, and 5.

Table 4 - Total Remuneration, Wages and Salaries, and Workers' Compensation
Quarterly March 2004-December 2004
(In Dollars Per Hours Worked)

	Panel A: Private Industry Employees	March 2004	June 2004	Sept. 2004	Dec. 2004	2004 Average
(1)	Total Remuneration	23.29	23.41	23.76	23.90	23.59
(2)	Gross Earnings	18.80	18.84	19.13	19.21	19.00
(3)	Wages and Salaries	16.64	16.71	16.96	17.02	16.83
(4)	Paid Leave	1.50	1.49	1.52	1.53	1.51
(5)	Supplemental Pay	0.66	0.64	0.65	0.66	0.65
(6)	Benefits Other Than Pay	4.50	4.56	4.64	4.70	4.60
(7)	Insurance	1.65	1.66	1.68	1.70	1.67
(8)	Retirement Benefits	0.80	0.82	0.85	0.88	0.84
(9)	Legally Required Benefits	2.01	2.04	2.07	2.08	2.05
(9A)	Workers' Compensation	(0.45)	(0.47)	(0.47)	(0.47)	(0.47)
(10)	Other Benefits	0.04	0.04	0.04	0.04	0.04
(11)	Workers' Compensation as Percent of Remuneration	1.93%	2.01%	1.98%	1.97%	1.97%
(12)	Workers' Compensation as Percent of Gross Earnings	2.39%	2.49%	2.46%	2.45%	2.45%

	Panel B: State and Local Employees	March 2004	June 2004	Sept. 2004	Dec. 2004	2004 Average
(1)	Total Remuneration	34.21	34.13	34.72	35.16	34.56
(2)	Gross Earnings	26.59	26.44	26.78	27.07	26.72
(3)	Wages and Salaries	23.69	23.52	23.83	24.10	23.79
(4)	Paid Leave	2.60	2.61	2.64	2.66	2.63
(5)	Supplemental Pay	0.30	0.31	0.31	0.31	0.31
(6)	Benefits Other Than Pay	7.62	7.68	7.94	8.07	7.83
(7)	Insurance	3.48	3.51	3.62	3.68	3.57
(8)	Retirement Benefits	2.07	2.12	2.23	2.28	2.18
(9)	Legally Required Benefits	2.02	2.00	2.04	2.06	2.03
(9A)	Workers' Compensation	(0.39)	(0.40)	(0.41)	(0.41)	(0.40)
(10)	Other Benefits	0.05	0.05	0.05	0.05	0.05
(11)	Workers' Compensation as Percent of Remuneration	1.14%	1.17%	1.18%	1.17%	1.16%
(12)	Workers' Compensation as Percent of Gross Earnings	1.47%	1.51%	1.53%	1.51%	1.51%

	Panel C: All Non-Federal Employees	March 2004	June 2004	Sept. 2004	Dec. 2004	2004 Average
(1)	Total Remuneration	24.95	24.96	25.36	25.57	25.21
(2)	Gross Earnings	19.97	19.95	20.24	20.37	20.13
(3)	Wages and Salaries	17.71	17.70	17.96	18.07	17.86
(4)	Paid Leave	1.66	1.66	1.68	1.70	1.68
(5)	Supplemental Pay	0.60	0.59	0.60	0.60	0.60
(6)	Benefits Other Than Pay	4.97	5.01	5.11	5.18	5.07
(7)	Insurance	1.93	1.93	1.96	1.99	1.95
(8)	Retirement Benefits	0.99	1.01	1.05	1.08	1.03
(9)	Legally Required Benefits	2.01	2.03	2.06	2.07	2.04
(9A)	Workers' Compensation	(0.44)	(0.46)	(0.46)	(0.46)	(0.46)
(10)	Other Benefits	0.04	0.04	0.04	0.04	0.04
(11)	Workers' Compensation as Percent of Remuneration	1.76%	1.84%	1.81%	1.80%	1.80%
(12)	Workers' Compensation as Percent of Gross Earnings	2.20%	2.31%	2.27%	2.26%	2.26%

Notes: See table on page 20.

Sources: Data in rows (1), (3) to (5), and (7) to (10) of Panels A, B, and C:
March, June, and Sept. 2004: U.S. Department of Labor, 2004b, Tables 1, 5, and 9.
December 2004: U.S. Department of Labor, 2005, Tables 1, 3, and 5.

Notes for Tables 1 - 4

Notes: * = $0.01 or less

(1) Table 1 and the text of this article use the term "remuneration" in place of the term "compensation" that is used in the BLS publications, and use the term "All non-federal Employees" in place of the term "Civilian workers'" that is used in the BLS publications.
(2) Total remuneration (row 1) = gross earnings (row 2) + benefits other than pay (row 6).
(3) Gross earnings (row 2) = wages and salaries (row 3) + paid leave (row 4) + supplemental pay (row 5).
(4) Benefits other than pay (row 6) = insurance (row 7) + retirement benefits (row 8) + legally required benefits (row 9) + other benefits (row 10).
(5) Workers' compensation (row 9A) is one of the legally required benefits (row 9).
(6) Workers' compensation as percent of remuneration (row 11) = workers' compensation (row 9A)/total remuneration (row 1).
(7) Workers' compensation as percent of gross earnings (row 12) = workers' compensation (row 9A)/gross earnings (row 12).
(8) Results in rows (2), (6), (11), and (12) were calculated by Florence Blum and John F. Burton, Jr.

State and Local Government Employees. The employers' costs of workers' compensation as a percent of payroll for employees in the state and local government sector from 1991 to 2004 are shown in Figure B and Panel B of Tables 1 to 4. This sector's workers' compensation costs started at 1.49 percent of payroll in 1991, peaked in 1995 at 1.59 percent of payroll, dropped to 1.34 percent of payroll in 2000, rebounded to 1.42 percent of payroll in 2001 and 2002, and increased to 1.43 percent of payroll in 2003 and 1.51 percent of payroll in 2004.

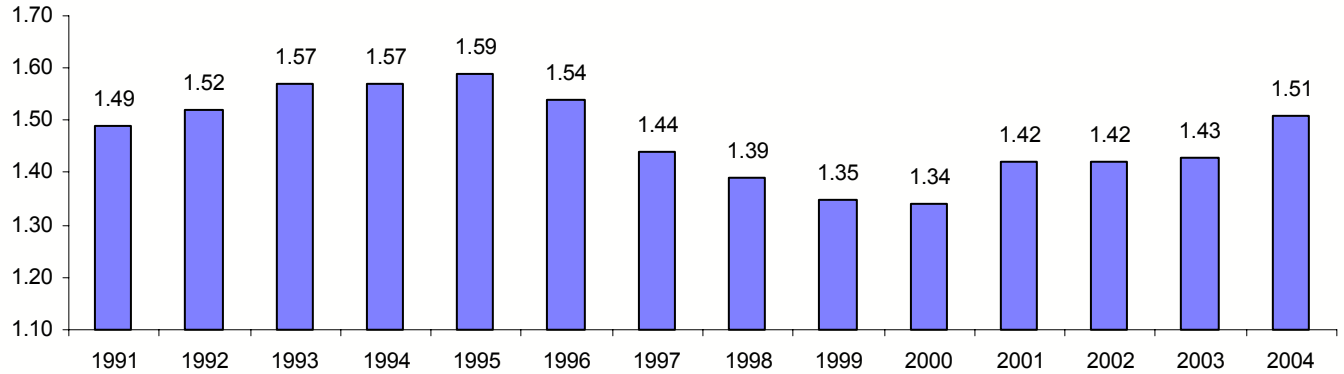
All Non-Federal Employees. Workers' compensation costs for 1991 to 2004 for all non-federal employees, a category that includes private industry employees along with state and local government employees, are presented in Figure C and in Panel C of Tables 1 to 4. Workers' compensation costs for employers of all non-federal employees represented 2.41 percent of payroll in 1991, increased to a peak of 2.67 percent in 1994, declined from 1994 to 2001, when it was 1.87 percent of payroll, and then increased for three years to 2.26 percent of payroll in 2004.

