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# 7

# The Battles over Benefit Levels, 1910–1930

During the legislative session in 1919 when Alabama adopted workers' compensation, a major debate erupted over the benefit levels proposed in the bill offered by Senator M. L. Leeth. His bill called for injured workers to receive 60 percent of their earnings up to a maximum of $17.50 per week. Ben Stroud, the manager of the Alabama Manufacturers and Operators Association, wrote to the *Birmingham News* that if such benefits were adopted "it becomes perfectly clear that the burden on Alabama industry will be excessive and force them to decline to come under the bill or to assume a heavy handicap in the approaching struggle for industrial existence." Pressure from employers led Senator Acker to amend the Leeth bill by reducing the replacement rate to 50 percent with a weekly maximum of $12.00 per week. Senator Leeth responded: "If the employers would only study the proposed act they would find that it is fair and reasonable. The maximum doesn't amount to so much. It only guarantees to the man . . . that if he is making $200 a month his wife and little children may get $72 of that per month. How degrading it is for a man to be so hardhearted and selfish that he will say to the employe's [*sic*] family, that we will not allow you but $48 per month to educate your children, to pay house rent, and support your family." Despite Senator Leeth's efforts, Acker's amendment became the basis for benefit levels in Alabama. The rhetoric in Alabama typifies the discussions over benefit levels in nearly every state. Whether the employers' proposed benefit levels or the proposals of labor leaders carried the day was determined by the relative political strength of employers and organized labor, by the nature of industry in the state, and by the extent of political reform movements.[1]

Benefit levels were particularly important because they determined the share of the rents that each group expected to receive from the legislation. Employers sought to limit benefits by imposing maximums on weekly and overall accident payments or by trying to force workers to pay a share of the employers' insurance premiums. Meanwhile, organized labor consistently fought for accident benefits that paid higher percentages of lost earnings, with no ceilings on weekly benefits and short waiting periods. Our sense is that insurance companies were generally not a central player in the benefit debates because the range of benefits discussed would not have led to significant moral hazard problems that would have affected their ability to underwrite workers' compensation insurance. The political negotiations over benefit levels did not stop with the introduction of workers' compensation. Unions continued to apply pressure to raise benefit levels in most states in most legislative sessions throughout the 1910s and 1920s.

The benefit levels sought by various groups of employers and workers were influenced by their wage rates, accident risk, factors determining the insurance premiums for workers' compensation, and the extent to which workers shared in paying the costs of those premiums through wage offsets. After considering the demands of lobbying groups, state legislatures, subject to the governor's veto, ultimately made the final choice. This chapter explores both the economic and political factors that influenced how workers' compensation benefit levels were determined in the political process. Did state legislators focus their attention on the demands of workers, who were far more numerous than employers and, thus, constituted the majority of interested voters? Alternatively, were legislators heeding the demands of organized employer groups, as many labor unions claimed at the turn of the century? What role did Progressive Era reformers play? And finally, after workers' compensation was established, how did the agencies administering workers' compensation influence the level of benefits?

The results of both quantitative and qualitative analyses suggest that benefit levels were influenced by all three groups: employers, workers, and reformers. How workers' compensation benefits varied across states depended on the relative strength of the interest groups and the economic factors that influenced their demands. Workers succeeded in securing relatively higher benefit levels, all else constant, in states where unions had a strong following, where political reforms led to party shifts in the state legislature, and where the workers' compensation system was administered by a bureaucratic agency. On the other hand, employers in more dangerous industries managed to hold benefit levels down, while employers also held benefit levels in check in states where high-wage workers had demanded substantial increases.

## 7.1 The Large Variation in Workers' Compensation Benefits

Since workers' compensation benefits were determined by state-level legislation, there was potential for substantial variation in the benefit parameters that the different state governments chose. To show how the legislative parameters that determined workers' compensation benefits differed across states and over time, we developed a measure of expected workers' compensation benefits for each state from the first year the 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. The index is calculated assuming that the hypothetical worker in each state earned the national average manufacturing wage and a discount rate of 5 percent. We then calculated a weighted average of the benefit levels across the four types of accidents where the weights, which are the same for all states and years, are the probabilities that the broad category of accident might occur. Thus, the numbers in table 7.1 represent the expected accident compensation (in constant 1967 dollars) for the hypothetical worker at the end of the year listed. Appendix B provides a detailed description of the benefits calculations and of the variables used to construct our estimates.

When we make comparisons across states in a particular year, the expected benefits index summarizes how the workers' compensation parameters differed across states because the wage used to calculate each state's measure is the same. However, cross-time comparisons of the index for the same state varied from year to year either because of a change in the state's workers' compensation law, a change in the national average manufacturing wage, or changes in the price level used to deflate the nominal figures. We used the national average weekly wage in each year to calculate the expected benefits index because there was a substantial rise in nominal wages during this period. If we had used a constant wage throughout, the expected benefits index would not have fully shown the impact of changes in many of the workers' compensation parameters in various years. For example, if we had used the low wages of around 1910 to calculate expected benefits for the 1920s, the expected benefits measures for those years would be well below the actual levels. 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 that would not reflect the actual payments that workers received during the earlier period.[2]

Expected benefits varied widely across states within any year. In 1920, for example, the expected benefits ranged from a low of $22.90 to a high of $48.70 (in 1967 dollars). The relative position of each state also fluctuated from year to year. Washington and Oregon's benefits were relatively

**Table 7.1** **Expected Workers' Compensation Benefits (constant 1967 dollars), by State, 1910–30**

| State | 1910 | 1911 | 1912 | 1913 | 1914 | 1915 | 1916 | 1917 | 1918 | 1919 | 1920 | 1921 | 1922 | 1923 | 1924 | 1925 | 1926 | 1927 | 1928 | 1929 | 1930 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Ala. | | | | | | | | | | | 30.67 | 34.33 | 36.66 | 36.01 | 35.94 | 35.05 | 34.72 | 35.39 | 35.87 | 35.87 | 36.81 |
| Ariz. | | | | 46.37 | 45.81 | 45.23 | 45.59 | 42.61 | 39.29 | 36.23 | 33.93 | 65.04 | 68.30 | 68.23 | 68.09 | 71.75 | 71.29 | 74.11 | 76.56 | 76.96 | 76.43 |
| Cal. | | 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 | 53.77 | 57.02 | 56.56 |
| Colo. | | | | | | 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 | 33.63 | 34.50 |
| Conn. | | | | | 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 |
| Del. | | | | | | | | | 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 |
| Iowa | | | | | 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 | 36.29 |
| Idaho | | | | | | | | | 39.15 | 34.08 | 29.43 | 42.02 | 44.86 | 44.07 | 43.99 | 42.90 | 42.49 | 43.31 | 43.90 | 43.73 | 44.86 |
| Ill. | | | 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 |
| Ind. | | | | | | 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 |
| Kan. | | | 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 |
| Mass. | | | 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 |
| Mich. | | | 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 |
| Minn. | | | | 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 | 56.85 | 58.05 |
| Mo. | | | | | | | | | | | | | | | | | | 57.33 | 58.11 | 58.11 | 59.62 |
| Mont. | | | | | | 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 |
| N.C. | | | | | | | | | | | | | | | | | | | | 52.67 | 54.04 |
| N.D. | | | | | | | | | | 78.20 | 75.40 | 82.45 | 85.69 | 87.06 | 87.18 | 85.28 | 84.54 | 82.45 | 84.02 | 84.15 | 85.55 |
| Neb. | | | | 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 |
| N.H. | | | 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 |
| N.J. | | 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 |
| N.M. | | | | | | | | 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 |
| Nev. | | | | 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 |

