

# Twenty-Five Years of Workmen's Compensation Statistics

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*A quarter of a century ago, the Social Security Administration began to assemble basic statistics on the operations of State and Federal workmen's compensation programs. Starting with the year 1939, data were collected on the amount of benefits paid under each of the separate programs, by type of insurer. During the next decade, a methodology was established for estimating coverage of each State program and for obtaining State and national estimates of costs. Beginning in the 1950's, emphasis was placed on developing measures of the scope and adequacy of workmen's compensation benefits and on measuring interstate variations. The following article, by summarizing selected statistics for 1939-64, provides a basis for evaluating the accomplishments of the program during that period.*

ALTHOUGH workmen's compensation is the oldest form of social insurance in the United States, there are fewer statistics available on the experience and operations of this program than on any other social insurance program. The paucity of nationwide data in the area of workmen's compensation insurance can be explained by a variety of factors.

Each State has its own workmen's compensation law for providing cash benefits and medical care to victims of work-connected injuries, independent of any Federal administrative or financial participation. These State laws differ materially in the scope of coverage, benefit provisions, administrative procedures, and, most importantly, the insurance mechanism used to underwrite the risk of work injury.

Except for seven States where the employer is required to carry his insurance with an "exclusive" State insurance fund (or, in two of the seven, to self-insure), the most common methods used by employers to furnish the benefits assured by law are to purchase a workmen's compensation policy from a private insurance carrier or to self-insure through providing proof of financial ability to carry his own industrial risk. In a few

States (11), an employer also has a choice of insuring with a State insurance fund that is "competitive" with private insurance carriers.<sup>1</sup>

Since most States are therefore not engaged in directly operating an insurance program—that is, setting rates, collecting premiums, paying benefits, or the like—they are not in a position financially or administratively to gather the type of data that are the normal byproducts of such other social insurance systems as old-age, survivors, disability, and health insurance (OASDHI) and unemployment insurance. Less than a third of the States collect, for example, any data on the number of covered workers or the amount of covered payrolls under workmen's compensation. Almost half the States fail to publish such basic data as the amount of benefits paid, by type of insurer or by type of benefit. Practically no State has any data on the number of persons currently receiving workmen's compensation benefits.

The problem of collecting meaningful nationwide data is complicated not only by the lack of assembled data in many jurisdictions, but also by the difficulty of securing data comparable from one jurisdiction to another.

Recognizing this problem, the Social Security Administration in the 1940's started to fill the gaps by assembling annual data from government and nongovernment sources that could be compiled into national aggregates. These annual estimates are published in the BULLETIN (recently the January issue). In addition, articles<sup>2</sup> have

<sup>1</sup> Starting January 1, 1966, the number of States with an exclusive State fund was reduced to 6 and the number with competitive funds increased to 12, as the Oregon exclusive State law was amended to permit employers to buy insurance from private carriers or to self-insure.

<sup>2</sup> Michalina M. Libman, "Workmen's Compensation Benefits in the United States, 1939 and 1940," *Social Security Bulletin*, January 1942; Dorothy McCamman, "Workman's Compensation: Coverage, Premiums, and Payments," *Social Security Bulletin*, July 1950; Dorothy McCamman and Alfred M. Skolnik, "Workmen's Compensation: Measures of Accomplishment," *Social Security Bulletin*, March 1954; Alfred M. Skolnik, "Trends in Workmen's Compensation: Coverage, Benefits, and Costs," *Social Security Bulletin*, August 1958; and Alfred M. Skolnik, "New Benchmarks in Workmen's Compensation," *Social Security Bulletin*, June 1962.

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been published at periodic intervals that present in greater depth national yardsticks for measuring the progress made under workmen's compensation. The present article brings up to date coverage, benefit, and cost statistics that offer various measures for evaluating the experience of the past quarter century. Among these measures are the proportions of the potential labor force covered, the percentage of wage loss compensated in temporary total and permanent total disability cases, the relation of benefits and premium costs to payrolls, and the proportion of premiums that goes for benefits and expenses.

Workmen's compensation had already had a long history by the time the Social Security Administration first began to collect nationwide figures for its statistical series on the program. The hazard of accidental injury or death arising out of and in the course of employment was one of the first risks following the industrial revolution to attract public attention.

Before the passage of workmen's compensation legislation, employers' liability—the general legal principle of liability based on common law—gave the injured workman the right to recover damages if he could establish through proper evidence the fact that the injury was due to the negligence of the employer. The employer, however, could block recovery by availing himself of three common-law defenses: (1) assumption of risk—the injured man could not recover if it was proved that his injury was due to an ordinary hazard of his employment; (2) fellow-servant rule—the employee could not recover if a fellow worker could be proved to have caused the injury by negligence on his part; and (3) contributory negligence—any contribution to the accident by negligence on the part of the employee, regardless of the fault of the employer, would preclude recovery by the employee.

The difficulties of securing redress under this system led to the enactment of employers' liability acts in many jurisdictions. These acts restricted the scope of the defenses the employer could use. The results for workers were still unsatisfactory because of long delays in securing court action, the high cost of negligence suits, and the uncertainties of indemnification.

Workmen's compensation laws were intended to replace the uncertainties of litigation at common law or under employers' liability laws with

the promise of a fixed schedule of benefits payable to compensate occupationally injured workers and their families for wage loss and medical expenses, regardless of fault. Industrial injuries were regarded as part of the productive process, and their costs were held to be a proper charge against the expense of production.

The first effective workmen's compensation law in the United States was enacted in 1908, when Congress adopted a program for certain Federal civilian employees engaged in hazardous work. Similar laws were enacted by 10 States in 1911; by 1920, all but six States had such laws. In 1939—the year with which the Social Security Administration began its series—only two States—Arkansas and Mississippi—did not have programs in operation. Both States enacted such legislation later; the Arkansas law became effective in 1940 and Mississippi's in 1949.

The Federal act for civil employees was re-enacted with broadened scope in 1916 and in 1927 another Federal law was passed—the Longshoremen's and Harbor Workers' Compensation Act—which was made applicable by a separate act to employees in private industry in the District of Columbia.

## COVERAGE

The estimates of coverage under workmen's compensation programs developed by the Social Security Administration are based on the number of workers covered in an average month and, of course, are much smaller than the count of different workers covered at some time during the year. They are also limited to employees of firms that actually carry insurance or submit proof of ability to self-insure. This measure of coverage has merit since it is comparable with that used for other social insurance programs and it excludes employees who have no assurance that benefits will be paid without having to initiate court action.

The basic method used to derive these estimates consists of building up a covered payroll figure for each State. These figures are then converted into estimates of the number of workers covered in an average month by using the relationships between total payrolls and average monthly em-

ployment under the various State unemployment insurance programs.<sup>3</sup>

The primary source of payroll data is the National Council on Compensation Insurance (NCCI), to which such data are reported for ratemaking purposes by eight competitive State funds and by private insurance companies in 41 States and the District of Columbia. These payroll data, which are compiled for policy years, are converted into calendar-year data and then supplemented by estimates of payrolls for self-insurers and for other State funds obtained from State administrative agencies and various other sources.

Coverage estimates are confined to specific benchmark years—1940, 1946, 1953, 1957, and 1961. The year 1961 is the latest full calendar-year for which private carrier payroll estimates could be computed for all States. This time lag is inevitable since the data obtained are based on policy-year experience that extends into succeeding calendar years and cannot be fully evaluated until 2 or 3 years after the end of the policy year.

These benchmark data provide the basis for estimating coverage in the intervening and succeeding years. The 1964 estimates of the average monthly number of covered workers in each State are projections from the 1961 data, based on the percentage change in average monthly employment covered under unemployment insurance programs, and adjusted where necessary for changes in the coverage provisions of the laws.

The NCCI agreed, as it had for the 1957 benchmark data, to compute an adjustment factor that would permit the estimating of total payrolls in those States where the insurance is limited to part of the payroll. In some jurisdictions (about 10), the earnings of individual workers above \$100 a week are not reported for premium computation purposes. In the other States there is no limitation or the limit has been raised to \$300 a week, which for the purpose in hand means no limit.

An adjustment factor for all States with a \$100 limitation and for which the NCCI compiles data was furnished by the Council. Dividing the reported payroll by this factor produced a payroll estimate on an unlimited basis.

<sup>3</sup> For a detailed description of the methodology, see the *Bulletin*, July 1950, pages 4-5, and August 1958, pages 4-6.

In summary, the workmen's compensation coverage estimates presented here are limited to employees of firms that actually carry insurance or that submit the required financial proof of ability to self-insure.<sup>4</sup> Employees of employers who voluntarily come under a workmen's compensation law are also counted.

Each State total also includes estimates of workers covered by the Longshoremen's and Harbor Workers' Compensation Act, practically all of whom are insured by private carriers. The number of Federal workers covered under the Federal Employees Compensation Act is estimated separately and not distributed among the States. The estimates exclude railroad workers in interstate commerce and seamen in the U.S. merchant marine, who are covered by statutory provisions for employer liability rather than by a workmen's compensation law.

### National and State Estimates

New benchmark data for 1961 produced national estimates of 44.9-45.1 million workers covered in an average month under State and Federal workmen's compensation programs. The payroll in employment covered by these programs in 1961 is estimated at \$226-\$227 billion. These estimates differ somewhat from the original estimates for 1961, which were based on projections from 1957 benchmark data.<sup>5</sup> The coverage estimates are approximately 1 million higher than the original and the payroll estimates about \$7-\$8 billion greater.

In light of the new benchmark data, the entire series back to 1958 has been revised upward (table 1). The slight year-to-year fluctuations are not deemed significant in view of the method used in preparing the estimates.

Projections from the 1961 data yield an estimate of 48.5-48.7 million workers covered in an average month in 1964, with a payroll of \$272-

<sup>4</sup> Employees of self-insured State and local political subdivisions are included in the estimates whether or not the employing unit submits financial proof of ability to self-insure, since in many States financial solvency of the employing unit is assumed and proof is not required by law.

<sup>5</sup> *Social Security Bulletin*, January 1963, page 28.

TABLE 1.—Estimated number of workers covered in an average month and total annual payroll in covered employment, 1940, 1946, and 1948-64<sup>1</sup>

Year	Workers covered in an average month		Total payroll in covered employment	
	Number (in millions)	Percent of employed wage and salary workers <sup>2</sup>	Amount (in billions)	Percent of civilian wage salary disbursements <sup>2</sup>
1940	24.2-25.0	70.8	\$35-36	72.1
1946	32.2-33.2	76.8	79-81	76.8
1948	35.6-36.3	77.0	104-106	79.7
1949	34.9-35.7	76.9	102-104	79.1
1950	36.5-37.2	77.2	112-115	80.1
1951	38.3-39.0	78.4	130-133	81.2
1952	39.1-39.7	78.9	140-143	81.0
1953	40.4-41.0	80.0	152-155	81.7
1954	39.5-40.0	79.7	152-154	82.0
1955	41.2-41.6	80.0	167-169	83.4
1956	42.8-43.1	80.2	181-182	83.2
1957	43.2-43.4	80.5	189-191	83.0
1958	42.4-42.6	80.2	191-193	83.4
1959	43.9-44.1	80.3	208-210	83.8
1960	44.8-45.0	80.4	219-221	84.3
1961	44.9-45.1	80.3	226-227	84.5
1962	46.1-46.3	80.4	241-243	84.8
1963	47.2-47.4	80.5	253-255	84.6
1964	48.5-48.7	80.6	272-274	84.8

<sup>1</sup> Before 1959, excludes Alaska and Hawaii.

<sup>2</sup> Midpoints of range used in computing percentages.

Source: Labor-force data from *Current Population Survey*, Bureau of Labor Statistics; wage and salary disbursements from Office of Business Economics, Department of Commerce.

\$274 billion for the year. The programs covered 80.6 percent of the 60.3 million civilian wage and salary workers in the United States in 1964 and 84.8 percent of the \$321.8 billion in civilian wages and salaries.

The 1961 benchmark coverage figures for each of the States and projections for 1964 are presented in table 2. The individual estimates for 1961 were submitted to the State administrative agencies for review, and any suggestions were taken into account. Although the method of estimating has been refined over the years, the estimates are still not uniformly good. The difficulty of obtaining data on coverage by self-insured firms is one of the weak links in the series. A range is used to embrace the probable coverage situation, where a lack of certainty concerning a single figure exists.

