From John Burton's Workers' Compensation Resources

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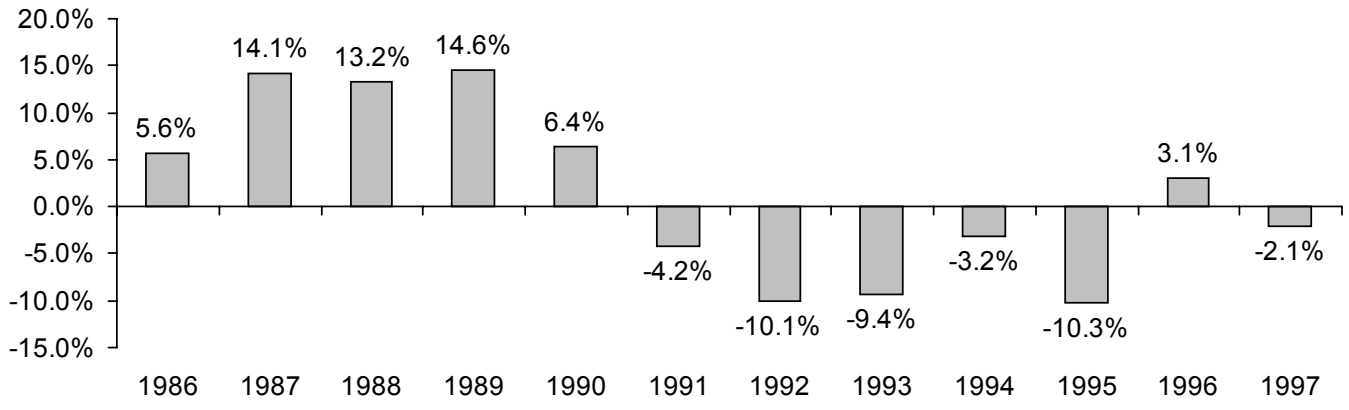
FEATURED TOPICS

Summary of the Contents

Workers' compensation costs to private industry employers nationally averaged 1.92 percent of payroll in 2001, according to data from the Bureau of Labor Statistics (BLS). Discussed in the first article by Blum and Burton, this figure represents a decrease from the previous year. As reported in the May/June 2001 issue of *Workers' Compensation Policy Review*, employers' costs were 2.02 percent of payroll in 2000. Variations of the national BLS data are also presented, including breakdowns by region, industry category, occupational grouping, number of employees, and bargaining status. These data reveal costs as low as 1.40 percent of payroll for establishments with 500 or more workers when studied according to number of employees. In contrast, when industry categories are examined, the mining and construction industry is found to have costs as high as 4.91 percent of payroll.

The decreasing average cost to employers nationally seems to be in keeping with the results of data analyzed in the second article, which focuses on the workers' compensation benefits paid to workers in the United States from 1985 to 1997 as reported by the National Council on Compensation Insurance (NCCI). Expanding on an article in the January/February 2001 *Workers' Compensation Policy Review*, this study finds that benefits generally have been decreasing from roughly 1991 through 1997, the most recent year of data available for inclusion. As the figure below indicates, while benefits were increasing in the 1980s, the 1990s stand in contrast overall as a decade of declining benefits. Possible reasons for this trend reversal, including reform, improved safety, managed care, and tighter eligibility standards, are discussed in the context of the data, which include specific results for most individual states as well as national averages. The implications of the NCCI data for assessing the adequacy of benefits received by injured workers are also considered.

Changes in Total (Cash plus Medical) Benefits Paid per 100,000 Workers (Percentage Increase from Preceding Year)



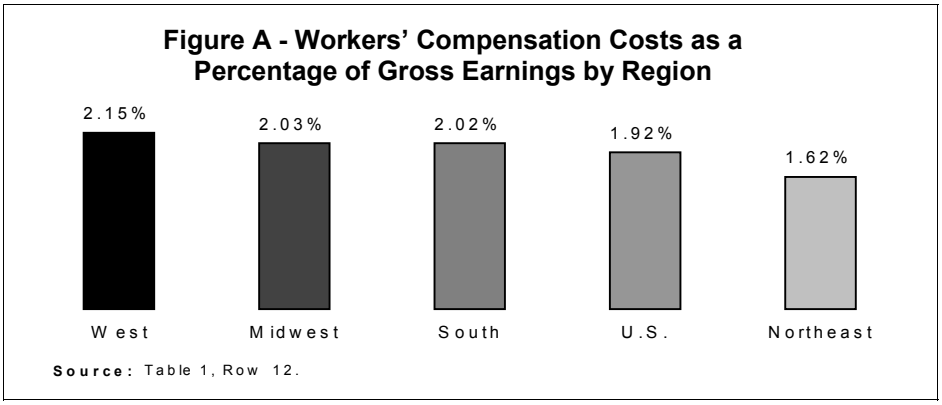
Source: Table 3, Panel B of Burton and Blum article in this issue (p.16).

Workers' Compensation Costs in 2001: Regional, Industrial, and Other Variations

by Florence Blum and John F. Burton, Jr.

The employers' costs of workers' compensation vary among industries and regions, according to 2001 data published by the Bureau of Labor Statistics (BLS), which is part of the U.S. Department of Labor.[1] The BLS data also indicate that workers' compensation costs differ by occupation, by establishment size, and by union-nonunion status. Though many of these variations are not surprising, some of the patterns evident in the data are unexpected.

The BLS data used in this article provide information on the employers' costs per hour worked for wages and salaries and for benefits (including workers' compensation and other legally required benefits) for a sample of 7,500 establishments in the private sector and 800 establishments in the state and local government sector.[2]



Cost Differences by Region

Workers' compensation costs as a percentage of wages and salaries are shown for four regions and the United States in Figure A.[3] Employers' workers' compensation costs are above the national average in three regions and are below the national average in the other region.[4] What is surprising is the ranking of the regions, and in particular the findings that: 1) the South has workers' compensation costs (as a percentage of gross earnings) that are above the national average and 2) the Northeast is the region with the lowest workers' compensation costs (as a percentage of gross earnings).

The derivation of the national and regional figures shown in Figure A helps explain these findings. The BLS data used to construct Figure A are shown in Table 1. *Total remuneration* per hour worked averaged $20.81 for employers in private industry throughout the United States in 2001 (row 1).[5] The $20.81 of total remuneration includes *gross earnings* that averaged $17.16 per hour (row 2) and *benefits other than pay* that averaged $3.65 per hour (row 6).

The gross earnings figure includes wages and salaries as well as paid leave and supplemental pay. The term *gross earnings* and *payroll* are used interchangeably in this article.

Benefits other than pay include employer contributions for insurance, retirement and savings, legally required benefits, and other benefits.[6] *Workers' compensation*, which averaged $0.33 per hour worked (row 9A), is one of the *legally required benefits* that are included in the BLS's total figure of $1.73 per hour for that category (row 9).

We used the BLS data in rows (1), (2), and (9A) of Table 1 to compute the figures listed in rows (11) and (12) of that table. For the private sector in the United States in 2001, workers' compensation expenditures ($0.33) were 1.59 percent of total remuneration ($20.81) and 1.92 percent of gross earnings (or payroll) ($17.16).

The same procedure used to calculate workers' compensation as a percentage of gross earnings (row 12 of Table 1) for the United States – namely, to divide the workers' compensation expenditures per hour (row 9A) by gross earnings per hour (row 2) – was used to calculate the regional results for workers' compensation as a percentage of gross earnings shown in Figure A and in row (12) of Table 1. Thus, for the Northeast, workers' compensation expenditures of $0.32 per hour were divided by gross earnings of $19.73 per hour to produce the figure of 1.62 percent – which is workers' compensation costs as a percentage of gross earnings in the Northeast in 2001.

An alternative way to measure regional differences in workers' compensation costs is shown in Figure B. Workers' compensation is measured as costs per hour worked, as shown in row (9A) of Table 1. In contrast to the results presented in Figure A – which indicated that the South had workers' compensation costs (as a percentage of gross earnings) that were **above** the national average – the results presented in row (9A) of Table 1 and in Figure B indicate that the South's workers' compensation costs ($0.31 per hour) were **below** the national average ($0.33 per hour).

Appendix A examines how the regions can switch their relative costs compared to the United States, depending on which measure of workers' compensation costs is used. That interregional differences in workers' compensation can vary depending on which measure of workers' compensation costs is used leads to an obvious question: Which is the "proper" measure that should be used to compare regions in terms of their workers' compensation costs: workers'

Table 1
Workers' Compensation Costs by Region in 2001
for Employers in Private Industry
(In Dollars Per Hours Worked)

		U.S.	Northeast	South	Midwest	West
(1)	Total Remuneration	20.81	23.91	18.59	20.47	21.86
(2)	Gross Earnings	17.16	19.73	15.36	16.77	18.12
(3)	Wages and Salaries	15.18	17.22	13.71	14.69	16.19
(4)	Paid Leave	1.37	1.73	1.17	1.33	1.41
(5)	Supplemental Pay	0.61	0.78	0.48	0.75	0.52
(6)	Benefits Other Than Pay	3.65	4.17	3.24	3.70	3.72
(7)	Insurance	1.28	1.50	1.16	1.35	1.19
(8)	Retirement Benefits	0.62	0.74	0.51	0.63	0.66
(9)	Legally Required Benefits	1.73	1.90	1.55	1.69	1.87
(9A)	Workers' Compensation	(0.33)	(0.32)	(0.31)	(0.34)	(0.39)
(10)	Other Benefits	0.02	0.03	0.02	0.03	*
(11)	Workers' Compensation As Percentage of Remuneration	1.59%	1.34%	1.67%	1.66%	1.78%
(12)	Workers' Compensation As Percentage of Gross Earnings	1.92%	1.62%	2.02%	2.03%	2.15%

Notes:
1. The text and all tables in this article use the term "remuneration" in place of the term "compensation" that is used by the BLS.
2. Total remuneration (row 1) = gross earnings (row 2) + benefits other than pay (row 6).
3. Gross earnings (row 2) = wages and salaries (row 3) + paid leave (row 4) + supplemental pay (row 5).
4. Benefits other than pay (row 6) = insurance (row 7) + retirement benefits (row 8) + legally required benefits (row 9) + other benefits (row 10).
5. Workers' compensation (row 9A) is one of the legally required benefits (row 9).
6. Workers' compensation as percent of remuneration (row 11) = workers' compensation (row 9A) + total remuneration (row 1).
7. Workers' compensation as percent of gross earnings (row 12) = workers' compensation (row 9A) + gross earnings (row 2).
8. Results in rows (2), (6), (11), and (12) were calculated by Florence Blum and John F. Burton, Jr.
9. Individual items may not sum to total remuneration because of rounding in BLS data.

* Cost per hour worked is $0.01 or less

Source: *Employer Costs for Employee Compensation - March 2001*, News Release USDL: 01-194 (June 29, 2001), Tables 5 and 7.

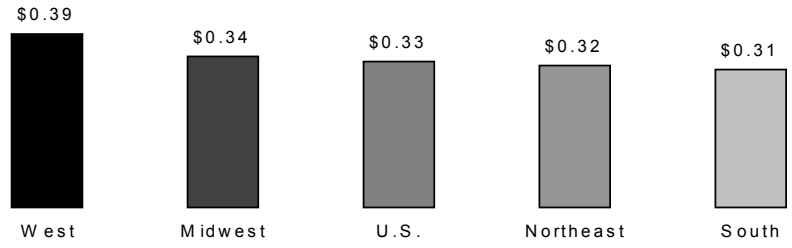
compensation costs as a percentage of gross earnings (as shown in Figure A) or workers' compensation costs per hour worked (as shown in Figure B)?

In our view, no measure of workers' compensation costs is invariably preferable for all comparisons. Rather, the choice of measurement depends on the purpose of the comparison. For example, an employer seeking a state or region with the least expensive operating environment may decide that workers' compensation costs per hour is the best measure of costs. In contrast, a policymaker concerned about adequacy of benefits may decide that workers' compensation costs as a percentage of payroll is the best measure.[7] In the remainder of this article, we confine our discussion to workers' compensation costs as a percentage of gross earnings (or payroll). This format reflects the most common approach in workers' compensation studies. The reader who wishes to make comparisons in terms of workers' compensation costs per hour will be able to do so, however, because hourly cost data are also presented in all of the tables in this article.

Cost Differences by Industry

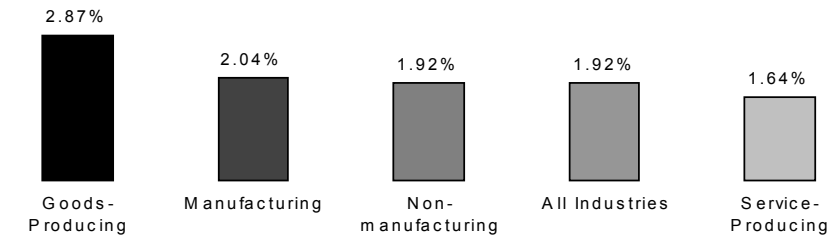
The BLS data for 2001 also reveal that employers' costs of workers' compensation as a percentage of gross earnings vary among major industry groups in the private sector (*see* Figure C and row 12 of Table 2). The national average for employers' workers'

Figure B - Workers' Compensation Costs as Employer Expenditures per Hour Worked by Region



Source: Table 1, Row 9A.

Figure C - Workers' Compensation Costs as a Percentage of Gross Earnings by Major Industry Group



Source: Table 2, Row 12.

compensation costs was 1.92 percent of gross earnings in 2001. (This all-industry average, in row 12 and the "all workers" column of Table 2, is the same as the U.S. average in Table 1.)

Workers' compensation data on industries throughout the United States can be disaggregated three ways. First, a distinction can be made between "goods-producing" industries (mining, construction, and manufacturing) and "service-producing" industries (including transportation, communication, and public utilities; wholesale and retail trade; finance, insurance, and real estate; and services). In 2001, national workers' compensation costs were, on average, 2.87 percent of gross earnings (payroll) in the goods-producing sector and 1.64 percent of gross earnings (payroll) in the service-producing sector (*see* row 12 of Table 2 and Figure C).

Workers' compensation data on industries can be disaggregated a second way. A distinction can be made between manufacturing and non-manufacturing industries. In 2001, national workers' compensation costs were, on average, 2.04 percent of gross earnings (payroll) in manufacturing and 1.92 percent of gross earnings (payroll) in the non-manufacturing sector (*see* row 12 of Table 2 and Figure C).

A third way to disaggregate the data on employers' costs by industry is possible. One implication of the data in Figure C is that workers' compensation costs in mining and construction are considerably higher than are workers' compensation costs in manufacturing, since workers'

Table 2
Workers' Compensation Costs by Major Industry Groups in 2001
for Employers in Private Industry
(In Dollars Per Hours Worked)

		All Workers	Goods-Producing	Service-Producing	Manufacturing	NonManufacturing	Mining & Construction
(1)	Total Remuneration	20.81	24.40	19.74	24.30	20.12	24.64
(2)	Gross Earnings	17.16	19.53	16.46	19.60	16.69	19.35
(3)	Wages and Salaries	15.18	16.86	14.68	16.66	14.89	17.34
(4)	Paid Leave	1.37	1.60	1.30	1.85	1.28	0.99
(5)	Supplemental Pay	0.61	1.07	0.48	1.09	0.52	1.02
(6)	Benefits Other Than Pay	3.65	4.87	3.26	4.70	3.42	5.28
(7)	Insurance	1.28	1.85	1.11	1.93	1.15	1.66
(8)	Retirement Benefits	0.62	0.83	0.55	0.75	0.59	1.02
(9)	Legally Required Benefits	1.73	2.14	1.60	1.95	1.68	2.60
(9A)	Workers' Compensation	(0.33)	(0.56)	(0.27)	(0.40)	(0.32)	(0.95)
(10)	Other Benefits	0.02	0.05	*	0.07	*	*
(11)	Workers' Compensation Percentage of Remuneration	1.59%	2.30%	1.37%	1.65%	1.59%	3.86%
(12)	Workers' Compensation As Percentage of Gross Earnings	1.92%	2.87%	1.64%	2.04%	1.92%	4.91%

Notes:
1. The text and all tables in this article use the term "remuneration" in place of the term "compensation" that is used by the BLS.
2. Total remuneration (row 1) = gross earnings (row 2) + benefits other than pay (row 6).
3. Gross earnings (row 2) = wages and salaries (row 3) + paid leave (row 4) + supplemental pay (row 5).
4. Benefits other than pay (row 6) = insurance (row 7) + retirement benefits (row 8) + legally required benefits (row 9) + other benefits (row 10).
5. Workers' compensation (row 9A) is one of the legally required benefits (row 9).
6. Workers' compensation as percent of remuneration (row 11) = workers' compensation (row 9A) + total remuneration (row 1).
7. Workers' compensation as percent of gross earnings (row 12) = workers' compensation (row 9A) + gross earnings (row 2).
8. Results in rows (2), (6), (11), and (12) were calculated by Florence Blum and John F. Burton, Jr.
9. Individual items may not sum to total remuneration because of rounding in BLS data.
10. Goods-Producing includes mining, construction, and manufacturing.
11. Service-Producing includes transportation, communication, and public utilities: wholesale and retail trade; finance, insurance, and real estate; and service industries.

* Cost per hour worked is $0.01 or less

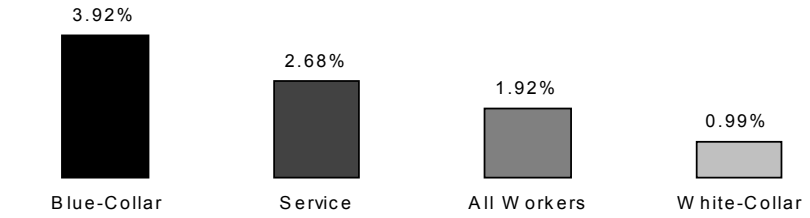
Source: *Employer Costs for Employee Compensation - March 2001*, News Release USDL: 01-194 (June 29, 2001), Table 5 for all industry groups except Mining & Construction, for which the derivation is explained in Appendix B of this article.

compensation costs for manufacturing industries alone averaged 2.04 percent of payroll, while workers' compensation costs for manufacturing in combination with mining and construction (that is, in the "goods-producing" sector) averaged 2.87 percent of gross earnings. Using a procedure explained in Appendix B, we estimate that the costs of workers' compensation benefits are $0.95 per hour in mining and construction, which represents 3.86 percent of remuneration and 4.91 percent of gross earnings (payroll) in these sectors. The costs of workers' compensation as a percentage of gross earnings in manufacturing, in mining and construction, and in the good-producing industries are shown in Figure D. It is not possible to separate the costs of workers' compensation in the mining industry from the construction industry in the data published by the BLS. However, the construction sector accounts for virtually all of the employment (92.6 percent) of the combined total of employment in the construc-

Figure D - Workers' Compensation Costs as a Percentage of Gross Earnings in All Goods-Producing Industries, in Manufacturing, and in Mining and Construction

Source: Appendix Table B.1

Figure E - Workers' Compensation Costs as a Percentage of Gross Earnings by Major Occupational Group



Source: Table 3, Row 12.

Table 3
Workers' Compensation Costs by Major Occupational Groups in 2001 for Employers in Private Industry
(In Dollars Per Hours Worked)

		All Workers	White-Collar	Blue-Collar	Service
(1)	Total Remuneration	20.81	25.34	19.35	10.32
(2)	Gross Earnings	17.16	21.27	15.32	8.58
(3)	Wages and Salaries	15.18	18.71	13.48	8.00
(4)	Paid Leave	1.37	1.88	1.08	0.42
(5)	Supplemental Pay	0.61	0.68	0.76	0.16
(6)	Benefits Other Than Pay	3.65	4.06	4.03	1.74
(7)	Insurance	1.28	1.43	1.45	0.52
(8)	Retirement Benefits	0.62	0.75	0.66	0.15
(9)	Legally Required Benefits	1.73	1.85	1.89	1.07
(9A)	Workers' Compensation	(0.33)	(0.21)	(0.60)	(0.23)
(10)	Other Benefits	0.02	0.03	0.03	*
(11)	Workers' Compensation As Percentage of Remuneration	1.59%	0.83%	3.10%	2.23%
(12)	Workers' Compensation As Percentage of Gross Earnings	1.92%	0.99%	3.92%	2.68%

Notes:
1. The text and all tables in this article use the term "remuneration" in place of the term "compensation" that is used by the BLS.
2. Total remuneration (row 1) = gross earnings (row 2) + benefits other than pay (row 6).
3. Gross earnings (row 2) = wages and salaries (row 3) + paid leave (row 4) + supplemental pay (row 5).
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8. Results in rows (2), (6), (11), and (12) were calculated by Florence Blum and John F. Burton, Jr.
9. Individual items may not sum to total remuneration because of rounding in BLS data.

* Cost per hour worked is $0.01 or less

Source: *Employer Costs for Employee Compensation - March 2001*, News Release USDL: 01-194 (June 29, 2001), Table 6.