(*continued*)

**Table 7.1** (continued)

| State | 1910 | 1911 | 1912 | 1913 | 1914 | 1915 | 1916 | 1917 | 1918 | 1919 | 1920 | 1921 | 1922 | 1923 | 1924 | 1925 | 1926 | 1927 | 1928 | 1929 | 1930 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N.Y.[a] | 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 |
| Ohio | | | 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 |
| Okla. | | | | | | 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 | 39.20 | 39.20 | 40.22 |
| R.I. | | | 34.05 | 34.28 | 33.88 | 33.42 | 34.58 | 39.61 | 35.12 | 31.52 | 32.77 | 37.55 | 38.86 | 40.13 | 40.40 | 39.50 | 42.11 | 43.10 | 43.86 | 43.91 | 44.74 |
| S.D. | | | | | | | | 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 |
| Tenn. | | | | | | | | | | 28.73 | 24.81 | 27.77 | 29.65 | 38.51 | 38.43 | 37.48 | 37.13 | 42.81 | 43.39 | 43.39 | 44.52 |
| Tex. | | | | 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 |
| Utah | | | | | | | | 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 |
| Wash. | | 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 |
| Wis. | | 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 |
| W. Va. | | | | 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 |
| Wyo. | | | | | | 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 |
| Real wage | 52.6 | 53.0 | 52.9 | 53.3 | 52.6 | 51.9 | 53.7 | 51.7 | 53.2 | 53.4 | 56.4 | 57.4 | 58.5 | 61.9 | 62.6 | 61.8 | 61.4 | 63.9 | 66.1 | 66.4 | 65.9 |
| Weekly wage | 14.72 | 14.83 | 15.34 | 15.82 | 15.84 | 15.79 | 17.57 | 19.87 | 24.01 | 27.67 | 33.81 | 30.77 | 29.39 | 31.62 | 32.05 | 32.44 | 32.54 | 33.23 | 33.89 | 34.08 | 32.94 |
| CPI 1967 = 100 | 28 | 28 | 29 | 29.7 | 30.1 | 30.4 | 32.7 | 38.4 | 45.1 | 51.8 | 60.0 | 53.6 | 50.2 | 51.1 | 51.2 | 52.5 | 53.0 | 52.0 | 51.3 | 51.3 | 50.0 |

*Sources:* Fishback and Kantor (1998b, 118–19) and appendix B. The real weekly wage is the national average manufacturing weekly wage in 1967 dollars.

*Notes:* Expected benefits are those in effect at the end of the year listed. Empty cells indicate 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 31 December of each year, regardless if changes were expected to take place the next day, for example.

[a]New York passed both a compulsory and a voluntary law in 1910. The compulsory law was declared unconstitutional, and the voluntary law was hardly used. New York passed a new law in 1913 that went into effect in 1914.

high 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 the weekly maximum benefit to fall to as low as 25 to 33 percent of the weekly wage.[3]

After some delay most states raised their maximums between 1919 and 1923. The pattern of benefits in Texas provides a typical example of the inflationary effects on expected compensation when the states were slow in raising the benefit ceilings. 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 to approximately the 1913 level, in real terms.

## 7.2 The Political Economy of Benefit Levels

What explains such a wide variation in benefit levels across states and over time in the early period of workers' compensation? Although the passage of workers' compensation generally was due to the cooperative efforts of the various interest groups, contentious disputes nevertheless persisted between workers and employers over the level of accident benefits. There was a range of benefit levels within which both workers and employers could gain from the legislation. Benefits had to be high enough that workers were better insured against workplace accident risk than under negligence liability. On the other hand, employers demanded an upper limit on benefit levels, in part, to avoid the moral hazard problems that might undermine their basic reason for shifting to workers' compensation—to reduce accident cost uncertainty. Public testimony and the bills proposed both by employers' and workers' groups in various states show clearly that workers sought workers' compensation parameters that led to higher benefit levels, while employers proposed parameters associated with much lower levels. The pressure from employers and workers was then filtered through the legislative process. In this section we describe the factors that influenced the benefit levels that workers and employers lobbied for and lay out the potential legislative outcomes.

### 7.2.1 The Employers' Choice of Benefit Levels

While employers generally lobbied for lower benefit levels, their choice of benefit levels varied in response to a variety of economic constraints. When employers decided on the benefit levels for which they lobbied state legislatures, they had to balance the costs of providing such insurance for their workers against the gains in the form of increased productivity. The costs of higher benefit levels were based largely on the insurance premiums that employers had to pay to obtain workers' compensation coverage.[4] Employers also anticipated some gains from higher benefit levels because better nonwage benefits have often been associated with higher productivity and lower turnover among workers. Further, employers generally did not bear the full economic burden of higher benefit levels even though the employer was required by law to pay all insurance premiums in nearly every state.[5] Nonunion workers often implicitly shared in paying the insurance costs associated with higher benefit levels because employers were able to pass a portion of the insurance costs on to workers through wage offsets (see chap. 3).

The preferred benefits of profit-maximizing employers potentially varied in response to a number of factors: the inherent danger of their workplaces, the productivity of their establishments, their size, the nature of their product market, their ability to pass their insurance costs on to workers through lower wages, and other factors influencing the premiums they paid for workers' compensation coverage.[6]

Employers generally sought to reduce the costs of their insurance premiums for workers' compensation coverage. Essentially the portion of the insurance premium that an employer actually paid could be written as

$$\begin{aligned} \text{Premium} &= (\text{Accident probability}) \times (\text{Benefits}) \times (\text{Load factor}) \\ &\times (\text{Experience-rating parameter}) \\ &\times (1 - \text{Share workers paid through wage offsets}). \end{aligned}$$

Higher benefit levels meant higher premiums. In more dangerous industries the higher accident risk raised premiums, holding benefit levels constant; therefore, employers had incentives to seek lower benefit levels to reduce the impact of higher accident risk on their insurance premiums. Another determinant of the premium was the load factor charged by insurers to cover administrative costs, to earn a profit, and to limit problems with adverse selection.[7] In states where insurance regulators allowed workers' compensation insurers to charge higher loads, employers tended to seek lower benefit levels to reduce the effect of these higher load factors on their insurance premiums.