Costs Per Hour Worked

An alternative measure of the employers' costs of workers' compensation is employers' expenditures on the program in dollars per hour worked.

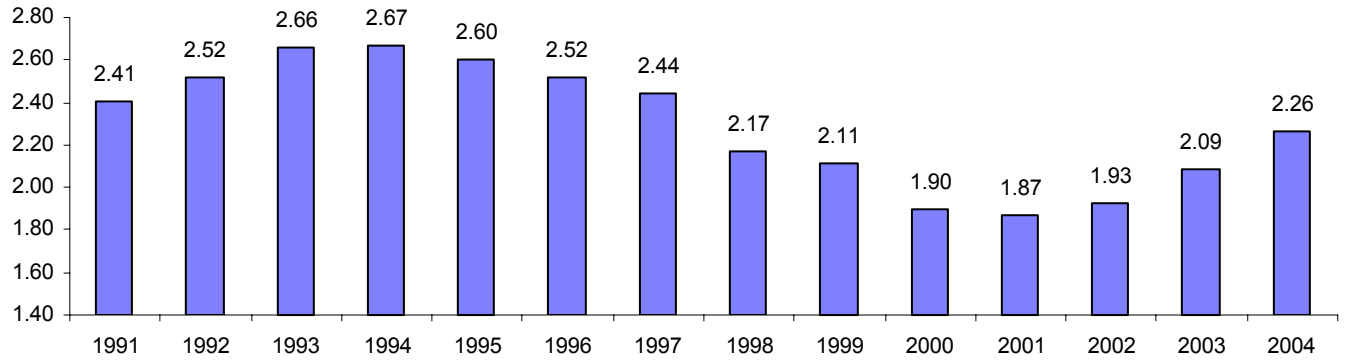
Private Sector Employees. The employers' costs of workers' compensation in dollars per hour worked for private sector workers from 1986 to 2004 are shown in Figure D and Panel A of Tables 1 to 4. Using this measure of employers' costs, the costs in the private sector began at $0.19 per hour in 1986, increased to $0.41 per hour in 1994, declined in most years until reaching $0.33 per hour in 2000 and 2001, and then increased to $0.37 per hour in 2002, $0.42 per hour in 2003, and $0.47 per hour in 2004.

Figure B
Workers' Compensation Costs as a Percentage of Gross Earnings, State and Local Government Employees, 1991-2004



Source: Tables 1, 2, 3 and 4.
Note: Data for 2002 - 2004 are annual averages; data for earlier years are for March.

Figure C
Workers' Compensation Costs as a Percentage of Gross Earnings, All Non-Federal Employees, 1991-2004



Source: Tables 1, 2, 3 and 4.
Note: Data for 2002 - 2004 are annual averages; data for earlier years are for March.

State and Local Government Employees. The employers' costs of workers' compensation in dollars per hour worked for workers in the state and local government sector from 1991 to 2004 are shown in Figures E and Panel B of Tables 1 to 4. The employers' costs of workers' compensation per hour worked in the state and local government sector were $0.26 in 1991 (the first year with data), increased to $0.31 in 1994, fluctuated in a narrow band between $0.30 and $0.31 per hour from 1994 to 2000, and then increase for four years until costs were $0.40 per hour worked in 2004.

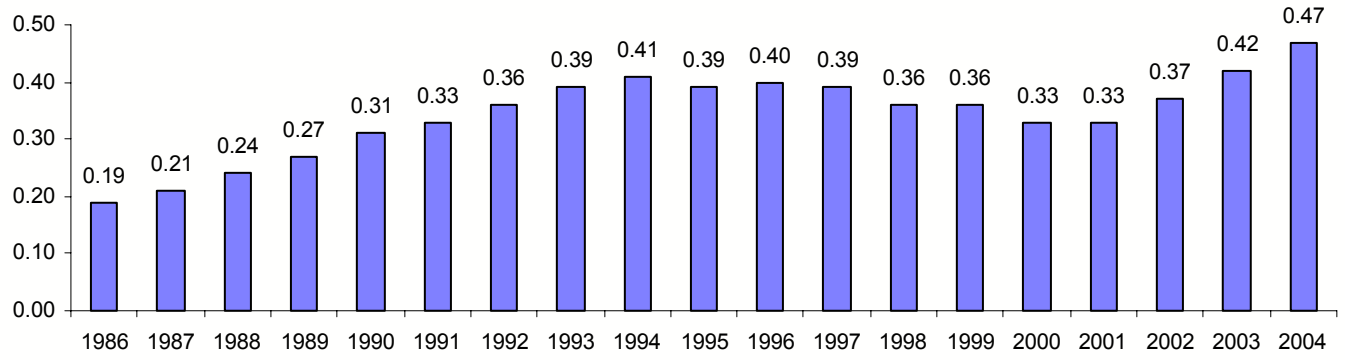
All Non-Federal Employees. The employers' costs of workers' compensation in dollars per hour worked for all non-federal government employees from 1991 to 2004 are shown in Figure F and Panel C of Tables to 4. Workers' compensation costs per hour worked for all non-federal government employees were $0.32 in 1991 (the first year with data), increased to $0.39 in 1994, declined to $0.33 in 2000, and then increased significantly to $0.37 in 2002, $0.41 in 2003, and $0.46 per hour worked in 2004.