Table 4
Workers' Compensation Costs by Establishment Employment Size in 2001
for Employers in Private Industry
(In Dollars Per Hours Worked)

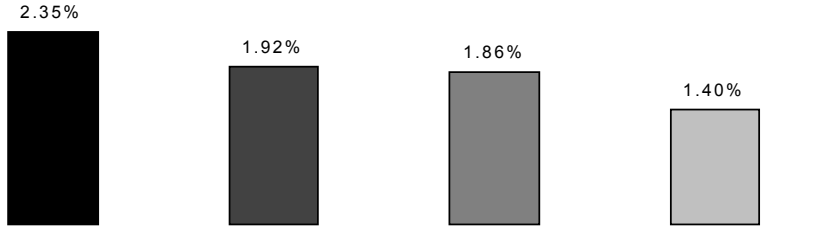
		All Workers	1-99 Workers	100-499 Workers	500 or More Workers
(1)	Total Remuneration	20.81	17.86	20.97	28.17
(2)	Gross Earnings	17.16	14.90	17.24	22.89
(3)	Wages and Salaries	15.18	13.41	15.21	19.67
(4)	Paid Leave	1.37	1.02	1.39	2.27
(5)	Supplemental Pay	0.61	0.47	0.64	0.95
(6)	Benefits Other Than Pay	3.65	2.95	3.73	5.28
(7)	Insurance	1.28	0.94	1.38	2.00
(8)	Retirement Benefits	0.62	0.42	0.61	1.12
(9)	Legally Required Benefits	1.73	1.59	1.72	2.09
(9A)	Workers' Compensation	(0.33)	(0.35)	(0.32)	(0.32)
(10)	Other Benefits	0.02	*	0.02	0.07
(11)	Workers' Compensation As Percentage of Remuneration	1.59%	1.96%	1.53%	1.14%
(12)	Workers' Compensation As Percentage of Gross Earnings	1.92%	2.35%	1.86%	1.40%

Notes:
1. The text and all tables in this article use the term "remuneration" in place of the term "compensation" that is used by the BLS.
2. Total remuneration (row 1) = gross earnings (row 2) + benefits other than pay (row 6).
3. Gross earnings (row 2) = wages and salaries (row 3) + paid leave (row 4) + supplemental pay (row 5).
4. Benefits other than pay (row 6) = insurance (row 7) + retirement benefits (row 8) + legally required benefits (row 9) + other benefits (row 10).
5. Workers' compensation (row 9A) is one of the legally required benefits (row 9).
6. Workers' compensation as percent of remuneration (row 11) = workers' compensation (row 9A) + total remuneration (row 1).
7. Workers' compensation as percent of gross earnings (row 12) = workers' compensation (row 9A) + gross earnings (row 2).
8. Results in rows (2), (6), (11), and (12) were calculated by Florence Blum and John F. Burton, Jr.
9. Individual items may not sum to total remuneration because of rounding in BLS data.

* Cost per hour worked is $0.01 or less

Source: *Employer Costs for Employee Compensation - March 2001*, News Release USDL: 01-194 (June 29, 2001), Table 8.

Figure F - Workers' Compensation Costs as a Percentage of Gross Earnings by Establishment Employment Size



Source: Table 4, Row 12.

tion and mining sectors. Thus, the high costs for the construction and mining sectors shown in Figure D and Table 2 are almost certainly due to the high costs of workers' compensation in the construction sector.

Cost Differences by Occupation

The employers' costs of workers' compensation as a percentage of payroll also vary among major occupational groups in the private sector, as shown in Figure E and in Table 3. The national average cost of employers' workers' compensation was 1.92 percent of payroll in 2001. (*See* Table 3, row 12, "All Workers" column. The U.S. average is the same in all tables in this article.) Two occupational groups had, on average, workers' compensation costs that exceeded the national average: blue-collar workers, for whom employers' workers' compensation costs averaged 3.92 percent of payroll, and service workers, for whom employers' workers' compensation costs averaged 2.68 percent of payroll. In sharp contrast, employers' workers' compensation costs for white-collar workers were, on average, only .99 of payroll in 2001. (*See* Table 3, row 12). These cost differences presumably reflect the differences in the number and severity of workplace injuries and diseases experienced by workers in these occupations.

Table 5
Workers' Compensation Costs by Bargaining Status in 2001
for Employers in Private Industry
(In Dollars Per Hours Worked)

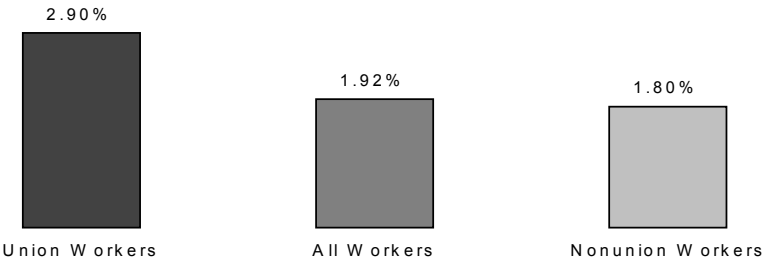
		All Workers	Union	Nonunion
(1)	Total Remuneration	20.81	27.80	19.98
(2)	Gross Earnings	17.16	21.40	16.67
(3)	Wages and Salaries	15.18	18.36	14.81
(4)	Paid Leave	1.37	1.92	1.31
(5)	Supplemental Pay	0.61	1.12	0.55
(6)	Benefits Other Than Pay	3.65	6.41	3.32
(7)	Insurance	1.28	2.48	1.14
(8)	Retirement Benefits	0.62	1.52	0.51
(9)	Legally Required Benefits	1.73	2.34	1.65
(9A)	Workers' Compensation	(0.33)	(0.62)	(0.30)
(10)	Other Benefits	0.02	0.07	0.02
(11)	Workers' Compensation As Percentage of Remuneration	1.59%	2.23%	1.50%
(12)	Workers' Compensation As Percentage of Gross Earnings	1.92%	2.90%	1.80%

Notes:
1. The text and all tables in this article use the term "remuneration" in place of the term "compensation" that is used by the BLS.
2. Total remuneration (row 1) = gross earnings (row 2) + benefits other than pay (row 6).
3. Gross earnings (row 2) = wages and salaries (row 3) + paid leave (row 4) + supplemental pay (row 5).
4. Benefits other than pay (row 6) = insurance (row 7) + retirement benefits (row 8) + legally required benefits (row 9) + other benefits (row 10).
5. Workers' compensation (row 9A) is one of the legally required benefits (row 9).
6. Workers' compensation as percent of remuneration (row 11) = workers' compensation (row 9A) + total remuneration (row 1).
7. Workers' compensation as percent of gross earnings (row 12) = workers' compensation (row 9A) + gross earnings (row 2).
8. Results in rows (2), (6), (11), and (12) were calculated by Florence Blum and John F. Burton, Jr.
9. Individual items may not sum to total remuneration because of rounding in BLS data.

* Cost per hour worked is $0.01 or less

Source: *Employer Costs for Employee Compensation - March 2001*, News Release USDL: 01-194 (June 29, 2001), Tables 5 and 7.

Figure G - Workers' Compensation Costs as a Percentage of Gross Earnings by Bargaining Status



Source: Table 5, Row 12.

Cost Differences by Establishment Size

An establishment is defined as an economic unit that: 1) produces goods or services at a single location (such as a factory or store) and 2) is engaged in one type of economic activity.[8] Many firms (or companies) thus consist of more than one establishment.

The BLS data on the employers' costs of workers' compensation allow comparisons among establishments of various sizes (as measured by number of employees). As shown in Figure F and in Table 4, there is a clear tendency for workers' compensation costs to decline with increasing establishment size. The national average for employers' workers' compensation costs across all establishments was 1.92 percent of payroll. Those establishments with fewer than 100 employees had workers' compensation costs that, on average, were 2.35 percent of gross earnings in 2001. In contrast, those establishments with 100 to 499 workers had workers' compensation costs that averaged 1.86 percent of payroll and establishments with 500 or more workers had costs that averaged 1.40 percent of payroll – both figures are below the national (all-establishments) average.

Cost Differences by Bargaining Status

The employers' costs of workers' compensation as a percentage of gross earnings also vary between unionized and nonunionized workers, as shown in Figure G and in Table 5. The employers' costs of workers' compensation for unionized workers in 2001 was 2.90 percent of pay-

roll and the comparable figure for nonunionized workers was 1.80 percent. The national average (unionized and nonunionized workers) was 1.92 percent. (*See* Table 5, row 12.)

One possible explanation for these cost differences between nonunionized and unionized workers is that unions have been more successful in organizing workers in industries such as mining, construction, and manufacturing than they have been in organizing other industries that have relatively fewer workplace injuries and diseases than do the mining, construction, and manufacturing industries. Thus, the higher costs are not due to unions, but are instead a reflection of the elevated risks of workplace injuries and diseases found in the industries that unions have organized. Another possible explanation is that unions provide information and assistance to members who are injured on the job, thus increasing the likelihood that unionized members will receive workers' compensation benefits, which in turn increases the employers' costs of workers' compensation for those workers.

Conclusions

The employers' costs of workers' compensation measured as a percentage of payroll (or measured as costs per hour) vary systematically by region, by major industry group, by major occupational group, by establishment size, and by bargaining status. The information derived from the BLS data should be useful to firms trying to place their own workers' compensation costs in perspective and to policymakers attempting to assess the costs of the workers' compensation programs in a particular jurisdiction relative to costs elsewhere. Ideally, the BLS data will be expanded in future years to present greater detail by industry, occupation, and (in particular) by individual states.

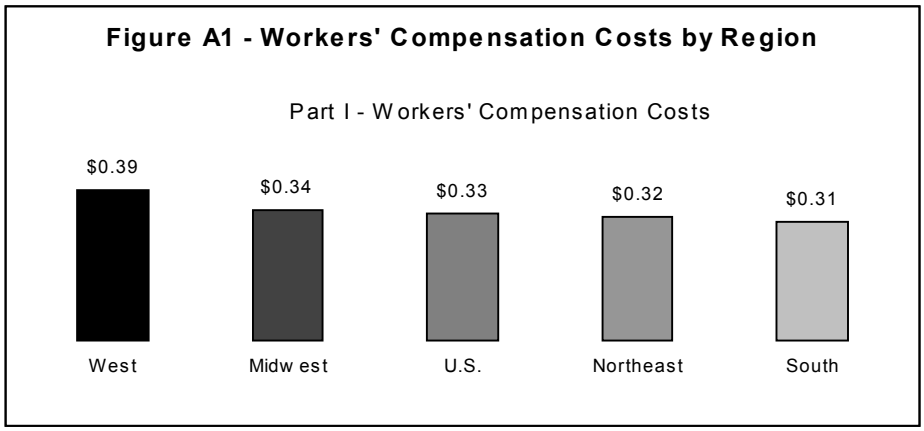
APPENDIX A

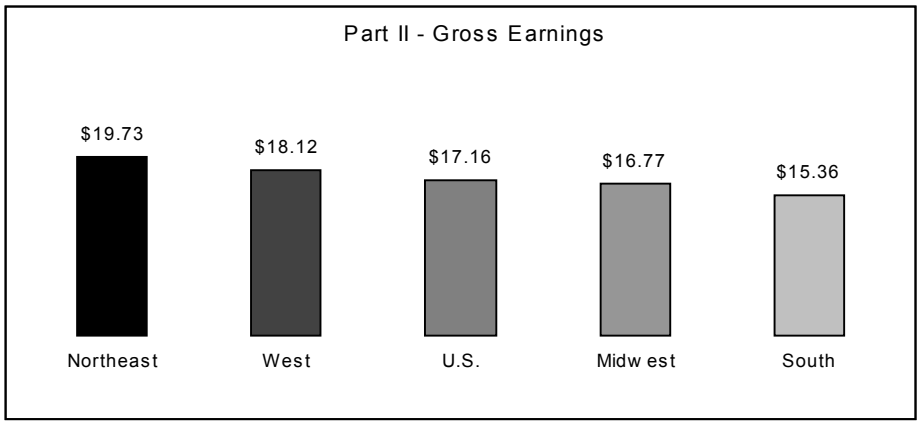
Alternative Ways to Measure Regional Differences in Workers' Compensation Costs

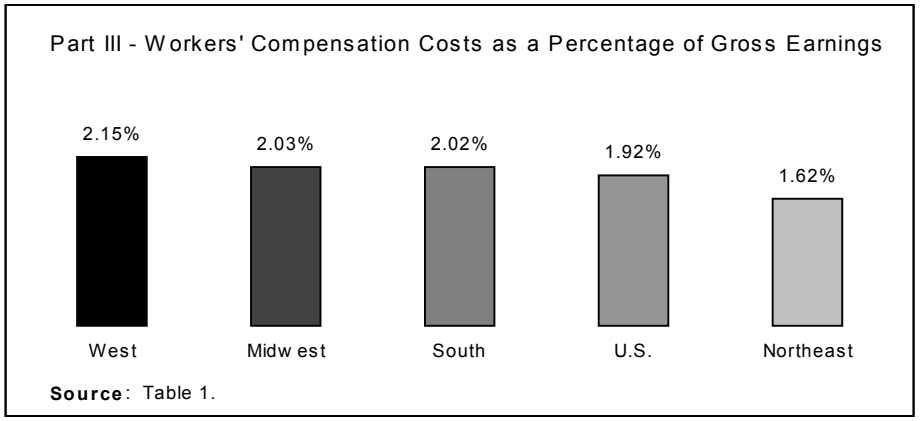
This appendix examines how regions can switch their relative costs compared to the United States depending on which measure of workers' compensation costs is used. The explanation is provided by a closer examination of the arithmetic procedure used in computing workers' compensation costs as a percentage of gross earnings. The workers' compensation costs per hour (row 9A of Table 1 and Appendix Figure A1: Part I, which is the same as Figure B in the article) have to be divided by gross earnings per hour (row 2 of Table 1 and Appendix Figure A1: Part II) in order to produce the figures on workers' compensation costs as a percentage of wages and salaries (row 12 of Table 1 and Appendix Figure A1: Part III, which is the same as Figure A in the article). The relationships between these numerators and denominators for the four regions account for the fluctuations in rankings between Figure A and Figure B in the article.

Consider the South. Workers' compensation costs per hour in the South ($0.31 per hour) are below the national average for workers' compensation costs ($0.33 per hour), but the hourly gross earnings in the South ($15.36 per hour -- row 2 of Table 1) are ten percent below the national average for gross earnings ($17.16 -- row 2 of Table 1). As a result, the South's workers' compensation costs as a percentage of gross earnings (2.02 percent -- or $0.31 divided by $15.36) are above the national average of workers' compensation costs as a percentage of gross earnings (1.92 percent -- or $0.33 divided by $17.16).

Figure A1 - Workers' Compensation Costs by Region







Source: Table 1.

APPENDIX B

Derivation of Workers' Compensation Costs in the Mining and Construction Industries

The BLS does not publish estimates of remuneration or the components of remuneration (including workers' compensation costs) for the mining and construction industries. However, rough estimates of remuneration and workers' compensation costs can be produced using the BLS data and the procedure explained in this appendix.

Table B1 contains information on remuneration that BLS publishes for the Goods Producing Major Industry Group in Rows (1) to (10) of Column (A). Similar BLS information for the Manufacturing Major Industry Group is contained in Rows (1) to (10) of Column (B) of Table B1. (These are identical to data contained in Table 2 of the article.)

The Goods-Producing Major Industry Group consists of the Manufacturing Industry, the Construction Industry, and the Mining Industry. The BLS indicates that March 2001 employment counts from the Bureau's Current Employment Statistics program are used as weights to calculate cost levels. Row (13) of Table B1 provides the employment figures for the Goods-Producing Industries, the Manufacturing Industries, and the combination of the Mining & Construction Industries. Row (14) of Table B1 indicates that as of March 2001, 70.8 percent of the employment in the Goods-Producing Industries were accounted for by Manufacturing Industries and 29.2 percent were accounted for by the Mining & Construction Industries.

With this information, the approximate costs of Total remuneration and its various components in Mining & Construction can be estimated by solving equations such as this for Total Remuneration:

$$24.40 = (.708)(24.30) + (.292)(X)$$

where X is the total remuneration in Mining and Construction.

Solving this equation provides the estimate that total remuneration

Table B1
Workers' Compensation Costs for Employers in the Mining & Construction Industries
(In Dollars Per Hours Worked)

		Goods-Producing (A)	Manufacturing (B)	Mining & Construction (C)
(1)	Total Remuneration	24.40	24.30	24.64
(2)	Gross Earnings	19.53	19.60	19.35
(3)	Wages and Salaries	16.86	16.66	17.34
(4)	Paid Leave	1.60	1.85	0.99
(5)	Supplemental Pay	1.07	1.09	1.02
(6)	Benefits Other Than Pay	4.87	4.70	5.28
(7)	Insurance	1.85	1.93	1.66
(8)	Retirement Benefits	0.83	0.75	1.02
(9)	Legally Required Benefits	2.14	1.95	2.6
(9A)	Workers' Compensation	(0.56)	(0.40)	(0.95)
(10)	Other Benefits	0.05	0.07	0
(11)	Workers' Compensation Percentage of Remuneration	2.30%	1.65%	3.86%
(12)	Workers' Compensation As Percentage of Gross Earnings	2.87%	2.04%	4.91%
(13)	Employment (Millions)	25.602	18.116	7.486
(14)	Share of Employment in Goods Producing	100.0%	70.8%	29.2%

Notes:
1. The text and all tables in this article use the term "remuneration" in place of the term "compensation" that is used by the BLS.
2. Total remuneration (row 1) = gross earnings (row 2) + benefits other than pay (row 6).
3. Gross earnings (row 2) = wages and salaries (row 3) + paid leave (row 4) + supplemental pay (row 5).
4. Benefits other than pay (row 6) = insurance (row 7) + retirement benefits (row 8) + legally required benefits (row 9) + other benefits (row 10).
5. Workers' compensation (row 9A) is one of the legally required benefits (row 9).
6. Workers' compensation as percent of remuneration (row 11) = workers' compensation (row 9A) + total remuneration (row 1).
7. Workers' compensation as percent of gross earnings (row 12) = workers' compensation (row 9A) + gross earnings (row 2).
8. Results in rows (2), (6), (11), and (12) were calculated by Florence Blum and John F. Burton, Jr.
9. Individual items may not sum to total remuneration because of rounding in BLS data.
10. Goods-Producing includes mining, construction, and manufacturing.
11. Service-Producing includes transportation, communication, and public utilities: wholesale and retail trade; finance, insurance, and real estate; and service industries.

* Cost per hour worked is $0.01 or less

Source: Columns (A) and (B), Rows 1-10: *Employer Costs for Employee Compensation March 2001,* News Release USDL: 01-194 (June 29, 2001), Table 5.
Columns (A), (B), and (C), Rows 13-14: March 2001 Employment from Monthly Labor Review, October 2001, Vol. 124, No. 10, Table 12, pp. 54-55.
Column (C), Rows 1-10, derivation explained in text.

in Mining and Construction averages $24.64 per hour, which is the figure shown in Row (1) of Column (C) of Table B1. Similar equations were solved for each of the other entries in Rows (2) to (10) in Column (C) of Table B1. The estimate of workers' compensation costs as 3.86 percent of total remuneration in Row (11) was calculated by dividing the figure of $0.95 in Row (9A) by the figure of $24.64 in Row (1). The estimate of workers' compensation costs as 4.91 percent of gross earnings in Row (11) was calculated by diving the figure of $ 0.95 in Row (9A) by the figure of $19.35 in Row (2).

The results shown in Column (C) of Table B1 and Figure D should be understood as rough estimates of the costs of various items in the construction and mining industries since they are based on manipulation of the BLS data. We nonetheless feel they are accurate enough to be useful to illustrate the relatively high costs of workers' compensation in the mining and construction industries. Since the BLS data indicate that construction industry employment represents 92.6 percent of the total of the combined construction and mining industries, the results strongly suggest that construction is the most expensive major industry group in the U.S. economy in terms of the costs of workers' compensation for employers.

ENDNOTES

1. The BLS data used in this article were published in U.S. Department of Labor 2001. The national data for private industry employees, state and local employees, and all non-federal employees were analyzed in Burton 2001.

2. The data set is described in more detail in Burton 1995a.

3. The BLS data on the employers' costs of workers' compensation do not provide information on individual states or on any other disaggregated level geographically, aside from the four regions for which data are shown in Figure A.

The four BLS-designated regions are the same as the U.S. Census regions and consist of the following categorization: 1) **Northeast** (Connecticut, Maine, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, and Vermont); 2) **South** (Alabama, Arkansas, Delaware, District of Columbia, Florida, Georgia, Kentucky, Louisiana, Maryland, Mississippi, North Carolina, Oklahoma, South Carolina, Tennessee, Texas, Virginia, and West Virginia); 3) **Midwest** (Illinois, Indiana, Iowa, Kansas, Michigan, Minnesota, Missouri, Nebraska, North Dakota, Ohio, South Dakota, and Wisconsin); and 4) **West** (Alaska, Arizona, California, Colorado, Hawaii, Idaho, Montana, Nevada, New Mexico, Oregon, Utah, Washington, and Wyoming).

4. Generally, two regions will be above the national average and the remaining two regions will be below the national average. However, in 2001 workers' compensation costs in one region (the Northeast) were very low compared to the national average, while the costs in the other three regions were generally only moderately higher than the national average. As a result, three regions had costs above the national average and only one region had costs below the national average in 2001. This also happened in 1995, as shown in Figure A and Table 1 of Burton 1995b.

5. The BLS uses the term "total compensation" for wages and salaries *plus* total benefits. I have instead used the term "total remuneration," lest the references to "total compensation" and to "workers' compensation" (one of the BLS's subcategories under "total benefits") become too confusing.

6. Specifically, the *gross earnings* figure includes wages and salaries; paid leave (vacations, holidays, sick leave, and other leave); and supplemental pay (premium pay, shift pay, and nonproduction bonuses). The *benefits other than pay* figure includes insurance (life insurance, health insurance, sickness and accident insurance); retirement and savings (pensions, savings and thrift); legally required benefits (Social Security, federal unemployment, state unemployment, and workers' compensation); and other benefits (includes severance pay and supplemental unemployment benefits).

7. The latter decision reflects a judgment that, since workers' compensation benefits are generally tied to workers' preinjury wages, and thus benefits and costs ought to increase proportionately with wages, costs as a percentage of wages and salaries should be the same across states and regions.

For example, suppose that in all regions, for every 1,000 hours worked, there are work injuries that result in the loss of 50 hours of work. Also suppose that two-thirds of lost wages are replaced by workers' compensation benefits in all regions. (A two-thirds replacement rate is a commonly used measure of adequacy.)

Using the data on hourly gross earnings shown in Table 1, the total payroll in the **South** for 1,000 hours worked is $16,770 ($16.77 X 1,000 hours); the total amount of workers' compensation benefits is $559 ($16.70 X 50 hours X 2/3 replacement rate); benefits (assumed to be the same as costs for this example) as a percentage of gross earnings in the **South** are 3.33 percent ($559 divided by $16,770).