The premiums paid for workers' compensation insurance were also influenced by the effectiveness of experience rating, which was the insurers' practice of making the employer's workers' compensation premium a function of the number and severity of accidents in that industry and in his workplace. If the premiums were not accurately experience rated, then the premiums that employers with more dangerous workplaces paid would be subsidized by payments from less dangerous workplaces. In these cases, employers with more dangerous workplaces might allow for higher benefit levels because they would not pay the full share of their insurance premium. Meanwhile, employers with less dangerous workplaces would have more incentive to push for lower benefit levels.[8] Our sense from cross-industry comparisons of workers' compensation insurance premiums, however, is that differences in accident risk across industrial classifications were reasonably well captured by adjustments in the manual rates set for each industry.[9] Within industries, however, experience rating across firms was less complete (McCahan 1929, 100–118). Studies of modern workers' compensation and examination of experience-rating formulas in the 1920s show that within industries, larger firms are more likely to be experience rated than smaller firms (Worrall and Butler 1988; Aldrich 1997 99–100, 153). Thus, if the same sort of relationship held eighty years ago, then larger firms may have had incentives to keep benefit levels lower than did smaller firms.

On the other hand, larger firms may have had an incentive to raise benefit levels to the extent that there were economies of scale in preventing accidents or in obtaining coverage of workers' compensation risk. In such a setting higher benefits would have raised the workers' compensation costs of smaller firms relatively more than for larger firms, giving larger firms a competitive advantage in the final product market. Such an anticompetitive strategy was most effective in settings where the industrial competitors were largely located within the same state. It was much less effective in settings where most of the competitors were located in other states with different workers' compensation laws.

Since employers potentially experienced higher productivity gains from providing workers relatively generous fringe benefits, some employers might have lobbied for higher benefit levels if they in turn led to higher productivity and profits. These employers were likely to be in industries with higher product prices, higher profit margins, or in industries where greater worker effort and reduced turnover had more of an effect on productivity.

Theoretically, employers generally tended to oppose changes in benefit levels and benefit maximums simply because wages changed. If the focus was on the benefit level, for example, when setting weekly maximums, the employers' choice of benefit levels was typically not influenced by the wage rate because the wage rate does not appear in the premium calculation above. Thus, both high-wage and low-wage employers would have opposed workers' efforts to obtain increases in benefit levels based on arguments that wages had changed.[10]

### 7.2.2 Factors Influencing the Workers' Choice of Benefit Levels

The workers' choice of optimum benefit levels depended on the balance between the benefits of higher compensation when they were injured and any costs they paid for obtaining the higher benefits. Workers clearly benefited from higher statutory benefit levels because this would have increased their payments if they were injured. Yet savvy workers could have anticipated that the higher benefits would come at some cost because employers were able to pass on at least part of their insurance costs related to higher benefits to nonunion workers through wage reductions. The wage offsets meant that workers were essentially paying for at least part of any increase in workers' compensation benefits and the "price" they paid was determined by the size of the premiums employers paid for workers' compensation coverage and the extent of the wage offset.

Economic analysis of the workers' optimal choice of benefits suggests that the level of benefits that they sought was determined by their wages, the dangers of their job, and a variety of factors influencing the insurance premiums paid by employers for workers' compensation coverage.[11] Workers with higher wages tended to demand higher benefit levels in settings where the weekly maximum was the focal issue. In economic terms benefit levels might be described as a normal good since workers with more income could "afford" to pay the costs associated with higher benefit levels.[12]

It is not clear whether workers in more dangerous jobs were more likely to demand higher benefit levels. If there were no wage offsets, these workers would clearly have sought higher benefit levels because they were more likely to face situations in which they were injured. On the other hand, the presence of the wage offsets meant that workers in more dangerous jobs would share in paying the higher premiums required to help pay for the higher benefits. Thus, workers in more dangerous jobs had to balance both the gains and losses from higher benefits and would not necessarily demand higher benefit levels.

The presence of wage offsets also meant that factors that might influence the employers' insurance premiums would influence the workers' optimal choice of benefits. Increases in the workers' share of the premiums through wage offsets would have tempered workers' efforts to secure higher benefit levels. Higher insurance loads raised the insurance premiums, which in turn would have caused workers to seek lower benefit levels to lower their implicit share of the premium costs. The extent of experience rating also influenced workers' choices. If the premiums were not experience rated very accurately, then the premiums paid for more dangerous workplaces would be subsidized by the premiums paid by employers for less dangerous workplaces. In these cases, workers in more dangerous workplaces might seek higher benefit levels because the insurance premiums would not fully reflect the greater danger and thus the worker and the employer would not fully pay the cost of raising the benefit levels.

Table 7.2 compares how workers' and employers' benefit level choices would have been affected by the various economic factors discussed above. Increases in insurance load factors and more accurate experience rating would have caused both workers and employers to reduce the benefit levels

**Table 7.2** **How Economic Factors Influenced the Employers' and Workers' Demands for Benefit Levels**

| Changes in the Optimal Level of Benefits with Respect to Increase in | Employer | Worker |
|---|---|---|
| Workers' implicit share of insurance costs (extent of wage offset) | Increase | Decrease |
| Accident rate | Decrease | Increase or decrease |
| Experience rating of premiums | Decrease | Decrease |
| Insurance load factor | Decrease | Decrease |
| Wage[a] | No effect | Increase |
| Product price | Increase | — |
| Number of workers | Increase or decrease | — |
| Labor productivity | Increase | — |

*Source:* Fishback and Kantor (1998b, 115).

*Notes:* Dashes imply no prediction. These predictions are derived from economic models of the benefit decisions for workers and employers. The full derivations are reported in Fishback and Kantor (1998b, app. A). The predictions above assume that both workers and employers share in paying the workers' compensation insurance premium, which implies a partial wage offset. When the worker completely pays the insurance premium in the presence of a full wage offset, the accident rate and the insurance load would have no impact on the employers' choice of benefit levels. When the employer pays the full insurance premium because there is no wage offset, the workers would demand higher benefits when the accident rate rises, but none of the other factors would affect their choice of benefit levels.

[a]This is the prediction when employers and workers are choosing levels of benefits. If they are choosing the replacement percentage of wages, the employer will seek lower benefit percentages when the wage rate increases, while workers might seek higher or lower benefit percentages.

they sought. There are three types of changes, however, that might have led workers and employers to seek conflicting changes in benefit levels. First, increases in wages would have led workers to demand higher benefit levels, while employers would have sought no changes in benefit levels. Thus, the absence of any effect on benefit levels when wages changed might have been a signal that employers had significant influence over the benefit-setting process in state legislatures. Second, in areas where there was more inherent danger, high-risk employers would have pressed for lower benefit levels, while workers in high-risk industries might have sought either lower or higher benefit levels. Finally, when the wage offset increased, causing workers to pay a larger implicit share of the workers' compensation insurance premiums, employers would have allowed higher benefit levels while workers would have sought lower benefit levels, holding other factors constant.