### State Variations

Few jurisdictions offer what might be called complete protection to all employees with work-connected injuries. Twenty-four of the State laws (as of 1964) are elective for most of the private employments covered—that is, the em-

TABLE 2.—Estimated average monthly number of wage and salary workers covered by workmen's compensation, 1961 and 1964

[In thousands]

State	1961	1964
Total	44,901-45,128	48,473-48,698
Alabama	500-520	560-580
Alaska	38	47
Arizona	260	290
Arkansas	255	295
California	4,600-4,700	5,140-5,240
Colorado	375	395
Connecticut	770	825
Delaware	115	125
District of Columbia	237	278
Florida	1,030	1,185
Georgia	665	765
Hawaii	175-185	180-190
Idaho	120	125
Illinois	2,935	3,330
Indiana	1,040	1,145
Iowa	515	545
Kansas	360	375
Kentucky	515	575
Louisiana	570	630
Maine	195	200
Maryland	700	765
Massachusetts	1,500	1,515
Michigan	1,900-1,950	2,130-2,180
Minnesota	740	790
Mississippi	275	310
Missouri	900	960
Montana	140	145
Nebraska	290-300	305-315
Nevada	75-85	105-115
New Hampshire	155	162
New Jersey	1,755	1,855
New Mexico	146	155
New York	5,390	5,570
North Carolina	955	1,045
North Dakota	90	100
Ohio	2,555	2,710
Oklahoma	305	325
Oregon	325	365
Pennsylvania	3,195	3,300
Rhode Island	225	235
South Carolina	410	460
South Dakota	93	93
Tennessee	580	655
Texas	1,575	1,735
Utah	205	215
Vermont	82	89
Virginia	780	885
Washington	525-550	550-575
West Virginia	380	400
Wisconsin	1,045	1,125
Wyoming	61	61
Federal employees <sup>1</sup>	2,279	2,348

<sup>1</sup> Excludes employment outside the United States.

ployer may accept or reject the legislation, but if he rejects it, he loses the customary common-law defenses against suits by employees. The remaining laws are compulsory and require every employer within the scope of the law to comply with the provisions and pay the compensation specified.<sup>6</sup> Some laws are part compulsory and part elective.

Twenty-eight States exempt from coverage em-

<sup>6</sup> As the result of amendments to the Oregon law, effective January 1, 1966, the number of programs with elective laws is now 23 and the number with compulsory laws 29.

employees having less than a specified number of employees. The range is from fewer than two employees in three States to fewer than 15 employees in one State. The most common exception is for those employers having less than three employees.

Even in the 24 jurisdictions that have no numerical exemptions, there are restrictions on the type of employment covered, with exemptions such as agricultural employment, domestic work, and casual labor. Only 4 of the 24 jurisdictions cover agricultural workers in the same way as other workers are covered; 5 others provide some coverage of farm workers. In only 5 of the 24 jurisdictions is domestic labor of any type included. Many laws exempt employees of non-profit, charitable, or religious institutions. Some States limit coverage to workers in hazardous occupations, variously defined.

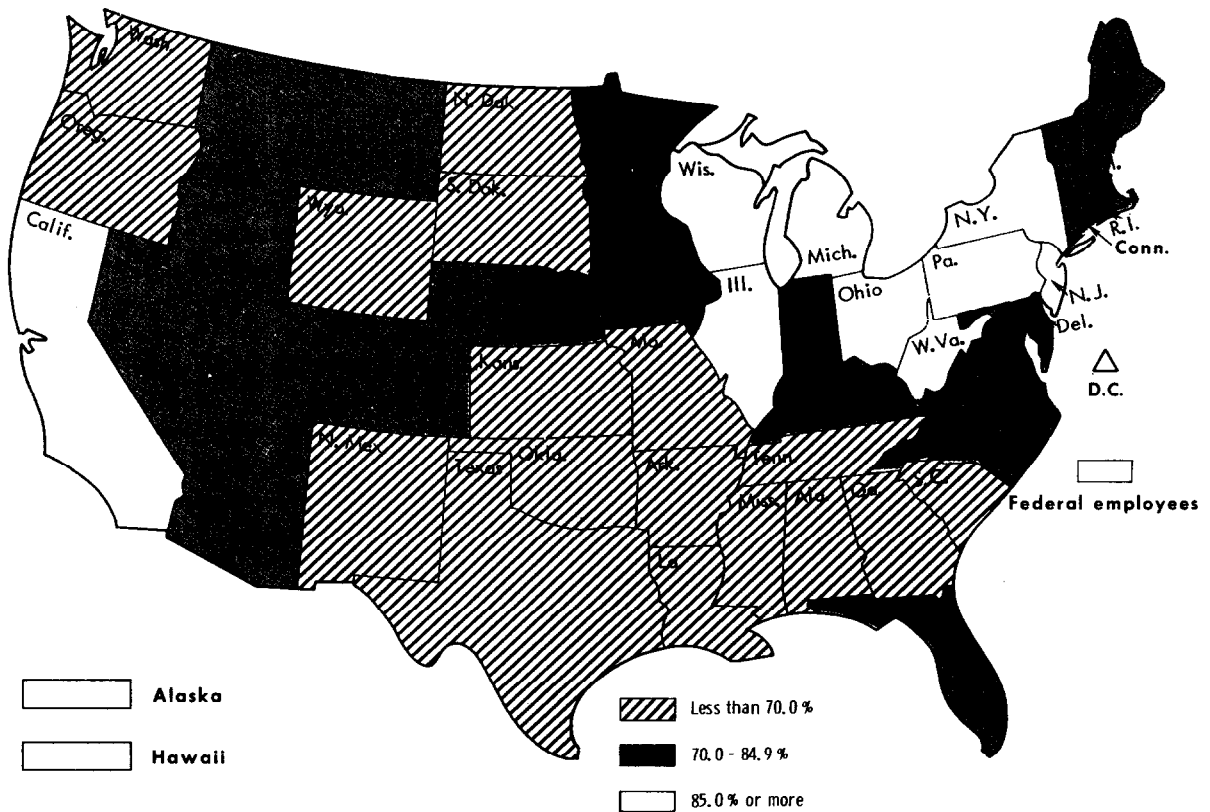
For State and local government employees, too, coverage differs markedly from one jurisdiction to another. Some laws specify no exclusions or

exclude only such groups as elected or appointed officials. Others limit coverage to employees of specified political subdivisions or to employees engaged in hazardous occupations. In still others, coverage is entirely optional with the State, or with the city or the political subdivision.

Because of these many variations in the coverage provisions of the State laws, the number of workers actually covered by workmen's compensation as a percentage of the total employed wage-and-salary labor force shows considerable variation from State to State.

Chart 1 shows the actual workmen's compensation coverage in the various States as a percentage of potential coverage. Potential coverage is based on 1964 State data on nonagricultural workers from the Bureau of Labor Statistics and on agricultural workers from the Department of Agriculture. Estimates of domestic employment are projected from the 1960 Decennial Census. These data have been modified to exclude Federal employees (who have their own separate system)

CHART 1.—Actual coverage as a percent of potential coverage, by jurisdiction, 1964



and interstate railroad workers (who are subject to Federal jurisdiction and therefore ineligible for State coverage).

Twelve out of 17 States with ratios of actual to potential coverage of less than 70.0 percent were contiguous and located primarily in the Central and Southeastern regions of the United States. These predominantly rural States, which include Kansas and Missouri from the Plains region, had a little over 19 percent of the Nation's potential coverage. The other five States in this category (North Dakota, Oregon, South Dakota, Washington, and Wyoming) brought the total potential coverage in this category up to a little over 22 percent. Six of the 17 States have compulsory laws, but three of the six exempt small firms. The others all have elective laws with small-firm exemptions ranging from a low of less than three to a high of less than 15 employees. These elective laws and numerical exemptions result in low coverage ratios even when potential coverage is confined to nonagricultural workers.

In 22 States that accounted for one-fourth of the Nation's potential coverage, the ratio was 70.0–84.9 percent. These States were scattered throughout the country—six in the Rocky Mountain region, six in the New England region, three in the Plains region and the rest—except Kentucky—located in the South Atlantic region. Twelve of these States have compulsory laws, but eight of the 12 exempt small firms.

The remaining 11 States, the District of Columbia, and the Federal system for employees (with almost 55 percent of the potential coverage) had 85 percent or more of their potential labor force covered. Almost all the large industrial States of the Middle Atlantic and Great Lakes regions were in this group. Three States in the Pacific region (Alaska, California, and Hawaii) were also a part of the high-coverage ratio group. Seven of the jurisdictions in this category have compulsory laws and do not exempt small firms. Three States have compulsory laws but exempt small firms with fewer than three employees. Only three laws are elective and they have no numerical exemptions. Seven laws provide some coverage for agricultural workers.

A comparison with 1960 coverage estimates reveals relatively little shifting among States between categories. Forty States were in the same coverage ratio categories for both years.

The greatest change occurred in the category where actual coverage was 85 percent or more of potential coverage. Five jurisdictions—Alaska, District of Columbia, Michigan, New Jersey, and West Virginia—moved into this group, while two States—Minnesota and Utah—moved out. In both years, the number of States with less than 70 percent coverage was seventeen; Maine and Vermont were included in the 1960 total and Missouri and North Dakota in the 1964 total. The results of this comparison are not surprising, since statutory liberalizations of coverage provisions in the past 4 years has been limited.

A longer look backward reveals that the number of workers covered by workmen's compensation in an average month has almost doubled during the past 25 years. Almost two-thirds of the 24-million increase in worker coverage took place during World War II and the immediate postwar period, when the covered proportion of the employed wage-and-salary labor force was raised from 71 percent to 77 percent. Since 1953, there has been virtually no change in the ratio covered (80 percent).

Most of the numerical increase in coverage can be attributed to the normal growth in the labor force and to the emergence of an era of relatively full employment in the period following World War II. Some of the rise may have been due to the shifting of workers away from non-covered types of employment (such as farm work and railroading) to industries covered by workmen's compensation. Except for the introduction of workmen's compensation laws in two States, statutory extensions of coverage have played a limited role.

The statutory change having the greatest impact on coverage has probably been the shift from elective to compulsory laws. In 1940, 18 (out of 49) jurisdictions made coverage compulsory. By 1965, the number was 28 (out of 52) programs. There has also been some extension of coverage to State and local government employees, agricultural workers, and domestic servants. In 1940, 29 States and the District of Columbia reported that they covered a substantial proportion of public employees; by 1965, 43 jurisdictions were in this category. The number of States that made some provisions for coverage of agricultural workers increased from 6 in 1940 to 19 (including Alaska and Hawaii)

in 1965; for coverage of domestic workers, the increase was from 4 to 7 States (including Alaska).

The least progress has been made in extending coverage to small firms. In 1940, 15 States had numerical exemptions that ranged as high as from 4 to 15 employees. In 1965, 11 States still had exemptions of this size.

## BENEFITS

In the 25 years since the series began, the aggregate benefits paid under workmen's compensation have risen to more than seven times the amount at the beginning of the period—from \$235 million in 1939 to \$1,705 million in 1964 (table 3). Payments made by private carriers

TABLE 3.—Benefit payments by type of insurance, 1939-64<sup>1</sup>  
(Amounts in thousands)

Year	Type of insurance							
	Total		Insurance losses paid by private insurance carriers <sup>2</sup>		State fund disbursements <sup>3</sup>		Self-insurance payments <sup>4</sup>	
	Amount	Per cent	Amount	Per cent	Amount	Per cent	Amount	Per cent
1939	\$234,723	100.0	\$122,183	52.0	\$68,464	29.2	\$44,067	18.8
1940	255,653	100.0	134,563	52.7	72,528	28.4	48,472	18.9
1941	290,812	100.0	159,823	55.0	77,408	26.6	53,581	18.4
1942	328,669	100.0	190,239	57.9	81,247	24.7	57,183	17.4
1943	353,035	100.0	213,123	60.4	80,574	22.8	59,338	16.8
1944	385,236	100.0	236,655	61.4	85,990	22.3	62,591	16.3
1945	408,374	100.0	252,570	61.9	91,225	22.3	64,549	15.8
1946	434,232	100.0	269,799	62.1	96,053	22.1	68,380	15.8
1947	485,794	100.0	301,833	62.1	110,303	22.7	73,658	15.2
1948	533,584	100.0	334,699	62.7	120,989	22.7	77,896	14.6
1949	566,295	100.0	353,140	62.4	131,734	23.3	81,421	14.4
1950	614,702	100.0	381,329	62.0	148,693	24.2	84,680	13.8
1951	709,047	100.0	444,416	62.7	170,445	24.0	94,186	13.3
1952	784,956	100.0	490,958	62.5	193,107	24.6	100,891	12.9
1953	841,126	100.0	524,176	62.3	210,337	25.0	106,613	12.7
1954	876,216	100.0	540,497	61.7	225,473	25.7	110,246	12.6
1955	915,665	100.0	562,515	61.4	238,445	25.9	114,705	12.5
1956	1,002,007	100.0	618,109	61.7	259,074	25.9	124,824	12.4
1957	1,062,171	100.0	660,903	62.2	271,406	25.6	129,862	12.2
1958	1,111,599	100.0	694,402	62.5	284,780	25.6	132,417	11.9
1959	1,209,808	100.0	752,580	62.2	315,990	26.1	141,238	11.7
1960	1,294,945	100.0	809,921	62.5	324,580	25.1	160,444	12.4
1961	1,374,176	100.0	850,872	61.9	347,433	25.3	175,871	12.8
1962	1,488,816	100.0	923,989	62.1	370,722	24.9	194,105	13.0
1963	1,582,459	100.0	987,580	62.4	388,242	24.5	206,637	13.1
1964	1,705,422	100.0	1,070,560	62.8	408,682	24.0	226,180	13.2

<sup>1</sup> Before 1959, excludes Alaska and Hawaii.