Using the data on hourly gross earnings shown in Table 1, the total wage bill in the **Northeast** for 1,000 hours worked is $19,730 ($19.73 X 1,000 hours); the total amount of workers' compensation benefits is $657.70 $19.73 X 50 hours X 2/3 replacement rate); benefits (assumed to be the same as costs for this example) as a percentage of wages and salaries in the **Northeast** are 3.33 percent ($657.70 divided by $19,730).

8. U.S. Department of Labor 2002, 37.

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Workers' Compensation Benefits Paid to Workers, 1985-1997

by John F. Burton, Jr. and Florence Blum

Workers' compensation benefits paid to workers decreased by 2.1 percent in 1997 from the previous year, as shown in Figure A.[1] The data measure the total benefits (cash plus medical benefits) paid per 100,000 workers and are national averages (involving 42 jurisdictions). The decrease in total benefits paid in 1997 (the latest year with data currently available) is interesting because benefit payments had increased in 1996 following five consecutive years of declines. In retrospect, the increase in 1996 may have been an exception to a continuing trend of declining benefit payments that began in 1991.

The results between 1991 and 1995 were unique because they represented the first time that workers' compensation benefit payments had declined for five successive years since at least the depression era of the 1930s. Moreover, the sharp decline in benefits paid to workers during most of the 1990s stands in sharp contrast to the experience in the late 1980s, when benefit payments per 100,000 workers were increasing nationally at annual rates that averaged more than 12 percent a year. As shown in Figure A, these double-digit increases were followed by a "transition" year in 1990, when total benefit payments per 100,000 workers were up only 6.4 percent from the previous year.

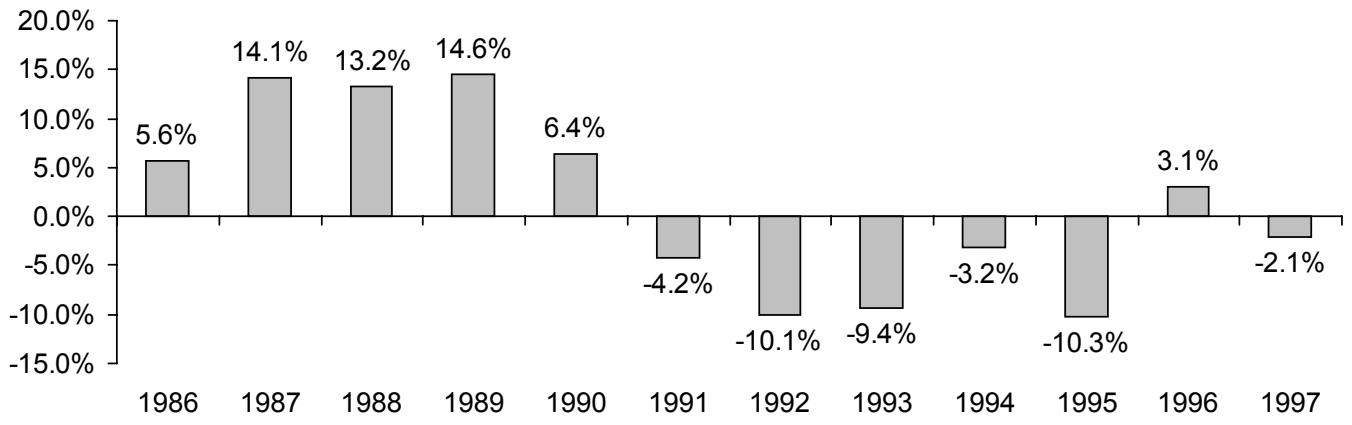
The recent experience in national workers' compensation benefit payments is also interesting when the data are separated into cash benefits and medical benefits. As shown in Figure B, payments for both types of benefits decreased in 1997. For cash benefits per 100,000 workers, the 2.3 percent decrease in benefits paid to workers in 1997 followed a 1.6 percent increase in payments in the previous year. Medical benefits also declined in 1997, with the 1.9 percent decrease following an increase of 4.7 percent in 1996.

Data Sources and Methodology

The primary source of the information used in this article is the National Council on Compensation Insurance (NCCI). The 2001 edition of the *Annual Statistical Bulletin* published by the NCCI (the *NCCI Bulletin*) provides data for 43 of the 45 jurisdictions (including the District of Columbia) in which private insurance carriers provide workers' compensation insurance in 1997.[2] The 2001 *NCCI Bulletin* also contains information for 1996 and 1997 for Nevada, in which the exclusive state fund was privatized in 1999. We also obtained information directly from two states (Delaware and Pennsylvania) with private carriers that are not included in the *NCCI Bulletin* and from one state (West Virginia) with an exclusive state fund.[3] Comparable data are not available from four states that had exclusive state workers' compensation funds in 1997 (North Dakota, Ohio, Washington, and Wyoming).

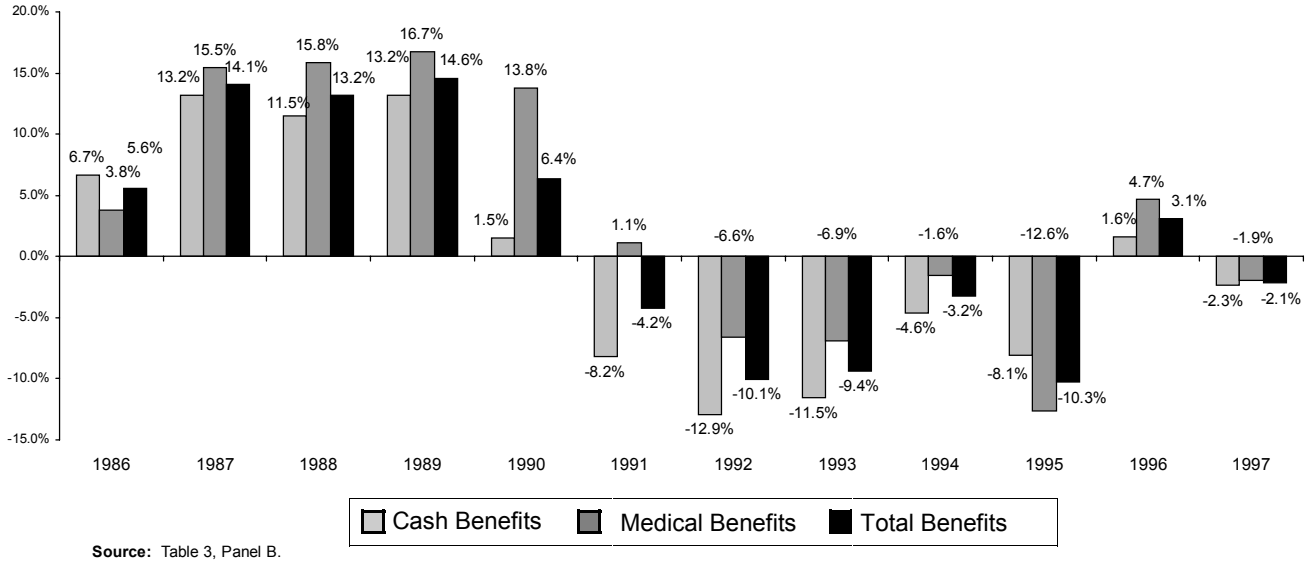
Exclusion of the four states with exclusive state funds for which we do not have data means that 47 is the maximum number of jurisdictions we use in any year to calculate national averages. However, data are lacking for Nevada prior to 1996 and for Delaware, the District of Columbia, Pennsylvania, and/or Texas in certain years, and the data in Panel A of Table 3 pertains only to the number of jurisdictions for which data are available in the designated year. (The jurisdictions missing in any year are shown in parenthesis.) We also

Figure A
Changes in Total (Cash plus Medical) Benefits Paid per 100,000 Workers
(Percentage Increase from Preceding Year)



Source: Table 3, Panel B.

Figure B
Changes in Benefits Paid per 100,000 Workers
(Percentage Increases from Preceding Year)



Source: Table 3, Panel B.

have calculated a national average for only those 42 states with data available for all years between 1985 and 1997, and the results are shown in Panel B of Table 3.

In addition to the maximum of 47 jurisdictions used to calculate the national averages, the *NCCI Bulletin* also contains information on the federal Longshore and Harbor Workers' Compensation Act (LHWCA). However, the costs for the LHWCA are considerably higher than those in any other workers' compensation program, and so we do not include LHWCA data in calculating the national averages. We do include information on the LHWCA benefit payments in Table 1 and Tables 2.96 and 2.97, where we show the program's costs relative to the national average in the other jurisdictions.

Data on the annual frequencies per 100,000 workers and the average costs for five types of injuries are presented in Exhibits XI and XII of the *NCCI Bulletin.* The five types are fatalities, permanent total disabilities, permanent partial disabilities, temporary total disabilities, and "medical-only" cases, in which medical benefits but no cash benefits were paid. We used these data to calculate three variants of benefits paid annually per 100,000 workers: (1) the cash (or "indemnity") benefits; (2) the medical benefits; and (3) the total (cash plus medical) benefits. The benefit payments are the incurred benefits for the injuries that occurred during the policy years indicated in Exhibits XI and XII in the 2001 and earlier editions of the *NCCI Bulletin.*[4]

The results of the calculations using the data from the 2001 *NCCI Bulletin* are shown in Table 1. The national (44-jurisdiction) average was $19,696,944 of cash benefits per 100,000 workers per year.[5] As indicated in Table 1, Panel A, the paid cash benefits (per 100,000 workers) were highest in the LHWCA (696.7 percent of the national average) and Nevada (208.0 percent of the national average) and lowest in Indiana (34.2 percent of the national average).

The 44-jurisdiction national average for medical benefit payments was $19,575,525 per 100,000 workers. As shown in Table 1, Panel B, the paid medical benefits (per 100,000 workers) were highest in the LHWCA program (326.5 percent of the national average) and Florida (183.0 percent of the national average) and lowest in the District of Columbia (44.5 percent of the national average).

Total (cash plus medical) benefit payments are shown in Table 1, Panel C. The national average for the 44 jurisdictions was $39,272,469 of total benefits paid per 100,000 workers. The LHWCA program had the highest total paid benefits (512.2 percent of the national average), followed by Nevada (169.0 percent of the national average), while the District of Columbia had the lowest total paid benefits (44.8 percent of the national average).

There are some limitations of the data shown in Table 1. Some are inherent, such as the absence of data from the four states with exclusive state workers' compensation funds for which the NCCI does not collect data. Another inherent limitation is that the data pertain only to the experience of employers who purchase insurance from private carriers and from some of the competitive and exclusive state workers' compensation funds. The most significant problem is that the experience of self-insuring employers is not included.

Other drawbacks of the data shown in Table 1 can be overcome, however. We are able to add three states (Delaware, Pennsylvania, and West Virginia) with data we obtained directly from these states. Another problem with the information in the *NCCI Bulletins* used to generate the data for this article is that in some editions of the *NCCI Bulletin*, the age of the policy years varies considerably. In the 2001 *NCCI Bulletin*, the policy years ranged from the oldest results for Rhode Island (January to December 1996) to the most

recent results for Massachusetts (July 1997 to June 1998). There is also considerable variation among policy years in earlier editions of the *NCCI Bulletin*. In the 1997 edition, for example, the policy years ranged from Georgia and Mississippi (January to December 1992) to Montana and South Dakota (January to December 1994). Given the recent volatility in workers' compensation costs, it is questionable whether, for example, the Georgia and Montana data in the 1997 *NCCI Bulletin* were comparable, since the Montana data were two years more current. Finally, the fact that different states often do not correspond in terms of the months included in their policy years complicates comparisons. For example, the Massachusetts policy period in the 2001 *NCCI Bulletin* covered July 1997 to June 1998, while many states covered January to December 1997.

We have dealt with the problem of data with different vintages in a particular issue of the *NCCI Bulletin* and with different months of inclusion in the policy periods by creating a series of tables that reallocate – by calendar year – data from the 1988 to 2001 issues of the *NCCI Bulletin*.[6] Thus three months of data from the Michigan policy period from April 1996 to March 1997 that were published in the 2000 *NCCI Bulletin* were combined with nine months of data from the Michigan policy period from April 1997 to March 1998 that were published in the 2001 *NCCI Bulletin* to calculate a twelve-month average for calendar year 1997 for Michigan. Table 2.96 presents information for those jurisdictions for which data for any months in 1996 are found in any of the 14 issues of the *NCCI Bulletin*. In similar fashion, Table 2.97 presents information on those jurisdictions for which

Table 1 - Benefits Paid Per 100,000 Workers For Employers Who Purchase Workers' Compensation Insurance

		Panel A: Cash (Indemnity) Benefits			Panel B: Medical Benefits			Panel C: Total (Cash plus Medical Benefits		
State	Policy Period	Dollar Amount (1)	State's Benefit as a Percentage of US Average (2)	Rank Among 45 Jurisdictions (3)	Dollar Amount (1)	State's Benefit as a Percentage of US Average (2)	Rank Among 45 Jurisdictions (3)	Dollar Amount (1)	State's Benefit as a Percentage of US Average (2)	Rank Among 45 Jurisdictions (3)
Alabama	01/97-12/97	15,473,480	78.6	27	33,004,598	168.6	4	48,478,078	123.4	9
Alaska	04/97-03/98	27,225,201	138.2	5	35,625,633	182.0	3	62,850,834	160.0	3
Arizona	03/97-02/98	11,904,526	60.4	35	19,510,724	99.7	20	31,415,250	80.0	26
Arkansas	08/96-07/97	7,612,546	38.6	44	11,742,660	60.0	41	19,355,206	49.3	44
California	01/97-12/97	33,183,304	168.5	4	24,221,274	123.7	11	57,404,578	146.2	4
Colorado	03/97-02/98	25,951,948	131.8	7	21,089,445	107.7	15	47,041,393	119.8	11
Connecticut	01/97-12/97	18,279,845	92.8	15	15,054,820	76.9	32	33,334,665	84.9	22
Dis. Of Columbia	04/96-03/97	8,893,248	45.2	41	8,708,852	44.5	45	17,602,100	44.8	45
Florida	10/96-09/97	19,430,964	98.6	13	35,814,330	183.0	2	55,245,294	140.7	5
Georgia	01/97-12/97	13,704,570	69.6	33	14,297,766	73.0	35	28,002,336	71.3	36
Hawaii	01/97-12/97	23,705,500	120.4	10	18,921,720	96.7	22	42,627,220	108.5	14
Idaho	03/97-02/98	17,371,722	88.2	17	24,845,160	126.9	10	42,216,882	107.5	15
Illinois	04/97-03/98	19,140,039	97.2	14	15,751,296	80.5	27	34,891,335	88.8	20
Indiana	01/97-12/97	6,733,802	34.2	45	13,843,680	70.7	37	20,577,482	52.4	43
Iowa	03/97-02/98	14,043,456	71.3	32	14,956,225	76.4	33	28,999,681	73.8	32
Kansas	01/97-12/97	10,980,520	55.7	38	15,289,188	78.1	29	26,269,708	66.9	40
Kentucky	01/97-12/97	10,347,400	52.5	40	20,012,544	102.2	19	30,359,944	77.3	28
Louisiana	04/97-03/98	19,691,766	100.0	12	22,438,152	114.6	13	42,129,918	107.3	16
Maine	06/97-05/98	24,522,300	124.5	9	20,905,320	106.8	16	45,427,620	115.7	12
Maryland	04/97-03/98	16,510,254	83.8	21	12,777,012	65.3	40	29,287,266	74.6	31
Massachusetts	07/97-06/98	21,807,570	110.7	11	10,282,800	52.5	44	32,090,370	81.7	25
Michigan	04/97-03/98	16,186,058	82.2	25	15,074,664	77.0	31	31,260,722	79.6	27
Minnesota	01/97-12/97	14,390,796	73.1	31	14,449,444	73.8	34	28,840,240	73.4	34
Mississippi	01/97-12/97	12,457,350	63.2	34	20,686,560	105.7	17	33,143,910	84.4	24
Missouri	01/97-12/97	16,884,852	85.7	19	16,393,699	83.7	26	33,278,551	84.7	23
Montana	01/97-12/97	24,672,060	125.3	8	27,170,760	138.8	6	51,842,820	132.0	6
Nebraska	01/97-12/97	14,762,090	74.9	29	18,784,750	96.0	23	33,546,840	85.4	21
Nevada	07/96-06/97	40,970,085	208.0	2	25,391,990	129.7	8	66,362,075	169.0	2
New Hampshire	04/97-03/98	17,214,050	87.4	18	27,137,741	138.6	7	44,351,791	112.9	13
New Jersey	01/97-12/97	16,401,140	83.3	23	11,552,256	59.0	42	27,953,396	71.2	37
New Mexico	01/97-12/97	10,899,745	55.3	39	19,408,498	99.1	21	30,308,243	77.2	29
New York	01/97-12/97	34,165,515	173.5	3	15,467,322	79.0	28	49,632,837	126.4	8
North Carolina	01/97-12/97	16,393,440	83.2	24	13,154,640	67.2	39	29,548,080	75.2	30
Oklahoma	01/97-12/97	26,115,168	132.6	6	24,146,530	123.4	12	50,261,698	128.0	7
Oregon	01/97-12/97	16,446,175	83.5	22	31,169,054	159.2	5	47,615,229	121.2	10
Rhode Island	01/96-12/96	16,777,684	85.2	20	10,344,816	52.8	43	27,122,500	69.1	39
South Carolina	01/97-12/97	14,450,217	73.4	30	13,190,544	67.4	38	27,640,761	70.4	38
South Dakota	01/97-12/97	7,887,726	40.0	43	14,184,639	72.5	36	22,072,365	56.2	42
Tennessee	01/97-12/97	16,061,352	81.5	26	20,031,054	102.3	18	36,092,406	91.9	19
Texas	01/97-12/97	15,425,924	78.3	28	25,311,162	129.3	9	40,737,086	103.7	17
Utah	01/97-12/97	8,012,576	40.7	42	15,243,037	77.9	30	23,255,613	59.2	41
Vermont	04/97-03/98	18,211,200	92.5	16	21,917,213	112.0	14	40,128,413	102.2	18
Virginia	02/97-01/98	11,506,741	58.4	36	16,744,178	85.5	25	28,250,919	71.9	35
Wisconsin	01/97-12/97	11,314,048	57.4	37	17,670,174	90.3	24	28,984,222	73.8	33
USLHWCA	02/96-01/97	137,235,640	696.7	1	63,916,640	326.5	1	201,152,280	512.2	1
National Average*		**19,696,944**			**19,575,525**			**39,272,469**		

*Weighted average based on 44 jurisdictions (including the District of Columbia), using 1997 state employment as weights. Data from USL&HW were not used to calculate national average
Source: NCCI, Annual Statistical Bulletin, 2001 edition.

Table 2.96 - Benefits Paid Per 100,000 Workers For Employers Who Purchase Workers' Compensation Insurance for 1996

State	Panel A: Cash (Indemnity) Benefits			Panel B: Medical Benefits			Panel C: Total (Cash plus Medical) Benefits		
	Dollar Amount (1)	State's Benefit as a Percentage of US Average (2)	Rank Among 48 Jurisdictions (3)	Dollar Amount (1)	State's Benefit as a Percentage of US Average (2)	Rank Among 48 Jurisdictions (3)	Dollar Amount (1)	State's Benefit as a Percentage of US Average (2)	Rank Among 48 Jurisdictions (3)
Alabama	17,813,901	90.7	21	29,376,212	156.1	6	47,190,113	122.7	14
Alaska	30,115,268	153.3	5	37,114,521	197.2	3	67,229,789	174.8	3
Arizona	12,214,157	62.2	38	21,190,003	112.6	17	33,404,160	86.8	27
Arkansas	8,030,439	40.9	46	14,264,372	75.8	37	22,294,812	58.0	46
California	29,893,600	152.2	6	22,111,190	117.5	15	52,004,790	135.2	10
Colorado	25,303,648	128.8	10	24,449,543	129.9	10	49,753,190	129.3	12
Connecticut	20,310,100	103.4	15	16,252,404	86.3	31	36,562,504	95.1	21
Delaware	20,465,870	104.2	14	32,262,616	171.4	5	52,728,486	137.1	8
Dis. of Columbia	8,465,558	43.1	45	8,340,821	44.3	48	16,806,379	43.7	48
Florida	20,797,207	105.9	13	39,256,827	208.6	2	60,054,034	156.1	5
Georgia	15,060,305	76.7	31	14,840,485	78.8	36	29,900,790	77.7	32
Hawaii	21,847,215	111.2	11	19,932,444	105.9	18	41,779,659	108.6	15
Idaho	15,549,542	79.2	28	19,811,291	105.3	20	35,360,832	91.9	23
Illinois	19,482,389	99.2	17	15,529,831	82.5	33	35,012,219	91.0	24
Indiana	6,058,140	30.8	48	13,151,160	69.9	42	19,209,300	49.9	47
Iowa	13,647,519	69.5	36	13,674,657	72.7	41	27,322,176	71.0	41
Kansas	10,740,114	54.7	43	13,844,400	73.6	40	24,584,514	63.9	44
Kentucky	11,968,016	60.9	41	23,394,048	124.3	12	35,362,064	91.9	22
Louisiana	18,537,822	94.4	19	19,643,778	104.4	21	38,181,600	99.3	18
Maine	21,443,663	109.2	12	19,871,864	105.6	19	41,315,527	107.4	16
Maryland	15,080,860	76.8	30	12,445,188	66.1	44	27,526,048	71.6	40
Massachusetts	18,606,261	94.7	18	9,721,998	51.7	47	28,328,259	73.6	36
Michigan	17,905,236	91.2	20	15,488,130	82.3	34	33,393,366	86.8	28
Minnesota	14,808,288	75.4	32	14,889,196	79.1	35	29,697,484	77.2	33
Mississippi	12,067,964	61.4	40	18,621,690	98.9	23	30,689,654	79.8	31
Missouri	15,916,776	81.0	27	15,733,272	83.6	32	31,650,048	82.3	29
Montana	27,247,104	138.7	8	28,499,724	151.4	8	55,746,828	144.9	6
Nebraska	13,833,750	70.4	35	17,624,030	93.6	28	31,457,780	81.8	30
Nevada	40,970,085	208.6	2	25,391,990	134.9	9	66,362,075	172.5	4
New Hampshire	16,143,031	82.2	26	22,326,884	118.6	14	38,469,915	100.0	17
New Jersey	16,218,464	82.6	25	11,338,812	60.2	45	27,557,276	71.6	39
New Mexico	9,937,632	50.6	44	18,274,053	97.1	24	28,211,685	73.3	37
New York	39,670,114	202.0	4	14,139,380	75.1	38	53,809,494	139.9	7
North Carolina	13,584,571	69.2	37	13,136,159	69.8	43	26,720,730	69.5	43
Oklahoma	27,289,864	138.9	7	23,615,550	125.5	11	50,905,414	132.3	11
Oregon	16,298,152	83.0	23	36,167,755	192.2	4	52,465,907	136.4	9
Pennsylvania	26,968,980	137.3	9	22,098,552	117.4	16	49,067,532	127.6	13
Rhode Island	16,777,684	85.4	22	10,344,816	55.0	46	27,122,500	70.5	42
South Carolina	13,881,920	70.7	34	13,881,010	73.7	39	27,762,930	72.2	38
South Dakota	15,393,050	78.4	29	19,473,456	103.5	22	34,866,506	90.6	25
Tennessee	16,292,200	82.9	24	17,715,425	94.1	27	34,007,625	88.4	26
Texas	14,492,673	73.8	33	22,408,684	119.1	13	36,901,357	95.9	20
USLHWCA	137,404,337	699.5	1	66,611,043	353.9	1	204,015,380	530.4	1
Utah	7,332,480	37.3	47	17,092,704	90.8	30	24,425,184	63.5	45
Vermont	19,704,189	100.3	16	18,101,125	96.2	25	37,805,314	98.3	19
Virginia	12,069,701	61.4	39	17,288,519	91.9	29	29,358,220	76.3	34
West Virginia	40,092,801	204.1	3	29,120,200	154.7	7	69,212,999	179.9	2
Wisconsin	11,373,984	57.9	42	17,826,298	94.7	26	29,200,282	75.9	35
National Average*	**19,642,719**			**18,822,046**			**38,464,765**		