### 7.2.3 Potential Legislative Outcomes

While groups of workers and employers lobbied for their optimal benefit levels, state legislators made the final decision subject to the governor's veto. As in the other chapters, we suggest that legislators chose benefits using a political calculus in which they maximized their own objectives, subject to pressures from the electorate and from competing economic and political interest groups. Employers and workers were able to exert influence on the legislators' choices based on their relative strength in the political arena. Employers' political strength was derived largely from their ability to organize effectively, which enabled them to apply political pressure on legislators, provide legislators with relevant information on the issue, and offer reelection contributions and support. On the other hand, their large numbers gave workers political strength because they were the vast majority of the electorate. Such strength was more effectively wielded when there was a strong union presence that could organize the workers' lobbying efforts. Workers' efforts were boosted further in states where there was a strong progressive reform movement, as shown in the previous chapter's analysis of state insurance funds. Once workers' compensation had been enacted, bureaucratic agencies established to administer the law potentially influenced benefit levels because they played a major role in providing legislators with information about how the system functioned. The workers' chances of raising benefits or employers' opportunities to determine benefit levels were enhanced if they could influence the bureaucratic agency administering the law.

Legislators may have responded to the lobbying of workers and employers in several ways. If legislators' political successes were tied to satisfying the median voter interested in the workers' compensation issue, then they were likely to focus on choosing the optimum benefit level from the workers' perspective because workers were far more numerous than employers.[13] If the key to political success was pleasing interest groups that could provide significant resources to aid in reelection campaigns, for example, then legislators may have focused on satisfying the demands of the most influential interest groups, or at least reaching a middle ground between those demands and the wishes of median voters. During the early 1900s, many unions claimed that employers' interests dominated state legislatures, which would have meant that employers' demands would have dominated in legislators' decisionmaking. On the other hand, in states where organized labor was strong, unionized workers wielded significant political power, as unions served as the mechanism that helped workers overcome the free-rider problem in voicing their political views (Olson 1965).

## 7.3 Lessons from a Quantitative Analysis of Workers' Compensation Benefit Levels

What specifically motivated legislators' choices is an empirical question. We examined how various political economic factors influenced the large variation in workers' compensation benefit levels across states and time. In our regression analysis we simultaneously examined how states' benefit levels were affected by such factors as the extent of union strength, average accident risk, the extent of wage offsets, firm size, manufacturing productivity, broad-based political coalitions, and the workers' compensation bureaucracy. We also controlled for the influence of events associated with specific years that would have affected all states in the same way, as well as the influence of specific features of each state that did not change over time. The quantitative results are reported in further detail in appendix K and in Fishback and Kantor (1998b).[14]

The statistical findings suggest that the legislatures heeded the demands of both employers and workers. While workers had an advantage because they accounted for a larger share of the voters in elections, employers still wielded significant political clout in the legislatures through their organized lobbying efforts and their financial support of legislators in elections. Workers were more successful at raising benefits in states where organized labor was stronger and thus could come closer to matching the concerted lobbying efforts of employers. Benefit levels were higher, ceteris paribus, in states with greater unionization, where political upheaval led to shifts in party control of the state legislature, and where bureaucracies, as opposed to the courts, administered the workers' compensation system.

One sign that state legislatures responded to the demands of high-accident-risk employers is that benefits were lower in states where more workers were employed in dangerous industries. Employers in those industries preferred lower benefit levels, while their workers might have chosen either higher or lower benefits. Both measures of accident risk led to economically significant reductions in benefit levels. A 10 percent increase in average accident risk in manufacturing was associated with roughly a 5 percent reduction in benefit levels. Similarly, a 1 percentage point increase in the percentage of workers in mining, one of the most dangerous industries during this time period, was associated with a 2.4 percent decline in benefit levels.[15]

Another sign that legislators were attentive to the demands of employers is the absence of a strong positive effect of higher wages on benefit levels. When wages were higher, workers generally would have demanded higher benefit levels. Meanwhile, optimizing employers had incentives to oppose raising benefit levels in response to higher wages.[16] The quantitative analysis could not reject the hypothesis that benefit levels were unaffected by changes in wages. Thus, employers appear to have been successful in limiting the benefit increases that workers sought simply because their wages rose.

We anticipated that firms with more employees, that received higher product prices, or that had higher labor productivity would have been more likely to support higher benefits. When we tested these relationships, however, we could not reject the hypothesis of no effect. The results cast some doubt on the notion that larger and more productive firms could have used higher workers' compensation benefits to gain a product market advantage over their smaller and less-productive competitors.

Benefit levels received a relatively strong boost from the presence of stronger unions. Workers gained more political clout in areas where organized labor was relatively stronger. In addition, unionized workers also had relatively strong incentives to push for higher benefit levels because they were more effective at preventing wage offsets (see chap. 3). On the other hand, the lower wage offset meant that employers had an incentive to lobby for lower benefit levels. The quantitative analysis indicates that in states dominated by industries where organized labor had a greater national presence, organized labor was successful in overcoming the pressure from employers for lower benefit levels. When our union measure rose by 1.0 percent, the benefit levels rose by 0.97 percent.

Legislators often have broader agendas than simply pleasing narrowly focused economic interest groups. To ensure reelection they also had to pay at least some attention to the demands of the electorate, which may have meant balancing workers' compensation issues with other social, political, or economic issues. Reform movements played a small role in determining the timing of adoption of the law and a larger role in the choice between private and state insurance (see chaps. 4 and 6). They also played a role in determining the level of benefits.

Shifts in the party composition of state legislatures had economically and statistically significant positive effects on benefit levels. Strong political reform movements during the Progressive Era often caused the party composition of state legislatures to shift dramatically around the time of the introduction of workers' compensation. Thus, during these initial upheavals, we might expect to see higher benefits in settings where political control of the legislature shifted from one party to the other. Further, when the reformers' opponents attempted to retake the legislature, they may have competed to obtain the support of the reform-minded sectors of the electorate by proposing even higher benefits. For example, in the 1914 gubernatorial race in Ohio, Republican gubernatorial candidate Frank Willis called for higher benefits in his efforts to unseat progressive Democratic governor James Cox and to lead the Republicans in their efforts to retake control of the legislature from the Democrats.[17] In the quantitative analysis a shift in party dominance in at least one branch of the legislature was associated with a 5.1 percent increase in benefit levels.

Once workers' compensation was adopted, workers appear to have been joined in the struggle for higher benefits by the bureaucratic agents that administered the new system. States typically chose to administer their workers' compensation programs in one of two ways. By 1930, ten states administered the laws through the courts, with employers and workers establishing agreements regarding accident compensation subject to the statutory guidelines and the courts settling disputes. Thirty-eight states administered workers' compensation with a bureaucratic commission, which directly oversaw the disbursement of accident compensation.[18] The state commissions had the potential to act as advocates for changes in the workers' compensation laws because they were often a key source of information for legislators, although their attitudes could have been influenced by either employers or workers. The quantitative analysis shows that when a state had a workers' compensation bureaucracy in place during the previous year, the benefit levels were about 7.3 percent higher. Thus, it appears that workers benefited more than employers from the lobbying by administrative agencies.

