

NBER WORKING PAPER SERIES
ON
HISTORICAL FACTORS IN LONG RUN GROWTH

THE POLITICAL ECONOMY OF WORKERS'
COMPENSATION BENEFIT LEVELS,
1910-1930

Price V. Fishback
Shawn Everett Kantor

Historical Paper 95

NATIONAL BUREAU OF ECONOMIC RESEARCH
1050 Massachusetts Avenue
Cambridge, MA 02138
November 1996

This research has been supported by National Science Foundation Grant No. SBR-9223058, the University of Arizona Foundation, and the Earhart Foundation. Responsibility for the interpretations and shortcomings of the paper remain ours. This paper is part of NBER's research program in the Development of the American Economy. Any opinions expressed are those of the authors and not those of the National Bureau of Economic Research.

© 1996 by Price V. Fishback and Shawn Everett Kantor. All rights reserved. Short sections of text, not to exceed two paragraphs, may be quoted without explicit permission provided that full credit, including © notice, is given to the source.

The Political Economy of Workers'
Compensation Benefit Levels, 1910-1930
Price V. Fishback and Shawn Everett Kantor
NBER Historical Paper No. 95
November 1996
JEL Nos. J38, K31, N41, N42
Development of the American Economy

ABSTRACT

Although workers, employers, and insurance companies by 1910 supported the adoption of workers' compensation, they fiercely debated the specific features of the legislation. In this paper we examine how workers' compensation benefit levels were determined in the political process of forging compromises across interest groups, and even within individual groups. A quantitative analysis of the benefit levels in each state between the time of adoption and 1930 shows several important trends. Employers in dangerous industries effectively imposed limits on accident benefits, while organized labor and the commissions that administered the laws were instrumental in achieving higher expected benefit levels. Political reformers that gained control of state legislatures in the early twentieth century aided organized labor in achieving their goal of improving workers' compensation accident benefits. The paper also presents case-studies of the political struggle over benefits that occurred in three states -- Ohio, Minnesota, and Missouri. These qualitative descriptions of the fight over benefit levels provide a more detailed picture of the political process through which workers' compensation was created because the cross-state quantitative study largely abstracts away from the political nuances that shaped workers' compensation legislation.

Price V. Fishback
Department of Economics
University of Arizona
Tucson, AZ 85721
and NBER
pfishback@bpa.arizona.edu

Shawn Everett Kantor
Department of Economics
University of Arizona
Tucson, AZ 85721
and NBER
skantor@u.arizona.edu

The Political Economy of Workers' Compensation Benefit Levels, 1910-1930

Recent studies of the origins of workers' compensation suggest that the legislation was enacted with little opposition from the major interest groups with a direct economic stake in the outcome.¹ By 1910 workers, employers, and insurance companies all anticipated gains from workers' compensation and members of all three groups actively supported the state-level legislation. Yet some contemporary accounts of the adoption of workers' compensation in various state legislatures portray the process as an extremely bitter struggle among the various interest groups. Although the disputants agreed that the general concept of workers' compensation was a good one, they fiercely debated the specific features of the legislation, including the level of benefits, state versus private insurance of workers' compensation risk, and the coverage of industries. In this paper we examine how workers' compensation benefit levels were determined in the political process of forging compromises across interest groups, and even within individual groups.

Employers and organized labor were the primary combatants over the issue of benefit levels. Employers sought to limit benefits by imposing maximums on weekly and overall payouts or by trying to force workers to pay a share of the employers' insurance premiums.² Meanwhile, organized labor consistently fought for higher percentages of earnings to be paid out as accident compensation, with no ceilings on weekly benefits. In most cases, since both groups were interested in adopting workers' compensation, they were able to effect a compromise by choosing a middle ground on the benefits issue or by adjusting their positions on other controversial features of the legislation. Often the compromise depended upon the relative political strength of the two groups in a particular state. There were situations, however, in which employers and organized labor could not reach a compromise, and sometimes internecine differences of opinion prevented organized labor (or employers) from being able to negotiate effectively. In some cases, then, political squabbles delayed the introduction of workers' compensation anywhere from two to 15 years. Moreover, once workers' compensation was adopted,

the struggle over benefit levels did not end, as benefit levels often were reexamined and changed every few years, often at the behest of organized labor that lobbied vigorously for such amendments.

Since the general concept of workers' compensation was widely supported by workers, employers, and insurers, progressives and other political reform groups played a relatively small role in the adoption of workers' compensation generally (Fishback and Kantor 1996a). In contrast, the issue of state versus private insurance became a major point of contention between insurance companies and organized labor. In fact, political reform groups played a much more powerful role in determining the outcome of the state versus private insurance debate than they did in facilitating the adoption of the legislation generally (Fishback and Kantor 1996b). Since employers and workers debated benefit levels as strongly as workers and insurers fought over state insurance, we anticipate that political reform groups played a decisive role in tipping the balance of power between the disputants over workers' compensation benefit levels.

In this paper we discuss the nature of workers' compensation benefits and show the variation in benefits across states during the period between 1910, when the first workers' compensation law was enacted in the United States, and 1930. A quantitative analysis of the benefit levels in each state between the time of adoption and 1930 shows several important trends. Employers in dangerous industries were effective at imposing limits on benefit levels, while organized labor and the commissions that administered the laws were instrumental in achieving higher expected benefit levels. Finally, political reformers that gained control of state legislatures in the early twentieth century aided organized labor in achieving their goal of improving workers' compensation accident benefits. In the last part of the paper we provide case-studies of the political struggle over benefits that occurred in three states -- Ohio, Minnesota, and Missouri. These qualitative descriptions of the fight over benefit levels provide a better picture of the political process through which workers' compensation was created because the cross-state quantitative study largely abstracts away from the political nuances that

shaped workers' compensation legislation. The case histories show how employers and workers framed the debate over the issue and how compromises were forged. Moreover, the case studies track the alternatives that legislators faced, something that quantitative analyses alone cannot do.

The Nature of Workers' Compensation Benefits

Workers' compensation laws dramatically changed the nature of post-accident compensation by mandating that employers remunerate all workers for their injuries arising "out of and in the course of employment."³ The accident benefits paid out under workers' compensation were determined by statutory provisions that varied by state and within states over time. The laws typically established that workers (or their heirs) would be paid a percentage of their weekly wage for a maximum number of weeks and most states fixed maximum amounts of total compensation. For example, Connecticut's workers' compensation law in 1915 provided the family of a fatal accident victim weekly payments equal to 50 percent of the worker's wage for up to 312 weeks. Weekly benefits could not be lower than \$5 a week or higher than \$10 a week. Of course, because fatal accidents were relatively rare, non-fatal accidents constituted the bulk of employers' workers' compensation costs. Non-fatal accidents were separated into three major categories -- permanent total disability, permanent partial disability, and temporary disability. The form of compensation for each type of non-fatal accident was similar to that of fatal accidents. During his disability the worker was paid a percentage of his weekly wage, subject to statutory minimum and maximum payments, for a maximum number of weeks. Each state established a waiting period, ranging from 3 days to two weeks from the date of the accident, during which no accident compensation was paid.⁴ For example, in Connecticut in 1915, a worker injured for 5 weeks received no compensation for the first 10 days of his injury and after the tenth day he began receiving 50 percent of his weekly wage, up to a maximum benefit of \$10 per week. For permanent partial disabilities, such as the loss of an arm, hand, or leg, states typically codified a schedule of the maximum number of weeks the worker could collect compensation for his particular

accident. For instance, a worker who lost his hand in Connecticut in 1915 was guaranteed 50 percent of his weekly wage for 156 weeks, subject to the same minimum and maximum weekly amounts that pertained to fatal accidents.⁵

The workers' compensation laws were not designed to fully compensate workers for their lost earnings. The maximum wage replacement offered by any state was 66.7 percent of a worker's wages. During the increase in wages during World War I, the weekly maximums in many states were binding, and many states' laws provided replacement for as little as 25 to 33 percent of wages during that period.

To show more fully how workers' compensation benefits varied across states and time, Table 1 shows the relative generosity of workers' compensation benefits for each state from 1910, the first year a state adopted a general workers' compensation law, through 1930. For each year and state we computed the present value of the stream of payments a worker or his family would have received for each of the four categories of industrial accidents given the particular rules governing workers' compensation in each state. We assumed a discount rate of 5 percent, which was a typical return on stocks and bonds for the period (U.S. Bureau of the Census 1975, 1001-04) and also was in the range of statutory rates used to convert the workers' compensation stream of payments to a lump sum.⁶ The index is calculated assuming that the hypothetical worker in each state earned the national average manufacturing wage. Since our goal is to report a measure that reflects the worker's expected compensation from all workplace accidents, we weighted each of the four types of accident benefits by its probability of occurrence, and then summed the four expected compensation figures. Appendix A provides a detailed description of the benefits calculation and of the variables used to construct our estimates. The figures in Table 1 represent the expected accident compensation (in constant 1967 dollars) at the end of the year listed. Note that the expected benefits might have risen or fallen over time because of changes in the national average manufacturing wage, changes in a state's workers'

compensation law, or changes in the price level. Within any one year, however, all of the variation in the benefits across states is due to differences in the parameters of the laws.

The table also shows the pace of the introduction of workers' compensation since the first entry for each state represents the first year the law went into effect. The rate of adoption was relatively rapid. Within a decade 43 states had adopted compensation legislation and by 1930 only Arkansas, Florida, Mississippi, and South Carolina had yet to enact a law. The generosity of expected benefits varied widely across states within any one year. In 1920, for example, the expected benefits ranged from a low of \$22.9 to a high of \$48.7 (in 1967 dollars). The relative position of each state also fluctuated from year to year. For example, Washington and Oregon's benefits were quite generous when the states first introduced their laws, but the states provided fixed benefits to all injured workers, regardless of their wages, so the states' rankings fell sharply through the latter half of the 1910s as inflation eroded the value of the fixed amounts. In most states the rapid increase in wages during World War I often caused benefit levels to hit statutory maximums, thus causing a smaller percentage of lost wages to be replaced. After some delay most states raised their maximums between 1919 and 1923. The pattern of benefits in Texas provides a typical example of the effects of inflation on expected compensation when the states were slow in boosting the maximums. When the law was first adopted in 1913 it provided expected benefits valued at \$50.93 (in constant 1967 dollars) and by 1920 inflation had caused expected benefits in that year to fall to \$34.95. Texas did not change the maximum allowable benefit until 1923, and that legislative change only brought the expected benefits up to approximately the 1913 level, in real terms.

Quantitative Analysis of the Benefit Levels

One of the distinguishing features of workers' compensation legislation in the early twentieth century was the diversity of laws adopted across the United States. The dissimilitude across the states provides an opportunity to test various hypotheses regarding the role that economic and political

interest groups play in the formation of public policy. In this section we examine quantitatively the political-economic determinants of the benefit levels that states chose during the period that includes the state's first year of adoption through 1930. The analysis examines both the initial benefits that states established as well as changes in those benefits through 1930. The choice of workers' compensation benefits was the outcome of a political process in which state legislators balanced the interests of competing economic and political groups, particularly employers and workers.⁷ We have collected information on a number of variables that identify these influences, including measures of the extent of unionization in manufacturing, the strength of farm and manufacturing interests, the presence of a workers' compensation bureaucracy, measures of the political atmosphere, and characteristics that might have caused different attitudes among manufacturing employers -- wage levels, the riskiness of manufacturing, the presence of large and small firms, and the average productivity of workers. The impact of these manufacturing variables is not clear at first glance because the pressures from employers and workers in firms with these characteristics often went in opposite directions. For example, workers in high-wage and more dangerous firms pushed for higher benefits and employers pushed for lower benefits. The coefficients of the variables then reflect the net impact of these countervailing forces.

The dependent variable is the natural log of each state's expected workers' compensation benefits (in 1967 dollars), as shown in Table 1.⁸ The benefits equations are estimated in semi-log form, controlling for year and state fixed-effects. The year effects control for influences, such as World War I, that were common to all states during a particular year, while the state effects control for characteristics of a state that did not change over time, such as the rules governing the state legislature or political attitudes that remained unchanged during the period under consideration. Our sample is an unbalanced panel because states are only included in the analysis after they had adopted workers' compensation. Therefore, we are estimating the determinants of benefits, conditional upon the state's

having already enacted a workers' compensation law. Thus, we estimated a regression equation in which we correct for potential selectivity bias. First, we estimated a reduced-form logit equation that predicts whether each of the 48 states had a workers' compensation law in place for each of the years from 1910 to 1930. From this equation we calculated the inverse-Mill's ratio which was then used as a sample-correction variable in the fixed-effects benefits regression. The t -statistic of the coefficient of the inverse-Mill's ratio suggests the presence of selectivity bias, so we focus our discussion on the results from the sample-corrected equation. Comparisons of these results with those from the OLS regression reveal, however, that our conclusions are robust to the precise specification of the model. The coefficients from the sample-corrected regression are reported in columns 1 and 2 of Table 2 and for comparative purposes, the OLS results, without the sample correction, are reported in columns 3 and 4.