<sup>2</sup> Net cash and medical benefits paid during the calendar year by private insurance carriers under standard workmen's compensation policies. Data from the *Spectator: (Premiums and Losses by States of Casualty, Surety and Miscellaneous Lines for 1939-49 and Insurance by States of Fire, Marine, Casualty, Surety and Miscellaneous Lines for 1950-58)*; and from published and unpublished reports of State insurance commissions for 1959-64.

<sup>3</sup> Net cash and medical benefits paid by competitive and exclusive State funds and the Federal systems. Compiled from State reports (published and unpublished) and from the *Spectator* or other insurance publications; data for fiscal years for some funds.

<sup>4</sup> Cash and medical benefits paid by self-insurers, plus the value of medical benefits paid by employers carrying workmen's compensation policies that do not include the standard medical coverage. Estimated from available State data.

TABLE 4.—Benefit payments by type, 1939-64<sup>1</sup>

[In millions]

Year	Total	Type of benefit			
		Medical and hospitalization payments	Compensation payments		
			Total	Disability	Survivor
1939	\$235	\$85	\$150	\$120	\$30
1940	256	95	161	129	32
1941	291	100	191	157	34
1942	329	108	221	185	36
1943	353	112	241	203	38
1944	385	120	265	225	40
1945	408	125	283	241	42
1946	434	140	294	250	44
1947	486	160	326	280	46
1948	534	175	359	309	50
1949	566	185	381	329	52
1950	615	200	415	360	55
1951	709	233	476	416	60
1952	785	260	525	460	65
1953	841	280	561	491	70
1954	876	308	568	498	70
1955	916	325	591	521	70
1956	1,002	350	652	577	75
1957	1,062	360	702	617	85
1958	1,112	375	737	647	90
1959	1,210	410	800	700	100
1960	1,295	435	860	755	105
1961	1,374	460	914	804	110
1962	1,489	495	984	879	115
1963	1,582	525	1,057	932	125
1964	1,705	565	1,140	1,005	135

<sup>1</sup> Before 1959, excludes Alaska and Hawaii.

in 1964 were almost nine times what they were in 1939, State fund disbursements were six times as much, and self-insurance payments had quintupled. As a result of their faster rate of growth, private carriers paid 63 percent of all benefits in 1964, compared with 52 percent expended in 1939.

These amounts consist of periodic cash payments, lump-sum payments and medical services to the worker during a period of disability, and death and funeral benefits to the worker's survivors. Since World War II about one-third of total benefits have gone for hospitalization and other medical care costs, and two-thirds for compensating the wage loss of injured or deceased workers (table 4). Before the war, the share going for medical expenses was slightly higher. Among the cash benefits paid, there has been a drop in the proportion going to survivors of workers killed on the job—from one-fifth in 1939 to almost one-eighth in 1964.

There have also been changes in the distribution of compensable cases and incurred losses by severity of injury, according to unpublished national data provided by the National Council on Compensation Insurance (table 5). The data

TABLE 5.—Percentage distribution of cases and incurred losses, and average incurred loss, by injury classification, policy years 1939, 1946, 1954, 1958, and 1962<sup>1</sup>

Classification <sup>2</sup>	Percentage distribution										Average incurred loss per case				
	Cases <sup>2</sup>					Incurred losses					1939	1946	1954	1958	1962
	1939	1946	1954	1958	1962	1939	1946	1954	1958	1962					
All compensable cases.....	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0					
Death.....	1.0	.7	.8	.8	.8	16.2	11.5	11.5	12.2	11.1	\$3,873	\$5,691	\$9,207	\$11,620	\$13,671
Injury:															
Permanent total <sup>3</sup> .....	.1	.1	.1	.1	.1	3.9	3.0	2.0	2.0	2.0	9,415	12,033	16,758	20,172	23,554
Major permanent <sup>4</sup> .....	1.8	2.1	2.0	2.4	3.0	22.3	21.7	20.7	18.8	22.7	2,792	3,500	5,010	6,085	7,329
Minor permanent <sup>5</sup> .....	12.1	12.8	23.2	24.9	25.3	26.2	27.7	36.8	38.5	38.7	500	720	986	1,202	1,463
Temporary total.....	85.0	84.4	73.3	71.8	70.8	31.4	36.1	29.1	28.5	25.6	85	143	247	309	346

<sup>1</sup> Excludes cases receiving medical benefits only. Data for 1954 through 1962 not strictly comparable with those of 1939. (Most States no longer use a uniform policy-year commencing Jan. 1.)

<sup>2</sup> For permanent injury cases includes, in addition to compensation for loss of earning power, payments to those cases during periods of temporary disability. For temporary disability cases, includes only those closed cases known not to have involved any permanent injury and the open cases in

which, in the carrier's judgment, the disability will be temporary only.

<sup>3</sup> Disability rate at 75-100 percent of total.

<sup>4</sup> Disability with severity equal to approximately 25-75 percent of total.

<sup>5</sup> Disability with severity equal to less than approximately 25 percent of total.

Source: Unpublished data from the National Council on Compensation Insurance.

relate to policy-year private carrier business in 41 States and the District of Columbia but include a few competitive State funds.<sup>7</sup>

Partial disability cases classified as "minor permanent" accounted for 12 percent of all compensable cases and 26 percent of incurred losses in 1939; by 1962, the proportions had risen to 25 percent and 39 percent. These increases were accompanied by a major drop in the proportion of cases and losses attributable to temporary total disability. In 1939, temporary total disabilities accounted for 85 percent of all cases and 31 percent of incurred losses; by 1962, the ratios had dropped to 71 percent of all cases and 26 percent of incurred losses.

Despite the relative decline in death and temporary disability cases, the average loss incurred has increased much more rapidly for such cases than for minor permanent disability cases. The average loss incurred for a death case was three and one-half times as great in 1962 as in 1939, and for a temporary disability case it was more than four times as great. In contrast, the loss incurred for an average case of minor permanent disability in 1962 was less than three times that in 1939.

<sup>7</sup> A few States have analyzed similar data for their States. See California, *Report of the Workmen's Compensation Study Commission*, April 1965; Stefan A. Riesenfeld, *Study of the Workmen's Compensation Law in Hawaii* (Legislative Reference Bureau Report No. 1, 1963) University of Hawaii; and Report of the Governor's Workmen's Compensation Review Committee, *Review of Workmen's Compensation in New York State*, December 1962.

### Measuring Real Advances

The substantial growth in benefit outlays since 1939 can be explained by a combination of factors: (1) the rise in the covered labor force; (2) the increase in wage rates and medical costs; and (3) the expansion in the scope and nature of benefits provided. These factors in turn reflect both external economic developments and internal program changes. It may be noted that the 1939 figures exclude the programs of Alaska and Hawaii, which were not included in the series until 1959 when statehood was achieved. Two other States—Arkansas and Mississippi—did not have workmen's compensation acts in 1939.

As already noted, the number of workers covered by workmen's compensation doubled during the past 25 years, and the number of man-hours with exposure to the risk of work injury was thus increased. Mainly because of improvements in industrial safety, however, the increase in the number of work injuries has been nowhere near proportionate to the rise in exposure. According to the Bureau of Labor Statistics, the number of disabling work injuries reported in 1964 was 2,050,000—only 28 percent more than the 1,603,500 reported in 1939 and less than 10 percent more than the 1940 sum of 1,889,700.

Obviously, then, playing a more important role in the sevenfold growth in aggregate benefits has been the increase in benefit levels brought about by rising wages and medical prices. Average wages, to which cash benefits are related, were four times as great in 1964 as in 1939. The price



of medical services was more than twice as great. In an effort to keep pace with rising wage levels, workmen's compensation benefits have been adjusted upward. In 1940, seven States and the District of Columbia were paying a weekly maximum for temporary total disability (excluding dependents' allowances) of more than \$20, 29 were paying \$16-\$20, and 12 were paying \$15 or less. By 1965, 14 States and the District of Columbia were paying a weekly maximum of \$55 or more, 22 were paying \$40-\$54, and 15 were paying less than \$40.

Increased benefit outlays also reflect workmen's compensation changes made to effect real improvements in the scope and nature of the protection. In this category are such changes as addition of dependents' allowances, adoption of unlimited benefits in case of permanent disability and death, liberalization of waiting period provisions, removal of limits on medical care benefits, and extension of coverage to occupational diseases.

Eleven out of 49 laws in 1940 provided additional benefits to injured workers if they had qualified dependents. In 1965, the ratio was 17 out of 52. In 1940, 16 programs paid permanent total benefits for life or the duration of the disability; by 1965, the number had doubled. In death cases, seven jurisdictions in 1940 provided benefits to the widow for life or until remarriage; in 1965, the number was 12.

In 1965, 18 programs required less than a 7-day waiting period before cash benefits begin, compared with 12 programs in 1940. All but two States in 1965 had provisions for paying benefits retroactively to include the waiting period, if the disability continued beyond a specified number of days; in 1940, 16 States lacked such provisions.

Medical benefits were paid without limit as to time and amount under 13 laws in 1940. By 1965, the number had increased to 42.

Workmen's compensation laws have also been broadened to cover occupational diseases as well as injuries. In 1940, only 26 laws out of 49 compensated for occupational diseases or for designated diseases of this class. In 1965, all but one State had made express provisions for diseases.

A significant question is the extent to which the substantial rise in benefit payments from 1939 to 1964 may be traced to real improvements in the effectiveness of workmen's compensation pro-

TABLE 6.—Aggregate benefits as percent of payroll in covered employment and rates of injury frequency and injury severity in manufacturing, 1940, 1946, and 1948-64

Year	Benefits as percent of payroll	Injury frequency rates <sup>1</sup>	Injury severity rates <sup>2</sup>
1940.....	0.72	15.3	1.6
1946.....	.54	19.9	1.6
1948.....	.51	17.2	1.5
1949.....	.55	14.5	1.4
1950.....	.54	14.7	1.2
1951.....	.54	15.6	1.3
1952.....	.55	14.3	1.3
1953.....	.55	13.4	1.2
1954.....	.57	11.5	1.0
1955.....	.55	12.1	637
1956.....	.55	12.0	712
1957.....	.56	11.4	754
1958.....	.58	4 11.4	761
1959.....	.58	12.4	752
1960.....	.59	12.0	753
1961.....	.61	11.8	698
1962.....	.62	11.9	698
1963.....	.62	11.9	689
1964.....	.62	12.7	(3)

<sup>1</sup> Average number of disabling work injuries per million employee-hours worked.

<sup>2</sup> For years before 1955, average number of days lost for each 1,000 employee-hours worked. In 1955 the basic computation was changed to average number of days lost per million hours, and different and more exact time charges were used in evaluating permanent impairments. Rates for years after 1954 are therefore not comparable with those of earlier years.

<sup>3</sup> Not available.

<sup>4</sup> Beginning 1958, new series based on revised Standard Industrial Classification Manual. The comparable 1958 figure under the old series was 10.8.

Source: Work-injury rates from published and unpublished data of the Bureau of Labor Statistics.

grams—other than what was the result of labor-force growth and increases in wage levels and medical care prices. Some light on this question can be thrown by relating aggregate benefits to payrolls covered by workmen's compensation (which reflect the growth in coverage and wage levels). This relationship gives some indication of the extent to which benefits have kept pace with the rise in the number of workers covered, with the rise in the wage rates, and indirectly with the increasing costs of hospitalization and medical benefits.

