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Workers' Comp. Studies

LEGISLATIVE AFFAIRS

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VARIOUS REPORTS 1981

Workers' compensation in 1980: summary of major enactments

Broader coverage and levels of benefits received the most attention among the 46 jurisdictions which met during the year, although several States did set new standards for measuring hearing loss

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All but six State legislatures convened in 1980, resulting in enactment of 136 amendments to State workers' compensation laws.¹ Twenty-three jurisdictions carried over legislation introduced from 1979 to the 1980 sessions. Most amendments either revised coverage or increased or supplemented weekly benefits.

Twenty-two jurisdictions amended their coverage laws. California extended coverage to off-duty peace officers and firefighters performing work-related duties anywhere in the State. Colorado and Missouri broadened coverage to include sheriffs and deputy sheriffs and Ohio extended coverage to jail inmates.

Domestic employees employed by an employer for 240 hours or more during a calendar quarter will be covered in the District of Columbia next year. New Jersey now requires that domestic servants and household employees be covered by homeowners' policies.

Missouri adopted a provision that excludes from mandatory coverage salaried corporate officers and private employment where the total gross annual payroll is under \$10,000 (except for the salaries of certain relatives). Sole proprietors and partners may elect coverage for themselves in Minnesota, Vermont, and Virginia. In New Mexico, employers with fewer than three employees and who are generally exempt from occupational disease coverage may also elect coverage.

By October 1980, 43 States and the District of Columbia had increased maximum weekly benefits for temporary total disability, and 40 States had increased ben-

efits for total disability and death through automatic adjustments of maximum benefit levels linked to each State's average weekly wage. (See table 1.)

The percentage of the State weekly wage on which benefits are based was raised from 100 to 150 percent in Nevada, from 60 to 100 percent in Kentucky, and from 72 to 75 percent in Kansas. The percentage of the worker's wage for determining weekly benefits was increased from 66-2/3 to 70 percent in New Jersey. Effective in 1981, maximum weekly benefits in Missouri will be based on a percentage of the State average weekly wage rather than being a statutory amount. Maximum benefits were also increased statutorily in five other jurisdictions.

The aggregate amount of compensation for death was increased from \$55,000 to \$75,000 in California. Children who are dependent and full-time students, in Mississippi, are newly entitled to receive death benefits until they are 23 years of age.

The burial allowance was increased from \$1,500 to \$3,000 in Louisiana, and from \$750 to \$2,000 in New Jersey.

Awards for disfigurement to the head, neck, hands, or arms were increased from \$2,000 to \$4,000 in Missouri.

New standards were established for occupational hearing loss compensation at frequencies ranging from 1,000 to 3,000 cycles per second in Illinois and New Jersey, and from 500 to 3,000 cycles per second in Iowa.

Louisiana enacted penalty provisions to prohibit employers from refusing to hire an applicant or rehire an employee solely because such person had previously

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filed a workers' compensation claim.

References to "workmen's compensation" were changed to "workers' compensation" in Kentucky, Missouri, New Jersey, and Tennessee.

Other amendments pertaining to benefits, coverage, medical care, rehabilitation, administration, and other aspects of State systems are included in the following State-by-State summary.

Alaska

Coverage was extended to public high school students in work-study programs while they are working outside the school.

A Workers' Compensation Study Commission was estab-

lished to review the workers' compensation law and recommend changes to eliminate outdated and inadequate provisions, to provide fully for the rights of workers injured in the State, and to minimize costs to employers.

Arizona

Definitions for "co-employee", "heart-related or perivascular injury, illness or death", "mental injury, illness or condition", and "weakness, disease or other condition of the heart or perivascular system" were added to the act.

An amendment was added to the Arizona Constitution which allows persons injured while engaged in manual or mechanical labor, or in case of death, the dependents, the option to accept benefits or retain the right to sue their employers.