*Weighted average based on 47 jurisdictions (including the District of Columbia), using 1996 state employment as weights. Data from USL&HW were not used to calculate national averages.
Sources: NCCI, *Annual Statistical Bulletin,* 1986-2001 editions.

data for any months in 1997 are available from any of these issues. Similar tables for years 1985 through 1995 are available upon request to subscribers to the *Workers' Compensation Policy Review.*

National Data

The data from Tables 2.96, Table 2.97, and similar tables for earlier years were used to produce the national data in Table 3 and Figures A and B. The most recent national data on total benefits for the same 42 states (shown in Panel B of Table 3 and in Figure A) document the dramatic fluctuations in benefits paid to injured workers in recent years. For the four years from 1986 through 1989, total benefits paid per 100,000 workers increased on average more than 12 percent a year. The fastest growth year was 1989, when total paid benefits were up 14.6 percent from the previous year. Then a sudden deceleration occurred, with total benefits per 100,000 workers up only 6.4 percent in 1990 from the previous year. Deceleration was followed by decline: total benefits were down 4.2 percent in 1991 from the previous year, which was followed by another four years of decline through 1995. Then in 1996 total benefits per 100,000 workers increased by 3.1 percent, only to be followed by a 2.1 percent decline in 1997, which is the most recent year for which we currently have data.

The data on total benefits per 100,000 workers are the combined total of cash benefits per 100,000 workers and medical benefits per 100,000 workers. Panel B of Table 3 and Figure B provide information for the same 42 juris-

dictions on the developments in all three measures of paid benefits since 1985. The movements through time have been similar for the three measures: initially several years when benefit payments were generally accelerating, followed by decelerating benefits in 1990, followed by a period of decline in benefits paid until 1995, then an increase in both cash and medical benefits in 1996, and finally a further decline in both types of benefits paid in 1997.

The data in Table 3 are in current dollars unadjusted for inflation. The benefits paid to workers in the 42 jurisdictions adjusted for changes in the consumer price index (CPI) are shown in Table 4. The decline in benefits paid during the 1990s is even more dramatic when measured in constant (1982-84) dollars. Measured in current dollars, total benefits paid per 100,000 workers declined by 31.5 percent from 1990 to 1997 (Table 4, Column 9). Measured in constant dollars, total benefits paid per 100,000 workers declined by 48.0 percent from 1990 to 1997 (Table 4, Column 10). Moreover, in constant dollars, the decline in cash benefits began in 1990 and continued through 1997; this seven-year stretch of declining cash benefits in constant dollars is three years longer than the decline in cash benefits measured in current dollars between 1991 and 1995.

Explanations of the National Developments

The latest national data on the benefits paid per 100,000 workers indicate that both cash and medical bene-

Table 2.97 - Benefits Paid Per 100,000 Workers For Employers Who Purchase Workers' Compensation Insurance for 1997

State	Panel A: Cash (Indemnity) Benefits			Panel B: Medical Benefits			Panel C: Total (Cash plus Medical) Benefits		
	Dollar Amount (1)	State's Benefit as a Percentage of US Average (2)	Rank Among 47 Jurisdictions (3)	Dollar Amount (1)	State's Benefit as a Percentage of US Average (2)	Rank Among 47 Jurisdictions (3)	Dollar Amount (1)	State's Benefit as a Percentage of US Average (2)	Rank Among 47 Jurisdictions (3)
Alabama	15,473,480	80.1	29	33,004,598	176.4	3	48,478,078	127.5	10
Alaska	27,994,430	144.9	5	36,120,814	193.1	1	64,115,244	168.6	3
Arizona	11,816,587	61.2	37	19,884,062	106.3	22	31,700,649	83.4	28
Arkansas	7,612,546	39.4	46	11,742,660	62.8	44	19,355,206	50.9	46
California	33,183,304	171.8	4	24,221,274	129.5	11	57,404,578	151.0	4
Colorado	25,882,572	134.0	9	21,681,523	115.9	16	47,564,095	125.1	12
Connecticut	18,279,845	94.6	18	15,054,820	80.5	34	33,334,665	87.7	25
Delaware	16,477,182	85.3	22	28,487,424	152.3	6	44,964,606	118.2	14
Dis. of Columbia	8,153,450	42.2	43	6,917,995	37.0	47	15,071,444	39.6	47
Florida	19,430,964	100.6	14	35,814,330	191.5	2	55,245,294	145.3	5
Georgia	13,704,570	70.9	35	14,297,766	76.4	37	28,002,336	73.6	39
Hawaii	23,705,500	122.7	11	18,921,720	101.2	24	42,627,220	112.1	15
Idaho	17,061,273	88.3	19	23,947,173	128.0	13	41,008,445	107.8	17
Illinois	19,226,492	99.5	16	15,716,144	84.0	29	34,942,636	91.9	23
Indiana	6,733,802	34.9	47	13,843,680	74.0	39	20,577,482	54.1	45
Iowa	13,997,955	72.5	34	14,745,394	78.8	35	28,743,349	75.6	36
Kansas	10,980,520	56.8	40	15,289,188	81.7	31	26,269,708	69.1	42
Kentucky	10,347,400	53.6	42	20,012,544	107.0	21	30,359,944	79.8	30
Louisiana	19,267,961	99.7	15	21,604,127	115.5	17	40,872,088	107.5	18
Maine	23,181,666	120.0	12	22,122,130	118.3	14	45,303,796	119.1	13
Maryland	16,097,547	83.3	27	12,552,131	67.1	42	28,649,678	75.3	37
Massachusetts	19,580,574	101.3	13	9,873,504	52.8	46	29,454,078	77.5	33
Michigan	16,422,507	85.0	24	15,078,639	80.6	33	31,501,146	82.8	29
Minnesota	14,390,796	74.5	33	14,449,444	77.2	36	28,840,240	75.8	35
Mississippi	12,457,350	64.5	36	20,686,560	110.6	19	33,143,910	87.2	27
Missouri	16,884,852	87.4	20	16,393,699	87.6	28	33,278,551	87.5	26
Montana	24,672,060	127.7	10	27,170,760	145.3	7	51,842,820	136.3	6
Nebraska	14,762,090	76.4	31	18,784,750	100.4	25	33,546,840	88.2	24
Nevada	40,970,085	212.1	2	25,391,990	135.7	9	66,362,075	174.5	2
New Hampshire	16,723,222	86.6	21	25,726,538	137.5	8	42,449,759	111.6	16
New Jersey	16,401,140	84.9	25	11,552,256	61.8	45	27,953,396	73.5	40
New Mexico	10,899,745	56.4	41	19,408,498	103.8	23	30,308,243	79.7	31
New York	34,165,515	176.8	3	15,467,322	82.7	30	49,632,837	130.5	9
North Carolina	16,393,440	84.9	26	13,154,640	70.3	41	29,548,080	77.7	32
Oklahoma	26,115,168	135.2	8	24,146,530	129.1	12	50,261,698	132.2	7
Oregon	16,446,175	85.1	23	31,169,054	166.6	4	47,615,229	125.2	11
Pennsylvania	27,600,525	142.9	6	22,085,037	118.1	15	49,685,562	130.7	8
Rhode Island	26,966,541	139.6	7	11,787,050	63.0	43	38,753,591	101.9	21
South Carolina	14,450,217	74.8	32	13,190,544	70.5	40	27,640,761	72.7	41
South Dakota	7,887,726	40.8	45	14,184,639	75.8	38	22,072,365	58.0	44
Tennessee	16,061,352	83.1	28	20,031,054	107.1	20	36,092,406	94.9	22
Texas	15,425,924	79.8	30	25,311,162	135.3	10	40,737,086	107.1	19
Utah	8,012,576	41.5	44	15,243,037	81.5	32	23,255,613	61.2	43
Vermont	18,668,922	96.6	17	21,136,275	113.0	18	39,805,197	104.7	20
Virginia	11,565,397	59.9	38	16,808,664	89.9	27	28,374,062	74.6	38
West Virginia	42,980,160	222.5	1	30,731,216	164.3	5	73,711,375	193.8	1
Wisconsin	11,314,048	58.6	39	17,670,174	94.5	26	28,984,222	76.2	34
National Average*	**19,320,301**			**18,706,058**			**38,026,359**		

*Weighted average based on 47 jurisdictions (including the District of Columbia), using 1997 state employment as weights. Data from USL&HW were not used to calculate national averages.
Sources: NCCI, *Annual Statistical Bulletin*, 1986-2001 editions.

Table 3: National Averages of Cost of Benefits Per 100,000 Workers By Policy Year

Panel A: All States with Data for the Particular Policy Year

		Cash Benefits		Medical Benefits		Total Benefits	
Policy Year	No. of States Used To Construct Avg.*	Dollar Amounts	Change from Previous Year	Dollar Amounts	Change from Previous Year	Dollar Amounts	Change from Previous Year
1985	44 (DE, PA, NV)	20,225,149	--	12,834,744	--	33,059,893	--
1986	45 (DE, NV)	21,985,147	8.7%	13,573,684	5.8%	35,558,831	7.6%
1987	44 (NV, PA, TX)	24,076,722	9.5%	14,936,712	10.0%	39,013,434	9.7%
1988	46 (NV)	27,393,892	13.8%	17,945,293	20.1%	45,339,186	16.2%
1989	44 (DC, NV, TX)	31,289,911	14.2%	20,944,330	16.7%	52,234,241	15.2%
1990	46 (NV)	31,374,472	0.3%	23,795,986	13.6%	55,170,457	5.6%
1991	46 (NV)	28,584,224	-8.9%	24,609,640	3.4%	53,193,864	-3.6%
1992	46 (NV)	25,077,618	-12.3%	22,543,962	-8.4%	47,621,580	-10.5%
1993	46 (NV)	22,094,348	-11.9%	20,713,872	-8.1%	42,808,220	-10.1%
1994	46 (NV)	21,107,038	-4.5%	20,530,511	-0.9%	41,637,548	-2.7%
1995	46 (NV)	19,432,675	-7.9%	18,313,712	-10.8%	37,746,388	-9.3%
1996	47	19,642,719	1.1%	18,822,046	2.8%	38,464,765	1.9%
1997	47	19,320,301	-1.6%	18,706,058	-0.6%	38,026,359	-1.1%

Panel B: Forty-Two States with Data for Policy Years 1985 - 1997

		Cash Benefits		Medical Benefits		Total Benefits	
Policy Year	No. of States Used To Construct Avg.*	Dollar Amounts	Change from Previous Year	Dollar Amounts	Change from Previous Year	Dollar Amounts	Change from Previous Year
1985	42	20,022,384	--	12,511,620	--	32,534,004	--
1986	42	21,361,970	6.7%	12,981,252	3.8%	34,343,222	5.6%
1987	42	24,183,609	13.2%	14,990,089	15.5%	39,173,697	14.1%
1988	42	26,972,235	11.5%	17,359,403	15.8%	44,331,638	13.2%
1989	42	30,535,180	13.2%	20,255,039	16.7%	50,790,218	14.6%
1990	42	31,006,668	1.5%	23,057,924	13.8%	54,064,593	6.4%
1991	42	28,479,229	-8.2%	23,313,288	1.1%	51,792,518	-4.2%
1992	42	24,801,038	-12.9%	21,785,272	-6.6%	46,586,310	-10.1%
1993	42	21,939,307	-11.5%	20,278,052	-6.9%	42,217,359	-9.4%
1994	42	20,930,754	-4.6%	19,949,667	-1.6%	40,880,421	-3.2%
1995	42	19,234,172	-8.1%	17,444,275	-12.6%	36,678,446	-10.3%
1996	42	19,540,782	1.6%	18,271,622	4.7%	37,812,404	3.1%
1997	42	19,092,251	-2.3%	17,918,652	-1.9%	37,010,904	-2.1%

* Maximum number of states is 47, including the District of Columbia. States missing from all years are four states with exclusive state funds, namely, North Dakota, Ohio, Washington, and Wyoming. States missing for a particular year in Panel A are shown in parentheses. In addition, the USL&HW is excluded from all calculations of National Averages.

**The states excluded from Panel B are the four states with exclusive state funds that are excluded from Panel A plus Delaware, the District of Columbia, Nevada, Pennsylvania, and Texas.

Table 4 - National Averages of Benefits Paid per 100,000 Workers by Year

		Cash Benefits				Medical Benefits				Total Benefits		
Policy Year	No. of States Used To Construct Avg.*	Benefits in Current Dollars (1)	CPI (2)	Benefits in 1982-84 Dollars (3)	Change from Previous Year (4)	Benefits in Current Dollars (5)	CPI (6)	Benefits in 1982-84 Dollars (7)	Change from Previous Year (8)	Benefits in Current Dollars (9)	Benefits in 1982-84 Dollars (10)	Change from Previous Year (11)
1985	42	20,022,384	107.2	18,677,597	--	12,511,620	113.5	11,023,454	--	32,534,004	29,701,051	--
1986	42	21,361,970	108.8	19,634,164	5.1%	12,981,252	122.0	10,640,370	-3.5%	34,343,222	30,274,534	1.9%
1987	42	24,183,609	112.6	21,477,450	9.4%	14,990,089	130.1	11,521,975	8.3%	39,173,697	32,999,425	9.0%
1988	42	26,972,235	117.0	23,053,192	7.3%	17,359,403	138.6	12,524,822	8.7%	44,331,638	35,578,014	7.8%
1989	42	30,535,180	122.4	24,947,042	8.2%	20,255,039	149.3	13,566,670	8.3%	50,790,218	38,513,713	8.3%
1990	42	31,006,668	128.8	24,073,500	-3.5%	23,057,924	162.8	14,163,344	4.4%	54,064,593	38,236,844	-0.7%
1991	42	28,479,229	133.8	21,284,925	-11.6%	21,313,288	177.0	12,041,406	-15.0%	51,792,518	33,326,330	-12.8%
1992	42	24,801,038	137.5	18,037,119	-15.3%	21,785,272	190.1	11,459,901	-4.8%	46,586,310	29,497,020	-11.5%
1993	42	21,939,307	141.2	15,537,753	-13.9%	20,278,052	201.4	10,068,546	-12.1%	42,217,359	25,606,299	-13.2%
1994	42	20,930,754	144.7	14,464,930	-6.9%	19,949,667	211.0	9,454,818	-6.1%	40,880,421	23,919,749	-6.6%
1995	42	19,234,172	148.6	12,943,588	-10.5%	17,444,275	220.5	7,911,236	-16.3%	36,678,446	20,854,824	-12.8%
1996	42	19,540,782	152.8	12,788,470	-1.2%	18,271,622	228.2	8,006,846	1.2%	37,812,404	20,795,316	-0.3%
1997	42	19,092,251	156.3	12,215,132	-4.5%	17,918,652	234.6	7,637,959	-4.6%	37,010,904	19,853,091	-4.5%

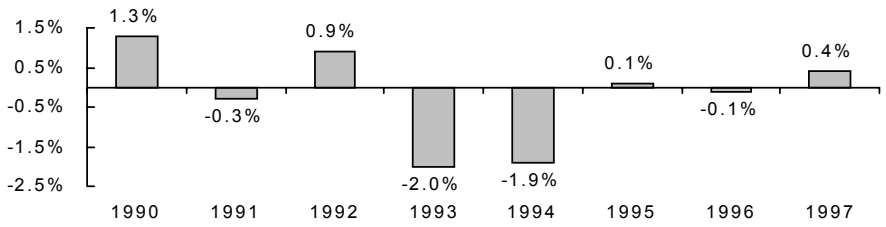
Notes: CPI in column (2) is the Consumer Price Index for all items less medical care with 1982-84 = 100 from Table B-62 of Council of Economic Advisers (2001: 346).
CPI in column (6) is the Consumer Price Index for medical care with 1982-84 = 100 from Table B-60 of Council of Economic Advisers (2001: 343).

fits have declined substantially during most of the 1990s. Between 1990 and 1997, as previously noted, the cumulative decline in total benefits per 100,000 workers in current dollars was 31.5 percent in the 42 jurisdictions with data available for all years. The components of total benefits also experienced declines over this period, albeit at different rates, with cash benefits down 38.4 percent and medical benefits down 22.3 percent measured in current dollars.

The general decline in benefits paid to workers between 1990 and 1997 (the most recent year with data) is surprising in terms of the magnitude and, to a lesser degree, in the timing. The employers' costs of workers' compensation as a percentage of gross earnings (payroll) continued to increase during part of this period.[7] For private industry employers, workers' compensation costs increased from 2.53 percent of payroll in 1990 to 2.99 percent of payroll in 1994, and only then began to decline (down to 2.65 percent of payroll in 1997). Part of the explanation of the different pattern for benefits paid to workers and workers' compensation costs to employers is that profitability of the workers' compensation insurance industry increased rapidly. The overall operating ratio for workers' compensation carriers improved from 108.7 in 1991 to 103.4 in 1992 (with ratios over 100 indicating that carriers were unprofitable even after considering investment income). The overall operating ratio then dropped to 92.4 in 1993, 86.9 in 1994, and 80.2 in 1995, before increasing slightly to 80.3 in 1997 (the last year encompassed by the current article). These results indicate that the workers' compensation insurance industry was highly profitable in those years.[8]

Even if the divergence between 1991 and 1997 in the employers' costs of workers' compensation and the benefits paid to workers can partially be explained by the increasing profitability of workers' compensation carriers, there is still the basic question of why benefits paid to workers dropped so rapidly between 1990 and 1996. One partial explanation is that the workplace appears to have become safer during the 1990s.[9] The number of lost workday cases per 100 full-time workers in the private sector dropped from: 4.1 in 1990; to 3.9 in 1991 and 1992; to 3.8 in 1993 and 1994; to 3.6 in 1995; to 3.4 in 1996; and to 3.3 in 1997.[10] These declines in the occupational injury and illness rates should translate into lower cash and medical benefit payments per 100,000 workers.

Figure C
Countrywide Changes in Statutory Benefits, 1990-1997



Source: NCCI, *Annual Statistical Bulletin*, 2001 Edition. Exhibit 1, p.6.

Another factor that explains at least a part of the decline in cash benefits paid to workers during the 1990s is that the statutory level of cash benefits provided by workers' compensation statutes were scaled back during several years in the 1990s, as shown in Figure C. Indeed, benefits were scaled back in four of the seven years between 1990 and 1997, which is another record that probably cannot be matched since at least the 1930s.

A possible explanation of the decline in the medical benefits paid to workers during the 1990s is the rapid emergence of managed care and the general increase in employer control over provision of medical care for injured workers. While I am skeptical that large reductions in medical expenditures due to managed care can be sustained over an extended period, it is possible that the rapid spread of HMOs, PPOs, et al in workers' compensation programs in the early 1990s drove costs down between 1990 and 1997.[11]

Another possible explanation for the decline in both cash and medical benefits per 100,000 workers that may be of major significance is the tightening of the eligibility standards for workers' compensation benefits that has occurred in a number of jurisdictions during the 1990s. The trend to limit compensability of workers' compensation claims was documented by Spieler and Burton (1998), and the evidence pertaining to the effects of the statutory changes on the benefits and costs of the Oregon workers' compensation program is discussed in a later section. Thus, the reductions in benefits paid to disabled workers may not reflect just the beneficial consequences of safer workplaces and elimination of unnecessary medical treatment resulting from managed care, but may also reflect the shifting of the costs of workplace disability to other public and private sources of cash and medical benefits or to the workers and their families.

This catalogue of the possible causes and consequences of the rapidly declining payments of cash and medical benefits to workers from 1991 to 1997 is meant to be suggestive rather than conclusive. For the sake of workers, employers, and other participants in the workers' compensation program, we need careful studies that will help us better understand these recent developments in benefit payments.

The increase in cash and medical benefits in current dollars in 1996 shown in Table 3 and Figure B stands in sharp contrast to the experience of the previous five years. The data in this article are incurred benefits for injuries that occurred in a particular year. An alternative measure of benefits, namely benefits paid in a particular year, continued to decline until 1997, before increasing in 1998 (Mont, Burton, and Reno 2001). In combination, the alternative measures of benefits paid to workers suggests that the late 1990s may be considerably different than the earlier portion of the decade when workers' compensation benefits were plummeting.