QUARTERLY DATA

Workers' Compensation Costs as Percent of Payroll

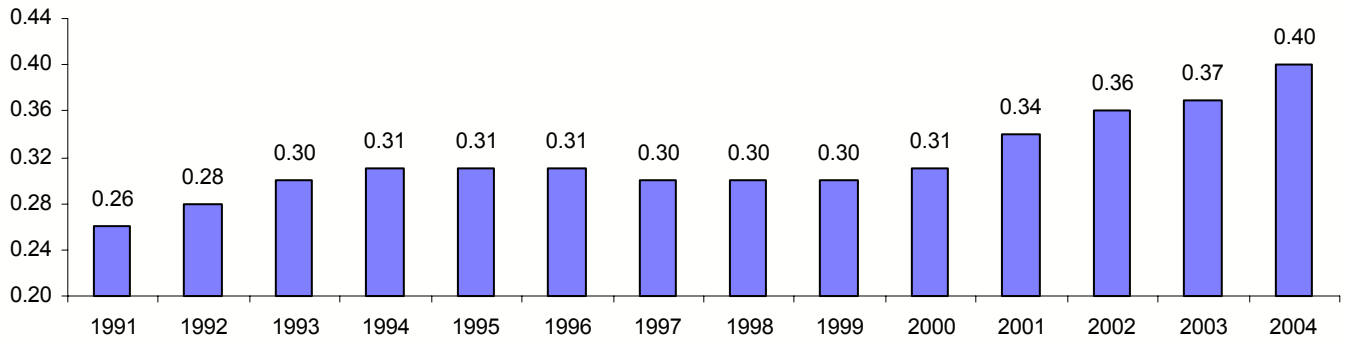
Private sector employees. The trend towards higher workers' compensation costs in the private sector since March 2002 is further documented in Figure G and Panel A of Tables 3 and 4, which present information on the 12 quarters of data available under the new BLS quarterly publication schedule. The employers'

Figure D
Workers' Compensation Costs for Private Industry Employees, 1986-2004 (In Dollars per Hour Worked)



Source: Tables 1, 2, 3 and 4.
Note: Data for 2002 - 2004 are annual averages; data for earlier years are for March.

Figure E
Workers' Compensation Costs for State and Local Government Employees, 1991-2004 (In Dollars per Hour Worked)



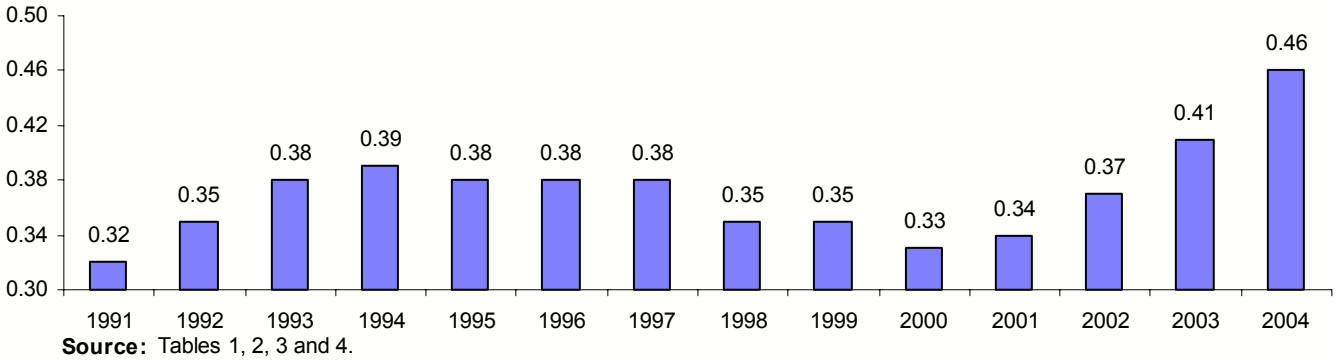
Source: Tables 1, 2, 3 and 4.
Note: Data for 2002 - 2004 are annual averages; data for earlier years are for March.

costs of 1.96 percent in March 2002 increased until September 2002, dropped slightly in December 2002, and subsequently resumed an increase in every quarter until June 2004, when costs represented 2.49 percent of payroll. Costs then dropped in the last two quarters of 2004, reaching 2.45 percent of payroll in December 2004.

State and Local Government Employees. The fluctuations in workers' compensation costs in the state and local sector in recent years are evident in the 12 quarters of data available included in Figure H and Panel B of Tables 3 and 4. The employers' costs increased from 1.37 percent of payroll in March 2002 to a peak of 1.45 percent of payroll in December 2002, dropped to 1.40 percent of payroll in March 2003, and then matched the previous peak of 1.45 percent of payroll in September 2003, before declining again to 1.44 percent of payroll in December 2003. Cost in the sector then increased for three quarters, reaching 1.53 percent of payroll in September 2004, followed by a decline to 1.51 percent of payroll in December 2004.

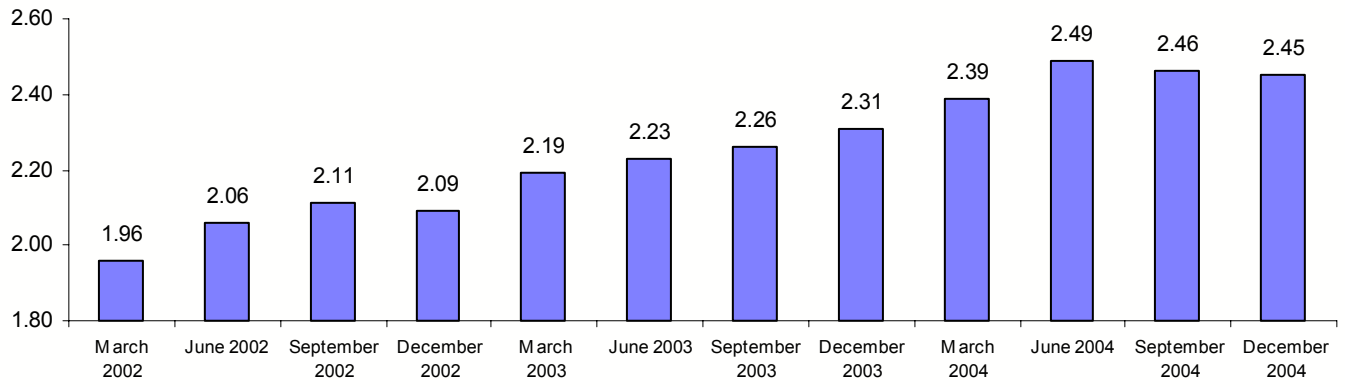
All Non-federal Employees. A general trend towards higher workers' compensation costs for all non-federal employers between 2002 and mid-2004 is shown in the data in Figure I and in Panel C of Tables 3 and 4. The employers' costs of 1.85 percent of payroll in March 2002, increased to 1.99 percent of payroll in September 2002, dropped slightly to 1.98 percent of payroll in December 2002, and then increased during the first three quarters of 2003, reaching 2.13 percent of payroll in September 2003, before dropping to 2.12 percent of payroll in December 2003. Costs then in-

Figure F
Workers' Compensation Costs for All Non-Federal Employees, 1991-2004 (In Dollars per Hour Worked)



Source: Tables 1, 2, 3 and 4.
Note: Data for 2002 - 2004 are annual averages; data for earlier years are for March.

Figure G
Workers' Compensation Costs as a Percentage of Gross Earnings, Private Industry Employees, March 2002 - December 2004



Source: Tables 3 and 4.

creased for two quarters before peaking at 2.31 percent of payroll in June 2004, followed by two quarters of decline in costs through December 2004, when workers' compensation costs were 2.26 percent of payroll.