Table 6 shows that, after dipping to a postwar low of 0.51 percent in 1948, the ratio of benefits to payroll has risen gradually to a postwar high of 0.62 percent in 1964. This ratio is still considerably below the 0.72 percent recorded in 1940.

These data would appear to indicate that during the 1940's the workmen's compensation programs had fallen behind in providing effective and adequate wage-loss and medical care protection against work-connected accidents but that statutory changes in the last decade have been making up some of the ground lost in the previous decade. The assessment, however, is not complete without taking into consideration changes in the frequency and severity of work injuries.

Obviously, reduced benefit outlays as a percentage of payroll may reflect improved accident experience as well as outdated benefit provisions.

The number of work injuries per million employee-hours was fairly high in the 1940's but dropped during the early 1950's and, with some fluctuations, has leveled off in recent years (table 6). The severity-of-injury rates show a similar long-term trend, though with some year-to-year differences from the injury-frequency rates.

The relatively high accident load in the 1940's, accompanied by low benefit outlays as a percent of insured payroll, would bolster the conclusion that the workmen's compensation program was not kept up to date in the immediate postwar period. The subsequent improvement in accident experience during the 1950's, together with a rising benefit-payroll ratio, lends weight to the conclusion that statutory liberalizations in this decade were beginning to bring benefit changes in line with current economic developments.

### Proportion of Wage Loss Compensated

One measure of the effectiveness of a workmen's compensation law is the extent to which it is replacing the wages lost as the result of disabilities incurred while the worker was employed. No law provides full indemnification for the loss sustained. An examination of workmen's compensation laws as of December 1965 shows that the intent of most of the laws, protecting almost 95 percent of the covered workers, is to replace from three-fifths to two-thirds of a worker's weekly wage during total disability, after a waiting period of varying lengths.<sup>8</sup>

Only five States, with fewer than 3 percent of the covered workers, specify a percentage maximum that is less than 60 percent of wages. Two States have maximums that are more than two-thirds of weekly wages. In six States and the program for Federal employees the statutory percentage is higher for injured workers with dependents. When these higher rates are included, only one State (with less than 1 percent of

covered employment) has a maximum of less than 60 percent of wages; five States and the Federal program (with 15 percent of covered jobs) have maximums higher than two-thirds.

The intent of a law and what is actually paid are for most States, however, two different matters. In every jurisdiction the statutory percentage of the weekly wage used to compute the weekly benefit for temporary total disability is subject to a weekly dollar maximum. These maximums generally operate to keep a large proportion of workers from receiving the full statutory percentage, especially in periods of rising wages. In 1939, for example, three-fifths of the laws provided a maximum of less than \$20 a week and \$25 was the highest amount payable. These maximums were nevertheless high enough, in all but 3 States, to permit a worker with earnings the same as the average wage for those covered by unemployment insurance to receive under workmen's compensation the proportion of his wage loss specified in the statute.

Twenty-five years later, despite periodic legislative increases in the maximum dollar amount of weekly benefits, this was the situation in only a few States. During this period weekly wages rose by 307 percent for the average worker covered by unemployment insurance, but the rise in dollar maximums in most States ranged from 100 percent to 200 percent for a worker without dependents. Only 11 laws had increased their dollar maximums by more than 200 percent. Five States had increased their maximums less than 100 percent during the 25-year period.

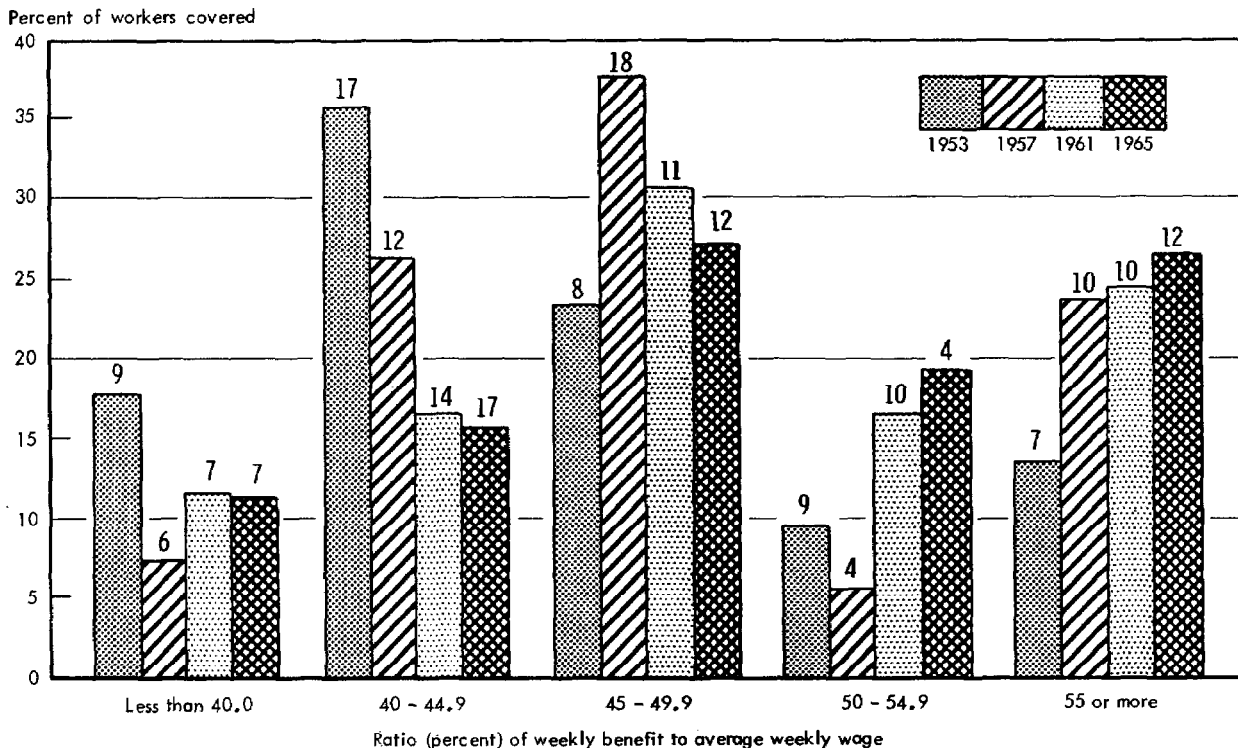
Consequently, in 1965 only five programs (including the system for Federal employees) with 7 percent of the covered workers had weekly maximums that were high enough to permit the statutory percentage to be effective for workers with average wages (though not for many workers with higher-than-average wages). One of them—Maine—provides for a flexible maximum amount that is recomputed annually at 66 2/3 percent of the State's average weekly wage.<sup>9</sup>

The actual portion of wage loss replaced varies among the States (depending on the benefit

<sup>8</sup> Department of Labor, Bureau of Labor Standards, *State Workmen's Compensation Laws*, Bulletin 161, September 1964, and unpublished data. In the State of Washington, flat benefits are paid, regardless of wages, varying only with number of dependents.

<sup>9</sup> Two other States (Connecticut and Kentucky) with flexible maximums are not included among the five programs since the statutory percentages in their laws are still higher than the percentage guaranteed by the flexible maximum for the average worker.

CHART 2.—Distribution of covered workers and of jurisdictions, by ratio of actual weekly benefits payable for temporary total disability to weekly wages, for a worker with average weekly wage in the preceding year, selected years, 1953-65<sup>1</sup>



<sup>1</sup> Benefits are those payable to worker without qualified dependents. Figures above bars represent number of jurisdictions.

formula in the law) and within a State from one period to another (depending on the timing of statutory changes). Some insight into trends is gained from calculating for a worker with the average weekly wage in each State, an effective benefit rate based on the ratio of benefits payable to wages. Such calculations (with dependents' allowances excluded) have been made at periodic intervals starting with the 1940 laws, using the average weekly wage of each State (as shown by unemployment insurance data) in the preceding year.

Under the 1940 laws, a worker in receipt of the average 1939 wage would have been paid a benefit of 55 percent or more of his wage in 35 jurisdictions. In only 2 States would he have received less than 45 percent. By 1949 this situation had so deteriorated that only 16 jurisdictions had a benefit-wage ratio of 55 percent or more, and 18 States had an effective benefit rate of less than 45 percent. The low point was reached in 1953 when effective benefit rates of 55 percent or more

were calculated for only 7 programs and rates of less than 45 percent for 26 States.

Since 1953, the situation has improved moderately. Chart 2 gives the State distribution of effective benefit rates, in terms of both covered workers and number of jurisdictions, for 1953, 1957, 1961, and 1965. (State distributions by covered workers first became available with 1953 data.)

Under the laws effective at the end of 1965, a worker receiving the average wage for 1964 would have been paid a benefit amounting to 50 percent or more of his wage in 16 jurisdictions encompassing 46 percent of all covered employment. In 1961 the jurisdictions in this category, while slightly more in number, accounted for only 41 percent of total coverage. The improvement is most marked since 1953 when the jurisdictions having effective benefit rates of 50 percent or more of the preceding year's average wage, accounted for only 23 percent of total coverage.

A similar story unfolds at the other end of the range. In 1953, there were 26 States, covering more than half the workers, with an effective benefit rate of less than 45 percent. The proportion of workers in this category dropped to one-third in 1957, and dropped still further in 1961 and 1965 to 28 percent and 27 percent, respectively. These declines occurred despite the fact that the number of States in the category increased during the period. It is obvious that the smaller States are having more difficulty in keeping their programs abreast of economic developments.

Chart 3 in its left panel shows for each State the actual proportion of weekly wages that a worker receiving the average 1964 wage would have been paid in benefits during a period of temporary total disability under the statutory percentages and dollar maximums effective in December 1965.

In 1965 for the Nation as a whole the weekly rate of compensation, weighted by coverage, for a single worker with average wages was estimated at \$52.98 or 49.6 percent of the nationwide average weekly wage. This ratio is practically unchanged from the 1961 ratio of 49.9 percent, though it is greater than that calculated for 1957 (48.0 percent).<sup>10</sup>

In 16 jurisdictions<sup>11</sup> additional amounts are provided for injured workers with qualified dependents. In these areas, the rate of compensation for a worker with the maximum number of dependents in 1965 was \$76.55 or 68.4 percent of the average weekly wage. Even a single worker in these jurisdictions fared somewhat better than a single worker in the States without dependents' allowances. His benefit-wage ratio was 52.6 percent, compared with 48.5 percent in the 36 areas that do not have dependents' allowances.

Four years earlier—in 1961—only 15 States had dependents' allowances and the proportion of the average wage replaced for a worker with the

maximum number of qualified dependents was 64.7 percent—almost 4 percentage points less than the 1965 ratio.

Since workmen's compensation benefits are not subject to Federal income or social security taxes, the percentage of actual "take-home" pay received by a worker in benefits is greater than those shown above. A worker with no dependents, earning the average weekly wage of \$106.82 in 1964, had weekly take-home pay of \$87.43 after deductions of \$16.04 for Federal income taxes (assuming the standard deduction) and \$3.35 for contributions for social security. During periods of total disability, therefore, the \$52.98 he received in weekly compensation benefits replaced 61 percent of his take-home pay. A married man with two dependent children had a higher take-home pay, and only 54 percent of his pay was offset in the States without dependents' allowances and 73 percent in the 16 jurisdictions with them.

If the above computations had been based on 1965 average wages, the ratio of benefits to take-home pay would have been somewhat smaller because of the lower income-tax rates that applied to wages in that year.