The statute of limitations for claim filing changed so that a

Table 1. Jurisdictions that changed maximum weekly temporary total disability benefits during 1980

| Jurisdiction | Former maximum | New maximum |
|----------------------|--|--|
| Alabama | \$136.00 | \$148.00 |
| Alaska | \$654.30 | \$650.00 |
| Arizona | \$192.32 | \$203.86 |
| Arkansas | \$112.00 | \$126.00 |
| Colorado | \$222.74 | \$244.65 |
| Connecticut | \$261.00, plus \$10 for each dependent under 18 years of age, not to exceed 75 percent of employee's wage | \$295.00, plus \$10 for each dependent under 18 years of age, not to exceed 75 percent of employee's wage |
| Delaware | \$164.71 | \$175.28 |
| District of Columbia | \$426.40 | \$456.24 |
| Florida | \$195.00 | \$211.00 |
| Hawaii | \$200.00 | \$215.00 |
| Idaho | \$115.80 to \$173.70 according to number of dependents, plus 7 percent of State average weekly wage for each child up to 5 | \$121.20 to \$181.80 according to number of dependents plus 7 percent of State average weekly wage for each child up to 5 |
| Illinois | \$353.19 | \$358.95 |
| Indiana | \$130.00 | \$140.00 |
| Iowa | \$352.00 | \$384.00 |
| Kansas | \$148.00 | \$170.00 |
| Kentucky | \$131.00 | \$217.00 |
| Louisiana | \$149.00 | \$154.00 |
| Maine | \$306.23 | \$332.16 |
| Maryland | \$220.00 | \$241.00 |
| Massachusetts | \$227.31, plus \$6 for each dependent, aggregate not to exceed worker's average weekly wage | \$245.48, plus \$6 for each dependent, aggregate not to exceed worker's average weekly wage |
| Michigan | \$156.00 to \$185.00, according to number of dependents | \$171.00 to \$200.00, according to number of dependents |
| Minnesota | \$226.00 | \$244.00 |
| Missouri | \$125.00 | \$150.00 |
| Montana | \$198.00 | \$219.00 |
| Nevada | \$228.20 | \$245.09 |
| New Hampshire | \$195.00 | \$213.00 |
| New Jersey | \$164.00 | \$185.00 |
| New Mexico | \$186.38 | \$201.04 |
| North Carolina | \$194.00 | \$210.00 |
| North Dakota | \$196.00, plus \$5 for each dependent child, aggregate not to exceed worker's net wage | \$213.00, plus \$5 for each dependent child, aggregate not to exceed worker's net wage |
| Ohio | \$241.00 | \$258.00 |
| Oklahoma | \$141.00 | \$155.00 |
| Oregon | \$241.70 | \$261.32 |
| Pennsylvania | \$227.00 | \$242.00 |
| Rhode Island | \$199.00, plus \$6 for each dependent, aggregate not to exceed 80 percent of worker's average weekly wage | \$217.00, plus \$6 for each dependent, aggregate not to exceed 80 percent of worker's average weekly wage |
| South Carolina | \$185.00 | \$197.00 |
| Tennessee | \$107.00 | \$119.00 |
| Texas | \$119.00 | \$133.00 |
| Utah | \$210.00, plus \$5 for dependent spouse and each dependent child up to 4, but not to exceed 100 percent of State average weekly wage | \$230.00, plus \$5 for dependent spouse and each dependent child up to 4, but not to exceed 100 percent of State average weekly wage |
| Vermont | \$192.00, plus \$5 for each dependent under 21 years of age | \$208.00, plus \$5 for each dependent under 21 years of age |
| Virginia | \$199.00 | \$213.00 |
| Washington | \$166.88 | \$221.72 |
| West Virginia | \$237.00 | \$262.08 |
| Wisconsin | \$218.00 | \$233.00 |
| Wyoming | \$292.35 | \$326.45 |

Note: Benefit increases are based on the applicable State's average weekly or monthly wage, and for the District of Columbia, the national average weekly wage. However, nine States (Arizona, Arkansas, California, Georgia, Indiana, Mississippi, Nebraska, New York, and

Tennessee) and Puerto Rico prescribe statutory amounts; six States (California, Georgia, Mississippi, Nebraska, New York, and South Dakota) and Puerto Rico are not listed because no increases for temporary total disability were legislated during 1980.

late claim can not be considered unless the claimant is deemed incompetent or justifiably relied on a "material representation" by the Industrial Commission, employer, or insurance carrier.

The Second Injury Fund is now responsible for one-half of the compensation award above a 50-percent reduced monthly earning capacity for a second injury to a preexisting scheduled injury.