## 7.4 Lessons from Three Case Studies of the Political Struggle over Benefit Levels

The quantitative analysis highlights the important roles played by workers, employers, and reformers, yet it does not offer a full picture of how benefits were determined in the political process. Information from cases studies in Ohio, Missouri, and Minnesota adds more depth to the analysis. The case studies confirm many of the findings in the quantitative analysis, while illuminating how workers and employers compromised on their original demands. In a number of cases each interest group had to settle internal disputes regarding their willingness to compromise in choosing the final benefit levels.

### 7.4.1 Proposed Benefit Levels and the Nature of Compromise

In all three states the benefit levels proposed by employers were clearly lower than the benefit levels sought by workers. As a result, the legislative process involved a series of compromises in which various different parameters of the workers' compensation law were subject to simultaneous negotiation.

In Ohio when workers' compensation was being discussed in 1911, the key parameter that distinguished the benefit packages proposed by organized labor and employer groups was the de jure percentage of workers' compensation premiums that workers would pay. The Ohio Manufacturers' Association (OMA) actively supported a proposal requiring workers to pay 25 percent of the insurance premiums to provide workers' compensation benefits. The Ohio State Federation of Labor sponsored an alternative proposal that called for employers to pay the entire premium. The law that was enacted struck a compromise between these two positions that also involved other features of the legislation. Workers were required to pay only 10 percent of employers' insurance premiums, but in return they gave up the option of choosing between filing a negligence suit or a workers' compensation claim after an accident occurred. Early in the process organized labor obtained their key demand that the state, and not private companies, insure workers' compensation risk. Although the OMA worried that paying 90 percent rather than 75 percent of the insurance premium might have led to the failure of the new law, their fears were unjustified, because within several years employers accepted the entire legal burden of workers' compensation premiums (Fishback and Kantor 1997, 12, 16–17).

In Minnesota during the 1910s the legislature made a series of changes in benefit levels. In each case the benefits proposed by workers exceeded the benefits proposed by employers. In 1913 when workers' compensation was enacted, the employers' initial proposal was to pay the same benefits as in New Jersey, which offered the lowest benefits of any state at the time (see table 7.1), while requiring workers to pay 20 percent of the insurance premiums. Organized labor, on the other hand, was adamantly opposed to paying any of the insurance costs and proposed raising the maximum weekly death benefits from the employers' proposal of ten dollars to fifteen dollars, the number of weeks workers would receive permanent disability or death benefits from 300 to 333, and the maximum total benefit from three thousand to five thousand dollars. The final result largely favored employers. Despite several attempts to improve benefits through amendments in the House and Senate, the legislature essentially followed the New Jersey low benefit structure. Workers managed to force employers to pay the entire insurance premiums, but they traded away the option to choose between negligence suits and workers' compensation claims, as Ohio workers had.

After both employers and workers in Minnesota agreed to slightly improve benefit levels in the 1915 legislature, they waged a major struggle over benefits in 1917. Organized labor, with the help of the Department of Labor and Industries, proposed a substantial increase in the wage replacement rate from one-half to two-thirds, a substantial rise in the maximum weekly benefit, a reduction in the waiting period from two weeks to one week, and a requirement that employers pay all medical costs. During the legislative session, labor's representatives in the legislature compromised at a replacement rate of 60 percent, a weekly maximum of twelve dollars, and a reduction in the waiting period of one week. During the course of the 1910s, the continued pressure from organized labor raised benefits from near the bottom of benefits in 1913 to a ranking among the top quartile of the states with workers' compensation in 1921 (see table 7.1).

In Missouri, where the battles over the passage of workers' compensation lasted nearly fifteen years, the gap between the employers' and organized labor's proposals was often quite large. For example, in 1919 the labor proposal called for a wage replacement rate of two-thirds along with no weekly maximum. The bill that passed the 1919 legislature more closely matched the employers' demands by lowering the weekly maximum to fifteen dollars. After voters struck down the 1919 act in a referendum, organized labor continued to propose substantially higher benefits than those offered by employers both inside the legislature and in proposals to be voted on in referenda. Finally, in a 1925 act employers and workers compromised, the employers allowed relatively high benefits in return for the elimination of state insurance, and voters approved the law in a 1926 referendum. In the first year of operation in 1927, Missouri's benefits ranked sixth among the forty-three workers' compensation states (see table 7.1).

### 7.4.2 Organized Labor's Support in the State Legislatures

In the regression analysis of benefit levels across states and time, we found that areas where organized labor had more strength tended to have higher benefit levels. Similarly, studies of roll-call voting within state legislatures show that legislators with strong ties to organized labor consistently voted to amend legislation to include higher benefits. Legislators that could be identified as having strong union ties nearly unanimously voted in favor of higher benefits. In addition, legislators from districts with higher unionization rates consistently supported higher benefits.[19]

In Ohio in 1911 there was a series of House votes on amendments to the compromise bill that required workers to pay 10 percent and employers to pay 90 percent of the workers' compensation insurance premiums. When the compromise bill reached the House floor on 26 April, Republican representative Charles Reid offered an amendment to raise the workers' burden to 20 percent, but it was defeated seventeen to seventy-four, as legislators who had strong labor ties voted unanimously against the amendment. The next day progressive representative W. B. Kilpatrick tried the reverse strategy, calling for an amendment that would have required employers to pay 100 percent of the premiums. After Speaker of the House Samuel Vining, at Reid's behest, ruled the amendment out of order because the issue had already been voted on, Kilpatrick appealed the decision and lost by a close vote of forty to thirty-eight. Again, legislators with strong labor ties unanimously voted against the speaker's decision; progressives and representatives from districts with relatively high accident rates also tended to vote against the speaker's ruling.[20] Kilpatrick then tried again in the afternoon, moving that the vote on Reid's original amendment be reconsidered and amending Reid's amendment so that employers would be required to pay the entire workers' compensation premium. This time his amendment was voted down thirty-five to seventy.[21] Labor representatives again supported this amendment.[22]

In 1913 the Minnesota House voted on a series of amendments related to benefits. These included attempts to raise the weekly maximum benefit payment from $10 to $15, the maximum level of medical benefits from $100 to $195, and the payment of retroactive benefits to workers after thirty days of disability to cover the benefits they had not been paid during the two-week waiting period. Roll-call analysis of the voting on the each of these amendments showed that legislators from districts where union members constituted a greater percentage of the population tended to vote in favor of the amendments. Although union members accounted for a relatively small fraction of a representative's total constituency (averaging 1.5 percent), a change of 1.8 percentage points (one standard deviation) in union membership in a legislator's district would have increased the legislator's probability of voting for the amendments by 20 to 34 percentage points.[23]

In Missouri in 1919 the battle over benefits included a roll-call vote in the House on raising the weekly maximum from eighteen to twenty-one dollars. The amendment was struck down by a vote of forty-seven to seventy-five. Analysis of the voting shows again that legislators from districts where union members constituted a larger percentage of the population strongly supported the measure (Kantor and Fishback 1994a).