An interest group with a significantly important influence over workers' compensation benefits appears to have been employers in dangerous industries. The index of manufacturing accident risk in a state had a strong negative impact on the level of expected benefits. We anticipated that employers in high-risk industries would have sought lower benefit levels in an attempt to keep their overall accident costs to a minimum. Workers in these same industries, on the other hand, would have lobbied for higher benefits because the chances of sustaining the income-depressing industrial accident, and thus collecting the benefits, were relatively high. It appears that these employers had more strength in state legislatures because states with higher manufacturing risk had substantially lower benefits. A one-standard-deviation (OSD) increase in the risk index (0.566) from its sample mean (1.48) would have reduced benefits by about 25 percent in the equation corrected for selectivity bias. Similarly, areas with a higher percentage of workers in mining, which was the most dangerous industry in most states, also had substantially lower benefits. An OSD increase in the percentage of workers in mining led to a statistically significant reduction in benefit levels of about 18 percent.

Organized labor had some success in offsetting some of the downward pressure that employers in dangerous industries exerted on workers' compensation benefits. Our manufacturing union index combines the national percentage of each industry that was unionized with the distribution of employment across industries within each state. In essence, the variable captures the extent to which industries that were strongly unionized at the national level were represented in each state. An OSD increase in the unionization index led to a statistically significant increase in expected benefits of about 6 percent.

Once workers' compensation was adopted, organized labor appears to have been joined in the struggle for higher benefits by the bureaucratic agents that administered workers' compensation. States typically chose to administer their workers' compensation system in one of two ways. Ten states administered the laws through the courts, with employers and workers establishing agreements regarding accident compensation subject to the state guidelines and the courts settling disputes. Thirty-eight states, alternatively, administered workers' compensation with a commission, which directly oversaw the disbursement of accident compensation.⁹ The commissions had the potential to act as advocates for changes in the workers' compensation laws, although their attitudes may have been influenced by either employers or workers. We examine the bureaucrats' impact on benefit levels by including a dummy variable that takes a value of 1 if the state had a workers' compensation commission in operation at the end of year $t-1$, and 0 otherwise. The dummy variable indicates the presence of a commission in the previous year because the bureaucracy could lobby the legislature in the current year only if it was already in existence. In other words, a commission which was established in a particular year would not have been able to influence legislative outcomes until the next legislature's meeting. The coefficient of the commission dummy implies that the presence of an administrative body led legislatures to establish benefits that were 10.3 percent higher, which is statistically significant.

One potential problem that arises in interpreting the impact of a workers' compensation commission on benefit levels is simultaneity bias. That is, legislatures that created commissions when they first enacted a workers' compensation law might have also favored higher benefit levels if legislatures chose a package favorable to organized labor. On the other hand, legislatures may have chosen a compromise piece of legislation in which workers traded off a commission for higher benefits, or vice versa. To control for this potential simultaneity bias, we have estimated a logit equation that predicts whether or not a state had a commission in each year in which it had workers' compensation in place between 1910 to 1930. We then replaced the commission dummy variable with its instrument which is the predicted probability of the presence of a commission from the first-stage logit regression. In the equations that include the instrumented commission variable (columns 2 and 4 of the table), the coefficients imply that if a state had a workers' compensation commission its benefit levels were between 13 and 25 percent higher than states without a bureaucracy.

We anticipated that relatively large manufacturing firms, that offered higher wages, or that were more productive would have supported higher benefits. However, the coefficients of average manufacturing wages in each state, of the percentage of firms with fewer than 20 workers, of the percentage of firms with more than 500 workers, and of value added per worker were all small and statistically insignificant. Similarly, the percentage of workers in manufacturing had a very small and statistically insignificant impact.

Agricultural interests might have taken two different attitudes toward the generosity of their state's workers' compensation laws. Because agriculturalists were able to exclude themselves from the law's purview, they may have viewed the sub-issue of benefit levels with indifference. Alternatively, farmers might have been opposed to higher benefits on the grounds that potential farm workers may have been steered toward manufacturing if benefits were improved in that sector. The regression results suggest that agricultural interests played little role in the benefits debate, as the coefficient of the

percentage of the state's workers in agriculture was small and statistically insignificant.

The final striking result is the impact that political reformers had on states' workers' compensation laws. We have tried to measure the impact of the political atmosphere within each state in several ways. One way to measure the political attitudes of voters is to include voting results from presidential elections. Since presidential elections were national, votes for presidential candidates of different political persuasions reflects better on the attitudes of voters than state-office voting returns would. The views of state-level political parties in the early twentieth century did not necessarily match those of their national-level parents. The results suggest, however, that political coalitions developing around national republican, democratic, or socialist views had little impact on the benefit levels that were determined at the state-level. The coefficients of variables measuring the percentage of the electorate voting for republican candidates and socialist candidates were small and statistically insignificant.¹⁰

Since workers' compensation legislation was state-based, we have attempted to measure the influence of political reformers at the state level. Strong political reform movements during the Progressive Era often caused the party composition of state legislatures to shift dramatically. We have, therefore, included dummy variables that measure situations in which the political dominance of one party shifted in at least one branch of the legislature and in which it shifted in both legislative chambers. Fishback and Kantor (1996b) found that political party shifts, as measured by these variables, played an important role in increasing the chances of adopting state insurance of workers' compensation risk in the early twentieth century. The debate over accident benefits was certainly a controversial one, but perhaps not as rancorous as the state insurance debate, and the empirical analysis suggests that political reform movements also played an important role in helping workers secure higher benefits. If one branch of a state legislature shifted parties in a particular year, expected benefits rose by a statistically significant 4.8 percent. If both branches shifted in that year, the

expected benefits rose another 4.4 percent, which is statistically significant at the 10 percent level.

The Political Struggle Over Benefits in Various States

While the regression analysis broadly describes the factors determining workers' compensation benefit levels in the early twentieth century, it ignores the political process by which the outcome was achieved. Employers and workers, unions in particular, fought bitterly over many aspect of workers' compensation legislation, including benefit levels. Thus, understanding how the preferences of these competing interest groups were filtered through the political process can help to explain better how workers' compensation legislation was crafted in the United States.

Interest groups framed the workers' compensation debate in state legislatures through their lobbying efforts, their "expert" testimony before legislative committees, and their writing of bills that included the elements of their idealized law. Organized labor typically sought high benefits, state insurance of workers' compensation risk, and a worker's right to choose between a negligence lawsuit against his employer and the guaranteed benefits of workers' compensation, even if his suit failed. Employers, on the other hand, wanted to impose limits on benefits by setting low weekly maximums and longer waiting periods or by trying to force workers to share in the costs of funding the system. Employers were adamantly opposed to a compensation law that would have allowed workers the right to sue. One of employers' goals for workers' compensation was to create a no-fault insurance scheme that provided them with a degree of certainty with regard to their expected accident costs. Allowing workers to sue would have undermined this objective. Since both employers and workers had to be satisfied with the final outcome for the law to succeed politically, it was clear that compromises were necessary. In some states the groups explicitly negotiated over benefit levels. In other states one group might have adjusted their demands on benefit levels, for example, if it were able to obtain a favorable outcome on another dimension of the overall workers' compensation bill. In all states, however, the nature of the compromises ultimately depended upon the relative strength that employers and workers

wielded within state politics.

In this section we provide three case studies describing how the political process shaped the adoption of workers' compensation and the choice of benefit levels in Ohio, Minnesota, and Missouri. In a number of states, such as Ohio, the governors' commissions that were created to investigate the feasibility of a workers' compensation law and to draft legislation were unable to agree on specific features of the legislation, so multiple bills were considered in state legislatures, where the political struggle was intensified. The case study of Ohio shows that employers and workers often compromised explicitly on the benefits issue, as well as on other features of the proposed law. Ohio's experience with the adoption of workers' compensation further emphasizes the importance of the internal organization of the state legislature, as the Senate and House often chose substantially different types of bills, thus adding another layer of political compromising. In other states, such as Minnesota and Missouri, various factions within organized labor and among employers could not agree internally on the proper level of benefits to seek. These internecine struggles, within the labor movement particularly, often developed over what strategy to use in order to achieve the desired legislative outcome -- either compromise by accepting relatively low benefits initially in order to enact a workers' compensation law quickly and seek amendments later, or adopt an all-or-nothing strategy and eschew compromise in order to achieve the group's idealized law at the onset. In Minnesota the struggle over this issue delayed the adoption of workers' compensation by two years, but organized labor ultimately chose the compromise strategy and was successfully able to amend the law through the 1910s to obtain more generous benefits. In Missouri, by contrast, the struggle between employers and organized labor delayed the adoption of the law for a few years, but the struggle within organized labor delayed the adoption of the law by an additional 8 to 10 years.

Ohio

When workers' compensation was first introduced in Ohio, the discussion of benefits centered

on how much of employers' accident insurance premiums workers would share. The initial set of bills considered in 1911 were written by the governor's Employers' Liability Commission (ELC), which consisted of two labor representatives, two employer representatives, and a "neutral" chairman. The majority report of the ELC suggested a bill that gave the Ohio State Federation of Labor one of its key demands, the elimination of private insurance of workers' compensation and the establishment of a state insurance fund, an issue on which employers' opinions varied widely (Fishback and Kantor 1996b). On the other hand, the bill required workers to pay 25 percent of the employers' insurance premiums. This version of the bill was strongly supported by employers, including the Ohio Manufacturers' Association (OMA), which had formed in November 1910 specifically to address the issues surrounding workplace liability.¹¹ The Ohio State Federation of Labor (OSFL) was disappointed with the report, and one of their labor representatives offered an alternative bill that called for employers to pay 100 percent of the premiums.¹² The "labor" bill also would have granted workers the right to file a liability claim against their employers, while the "employer" majority bill would have limited that right.

A bitter battle ensued as the legislature debated the employer and labor bills. Both the OMA and the OSFL, with the assistance of the Chief Inspector of Workshops and Industries who was chosen from the OSFL membership, held numerous hearings, cajoled legislators, and had supporters meet with the governor and legislators. Employers and organized labor battled within a political environment that had changed dramatically since the previous legislature's special session in 1910. The Democrats, the progressive party in Ohio at the time, captured a majority in both chambers and progressives from both parties held 47 percent of the House seats and 32 percent of the Senate seats in the 1911 legislature.¹³

The choice between the labor and employer bills was hotly contested in the House during the early part of the legislative session. To try to resolve the controversy over the bills, the House established a special 10-man committee.¹⁴ These initial battles in the House became moot when

William Green -- president pro-tem of the Senate, former coal miner, and later president of the American Federation of Labor -- rammed the labor bill, requiring employers to pay the full de jure burden on the insurance premiums, through the Senate with a vote of 26 to 1. The bill compromised slightly with the employers' position by requiring workers to waive their right to workers' compensation if they chose to sue.¹⁵ Governor Harmon announced that he favored the employers' bill and would veto the labor bill if it passed.¹⁶ The governor, in conjunction with the special House committee, crafted a compromise, proposing that employers be forced to pay 90 percent of the premiums, workers 10 percent.¹⁷

The battle over the benefits issue continued when the compromise bill hit the House floor on 26 April 1911. An amendment favored by employers to raise the workers' burden to 20 percent was defeated 17 to 74, as legislators with strong ties to organized labor were unanimous in their opposition. The next day a representative with strong labor ties proposed an amendment to require employers to pay 100 percent of the premiums. The Speaker of the House ruled the amendment out of order because the issue had already been voted on. The labor supporters appealed the ruling, forcing a vote, which they lost by a very close 40 to 38 margin. The labor representatives unanimously opposed the Speaker's ruling, while progressives, democrats, and representatives from districts that tended to have relatively dangerous manufacturing industries also tended to oppose the Speaker.¹⁸ A representative with strong labor ties pressed the issue again. First he moved that the vote on the original employers' amendment be reconsidered, and then he amended the employers' amendment to force employers to pay the entire workers' compensation premium. This time the labor amendment was voted down 35 to 70. Labor representatives supported this amendment, but the earlier support of progressives, democrats, and representatives from high-injury areas evaporated. It is clear that their earlier support was based on the procedural issue involved, and not the desire to force employers to pay a greater share of the de jure costs of workers' compensation insurance.¹⁹

The workers' compensation bill that ultimately passed was clearly a compromise. The OSFL obtained the state insurance provision that they demanded, but workers lost their rights to sue for compensation and they were forced to accept the provisions of the workers' compensation law if their employers elected to join the system. Employers benefitted from the legislation because they were able to restrict a worker's option to sue. Further, they were able to secure wording in the legislation that enabled them to pass some of the costs of their workers' compensation insurance directly back to workers, thus reducing the amount they would have to try to pass back to workers through lower wages. While the OMA considered the new law "probably the best law on this subject in the United States today," they worried that having employers pay 90 percent of the insurance premiums, instead of 75 percent as they wanted, might have made the difference between success and failure of the new law.²⁰ The OMA's fears, it turned out, were unjustified because within several years employers accepted the entire de jure burden of workers' compensation premiums.