The maximum amount used for computing the employee's average monthly wage was raised from \$1,250 to \$1,325.

Scheduled injuries will now be paid solely for fixed periods, regardless of the claimant's earning capacity, if compensation has not been awarded for permanent partial disability.

The time for requesting a hearing was extended from 60 to 90 days.

California

Coverage was extended to off-duty peace officers or firefighters who are injured, killed, or disabled while engaged in the performance of their duties anywhere in the State. Employees of the San Luis Obispo County sheriff's office disabled in the line of duty are entitled to 1 year of disability leave, in lieu of temporary disability benefits, if such leave is approved.

Employers must post in a conspicuous place at the worksite, written notice of compensation coverage, including names of persons responsible for claims adjustment.

The average weekly wage used for determining total disability payments was increased from \$231 to \$262.50. The total maximum compensation for death was increased from \$55,000 to \$75,000, according to the number of dependents.

The Asbestos Workers' Account was established in the Uninsured Employer's Fund to provide temporary disability and medical benefits to asbestos workers suffering from asbestosis when the liable employer either cannot be located or fails to provide benefits within 30 days of the disability.

The director of the Department of Industrial Relations is authorized to adopt rules and regulations to implement the statutory coverage provisions relating to uninsured employers. Legal actions may now be taken against an uninsured employer.

The administrative director of the Division of Industrial Accidents no longer has authority to change regulations regarding the privacy of certain employee records.

All attorneys employed as referees by the Division of Industrial Accidents must now adhere to the California Code of Judicial Conduct.

Delivery of notices in third party actions will be made by personal service or certified mail, instead of by registered mail.

Claimants traveling to medical facilities for examination by a physician will be reimbursed 21 cents for each mile traveled, instead of the previous 14 cents.

Colorado

Municipalities can now elect coverage for unpaid appointed or elected officials. Coverage was extended to deputy sheriffs and persons who serve on posses.

Tax paid by insurers into the Major Medical Insurance Fund was raised to 1.75 percent of the premiums received, from 1.25 percent.

Connecticut

Interlocal risk management pools (established to insure high-risk employers) now have authority to operate separate pools to cover hypertension and heart disease risks.

Supplemental compensation for recipients on-the-rolls prior

to October 1977 was changed from a one-time 25 percent increase to an annual cost-of-living increase.

Dependent children who are full-time students are eligible for benefits until age 22 (previously, the limit was 18 years).

Claimants will now be reimbursed 15 cents for each mile traveled to medical treatment facilities, instead of the previous 10 cents per mile.

The lung function test now applies to all foundry workers, except those who are exempted for religious reasons.

District of Columbia

The city council passed, and the mayor signed, a bill establishing the District of Columbia Workers' Compensation Act of 1979, effective October 1, 1981. This action was taken to simultaneously remove private employment in the District of Columbia from the provisions of the Longshoremen's and Harbor Workers' Compensation Act, and to transfer administration of the District of Columbia's compensation law from the U.S. Department of Labor to the District of Columbia.

However, the legality of the act is in doubt because on September 26, 1980, D.C. Superior Court Judge John F. Doyle ruled that the reform law passed by the D.C. city council violated the home rule charter of the city. He concluded that the city, therefore, had illegally legislated the Federal program out of existence. The council appealed Judge Doyle's decision in the U.S. Court of Appeals for the District of Columbia on November 12, 1980, requesting an expedited decision.

Under the new act, coverage will include only workers employed in the District of Columbia and injured or killed as a result of their employment. Domestic workers also will be covered if they worked for the same employers at least 240 hours during a calendar quarter. Compensation for illness or death resulting from a job-related disease is the responsibility of the employer where the last known exposure occurred.

The same maximum will apply for both weekly disability and death benefits, however, benefits to survivors will only be allowed if death was caused by a job-related injury or illness. Minimum compensation for total disability and death is 25 percent of the maximum weekly benefit amount, rather than 50 percent of the national average weekly wage as required by the Longshoremen's and Harbor Workers' Compensation Act. Permanent partial disability awards can now be reviewed at any time up to 3 years after either the date of the last compensation payment or the rejection of the claim. For those receiving benefits for permanent total disability or death, a supplementary benefit is provided of no more than 5 percent of the maximum weekly benefit received the preceding year. However, this provision does not become effective until the average weekly wage in the District of Columbia exceeds \$396.78.