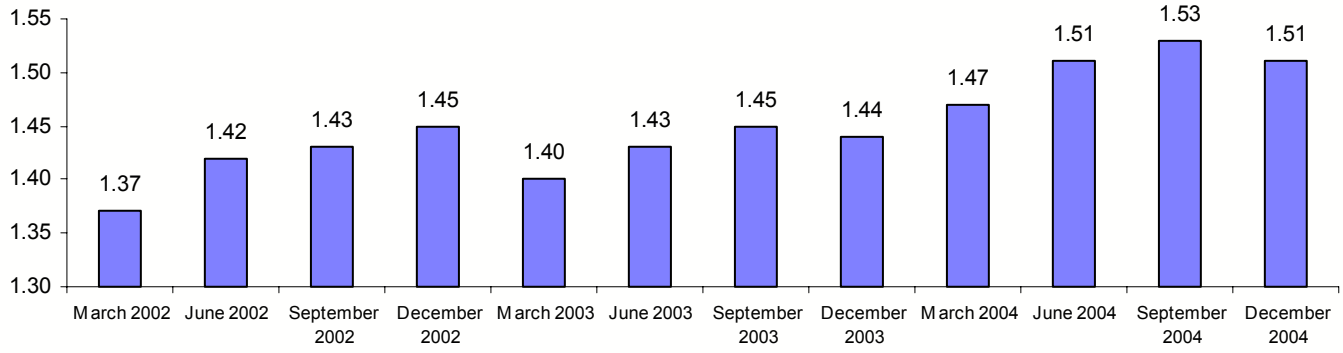
Workers' Compensation Costs per Hour Worked

Private Sector Employees. The quarterly data indicate that private sector employers expended $0.35 per hour on workers' compensation in March 2002 and that these expenditures increased almost every quarter until reaching $0.47 per hour in June 2004 (Figure J and Panel A of Tables 3 and 4). The June 2004 figure started a plateau, with costs remaining at $0.47 per hour worked through December 2004.

State and Local Government Employees. The quarterly data indicate that state and local government employers expended $0.34 per hour on workers' compensation in March 2002 and that these expenditures fluctuated between $0.36 and $0.38 per hour between September 2002 and December 2003 (Figure K and Panel B of Tables 3 and 4). Costs then increased during 2004, reaching $0.41 per hour worked in September and December 2004.

All Non-Federal Employees. The quarterly data indicate that state and local government employers expended $0.35 per hour on workers' compensation in March 2002 and that these expenditures increased in most quarters until they reached $0.46 per hour worked in June 2004, a figure that persisted into September and December 2004 (Figure L and Panel C of Tables 3 and 4).

Figure H
Workers' Compensation Costs as a Percentage of Gross Earnings, State and Local Employees, March 2002 - December 2004



Source: Tables 3 and 4.

Table 5 - Employers' Cost of Workers' Compensation as Percent of Gross Earnings (Payroll): Increases Since March 2002

Panel A: Private Industry Employees

	Employers' Costs as % of Payroll (1)	Cumulative Increase Since March 2002 (2)	Increase Over Twelve Months (3)
March 2002	1.96		
June 2002	2.06	5.1%	
September 2002	2.11	7.7%	
December 2002	2.09	6.6%	
March 2003	2.19	11.7%	11.7%
June 2003	2.23	13.8%	8.3%
September 2003	2.26	15.3%	7.1%
December 2003	2.31	17.9%	10.5%
March 2004	2.39	21.9%	9.1%
June 2004	2.49	27.0%	11.7%
September 2004	2.46	25.5%	8.8%
December 2004	2.45	25.0%	6.1%

Panel B: State and Local Employees

	Employers' Costs as % of Payroll (1)	Cumulative Increase Since March 2002 (2)	Increase Over Twelve Months (3)
March 2002	1.37		
June 2002	1.42	3.6%	
September 2002	1.43	4.4%	
December 2002	1.45	5.8%	
March 2003	1.40	2.2%	2.2%
June 2003	1.43	4.4%	0.7%
September 2003	1.45	5.8%	1.4%
December 2003	1.44	5.1%	-0.7%
March 2004	1.47	7.3%	5.0%
June 2004	1.51	10.2%	5.6%
September 2004	1.53	11.7%	5.5%
December 2004	1.51	10.2%	4.9%

Panel C: All Non-Federal Employees

	Employers' Costs as % of Payroll (1)	Cumulative Increase Since March 2002 (2)	Increase Over Twelve Months (3)
March 2002	1.85		
June 2002	1.90	2.7%	
September 2002	1.99	7.6%	
December 2002	1.98	7.0%	
March 2003	2.01	8.6%	8.6%
June 2003	2.10	13.5%	10.5%
September 2003	2.13	15.1%	7.0%
December 2003	2.12	14.6%	7.1%
March 2004	2.20	18.9%	9.5%
June 2004	2.31	24.9%	10.0%
September 2004	2.27	22.7%	6.6%
December 2004	2.26	22.2%	6.6%

Source: Tables 3 and 4.

RECENT INCREASES IN WORKERS' COMPENSATION COSTS

The most comprehensive set of employers represented in the BLS survey are those employing all non-federal employees. For those employers, the low point for employers' costs as a percent of payroll occurred in March 2002, when the costs represented 1.85 percent of payroll. Tables 5 and 6 indicate the increases in workers' compensation costs since March 2002.

Employers' Costs as a Percent of Payroll

Private Sector Employees. The employers' costs of workers' compensation as a percent of payroll increased from 1.96 percent in March 2002 to 2.45 percent of payroll in December 2004 (Figure G and Panel A, Column (1) of Table 5). This represents a cumulative increase of costs of 25.0 percent over the twelve quarters (Table 5, Panel A, column (2)). The quarterly data can also be used to calculate annual rates of increase in workers' compensation costs over the preceding year. For example, private sector employers' costs were 1.96 percent of payroll in March 2002 and 2.19 percent of payroll in March 2003, which represents an 11.7 percent increase in costs over the twelve months (Figure M and Table 5, Panel A, Column (3)). The data indicate that the annual rate of increase in the employers' costs of workers' compensation in the private sector fluctuated during 2004, first accelerating from the first quarter to the second quarter and then slowing in the final two quarters of 2004. In December 2004, the employers' costs of workers' compensation as a percent of payroll was up only 6.1 percent over twelve months.