Minnesota

The dispute over benefit levels in Minnesota began within the three-man commission appointed by the governor in 1909. The commission was composed of the three men who were the clear leaders of the workers' compensation movement in the state: George Gillette, president of the Minnesota Employers' Association (MEA), William McEwen, Minnesota's Commissioner of Labor and Secretary-Treasurer of the Minnesota Federation of Labor (MSFL), and attorney Hugh Mercer, the chairman of the Minnesota State Bar Association's special committee on workers' compensation.²¹ The commission eventually fractured, with labor leader McEwen and attorney Mercer agreeing on a form of legislation and Gillette formulating his own plan.²² Employer representative Gillette refused to join the majority in part because he felt the benefit levels were too generous. His alternative proposal called for most of the same benefit parameters as the majority bill, however, but he recommended that employees contribute 20 percent of the cost of insurance up to a maximum of 1 percent of the worker's wage. In

addition, he sought to cap an employer's liability for a single accident, like a mine explosion, at \$50,000. Gillette was also dissatisfied with the medical coverage in the majority bill, which required employers to pay full medical coverage for the first two weeks of injury, up to \$100. Gillette claimed that no matter how minor the accident, hospitals and doctors would prescribe treatment in order to extract the full \$100 benefit; therefore, his bill specified that an employer was only required to furnish "reasonable medical and surgical first aid."²³

The division within the commission paled in comparison with the divisions within the interest groups themselves. The MEA membership was not willing to support Gillette's alternative bill because of the "diversity of opinion on the subject."²⁴ On the other side, labor representative McEwen found that his own advisory group of 50 labor leaders were dissatisfied because the benefit levels proposed in the majority bill were too low.²⁵ McEwen supported the majority commission bill because he thought it best to get some form of workers' compensation, and to amend it later to secure better benefits. The MSFL supported the goals of the majority bill, but wanted the benefits increased before the legislation passed. The railroad brotherhoods, alternatively, wanted the status quo since they were doing relatively well under the common law.²⁶ With all workers' compensation bills facing sure defeat in the 1911 legislature, workers' compensation supporters in the Senate managed to establish an interim commission of five senators to draft legislation for the 1913 session.²⁷ By late 1911 the heat that was generated during the legislative debate months prior had begun to cool. Gillette emphasized to his fellow MEA members that their agreeing on a workers' compensation plan was a "necessity" because workers' compensation was "the most important subject which confronted employers."²⁸ In March 1912 James Emery, legal counsel for the National Association of Manufacturers, urged MEA members to be leaders in the effort to enact workers' compensation, because doing nothing would result in a "Juggernaut . . . [of] the radical, the demagogue, the extremist, the half informed, and unfair men . . . run[ning] over them."²⁹

By late 1912 employers and labor representatives had agreed in principle on a bill for the 1913 legislative session, but the groups still struggled over the details of the law. The MEA proposed a law that closely resembled New Jersey's law, which was enacted in 1911 and declared constitutional.³⁰ Labor remained dissatisfied with the benefits levels offered in the MEA-sponsored bill and adamantly opposed the MEA's proposal to pass 20 percent of the insurance costs directly onto workers.³¹ McEwen, the labor representative from the 1910 commission, testifying before the Senate interim committee charged with drafting a bill, suggested increasing the maximum weekly benefits for death and permanent disability from \$10 to \$15, increasing the length of benefits from 300 to 333 weeks, and raising the overall maximum benefit from \$3000 to \$5000.³²

A marked-up bill emerged from the Senate Labor Committee that eliminated any insurance contributions by workers, raised the minimum weekly benefit from \$5 to \$6, eliminated farm labor and domestic servants from coverage, guaranteed foreign and domestic dependents the same schedule of benefits, and removed the "wilful negligence" clause. As a compromise, the MEA agreed to the minimum compensation and worker-contribution amendments, but not the others.³³ The committee's action led to name-calling by both employers and labor. Gillette issued a letter to his fellow MEA members urging them to protest the exclusion of farm laborers, the same benefits to alien dependents, and the removal of the negligence clause. Gillette accused labor representatives of bad faith because he alleged that both parties had agreed to a law months ago and "Now labor wants something else."³⁴ Labor accused Gillette of "duplicity."³⁵ Instead of allowing the Labor Committee's amendments to delay the passage of workers' compensation any further, the MEA decided to take no further action to hinder the bill's progress in the legislature. Gillette finally conceded that the Senate bill was "a satisfactory one and the best that could be obtained."³⁶

While the MEA and the MSFL had essentially agreed to discontinue their disagreeing, a feud within the labor movement grew more heated as the Senate bill reached a final vote. The MSFL took

the position that in order for the principle of workers' compensation to be introduced in Minnesota, sacrifices had to be made. Without compromising their principles -- such as having industry bear the de jure full cost of the insurance and the removal of all notions of negligence -- the MSFL was willing to accept lower benefits in the short term, but with the full expectation of amending the law in future legislatures.³⁷ The low benefits that the MSFL was willing to accept, however, incited calls that they were "selling out the cause of the workers to their employers."³⁸ The two most vocal opponents to the compensation bill were the railroad brotherhoods, who were concerned that the new law would preempt their rights under the Federal Employers' Liability Acts of 1906 and 1908, and the Minneapolis Trades and Labor Assembly (MTLA), which was allegedly "controlled by socialists."³⁹ The MTLA called the Senate bill "The most outrageous piece of legislation attempted to be passed against the interests of the working people of the state" and they "deplore[d] the fact that certain representatives of labor seemed to be satisfied with anything the employers handed them."⁴⁰ The St. Paul Trades and Assembly (SPTLA) scolded the MTLA for favoring the "upper class of workers" with its attempt to secure very generous benefit levels upfront: "Shame on such selfishness! If this is unionism and fraternity the less we have of it the better." Like the MSFL, the SPTLA believed that "half a loaf is better than no bread at all."⁴¹

Despite the opposition of some labor groups, some employers, and "ambulance chasing lawyers," workers' compensation passed the Senate unanimously.⁴² As the bill moved to the House, "one of the most interesting fights ever witnessed in the legislature" ensued.⁴³ For six hours Representative Ernest Lundeen, a Republican and avid supporter of labor issues, cheered on by labor representatives and socialists sitting in the gallery, proposed a litany of labor-supported amendments that effectively served as a filibuster.⁴⁴ "Isn't it a travesty on justice to ask you to pass this measure ostensibly for the benefit of the workingmen but urged by the big employers of the state?", Lundeen asked rhetorically.⁴⁵ Lundeen and representatives from districts with a relatively higher percentage of

union members were able to secure two amendments to the Senate's bill that affected compensation levels: (1) if workers were disabled for more than 30 days, they were to be retroactively compensated for the first two weeks of not receiving benefits because of the waiting period; and (2) a increase in the medical benefits from \$100 to \$195.⁴⁶ In fact, the House had rejected an amendment to raise the medical benefits to \$200, but in an effort to shut-down Lundeen's attacks on the bill, McEwen was able to orchestrate support for the \$195 maximum. Two other important amendments failed to pass -- an increase in the weekly benefits from \$10 to \$15 and the exclusion of all (not just interstate) railroad workers from coverage.⁴⁷ The House passed the workers' compensation bill, with its amendments, by an overwhelming 102 to 6.⁴⁸

The workers' compensation law that Minnesota enacted in 1913 was relatively stingy when compared to the other 18 states having adopted workers' compensation by that year. Taking into account the percentage of the wage replaced, the weekly and overall maximum benefits, and the waiting period, we have calculated that Minnesota workers' expected benefits under workers' compensation were \$32.36 (in 1967 dollars). By comparison, in 1913 the lowest benefits were guaranteed in New Jersey (\$31.41) and the most generous law was Washington's \$55.56 (see Table 1). Because the law provided such minimal benefits, the MTLA concluded that "the compensation law really is a joke, if a pathetic one."⁴⁹ McEwen admitted that "The new Workingmen's Compensation law falls far short of our ideal . . . yet . . . it was the very best that could have been passed."⁵⁰ It is important to note also that even though Minnesota's workers' compensation offered relatively low benefit levels, these same benefits were higher than what injured workers or their heirs expected under the negligence liability system. For example, whereas the family of a fatal accident victim expected to receive about half a year's earnings under the negligence system (Fishback and Kantor 1995, 718), the Minnesota workers' compensation law provided workers with 2.4 times annual earnings with virtual certainty (Kantor and Fishback 1994, 261).

The MSFL's prediction that they would be able to amend workers' compensation to increase the benefits in later legislatures proved prescient. By October 1914 the MEA, MSFL, the Department of Labor, and mining companies had agreed to an omnibus bill of amendments to raise the minimum weekly benefit from \$6 to \$6.50 and the maximum from \$10 to \$11. When the omnibus bill was introduced in the legislature in 1915, some members of organized labor criticized the proposal as too meager, encouraging labor supporters in both chambers to amend the proposal from the floor. None of these attempts bore fruit, although a major dispute erupted over an attempt to reduce the waiting period from 2 weeks to 1 week. Two House representatives with labor backgrounds led the fight for the waiting period reduction, and strong support from representatives from districts with large percentages of union members pushed the reduction through the House by a vote of 77 to 39.⁵¹ The reduction proposal failed in the Senate by a vote of 22 to 40, but the struggle had not yet ended. When the conference committee on the omnibus bill met, they still had to reconcile the 1-week waiting period that the House passed, but the Senate had not. The sponsors of the reduced waiting period were members of the conference committee and submitted a minority report calling for the Senate to reduce the waiting period to 1-week, while the majority asked the House to return to the 2-week period. Despite strong support from legislators from districts with a strong organized labor presence and Labor Committee members, the minority report was rejected by a vote of 51 to 58 in the House, and the waiting period reduction failed.⁵² Despite the MEA's success at fending off labor's effort to increase workers' compensation benefits, it became increasingly concerned with the "growing aggressiveness of the labor organizations."⁵³

Organized labor continued to pressure the legislature to further increase benefits and met more success in 1917. The Department of Labor in its 1915-1916 biennial report suggested 15 major changes in the law, including an increase in the rate of compensation to 66⅔ percent (from 50 percent) of the wage, a reduction in the waiting period to one week, and a requirement that employers pay for

all medical care necessary to cure the injury.⁵⁴ Gillette, representing the MEA, categorically rejected the Department's proposals as the work of "theorists and so-called social reformers . . . who have had no experience with employers."⁵⁵ The MEA further decried their treatment at the hands of the legislative committees that were given jurisdiction over the workers' compensation amendments. According to Gillette, "Oftentimes only with the greatest difficulty could we obtain information relative to times of hearings and often hearings were held at times different from those set and of which we had been advised, giving us no opportunity to be heard . . . At no previous session were these conditions so rank."⁵⁶ Twenty-one bills were introduced in the 1917 legislature to amend the benefits of the workers' compensation law. After "spirited debate," labor representatives compromised the compensation down to 60 percent of the wage from 66⅔ percent, and the employers accepted an increase in the maximum weekly amount to \$12 and the reduction in the waiting period to one week. However, the changes were limited to disability cases only and not fatalities. The bills passed the House with only six dissenting votes each.⁵⁷ While the MEA was "somewhat disappointed at the success of our efforts during the past session," the labor press saw the amendments' adoption as a "distinct victory for the forces of organized labor."⁵⁸

Minnesota's history vividly portrays the nature of the battles over workers' compensation benefit levels. Disputes across and within interest groups slowed the adoption of workers' compensation in 1911. The MSFL then developed a long-range strategy in 1913 of compromising with employers to pass a workers' compensation plan with relatively low benefits in anticipation of obtaining higher benefits later. The strategy eventually succeeded as benefits rose throughout the 1910s. In fact, Minnesota workers were able to transform their relatively stingy law of 1913 into the tenth most lucrative among the 42 states that had workers' compensation in place in 1921.