### 7.4.3 The Effects of Differences within Interest Groups

In several states there were differences in attitudes within groups about the proper benefit levels. As discussed in chapter 5, in some states internal strife within labor groups and employer groups actually led to perverse effects, delaying the adoption of workers' compensation in Minnesota by two years and in Missouri by nearly fifteen years.

In Minnesota the internal struggle over the proper parameters of the law developed early in 1911. The 1909 Employers' Liability Commission fractured as the organized labor and state bar representatives offered a majority report while a minority report was written by the employers' representative. The division in the commission paled, however, in comparison with the divisions within the interest groups themselves. The membership of the Minnesota Employers' Association (MEA) was not willing to support their own representative's bill because they could not agree on the proper parameters of the bill (MEA, 14 December 1911). On the labor side, the labor representative found that his own advisory group of fifty labor leaders thought the benefits he had proposed were too low. The disagreement within each group stifled effective compromise between the groups and prevented the adoption of workers' compensation in 1911.

Internal conflicts within organized labor continued as the employers' proposal, which mimicked the low benefits in New Jersey, worked its way through the 1913 legislature. The Minnesota State Federation of Labor (MnSFL) and the St. Paul Trades Assembly were willing to accept the relatively low benefit levels, as long as they imposed the full de jure cost of insurance on employers and worker negligence would never bar the payment of benefits. To establish workers' compensation in 1913, they were willing to accept the low benefits in the MEA proposal with the full expectation of amending the law in future sessions of the legislature.[24] The low benefits in the proposed bill led some members of the MnSFL, the railroad brotherhoods, and the Minneapolis Trades and Labor Assembly (MTLA) to accuse the MnSFL of "selling out the cause of the workers to their employers." They argued for pushing for higher benefits in the initial law on the grounds that the law could not be easily amended later.[25] To some extent, the MnSFL's prediction that they would be able to amend workers' compensation to increase the benefits in later legislatures proved prescient. Over the next several legislatures they were able to obtain higher benefits and move from a ranking among the lowest benefit levels in the nation in 1913 to one among the upper quartile by 1919 (Kantor and Fishback 1998).

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, the failure on the part of organized labor and of employers to compromise effectively over the level of benefits, waiting periods, the coverage of occupational diseases, and state insurance 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 (MoSFL) 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, were interested in securing 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 (Kantor and Fishback 1994a).

In 1918 the MoSFL and building trades unions came together and proposed a bill for the 1919 legislature that called for relatively generous benefits—two-thirds of the wage and no maximum weekly benefit—and state insurance. It is clear that legislators focused more fully on the demands of employers because the bill enacted by the 1919 legislature imposed a maximum weekly benefit of fifteen dollars per week and eliminated state insurance. Once again, the MoSFL agreed to the changes, arguing 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 prolabor amendments in later years. The building trades unions disagreed, demanding a law with state insurance and high maximum benefits or no law at all. The building trades and some other union elements then joined damage-suit attorneys in seeking a referendum to strike down the legislative act. The strategy was successful, as voters rejected the 1919 workers' compensation law by a close 52.2 to 47.8 percent margin.

The intransigence of the building trades continued for several more years. In 1921 the MoSFL, the Associated Industries of Missouri (AIM), and other employer organizations cooperated to pass a new workers' compensation law that added a state fund that would compete with private insurers and raised the weekly maximum benefit from fifteen to twenty dollars. The building trades council remained dissatisfied with this compromise and again joined the damage-suit lawyers in forcing a referendum that struck the act down. In 1923 the legislature could come to no compromise, freeing organized labor to place their dream initiative with state insurance and high weekly maximums of thirty dollars on the ballot. The initiative's resounding defeat at the polls finally convinced the building trades that compromise was necessary. In 1925 the legislature passed another workers' compensation law, which was approved in a 1926 referendum, that eliminated state insurance but gave Missouri workers their relatively generous benefits.

### 7.4.4 The Significance of Political Institutions

The case histories also show how the original proposals were altered and shaped into legislation by the political process. The interest groups tried to frame the debates over their proposals, but the debates were often reframed as the proposals moved from the employers' liability commissions through the House, the Senate, the governor's office, and even voter referenda. Since at each stage the relative political strength of labor and employers varied, proposals that carried the day in the House might face severe problems in passing the Senate, while the compromises struck in the legislature might not satisfy the electorate. The case studies, therefore, show the importance of veto power at each stage of the political process in shaping the ultimate form of workers' compensation laws. The importance of this veto power is also illustrated by the party shift coefficients in the quantitative analysis. A party shift in one house of the legislature raised benefit levels to some degree by reframing the debate in the other house, but the benefit levels rose still higher when the party shift occurred in both houses of the legislature.

In Ohio a key event that shaped the final law occurred in 1911 when labor leader and Senate president pro-tem William Green rammed a modified version of the labor proposal through the Senate. The Senate action established a benchmark for further discussion but was not decisive. Governor Harmon, who was less progressive than the legislature, immediately announced that he would veto the labor version of the bill, and then worked with House members to develop a compromise that eventually was enacted (Fishback and Kantor 1997, 12–17).

In Minnesota in 1913 and again in 1915 the veto power of one house of the legislature is effectively illustrated by the struggles over the waiting period before benefits would be paid. In both years the House passed bills that called for shorter waiting periods than those proposed in bills passed by the Senate. The bills then went to conference committee where the Senate's rejection of the shorter waiting period stood.[26]

Missouri's experience offers a final example of the impact of veto power by the voters in referenda. In 1919 the Missouri House passed a bill with a weekly maximum of eighteen dollars, which also included a state insurance provision. The Senate then lowered the maximum to fifteen dollars and eliminated state insurance. As described above, the interest groups dissatisfied with the legislation, albeit for different reasons, forced a voter referendum that vetoed the legislation. Once the potential for a veto by referendum was established, more strategic behavior was practiced in legislative deliberations. In 1921 a state insurance fund to compete with private insurers was added by floor amendment at the last minute. The amendment was widely supported by opponents of workers' compensation as a means of ensuring the law's defeat at the polls (Kantor and Fishback 1994a, 288–91).

## 7.5 Summary

The general concept of workers' compensation included a range of benefits under which both employers and workers could benefit. Yet, adjustments of benefit levels within that range could lead to a significant redistribution of the gains available from enacting the legislation. Thus, even though employers and workers might have gained with any benefit level within the range when compared to the status quo, significant disputes erupted as both employers and workers sought to increase their share of the gains from passing the law. The disputes ultimately were settled by state legislators.