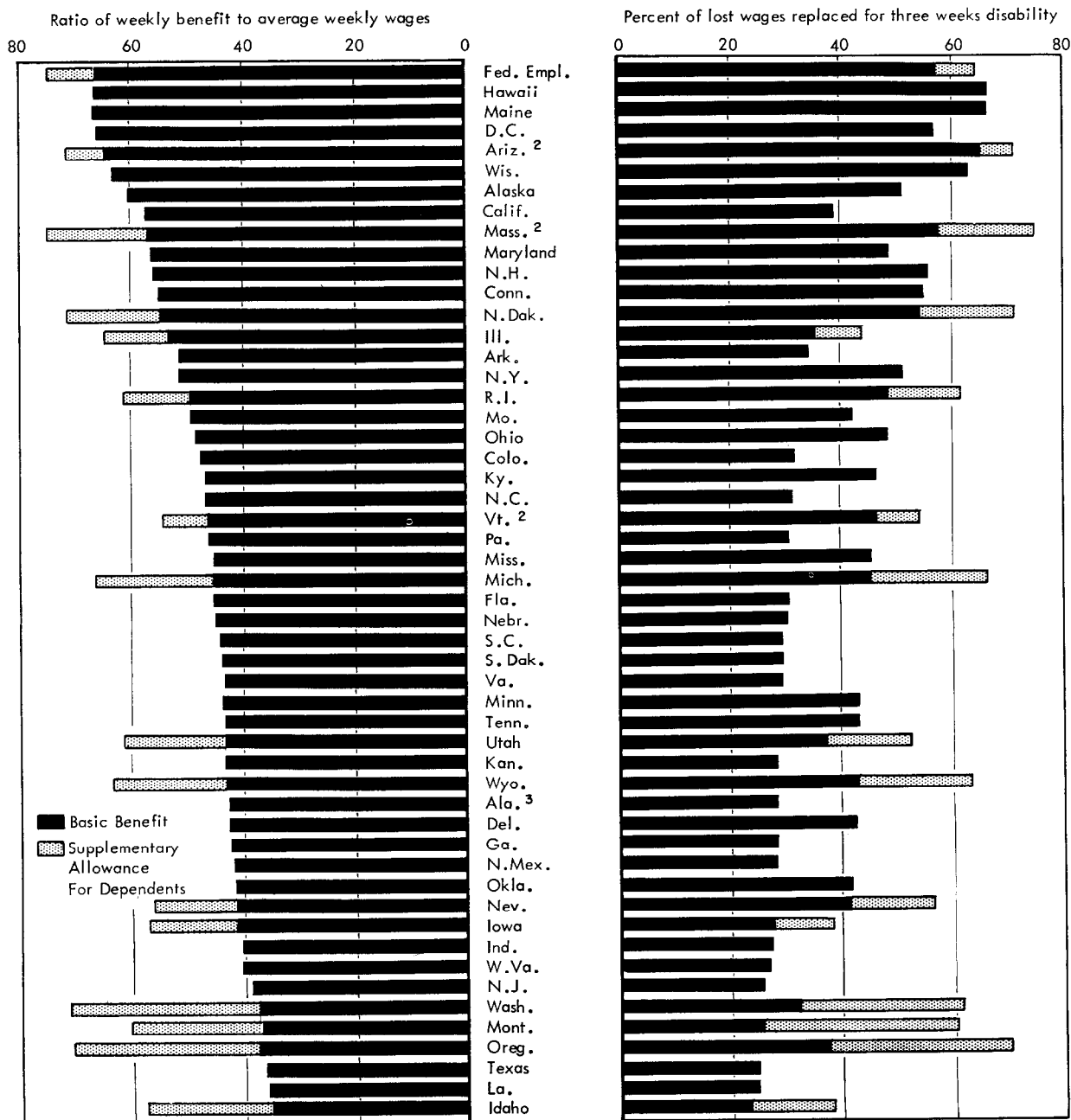
*Waiting-period provisions.*—In measuring the extent to which overall wage loss is being replaced under workmen's compensation laws, another factor to consider is the waiting period that must elapse after the injury date before cash benefits are payable. This is an especially important consideration in temporary disability cases, which last, on the average, about 18 calendar days in manufacturing industries (according to 1963 data from the Bureau of Labor Statistics).

As of December 1965, all jurisdictions require a waiting period; 34 States with 82 percent of covered employment have a 7-day waiting period and the remaining jurisdictions require 2–5 days. All but 2 States provide that if the disability continues for a specified period of time the payment of benefits is retroactive to the date of injury. Almost 2 out of 5 covered workers are employed in the 22 States requiring less than 22 days for the retroactive provisions to become effective. About 45 percent of the workers are in the 24 jurisdictions requiring at least 28 days

<sup>10</sup> Using similar methods, Arthur H. Reede estimated that the weighted average rate of compensation for 1940 was 63.7 percent of past earnings, (*Adequacy of Workmen's Compensation*, Harvard University Press, 1947, page 148).

<sup>11</sup> Alabama's program, which provides for a statutory percentage that is higher for a worker with dependents, is excluded here because its maximum is the same for the worker with average wages whether or not he has dependents.

CHART 3.—Measures of interstate variation: Weekly benefit payable for temporary total disability as percent of average weekly wage, 1964, and percent of lost wages replaced for worker with 1964 average weekly wage for temporary total disability lasting 3 weeks, December 1965<sup>1</sup>



<sup>1</sup> Maximum weekly benefit for worker with and without eligible dependents under laws paying dependents' allowances; average wage for workers covered by unemployment insurance program (for Connecticut, "average production" wage is used).

<sup>2</sup> Assumes 3 dependents.

<sup>3</sup> Maximum same for worker earning average wage whether or not he has dependents, but compensation for worker with dependents is based on higher proportion of wages.

—some of them calling for a period as long as 6 weeks.

The past quarter century has seen a substantial improvement in the situation. In 1940, 16 States had no retroactive provisions in their laws. Of the remaining 33 jurisdictions, only 11 did not require that the disability last for more than 21 days if benefits for the waiting period were to be payable. By 1953, the number of States not having retroactive benefit provisions had declined to 11; the number not requiring that the disability last 22 days or longer rose to 14 States.

The effect of waiting-period provisions, on wage-loss replacement, as of December 1965, is shown in chart 3 on the right. For each State, total benefits payable for the first 3 weeks of temporary total disability are related to the wage loss of a worker (with and without dependents) receiving the average 1964 weekly wage in his jurisdiction.

For the Nation as a whole the proportion of wage loss replaced during the first 3 weeks of disability, when weighted by coverage, equals 40.6 percent for the single worker with average wages. This represents an improvement over the situation four years earlier when the proportion was 37.3 percent. At that time States with retroactive provisions were one fewer than in 1965, and two fewer required less than 22 days for the retroactive provisions to become effective.

It is difficult to translate these estimates on proportions of wage loss compensated for the average worker into overall ratios of wage loss. Influencing the latter are such factors as the dispersion of wages and benefits around the average and the distribution of temporary disabilities by duration. For workers with higher-than-average wages it is obvious that the proportions of wage loss replaced will be smaller as the dollar maximums come into full play. For workers with below-average wages the wage-replacements ratios may be higher, especially when statutory minimums become effective.<sup>12</sup>

<sup>12</sup> Various sources indicate that the average wage of workers suffering industrial injuries is somewhat lower than the average wage for the labor force in general. The National Council on Compensation Insurance, for example, reported that in 1964 the average weekly earnings of an injured worker was \$93.17 (in the jurisdictions for which data were collected). The national average weekly wage for that year was \$106.82 (based on unemployment insurance data for 50 States and the District of Columbia).

Similarly, workers with shorter periods of disability than the average will have a smaller proportion of their wage loss compensated because of the limiting effects of waiting period provisions. Workers with longer-than-average periods of disability would have a somewhat greater proportion of their overall wage loss replaced because of the provisions for retroactive payments of benefits, as well as because of the declining importance of the waiting period in calculating the wage-replacement ratio. In 36 States and the District of Columbia, however, there are monetary or time limits that may prevent payment of benefits throughout the entire period of the temporary disability, though few temporary disabilities last long enough to be affected by such restrictions.

All in all, it appears likely that workmen's compensation is leaving unmet considerably more than one-half the total wage loss in temporary disability cases.

*Death and permanent disability benefits.*—For work injuries that result in death or permanent disability, the proportion of the wage loss compensated is even smaller, partly because the compensation is more likely to be subject to statutory maximums on duration or amount of payments.

Under the laws in effect in December 1965, only 20 jurisdictions, with 42 percent of the coverage, provide death benefits to the widow for life or until remarriage and to children until grown, and eight of these, with 19 percent of covered employment, limit the total amount payable. In seven other States, covering 15 percent of the workers, survivors' benefits without restrictions as to duration or amount are paid only to dependent children. These provisions have undergone little change in recent years.

In 32 jurisdictions covering three-fifths of all workers, permanent total disability benefits are limited as to duration, amount, or both, the time periods range from 330 to 550 weeks, and the money limitations from \$10,000 to 30,000.

Evidence continues to mount that workmen's compensation programs are less effective in compensating for injuries that are permanent or result in death than those of shorter duration.

Using methods developed by Earl F. Cheit,<sup>13</sup> the Kentucky Legislative Research Commission, upon the request of the State General Assembly, conducted a sample survey of widows and permanently disabled workers who filed claims in the fiscal year 1957-58 to determine the impact of workmen's compensation.<sup>14</sup> The Commission found that for death claims, the workmen's compensation program in Kentucky replaced 13.3 percent of the median economic loss to survivors. In permanent disability cases, two-fifths of those suffering permanent wage loss had less than 10 percent of their wage loss restored by workmen's compensation. One-sixth had between 10 and 29 percent of their wage loss replaced.

The Social Security Administration has made some rough State-by-State calculations on the proportion that workmen's compensation benefits represents of the earnings a totally and permanently disabled worker could expect to have received if he lived to age 65 and did not become disabled.<sup>15</sup> The calculations were made on the basis of the permanent total disability provisions in effect as of October 1963, for workers with typical average earnings in the respective States (based on unemployment insurance data for 1962).

The States are grouped below by the ratio of workmen's compensation benefits to wages for a worker disabled at age 40 with a dependent wife and a child aged 8 (assuming no increase in earnings or benefit levels from the date of injury to age 65). The disabled worker would receive workmen's compensation benefits of less than 35 percent of his assumed wages in 29 States and of 50 percent or more in only 8 States and the District of Columbia. In 18 States, he would receive less than 15 percent. Most of these States

had had monetary or time limitations on the payment of benefits.

<i>Less than 15 percent</i>	<i>35 to 49.9 percent</i>
Alabama	Alaska
Arkansas	California
Georgia	Colorado
Indiana	Delaware
Kansas	Florida
Kentucky	Nevada
Louisiana	Ohio
Mississippi	Oregon
New Hampshire	Pennsylvania
New Jersey	Rhode Island
North Carolina	Utah
Oklahoma	Washington
South Carolina	West Virginia
South Dakota	
Tennessee	<i>50 percent or more</i>
Texas	Arizona
Vermont	Connecticut
Virginia	District of Columbia
	Hawaii
<i>15 to 34.9 percent</i>	Illinois
Idaho	Massachusetts
Iowa	New York
Maine	North Dakota
Maryland	Wisconsin
Michigan	
Minnesota	
Missouri	
Montana	
Nebraska	
New Mexico	
Wyoming	

These calculations do not take into account future wage increases that the worker, if he had not become disabled, might reasonably be expected to have had through possible advances into better-paying jobs and through cost-of-living pay increases and increases resulting from the growth of productivity. Since few workmen's compensation laws provide for periodic increases to beneficiaries on the rolls as wages rise, the replacement ratios are overstated. Only six jurisdictions—the Federal system, Michigan, and four exclusive-fund States (Nevada, Ohio, Oregon, and Washington)—provide for augmenting the lifetime awards of persons living in the present on benefit levels of the past.

The unmet wage loss is not, of course, a measure of the overall cost of industrial injury that the worker must meet. If he lives in a State that has time or money restrictions on the medical benefits furnished, his costs may include a part of the medical or hospital bills. As of December 1965, there were 11 such States, with 10 percent of the covered workers. Another 11 States limit

<sup>13</sup> Earl F. Cheit, *Injury and Recovery in the Course of Employment*, John Wiley & Sons, Inc., 1961. Some highlights from this study were included in the *Bulletin* article of June 1962.

<sup>14</sup> Barbara W. Caswell, *Workmen's Compensation Benefits in Kentucky*, Kentucky Legislative Research Commission, Research Report No. 19, 1963.

<sup>15</sup> The basic data are published in U. S. Congress, Senate Committee on Finance, *Hearings on H. R. 6675, Social Security, Part II*, 1965, pages 915-921.

the medical benefits that are paid in cases of occupational diseases.<sup>16</sup>

In addition, the worker may have to pay his own legal fees to have his claim brought to a successful conclusion. These fees may range up to a third of the cash compensation awarded, although in some States the financial burden of paying fees can be shifted to the employers or carriers under specified conditions. Also, in the case of severely disabled workers, there may be certain fringe benefits provided through the place of employment that may be lost.

Finally, consideration should be given to the wage loss and medical bills of employees who find themselves excluded from the protection of the workmen's compensation program because of the type of employment or type of injury or disease experienced. There are still 20 States, with slightly less than one-fifth of the covered employment, that have less than full coverage of occupational diseases; one of these States has none.