Comparisons of Individual States for 1997

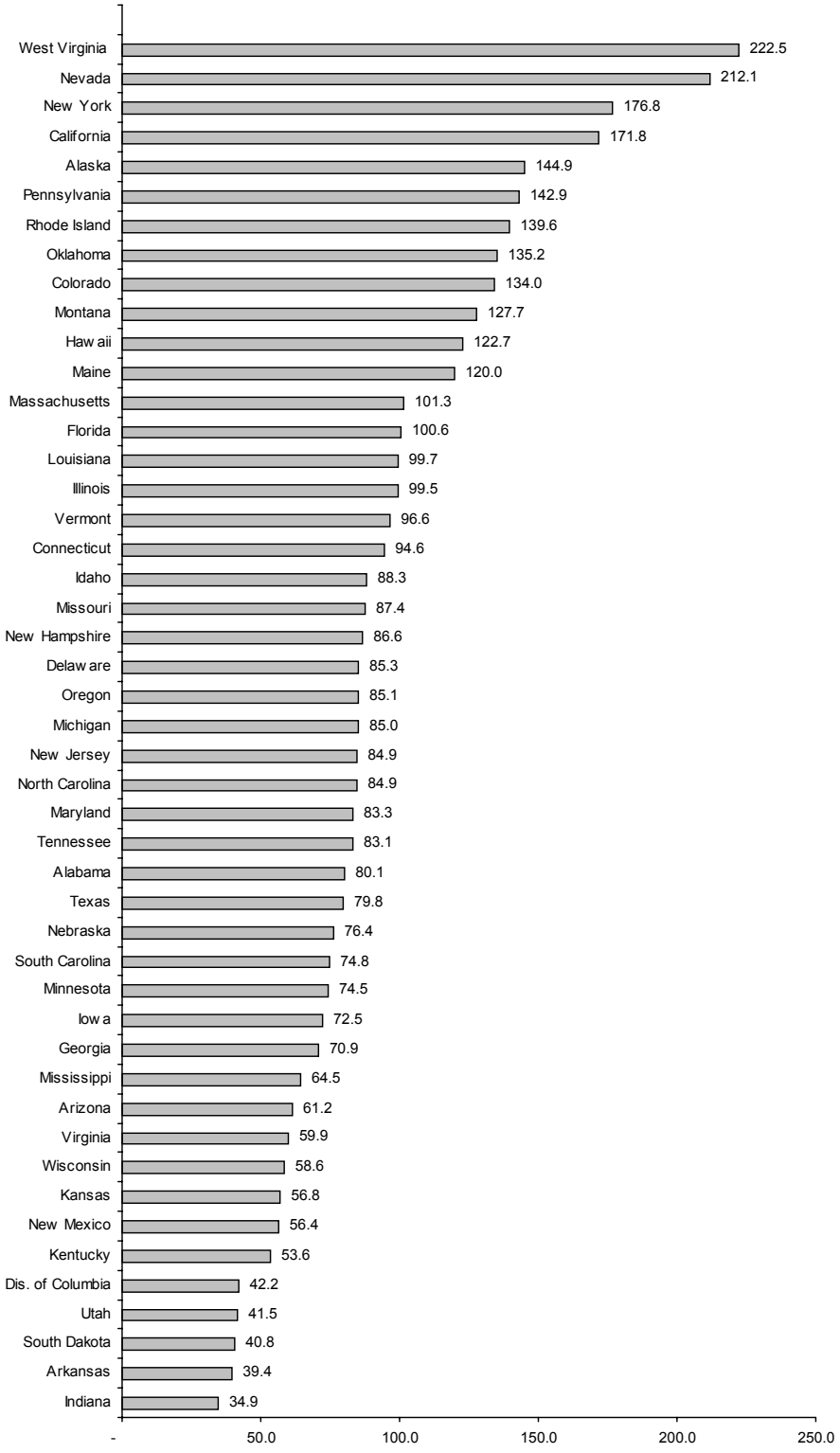
The latest year for which data for all of the 47 workers' compensation programs (other than the LHWCA) encompassed by this study are available is 1997. The data for that year are included in Table 2.97 and were used to construct Figures D through F.

Cash Benefits. Each of the state's cash benefits paid per 100,000 workers as a percentage of the U.S. average payment in 1997 is shown in column (2) of Panel A of Table 2.97. States were ranked in Figure D in terms of how generous or penurious their cash benefits were relative to the national average. We have relied on five classifications of generosity to categorize the states.

Four states had cash benefits that we term "well above average" - workers were paid benefits that were more than 50 percent above the national average. These states ranged from California (where cash benefits were 72 percent higher than the national average) to West Virginia (where cash benefits were more than 123 percent above the national average). In addition six states had cash benefits that were "above average" - workers were paid benefits that were more than 25 percent, but no more than 50 percent, above the national average. These states ranged from Montana (where cash benefits were 28 percent above the national average) to Alaska (where benefits were 45 percent above the national average).

Other states were more penurious in their cash benefits. Five jurisdictions had cash benefits that were "well below average" - workers were paid benefits that were at least 50 percent below the national average. These jurisdictions ranged from the District of Columbia (where benefits were 58 percent below the national average) to Indiana (where benefits were 65 percent below the national average). In addition, eleven states had cash benefits that were "below average" - workers were paid cash benefits that were more than 25 percent, but no more than 50 percent below the national average. These states ranged from South Carolina (where benefits were 25 percent below the national average) to Kentucky (where benefits were 46 percent below the national average).

Figure D - Cash Benefits Paid per 100,000 Covered Workers, State's Benefits as a Percentage of U.S. Average Payments for 1997



Source: Table 2.97, Panel A

There were also 21 states with "average" cash benefits - workers in these states were paid cash benefits that were within 25 percent of the national average. These states ranged from Nebraska (where benefits were 24 percent below the national average) to Hawaii (where benefits were 23 percent above the national average).

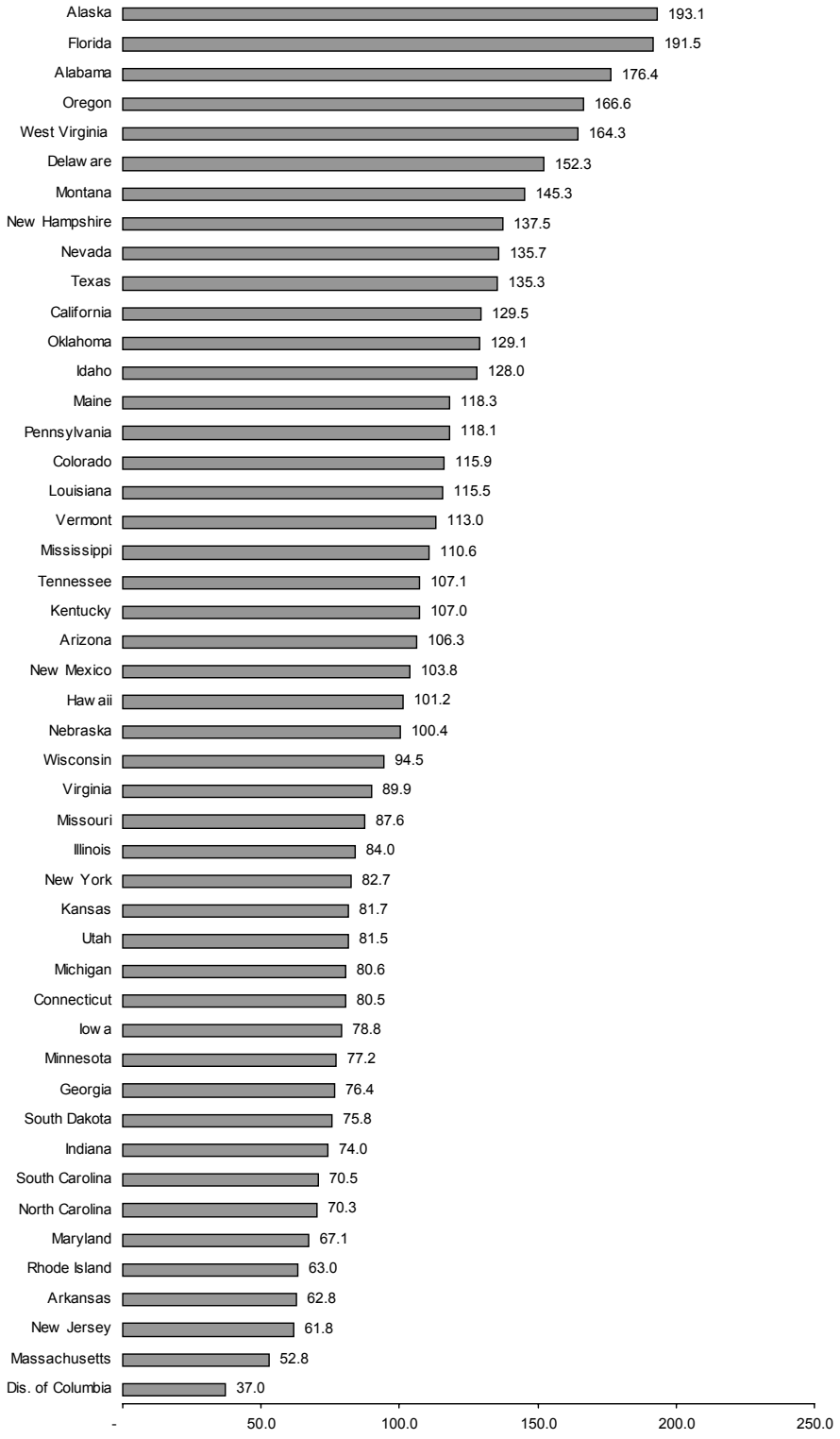
In an earlier article (Burton and Blum 1996), we had used different labels for the categories of generosity of workers' compensation benefits. For example, we had described states with benefits that were at least 25 percent, but no more than 50 percent, above the national average as having "expensive" benefits. States with benefits that were at least 50 percent below the national average were described as having "paltry" benefits. We have decided not to use these labels in this article in part because of the significant swings in the national averages of cash, medical, and total benefits shown in Table 3 and Figure B. A state whose benefits paid per 100,000 workers were stable over the 13 years encompassed by our study could have its benefits described as expensive in the mid-1980s, then paltry in the late 1980s, and then again paltry in the mid-1990s solely because the national averages of benefits paid varied so widely over these years.

We plan to reexamine the criterion for assessing states in terms of the adequacy of their workers' compensation benefits in a subsequent article. In the meantime, the current categories should be understood as only reflecting a state's costs in a particular year relative to the national average that year. We are not saying that below average benefits are necessarily inadequate or that above average benefits are adequate in terms of the protection provided to workers.

Medical Benefits. Each of the state's medical benefits paid per 100,000 workers as a percentage of the U.S. average payment in 1997 is shown in column (2) of Panel B of Table 2.97. States were ranked in Figure E in terms of how generous or penurious their medical benefits were relative to the national average, using the same terms used to classify states for their cash benefits.

Six states had medical benefits that were well above average - workers were paid medical benefits that were more than 50 percent above the national aver-

Figure E - Medical Benefits per 100,000 Covered Workers, State's Benefits as a Percentage of U.S. Average Payments for 1997



Source: Table 2.97, Panel B

age. These states ranged from Delaware (where medical benefits were 52 percent above the national average) to Alaska (where medical benefits were 93 percent above the national average). In addition, seven states had medical benefits that were above average - workers were paid medical benefits that were more than 25 percent, but no more than 50 percent, above the national average. These states ranged from Idaho (where medical benefits were 28 percent above the national average) to Montana (where medical benefits were 45 percent above the national average).

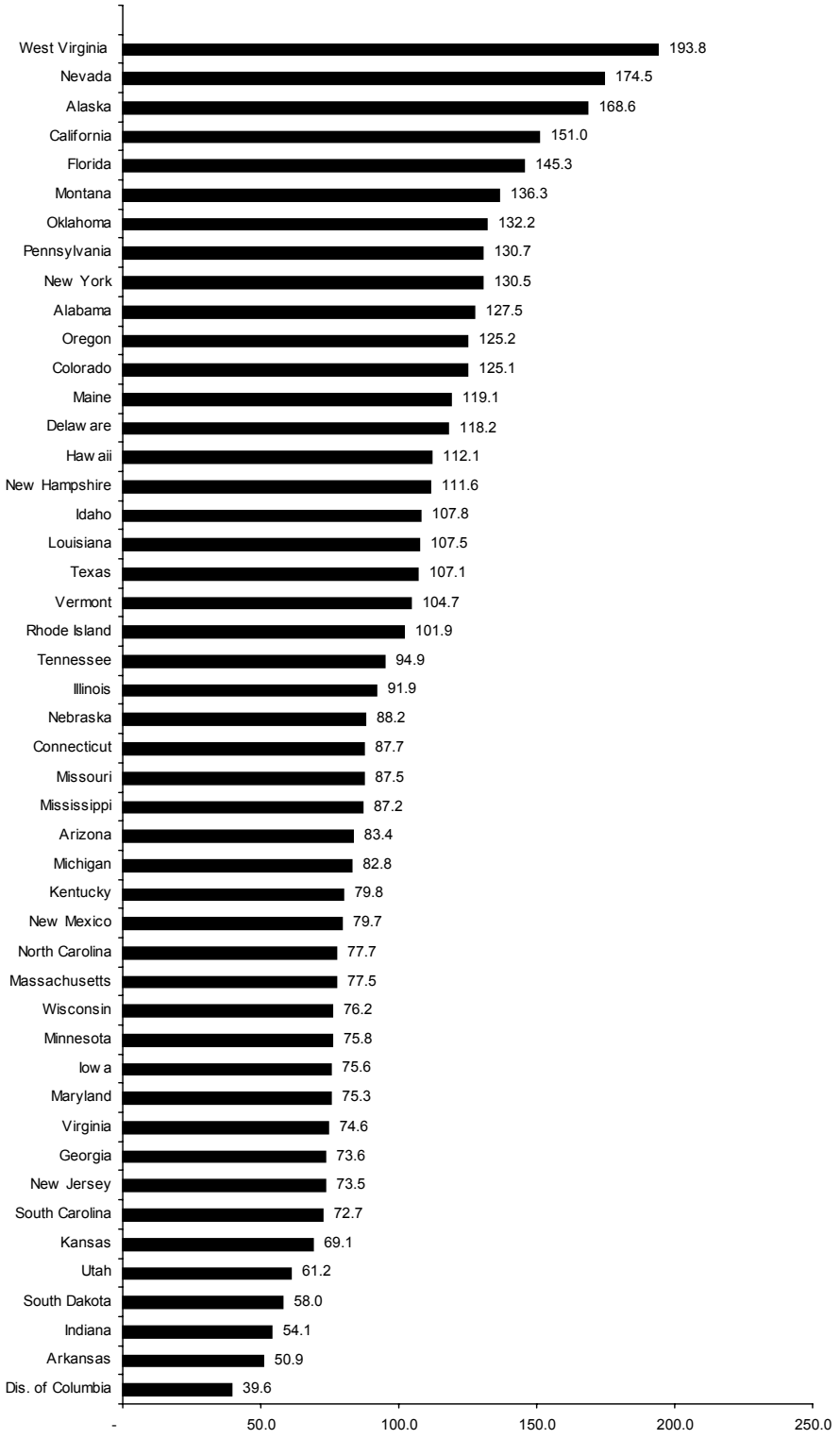
Other states were more penurious in their medical benefits. Only one jurisdiction (the District of Columbia) had medical benefits that were well below average - workers were paid medical benefits that were at least 50 percent below the national average. In addition, eight states had medical benefits that were below average - workers received medical benefits that were more than 25 percent, but no more than 50 percent, below the national average. These states ranged from Indiana (where benefits were 26 percent below the national average) to Massachusetts (where benefits were 47 percent below the national average).

There were also 25 states with average medical benefits - workers in these states received medical benefits that were within 25 percent of the national average. These states ranged from South Dakota (where benefits were 24 percent below the national average) to Maine (where benefits were 18 percent above the national average).

Total Benefits. Finally, states can be compared in terms of their total (cash plus medical) benefits. Each of the state's total benefits paid per 100,000 workers as a percentage of the U.S. average payment in 1997 is shown in column (2) of Panel C of Table 2.97. States were ranked in Figure F in terms of how generous or penurious their total benefits were relative to the national average.

Four states had total benefits that were well above average - workers were paid total benefits that were more than 50 percent above the national average. These states ranged from California (where total benefits were 51 percent above the national average) to West Virginia (where total benefits were 94 percent above the national average). In

Figure F - Total (Cash plus Medical) Benefits Paid per 100,000 Covered Workers, State's Benefits as a Percentage of U.S. Average Payments for 1997



Source: Table 2.97, Panel C

addition, eight states had total benefits that were above average - workers were paid total benefits that were more than 25 percent, but no more than 50 percent, above the national average. These states ranged from Colorado (where total benefits were 25 percent above the national average) to Florida (where total benefits were 45 percent above the national average).

Other states were more penurious in their total benefits. Only one jurisdiction (the District of Columbia) had total benefits that were well below average - workers were paid total benefits that were at least 50 percent below the national average. In addition, nine states had total benefits that were below average - workers were paid total benefits that were more than 25 percent, but no more than 50 percent, below the national average. These states ranged from Virginia (where benefits were somewhat more than 25 percent below the national average) to Arkansas (where benefits were 49 percent below the national average).

There were also 25 states with average total benefits - workers in these states received total benefits that were within 25 percent of the national average. These states ranged from Maryland (where benefits were almost 25 percent below the national average) to Maine (where benefits were 19 percent above the national average).

The comparisons among states in terms of cash benefits, medical benefits, and total benefits paid in 1997 reveals substantial differences among jurisdictions in the generosity or paucity of benefits. Whether those differences are due to factors peculiar to that year, or are due to factors that persist across years, is important for evaluation and policy purposes. The next section thus examines whether states are consistent across years in the relative generosity of benefits paid to workers.

Historical Comparisons of Amounts of Benefits Paid by Different States

Table 2.96 and Table 2.97 in this article, plus comparable unpublished tables covering 1985 to 1995, present a formidable amount of data: costs of cash, medical, and total benefits per 100,000 workers for each state for each year between 1985 and 1997. Some readers (and surely both authors) are likely to find that much data hard to assimilate. Tables 5 through 7 are designed to facilitate that assimilation.

Cash Benefits. Table 5 provides summary information on the relative generosity of cash benefits for each of the 46 states plus the District of Columbia and the LHWCA for the 13 years included in this study. The coding scheme relies on the classifications previously introduced: a state receives a "++" for a particular policy year if its cash benefits are well above average. Likewise, a state receives a "+" for a policy year if its cash benefits are above average; a "--" if its cash benefits are well below average; a "-" if its benefits are below average; a "0" if its benefits are average; and a "N/A" if data are not available for the particular policy period. (The ranges for the various categories are shown in the notes to Tables 5-7.)

The entries in Table 5 permit a quick assessment of how generous the cash benefits have been in each jurisdiction during the 13 years. Some jurisdictions demonstrate a consistent record in terms of benefit generosity through the years. The LHWCA program and West Virginia had well above average benefits (payments that were at least 50 percent above the national average) in all years for which data are available. Illinois and Michigan have had average benefits (payments that were within 25 percent of the national average) in all 13 years. Kansas had below average benefits (payments have been from 25 to 50 percent below the national average) every year. Indiana and the District of Columbia had well below average benefits (payments that were at least 50 percent below the national average) in all 13 years. There was no state that always had above average cash benefits.

Other states showed somewhat less stability in terms of their relative costs of cash benefits over the 13-year period and moved among adjacent categories. Alabama, for example, had cash benefits that were below average for nine years and then increased to the average category for the last four years. Arkansas cash benefits varied were below average for nine years and well below average in the four most recent years. Iowa had below average cash benefits in every year but 1989, when the benefits were well below average. New Hampshire cash benefits fluctuated between average and above average, while Wisconsin cash benefits fluctuated between below average and well below average over the 13 years. Table 5 contains a number of other states in which the cash benefits moved between adjacent categories

More interesting are the states that moved among three categories in terms of the relative generosity of their cash benefits between 1985 and 1997. Nine states – Alaska, Colorado, Hawaii, Louisiana, Massachusetts, New York, Oklahoma, Oregon, and Pennsylvania – varied between average and well above average cash benefits during the 13 years. Of these jurisdictions, only New York had well above average benefits in 1997, and only Alaska, Colorado, Oklahoma, and Pennsylvania had above average benefits in 1997. The other four jurisdictions had average benefits in 1997, obviously well below their relatively high benefits in earlier years. Two states – Missouri and Tennessee – had well below average benefits in 1985, then improved to below average benefits for several years, and then had average benefits for at least the five most recent years.

Two states – Maine and Minnesota – had well above average benefits in 1985 but during 1993 to 1997 had benefits that varied among average and below average. New Mexico began with well above average cash benefits in 1985, but had average or below average cash benefits between 1989 and 1997. Rhode Island had well above average benefits from 1985 to 1992, then skipped over the above average category on the way to below average and average benefits from 1993 to 1996, and then increased to above average benefits in 1997. The movement of these four states thus represented variations across four of the generosity categories.

The experiences in Maine, Minnesota, Rhode Island, and New Mexico clearly demonstrate that significant reductions in cash benefits paid to workers are possible. There were also three states – New York, Oklahoma, and Pennsylvania – that began with average benefits in 1985 but that paid well above average cash benefits in at least three of the latest five years in Table 5. These states demonstrate that states can also substantially increase the cash benefits paid to workers.

Medical Benefits. Table 6 provides summary information on the relative generosity of medical benefits for each of the 46 states plus the District of Columbia and the LHWCA for the 13 years included in this study. The entries in Table 6 permit a quick assessment of how generous the medical benefits have been in each jurisdiction during the 13 years.