State and Local Employees. The employers' costs of workers' compensation as a percent of payroll increased from 1.37 percent of payroll in March 2002 to 1.51 percent of payroll in December 2004 (Figure H and Table 5, Panel B, Column (1)). This represents a cumulative increase in costs of 10.2 percent over twelve quarters (Table 5, Panel B, Column (2)). The quarterly data can also be used to calculate annual rates

Table 6 - Employers' Cost of Workers' Compensation in Dollars Per Hours Worked: Increases Since March 2002

Panel A: Private Industry Employees

	Employers' Costs in Dollars (1)	Cumulative Increase Since March 2002 (2)	Increase Over Twelve Months (3)
March 2002	0.35		
June 2002	0.37	5.7%	
September 2002	0.38	8.6%	
December 2002	0.38	8.6%	
March 2003	0.40	14.3%	14.3%
June 2003	0.41	17.1%	10.8%
September 2003	0.42	20.0%	10.5%
December 2003	0.43	22.9%	13.2%
March 2004	0.45	28.6%	12.5%
June 2004	0.47	34.3%	14.6%
September 2004	0.47	34.3%	11.9%
December 2004	0.47	34.3%	9.3%

Panel B: State and Local Employees

	Employers' Costs in Dollars (1)	Cumulative Increase Since March 2002 (2)	Increase Over Twelve Months (3)
March 2002	0.34		
June 2002	0.35	2.9%	
September 2002	0.36	5.9%	
December 2002	0.37	8.8%	
March 2003	0.36	5.9%	5.9%
June 2003	0.37	8.8%	5.7%
September 2003	0.38	11.8%	5.6%
December 2003	0.38	11.8%	2.7%
March 2004	0.39	14.7%	8.3%
June 2004	0.40	17.6%	8.1%
September 2004	0.41	20.6%	7.9%
December 2004	0.41	20.6%	7.9%

Panel C: All Non-Federal Employees

	Employers' Costs in Dollars (1)	Cumulative Increase Since March 2002 (2)	Increase Over Twelve Months (3)
March 2002	0.35		
June 2002	0.36	2.9%	
September 2002	0.38	8.6%	
December 2002	0.38	8.6%	
March 2003	0.39	11.4%	11.4%
June 2003	0.41	17.1%	13.9%
September 2003	0.42	20.0%	10.5%
December 2003	0.42	20.0%	10.5%
March 2004	0.44	25.7%	12.8%
June 2004	0.46	31.4%	12.2%
September 2004	0.46	31.4%	9.5%
December 2004	0.46	31.4%	9.5%

Source: Tables 3 and 4.

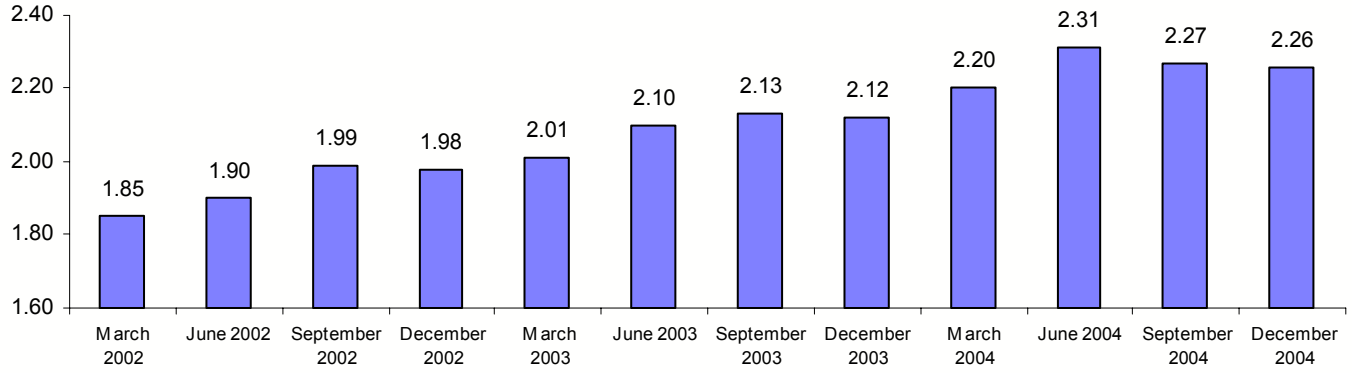
of increase in workers' compensation costs over the preceding year. For example, state and local government sector employers' costs were 1.37 percent of payroll in March 2002 and 1.40 percent of payroll in March 2003, which represents a 2.2 percent increase in costs over the twelve months (Figure M and Table 5, Panel B, Column (3)). The data indicate that the annual rate of change in the employers' costs of workers' compensation in the state and local government sector was relatively steady during 2004, ranging from a 5.6 percent increase from June 2003 to June 2004 to a 4.9 percent increase from December 2003 to December 2004.

All Non-Federal Employees. The employers' costs of workers' compensation as a percent of payroll increased from 1.85 percent of payroll in March 2002 to 2.26 percent of payroll in December 2004 (Figure I and Table 5, Panel C, Column (1)). This represents a cumulative increase of costs of 22.2 percent over the twelve quarters (Table 5, Panel C, Column (2)). The quarterly data can also be used to calculate annual rates of increase in workers' compensation costs over the preceding year. For example, all non-federal employers' costs were 1.85 percent of payroll in March 2002 and 2.01 percent of payroll in March 2003, which represents an 8.6 percent increase in costs over the twelve months (Figure M and Table 5, Panel C, Column (3)). The annual rate of increase in the employers' costs of workers' compensation for all non-federal employees fluctuated during 2004, although the 6.6 percent rate of increase in the last two quarters was lower than the rate of increase in the first half of the year.

Workers' Compensation Costs per Hour Worked

Private Sector Employees. The employers' costs of workers' compensation per hour worked increased from $0.35 in March 2002 to $0.47 percent of payroll in December 2004 (Figure J and Panel A, Column (1) of Table 6). This represents a cumulative increase of costs of 34.3 percent over the twelve quarters (Table 6, Panel A, column (2)). The quarterly data can also be used to calculate annual rates of increase in workers' compensation costs over the preceding

Figure I
Workers' Compensation Costs as a Percentage of Gross Earnings, All Non-Federal Employees, March 2002 - December 2004



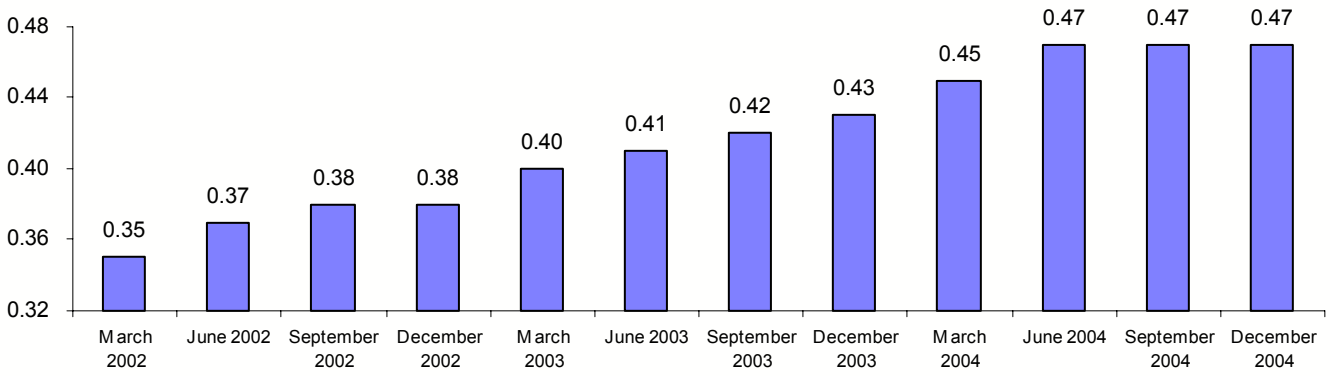
Source: Tables 3 and 4.

year. For example, private sector employers' costs were $0.35 per hour in March 2002 and $0.40 in March 2003, which represents a 14.3 percent increase in costs over the twelve months (Figure N and Table 6, Panel A, Column (3)). The data indicate that the annual rate of increase in the employers' costs of workers' compensation in the private sector fluctuated during 2004, increasing between the first and second quarters, and then dropping for two quarters to annual rate of increase of 9.3 percent in the final quarter of 2004.