It is thus clear that much the larger share of the cost of industrial accidents falls on the worker and his family or on public assistance or private charity—far from the original intent of workmen's compensation.<sup>17</sup> At the same time, recognition should be given to the economic relief that some injured workers receive through employee-benefit plans that are increasingly being used to supplement the statutory workmen's compensation benefits or pay cash sickness and medical care benefits in cases not covered by workmen's compensation.<sup>18</sup> Even more significant in the case of injuries that result in death or long-term

disability may be the benefits payable, in addition to workmen's compensation, under the provisions of the Social Security Act. For a totally disabled worker, the additional social security benefits, in combination with workmen's compensation benefits, may equal as much as 80 percent of his average monthly earnings (as defined in the Act) before he became disabled.<sup>19</sup>

### Relation to Payroll

Chart 4 presents another rough measure of the interstate variation in workmen's compensation benefits by relating aggregate cash indemnity and medical benefits to payroll in covered employment. The proportions computed for 1964 vary from a low of 0.35 percent in Indiana to a high of 1.46 percent in Oregon. In 13 States and the system for Federal employees, accounting for 36 percent of the covered work force, aggregate benefit payments amounted to less than 1/2 of 1 percent of covered payroll. Only in seven States with 5 percent of covered employment, did benefit payments absorb as much as 1 percent of payroll.

A geographic pattern of benefits as a percent of payroll is not clearly discernible, but for the most part, the lowest ratios are found in the industrial States of the Midwest and the eastern seaboard.

Comparing chart 4 with chart 3 shows little correlation between the statutory provisions for compensating temporary total disability and the aggregate amounts expended for all types of benefits as percent of payroll. States with relatively liberal benefit provisions are among those expending the lowest proportion of payroll for benefits, and vice versa.

Seventeen jurisdictions made up the third with the highest wage-replacement ratio (including dependents' allowances) in terms of the percentage of wages replaced for the first 3 weeks of temporary disability. Only 4 of the 17 were also in the top third with respect to benefits as a percent of payroll, and six actually were in the bottom third in terms of benefit-payroll ratios.

<sup>19</sup> Before the establishment of the offset provision by the 1965 amendments to the Act, full benefits under both systems could be payable to a totally disabled worker. There is still no limit on the combined benefits payable for disabilities that began before June 1965.

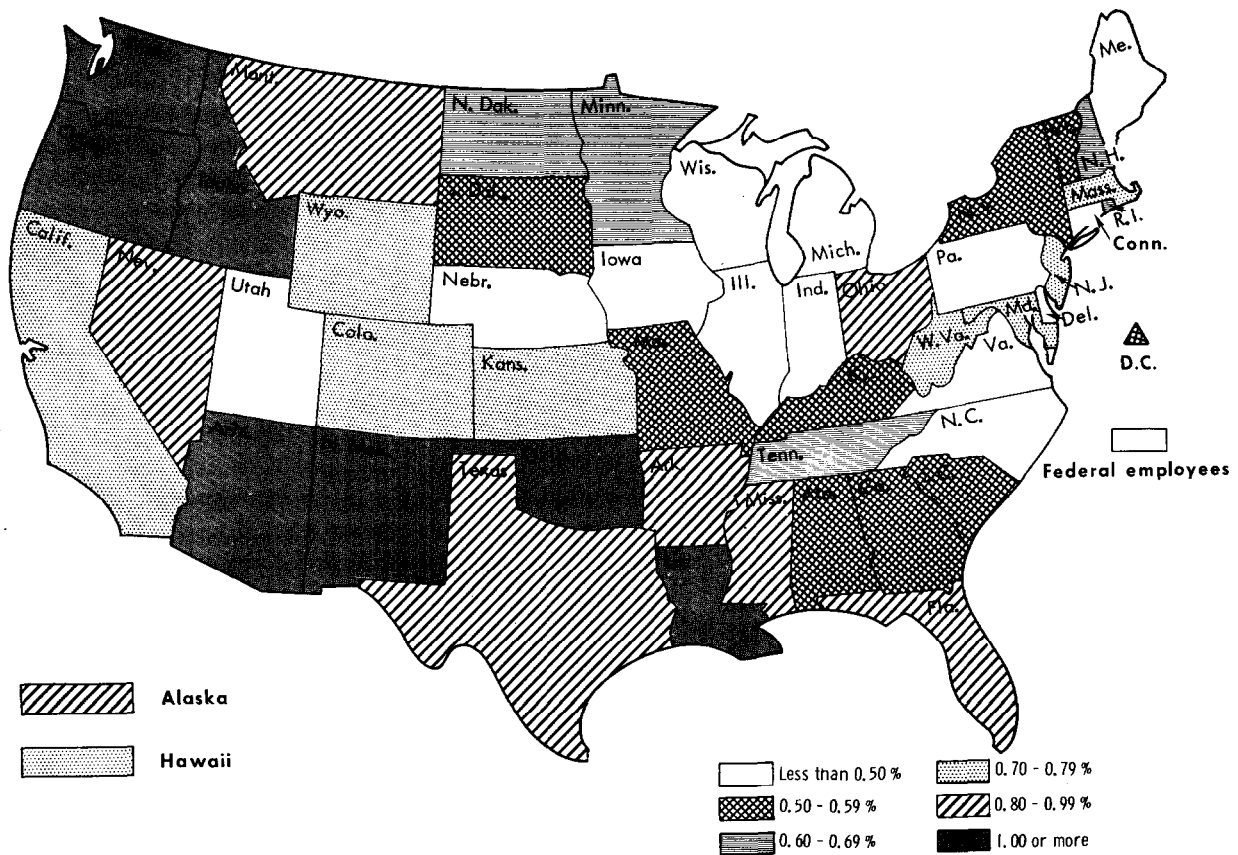
<sup>16</sup> A discussion of the effects of limited medical care on individual workers may be found in Earl F. Cheit, *Medical Care Under Workmen's Compensation*, Department of Labor, Bureau of Labor Standards (Bulletin 244), 1962, pages 12-16.

<sup>17</sup> According to a study of severely disabled persons in the New York metropolitan area who were receiving workmen's compensation benefits, 63 percent relied on savings while out of work after the injury, 40 percent borrowed money, 39 percent received help from friends or relatives, and 15 percent had family members who went to work. (Some persons received support from two or more sources.) Only 5 percent, however, became public welfare charges. A. J. Jaffee, Lincoln H. Day, and Walter Adams, *Disabled Workers in the Labor Market*, The Bedminster Press, 1964, pages 133-136.

<sup>18</sup> For a thorough review of the types of supplemental benefits that may be payable in case of injury or death on the job, see Harland Fox, "Corporate Supplements to Workmen's Compensation," in *Occupational Disability and Public Policy* (edited by Earl F. Cheit and Margaret S. Gordon), John Wiley & Sons, Inc., 1963.



CHART 4.—Total benefits as a percent of payrolls in covered employment, by jurisdiction, 1964



Similarly, of the 17 jurisdictions with the lowest wage-replacement ratio, seven were in the group with the lowest benefit-payroll ratio and five in the category with the highest.

Even when other benefits, such as medical services and cash indemnity payments in permanent disability and death cases, are taken into consideration, the correlation is little changed. An overall benefit index, for 25 States with comparable data, that takes into account all these other benefits has been constructed by John F. Burton, Jr.<sup>20</sup> This index, which is intended to show how the States ranked with respect to the liberality of their laws, has been compared with the ranking of States by their benefit-payroll ratios as shown in chart 4. Of those States with above-average liberality only one-third had registered above-average benefit-payroll ratios and a

similar lack of correlation existed with respect to States with below-average liberality.

It is apparent from these data that many factors other than statutory benefit provisions influence the benefit-payroll ratio and the variations among States in these ratios. These include: (1) the frequency and severity of work injuries as affected by the hazardous nature of a State's industries, by the age, sex, and occupational composition of the labor force, and by the effectiveness of safety and rehabilitation programs; (2) the level and distribution of wages and the size of the group at risk; (3) the methods used to underwrite the risk; (4) the regional differences in cost and accessibility of medical care and (5) the administrative and legal procedures and policies used in evaluating, adjudicating, and policing claims.<sup>21</sup>

<sup>20</sup> John F. Burton, Jr., *The Significance and Causes of the Interstate Variations in the Employers' Costs of Workmen's Compensation*, Ph.D. Dissertation, the University of Michigan, 1965, pages 134-165.

<sup>21</sup> A full discussion of these factors and others, in an attempt to quantify them as causes of interstate variations in benefit costs, is found in John Burton, *op. cit.*, pages 187 ff.

## COST

The total cost of workmen's compensation to employers<sup>22</sup> is made up of several elements. In addition to benefit costs (commonly termed "pure premium"), there are the overhead costs (known as "expense loading") of insuring the risk, which are reflected in the premium (manual) rates or their "equivalent" that employers pay to insure or self-insure the risk of work injury. Included in the overhead are the expenses of policywriting, ratemaking, payroll auditing, claims investigation and adjustment, safety inspection, legal and medical services, and general administration. In self-insurance, some of these overhead expenses are eliminated or reduced, but in insurance provided by commercial carriers there are additional charges, such as acquisition costs (commissions and brokerage fees), taxes and licenses, and allowances for underwriting profit and gain.

Annual costs for employers in the aggregate have risen in the 1960's (table 7). In 1964, they reached 1 percent of payroll in covered employment for the first time since the early 1940's. For most of the 1950's, workmen's compensation costs were relatively low, hovering at 89-92 cents per \$100 of covered payroll.

These overall cost ratios, of course, conceal the wide differences that exist among individual employers. The major factors in these differences are the employer's industrial classification and the hazards of that industry as modified by experience rating. The premium rate an employer pays, compared with the rate for the same industrial classification in another State, also reflects the level of benefits provided in his jurisdiction. His costs are also influenced by the method he uses to insure his compensation liability—through a commercial carrier, through an exclusive or competitive State fund, or through carrying his own risk—and the proportion of his premium assigned to acquisition costs and costs for services and general administration.

Studies made by the Bureau of Labor Statistics and the Chamber of Commerce of the United States indicate the extent of these industry differences. The BLS, for example, in its sample

<sup>22</sup> Except in a few Western States that require employee contributions—primarily toward the cost of medical care—workmen's compensation is entirely employer-financed.

survey of employer expenditures for selected fringe benefits reported that such expenditures in 1962 for workmen's compensation averaged 1.0 percent of gross payroll for production and related workers in manufacturing industries, amounting to 2.4 cents per hour paid.<sup>23</sup> The range was from 0.3 percent of gross payroll in the tobacco industry to 3.0 percent in the lumber and wood products industry. In general, the study found that establishments with fewer than 100 employees had the highest expenditures for workmen's compensation.

TABLE 7.—Estimated costs of workmen's compensation to employers as percent of payroll in covered employment, 1940, 1946, and 1948-64

Year	Amount <sup>1</sup> (in millions)	Percent of payroll
1940.....	\$421	1.19
1946.....	726	.91
1948.....	1,013	.96
1949.....	1,009	.98
1950.....	1,013	.89
1951.....	1,185	.90
1952.....	1,333	.94
1953.....	1,483	.97
1954.....	1,499	.98
1955.....	1,532	.91
1956.....	1,666	.92
1957.....	1,734	.91
1958.....	1,746	.91
1959.....	1,869	.89
1960.....	2,055	.93
1961.....	2,156	.95
1962.....	2,323	.96
1963.....	2,510	.99
1964.....	2,737	1.00

<sup>1</sup> Premiums written by private carriers and State funds and benefits paid by self-insurers increased by 5-10 percent to allow for administrative costs. Also includes benefit payments and administrative costs of Federal system. Where necessary, fiscal-year data converted to calendar-year data. Before 1959, excludes Alaska and Hawaii.

Other BLS studies for nonmanufacturing industries show similar variations. In the mining industry, workmen's compensation expenditures averaged 3 percent of the gross payroll for production workers in 1960.<sup>24</sup> In fact, for this industry, workmen's compensation was the most expensive of the legally required benefits. A study of the finance, insurance, and real estate industries shows, in contrast, that expenditures for workmen's compensation equaled only 0.2 per-

<sup>23</sup> Bureau of Labor Statistics, *Employer Expenditures for Selected Supplementary Compensation Practices for Production and Related Workers, Composition of Payroll Hours, Manufacturing Industries, 1962* (Bulletin No. 1428), 1965, table 23.

<sup>24</sup> Bureau of Labor Statistics, *Employer Expenditures for Selected Supplementary Remuneration Practices for Production Workers in Mining Industries, 1960* (Bulletin No. 1332), 1963, table 17.

cent of the gross payroll for all employees in 1961.<sup>25</sup> Another BLS study provides a contrast in costs between production and nonproduction workers.<sup>26</sup> Reflecting the low incidence of accidents among white-collar employees, workmen's compensation programs (including the Federal Employers' Liability Act) entailed expenditures of only 0.3 percent of basic salaries in 1963 for nonproduction workers (in both manufacturing and nonmanufacturing industries).