Compensation for total disability will be paid at 66-2/3 percent of the employee's average weekly wage. In case of death, compensation to all survivors is not to exceed that amount. Eighty percent of the employee's spendable earnings will be considered as 66-2/3 percent of his or her average weekly wage. Benefits for disability or death will be offset by no more than 80 percent of disability compensation under the Social Security Act or an employee benefit plan, subject to the Employee Retirement Income Security Act.

The mayor will be required to appoint a panel of physicians from which an injured employee must select an attending physician.

Attorney fees will be limited to no more than 20 percent of the actual benefit the attorney secured for the claimant.

The costs of administering the act will be met by assessing

insurance carriers and self-insured employers based on the share of payments made by each to the total amount of all payments during the preceding fiscal year.

Florida

General contractors are now liable for coverage for all employees of a subcontractor, unless the subcontractor already provides coverage.

The basis for computing temporary partial disability benefits was changed from a "monthly" to "weekly" rate.

An award must now be paid within 30 days, rather than the previous 20 days.

The definition for "accident" now includes the acceleration or exaggeration of a preexisting disability.

An employer must now provide at least two physicians from which the employee must select one for treatment.

Changes in medical fee schedules will be determined annually by a panel consisting of the Secretary of Labor and Employment Security, the Insurance Commissioner, and the State medical consultant of the Division of Workers' Compensation.

Pharmacists were added to the list of health care providers, making them subject to evaluation by the Division to determine if their services are acceptable based on medically accepted standards and the medical fee schedules.

Medical reports required from self-insurers must be filed with the Division of Workers' Compensation within 15 days, instead of the previous 5 days.

An injured employee is no longer required to notify the Division within 30 days of an injury.

Georgia

Group self-insurance will be allowed in the State next year.

A requirement was enacted for both public and private corporations to provide employee coverage.

Hawaii

Permanent total disability awards made before July 1, 1980, are now to be increased annually.

A rehabilitation unit, in the Department of Labor and Industrial Relations, will refer to the director employees suspected of having permanent disabilities and those who have permanent disabilities and who can be physically or vocationally rehabilitated.

Enrollment in a rehabilitation program will not affect a disabled worker's entitlement to temporary total disability compensation, if the worker earns no wages during the enrollment period.

Labor organizations are exempted from third party liability for injuries to its members on the basis of the organizations' failure to furnish or enforce health or safety regulations.

Illinois

Real estate brokers, broker-salesworkers, salesworkers paid solely by commission, and volunteers in recreational programs and drug and alcohol rehabilitation programs are now excluded from workers' compensation coverage.

The Department of Insurance must adopt rules that will permit two or more employers with similar risks to group self-insure.

Employers may now obtain life insurance policies to cover liabilities for work-related death benefits.

Maximum weekly benefit levels for permanent partial disability are frozen (at \$269.21 or 100 percent of the State's average weekly wage) from January 1, 1981, through December 31, 1983.

The definition of "average weekly wage" was redefined to mean the actual earnings of the employee at the time of the injury during the 52 weeks ending with the pay period immediately preceding the injury.

All time periods of compensation for fractures were reduced: for skull and vertebrae fractures, from 60 to 6 weeks; for each facial bone fracture, from 20 to 2 weeks; for each transverse process, from 30 to 3 weeks; and for the loss of a kidney, spleen, or lung, from 100 to 10 weeks.

New standards were established for compensation of occupational hearing loss at frequencies of 1,000, 2,000, and 3,000 cycles per second and a causation level of 90 decibels. Employers are no longer responsible for cases of occupational hearing loss before July 1, 1975, and the new standards do not apply to hearing loss resulting from trauma or explosion.

Attorney fees are limited to 20 percent of the amount of compensation recovered and paid, unless otherwise approved by the Industrial Commission.

The Industrial Commission must publish a workers' compensation handbook for employers and employees. The Director of Insurance is required to publish informational booklets on workers' compensation insurance rates and the rights and obligations of employers and employees under the Workers' Compensation and Occupational Disease Acts.