State and Local Employees. The employers' costs of workers' compensation per hour worked increased from $0.34 in March 2002 to $0.41 in December 2004 (Figure K and Table 6, Panel B, Column (1)). This represents a cumulative increase of costs of 20.6 percent over twelve quarters (Table 6, Panel B, Column (2)). The quarterly data can also be used to calculate annual rates of increase in workers' compensation costs over the preceding year. For example, state and local government sector employers' costs were $0.34 per hour worked in March 2002 and $0.36 per hour worked in March 2003, which represents a 5.9 percent increase in costs over the twelve months (Figure N and Table 6, Panel B, Column (3)). The data indicate that the annual rate of change in the employers' costs of workers' compensation in the state and local government sector was relatively constant in 2004, ranging from only 8.3 percent in the first quarter to 7.9 percent in the last two quarters.

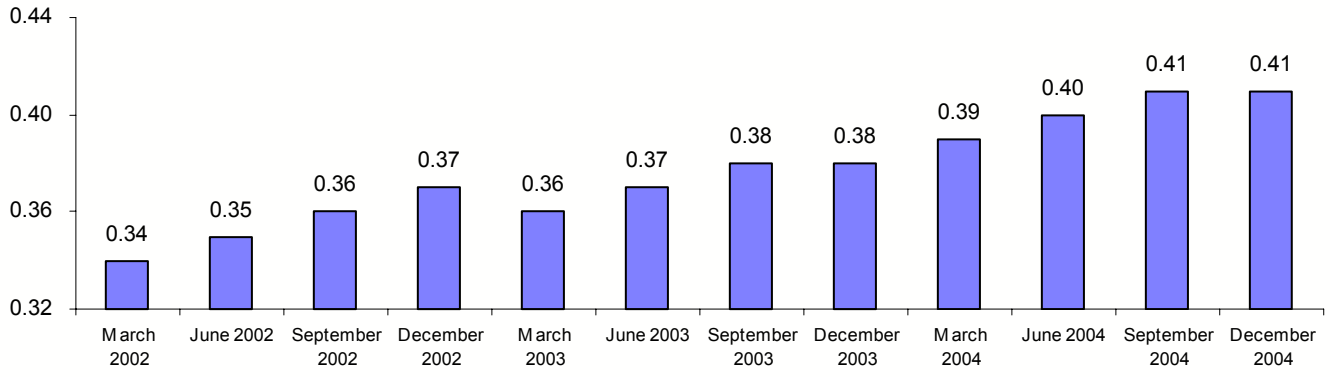
All Non-Federal Employees. The employers' costs of workers' compensation per hour worked increased from $0.35 in March 2002 to $0.46 in Decem-

Figure J
Workers' Compensation Costs for Private Industry Employees, March 2002 - December 2004 (in Dollars per Hour Worked)



Source: Tables 3 and 4.

Figure K
Workers' Compensation Costs for State and Local Employees, March 2002 - June 2004 (in Dollars per Hour Worked)



Source: Tables 3 and 4.

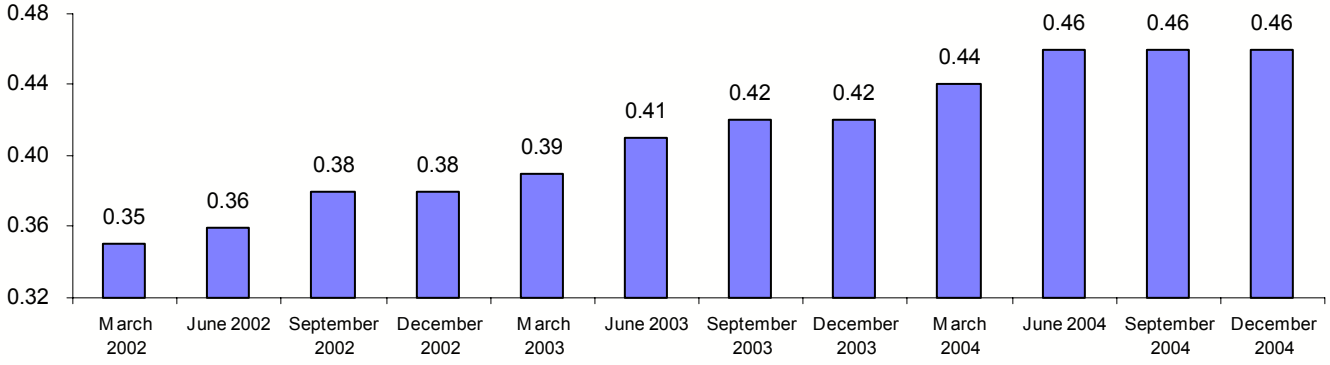
ber 2004 (Figure L and Table 6, Panel C, Column (1)). This represents a cumulative increase of costs of 31.4 percent over the twelve quarters (Table 6, Panel C, Column (2)). The quarterly data can also be used to calculate annual rates of increase in workers' compensation costs over the preceding year. For example, all non-federal employers' costs were $0.35 per hour worked in March 2002 and $0.39 in March 2003, which represents an 11.4 percent increase in costs over the twelve months (Figure N and Table 6, Panel C, Column (3)). The annual rate of increase in the employers' costs of workers' compensation for all non-federal employees declined during 2004, from 12.8 percent in the first quarter of the year to 9.5 percent in the last two quarters of 2004.

ANALYSIS

Employers' Costs in Historical Context

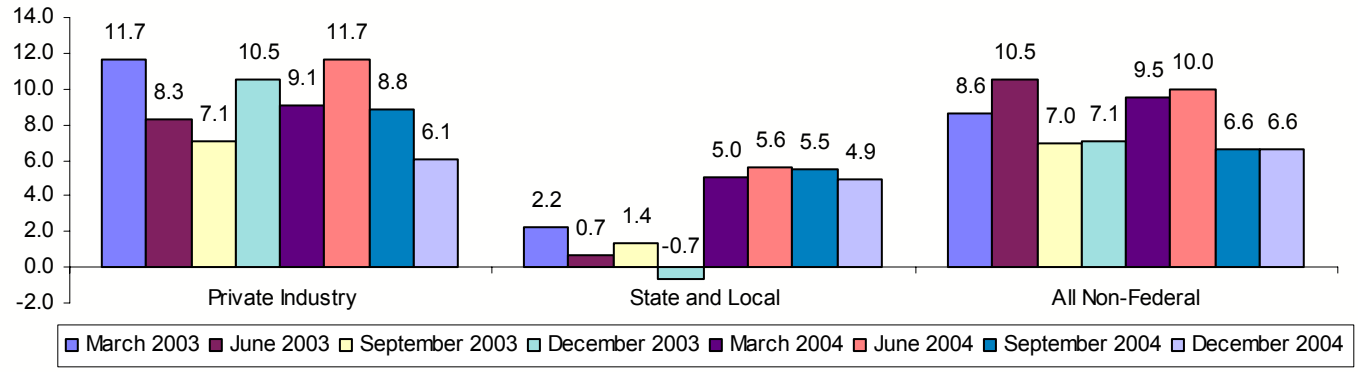
Workers' compensation costs as a percentage of gross earnings (or payroll) is the most common measure of employers' costs used in the workers' compensation literature. The rationale is that over time employer expenditures on remuneration for employees, including wages, health insurance, pensions and workers' compensation, increase. For example, between 1991 (March) and 2004 (annual), private sector employers' expenditures for workers' compensation increased from $0.33 to $0.47 per hour worked (Panel A, Tables 1 and 4), which represents a 42 percent increase. In isolation, a 42 percent increase in workers' compensation costs per hour worked may sound like a substantial increase.