Similarly, the Chamber of Commerce in its 1963 sample survey of fringe benefits reported workmen's compensation costs incurred by employers equal to 0.9 percent of gross payroll in manufacturing industries and 0.5 percent in non-manufacturing industries, for an overall ratio of 0.8 percent.<sup>27</sup> These rates ranged from a low of 0.1 percent for banks, finance, and insurance companies to a high of 1.3 percent in stone, clay, and glass products and in primary metal industries.

Not only do costs vary from one industry to another but also from one State to another, as might be anticipated from the State differences noted in aggregate benefit-payroll ratios. Policy-year data for 1962 from the National Council on Compensation Insurance show that earned premiums as a percentage of insured payrolls ranged from 0.6 percent in Utah to 2.4 percent in Louisiana with a national average of 1.3 percent. About two-fifths of the States had rates of 0.8–1.1 percent, and only three had rates lower than 0.8 percent. The rates were 1.4 percent or more in about 3 out of 10 of the jurisdictions, including three with rates of 2.0 percent or more. These rates do not differ materially from those computed for other policy years after World War II (such as 1946, 1954, and 1958), but they are lower than the rates computed for 1940. At that time, two-fifths of the States had rates of 1.4

<sup>25</sup> Bureau of Labor Statistics, *Employer Expenditures for Selected Supplementary Remuneration Practices, Finance, Insurance, and Real Estate Industries, 1961* (Bulletin No. 1419), 1964 page 34.

<sup>26</sup> Bureau of Labor Statistics, *Supplementary Compensation for Nonproduction Workers, 1963* (Bulletin No. 1470), 1965, table 1.

<sup>27</sup> Chamber of Commerce of the United States, *Fringe Benefits 1963, 1964*, table 15.

TABLE 8.—Comparative loss ratios, private carriers, 1950–64<sup>1</sup>

[Amounts in millions]

Year	Direct writings related to direct losses paid <sup>2</sup>			Earned premiums related to incurred losses <sup>3</sup>		
	Direct writings <sup>4</sup>	Direct losses paid	Loss ratio	Earned premiums <sup>4</sup>	Incurred losses	Loss ratio
Total..	\$19,052.9	\$10,312.9	54.1	\$18,045.3	\$11,215.7	62.2
1950.....	721.5	381.3	52.8	696.6	427.7	61.4
1951.....	844.5	444.4	52.6	789.9	518.5	65.6
1952.....	956.3	491.0	51.3	903.7	571.9	63.3
1953.....	1,074.1	524.2	48.8	1,010.6	605.4	59.9
1954.....	1,067.3	540.5	50.6	1,010.8	561.4	55.5
1955.....	1,078.4	562.5	52.2	1,027.9	594.3	57.8
1956.....	1,152.8	618.1	53.6	1,103.4	649.3	58.8
1957.....	1,234.1	660.9	53.6	1,173.5	706.7	60.2
1958.....	1,235.0	694.4	56.2	1,193.9	746.6	62.5
1959.....	1,322.5	752.6	56.9	1,271.4	821.7	64.6
1960.....	1,452.3	809.9	55.8	1,367.9	874.2	63.9
1961.....	1,530.9	850.9	55.6	1,434.0	930.8	64.9
1962.....	1,651.1	924.0	56.0	1,562.6	982.1	62.8
1963.....	1,782.3	987.6	55.4	1,671.3	1,071.7	64.1
1964.....	1,949.8	1,070.6	64.9	1,827.8	1,153.4	63.1

<sup>1</sup> Before 1959, excludes Alaska and Hawaii.

<sup>2</sup> Data for 1950–58 from *Spectator: Insurance by States of Fire, Marine, Casualty, Surety and Miscellaneous Lines*, annual issues. 1959–64 data compiled from published and unpublished reports of the State insurance commissions.

<sup>3</sup> From National Council on Compensation Insurance, *Insurance Expense Exhibit (Countrywide)*, annual issues.

<sup>4</sup> Disregards dividends to policyholders but allows for premium discounts and retrospective rating.

percent or more, while fewer than one-third of the jurisdictions had rates that were lower than 1.2 percent.<sup>28</sup>

Once again it should be cautioned that the variation in these ratios, like those of benefits to payrolls, is due to a multiplicity of factors, of which benefit costs is only one.

### Loss and Expense Ratios

A comparison of the benefits paid (table 4) with the premium costs (table 7) gives a rough indication of the proportion of the premium dollar that reaches the injured worker. In 1964, the \$1,705 million paid out in cash and medical benefits amounted to 62 cents for every dollar of the \$2,737 million spent by employers to insure or self-insure their work-injury risks. Between 1958 and 1963, higher proportions of 63–65 percent were registered. Before 1958, the rate of return was lower, with lows of 53 percent and

<sup>28</sup> For a detailed methodology for measuring interstate variations in workmen's compensation costs for selected employer classifications, using primarily National Council data, see John F. Burton, Jr., *Interstate Variations in Employers' Costs of Workmen's Compensation*, W. E. Upjohn Institute for Employment Research, May 1966.

57 percent computed for 1948 and 1953, respectively.

The ratio of benefits paid during the year to insurance costs for the same year—the loss ratio—is subject to considerable misinterpretation. In the first place, the overall ratio conceals sharply varying ratios that result from differences in the insurance mechanisms. Thus, for self-insurers and the system for Federal employees, the ratio is 90–95 percent because the cost is figured on the basis of payments during the year plus administrative expenses. For participating (dividend-paying) carriers—primarily mutual companies—and for some State funds, the ratio is lower than it would be if dividends could be taken into account. That is, the cost for employers insured by these carriers is overstated to the extent that part of their premiums may later be returned in the form of dividends.

For all private carriers and State funds, moreover, a loss ratio based on losses paid during the year is lower than one based on losses incurred. This difference is especially great in a period when insured payrolls are rising rapidly. The large amounts of premium income that must be set aside to cover liabilities for future payments may be considerably higher than the amounts paid during the year in cases continued from earlier years when wages and compensation rates were lower.

The extent of the differences in the loss ratios computed by the two methods may be seen in table 8. Relating losses paid to direct premiums written produces an average loss ratio of 54.1 percent for private carriers for 1950–64. The loss ratio is 62.2 percent when losses incurred are related to premiums earned. The effect of business activity on these differences may be noted. The largest yearly differences were registered in the early 1950's when the upward trend of business and payrolls was most pronounced. As the growth in the economy slackened, the yearly differences narrowed to 5–6 percentage points. Since 1959, these differences have begun to widen again.

Whichever series is used, benefit payments as a percentage of premiums have been higher in the second half of the period 1950–64 than in the first half. There have been some declines in the ratio in the past few years, but the long-term trend is unmistakable.

The relationship of the amount of losses incurred to the premiums earned is the measure commonly used by insurance organizations in evaluating and revising their manual rates. Data needed to determine this ratio are not available in a continuous series going back to 1939 for all private carriers or for State funds. The annual reports of the New York State Insurance Department, however, contain pertinent data on the countrywide business of private carriers operating in the State and representing about 80 percent of all business underwritten for United States employers by insurance companies. From these data, some general observations can be made on the loss ratios, expense ratios, and underwriting gains experienced by stock and mutual insurance companies in underwriting workmen's compensation (table 9).

Caution must be used in comparing loss and expense ratios, since the mode of operation of stock and mutual companies is different. Non-participating stock companies, for example, dis-

TABLE 9.—Countrywide experience of stock and mutual companies operating in the State of New York, 1939–64

[Amounts in thousands]

Year	Premiums earned	Losses incurred	Loss ratio	Expenses incurred	Expense ratio	Net gain ratio
Stock companies						
1939–47, total <sup>1</sup> .....	\$1,934,554	\$1,110,676	57.4	\$733,512	37.9	4.7
1948–56, total <sup>1</sup> .....	3,920,104	2,318,171	59.1	1,403,189	35.8	5.1
1957–64, total .....	6,131,817	3,924,643	64.0	2,119,200	34.5	1.5
1957 .....	614,827	381,808	62.1	215,804	35.1	2.8
1958 .....	625,076	395,673	63.3	218,152	34.9	1.8
1959 .....	650,829	427,595	65.7	226,488	34.8	–.5
1960 .....	724,092	467,936	64.9	254,156	35.1	.0
1961 .....	775,883	507,127	65.7	268,615	34.8	–.5
1962 .....	838,902	529,347	63.1	290,260	34.6	2.3
1963 .....	905,170	577,498	63.8	311,378	34.4	1.8
1964 .....	1,001,038	635,659	63.5	334,347	33.4	3.1
Mutual companies <sup>2</sup>						
1939–47, total <sup>1</sup> .....	\$1,200,334	\$684,948	57.1	\$273,267	22.8	20.1
1948–56, total <sup>1</sup> .....	2,614,500	1,533,125	58.6	626,992	24.0	17.4
1957–64, total .....	3,421,181	2,140,765	62.6	891,391	26.1	11.3
1957 .....	355,978	206,823	58.1	90,774	25.5	17.3
1958 .....	355,103	217,678	61.3	94,457	26.6	12.1
1959 .....	378,220	239,791	63.4	97,959	25.9	10.7
1960 .....	412,719	259,600	62.9	104,005	25.2	11.9
1961 .....	430,969	269,356	62.5	112,052	26.0	11.5
1962 .....	470,066	288,621	61.4	120,337	25.6	13.0
1963 .....	492,839	324,288	65.8	132,081	26.8	7.4
1964 .....	525,287	334,608	63.7	139,726	26.6	9.7

<sup>1</sup> Annual figures previously published in the articles on workmen's compensation that appeared in the *Social Security Bulletin*, March 1954 and August 1958.

<sup>2</sup> All figures disregard dividends to stockholders, which if taken in to consideration result in higher loss ratios and expense ratios; net gain ratio represents ratio before dividends to policyholders.

Source: Compiled from data in the Annual Reports of the New York State Insurance Department and from data in the Annual Casualty-Surety Editions of the *Eastern Underwriter*.

tribute profits among their stockholders, but the bulk of the profits of mutual companies is returned to policyholders as dividends—representing in essence the difference between the anticipated and actual cost of insurance. Precise data on the amount of dividends returned to policyholders are hard to obtain. Companies issuing workmen's compensation policies on a participating basis generally estimate dividends equal to 10–15 percent of premium income.<sup>29</sup> If the data in table 9 were adjusted to allow for dividends, the loss ratios for mutual companies would be increased by about 7–10 percentage points and the expense ratios by 3–5 points.

Without this adjustment, the average loss ratios of mutual and of stock companies for the period 1957–64 are not far apart. Stock companies earned \$6.1 billion in premiums and paid to claimants or reserved for future payments \$3.9 billion, for a loss ratio of 64.0 percent; mutual companies earned \$3.4 billion in premiums and incurred losses of \$2.1 billion, for a ratio of 62.6 percent. In keeping with the trend already evidenced in table 8, these loss ratios are considerably higher than those recorded in the earlier periods.

The effect of such high ratios on underwriting gains and profits is readily demonstrated. Stock companies reported an underwriting profit of only 1.5 percent for 1957–64, compared with 5.1 percent and 4.7 percent for the periods 1948–56 and 1939–47. Mutual companies, likewise, reported a drop in their underwriting gain from 20.1 percent in 1939–47 to 17.4 percent in 1948–56 to 11.3 percent in 1957–64.

The averages conceal wide year-to-year fluctuations. During the past 25 years, the underwriting gain for stock companies has ranged from a profit of 10.6 percent in 1948 to a deficit of 4.2 percent in 1951. For the mutual companies, the fluctuation has ranged from a net gain of 24.5 percent in 1948 to 7.4 percent in 1963.