Some states demonstrate a consistent record in terms of generosity of medical benefits through the years. There were five programs that were in the same category of generosity of medical benefits for all 13 years: two (Georgia and Mississippi) were in the average category every year; one state (New Jersey) was in the below average category every year; one jurisdiction (the District of Columbia) was in the well below average category every year; and one jurisdiction (the LHWCA) was in the well above average category every year for which data are available. There was no state in the above average category all 13 years.

There were a number of states that had relatively stable medical costs over the 13 years, with only movements among adjacent categories of relative generosity. Alaska, for example, moved between above average and well above average medical benefits between 1985 and 1997. Colorado and Idaho are examples of states that moved between average and above average medical benefits during the 13 years. Illinois began with below average benefits and moved to average medical benefits, while Indiana began with well below average medical benefits and moved to below average benefits during the period between 1985 and 1997. There are a number of other states that moved between adjacent categories of relative generosity of medical benefits during the 13 years included in Table 6.

As Table 6 also illustrates, there were 14 states that moved among non-adjacent categories during the 13 years. Twelve states (Alabama, California, Delaware, Hawaii, Louisiana, Maine, Minnesota, Montana, New Mexico, Oregon, Pennsylvania, and West Virginia) varied among the average, above average, and well above average categories between 1985 and 1997. Two states (New York and North Carolina) paid medical benefits that varied among the average, below average, and

Table 5 - Relative Generosity of Cash Benefits in States During 13 Years

	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997
Alabama	-	-	-	-	-	-	-	-	-	0	0	0	0
Alaska	++	++	++	+	+	+	+	+	0	0	+	++	+
Arizona	-	-	0	-	-	0	0	0	0	0	0	-	-
Arkansas	-	-	-	-	-	-	-	-	-	- -	- -	- -	- -
California	+	+	+	0	0	0	+	+	0	0	+	++	++
Colorado	0	++	0	0	++	+	0	0	0	0	0	+	+
Connecticut	0	0	+	+	+	+	+	+	0	0	0	0	0
Delaware	0	0	-	-	-	-	-	-	0	0	0	0	0
Dis. of Columbia	- -	- -	- -	- -	N/A	- -	- -	- -	- -	- -	- -	- -	- -
Florida	0	+	++	++	++	+	0	0	0	0	0	0	0
Georgia	-	-	0	0	-	0	-	-	0	0	0	0	-
Hawaii	0	0	0	0	0	+	++	++	++	++	+	0	0
Idaho	0	0	-	-	-	-	0	0	0	0	0	0	0
Illinois	0	0	0	0	0	0	0	0	0	0	0	0	0
Indiana	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
Iowa	-	-	-	-	- -	-	-	-	-	-	-	-	-
Kansas	-	-	-	-	-	-	-	-	-	-	-	-	-
Kentucky	-	-	-	-	0	0	0	0	0	0	0	-	-
Louisiana	+	+	++	++	0	0	0	0	0	0	0	0	0
Maine	++	++	++	++	++	++	++	++	0	-	0	0	0
Maryland	0	-	-	-	-	-	-	-	0	0	0	0	0
Massachusetts	+	+	++	++	++	++	0	0	0	0	0	0	0
Michigan	0	0	0	0	0	0	0	0	0	0	0	0	0
Minnesota	++	+	+	+	0	+	0	0	0	0	0	0	-
Mississippi	- -	-	-	-	-	-	-	-	-	-	-	-	-
Missouri	- -	-	-	-	-	-	-	-	0	0	0	0	0
Montana	++	++	++	+	++	++	++	++	+	++	++	+	+
Nebraska	- -	- -	- -	- -	-	-	-	-	-	-	-	-	0
Nevada	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	++	++
New Hampshire	0	0	0	+	+	+	+	+	0	0	0	0	0
New Jersey	-	-	-	-	-	-	-	-	0	0	0	0	0
New Mexico	++	+	++	+	0	0	0	0	-	-	-	-	-
New York	0	0	0	0	0	0	+	+	++	++	++	++	++
North Carolina	- -	- -	- -	- -	- -	-	-	-	-	-	-	-	0
Oklahoma	0	0	0	0	0	0	+	+	++	++	++	+	+
Oregon	++	++	++	++	0	0	0	0	0	0	0	0	0
Pennsylvania	0	+	+	+	+	++	+	+	++	++	++	+	+
Rhode Island	++	++	++	++	++	++	++	++	-	0	0	0	+
South Carolina	-	-	-	-	-	-	-	-	-	0	0	-	-
South Dakota	-	-	-	-	-	-	-	-	-	-	0	0	- -
Tennessee	- -	-	-	-	-	-	-	-	0	0	0	0	0
Texas	0	0	N/A	+	N/A	0	0	0	-	-	0	-	0
USLHWCA	N/A	++	++	++	++	++	++	++	++	++	++	++	N/A
Utah	- -	- -	- -	- -	- -	- -	- -	- -	-	-	- -	- -	- -
Vermont	-	-	-	-	-	0	0	0	0	0	0	0	0
Virginia	- -	-	-	-	-	-	-	-	- -	- -	-	-	-
West Virginia	++	++	++	++	++	++	++	++	++	++	++	++	++
Wisconsin	-	-	-	- -	- -	- -	-	-	-	-	-	-	-

Note:			
	++	150.1% or more of National Average	Well Above Average
	+	125.1 - 150.0% of National Average	Above Average
	0	75.0 - 125.0% of National Average	Average
	-	50.0 - 74.9% of National Average	Below Average
	--	49.9% or less of National Average	Well Below Average
	N/A	Data Not Available	

Source: Tables 2.85 - 2.97
(Tables 2.85 - 2.95 are available upon request to subscribers to the *Workers' Compensation Policy Review*.)

Table 6 - Relative Generosity of Medical Benefits in States During 13 Years

	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997
Alabama	0	0	0	+	+	+	+	+	+	+	+	++	++
Alaska	++	++	++	++	++	++	+	+	++	++	++	++	++
Arizona	0	0	0	0	0	0	0	0	+	0	0	0	0
Arkansas	0	0	0	0	+	0	0	0	0	0	0	0	-
California	++	++	++	++	+	++	+	+	0	0	0	0	+
Colorado	0	0	0	0	0	0	0	0	0	+	+	+	0
Connecticut	0	-	-	0	0	0	0	0	0	0	0	0	0
Delaware	N/A	N/A	N/A	0	0	0	0	0	++	+	++	++	++
Dis. of Columbia	- -	- -	- -	- -	N/A	- -	- -	- -	- -	- -	- -	- -	- -
Florida	+	+	+	++	++	++	+	++	++	++	++	++	++
Georgia	0	0	0	0	0	0	0	0	0	0	0	0	0
Hawaii	+	0	0	0	0	+	+	++	++	++	0	0	0
Idaho	0	0	0	0	0	0	0	0	0	0	0	0	+
Illinois	-	-	-	-	-	-	-	0	0	0	0	0	0
Indiana	- -	- -	- -	-	-	-	-	-	-	-	-	-	-
Iowa	-	- -	- -	-	-	-	-	-	-	-	-	-	0
Kansas	-	-	-	-	0	0	0	0	0	-	0	-	0
Kentucky	0	0	0	0	0	0	+	+	+	+	+	0	0
Louisiana	++	++	++	++	++	+	0	0	0	0	0	0	0
Maine	+	0	0	++	+	0	0	0	0	0	0	0	0
Maryland	0	-	-	-	-	-	-	-	0	0	0	-	-
Massachusetts	-	-	-	-	-	-	-	-	-	- -	-	-	-
Michigan	0	0	0	0	0	0	-	-	-	0	0	0	0
Minnesota	++	0	0	0	0	0	0	0	0	0	0	0	0
Mississippi	0	0	0	0	0	0	0	0	0	0	0	0	0
Missouri	-	-	-	-	-	-	0	0	0	0	0	0	0
Montana	+	++	++	+	0	+	+	+	+	++	++	++	+
Nebraska	-	-	-	-	-	-	-	0	-	-	0	0	0
Nevada	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	+	+
New Hampshire	0	0	0	0	0	0	0	0	0	0	+	0	+
New Jersey	-	-	-	-	-	-	-	-	-	-	-	-	-
New Mexico	+	+	+	++	+	++	+	+	0	0	0	0	0
New York	-	- -	- -	- -	- -	-	-	-	-	-	-	0	0
North Carolina	- -	- -	- -	-	-	-	-	-	-	-	0	-	-
Oklahoma	0	0	0	0	0	0	0	+	+	+	0	+	+
Oregon	++	++	++	++	+	0	0	+	+	0	+	++	++
Pennsylvania	N/A	0	0	N/A	++	++	+	+	0	0	0	0	0
Rhode Island	0	0	0	0	0	0	-	- -	- -	- -	0	-	-
South Carolina	-	-	-	- -	-	-	-	-	-	0	-	-	-
South Dakota	-	-	-	-	-	-	0	0	0	0	0	0	0
Tennessee	-	-	-	0	0	0	0	0	0	0	0	0	0
Texas	+	+	+	+	N/A	0	+	0	0	+	+	0	+
USLHWCA	N/A	++	++	++	++	++	++	++	++	++	++	++	N/A
Utah	0	-	-	0	0	0	0	0	0	0	0	0	0
Vermont	-	-	-	-	-	-	0	0	0	0	0	0	0
Virginia	-	0	0	-	0	0	-	0	0	-	0	0	0
West Virginia	+	+	+	0	0	0	0	+	+	+	++	++	++
Wisconsin	-	0	0	-	-	-	0	0	0	0	0	0	0

Note and Source: See Table 5

well below average categories in the years encompassed by Table 6.

The experiences in California, Hawaii, Louisiana, Maine, Minnesota, New Mexico, and Pennsylvania clearly demonstrate that significant reductions in medical benefits paid to workers are possible. There were also two states – New York and North Carolina – that had well below average medical benefits in 1985 or 1986, but that paid average medical benefits in 1995, 1996, or 1997. These states demonstrate that states can also substantially increase the medical benefits paid to workers. Of particular interest are two states (Montana and Oregon) that had well above average medical benefits in 1985 and/or 1986, reduced the relative generosity of their medical benefits to the average category for at least one year in the late 1980s or early 1990s, but had well above average medical benefits again in 1996 and/or 1997. The "solutions" to high medical costs in these states are worth further examination.

Total Benefits. Table 7 provides summary information on the relative generosity of total (cash plus medical) benefits for each of the 46 states plus the District of Columbia and the LHWCA program for the 13 years included in this study. The entries in Table 7 permit a quick assessment of how generous the total benefits have been in each jurisdiction during these 13 years

Some states demonstrate a consistent record in terms of generosity of total benefits through the years. There were four programs that have been in the same category of generosity of total benefits for all 13 years. Two programs (West Virginia and the LWHCA) had well above average total benefits in every year. One state (Michigan) was in the average category every year; and one jurisdiction (the District of Columbia) was in the well below average category every year. There were no states that paid above average total benefits in all 13 years.

A number of states had relatively constant total benefits throughout the 13 years and only moved between adjacent categories of relative generosity. Two states had been in a single category for 1985 to 1996, and only changed in 1997. Alabama was in the average payments category for every year until 1997, when benefit payments were above average. Iowa had below average payments until 1997, when the state moved to the average category. Other states also were only in adjacent categories between 1995 and 1997. Alaska, for example, varied between the above average and well above average categories. Colorado is an example of a state that varied between the average and above average categories over the 13 years.

Arkansas was one of the jurisdictions that had either average or below average total benefits during all the years. Indiana had well below average benefits in 10 years, but paid only below average benefits in three of the most recent four years. There are other jurisdictions that only varied between two adjacent categories of relative generosity of total benefits included in Table 7.

As shown in Table 7, there were 14 states that moved among non-adjacent categories during the 13 years shown. Eight states (California, Florida, Hawaii, Louisiana, Maine, Minnesota, Oklahoma, and Oregon) had total benefits that varied between average and well above average during the 13 years. Of these eight states, only California paid well above average total benefits in 1997. Three states (Delaware, Massachusetts, and New York) had total benefits that varied among the above average, average, and below average categories of generosity during the 13 years, while Utah varied among the average, below average, and well below average categories over the years included in Table 7.

Finally, New Mexico and Rhode Island experienced an exhilarating ride over the 13 years that ranged among four categories of generosity of total benefits: the states started with well above average benefits for most years between 1985 and 1989, dropped to the average category in 1991, and then dropped to the below average category for total benefits for two of the four most recent years

The experiences in New Mexico and Rhode Island, as well as four other jurisdictions (Hawaii, Louisiana, Maine, and Minnesota) that had average benefits in 1997 following well above average benefits in at least one earlier year make clear that significant reductions in total benefits (cash plus medical) provided to injured workers are possible. The fleeting nature of "reform" in Florida is also evident in the data in Table 7. The state began with average total benefits in 1985, achieved well above average total benefits in 1987-1989, cut total benefits to the average category again in 1991, and then re-achieved well above average total benefits in 1994 and 1996.

Are the States Converging or Diverging?

Our casual perusal of the information in Tables 5 to 7 suggests that the differences among states in the costs of workers' compensation benefits paid to workers have narrowed over the 13 years for which we have data. For example, in terms of the data on total benefits (cash plus medical) shown in Table 7, there were eight states with well above average benefits and four jurisdictions with well below average benefits in 1985, while in 1997 there were only four states with well above

Table 7 - Relative Generosity of Total Benefits in States During 13 Years

	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997
Alabama	0	0	0	0	0	0	0	0	0	0	0	0	+
Alaska	++	++	++	+	+	+	+	+	+	+	++	++	++
Arizona	0	0	0	0	0	0	0	0	+	0	0	0	0
Arkansas	0	0	0	0	0	0	0	0	-	-	-	-	-
California	++	+	+	+	+	+	+	0	0	0	0	+	++
Colorado	0	+	0	0	+	+	0	0	0	+	+	+	+
Connecticut	0	0	0	+	+	0	0	0	0	0	0	0	0
Delaware	N/A	N/A	0	0	0	-	0	0	+	0	+	+	0
Dis. of Columbia	- -	- -	- -	- -	N/A	- -	- -	- -	- -	- -	- -	- -	- -
Florida	0	+	++	++	++	+	0	+	+	++	+	++	+
Georgia	0	0	0	0	0	0	-	0	0	0	0	0	-
Hawaii	0	0	0	0	0	+	++	++	++	++	0	0	0
Idaho	0	0	0	-	-	0	0	0	0	0	0	0	0
Illinois	-	0	0	0	0	0	0	0	0	0	0	0	0
Indiana	- -	- -	- -	- -	- -	- -	- -	- -	- -	-	-	- -	-
Iowa	-	-	-	-	-	-	-	-	-	-	-	-	0
Kansas	-	-	-	-	-	-	-	0	0	-	-	-	-
Kentucky	-	-	-	-	0	0	0	0	0	0	0	0	0
Louisiana	+	+	++	++	+	0	0	0	0	0	0	0	0
Maine	++	++	++	++	++	++	++	0	0	0	0	0	0
Maryland	0	-	-	-	-	-	-	-	0	0	0	-	0
Massachusetts	0	0	+	+	+	0	0	0	0	0	0	-	0
Michigan	0	0	0	0	0	0	0	0	0	0	0	0	0
Minnesota	++	0	+	0	0	+	0	0	0	0	0	0	0
Mississippi	-	-	0	0	0	0	0	0	-	0	0	0	0
Missouri	-	-	-	-	-	-	-	-	0	0	0	0	0
Montana	++	++	++	+	++	++	++	+	+	++	++	+	+
Nebraska	- -	-	-	-	-	-	-	-	-	-	0	0	0
Nevada	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	++	++
New Hampshire	0	0	0	+	0	+	+	+	0	0	0	0	0
New Jersey	-	-	-	-	-	-	-	-	-	-	0	-	-
New Mexico	++	+	++	++	0	+	0	0	0	-	0	-	0
New York	0	-	-	-	0	0	0	+	+	+	+	+	+
North Carolina	- -	- -	- -	- -	-	-	-	-	-	-	-	-	0
Oklahoma	0	0	0	0	0	0	0	+	++	++	+	+	+
Oregon	++	++	++	++	0	0	0	+	0	0	0	+	+
Pennsylvania	N/A	+	N/A	N/A	+	++	+	+	+	+	+	+	+
Rhode Island	+	++	++	++	++	++	0	-	-	-	0	-	0
South Carolina	-	-	-	-	-	-	-	-	-	0	-	-	-
South Dakota	-	-	-	-	-	-	0	0	0	0	0	0	-
Tennessee	-	-	-	-	-	-	0	0	0	0	0	0	0
Texas	0	+	N/A	+	N/A	0	0	0	0	0	0	0	0
USLHWCA	N/A	++	++	++	++	++	++	++	++	++	++	++	N/A
Utah	-	- -	- -	- -	-	-	-	0	-	-	0	-	-
Vermont	-	-	-	-	-	0	0	0	0	0	0	0	0
Virginia	-	-	-	-	-	-	-	-	-	-	-	0	-
West Virginia	++	++	++	++	++	++	++	++	++	++	++	++	++
Wisconsin	-	-	-	-	-	-	-	-	0	0	0	0	0

Note and Source: See Table 5

average benefits and one jurisdiction with well below average benefits.

A more rigorous examination of whether the differences among states in the amounts of benefits paid to workers are narrowing over the 13 years for which we have data is presented in Table 8. For each of the years, we have calculated the dispersion among the 42 states for which data are available for all 13 years in each state's costs as a percentage of the national average for cash benefits, for medical benefits, and for total (cash plus medical) benefits. The dispersion is measured by the standard deviation, which is a commonly used statistical measure of the variability of the values of individual observations around the average value (mean) for all observations.

Several patterns revealed in Table 8 are worth mentioning. First, there is a pronounced tendency for the dispersion among states in benefits paid to workers to narrow over the 13 years. Second, this narrowing has occurred for cash benefits, for medical benefits, and for total benefits, although all of the narrowing for medical benefits occurred between 1985 and 1991, and the differences among states in medical benefits has increased to some extent since 1991. Third, there was a greater dispersion among states for cash benefits paid to workers than for medical benefits in most years, although the dispersion for cash benefits and the dispersion for medical benefits were roughly the same in 1996 and 1997.

Table 8 - Dispersion Among Forty-Two States in Benefits Paid Per 100,000 Workers for Years 1985-1997

Standard Deviations for State's Benefits as a Percentage of U.S. Average

Year	Cash Benefits	Medical Benefits	Total Benefits
1985	100.3	51.0	76.9
1986	98.9	48.5	74.2
1987	76.3	42.6	57.7
1988	69.6	41.5	53.2
1989	67.3	33.7	47.8
1990	63.2	31.6	43.0
1991	49.5	31.6	35.1
1992	47.8	33.1	35.6
1993	46.0	34.7	35.7
1994	46.3	37.3	37.4
1995	41.0	35.0	32.0
1996	38.4	38.0	32.0
1997	39.9	37.3	32.5

Note: The 42 states are those included in Panel B of Table 3

Historical Comparisons of Changes in Benefits Paid by Different States

The data in Tables 5 to 7 examine the relative generosity of cash, medical and total benefits paid to workers in 48 jurisdictions plus the LHWCA for each year between 1985 and 1997. In each year, each state's benefits payments are compared to the national average and each state has been classified as well above the national average through well below the national average

One limitation of this approach is that some states consistently have benefit payments that are above the national average for reasons that have little if anything to do with the adequacy of those benefits. Nonetheless, some organizations, typically those representing employers, have criticized these states for having inappropriately high benefits. West Virginia is a prime example of a state where employers have used a measure of benefits similar to that used in this article – namely the data on average paid benefits per covered worker published by the National Academy of Social Insurance – to argue that the benefits were out of line.[12] There are a number of reasons why such an argument is questionable. One important reason is that West Virginia has an above average representation of industries with high injury rates – such as coal mining – that result in substantial losses of earning to workers in the state. Thus, the high benefits paid to West Virginia workers are likely due to the significant amount of earnings losses for the state's workers.

We cannot resolve in this article the issues pertaining to determining the proper way to measure the adequacy of workers' compensation benefits. We can, however, use the data on benefits paid per 100,000 workers to track the changes over time in the amount of benefits within a state, which may help us understand what has happened to the generosity of benefits in each state over the period from 1985 to 1997.

We chose 1990 as the base year for the comparisons because, as shown in Table 3, that was the year in which the national average of total benefits (cash benefits plus medical benefits) peaked.[13] We will use Alabama data to illustrate the entries for the state in Tables 9, 10, and 11. Cash benefits per 100,000 workers were $22,664,207 in Alabama in 1990, and we set that figure equal to the base of 100.0 for Alabama in Table 9. As shown in Table 2.97, the cash benefits per 100,000 workers for Alabama in 1997 were $15,473,480. This means that cash benefits per 100,000 workers in Alabama were 68.3 percent as high in 1997 as they were in 1990, and thus 68.3 is the Alabama entry for 1997 in Table 9.[14]

Medical benefits per 100,000 workers were $32,730,437 in Alabama in 1990, and we set that figure equal to the base of 100.0 for Alabama in Table 10. As shown in Table 2.97, the medical benefits per 100,000 workers for Alabama in 1997 were $33,004,598. This means that medical benefits per 100,000 workers in Alabama were 100.8 percent as high in 1997 as they were in 1990, and thus 100.8 is the Alabama entry for 1997 in Table 10.[15]

Total benefits per 100,000 workers were $55,394,644 in Alabama in 1990, and we set that figure equal to the base of 100.0 for Alabama in Table 11. As shown in Table 2.97, the total benefits per 100,000 workers for Alabama in 1997 were $48,478,078. This means that total benefits per 100,000 workers in Alabama were 87.5 percent as high in 1997 as they were in 1990, and thus 87.5 is the Alabama entry for 1997 in Table 11.[16]

While the Alabama and the national averages of total benefits paid per 100,000 workers peaked in 1990, not surprisingly some states reached their pinnacles of total benefits paid in other years. Thus (as shown in Table 11), three states (Louisiana, Oregon, and Texas) peaked in 1988; five states (Colorado, Connecticut, Florida, Maine, and Massachusetts) peaked in 1989; six states (Idaho, Iowa, Kentucky, Missouri, Tennessee, and Wisconsin) topped out in 1991; seven programs (Hawaii, Indiana, New Jersey, New York, South Dakota, the USLHWCA, and Utah) peaked in 1992; and three jurisdictions (Delaware, Oklahoma, and Vermont) peaked in 1993. Readers interested in a particular state in which total benefits peaked in a year other than 1990 may wish to index that year as 100 and prepare state-specific versions of Tables 9 to 11. We will nonetheless use the current versions of Tables 9 to 11 since they facilitate interstate comparisons.