Figure L
Workers' Compensation Costs for All Non-Federal Employees, March 2002 - December 2004 (in Dollars per Hour Worked)



Source: Tables 3 and 4.

Figure M
Workers' Compensation Costs as Percent of Payroll:
Annual Percentage Rates of Increase



Source: Table 5.

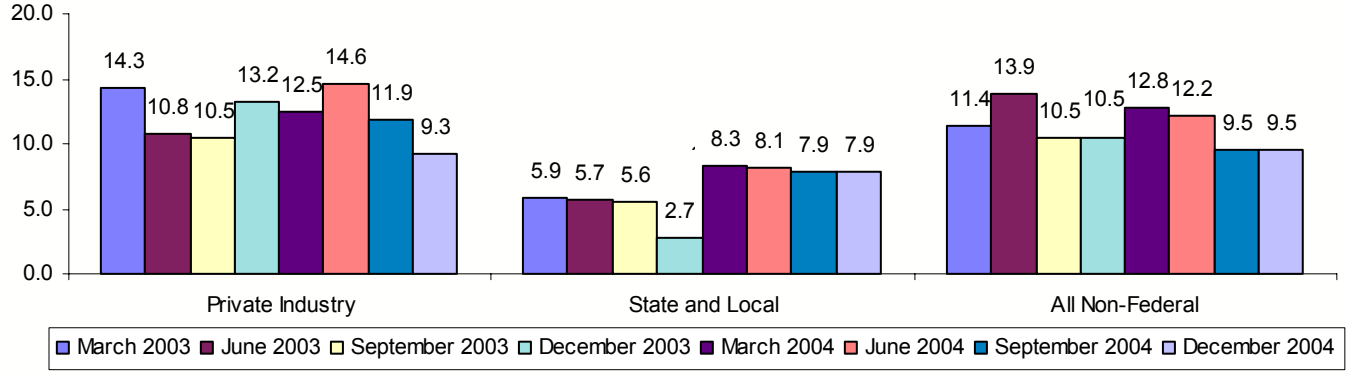
However, over that same period -- between 1991 (March) and 2004 (annual), the gross earnings (payroll) paid by employers for private sector employees increased from $12.55 to $19.00 per hour worked (Panel A, Tables 1 and 4), which is a 51 percent increase. Obviously, workers' compensation costs per hour worked have increased less rapidly than payroll since 1991, which helps put the workers' compensation cost developments in perspective.

...the recent run-up in costs for private sector employers nonetheless meant that workers' compensation costs as a percent of payroll in 2004 were lower than in any year between 1990 and 1997.

Another way to put in perspective the developments over time in employer expenditures on workers' compensation is to compare them to payroll in each year. That workers' compensation expenditures represented 2.63 percent of payroll in 1991 (March) for private sector employers and 2.45 percent of payroll in 2004 (annual) provides information more useful than simply stating that workers' compensation costs per hour increased by 42 percent over those 14 years.

The preceding sections have documented the changes in employer expenditures on workers' compensation as a percent of payroll for three levels of aggregation of employees. For private sector employees,

Figure N
Workers' Compensation Costs in Dollars Per Hour Worked:
Annual Percentage Rates of Increase



Source: Table 6.

where the data are available since 1986, the costs increased from 1986 to 1994, declined sharply through 2001, and then increased from 2001 to mid-2004, after which they modestly declined (Figures A and G). For state and local government employees, where the data are only available since 1991, the pattern is roughly similar: employers' costs increased through 1995, declined until 2000, and then increased through September 2004, after which they modestly declined (Figures B and H). Finally, for all non-federal employees (which primarily consists of private sector employees), the data series shows a decline in employers' costs between 1991 and 2002, followed by an increase through the second quarter of 2004, after which they modestly declined (Figures C and I). While the patterns differ slightly in recent years, the experience in all of the sectors indicates that the employers' costs of workers' compensation increased beginning in 2001 or 2002, peaked in the second or third quarter of 2004, and then declined for one or two quarters at the end of 2004.

While these increases in costs after 2002 are noteworthy, the recent run-up in costs for private sector employers nonetheless meant that workers' compensation costs as a percent of payroll in 2004 were lower than in any year between 1990 and 1997. Likewise, the employers' costs of workers' compensation as a percent of payroll in the state and local sector were lower in 2004 than in any of the years between 1992 and 1996, while the employers' costs as a percent of payroll for all non-federal employers were lower in 2004 than in all the years between 1991 and 1997.

A Comparison to Other Sources of Data on Employers' Costs

The BLS information on employers' expenditures on workers' compensation has some advantages over other sources of data on workers' compensation. One significant advantage, compared to the annual data prepared by the National Academy of Social Insurance (NASI), is timeliness: the most recent NASI data pertain to 2002 (Williams, Reno, and Burton 2004), while BLS data for 2004 are already available. The BLS data on employers' costs are also disaggregated by census region and division, major industry group, occupational group, establishment employment size, and bargaining status -- useful distinctions that are not available in the NASI data, which only includes data on employers' costs at the national level.

The BLS data also have their limitations when compared to the NASI data. The foremost limitation of the BLS data is that they only measure costs to employers, not benefits paid to workers. The NASI data, for example, provide national and state-specific information on benefit payments that differentiate among the types of insurance arrangements (private carriers, state funds, and self-insurers) and that distinguish between medical and cash benefit payments. The NASI national data on benefits and costs also include the federal sector, which are missing from the BLS data on costs.

The NASI data and BLS data are, to a considerable degree, complementary and, as such, both sources of information are valuable. One problem, however, is that the two data series are not entirely consistent with one another. For example, the NASI data for 2002 (the latest year with data available from that source) indicate that the employers' costs of workers' compensation were 1.58 percent of covered payroll for employers in all sectors (including the federal government); the BLS data for all non-federal employees in 2002 yield an estimation of workers' compensation costs for that group of 1.93 percent of payroll.[1] In addition, the NASI data show 1990 as the peak year (with employers' costs at 2.18 of payroll), while the BLS data (as shown in Figure C and Table 1) for all non-federal employees show continuing increases in workers' compensation costs as a percent of payroll through 1994, with a decrease in costs only beginning in 1995. But even though the NASI and BLS data have different peak years, both sources of data indicate that the employers' costs of workers' compensation measured as a percent of payroll substantially declined during the latter half of the 1990s. Finally, the BLS data for the non-federal employees show that workers' compensation costs as a percent of payroll declined until 2001 and only started to increase in 2002, while the NASI data show an increase from $1.33 per $100 of payroll in 2000 to $1.40 in 2001, thus anticipating the start of higher costs by a year compared to the BLS data. We will continue to publish updates as the NASI annual and BLS quarterly data are available.