The state legislators paid substantial attention to the demands of several interest groups. Employers in high-risk industries succeeded in pressuring legislatures to keep benefit levels low. Further, they succeeded in convincing legislatures to hold the line on benefits despite wage increases. The employers' push for low benefits was tempered in areas where organized labor was strong. In states with a greater share of manufacturing employment in unionized industries, benefits were substantially higher. Furthermore, once agencies were established to administer workers' compensation, organized labor succeeded in enlisting the efforts of state administrators to help raise benefit levels in the years after workers' compensation was adopted.

Another key factor in determining benefit levels was the presence of political reform movements, like that of the progressives, within state legislatures. Political power shifts, as measured by shifts in the party dominance of state legislatures, played a stronger role in the determination of benefit levels than they did in the adoption of workers' compensation more generally. In chapter 6 we find a similar result when examining the struggles over state insurance. 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.

Case histories offer several additional insights into the determination of benefit levels. They confirm that workers initially proposed higher benefits than employers were willing to offer. Organized labor and employers played important roles in framing the debates over benefit levels, which involved a range of parameters including the wage replacement percentage, the weekly maximums, waiting periods, and the de jure share of the insurance premiums paid by employers. The case studies show that the legislative compromises over benefit levels often involved adjustments along these different margins. In Ohio and Minnesota, for example, employers increased their de jure share of the cost of insurance premiums to ensure that workers did not retain their rights to sue under negligence liability. Finally, the studies of Minnesota and Missouri show that the struggle over benefits could sometimes lead to perverse results. Even though employers and workers both anticipated gains from workers' compensation, their struggle to increase their share of the gains through adjustments in benefit levels actually led to delays in the adoption of workers' compensation by two years in Minnesota and nearly a decade in Missouri.

## Notes

1. Stroud's argument was printed in a letter to the editor of the *Birmingham News* under "Manufacturers on Compensation Act," 9 February 1919, 6. Senator Leeth's statement appeared in "Senator Leeth Explains Why Compensation Bill Was Delayed," *Labor Advocate,* 8 March 1919, 1.

2. We also used the national average wage, as opposed to each state's specific wage, to avoid a spurious positive relationship between wages and benefits in the quantitative analysis that we summarize later in the chapter and in appendix K.

3. In nearly all states employers were required by statute to pay all of the insurance premiums required to provide the workers' compensation benefits. However, the issue of whether workers would share in paying the premiums was actively discussed in some states. In the initial Ohio law workers were required to pay a share of the premium, which in essence reduced their expected benefits from the law. We have adjusted the expected benefits in Ohio downward.

4. The employer might pay these premiums to a separate insurer, either private or state, or he might self-insure and just pay out the workers' compensation premiums directly.

5. The exceptions were Ohio and Oregon just after they passed workers' compensation. Both states joined the remaining states in forcing employers to pay 100

percent of the workers' compensation insurance premiums within a few years of their initial passage.

6. The employer's demand for workers' compensation benefit levels can be derived from the maximization of the following profit function:

$$A(C) = RQ(zL,C) - WL - (1 - k)e(1 + h)pCL,$$

where $L$ is the number of workers employed, $R$ is the product price, $z$ is a labor productivity parameter, and $Q(zL,C)$ is output, which rises at a diminishing rate with increases in labor and benefits ($Q_L$, $Q_C > 0$; $Q_{LL}$, $Q_{CC} < 0$). We assume that the derivative of the marginal product of labor with respect to benefit levels is positive ($Q_{LC} > 0$). Generally, efficiency-wage models predict that improvements in workers' nonwage benefits can lead to greater labor productivity. Further, increased compensation when injured would allow workers more freedom to increase productivity because the worker's net loss from an accident is reduced. The representative employer would then choose $C$ to satisfy the first-order condition for a maximum:

$$A_c = RQ_c - ep(1 - k)(1 + h)L = 0, \tag{2}$$

leading to the following demand function for benefit levels:

$$C^e = C(R, z, e, p, k, h, L).$$

When there is less than a full wage offset, an employer would seek higher benefit levels in settings where the wage offset ($k$) is higher, in industries where the accident rate ($p$) is lower, there is less experience rating ($e$ is lower), insurance loads ($h$) are lower, the product price ($R$) is higher, and labor productivity ($z$) is higher. The employer's choice of the optimal benefit level will be the same whether wages rise or fall. In other words, the employer's optimal benefit level is independent of the wage, as the first-order condition suggests. A discussion of the derivation of these results and how they might be influenced by other assumptions can be found in Fishback and Kantor (1998b).

7. In a world where there were no information costs or costs of administering insurance, the insurance premium would have been "actuarially fair." An actuarially fair premium is equal to the benefits paid when an accident occurs multiplied by the probability the accident would occur. Given the administrative costs of selling insurance, companies would then add a load factor into the premium to cover their administrative costs. Load factors were sometimes included to reduce problems associated with adverse selection, which arise because insurance companies cannot always tell the difference between customers with high risks and those with low risks. Without such information, if they set the premiums based on the average risk, only high-risk customers will buy, and the insurance companies will lose money. By setting the premiums higher, under some conditions the insurance company can make money selling insurance to the high-risk customers even though they sell no insurance to the low-risk customers.

8. Experience rating is important because incomplete experience rating offers high-risk groups the opportunity to obtain subsidies from low-risk groups. Baicker, Goldin, and Katz (1998) view problems with experience rating as a central factor in explaining the introduction of unemployment insurance in the United States in the 1930s.

9. Workers' compensation appears to have been more fully experience rated than unemployment insurance later became, in part because private insurers played a much larger role in determining workers' compensation insurance premiums. McCahan (1929, 100–118) suggests that private insurers were relatively effective at experience rating across industries because they pooled information through the

National Council on Compensation Insurance. He suggests that state funds had less success at experience rating, although many state funds tried to experience rate across industries by maintaining separate funds for each industry grouping.

10. On the other hand, in situations where benefits were set as a percentage of the wage, that is, the maximums were not binding, the wage rate played a role in determining the benefit level. Consequently, higher-wage employers tended to press for lower benefit percentages to reduce their insurance premiums. Workers' compensation benefits can be discussed in terms of the level of benefits or in terms of replacing a percentage of the wage. We focus much of the discussion on benefit levels here because a large share of the battles fought were over the maximum weekly payment to workers. Generally, our discussions of how the choice of benefits is influenced by the dangers of the job, load factors, productivity, wage offsets, and so on are the same whether we focus on benefits as levels or as percentages of the wage. The prediction of how wage rates would influence benefits is the only predicted effect to differ. For further discussion, see Fishback and Kantor (1998b, app. A).