Changes in Cash Benefits. Table 9 provides information on the amount of cash benefits paid per 100,000 workers by state for the years 1985 to 1997, where each state's amount of cash benefits in 1990 is used as the base year with a value of 100. Using Alabama again as an example, the table indicates that cash benefits paid to workers in the state in 1985 were 53.1 percent of the benefits paid in 1990, and that by 1997, the Alabama cash benefits were 68.3 percent of the benefits paid in the state in 1990. The national average entry in Table 9 indicates that in the 42 states that are used to construct the average, cash benefits in 1985 were 64.6 percent of the amount paid in 1990, and that cash benefits had declined by 1997 to an amount that was 61.6 percent of the 1990 cash benefit payments.

The data in Table 9 are interesting, but the results are hard to comprehend because of the variety of experiences among the various states. Figure G provides an example of how the data on cash benefits per 100,000 workers using each state's payments in 1990 as the base can be analyzed. The figure shows the changes in cash benefits per 100,000 workers for each state between 1990 and 1997, with the states in order of the magnitude of increases or decreases in benefits paid over the period. The results are striking. Only in New York have cash benefits paid to workers increased over these eight years. In all other states cash benefits paid per 100,000 workers declined at least 10 percent. The national average decline in cash benefits paid was 38.4 percent between 1990 and 1997, and 15 states had declines in cash benefits paid per 100,000 workers of at least 50 percent.

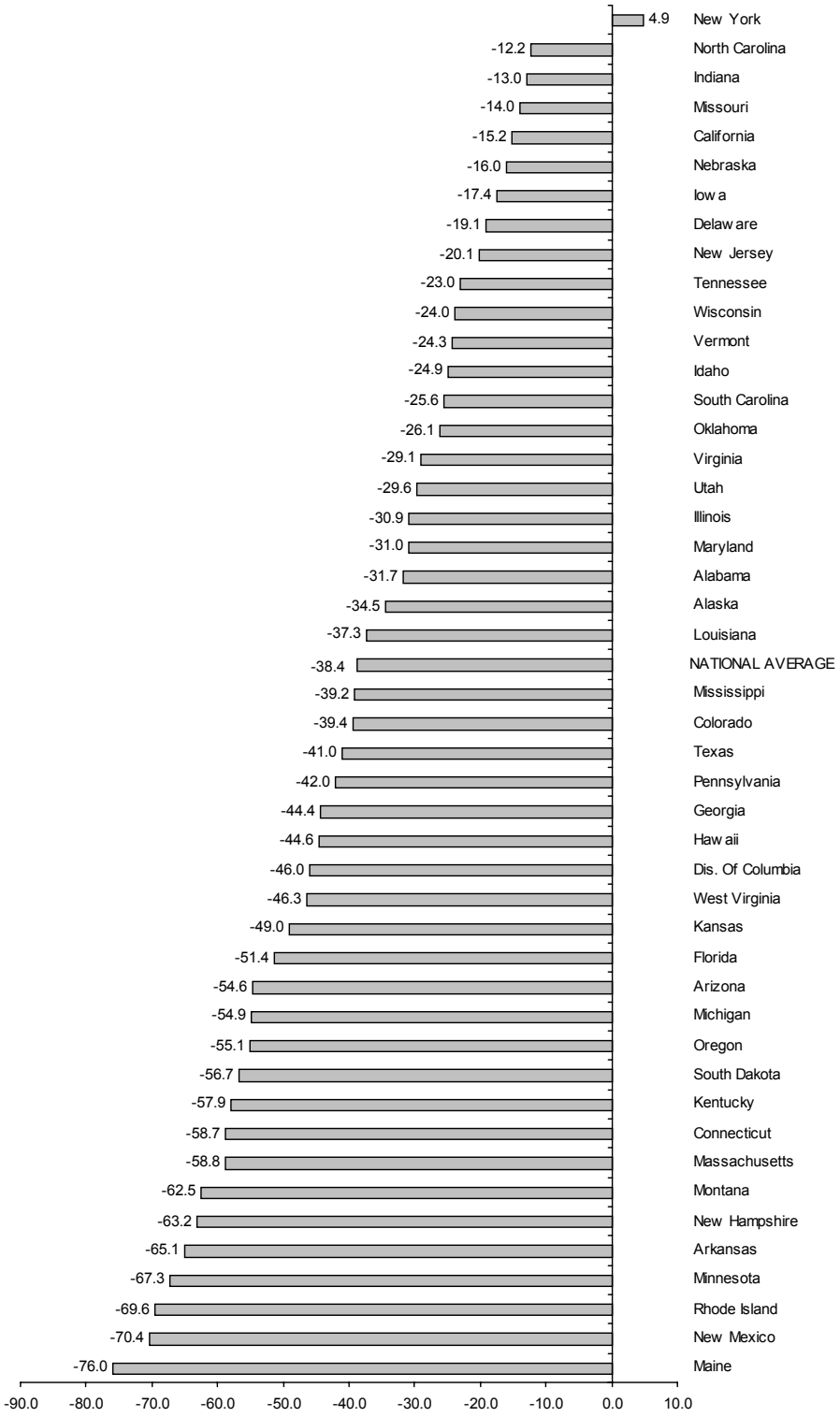
Two states are worth mentioning. In West Virginia, cash benefits per 100,000

Table 9 - Cash (Indemnity) Benefits Paid Per 100,000 Workers by State Using 1990 as Base Year

	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997
Alabama	53.1	63.0	72.2	80.6	92.7	100.0	88.9	79.4	66.2	74.9	77.5	78.6	68.3
Alaska	198.4	161.3	107.7	82.4	93.6	100.0	88.5	71.8	61.5	59.5	66.8	70.5	65.5
Arizona	56.6	57.9	71.0	77.6	88.5	100.0	88.4	84.8	89.2	78.7	65.2	46.9	45.4
Arkansas	58.0	72.5	80.4	84.3	94.5	100.0	87.4	68.3	54.3	45.3	39.5	36.8	34.9
California	76.6	75.9	81.5	83.8	88.4	100.0	96.1	75.5	63.9	66.9	67.5	76.4	84.8
Colorado	55.9	80.6	67.0	68.3	111.0	100.0	64.9	52.0	52.5	55.6	56.5	59.3	60.6
Connecticut	51.4	60.9	77.0	89.9	104.8	100.0	86.6	70.5	46.8	42.1	41.2	45.9	41.3
Delaware	88.7	108.4	82.2	90.7	102.0	100.0	104.0	90.0	105.9	89.2	98.7	100.5	80.9
Dis. of Columbia	59.8	71.8	68.7	80.7	0.0	100.0	87.6	71.8	66.6	62.8	51.2	56.1	54.0
Florida	55.0	74.0	98.0	121.0	122.8	100.0	69.6	63.2	64.0	61.5	51.9	52.0	48.6
Georgia	54.4	63.4	77.6	85.7	89.3	100.0	77.4	78.7	76.5	68.0	64.6	61.1	55.6
Hawaii	55.6	56.6	57.1	66.6	78.7	100.0	121.2	131.5	103.0	81.2	59.2	51.1	55.4
Idaho	90.9	82.7	74.2	71.6	84.6	100.0	104.9	94.7	92.7	81.0	70.9	68.5	75.1
Illinois	57.5	65.8	72.3	81.6	96.6	100.0	93.6	85.8	79.3	73.9	70.7	70.1	69.1
Indiana	52.4	57.6	67.3	86.5	97.5	100.0	97.3	97.5	90.4	86.3	83.1	78.2	87.0
Iowa	70.6	80.9	90.6	82.7	91.8	100.0	91.6	82.6	79.7	70.6	75.5	80.5	82.6
Kansas	60.2	65.9	63.9	75.3	87.7	100.0	93.3	81.7	70.5	58.3	51.7	49.9	51.0
Kentucky	46.7	49.9	54.2	71.6	106.2	100.0	99.5	92.6	89.3	71.0	61.3	48.7	42.1
Louisiana	87.9	99.1	123.9	137.6	122.2	100.0	84.8	71.7	58.5	60.1	64.7	60.3	62.7
Maine	81.6	88.7	94.7	96.3	109.5	100.0	68.4	35.4	18.4	15.5	19.3	22.2	24.0
Maryland	66.9	66.1	73.3	81.5	92.5	100.0	87.8	69.7	71.6	73.6	69.0	64.6	69.0
Massachusetts	57.2	67.6	83.7	102.7	115.4	100.0	69.9	57.0	54.3	45.1	43.5	39.1	41.2
Michigan	57.8	65.0	72.2	79.4	90.2	100.0	88.6	69.2	60.5	57.0	55.7	49.2	45.1
Minnesota	74.4	66.4	81.0	80.0	86.3	100.0	76.1	67.5	49.2	41.1	33.7	33.7	32.7
Mississippi	48.3	58.2	61.0	71.4	90.2	100.0	83.8	77.2	58.5	58.5	58.5	58.9	60.8
Missouri	50.4	58.6	66.7	75.5	87.0	100.0	99.0	91.7	88.5	88.0	88.7	81.0	86.0
Montana	93.9	136.4	58.9	56.7	85.3	100.0	72.4	48.5	42.9	63.9	45.6	41.4	37.5
Nebraska	51.2	59.0	65.9	75.8	93.9	100.0	82.8	79.9	68.7	68.1	74.7	78.8	84.0
New Hampshire	53.4	55.7	65.5	80.9	94.8	100.0	92.5	74.4	58.9	47.0	42.2	35.6	36.8
New Jersey	53.2	61.9	67.3	77.5	95.2	100.0	97.1	98.8	82.0	77.0	84.2	79.0	79.9
New Mexico	105.0	89.0	104.5	111.1	94.3	100.0	70.1	44.1	38.0	31.9	32.5	27.0	29.6
New York	56.0	53.1	59.9	74.5	99.6	100.0	129.7	142.4	125.5	120.5	125.1	121.8	104.9
North Carolina	36.4	39.3	49.9	59.5	78.5	100.0	97.6	84.8	77.6	73.6	72.6	72.7	87.8
Oklahoma	60.3	60.3	72.8	79.8	87.0	100.0	106.9	108.8	111.6	111.6	86.9	77.2	73.9
Oregon	110.3	118.7	122.8	118.1	104.6	100.0	78.2	79.8	63.5	55.7	47.8	44.5	44.9
Pennsylvania	45.0	59.6	74.0	74.5	94.5	100.0	86.3	88.7	76.0	73.4	64.3	56.7	58.0
Rhode Island	41.5	56.0	64.2	78.1	93.8	100.0	51.2	20.9	18.3	17.9	27.1	18.9	30.4
South Carolina	61.5	74.0	85.3	88.8	97.3	100.0	85.7	67.6	74.3	86.2	76.3	71.5	74.4
South Dakota	72.6	81.0	70.2	75.1	93.1	100.0	115.8	108.8	90.5	84.7	91.7	84.4	43.3
Tennessee	45.2	53.1	59.8	76.9	89.1	100.0	102.1	93.3	88.2	86.6	83.2	78.1	77.0
Texas	88.5	98.3	0.0	131.4	0.0	100.0	86.8	69.1	58.7	58.1	58.8	55.4	59.0
USLHWCA	0.0	87.2	101.4	114.9	76.0	100.0	74.0	92.6	83.8	92.2	78.4	76.0	0.0
Utah	64.6	63.2	65.6	71.6	88.0	100.0	116.0	134.6	108.2	107.4	74.8	64.4	70.4
Vermont	45.7	50.4	59.9	71.4	78.1	100.0	103.1	85.9	93.4	78.5	74.9	79.9	75.7
Virginia	60.0	71.1	77.6	84.0	99.8	100.0	87.8	76.1	66.1	64.3	64.5	74.0	70.9
West Virginia	107.4	106.6	104.6	101.2	101.5	100.0	95.1	86.9	76.9	69.9	57.1	50.1	53.7
Wisconsin	94.0	99.9	89.0	88.6	92.0	100.0	107.6	98.1	89.3	81.7	77.9	76.4	76.0
National Average*	**64.6**	**68.9**	**78.0**	**87.0**	**98.5**	**100.0**	**91.8**	**80.0**	**70.8**	**67.5**	**62.0**	**63.0**	**61.6**

Note: National Average based on data in Table 3, Panel B.

Figure G - Change in Cash Benefits Paid per 100,000 Workers by State From 1990-1997



Source: Table 9

workers declined by 46.3 percent, which is a much more rapid decline that the national average decline of 38.4 percent. The employers of West Virginia who are concerned about the adequacy of protection provided to injured workers in the state will surely want to express their concerns to state legislators about this precipitous decline.

Oregon is also an interesting state, where cash benefits paid per 100,000 workers declined 55.1 percent between 1990 and 1997. As indicated in Table 9, Oregon cash benefits per 100,000 peaked in 1987 at an amount that was 122.8 percent of the benefit payments in 1990, so the cumulative decline in cash benefits paid per 100,000 workers between 1987 and 1997 was over 63 percent. In a recent article, Thomason and Burton (2001) examined the effects of changes in the Oregon workers' compensation statue on employees' benefits and employers' costs. These statutory changes included SB 1997 enacted in 1990, which *inter alia* provided that claims were compensable under the Oregon workers' compensation statute only if work was the "major cause" of the permanent disability or need for treatment. This provision is generally referred to as the major contributing cause (MCC) requirement. The 1995 Oregon legislature enacted SB 369, which *inter alia* amended the workers' compensation statute to provide further restrictions on claims that involved a "combined condition." In our article, we provided a range of estimates concerning the effects of these laws. One of our conclusions (Thomason and Burton 2001: 21) was:

> Our judgment based on the evidence we have developed is that by the mid-1990s the Oregon legislation had reduced costs and benefits by about 20% to 25% below what the amounts would have been if SB 1197 and SB 369 had not been enacted.

The Thomason and Burton (2001) study suggests that a substantial proportion of the reduction in cash benefits paid to Oregon workers between 1990 and 1997 shown in Figure G is a result of legislative changes that limited the compensability of certain work-related injuries. Although we do not have similar direct evidence concerning the

source of the decline of cash benefits paid to workers in other states during the 1990s, as previously mentioned, there were a number of states that also constricted the eligibility rules for the workers' compensation programs during the 1990s as documented by Spieler and Burton (1998).[17] We suspect that the drop in cash benefits paid to workers is associated with the tightening eligibility rules in many of the states showing substantial declines in paid benefits in Figure G.

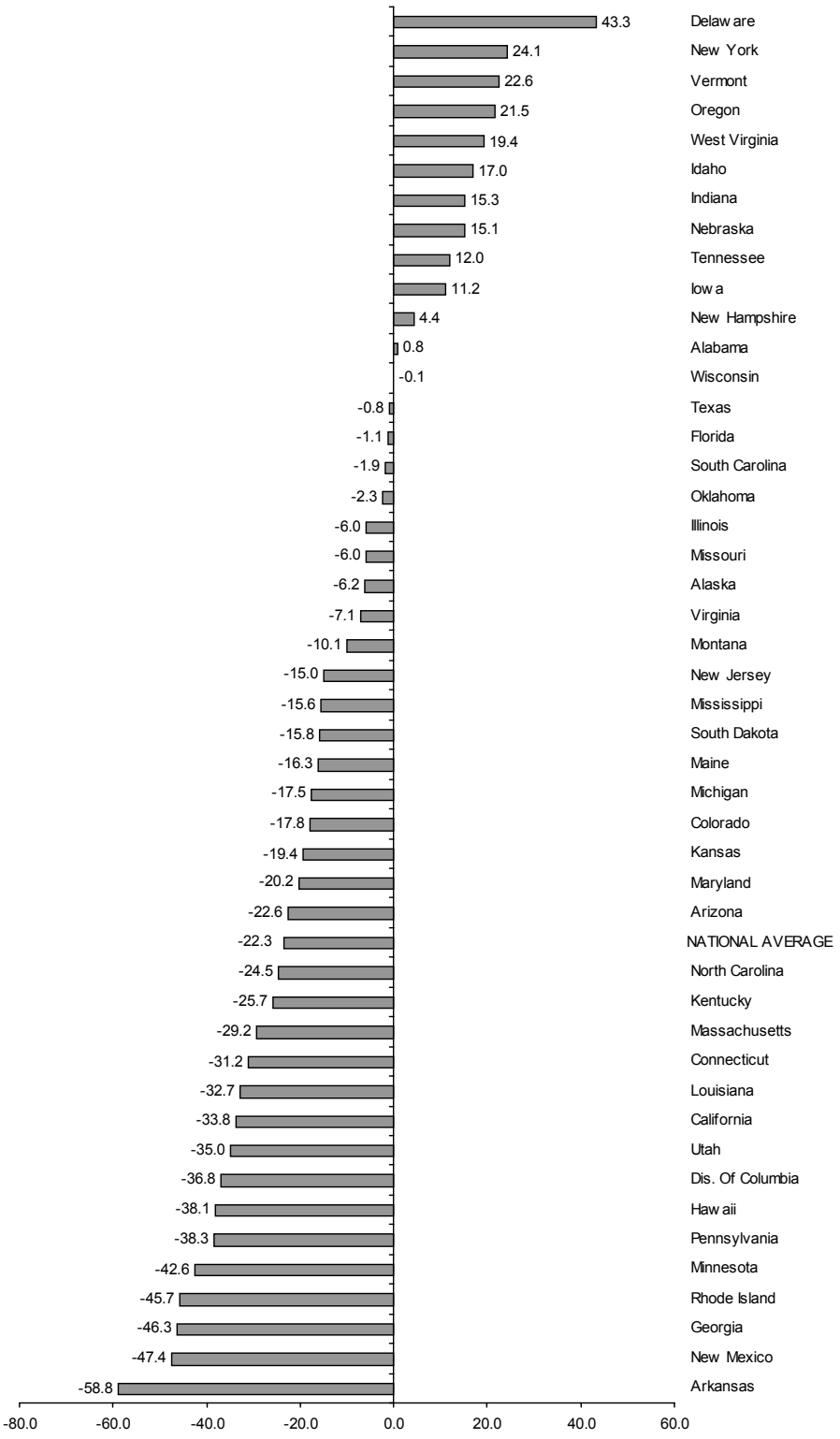
Changes in Medical Benefits. Table 10 provides information on the amount of medical benefits paid per 100,000 workers by state for the years 1985 to 1997, where each state's amount of medical benefits in 1990 is used as the base year with a value of 100. Using Alabama again as an example, the table indicates that medical benefits paid to workers in the state in 1985 were 41.6 percent of the medical benefits paid in 1990, and that by 1997, the Alabama medical benefits were 100.8 percent of the medical benefits paid in the state in 1990. The national average entry in Table 10 indicates that in the 42 states that are used to construct the average, medical benefits in 1985 were 54.3 percent of the medical benefits paid in 1990, and that medical benefits had declined by 1997 to an amount that was 77.7 percent of the 1990 medical benefit payments.