But even though the NASI and BLS data have different peak years, both sources of data indicate that the employers' costs of workers' compensation measured as a percent of payroll substantially declined during the latter half of the 1990s.

Appendix A
Source of Information and Methodology

Tables 1 to 6 and Figures A through N are based on data published by the Bureau of Labor Statistics (BLS), which is a part of the U.S. Department of Labor.[2] The most recent BLS data for December 2004 are based on a national survey of approximately 9,700 establishments in the private sector and 800 establishments in state and local government. (Sample sizes were smaller for earlier surveys.) The BLS published annual data based on the survey conducted each March from 1986 to 2002. Beginning with March 2002, the BLS has conducted the survey every quarter, and this article includes the data on workers' compensation costs through December 2004. This appendix discusses the data from March 2004 shown in Table 4 (since the March 2004 data are most comparable to the data from earlier years).[3]

The BLS data on Employer Costs for Employee Compensation (ECEC) measure the average cost per employee hour worked that employers pay for wages and salaries and various benefits, including benefits voluntarily paid as well as legally required benefits, such as workers' compensation. I have calculated workers' compensation as a percent of gross earnings (payroll) for this article, as explained below.

Data are available since 1986 for private sector employers' expenditures per hour on employees' total remuneration, and (as shown in Panel A of Tables 1 to 4) on a number of components of remuneration, including wages and salaries, paid leave, insurance, and legally required benefits (including separate information on workers' compensation).[4] Comparable data pertaining to state and local government employees (Panel B of Tables 1 to 4) and to all non-federal employees (Panel C of Tables 1 to 4) are available for the period 1991 to 2004.

The only employees not included in this BLS data series are federal government, agriculture, and household workers, who in aggregate account for only about 4 percent of all employees. Of the 96 percent of all employees who are included in the BLS data, private industry employees clearly predominate (83 percent of all employees), whereas state and local government employees account for the remaining 13 percent of all employees.[5]

Private Industry Employees

The March 2004 data for private industry employees presented in Panel A of Table 4 further explain the BLS data series. In 2004, private sector employers spent, on average, $23.29 per hour worked on *total remuneration* (row 1). The $23.29 of total remuneration included *gross earnings* of $18.80 per hour (row 2) and *benefits other than pay* of $4.50 per hour (row 6).[6] *Gross earnings*, or *payroll*, included wages and salaries ($16.64 per hour; row 3), paid leave ($1.50 per hour; row 4), and supplemental pay ($0.66 per hour; row 5). *Benefits other than pay* included insurance ($1.65 per hour; row 7), retirement benefits ($0.80 per hour; row 8), legally required benefits ($2.01 per hour; row 9), and other benefits ($0.04 per hour; row 10). *Workers' compensation*, which averaged $0.45 per hour worked (row 9A), is one of the legally required benefits (row 9).[7]

The BLS data in Panel A of Table 4 indicate that private sector employers' workers' compensation expenditures ($0.45 per hour) were 1.93 percent of total remuneration (row 11) and 2.39 percent of gross earnings (payroll) (row 12) in March 2004.[8]

State and Local Government Employees

The BLS data with respect to state and local government employees' remuneration are only available since 1991. There are several interesting differences between the employer expenditure patterns in the state and local government sector (Panel B of Tables 1 to 4) and in the private sector (Panel A). In March 2004, for example, the state and local sector had higher figures than the private sector for gross earnings per hour ($26.59 vs. $18.80, row 2); benefits other than pay ($7.62 vs. $4.50, row 6); and, therefore, total remuneration ($34.21 vs. $23.29, row 1). Workers' compensation costs per hour worked were somewhat lower in the state and local sector ($0.39) than in the private sector ($0.45) (row 9A). However, because of the higher wages in the government sector, workers' compensation costs as a percentage of gross wages and salaries (payroll) in 2004 were considerably lower in the state and local government sector than in the private sector (1.47 percent vs. 2.39 percent, row 12), as they have been each year from 1991 to 2004.

All Non-Federal Employees

The most comprehensive variant of the BLS data, the data for all non-federal employees, is shown in Panel C of Tables 1 to 4. Available since 1991, this grouping, which is the total of private sector employees and state and local government employees, covers about 95 percent of all U.S. employees.

In March 2004, total remuneration per hour worked for all non-federal employees averaged $24.95 per hour (row 1) and gross earnings (payroll) averaged $19.97 per hour (row 2). Workers' compensation expenditures were $0.44 per hour in March 2004 (row 9A), which represented 2.20 percent of payroll (row 12).

ENDNOTES

1. The differences between the NASI data and the BLS data used in this article in the employers' costs of workers' compensation as a percentage of payroll are greater than is immediately obvious. The NASI data relate the employers' costs for workers' compensation only to the payroll of employers who are covered by state or federal workers' compensation programs. The costs would be a lower percentage if the base were payroll for all employers (whether covered or not), which is the base used for the BLS data.

2. Citations to the U.S. Department of Labor publications containing the data used to prepare this article are provided in the references.

3. The data are from the survey conducted in March 2004. The BLS uses the current-cost approach. That is, the costs do not pertain to the costs for the previous year. Rather, annual costs are based on the current price of the benefits and current plan provisions as of March 2004. The annualized cost of these March 2004 benefits are then divided by the annual hours worked to yield the cost per hour worked for each benefit, including workers' compensation benefits. Thus, if the annual workers' compensation premium per worker is $800 and the employee works 2,000 hours per year, the workers' compensation cost is $0.40 per hour worked. For further explanation of the BLS data, see Appendix A of U.S. Department of Labor 2000a.

4. This article uses the term "remuneration" in place of the term "compensation" that is used in the BLS publications in order to more clearly distinguish between workers' compensation and remuneration.

5. U.S. Department of Labor 2000a. See Chart 1, "Coverage of the Employment Cost Index, Total Civilian Employment, 1999." Comparable data for 2002 to 2004 are not yet available, but should not differ much from the 1999 data.

6. The terms "gross earnings" and "benefits other than pay" are not used in the BLS publications. These terms are used here to make the base for calculating workers' compensation costs as a percentage of payroll comparable to measures used in other publications.

7. The parentheses around the workers' compensation figures in row 9A of each panel in Tables 1, 2, and 3 are to show that these figures are included in the legally required benefits figures in row 9 of each panel.

8. Relating workers' compensation costs to "gross wages" (which is straight-time hourly wages plus paid leave and supplemental pay) is based on advice in an April 7, 1995 letter to me from Mr. Albert Schwenk, Supervisory Economist, Division of Employment Cost Trends, Bureau of Labor Statistics, U.S. Department of Labor. I appreciate this suggestion from Mr. Schwenk.

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