Missouri

The struggle over the details of workers' compensation legislation that delayed adoption in

Minnesota was minor in comparison to what occurred in Missouri. Missouri was one of the many states to establish a workers' compensation commission in 1910. However, organized labor and employers could not compromise effectively over the level of benefits, waiting periods, the coverage of occupational diseases, and state insurance, which led to stalemates in the legislature throughout the 1910s. By 1917 a divisive split had developed within organized labor. The Missouri State Federation of Labor (MSFL) was ready to compromise with employers so that workers could finally receive the benefits of workers' compensation. They planned to seek amendments to the law later. The building trades unions, on the other hand, focused on getting their desired bill at the time of adoption, on the grounds that amending the law later would be difficult politically. The divisions within organized labor delayed the adoption once again in 1917. In 1918 the MSFL and building trades unions came together and proposed a bill for the 1919 legislature that called for relatively generous benefits -- $\frac{2}{3}$ of the wage and no maximum weekly benefit -- and state insurance.

In 1919 the House passed an amended version of the "labor" bill that imposed an \$18 weekly maximum, but kept the state insurance feature intact. The House bill was subsequently killed by the Senate Workmen's Compensation Committee and two efforts by senators sympathetic to the MSFL to place the bill on the calendar failed. The Senate then passed its own bill, lowering the maximum weekly benefit to \$15 per week and eliminating state insurance. The MSFL agreed to the new bill on the grounds that if state insurance and high benefits were not politically feasible, then the goal should be to get the best workers' compensation bill possible and to seek pro-labor amendments in subsequent legislation. The building trades unions disagreed, adhering to an all-or-nothing strategy, either workers' compensation with state insurance and high maximum benefits or no law at all. Despite this opposition, the Senate bill became law in 1919. The building trades and some other union elements then joined damage-suit attorneys, who clearly had an interest in striking down workers' compensation, in circulating a petition to put the legislative act before the voters in a November 1920 referendum.⁵⁹

The strategy was successful. Voters rejected the 1919 workers' compensation law by a close 52.2 to 47.8 percent margin.⁶⁰

By 1921 the MSFL, the Associated Industries of Missouri (AIM), and other employer organizations were cooperating for the passage of another workers' compensation law.⁶¹ The act that was ultimately adopted had many similarities to the one enacted in 1919, but added a state fund that would compete with private insurers and raised the weekly maximum benefit from \$15 to \$20. The inclusion of state insurance was actually a last minute floor amendment that was widely supported by opponents of workers' compensation. By 1921 legislators could expect that any legislative act would be challenged in a referendum. Thus, by saddling workers' compensation with state insurance, which voters opposed, opponents of the legislation hoped to ensure the law's defeat at the polls (Kantor and Fishback 1994, 288-91). The damage-suit lawyers, in concert with the building trades councils, again forced a referendum. Missouri voters once again struck down workers' compensation, this time by a comfortable 55.2 to 44.8 percent margin.

The General Assembly failed to enact new workers' compensation legislation in the 1923 session.⁶² Lindley Clark (1925, 602) reported in the Monthly Labor Review that the chances of legislation were wrecked by organized labor's demands for an exclusive state insurance system. Despite its losses in the legislature, the MSFL managed to put an initiative on the November 1924 ballot that included organized labor's demands without compromise: an exclusive state insurance fund and maximum weekly benefit levels of \$30, double the maximum benefits in neighboring Illinois and Kansas.⁶³ Opponents urged support from a wide range of interests. Since benefits were set so high, they argued that manufacturers would leave St. Louis and Kansas City for neighboring states.⁶⁴ Since labor's proposal would have required firms with as few as 2 employees to insure, AIM gained support from small business owners who otherwise might not have been directly involved in workers' compensation. Finally, and probably with most success, opponents appealed to the taxpayer since

organized labor proposed setting up an expensive commission of 5 members with salaries of \$6,000 each, creating a monopoly state insurance fund, and appropriating more than \$4 million to start it.⁶⁵ Not surprisingly, the initiative was strongly defeated, 72.6 to 27.4 percent.

Organized labor's sound defeat in 1924 and employers' increasing urgency to adopt a workers' compensation law led to a compromise in the 1925 legislative session.⁶⁶ The 1925 act was among the more liberal laws at the time. No other state's accident benefits exceeded the act's $\frac{2}{3}$ wage replacement and its \$20 per week payment ceiling was higher than those in neighboring Kansas and Illinois. The generous benefit ceiling put Missouri fifth (tied with 6 others) among all workers' compensation states, while its 3-day waiting period tied Missouri for third among the states (BLS 1926, 23, 26). Without state insurance, the bill also gained support from the insurance industry. The bill passed the legislature and Missouri voters this time approved the workers' compensation law as enacted by the legislature, voting in favor of the legislation 69 to 31 percent in a November 1926 referendum (Kantor and Fishback 1994, 284-87).

Disagreements between manufacturers and organized labor over benefit levels and other details of the law prevented the passage of workers' compensation for several years. Eventually a split within the ranks of organized labor over the proper legislative strategy for obtaining high benefits in the long run further delayed the passage of workers' compensation. It became quite clear that the building trades unions were willing to sacrifice the adoption of workers' compensation for an attempt to get the highest benefits possible. Over the course of the early 1920s the combination of legislative acts and referenda showed that the labor extremists' all-or-nothing strategy would not work, as proposals that increasingly reflected the ideals of organized labor went down to defeat in referenda. Finally, workers' compensation was adopted only when the building trades accepted the compromise.

Summary Remarks

One of the leading controversies that developed over the adoption of workers' compensation

was the issue of benefit levels. Employers offered versions of the law that called for low benefit levels, either through low ceilings on weekly payments or by seeking to have workers share in the payment of insurance premiums. Workers on the other hand sought to eliminate ceilings on payments and to avoid paying any of the workers' compensation premiums. In most states the result was a compromise between the two extremes. The extent of the compromise often reflected the relative strengths of employers and workers in the state legislature. An empirical examination shows the role that these divergent economic interests played in determining how generous a state's workers' compensation law was. Employers in dangerous industries succeeded in the efforts to keep their overall accident costs minimized by securing relatively low benefit levels. Organized labor and workers' compensation commissions, all else constant, were able to successfully lobby state legislatures for better accident benefits for workers. Another key factor in determining benefit levels was the presence of political reform interest within state legislatures. Political power shifts, as measured by shifts in the party dominance of state legislatures, played a much stronger role in the determination of benefit levels than they did in the adoption of workers' compensation more generally. We believe the reason is that all sides expected to benefit from the adoption of workers' compensation, but their interests differed on the issue of benefit levels. Employers typically opposed high benefits, but in states where political reformers forged a coalition with organized labor, the benefit levels were higher and relatively radical features such as state insurance were more likely to have been included in the workers' compensation law.

Workers' compensation laws across states were similar in that they all changed the nature of employer liability from negligence liability to a form of strict liability, but the laws varied substantially in their details. The parameters of workers' compensation laws that were enacted across the United States were often the result of major compromises between the demands of employers, workers, and other groups with a vested interest in the outcome, such as lawyers and insurance companies. The

political strength that each of these interest groups brought to the political negotiations is manifest in the compromises that were ultimately effected. In many states these compromises were resolved relatively quickly, although in other states inter- and intra-group squabbles delayed the adoption of workers' compensation anywhere from two to fifteen years. Our analysis of the adoption of workers' compensation legislation in the early twentieth century highlights the importance of understanding the role that interest groups play in formulating public policy. Disparities in the political influence of these competing groups determined the timing of the law's adoption across the United States and the form the law took in a particular state.

Appendix A

Constructing the Expected Benefits Variable

The expected benefit measure is essentially the probability of an accident multiplied by the present value of the stream of benefits paid to the worker if he were to experience an industrial accident. The calculation is complicated by the fact that a worker could suffer a variety of accidents, each with a different probability and payout scheme. Workers' compensation commissions typically classified accidents into four broad categories: fatal, permanent total disability, permanent partial disability, and temporary disability. Permanent total disability accidents were relatively rare and the payments were very close to the fatal accident payouts, so we merged the permanent total disability and fatal accident categories together. Using the national average weekly wage for manufacturing, we calculated the benefits that would have been paid for a typical accident in each category. For the permanent partial disability category, we used the loss of a hand as a typical accident because the payment structure for the amputation of a hand was described in every law in every state. The typical accident in the permanent partial category, however, was actually much less serious. Based on actual accident statistics reported by the Wisconsin Industrial Commission (1915, 41; 1916, 44; 1917, 6-7) for 1914 to 1917, we found that the average payments for permanent partial disabilities was 21.9 percent of that for the loss of a hand. Thus, in computing our payment for a permanent partial accident, we scaled down the payout for the hand by multiplying the figure by 21.9 percent. We treated the typical temporary disability accident as one in which the injured worker was out of work for 5 weeks. We then took the typical benefit in each category, multiplied by the probability of an accident occurring in that category, and then summed across categories.

When calculating the expected workers' compensation benefits for each accident category, we assumed that the injured worker was married and had two children. We assumed the children were ages 8 and 10 and that the deceased's widow did not remarry and lived another 30 years. We obtained the statutory descriptions from various Bulletins of the United States Bureau of Labor Statistics in the Workmen's Compensation and Insurance Series (U.S. Bureau of Labor Statistics 1914, 1917, 1918, 1923, and 1926; Hookstadt 1920 and 1922; Clark and Frincke 1921). We also consulted Jones (1927). When questions arose about the timing of changes in the law, the state's statutes were consulted directly.

For fatal accidents, the typical law allowed weekly payments to be a percentage of the weekly wage for a specified period of time. We calculated the present value (using continuous discounting) of the stream of benefits using a discount rate of 5 percent, which was the typical return on stocks and bonds for the period and also was in the range of statutory rates used when the stream of workers' compensation benefits were converted to lump sums. The calculations were sometimes complicated because states usually imposed maximums on the weekly payout or maximum total payouts. If the percentage times the weekly wage exceeded the maximum weekly payment, we inserted the maximum weekly payment into the present value calculations. In cases where there was a maximum total payment, we assumed the family received the regular weekly payment until the total undiscounted stream of payments reached the maximum total. Thus, we determined the number of weekly payments by taking the maximum total divided by the weekly payment (states did not worry about discounting issues when deciding when a family reached its maximum total benefit).

For the loss of a hand, the typical state paid a percentage of the weekly wage for a fixed amount of time, subject to minimum and maximum weekly amounts. Some states commenced the hand payments after the worker collected a statutory amount of temporary disability pay. Following the recommendations of the International Association of Industrial Accident Boards and Commissions in

1920 (Hookstadt 1920, 77), we assumed that the loss of a hand temporarily disabled the worker fully for 15 weeks before he could return to work. We calculated the present value of the stream of payments using continuous discounting. It was important to calculate the present value because some states would pay a relatively small amount per week for the rest of the worker's life. Without discounting, the total amount paid would look quite large when, in fact, the present value of the stream of payments was in the range of other states' benefits. In the few cases where a hand payment was not mentioned specifically, we followed the BLS in describing it as a 50 percent disability.

For temporary disabilities, workers were paid a percentage of their weekly wage during the period of the disability, which we assumed to be 5 weeks. These payments were usually subject to minimum and maximum weekly amounts. Nearly all states had waiting periods. In many cases a worker injured for 5 weeks would receive no payment for the first 3 to 14 days of the disability, such that he might receive as few as 3 weekly payments. In a number of states, the worker would receive nothing during the waiting period, but if the disability lasted beyond 4 weeks (up to 7 weeks in some states) the worker would eventually receive a retroactive payment for the first week or two of the disability. We have made our calculations sensitive to these nuances across states.

In a number of years the statutory parameters of the law changed. All values of expected benefits in the papers are the benefits as they stood at the end of the year listed.

The probabilities of each type of accident were derived from data from the Oregon Industrial Accident Commission (1919, pp. 28-42), and they represent the average accident experiences of all Oregon industries.

Finally, the national average manufacturing weekly wage was constructed using Paul Douglas's measures of weekly hours and hourly earnings (series D-765 and D-766 in U.S. Bureau of the Census 1975, 168) for the years 1890 to 1926. We then interpolated values for the years 1927 through 1930 by running a regression of the weekly wage measure on Stanley Lebergott's measure of average annual earnings per full-time employee for manufacturing (series D-740 in U.S. Bureau of the Census 1975, 166) divided by 52. The interpolated values for 1927 through 1930 are equal to $2.021638 + 1.080317$ times the Lebergott measure of weekly wages.