Table 10 - Medical Benefits Paid Per 100,000 Workers by State Using 1990 as Base Year

	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997
Alabama	41.6	47.2	56.1	71.4	90.3	100.0	103.2	89.4	82.9	83.5	81.8	89.8	100.8
Alaska	92.1	87.2	75.2	81.6	95.5	100.0	87.7	79.6	81.0	80.8	89.5	96.4	93.8
Arizona	58.2	65.3	80.9	83.3	91.5	100.0	104.9	104.7	119.2	99.8	75.5	82.5	77.4
Arkansas	44.4	50.8	49.7	69.8	97.2	100.0	102.1	85.5	69.7	61.4	57.4	50.1	41.2
California	60.6	62.2	68.8	77.3	84.2	100.0	100.7	77.9	62.2	59.7	55.2	60.4	66.2
Colorado	44.2	55.0	47.9	57.4	91.7	100.0	95.7	88.5	91.8	111.7	93.4	92.7	82.2
Connecticut	45.1	38.9	66.2	77.7	93.5	100.0	108.8	113.8	82.4	76.4	77.7	74.3	68.8
Delaware	0.0	0.0	74.5	93.7	102.6	100.0	108.6	137.7	162.1	136.9	160.7	162.3	143.3
Dis. of Columbia	56.9	50.3	38.4	68.4	0.0	100.0	88.0	68.6	69.9	72.5	67.8	76.2	63.2
Florida	45.6	53.7	63.2	80.5	92.7	100.0	94.6	99.3	104.5	110.2	93.0	108.4	98.9
Georgia	47.8	54.0	52.0	71.6	82.0	100.0	74.7	79.5	79.9	77.0	68.6	55.8	53.7
Hawaii	52.7	52.2	40.0	52.7	78.7	100.0	116.5	136.4	132.1	106.8	68.6	65.2	61.9
Idaho	65.1	62.4	70.0	73.8	85.1	100.0	108.5	101.5	105.0	94.2	103.1	96.8	117.0
Illinois	47.2	55.9	62.1	71.6	87.1	100.0	102.8	104.0	101.5	100.0	93.6	92.9	94.0
Indiana	48.3	53.6	63.0	81.0	91.1	100.0	105.4	115.0	116.0	117.8	110.0	109.5	115.3
Iowa	49.5	49.0	76.3	79.3	92.9	100.0	112.1	109.9	108.9	103.8	102.5	103.1	111.2
Kansas	40.8	38.7	55.2	56.3	87.9	100.0	97.4	97.0	92.6	74.7	80.1	73.0	80.6
Kentucky	42.5	45.8	52.7	58.4	95.8	100.0	118.2	116.5	113.5	96.4	95.5	86.9	74.3
Louisiana	62.4	70.6	81.9	94.1	101.5	100.0	95.4	87.7	71.2	66.4	66.3	61.2	67.3
Maine	61.1	55.8	77.4	102.7	107.2	100.0	94.7	83.8	80.7	63.9	52.3	75.2	83.7
Maryland	67.3	60.7	70.7	75.4	88.2	100.0	92.9	81.8	101.9	99.0	91.3	79.1	79.8
Massachusetts	55.3	65.8	76.4	93.2	103.1	100.0	93.1	88.6	87.7	73.1	72.3	69.7	70.8
Michigan	66.3	72.4	77.2	86.6	94.8	100.0	98.2	90.4	84.4	86.9	90.5	84.7	82.5
Minnesota	77.6	60.6	69.6	68.6	83.6	100.0	88.9	86.5	69.6	69.1	58.8	59.2	57.4
Mississippi	52.8	56.6	72.8	89.7	98.9	100.0	92.8	113.2	80.7	80.7	82.6	76.0	84.4
Missouri	42.0	48.6	60.1	72.6	82.5	100.0	109.8	99.8	106.7	98.6	100.6	90.2	94.0
Montana	60.0	69.3	74.2	77.6	82.0	100.0	120.2	106.6	95.9	143.7	119.4	94.3	89.9
Nebraska	44.5	48.8	56.3	58.2	90.0	100.0	102.8	109.5	83.6	89.2	101.2	108.0	115.1
New Hampshire	51.8	45.3	64.0	82.7	90.4	100.0	105.1	105.5	100.1	95.4	99.2	90.6	104.4
New Jersey	54.2	61.1	69.2	80.7	95.9	100.0	102.7	105.0	98.6	89.0	95.0	83.4	85.0
New Mexico	51.5	52.9	73.8	87.4	82.4	100.0	99.5	77.5	54.6	50.1	50.4	49.6	52.6
New York	62.7	52.9	59.4	64.6	74.6	100.0	113.9	116.3	114.4	113.2	108.5	113.5	124.1
North Carolina	33.4	36.1	44.9	60.3	87.9	100.0	97.9	89.4	79.3	86.1	84.2	75.4	75.5
Oklahoma	51.9	51.7	62.4	60.9	76.3	100.0	109.3	116.8	121.6	115.9	89.5	95.6	97.7
Oregon	118.6	122.3	128.1	135.0	103.6	100.0	90.2	126.1	108.6	99.8	101.4	141.0	121.5
Pennsylvania	0.0	46.4	0.0	0.0	91.7	100.0	90.3	80.7	70.3	62.2	61.8	61.7	61.7
Rhode Island	46.0	56.9	43.0	83.9	94.1	100.0	78.0	49.9	46.4	41.5	68.4	47.6	54.3
South Carolina	53.0	62.7	77.2	64.4	100.5	100.0	92.6	101.5	95.6	117.1	97.0	103.2	98.1
South Dakota	48.6	50.7	62.5	70.8	90.5	100.0	144.4	155.6	149.8	125.2	130.2	115.6	84.2
Tennessee	40.7	53.0	58.3	75.3	93.3	100.0	109.9	107.1	109.2	101.5	106.7	99.0	112.0
Texas	66.1	74.6	0.0	103.0	0.0	100.0	143.3	109.5	89.9	104.4	101.8	87.8	99.2
USLHWCA	0.0	50.1	88.0	98.6	76.2	100.0	82.8	163.6	157.2	123.0	111.5	76.6	0.0
Utah	44.6	37.3	46.9	59.3	77.1	100.0	107.7	101.2	73.6	75.0	94.2	72.9	65.0
Vermont	39.0	53.8	58.0	55.5	77.1	100.0	113.1	108.0	146.0	111.5	93.6	105.0	122.6
Virginia	46.6	59.1	61.2	73.3	98.0	100.0	97.0	97.0	90.2	82.7	81.6	95.5	92.9
West Virginia	74.6	78.7	80.9	86.7	95.3	100.0	108.3	116.8	115.9	115.7	114.5	113.1	119.4
Wisconsin	53.8	58.1	62.1	72.7	83.5	100.0	114.5	108.6	114.6	124.3	117.9	100.8	99.9
National Average*	**54.3**	**56.3**	**65.0**	**75.3**	**87.8**	**100.0**	**101.1**	**94.5**	**87.9**	**86.5**	**75.7**	**79.2**	**77.7**

Note: National Average based on data in Table 3, Panel B.

Figure H - Change in Medical Benefits Paid per 100,000 Workers by State From 1990-1997



Source: Table 10

The data in Table 10 are fascinating, but the results are hard to comprehend because of the variety of experiences among the various states. Figure H provides an example of how the data on medical benefits per 100,000 workers using each state's payments in 1990 as the base can be analyzed. The figure shows the changes in medical benefits per 100,000 workers for each state between 1990 and 1997, with the states in order of the magnitude of increases or decreases in benefits paid over the period. The results are interesting. There are 12 states in which medical benefits paid to workers increased over these eight years. In all other states medical benefits paid per 100,000 workers declined, and in 25 states, the decline in paid medical benefits was at least 10 percent. The national average decline in medical benefits paid was 22.3 percent between 1990 and 1997. An interesting challenge is whether the differences in the magnitudes of the increases or decreases in paid medical benefits can be related to the inter-jurisdictional differences in the types and timing of reforms of the health care delivery system in various jurisdictions. These reforms, such as the introduction of HMOs and the restrictions on the employee's choice of treating physician, are discussed in Burton (1997).

Changes in Total Benefits. Table 11 provides information on the amount of total (cash plus) medical benefits paid per 100,000 workers by state for the years 1985 to 1997, where each state's amount of total benefits in 1990 is used as the base year with a value of 100. Using Alabama again as an example, the table indicates that total benefits paid to workers in the state in 1985 were 46.3 percent of the total benefits paid in 1990, and that by 1997, the Alabama total benefits were 87.5 percent of the total benefits paid in the state in 1990. The national average entry in Table 11 indicates that in the 42 states that are used to construct the average, total benefits in 1985 were 60.2 percent of the total benefits paid in 1990, and that total benefits had declined by 1997 to an amount that was 68.5 percent of the 1990 total benefit payments.

The data in Table 11 are thought-provoking, but the results are hard to comprehend because of the variety of experiences among the various states. Figure I provides an example of how the data on total benefits per 100,000 workers using each state's payments in 1990 as the base can be analyzed. The figure shows the changes in total benefits per 100,000 workers for each state between 1990 and 1997, with the states in order of the magnitude of increases or decreases in benefits paid over the period. The results indicate that in only three states – Delaware, New York, and Indiana – did total benefits paid to workers increased over these eight years. In all other states total benefits paid per 100,000 workers declined, and in 30 states (including West Virginia), the decline in paid total benefits was at least 20 percent. The national average decline in total benefits paid was 31.5 percent between 1990 and 1997.

Conclusions

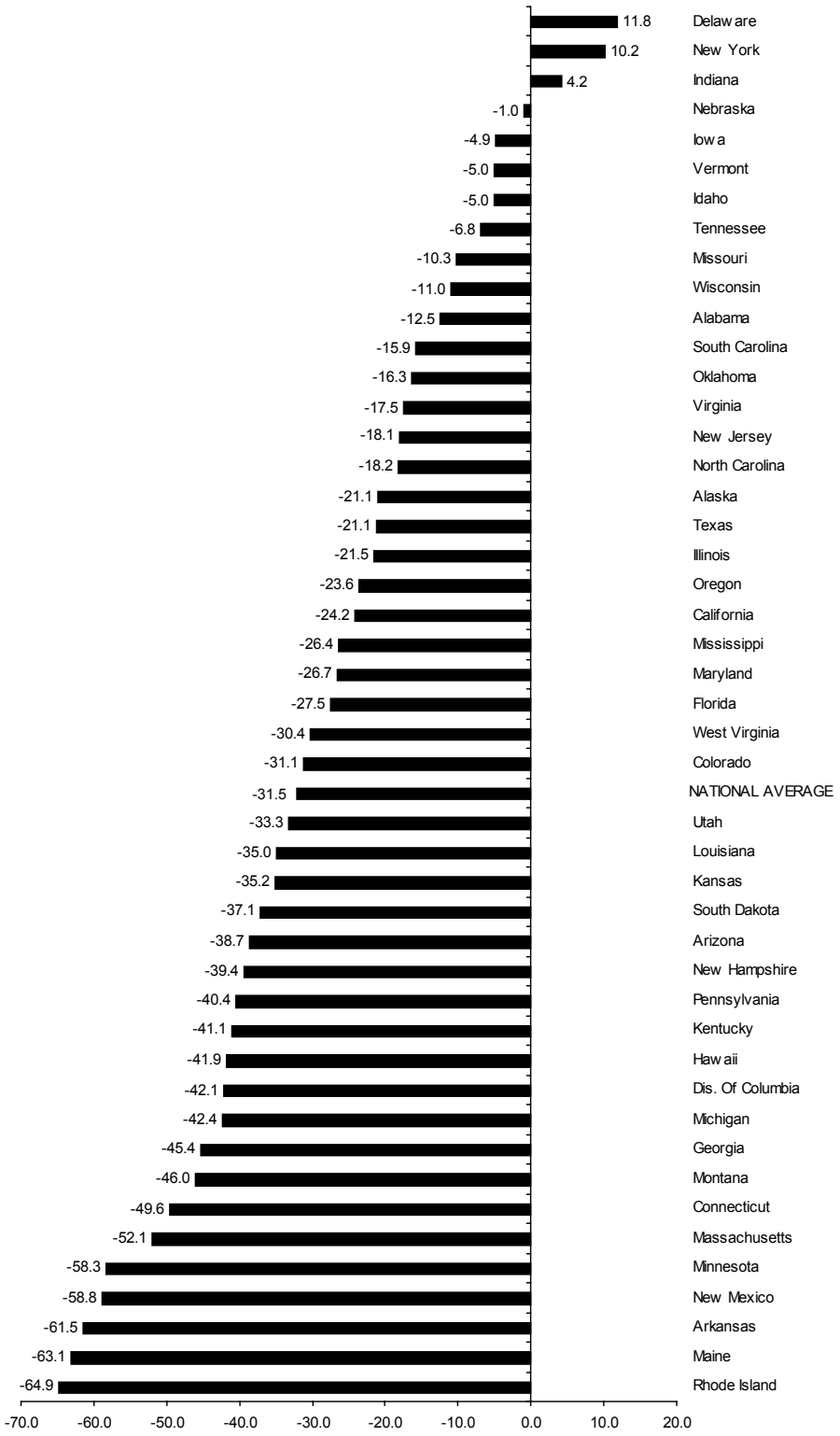
Three conclusions warrant emphasis. First, the national averages of workers' compensation benefits paid to workers have experienced dramatic swings in the last 13 years with available data. For example, cash benefits per 100,000 workers averaged increases of almost 12 percent annually for the four years from 1986 through 1989, but then averaged annual decreases of eight

Table 11 - Total Benefits Paid Per 100,000 Workers by State Using 1990 as Base Year

	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997
Alabama	46.3	53.7	62.7	75.2	91.3	100.0	97.4	85.3	76.1	80.0	80.1	85.2	87.5
Alaska	148.0	126.1	92.3	82.0	94.5	100.0	88.1	75.5	70.7	69.6	77.5	82.8	78.9
Arizona	57.4	61.6	75.9	80.5	90.0	100.0	96.6	94.7	104.1	89.2	70.4	64.6	61.3
Arkansas	50.3	60.2	63.0	76.1	96.0	100.0	95.7	78.0	63.0	54.4	49.6	44.3	38.5
California	68.9	69.2	75.4	80.6	86.3	100.0	98.4	76.6	63.0	63.4	61.6	68.7	75.8
Colorado	51.4	70.8	59.7	64.2	103.6	100.0	76.7	65.9	67.5	77.0	70.6	72.0	68.9
Connecticut	49.3	53.6	73.4	85.9	101.1	100.0	93.9	84.8	58.6	53.5	53.3	55.3	50.4
Delaware	0.0	0.0	78.4	92.2	102.3	100.0	106.2	113.6	133.7	112.7	129.3	131.0	111.8
Dis. of Columbia	58.6	62.8	56.0	75.5	0.0	100.0	87.8	70.4	68.0	66.9	58.2	64.5	57.9
Florida	50.5	64.4	81.5	101.8	108.5	100.0	81.5	80.3	83.2	84.6	71.4	78.8	72.5
Georgia	51.0	58.5	64.3	78.4	85.5	100.0	76.0	79.1	78.3	72.7	66.7	58.3	54.6
Hawaii	54.4	54.8	50.0	60.8	78.7	100.0	119.2	133.6	115.1	91.9	63.1	57.0	58.1
Idaho	78.7	73.1	72.2	72.6	84.8	100.0	106.6	97.9	98.5	87.2	86.2	81.9	95.0
Illinois	53.7	62.1	68.4	77.8	93.0	100.0	97.1	92.6	87.6	83.7	79.3	78.6	78.5
Indiana	49.9	55.2	64.7	83.1	93.6	100.0	102.2	108.1	105.9	105.5	99.5	97.3	104.2
Iowa	61.3	66.9	84.4	81.2	92.3	100.0	100.6	94.6	92.6	85.2	87.4	90.4	95.1
Kansas	51.1	53.2	59.8	66.4	87.8	100.0	95.2	88.9	80.9	66.0	65.0	60.7	64.8
Kentucky	44.5	47.7	53.4	64.7	100.7	100.0	109.3	105.1	101.9	84.3	79.1	68.6	58.9
Louisiana	74.8	84.5	102.5	115.4	111.6	100.0	90.2	79.9	65.0	63.3	65.5	60.8	65.0
Maine	77.2	81.6	91.0	97.7	109.0	100.0	74.0	45.8	31.8	25.9	26.4	33.6	36.9
Maryland	67.1	63.9	72.3	79.0	90.8	100.0	89.9	74.6	83.8	83.9	78.0	70.5	73.3
Massachusetts	56.8	67.2	82.0	100.5	112.6	100.0	75.1	64.1	61.8	51.5	50.0	46.1	47.9
Michigan	60.6	67.5	73.9	81.8	91.7	100.0	91.8	76.3	68.5	67.0	67.3	61.1	57.6
Minnesota	75.5	64.3	76.8	75.9	85.3	100.0	80.8	74.4	56.6	51.3	42.8	43.0	41.7
Mississippi	50.8	57.3	67.4	81.3	95.0	100.0	88.7	96.8	70.6	70.6	71.6	68.2	73.6
Missouri	46.4	53.9	63.6	74.2	84.9	100.0	104.1	95.5	97.1	93.0	94.3	85.3	89.7
Montana	83.2	115.3	63.7	63.3	84.3	100.0	87.4	66.8	59.6	89.0	68.8	58.1	54.0
Nebraska	48.0	54.0	61.3	67.3	92.0	100.0	92.4	94.1	75.9	78.3	87.5	92.8	99.0
New Hampshire	52.9	52.0	64.9	81.5	93.3	100.0	96.9	85.4	73.4	64.0	62.2	54.9	60.6
New Jersey	53.6	61.6	68.0	78.7	95.5	100.0	99.3	101.3	88.6	81.8	88.5	80.7	81.9
New Mexico	78.2	70.9	89.1	99.2	88.3	100.0	84.8	60.8	46.3	41.0	41.5	38.3	41.2
New York	57.8	53.1	59.8	71.7	92.7	100.0	125.3	135.1	122.5	118.5	120.5	119.5	110.2
North Carolina	35.0	37.7	47.5	59.9	83.1	100.0	97.8	87.0	78.4	79.6	78.2	74.0	81.8
Oklahoma	56.8	56.8	68.5	72.0	82.6	100.0	107.9	112.1	115.7	113.4	88.0	84.7	83.7
Oregon	113.7	120.2	124.9	125.1	104.2	100.0	83.1	98.8	82.1	73.8	69.9	84.2	76.4
Pennsylvania	0.0	53.9	0.0	0.0	93.3	100.0	88.0	85.3	73.6	68.6	63.2	58.8	59.6
Rhode Island	42.4	56.2	60.0	79.3	93.9	100.0	56.5	26.6	23.8	22.5	35.2	24.6	35.1
South Carolina	58.0	69.4	82.0	78.8	98.6	100.0	88.5	81.5	83.0	98.8	84.8	84.5	84.1
South Dakota	61.1	66.5	66.5	73.0	91.8	100.0	129.5	131.3	119.0	104.2	110.2	99.4	62.9
Tennessee	43.1	53.0	59.1	76.2	91.0	100.0	105.7	99.7	97.9	93.5	94.1	87.8	93.2
Texas	77.4	86.6	0.0	117.4	0.0	100.0	114.7	89.1	74.1	81.0	80.0	71.4	78.9
USLHWCA	0.0	75.1	97.1	109.6	76.1	100.0	76.8	115.6	107.7	102.2	89.1	76.2	0.0
Utah	51.1	45.8	53.0	63.3	80.6	100.0	110.4	112.1	84.9	85.6	87.8	70.1	66.7
Vermont	42.9	51.8	59.1	64.8	77.7	100.0	107.2	95.0	115.0	92.1	82.6	90.2	95.0
Virginia	53.0	64.8	69.0	78.4	98.9	100.0	92.6	87.1	78.8	74.0	73.5	85.3	82.5
West Virginia	99.4	99.8	98.9	97.7	100.0	100.0	98.3	94.1	86.4	81.0	71.0	65.4	69.6
Wisconsin	72.2	77.2	74.4	80.0	87.4	100.0	111.3	103.8	103.0	104.8	99.6	89.7	89.0
National Average*	**60.2**	**63.5**	**72.5**	**82.0**	**93.9**	**100.0**	**95.8**	**86.2**	**78.1**	**75.6**	**67.8**	**69.9**	**68.5**

Note: National Average based on data in Table 3, Panel B.

Figure I - Change in Total Benefits Paid per 100,000 Workers by State From 1990-1997



Source: Table 11

percent for 1992 to 1995. Similar turnarounds have occurred in the payments of medical benefits and total benefits (cash plus medical) per 100,000 workers over the last 13 years with data.

Second, the experience of states varies widely. Some states, such as Alabama, Indiana, Iowa, Michigan, and New Jersey, have shown little variation over the 12 years in their payment of benefits compared to the national averages in those years. But a number of other states, such as New Mexico, Rhode Island, and Maine have seen their benefit payments plummet. Other states, such as New York and Oklahoma, have experienced significant increases in benefit payments relative to national averages. For better or worse, the generosity of benefits in a state is not an immutable condition.

Third, the dispersion in benefits paid to workers has narrowed considerably over the 13 policy periods encompassed in this study. The explanation of this phenomenon that is apparent from the data presented in this article is that the narrowing of the dispersion is due both to the substantial reduction in the amount of benefits paid in well above average states as well as some increase in benefits paid in well below average states.

These observations are consistent with the recent climate of cost control in American business in general, and in workers' compensation in specific. Decreases in benefits paid may also be the result of improved safety records as well as efforts by employers, insurers, and legislators to decrease or deny benefits to injured workers. As previously discussed, there is some evidence that work-related injury rates have declined in the 1990s. From that perspective, decreased benefits are surely a positive outcome, as the ultimate goal of any workers' compensation program would be to have no injuries and thus pay no benefits at all.

A myriad of explanations beyond the cursory ones offered above are possible for the downward and tightening spiral of workers' compensation benefits paid to workers by the various state programs over most of the 1990s; a definitive explanation of this trend is outside the scope of the present study.

ENDNOTES

1. The results for 1985 to 1996 in the present article differ from those included in Burton and Blum (2001). The main reason is that the current article uses the number of workers covered by the unemployment insurance program in each state in each year to calculate the weighted national average for that year. Last year we used the number of employees as measured by the U.S. Bureau of Labor Statistics in its establishments surveys in each state in each year to calculate the weighed national average for that year, with the exception of 1996, when 1995 employment weights were used to calculated the weighted national average.

2. Data for Delaware and Pennsylvania are missing from the 2001 edition of the *NCCI Bulletin*.

3. We appreciate the assistance of Judith Greenwood, formerly of the Research, Information and Analysis Division of the West Virginia Bureau of Employment Programs for providing the West Virginia data used in this study.

4. The benefits paid are incurred benefits for all injuries that occur in policy year. Incurred benefits include benefits paid as of the reporting date plus reserves for future benefits.

5. The missing jurisdictions from the maximum number of 47 jurisdictions are Delaware, Pennsylvania, and West Virginia.

6. The tables also incorporate previously unpublished or corrected data that we obtained from the NCCI, or directly from states with independent rating bureaus, or from West Virginia.

7. Data on the employers' costs of workers' compensation as a percent of gross earnings are included in Burton (2001a). Table 1 includes information on private industry employees for 1991-2000 in Panel A; information on state and local government employees for 1991-2000 in Panel B; and information for all non-federal employees for 1991-2000 in Panel C. Table 2 includes information on private industry employees for 1986-1990.

8. Data on the overall operating ratio from 1973 to 2000 are included in Table A5.1 of Burton (2001b: 27).

9. Krueger (2000) discusses the significant decline in the work-related injury rate during the 1990s.

10. Data on work-related injury and illness incidence rates from 1972 to 1998 are included in Table A.6 of Thomason, Schmidle, and Burton (2001).

11. Burton (1997) discusses recent developments in managed care in workers' compensation.

12. For an exchange of views on the proper method to measure the employers' costs of workers' compensation and the effects of interstate differences in these costs, see Hicks and Wilburn (2001), Mont and Burton (2001), Roberts (2001), and White (2001).

13. There is no generally accepted choice for a base year in economics data series. Examples from the Council of Economic Advisers (2001) include: 1996 for Real Gross Domestic Product (Table B-2); 1999 dollars for Median Money Income (Table B-33); 1982 dollars for Hourly and Weekly Earnings (Table B-47); 1992 for Productivity (Table B-49); and 1982-84 for Consumer Price Indexes (Table B-60).

14. [($15,473,480) / ($22,644,207)] X 100 = 68.3

15. [($33,004,598) / ($32,730,437)] X 100 = 100.8

16. [($48,478,078) / ($55,394,644)] X 100 = 87.5

17. A further discussion of developments in workers' compensation benefits during the 1990s is Burton (2001b).

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