11. The optimal benefit levels from the standpoint of the individual worker can be determined by examining the maximization of the following expected utility function:

$$E(C) = (1 - p)U[W - ek(1 + h)pC] + pV(C),$$

where $p$ $(0 \leq p \leq 1)$ is the probability that the disabling accident would occur. The worker's net income if he remains uninjured is the term $[W - ek(1 + h)pC]$, where $W$ is the workers' annual wage not accounting for any potential wage offset from employer-provided accident insurance, $k$ is the share of the cost of the benefits that workers pay through wage offsets $(0 \leq k \leq 1)$, $e$ is the extent to which insurance premiums are experience rated to reflect industrial differences in accident risk ($e < 1$ implies that the worker's industry was subsidized by other industries), $h$ is the insurance load factor, which reflects administrative costs, including the monitoring costs associated with moral hazard problems, and $pC$ represents the actuarially fair insurance premium that would provide $C$ dollars worth of benefits in case of injury. $U$ is the worker's utility of income with no accident and $V$ is the utility function in the disabled state. $U'$ and $V'$ are positive and $U''$ and $V''$ are negative, implying risk aversion.

The worker chooses $C$ to maximize his expected utility and the first-order condition for a maximum, derived from the equation above, is

$$E_C = V'(C) - ek(1 - p)(1 + h)U'[W - ek(1 + h)pC] = 0.$$

Using the first-order condition we can derive the representative worker's optimal choice of benefits

$$C^w = C(e, k, p, h, W).$$

The comparative statics from the maximization problem imply that the worker would seek higher benefits at higher wages ($W$), when the wage offset ($k$) was lower, when the insurance load factor ($h$) was lower, and when workers' compensation premiums were less experience rated ($e$). The impact of changes in accident risk on the worker's benefit choice is uncertain. On the one hand, higher accident risk raises the worker's demand for higher benefits because the accident state of the world is more likely; on the other hand, if there is a wage offset the cost of the insurance to the worker also rises with the increase in accident risk. For a description of how these results were derived, see Fishback and Kantor (1998b, app. A).

12. In situations where workers were lobbying not for levels but for replacement

percentages, a higher wage did not necessarily cause workers to demand higher benefit percentages because their benefit levels were already tied directly to the wage rate by the replacement percentage.

13. Danzon (1988) used a median voter model to examine modern workers' compensation benefit levels. While offering some useful insights, it is only one model that can be used to explain legislative behavior. There is a variety of qualitative and quantitative evidence that state legislators paid attention to the pressures 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 or personnel for reelection campaigns, framed the legislative debates for legislators, flooded hearings with lobbyists, and often served as key sources of information in an era when legislators did not have large staffs to conduct research or write legislation.

14. See also Fishback and Kantor (1998b).

15. Another factor that potentially influenced the mining coefficient was the size of the wage offset. As argued in chapter 3, nonunion coal miners experienced a full wage offset, but unionized miners experienced close to no wage offset. Since the mining variable includes both union and nonunion workers, the workers aggregated in the measure did not experience a full wage offset. Under this condition, employers in mining would demand lower benefits because workers were paying less of the benefits through lower wages (see table 7.2).

16. The employer's choice of benefit levels was unaffected by the wage in the theoretical model. This does not imply that the employer was indifferent to changes in benefit levels that were caused by wage changes. Instead, his optimal benefit choice was the same whether the wage was high or low; therefore, the employer would have been opposed to changes in the benefit level that were driven only by wage changes, holding other relevant determinants constant. When the focus was on benefit percentages as opposed to levels, employers tended to want lower benefit percentages as wages rose.

17. Ohio State Federation of Labor (1915a, 25–27). Cox charged that Willis was hostile to workers' compensation. Willis always strongly denied this. While running for reelection in 1916, Willis stated that not one line of the law had been changed during his administration, and that he had sought higher benefits but both labor and capital stated that the time was not yet right (Ridinger 1957, 103–5).

18. Wyoming administered the law through the courts but had a monopoly state insurance fund, so we have treated it in the regression analyses as having an administrative body.

19. See the analysis in Fishback and Kantor (1997, 15–17) of roll-call votes in the Ohio House of Representatives on 26 April 1911 on an amendment to raise the workers' insurance cost burden to 20 percent from 10 percent, on a House Speaker ruling that an amendment requiring employers to pay 100 percent of insurance premiums was out of order, and then a direct vote on an amendment to force employers to pay 100 percent of insurance premiums. For Minnesota see the discussion in Kantor and Fishback (1998) of the battle in the House over a series of amendments proposed by Representative Lundeen in April 1913 and of House votes on a reduction in the waiting period in 1915. For Missouri, see the analysis in Kantor and Fishback (1994a, 282–90) of four referenda and of a 1919 House amendment to raise the weekly maximum to twenty-one dollars.

20. The labor group voted unanimously against the speaker and for Kilpatrick's amendment. Among progressives 68.4 percent voted against the speaker, while only 27 percent of nonprogressives voted against him. We gathered information

on the amount awarded in workers' compensation claims in Ohio from 1 January 1914 to 30 June 1915, as reported by the Ohio Industrial Commission (1916, 64–118), and divided by the adult male population in 1910 to get a sense of the extent of workplace injury problems in each county. Of representatives from counties where per capita injury payments were higher than the mean, 61 percent voted against the speaker in favor of Kilpatrick, while only 33.2 percent of the representatives from counties below the mean voted against the speaker.

21. See also Ohio House of Representatives *Journal* (1911, 846–52); *Cleveland Plain Dealer,* 28 April 1911; *Ohio State Journal,* 28 April 1911; *Toledo News-Bee,* 28 April 1911.

22. Although organized labor supported the amendment, 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, not the desire to force employers to pay a greater share of the de jure costs of workers' compensation insurance. A regression 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 *Journal* (1911, 846–52); *Cleveland Plain Dealer,* 28 April 1911; *Ohio State Journal,* 28 April 1911; and *Toledo News-Bee,* 28 April 1911.

23. The roll-call analysis involved estimating a probit of the legislators' vote on the issue while controlling for membership in key legislative committees, whether the legislator was a Democrat, the legislator's occupation, the percentage of the population in unions, the percentage in manufacturing, and agricultural output per person in the district. The roll-call votes were from the Minnesota House of Representatives *Journal* (1913, 1623–29). Committee memberships and occupations are from Minnesota Secretary of State (1913, 146–47, 151–53). Union membership is from Minnesota Department of Labor and Industries (1913–1914, 229). Agricultural output, population, and manufacturing employment data were obtained from the Inter-University Consortium for Political and Social Research (ICPSR) census tapes for 1910 and 1920.

24. See *Minneapolis Labor Review,* 14 March 1913; Lawson (1955, 217); *Labor World,* 19 April 1913; and MnSFL (1913, 36–37). The *Minneapolis Journal,* 10 April 1913, made the same plea to its readers: "[P]ass 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."

25. See MEA, 14 March 1913; *Labor World,* 15 March 1915; and *Minneapolis Labor Review,* 11 and 18 April 1913. The railroad brotherhoods were concerned that the new law would preempt their rights under the Federal Employers' Liability Acts of 1906 and 1908.

26. In 1913 the Senate and the House also chose different maximums for medical expenses, one hundred and two hundred dollars, respectively. They struck a compromise in conference committee that imposed an initial maximum of one hundred dollars but allowed the courts to order an additional one hundred dollars of benefits.