Appendix B

Data Sources and Descriptions of Independent Variables

This appendix describes the sources of the independent variables in the regressions in Table 2.

Index of Accident Risk

The index of manufacturing accident risk is based on the workers' compensation premiums that Ohio employers paid into the Ohio State Insurance Fund in 1923, and the distribution of manufacturing employment in 1899, 1909, 1919, and 1929. The index is a weighted average of the accident risk in each state's manufacturing industries, where the relative danger in each industry is held fixed over time. The only reason a state's index would change over time is because of changes in the relative employment in each industry. Our measure of the relative danger in each industry is workers' compensation premiums that employers in a wide range of industries paid per \$100 on the payroll into Ohio's state-run compensation fund in 1923. The premiums were reported in Ohio Industrial Commission (1923). The workers' compensation premiums are a reasonable measure of the relative danger across industries because the Ohio Industrial Commission experience-rated the premiums such that industries paid higher premiums if they generated relatively more accident costs. We chose Ohio premiums because the state had a broader set of industries than most other states for which data were available. The employment data for each industry in each state, which are used as the weights in the weighted average calculation, represent the average number of wage earners in the industry. The data are from the U.S. Bureau of Census (1902, volume 7; 1913, volume 9; 1923, volume 8; 1933, volume 3). The risk index for the intervening years was calculated using a straight-line interpolation.

Manufacturing Firm Size and Value Added

The percentage of manufacturing establishments employing less than 20 workers and more than 500 workers were reported by the Census for the years 1899, 1909, 1914, 1919, 1929, and 1939. We used straight-line interpolations to fill the intervening years. The data were collected from the U.S. Bureau of the Census (1902, volume 7, 336-67; 1913, volume 8, 469; 1917, 422-25; 1923, volume 8, 90; 1933, volume 1, 72-73; 1943, volume 1, 169).

Manufacturing value added per manufacturing worker was reported in the manufacturing censuses of 1899, 1904, 1909, 1919, 1921, 1923, 1925, 1927, 1929, and 1931. The values were deflated using the CPI (1967=100, series E135 in U.S. Bureau of the Census 1975, 211). Values for the intervening years were determined using straight-line interpolation. Hand trades were excluded. Data from 1899, 1904 and 1909 are from U.S. Bureau of the Census (1913, volume 8, 542-44); 1914 data are from U.S. Bureau of the Census (1917, 171-73); data for 1921, 1923, and 1925 are from U.S. Bureau of the Census (1928, 1283-87); 1919, 1927, and 1929 are from U.S. Bureau of the Census (1933, volume 1, 17-20); and 1931 data are from U.S. Bureau of the Census (1935, 21).

Employment Shares in Agriculture, Manufacturing, and Mining

The percentages of gainfully employed workers in agriculture, manufacturing, and mining were reported in the population censuses for the years 1900, 1910, 1920, and 1930. See U.S. Bureau of the Census (1902, volume 2, 508; 1913, volume 4, 44-45; 1923, volume 4, 48; 1933, volume 5, 54). Straight-line interpolation was used to fill the intervening years.

Unionization Index

The union index implicitly assumes that the national unionization rates across industries in 1899, 1909, 1919, and 1929 were the same across states. For each of the four manufacturing census years, we calculated a weighted average of the unionization rates across each state's manufacturing industries. The weights are the shares of the manufacturing wage earners in each industry. We used Whaples' (1990, 434-47) estimates of the unionization rates in each manufacturing industry from 1909. We then followed Whaples' procedure to recalculate his 1919 unionization rates across industries and to derive estimates for 1899 and 1929 using information on union membership from Wolman (1936). The average number of wage earners was reported by the U.S. Bureau of the Census (see the Accident Risk section above for sources).

To fill in the years between 1899, 1909, 1919, and 1929 for each state, we interpolated based on movements in the ratio of U.S. trade union membership (Wolman 1936, 16) to nonagricultural employment (series D-127 in U.S. Bureau of the Census 1975, 137).

The Political Composition of State Legislatures

The variables indicating political power shifts in each state legislature are based on the number of Republicans, Democrats, and other party members in each chamber of the state's legislature at each legislative session. For each state we sought information on the political structure of the state legislature from legislative manuals, state bluebooks, House and Senate journals, newspapers, and historical listings. In many of the southern states the legislatures were overwhelmingly Democratic and many of the bluebooks did not bother to list party affiliations.

To fill in any gaps we encountered, we used information from the New York Secretary of State, Manual, for the years 1925-1940. The information there seems reasonably accurate when matched up against information we collected from states' bluebooks. For the earlier years we collected information from the Chicago Daily News Almanac and Yearbook, 1918-1930, Tribune Almanac, 1900-1909, and World Almanac and Encyclopedia, 1910-1918. There is still probably some measurement error in the data because some sources disagree on the exact party splits of the legislatures because some legislators may have changed parties mid-course or because people died and vacancies were filled.

We determined whether the legislature was in session by examining the frequency of each state's legislative sessions, as reported in U.S. Bureau of the Census (1918, 62-63). However, because some states held special sessions during the period under investigation, we examined the statute volumes for each state to determine all of the years that the legislatures met.

Presidential Voting Information

The percentage of votes for Republican and Socialist presidential candidates are from Congressional Quarterly Inc. (1975, 281-91). Votes for Theodore Roosevelt's Progressives in 1912 were treated as Republican votes and votes for LaFollette in 1924 were treated as Socialist votes. The values for years between presidential elections are based on straight-line interpolations between election years.

Estimates of Average Manufacturing Wages by State

To estimate state-level manufacturing wages we calculated the ratio of total wages paid to

manufacturing workers to the average number of wage earners for the years 1899, 1904, 1909, 1914, 1919, 1921, 1923, 1925, 1927, 1929, and 1931. We then calculated the ratio of the state manufacturing wage to the national average manufacturing wage for each of those years. We used straight-interpolations to fill in the noncensus year values of this ratio. We then multiplied these ratios by national average wages for each year to estimate the manufacturing wage in each state. Specifically, we multiplied the ratios by Douglas's estimate of the national manufacturing weekly wage. We then converted this figure into a real weekly wage in 1967 dollars by dividing by the CPI for all goods (series E-135 in U.S. Bureau of the Census 1975, 211). The total wages and the average employment figures for the years 1899, 1904 and 1909 are from U.S. Bureau of the Census (1913, volume 8, 542-44); for 1929, 1927, and 1919 from U.S. Bureau of the Census (1933, volume 3, 17-20); for 1914 from U.S. Bureau of the Census (1923, volume 8, 171-73); for 1921, 1923, and 1925 from U.S. Bureau of the Census (1928, 1283-87); and for 1931 from U.S. Bureau of the Census (1935, 21).

Variables Characterizing Employers' Liability Laws

Information on the status of each state's employers' liability laws was collected from a variety of sources: Fessenden (1900, 1157-1210), U.S. Department of Labor (1903, 1363-64), Clark (1908 and 1911, 904-11), and U.S. Bureau of Labor Statistics Bulletins 111 (1913), 148 (1914), and 370 (1925).

Footnotes

1. The major interest groups with a stake in workers' compensation expected to benefit from the new legislation. Employers were not particularly bothered by the rise in expected accident benefits because they could pass the extra costs onto workers and the uncertainty of the negligence system was reduced (see Fishback and Kantor 1995). Workers gained, even if they paid for the higher benefits through lower wages, because they had limited access to private accident insurance under negligence liability. Workers' compensation provided workers better insurance against workplace accident risk than they could obtain privately under the negligence system. Finally, insurers anticipated an expansion in their coverage of workplace accident risk because the information problems associated with selling employers insurance for their entire payrolls were substantially less than trying to sell accident insurance to individual workers (see Kantor and Fishback 1996b). The natural coalition among workers, employers, and insurers allowed for the rapid and relatively uncontested adoption of workers' compensation in the 1910s.
2. Fishback and Kantor (1995) show that nonunion miners and lumber workers experienced wage offsets, while unionized coal workers and building tradesman experienced much smaller wage reductions. If employers anticipated that they would pass their costs of workers' compensation onto workers, then why would they struggle to keep benefit levels relatively low? They had an interest for several reasons. First, since unionized workers experienced small or no wage offsets, employers of unionized labor had a strong incentive to limit the size of the benefits they paid. Second, even if employers anticipated passing the costs of the benefits back to workers, there was no guarantee that they could pass on their full costs from the legislation. Fishback and Kantor show that particularly for lumber workers, employers were able to pass back amounts ranging from 50 to 100 percent of the benefits that workers received. Insurance premiums typically were another 50 to 70 percent higher than the amounts workers received. Thus, employers in many industries were probably not able to pass the full costs of the workers' compensation insurance back to their workers. Finally, even if employers could impose their entire accident costs on workers, there were no guarantees that they could do so immediately. Immediate and obvious wage cuts when workers' compensation was enacted would have led to a great deal of friction over the issue (see our discussion of this type of issue in the Ohio and Minnesota case studies below). Employers might have succeeded in lowering real wages by not raising nominal wages to offset inflation, but such effects would have occurred gradually. In the meantime, however, employers' wage bills were higher than they were prior to the legislation.
3. There were many exceptions to this mandate, however. Most states exempted firms with fewer than 5 workers. In many states, moreover, agriculture, domestic service, casual labor, and public service were excluded from the compensation laws. Sometimes, specific industries were exempted. For example, Maine excluded logging, Maryland exempted country blacksmiths, and Texas excluded cotton ginning. The laws also precluded compensation in cases where the worker was intoxicated at the time he was injured or if he had maliciously caused his own accident. For a more comprehensive summary of the exemptions across the United States, see U.S. Bureau of Labor Statistics (1918, 58).
4. In a number of states, if a worker had an injury lasting more than one or two months, then he could retroactively collect accident benefits foregone during the waiting period.

5. The evidence from Conyngton's (1917) surveys from Ohio and Connecticut in 1915 suggest that families of fatal accident victims generally received the benefits they were entitled to under the law. In Ohio, the families' actual death benefits were on average equal to 98.8 percent of the weekly payment that we estimated the families should have received using the statutory rules and each worker's reported weekly wage. In fact, 46 percent of the actual payments were the same as predicted by the statute, 34 percent were slightly higher, and 20 percent were slightly lower. In Connecticut, the actual payments averaged 99.9 percent of the predicted payments based on the statute. Therefore, cross-state comparisons of estimated workers' compensation payments using the statutory rules should give a reasonable measure of the actual amounts that injured workers and their families received. On the other hand, there were complaints by workers in various states that they were not receiving the legal level of benefits for nonfatal accidents. Such complaints would obviously have been expected given insurers' inability to determine precisely the severity of the nonfatal injury. These problems did not exist in fatality cases.
6. The workers' compensation payments are reported as discounted values because the benefits were structured such that workers or their heirs were paid a weekly amount over an extended period of time. Many state laws allowed families of fatally injured workers to obtain lump sum payments equal to the present value of the stream of payments discounted at statutory rates ranging from 2.5 to 6 percent. Such conversions, however, were not very common. A lump sum settlement typically required a paternalistic hearing before a state board to determine whether a lump-sum payment was in the best interest of the family. Conyngton (1917, 119-21, 137-44) found that less than 13 percent of the families of fatal accident victims in Ohio and Connecticut received their benefits as lump-sum amounts.
7. Danzon (1988) uses a median voter model to examine modern workers' compensation benefit levels. While the median voter model offers some useful insights, we do not want to tie the analysis down to considering only the attitudes of voting constituents. There is plenty of qualitative and quantitative evidence that state legislators paid attention to pressure from interest groups and to political coalitions within the legislature. Employers, insurance companies, and organized labor had a much greater influence within state legislatures than their voting numbers would suggest. Many of these interest groups offered funds for reelection campaigns, framed the debates over issues for legislators, flooded hearings with lobbyists, and often served as key sources of information in an era when legislators were not professionals and did not have large staffs to conduct research or write legislation.
8. In our calculation of expected benefits, recall that we used the national average weekly wage in each year in order to show how differences in the benefit parameters across states produced a dispersion of benefit levels across the country. The nominal national average weekly wage does rise significantly over time, so some of the variation across time is driven by differences in the national average weekly wage. We chose to use the nominal wages because if we had kept a constant wage throughout, the measure of expected benefits in the various periods would have been out of line with what was actually paid. If we had used the low wages of around 1910, the expected benefits in the late 1920s would not have been anywhere near the levels that were actually paid out during that period. If we had used the high wages circa 1930, some of the states without maximums in the early 1910s would have had extraordinarily high benefit levels. We have also estimated the equations using the expected benefits as a percentage of the

annual wage as the dependent variable, and the results are very similar to the ones reported in the text. The inclusion of year dummies in the fixed-effect regressions also controls for differences in the benefits driven by the rise in the national average wage.