Generally speaking, stock companies have found the workmen's compensation line less profitable than have the mutual companies. An important factor has been the lower expense ratio of mutual companies. In 1957–64, stock companies incurred expenses averaging 34.5 per-

TABLE 10.—Administrative expenses incurred as percent of net premiums earned, by category of expense and by type of private carrier, 1950, 1955, and 1960–64

Year	Expenses incurred as percent of net premiums earned <sup>1</sup>						
	Total	Investigation and adjustment of claims	Acquisition, field supervision, and collection expenses <sup>2</sup>	Taxes, licenses, and fees	Safety inspection and engineering	Payroll audit	Other <sup>3</sup>
Nonparticipating stock companies							
1950.....	40.9	10.3	17.4	3.8	1.6	2.7	5.1
1955.....	36.5	8.7	15.8	3.5	1.4	2.3	4.8
1960.....	36.9	9.4	15.4	3.6	1.2	1.9	5.4
1961.....	36.4	9.2	15.2	3.6	1.1	1.7	5.6
1962.....	36.4	9.2	15.2	3.6	1.1	1.7	5.6
1963.....	36.1	9.0	15.1	3.8	1.1	1.6	5.5
1964.....	35.0	8.7	14.8	3.8	1.1	1.5	5.1
Participating stock companies							
1950.....	28.6	8.2	11.5	2.4	1.1	1.1	4.3
1955.....	28.3	7.9	11.9	2.3	1.0	.9	4.3
1960.....	26.8	8.3	11.0	2.3	.7	.6	3.9
1961.....	27.3	8.8	10.8	2.4	.7	.8	3.8
1962.....	26.8	8.6	10.6	2.4	.7	.7	3.8
1963.....	26.0	8.5	10.3	2.4	.7	.7	3.4
1964.....	26.4	9.2	10.2	2.4	.6	.6	3.4
Mutual companies							
1950.....	25.0	8.0	7.4	3.1	2.3	1.2	3.0
1955.....	25.0	7.7	7.5	2.8	2.3	1.1	3.6
1960.....	25.6	8.3	7.4	3.0	2.2	1.0	3.7
1961.....	25.8	8.5	7.4	2.8	2.1	1.0	4.0
1962.....	26.0	8.7	7.4	3.0	2.2	1.0	3.7
1963.....	27.0	8.8	7.7	3.3	2.2	1.1	3.9
1964.....	27.0	9.1	7.5	3.4	2.1	1.0	3.9

<sup>1</sup> Net premiums earned excludes premium discounts and retrospective adjustments but not dividends.

<sup>2</sup> Includes commission and brokerage expenses.

<sup>3</sup> Includes general administration and rating bureau expenses.

Source: National Council on Compensation Insurance, *Insurance Expense Exhibit (Countrywide)*, annual issues.

cent of premiums earned, and mutual companies incurred expenses averaging only 26.1 percent of premiums earned.

The difference in expense ratios between stock and mutual companies has been narrowing. During the period 1939–47, the expense ratio for stock companies averaged 37.9 percent and has been dropping since then. Conversely, the expense ratio for mutual companies averaged 22.8 percent in 1939–47 and has been on the rise since then. The difference would be less if dividends were taken into account.

The disparity in expense ratios is primarily due to the greater acquisition costs of stock companies. Stock companies sell the major proportion of their policies through commissioned agents and mutuals sell most of their policies through salaried employees of the company. In recent years, acquisition and field supervision

<sup>29</sup> For some recent estimates of dividends payments, see John F. Burton, Jr., *Interstate Variations in Employers' Costs of Workmen's Compensation*, W. E. Upjohn Institute for Employment Research, May 1966, page 35.

TABLE 11.—Benefit payments and administrative expenses in relation to premiums written, 18 State funds, 1950-64<sup>1</sup>

(Amounts in millions)

Year	Premiums written <sup>2</sup>	Benefits paid	Benefits as percent of premiums	Administrative expenses <sup>3</sup>	Expenses as percent of premiums
Total...	\$4,691.1	\$3,392.2	72.3	\$432.5	9.2
1950.....	172.1	127.7	73.6	16.5	9.6
1951.....	204.9	140.9	68.3	18.0	9.1
1952.....	228.6	158.3	69.2	20.4	8.9
1953.....	250.1	170.4	68.1	21.9	8.8
1954.....	265.9	183.2	68.9	24.1	9.1
1955.....	279.6	192.6	68.9	24.4	8.7
1956.....	324.3	209.5	64.6	26.0	8.0
1957.....	300.8	216.7	72.0	26.3	8.7
1958.....	302.4	225.9	74.7	29.6	9.8
1959.....	328.4	247.0	75.4	31.2	9.5
1960.....	366.9	265.0	72.5	33.6	9.2
1961.....	370.7	287.0	77.4	36.0	9.7
1962.....	394.8	307.8	78.0	38.3	9.7
1963.....	402.8	320.6	79.1	41.5	9.6
1964.....	408.8	338.0	72.1	44.1	9.4

<sup>1</sup> For 9 States, fiscal-year data converted to calendar-year data.

<sup>2</sup> Disregards dividends to policyholders but allows for premium discounts.

<sup>3</sup> Excludes loss-adjustment expenses for certain competitive State funds, estimated at 6-9 percent of premiums. Includes administrative expenses financed through appropriations from general revenue.

Source: *Spectator, Insurance by States*, annual issues; *Argus Casualty and Surety Chart*, annual issues; and State reports.

costs have averaged about 15 percent of premiums earned for stock companies and 7-8 percent (before dividends) for mutuals (table 10). Another factor contributing to the disparity is the smaller average size of risk insured by stock companies. As a general rule, the smaller the policy, the greater the proportion of premiums that is required for handling it.<sup>30</sup>

For the competitive and exclusive State funds the ratio of benefits to premiums or contributions are considerably higher than they are for the private carriers. Table 11 shows that, for 1950-64, benefits paid amounted to 72.3 percent of the premiums written for the 18 State funds—18 percentage points greater than the corresponding ratio for private carriers (table 8). Fluctuations in the ratio for State funds have generally followed the trend revealed by private-carrier data, with the second half of the 15-year period showing considerably higher ratios than the first half.

The loss ratios shown in table 11 are not strictly comparable, however, with those reported for private carriers in table 8. First, the premium income of State funds is more likely than that of private carriers to reflect anticipatory dividends

<sup>30</sup> For a further analysis of expense ratios and workmen's compensation costs under private insurance, see Ashley St. Clair, "Occupational Disability—Privately Insured," in *Occupational Disability and Public Policy*, *op. cit.*, pages 91-123.

or advance discounts on the manual rates charged standard risks. For private carriers, especially mutual companies, the difference between the anticipated and the actual cost of insurance is usually reflected in ex post facto dividends returnable to policyholders—an item not taken into account in table 8.<sup>31</sup> Second, the premium charges of some State funds, especially the exclusive funds, do not or need not cover allowances for certain items included in the premium charges of private carriers—maintenance of adequate reserves, for example, administrative and legal services financed through public appropriations or provided by other government departments, and taxes and other special assessments. Third, benefit outlays for the State funds reflect the fact that the States generally insure an undue proportion of the high-hazard undesirable risks, many of which cannot get insurance from private carriers. These three factors combine to increase the loss ratio for State funds.

Since competitive State funds spend a very small proportion of premiums for business-getting, and exclusive State funds spend practically nothing, it is to be expected that the expense ratios of State funds are lower than those of private carriers. For the years 1950-64, administrative costs (excluding loss-adjustment expenses for certain competitive funds) of all State funds averaged 9.2 percent of premiums written (table 11). Exclusive funds devoted, on the average, 6.7 percent of premiums to expenses and competitive funds 11.6 percent. These ratios do not vary significantly from year to year.

A comparison of the expense ratios of State funds and private carriers must, however, like the comparison of their loss ratios, be made carefully. Private carriers include in their expense loading certain charges, noted above, that not all State funds are required to meet out of their premium income—taxes, for example, and those administrative expenses absorbed by other gov-

<sup>31</sup> The Social Security Administration questionnaire sent to State insurance commissions to obtain 1964 workmen's compensation data asked for information on dividend experience. For the 10 States that furnished data, dividends under private workmen's compensation policies (including both nonparticipating and participating policies) amounted to 6.6 percent of premiums. If the data in table 8 were adjusted to allow for this rate of dividends, the loss ratios would be increased by 4-5 percentage points.

ernment departments. In addition, private carriers generally provide special consultative services in the fields of accident prevention, rehabilitation, payroll auditing, program planning, and merit rating that may be inadequately furnished by State funds.

The magnitude of these services is shown in table 10. Taxes, licenses, and fees, for example, generally take 2-4 percent of premium; inspection and safety engineering, 1-2 percent; and payroll auditing, 1-2 percent. Some State funds, however, would have a lower expense ratio than indicated if the premium volume were adjusted to include the amounts from general revenues for operations.

### State Administrative Costs

Another cost item of workmen's compensation involves the expenditures of State administrative agencies in supervising the operations of the insurance carriers and in exercising adjudicative and enforcement powers to ensure compliance with the law. These administrative costs for the fiscal year 1964 amounted to \$30.2 million for the District of Columbia and the 39 States for which data are available (table 12).

Not all of this amount, however, represents a cost in addition to that paid by employers, as shown in table 7. In 20 States, expenses amounting to \$19.1 million were financed through assessments against the insurance mediums and were already reflected in the premium charges of carriers to employers. Only where administrative expenses were financed through appropriations from the general treasury (19 States and the District of Columbia) did such expenses—totaling \$11.1 million—represent a cost of workmen's compensation in addition to that charged in premiums.

Although State administrators prefer to have workmen's compensation costs financed through assessments rather than legislative appropriations, only one State has made the switch during the past quarter century. The relative amount of administrative dollars available under the two methods of financing can be calculated. In 1964, in the States that relied on legislative appropriations, there was allocated for administration \$1.57 for every \$100 of benefits paid; in the States that

TABLE 12.—Administrative costs of State agencies by method of financing, 1950-64<sup>1</sup>

[Amounts in millions]

Fiscal year	Total administrative costs	Financed through legislative appropriations		Financed through assessments on carriers	
		Amount	Percent	Amount	Percent
1950.....	\$12.4	\$4.6	37	\$7.8	63
1951.....	12.9	4.8	37	8.1	63
1952.....	14.1	5.1	36	9.0	64
1953.....	15.5	5.3	34	10.2	66
1954.....	16.1	5.6	35	10.5	65
1955.....	16.7	5.8	35	10.9	65
1956.....	17.3	6.0	35	11.3	65
1957.....	19.1	6.5	34	12.6	66
1958.....	21.1	7.4	35	13.7	65
1959.....	23.3	7.7	33	15.6	67
1960.....	23.9	8.1	34	15.8	66
1961.....	24.9	8.7	35	16.2	65
1962.....	26.3	9.3	35	17.0	65
1963.....	28.6	10.5	37	18.1	63
1964.....	30.2	11.1	37	19.1	63

<sup>1</sup> Includes the District of Columbia. Excludes the 7 States with exclusive funds and the Federal system, where the task of administering the law is generally merged with that of providing insurance protection. Also excludes the 4 States where the laws are court-administered and, before 1960, Alaska and Hawaii.

Source: Compiled from State budget, finance, and treasury documents and annual reports of State administrative agencies.

relied on assessments the administrative agencies received \$3.07 per \$100 of benefits disbursed.

### SUMMARY

Although the number of workers covered by workmen's compensation has doubled since 1939, much of this growth is attributable to the growth in the labor force. Statutory extensions of coverage have played only a limited role. Except for the period of World War II and the immediate postwar period, the proportion of the labor force covered has remained relatively stable—at about 80 percent.

Similarly, although benefit outlays have increased sevenfold from 1939 to 1964, much of this growth is accounted for by economic factors—labor-force expansion and rising prices and wages—as well as the higher benefit maximums enacted in an attempt to keep pace with these economic changes. Some statutory liberalization of benefits that represent real gains has also taken place—mainly in the area of medical benefits, coverage of occupational diseases, and retroactive waiting-period provisions.

Despite statutory changes, the proportion of wage loss compensated, as measured here, has fallen sharply since 1939. The deterioration in the relation of benefits to wages was particularly

acute during the post-World War II period, reaching a low point in the early 1950's. Since then improvements in the laws have started to catch up with economic developments. Nevertheless, the evidence today is that the average worker is still meeting out of his own resources the larger share of the cost of work injuries. Benefit payments in the 1960's as a percent of payroll are still lower than in the prewar period, though higher than the ratios registered in the decade after the war. Similarly, the annual cost to employers of workmen's compensation as percent of payroll in the 1960's, though somewhat higher than the averages of the 1950's, is still lower than the prewar ratios.

The costs of workmen's compensation, however, have not increased as fast as benefit payments.

The result is that the proportion of the premium dollar finding its way back in benefits to the injured worker or his dependents—the loss ratio—has been rising. The loss ratios continue to be lower for private carriers than for State funds—about 18 percentage points in the period 1950-64—although adjustment for differences in the method of calculation would reduce the gap. The proportion of premiums that go for administrative expenses—the expense ratio—is still an important element accounting for these differences. Expense ratios have averaged 34-38 percent for stock companies, 23-26 percent for mutual companies, and 12-15 percent for State funds (including an estimated allowance for loss of adjustment expenses). There has been some narrowing of these differences over the years.