9. Wyoming administered the law through the courts but had a monopoly state insurance fund, so we have treated it as having an administrative body in the regression analyses.
10. In the analyses reported in Table 2, we have treated votes for Theodore Roosevelt as Republican votes in 1912. We have also rerun the equations, separating the republican votes and the Roosevelt progressive votes. The progressive votes are interpolated upward from 0 in 1908 and back down to 0 by 1916, which follows the progress of the Progressive party at the national level. The socialist and republican votes have small and statistically significant effects, while the progressive vote has a negative effect.
11. Original members of the OMA included such influential firms as B.F. Goodrich, Youngstown Sheet and Tube, Republic Steel, Goodyear Tire, Jeffrey Manufacturing, Dayton Manufacturing, Mosaic Tile, Owens-Illinois Glass, and Columbus Iron and Steel. See OMA, Records, p. 2.
12. The OSFL repudiated their other representative on the commission for signing the majority report on the bill, after he had promised to support the minority report. See Ohio State Journal, 23 March 1911, Toledo Union Leader, 24 March 1911, and Byrum and Ohio State Federation of Labor (1911, 6)
13. In the Senate the progressives had 11 certain votes (9 democrats and 2 republicans), while conservatives held 17 votes (5 democrats and 12 republicans). The remaining 6 were moderates. In the House there were 68 democrats and 48 republicans. Of this group there were 55 progressives (44 democrats, 10 republicans, and 1 independent), 43 conservatives (12 democrats and 31 republicans), and 12 democrats and 7 republicans affiliated with neither ideological wing. See Warner (1964, 266-75, 282-83).
14. The labor bill in the House was shepherded to the Corporations Committee, chaired by labor representative George Nye, which favorably reported the bill out of committee. In the words of the OMA, the committee did this “without giving the matter any consideration whatever.” Meanwhile, the employers’ bill was sent to the Judiciary Committee, which amended the bill and reported it out of committee without a recommendation. The OMA was worried that the OSFL had enough votes to pass the labor bill, but the OMA held a trump card because “if the bill had . . . become law it would have had not the least effect, because no employer in Ohio would have insured under it, and the labor leaders and their allies knew this to be a fact.” When the labor bill came up for a vote, the allies of the OMA pushed to have both bills sent to the special committee. Shortly after the special committee was announced, the Senate passed Green’s labor bill, which is discussed below. See “Secretary’s Report, November 1911,” OMA, Records, Ohio House of Representatives (1911, 399, 541, 581, 585), Ohio State Journal, 7, 9, 14, 17, 18, 21, and 22 March 1911, and Toledo Union Leader, 17 and 24 March 1911.
15. Ohio State Journal, 23 March 1911 and Ohio Senate (1911, 288).

16. Ohio State Journal, 29 March 1911 and 18 April 1911, and Cleveland Federationist, 30 March 1911.
17. Mengert (1920, 12) claims that Harmon wrote these clauses. See also Ohio House of Representatives (1911, 797-800), Toledo News-Bee, 19 and 20 April 11, Ohio State Journal, 20 and 28 April 1911, and Cleveland Plain Dealer, 28 April 1911.
18. The results of a probit voting analysis suggest that a one-standard-deviation increase in the progressive index, as measured by the Toledo News-Bee, lowered the probability of supporting the Speaker's decision by a statistically significant 14.5 percentage points. A one-standard-deviation increase in workplace injuries per male population lowered the probability of supporting the Speaker by a statistically significant 27.3 percentage points. Democrats, on the margin, voted against the Speaker, with a one-standard-deviation increase lowering the probability of voting yes by 12.5 percentage points. Per capita wealth had the largest effect on the vote in terms of magnitude. A one-standard-deviation increase would have lowered the probability of supporting the Speaker by 40 percentage points, but the effect is not statistically significant. The results of this probit analysis are available from the authors.
19. A probit analysis of the voting revealed no sign of statistically significant support from progressives, democrats, or representatives from counties that had relatively high accident risk. A one-standard-deviation increase in the probability of being a labor representative raised the probability of voting in favor of the amendment by a statistically significant 12.6 percentage points. Legislators who were farmers also supported labor's amendment. A one-standard deviation-increase in the probability of being a farmer raised support by a statistically significant 11 percentage points. The results from this roll-call analysis are available from the authors. See also Ohio House of Representatives (1911, 846-52), Cleveland Plain Dealer, 28 April 1911, Ohio State Journal, 28 April 1911, and Toledo News-Bee, 28 April 1911.
20. "Secretary's Report, November 10, 1911," OMA, Records.
21. Although Gillette (1911c, pp. 174, 180) worried about "the danger of injecting . . . a paternalistic and socialistic feature" into the workers' compensation system, he believed that "laws properly framed and intending to do equal justice will probably do more good than breaking down of precedents will do harm." As the president of the MEA, Gillette saw accident reduction as one of the motivating factors producing the mutual cooperation between employers and their workers. As the spokesman for labor interests, McEwen (1911, p. 168) stood on relatively conservative ground by today's standards: "True progress will consist in the equilibrium between obtaining the greatest benefits for the largest number of injured workingmen and affecting the least injury to industry." "You must never kill the goose that lays the golden egg; don't do anything to injure capital," McEwen warned Minnesota's workers. See Minnesota House of Representatives, "Public Hearing," p. 15 and MSFL (1910, 22).
22. Speaking before the Minnesota Academy of Social Sciences in December 1910, Gillette (1911c, p. 175) indicated the fractionalization occurring within the commission and set the tone for the debate to occur in the 1911 legislature: "My own conclusion . . . is that it will be impossible to frame an act in a fair degree satisfactory to the employers and providing reasonably adequate compensation to injured employes or their dependents . . ." See also

Minneapolis Journal, 3 December 1910.

23. Another problem Gillette identified was that the majority bill would have made workers' compensation compulsory for all employers. Gillette (1911a) argued that the compulsory feature of the law was likely to be unconstitutional; therefore, he offered the same alternative adopted in Ohio and many other states, making the law elective in fact, but compulsory in practice because any employer who opted out of the system would have been stripped of the three common law defenses. See Gillette (1911b) for his view of how the Gillette bill differed from his colleagues'. Also see Minneapolis Journal, 12 and 17 February 1911 and Labor World, 24 February 1911. F. G. Winston, the "head of one of the largest railroad and stripping [sic] contract concerns in the west," argued that a \$100 medical allowance would "create a class of 'ambulance-chasing physicians' to take the place of lawyers." See Minneapolis Journal, 1 and 24 February 1911. Another issue that received some prominent discussion late in the legislative session was state versus private insurance of workers' compensation risk.
24. MEA, 14 December 1911.
25. Labor World, 4 March 1911. On labor's "Committee of Fifty" see MSFL (1909, 21) and Minneapolis Journal, 5 February 1911. Further, their legal counsel, Minnesota Supreme Court Justice Thomas D. O'Brien, believed that employers and employees could not be deprived of their right to a jury trial. Minneapolis Journal, 16 February 1911. Not surprisingly, "Lawyers in the legislature . . . were strong for the jury trial feature." Thus, in addition to the majority and minority bills of the 1909 commission, O'Brien's bill was introduced in the legislature. That bill pertained only to a select number of dangerous industries and was "elective" in that it allowed an injured worker to decide after his accident whether he would pursue a negligence claim or take a fixed amount of compensation, which was set at a higher level than either of the competing bills. Moreover, if a worker decided to sue his employer, the employer was stripped of his assumption of risk and fellow servant defenses and was allowed only a modified version of the contributory negligence defense. See Labor World, 8 February 1911 and Minneapolis Journal, 23 February 1911. Employer representatives dismissed the O'Brien bill as unrealistically burdensome on employers. See Minneapolis Journal, 24 February 1911.
26. Labor World, 25 March 1911.
27. Labor World, 29 April 1911 and MSFL (1911, 16).
28. MEA, 14 December 1911.
29. Minneapolis Journal, 26 March 1912.
30. MEA, 2 and 16 August 1912, and Minneapolis Journal, 14 October 1912. The Bar Association continued its support of the commission's majority bill from 1911 which made coverage compulsory. But organized labor was willing to join the employers in supporting the New Jersey law because it was seen as "a fair law and guarantees adequate protection at the minimum of cost." Although the New Jersey law was elective in nature, 90 to 95 percent of the employers were choosing the new system because if they refused the law, they would have been stripped of their common law defenses in a negligence suit. Minneapolis Journal, 14

October 1912 and 1 December 1912. Reports from William E. Stubbs, secretary of New Jersey's Employers' Liability Commission, heartened labor leaders. Stubbs concluded that his state's law was functioning relatively smoothly as 94 percent of the workers entitled to benefits were receiving them. See letter from Stubbs to Houk, 21 March 1912, in Minnesota Labor and Industry Department Records.

31. Labor also opposed three other clauses: a clause allowing for compensation only if the worker was not "willfully negligent" at the time he was injured; a lower set of benefits for the dependents of injured workers living outside the United States; and a provision allowing benefits to be paid in a lump sum without court supervision. Minneapolis Journal, 3, 8, and 31 December 1912; Labor World, 28 December 1912 and 18 January 1913; Minnesota Union Advocate, 10 January 1913; and MSFL (1913, 36, 67-68). Also see MEA, 2 December 1912.
32. Labor World, 18 January 1913 and MSFL (1913, 68).
33. MEA, 28 February 1913. Also see Labor World, 1 March 1913.
34. MEA, 14 March 1913.
35. Minnesota Union Advocate, 14 March 1913. Part of the debate extended to other issues. The MSFL, the only statewide labor organization, had vehemently opposed the negligence clause from the onset, yet Gillette now claimed that the MSFL had agreed to it. The MSFL further ridiculed Gillette's position on domestic servants because as a member of the compensation commission of 1909 he had helped to draft a bill that excluded them from coverage. Labor World, 15 March 1913.
36. MEA, 17 March 1913 and 7 April 1913.
37. Labor World, 19 April 1913, MSFL (1913, 36-37), and Railroad Brotherhoods (1912-1913, 22). The Minneapolis Journal, 10 April 1913, made the same plea to its readers: ". . . pass the bill and get the system started. It can be perfected better after it is in operation than by laying aside the whole matter for another two years, while the extremists on both sides quarrel about terms."
38. MSFL (1913, 19).
39. Labor World, 15 March 1915.
40. Minneapolis Labor Review, 11 April 1913 and 18 April 1913.
41. Minneapolis Labor Review, 14 March 1913. For a summary of the internal fight within the labor movement, see Lawson (1955, 217). We discuss a similar fight among Missouri's organized labor below.
42. MSFL (1913, 19), Minneapolis Journal, 4 April 1913, and Minnesota Senate (1913, 1156-61).
43. Labor World, 19 April 1913.

44. Biographical information on Lundeen is from Minnesota Secretary of State (1913, 664).
45. Minneapolis Journal, 12 April 1913.
46. The support of representatives from districts with a higher percentage of voters who were members of labor unions is shown in Kantor and Fishback (1996b).
47. Minnesota House (1913, 1624-31) and Minneapolis Journal, 12 April 1913.
48. Minnesota House (1913, 1630-31). The Senate did not agree to the House's amendments and a conference committee was organized. Of the two most important amendments that the House enacted, the House agreed to recede from the retroactive benefits for injuries lasting longer than 30 days and a revised medical benefits amendment was written. Instead of providing workers with a maximum of \$195 in medical benefits over an extended time period, the new amendment provided up to \$100 during the first 90 days of the injury, but the courts could order an additional \$100 of medical benefits. See Minnesota Senate (1913, 1649-53).
49. Minneapolis Labor Review, 25 April 1913.
50. MSFL (1913, 36) and MSFL (1914, 27).
51. The voting patterns of representatives from "union" districts was uncovered from a logit analysis of the roll call vote. See Kantor and Fishback (1996a).
52. See Kantor and Fishback (1996a) for the determinants of the vote on the majority bill.
53. MEA, 15 December 1914.
54. Minnesota Department of Labor and Industries (1915-1916, 7-8, 11-41).
55. For Gillette's response to the Department of Labor and Industries' proposals, see "Weekly Bulletin No. 1," 6 January 1917, in MEA.
56. See "Weekly Bulletin No. 15," 15 May 1917, in MEA. The order of the two sentences in the original source is switched.
57. Minnesota House (1917, 1566-67). Also see Labor World, 14 April 1917, which reported that "There was considerable resentment among leaders of organized labor over the action of Mr. McGrath," a representative with railroad union ties, who orchestrated the compromise.
58. See "Weekly Bulletin No. 15," 15 May 1917, in MEA and Labor World, 28 April 1917. These increases in the compensation levels, according to labor, were "promised" to them in 1913 in return for conceding to employers to get the initial law passed in 1913. See Labor World, 21 April 1917.
59. After the petition was filed, the Missouri Secretary of State, MSFL President R. T. Wood, other labor leaders, insurance men, and corporation lawyers who favored the new law instituted court proceedings in the Jefferson City Circuit Court to have the referendum set aside. The lower

court sustained their motion. However, the referendum supporters appealed to the State Supreme Court, which reversed the lower court and ordered the referendum to proceed (MBLS 1918-19, 892).

60. Workers' compensation was supported by the Republican gubernatorial candidate Hyde, who won the election (St. Louis Post-Dispatch, 31 October 1920). The Republicans also achieved the "impossible," their first majority in the Senate (Kansas City Star, 4 November 1920).
61. St. Louis Post-Dispatch, 25 March 1921 and Kansas City Star, 6 November 1922.
62. Associated Industries of Missouri (AIM), Bulletin Nos. 150, 169, 185.
63. Kansas had a weekly maximum of \$15, while Illinois' weekly maximum was \$14 (U.S. BLS 1926, 23, 26).
64. AIM, Bulletin No. 177.
65. Clark (1925, 602), St. Louis Post-Dispatch, 29 October 1924, and Kansas City Star, 2 November 1924.
66. Views on the probability of ever passing a workers' compensation law varied widely at the beginning of 1925. A state labor official saw no reason why a workable workers' compensation law could not be enacted. On the other hand, the Monthly Labor Review received reports that the difference of opinion over the nature of the bill was so great that it would be difficult to agree upon a measure to get sufficient support for passage (Clark 1925, 602).

References

- Associated Industries of Missouri. Bulletin. Various years. State Historical Society of Missouri, Columbia, Missouri.
- Byrum, Ike and Ohio State Federation of Labor, Report of Legislative Agent Ike S. Byrum and Executive Board of the Ohio State Federation of Labor on the 79th General Assembly of Ohio, 1911 and Record of Labor Laws Enacted since 1907. Copy located at the Ohio Historical Society, Columbus, OH.
- Chicago Daily News Almanac and Yearbook, 1918-1930.
- Clark, Lindley D., "The Legal Liability of Employers for Injuries to their Employees in the United States," U.S. Bureau of Labor Bulletin No. 74 (January 1908).
- Clark, Lindley, "Review of Labor Legislation of 1911," U.S. Bureau of Labor Bulletin No. 97 (Washington, 1911), pp. 904-11.
- Clark, Lindley. "Referendum on Missouri Workmen's Compensation Law." Monthly Labor Review 21 (September 1925): 602-04.
- Clark, Lindley D., and Martin C. Frincke, Jr. "Workmen's Compensation Legislation of the United States and Canada," U.S. Bureau of Labor Statistics Bulletin No. 272 (January 1921).
- Cleveland Federationist, 30 March 1911.
- Cleveland Plain Dealer, 28 April 1911.
- Congressional Quarterly Inc., Guide to U.S. Elections (Washington, 1975).
- Conyngton, Mary K., "Effect of Workmen's Compensation Laws in Diminishing the Necessity of Industrial Employment of Women and Children," U.S. Bureau of Labor Statistics Bulletin No. 217 (Washington, DC, December 1917).
- Danzon, Patricia, M., "The Political Economy of Workers' Compensation: Lessons for Product Liability," American Economic Review Papers and Proceedings 78 (May 1988), pp. 305-10.
- Fessenden, Stephen, "Present Status of Employers' Liability in the United States," U.S. Department of Labor Bulletin No. 29, July 1900 (Washington, DC, 1900), pp. 1157-210.
- Fishback, Price V., and Shawn Everett Kantor. "Did Workers Pay for the Passage of Workers' Compensation?" Quarterly Journal of Economics 110, no. 3 (1995): 713-42.
- _____. "The Adoption of Workers' Compensation in the United States, 1900-1930." University of Arizona Working Paper, Tucson, AZ, February 1996a.
- _____. "The Durable Experiment: State Insurance of Workers' Compensation Risk in the Early Twentieth Century." Journal of Economic History 56, no. 4 (1996b).
- Gillette, George M., "A Bill for an Act," in William A. Schaper, ed., Papers and Proceedings of the Fourth Annual Meeting of the Minnesota Academy of Social Sciences (Minneapolis, 1911a), pp. 226-232.
- _____. "Comment on the Principal Differences between the Gillette Code and the McEwen-Mercer Code," in William A. Schaper, ed., Papers and Proceedings of the Fourth Annual Meeting of the Minnesota Academy of Social Sciences (Minneapolis, 1911b), pp. 233-41
- _____. "Employer's Liability and Workmen's Compensation Acts," in William A. Schaper, ed., Papers and Proceedings of the Fourth Annual Meeting of the Minnesota Academy of Social Sciences (Minneapolis, 1911c), pp. 172-89.
- Hookstadt, Carl. "Comparison of Workmen's Compensation Laws of the United States and Canada up to January 1, 1920," U.S. Bureau of Labor Statistics Bulletin No. 275 (September 1920).
- _____. "Comparison of Workmen's Compensation Laws and Administration, April 1922," U.S. Bureau of Labor Statistics Bulletin No. 301 (April 1922).
- Jones, F. Robertson, Digest of Workmen's Compensation Laws in the United States and Territories.

with Annotations, revised to December 1, 1927 (New York: Workmen's Compensation Publicity Bureau, 1927).

Kansas City Star, various issues.

Kantor, Shawn Everett, and Price V. Fishback, "Coalition Formation and the Adoption of Workers' Compensation: The Case of Missouri, 1911 to 1926." In The Regulated Economy: A Historical Approach to Political Economy, edited by Claudia Goldin and Gary D. Libecap, 259-97. Chicago: University of Chicago Press and NBER, 1994.

_____. "Compromise and Conflict: The Adoption of Workers' Compensation in Minnesota, 1909 to 1921." University of Arizona working paper. 1996a.

_____. "Precautionary Saving, Insurance, and the Origins of Workers' Compensation." Journal of Political Economy 104, no. 2 (1996b): 419-42.

Labor World, various issues.

Lawson, George W. History of Labor in Minnesota. St. Paul, MN: Minnesota State Federation of Labor, 1955.

McEwen, William E., "The Evils of the Present System of Employer's Liability," in William A. Schaper, ed., Papers and Proceedings of the Fourth Annual Meeting of the Minnesota Academy of Social Sciences (Minneapolis, 1911), pp. 154-71.

Mengert, H. R. "The Ohio Workmen's Compensation Law." Ohio Archaeological and Historical Publications 29, no. 1 (1920): 1-48.

Minneapolis Journal, various issues.

Minneapolis Labor Review, various issues.

Minnesota Department of Labor and Industries, Biennial Report, 1915-1916.

Minnesota Employers' Association (MEA), "Minute Book, volume 1," location 152.K.16.1B, box 13, Minnesota Historical Society, St. Paul, MN.

Minnesota House of Representatives, "Public Hearing on the Employers' Liability Act, February 10, 1909," in Minnesota Association of Commerce and Industry Papers, location 152.K.16.2F, box 14, Minnesota Historical Society, St. Paul, MN.

_____, Journal, various years.

Minnesota Labor and Industry Department, "Insurance Compensation Correspondence," location 115.H.17.3B, Minnesota Historical Society, St. Paul, MN.

Minnesota Senate, Journal, 1913.

Minnesota State Federation of Labor (MSFL), Proceedings of the Twenty-Seventh Convention of the Minnesota State Federation of Labor Held at Red Wing, Minnesota, June 14, 15, and 16, 1909.

_____, Proceedings of the Twenty-Eighth Convention of the Minnesota State Federation of Labor Held at Fargo, N. D., June 20-21-22, 1910.

_____, Proceedings of the Twenty-Ninth Convention of the Minnesota State Federation of Labor Held at Mankato, Minnesota, June 19th, 20th, and 21st, 1911.

_____, Proceedings of the Thirty-First Convention of the Minnesota State Federation of Labor Held at St. Cloud, Minnesota, June 16-17-18, 1913.

_____, Proceedings of the Thirty-Second Convention of the Minnesota State Federation of Labor Held at Duluth, Minnesota, June 20-21-22, 1914.

Minnesota. Secretary of State. Legislative Manual, various years.

Missouri. Bureau of Labor Statistics. Biennial Report, 1918-1919. (Check cite)

New York Secretary of State, Manual of the Legislature of the State of New York, various years.

Ohio. House of Representatives. Journal, 1911.

Ohio Industrial Commission, The Ohio State Insurance Manual, Rules and Rates Effective July 1, 1923 (Columbus, OH, 1923).

- Ohio Journal of Commerce, 15 October 1910.
- Ohio Manufacturers' Association. Records, 1910-1950. Microfilm No. 148. Ohio Historical Society. Columbus, OH.
- Ohio State Journal.
- Oregon Industrial Accident Commission, Second Report for the Two Year Period Ending June 30, 1917.
- Pacific Coast Lumber Manufacturers' Association. Proceedings and Addresses, Annual Meeting of the Pacific Coals Lumber Manufacturers' Association. Seattle, 1911.
- St. Louis Post-Dispatch, various issues.
- Toledo News Bee, various issues.
- Toledo Union Leader, various issues.
- Tribune Almanac, 1900-1909.
- U.S. Bureau of the Census, Twelfth Census of the United States: 1900, volumes 2 and 7 (Washington, DC, 1902).
- U.S. Bureau of the Census, Thirteenth Census of the United States: 1910, volumes 4, 8, and 9 (Washington, DC, 1913).
- U.S. Bureau of Census, Abstract of the Census of Manufactures, 1914 (Washington, DC, 1917).
- U.S. Bureau of the Census, Financial Statistics of States, 1917 (Washington, DC, 1918).
- U.S. Bureau of the Census, Fourteenth Census of the United States: 1920, volumes 4 and 8 (Washington, DC, 1923).
- U.S. Bureau of the Census, Biennial Census of Manufactures, 1925 (Washington, DC, 1928).
- U.S. Bureau of the Census, Fifteenth Census of the United States: 1930, volumes 1, 3, and 5 (Washington, DC, 1933).
- U.S. Bureau of the Census, Biennial Census of Manufactures, 1931 (Washington, DC, 1935).
- U.S. Bureau of the Census, Sixteenth Census of the United States: 1940, volumes 1 (Washington, DC, 1943).
- U.S. Bureau of the Census. Historical Statistics of the United States, Colonial Times to 1970. Washington, DC: GPO, 1975.
- U.S. Bureau of Labor Statistics, "Labor Legislation of 1912," U.S. Bureau of Labor Statistics Bulletin No. 111 (Washington, DC, 1913).
- U.S. Bureau of Labor Statistics, "Labor Laws of the United States with Decision of Courts Relating Thereto," U.S. Bureau of Labor Statistics Bulletin No. 148, parts 1 and 2 (Washington, DC, 1914).
- U.S. Bureau of Labor Statistics, "Labor Laws of the United States with Decision of Courts Relating Thereto," Bulletin No. 370, parts 1 and 2, April, 1914. Washington, GPO, 1914.
- U.S. Bureau of Labor Statistics, "Workmen's Compensation Laws of the United States and Foreign Countries," U.S. Bureau of Labor Statistics Bulletin No. 203 (January 1917).
- U.S. Bureau of Labor Statistics, "Workmen's Compensation Legislation in the United States and Foreign Countries, 1917 and 1918," U.S. Bureau of Labor Statistics Bulletin No. 243 (September 1918).
- U.S. Bureau of Labor Statistics, "Workmen's Compensation Legislation of the United States and Canada, 1920 to 1922," Bulletin No. 332 (June 1923).
- U.S. Bureau of Labor Statistics, "Workmen's Compensation Legislation of the United States and Canada as of July 1, 1926," Bulletin No. 423 (December 1926).
- U.S. Department of Labor, "Decisions of Courts Affecting Labor," Department of Labor Bulletin No. 47 (Washington, DC, 1903).

Warner, Hoyt Landon. Progressivism in Ohio, 1897-1917. Columbus: Ohio State University Press, 1964.

Whaples, Robert. "The Shortening of the American Work Week: An Economic and Historical Analysis of Its Context, Causes, and Consequences." Ph.D. diss., University of Pennsylvania, 1990.

Wisconsin Industrial Commission, Annual Report (1915, 1916, 1917).

Wolman, Leo. Ebb and Flow in Trade Unionism. New York: National Bureau of Economic Research, 1936.

World Almanac and Encyclopedia, 1910-1918.

Table 1

Expected Workers' Compensation Benefits (constant 1967 dollars), by State, 1910 to 1930

State	1910	1911	1912	1913	1914	1915	1916	1917	1918	1919	1920	1921	1922	1923	1924	1925	1926	1927	1928	1929	1930	
AL	30.67	34.33	36.66	36.01	35.94	35.05	34.72	35.39	35.87	35.87	36.81	
AZ	.	.	46.37	45.81	45.23	45.59	42.61	39.29	36.23	33.93	65.04	68.30	68.30	68.23	68.09	71.75	71.29	74.11	76.56	76.96	76.43	
CA	47.02	46.97	46.70	41.40	40.84	42.88	41.24	44.73	46.62	45.80	49.15	50.13	52.96	53.57	52.46	51.97	53.01	53.01	53.77	57.02	56.56	
CO	25.96	24.46	23.32	19.86	22.93	19.80	22.16	23.66	29.01	28.95	28.24	27.97	28.51	28.90	28.90	33.63	34.50	
CT	.	.	.	32.75	34.09	35.20	33.84	34.72	39.33	38.53	40.69	42.26	43.40	43.68	45.44	45.15	47.36	48.95	49.22	48.83		
DE	26.99	36.41	34.58	38.71	40.50	40.61	40.53	39.52	39.15	39.90	40.45	40.45	41.50		
GA	25.03	36.40	36.99	36.92	36.00	35.66	36.35	36.85	36.85	37.80		
IA	.	.	.	31.98	31.55	32.57	31.40	26.83	34.84	30.08	33.67	35.95	35.31	35.44	34.57	34.24	34.90	35.37	35.37	35.37	36.29	
ID	39.15	34.08	29.43	42.02	44.86	44.07	43.99	42.90	42.49	43.31	43.90	43.90	43.73	44.86	
IL	.	40.67	39.42	38.96	38.43	39.71	41.47	39.45	38.78	33.48	38.44	41.04	40.32	40.24	43.92	43.50	44.64	45.25	49.59	50.88		
IN	34.64	35.77	37.80	38.77	36.09	31.16	34.88	37.24	36.58	36.51	35.61	35.27	44.84	45.45	45.45	46.63		
KS	.	33.77	33.99	33.59	33.14	34.29	37.74	38.82	34.57	29.85	33.41	35.67	35.05	34.98	34.11	33.79	41.65	42.22	42.22	43.32		
KY	43.83	39.13	36.50	31.78	31.34	35.08	37.45	36.79	36.72	35.81	35.48	36.16	36.65	36.65	37.60		
LA	31.55	35.79	34.41	38.79	38.85	39.61	42.78	46.59	46.71	49.93	48.69	48.23	49.16	51.64	51.64	52.98		
MA	.	45.36	45.32	59.14	58.53	57.11	52.87	46.37	42.42	37.00	41.23	49.49	50.40	54.08	52.77	52.27	55.65	57.45	57.46	58.88		
MD	.	35.05	35.28	36.21	35.72	36.91	35.50	34.13	30.02	41.54	46.50	49.65	48.78	48.68	47.48	47.03	47.93	48.59	48.59	49.85		
ME	34.83	33.56	29.44	36.88	32.79	41.26	43.77	43.45	43.45	45.42	45.01	46.01	46.77	46.81	47.79		
MI	.	31.47	31.68	31.30	30.88	31.95	30.78	26.37	35.38	30.55	34.95	37.32	36.66	36.59	35.69	35.35	46.10	46.73	46.73	47.94		
MN	.	32.36	31.98	32.92	34.00	39.82	34.11	38.30	33.07	45.87	48.95	55.95	56.12	54.98	54.52	56.00	56.84	56.84	58.85	58.05		
MO	57.33	58.11	58.11	59.62			
MT	35.15	36.32	34.93	29.93	32.50	28.06	31.60	33.74	33.14	33.08	38.71	38.35	39.08	39.62	47.42	48.66		
NC	52.67	54.04	
ND	78.20	75.40	82.45	85.69	87.06	87.18	85.28	84.54	82.45	84.02	84.15	85.55			

	1910	1911	1912	1913	1914	1915	1916	1917	1918	1919	1920	1921	1922	1923	1924	1925	1926	1927	1928	1929	1930
NE	.	.	.	35.57	35.15	34.68	35.81	45.21	38.50	41.99	36.26	40.58	43.33	42.57	42.49	41.43	41.04	41.83	42.40	42.40	43.51
NH	.	.	33.37	33.59	33.20	32.75	33.89	32.65	29.16	26.33	24.09	26.22	27.62	38.64	38.68	37.82	37.49	38.38	39.08	39.13	39.84
NJ	.	31.47	31.41	31.59	31.22	30.80	31.80	30.57	27.36	30.12	26.00	29.11	31.08	40.52	40.64	39.81	41.12	42.22	43.11	49.71	50.45
NM	26.57	25.12	28.53	25.66	30.28	32.01	31.76	31.70	30.92	30.63	31.21	31.64	35.80	36.74
NV	.	.	.	39.47	42.15	44.69	46.15	44.37	60.72	69.01	62.64	68.43	72.25	72.28	72.39	70.81	70.20	71.94	73.31	73.42	74.65
NY	47.23	47.60	47.06	49.91	63.68	62.82	64.93	62.48	62.61	58.82	54.61	59.75	70.48	73.15	73.55	76.77	76.17	80.44	82.78	83.13	83.09
OH	.	.	44.26	47.09	48.57	47.92	49.48	43.35	41.58	38.97	33.64	39.33	42.00	41.26	52.04	50.75	50.27	51.24	51.94	51.94	53.29
OK	19.52	20.19	19.45	16.67	26.47	27.93	28.45	29.01	31.91	31.85	31.06	30.76	31.36	31.78	31.78	32.61
OR	65.59	64.87	62.37	53.55	45.60	41.64	35.95	47.69	49.92	50.63	50.84	49.64	49.17	50.12	50.80	50.80	52.12
PA	33.82	32.51	27.85	24.25	24.66	27.60	29.47	28.95	28.90	28.18	27.92	28.45	29.20	29.20	40.22
RI	.	34.05	34.28	33.88	33.42	34.58	39.61	35.12	31.52	32.77	32.77	37.55	38.86	40.13	40.40	39.50	42.11	43.10	43.86	43.91	44.74
SD	31.59	30.33	28.15	24.47	31.55	33.64	33.12	33.07	32.26	31.96	32.59	33.05	33.06	33.89
TN	28.73	24.81	27.77	29.65	38.51	38.43	37.48	37.13	42.81	43.39	43.39	44.52
TX	.	.	.	50.93	50.31	49.67	50.78	43.41	44.66	40.48	34.95	39.12	41.77	51.90	52.51	51.83	51.50	53.59	54.50	54.50	55.25
UT	37.12	36.09	43.70	37.73	42.23	45.10	44.30	44.21	43.12	42.71	43.53	44.13	44.13	45.28
VA	23.36	24.13	27.01	28.84	28.33	29.88	29.14	28.86	29.42	29.82	29.82	35.63
VT	27.49	28.39	27.30	30.11	28.02	27.23	33.14	34.39	35.07	35.16	34.43	34.14	35.04	35.69	35.70	36.34
WA	.	58.93	56.90	55.56	54.82	54.28	50.46	45.41	38.66	48.67	42.02	47.03	50.22	56.00	55.89	54.50	53.99	55.22	55.97	55.97	57.43
WI	.	53.39	51.69	43.10	42.53	42.10	39.36	41.69	35.73	31.23	27.10	51.27	54.64	58.17	58.09	56.68	56.15	61.14	62.03	62.04	63.56
WV	.	.	.	46.19	45.60	44.82	42.93	37.85	32.28	37.83	32.66	36.56	39.04	52.78	52.82	51.51	51.03	52.01	52.72	52.72	54.09
WY	28.06	26.09	27.73	23.61	26.73	27.18	36.33	38.79	38.11	38.04	37.09	36.74	38.25	38.78	38.78	39.78

Notes: Expected benefits are those in effect at the end of the year listed. A dot indicates no workers' compensation law was in effect at the end of the year. Some states adopted workers' compensation or changed benefit levels in one year, but the change was not effective until the next year. The figures in this table report the benefit levels actually in effect on December 31 of each year, regardless if changes were expected to take place the next day, for example.

Sources: See Appendix A.

Table 2

Coefficients of Regression Analyses of Expected Workers' Compensation Benefits, 1910-1930

Variables	Means	Correction for Selectivity ^a		No Correction for Selectivity	
		(1)	(2)	(3)	(4)
Constant		1.19 (1.78)	0.91 (1.23)	3.64 (8.48)	3.40 (7.49)
<u>Economic Environment</u>					
Estimated average weekly manufacturing wage in year $t-1$ (in 1967 dollars)	59.2 (10.2)	-0.0007 (0.27)	-0.0072 (0.26)	0.0017 (1.13)	0.0019 (1.30)
Manufacturing accident risk index	1.48 (0.57)	-0.446 (6.65)	-0.471 (6.35)	-0.270 (5.48)	-0.281 (5.51)
Percentage of manufacturing establishments with less than 20 workers	79.5 (7.8)	0.0002 (0.33)	0.0006 (0.72)	0.0015 (0.35)	0.0004 (0.91)
Percentage of manufacturing establishments with more than 500 workers	1.1 (0.70)	0.0046 (1.02)	0.0011 (0.21)	0.015 (0.48)	-0.0002 (0.07)
Manufacturing value added per worker (000s; constant 1967 dollars)	5.65 (1.43)	0.018 (1.33)	0.008 (0.55)	0.0040 (0.49)	-0.0002 (0.31)
Percentage of labor force employed in manufacturing	28.1 (12.0)	-0.0004 (0.05)	0.0038 (0.44)	0.0009 (0.18)	0.0036 (0.70)
Percentage of labor force employed in mining	3.3 (4.4)	-0.040 (6.56)	-0.040 (5.98)	-0.026 (6.66)	-0.026 (6.64)
Percentage of labor force employed in agriculture	27.2 (14.4)	0.194 (0.29)	0.0068 (0.93)	0.004 (1.06)	0.008 (1.86)
Manufacturing unionization index	14.5 (7.7)	0.0087 (3.28)	0.0072 (2.35)	0.0048 (2.90)	0.0039 (2.16)
<u>Political Climate</u>					
Power shift in at least one branch of legislature	0.131 (0.34)	0.0496 (2.16)	0.048 (1.90)	0.026 (1.83)	0.024 (1.69)
Power shift in both branches of legislature	0.067 (0.25)	0.051 (1.68)	0.044 (1.29)	0.041 (2.19)	0.038 (2.16)

Percent of presidential vote for Republican candidate	52.7 (11.2)	0.0009 (0.59)	-0.0007 (0.39)	0.0001 (0.13)	-0.0008 (0.68)
Percent of presidential vote for socialist candidate	6.5 (8.2)	0.0019 (1.40)	0.00082 (0.55)	0.0003 (0.41)	-0.0004 (0.40)
Workers' compensation commission or state fund in year $t-1$	0.741 (0.438)	0.103 (4.71)		0.069 (4.24)	
Predicted probability of the presence of workers' compensation commission or state fund in year $t-1$ ^b			0.253 (2.62)		0.131 (2.10)
Inverse Mills ratio		0.191 (3.50)	0.230 (3.77)		
Year Dummies (1930 excluded)		Included	Included	Included	Included
State Dummy Variables (Connecticut excluded)		Included	Included	Included	Included
R ²		0.88	0.87	0.89	0.88
<u>N</u>	702	702	702	702	702

^a The selection equation which predicts which states were included in the benefits-equation sample of 702 observations was run on a sample of 998 observations with the following variables: presence of an employer's liability law that substantively affected the common law, presence of an employers' liability law that simply restated the common law, and all of the variables above except the state and year dummies. We did not include the state and year dummies because of convergence problems when they are included.

^b The predicted probability of having a commission is the predicted value from a logit analysis with the following variables: presence of an employers' liability law that substantively affected the common law, presence of an employers' liability law that simply restated the common law, and all of the variables above except the state and year dummies. We did not include the state and year dummies because of convergence problems when they are included.

Notes: The dependent variable is natural log of expected benefits in constant 1967 dollars. Absolute value of t-statistics are in parentheses below the coefficients and standard deviations are below the means.

Sources: See Data Appendix B.