Indiana

Coverage was extended to participants in a township poor relief program who are satisfying assistance requirements. A wage rate was set as the basis for computing his or her workers' compensation benefits.

Iowa

New standards require determining the severity of occupational hearing loss based on using frequencies of 500, 1,000, 2,000, and 3,000 cycles to measure hearing levels. A maximum of 175 weeks of compensation can be received for hearing loss but compensation will not be paid to an employee who fails to use hearing protective devices.

Kansas

Self-insurance is now permitted for cities, counties, school districts, vocational-technical schools, or community colleges. A separate reserve fund was created to pay claims, judgments, and expenses of these entities.

The director of the Division of Workers' Compensation, now has authority to conduct hearings and determine all disputes on medical charges and interest due.

Kentucky

The maximum weekly benefit levels were increased to 100 percent (formerly 60 percent) of the State average weekly wage for total disability; and, to 75 percent (formerly 60 percent) for permanent partial disability and death. All provisions for scheduled injuries were deleted. Payment for permanent partial disability will be determined by multiplying the weekly benefit for permanent partial disability by the percentage of disability or the wage earning capacity, whichever is greater, for a maximum period of 425 weeks.

The maximum period for vocational rehabilitation was extended from 26 to 52 weeks. During rehabilitation, the percentage for calculating the employee's average weekly wage will be raised from 66-2/3 percent to 80 percent times the percentage of disability.

The definition of "injury" now includes any work-related harmful change in the human organism, "arising out of and in

the course of employment." Previously, communicable diseases were not included unless the risk of contacting such disease increased by the nature of the employment.

The Pneumoconiosis Fund was abolished and all unfunded liabilities transferred to the Special Fund.

The time limit for notifying the Board of Workers' Compensation that a claim will be disputed was increased from 60 to 90 days.

A sum of \$150,000 was appropriated from the General Fund to finance a study of the State's workers' compensation program. The study will review the National Council on Compensation Insurance rating procedures, compare premium levels in Kentucky with other jurisdictions, and analyze the feasibility of a computer system and of a State Fund.

References to "workmen's" were changed to "workers'" throughout the Act.

Louisiana

Surviving parents are now entitled to a \$20,000 lump-sum payment in death cases where there are no other legal dependents.

Burial expenses were doubled from \$1,500 to \$3,000.

The statute of limitations for filing a claim for an occupational disease was extended to 6 months from the time: (1) of the initial manifestation; (2) of the disability resulting from the disease; or, (3) that the employee knew or had reason to suspect that the disease is occupationally related. For claims arising from death due to an occupational disease, the filing period was extended to 6 months from the date of death or from the date the claimant has reason to believe that the death resulted from an occupational disease.

Employers are now required to conspicuously post notices regarding time limitations for filing occupational disease claims; failure to comply will allow claims to be filed against the employer for an additional 6 months.

Attorney fees were raised to 20 percent of the first \$10,000 of an award (formerly \$5,000) and 10 percent for any additional amount.

Employers are prohibited from refusing to hire applicants or discriminating against employees solely because they had previously filed compensation claims. For such discrimination, an employee is eligible for up to 1 year's salary in addition to a reasonable attorney's fee.

Injured employees are now permitted to file petitions in the District Court of the parish in which either the employee or his or her dependents live.

Maine

A commissioner whose term has expired is now entitled to \$50 per day for time spent preparing decisions in cases where all evidence was heard and no decision was made.

Maryland

Mandatory coverage was authorized for participants in the State's Workfare Program and for jurors serving on State juries.

Minimum weekly compensation for temporary total disability was increased from \$25 to \$50.

The time in which an employee must notify the employer of his or her occupational disease was extended from 30 days to 1 year after the employee knows he or she has a disease.

Massachusetts

Third party actions in industrial accident cases will only be enforced 7 months after the injury and after compensation is paid.

Interest on late payments of compensation awards was increased from 6 to 10 percent.

Minnesota

Coverage now includes certain volunteer workers whose services are accepted or contracted.

The following may elect coverage for certain employed relatives: owners or partners of a business or farm, a family farm corporation, and a closely-held corporation which had fewer than 22,880 hours of payroll in the preceding year.

The definition of "family farm" now includes any farming operation which pays or is obligated to pay less than \$8,000 in wages to farm laborers; and, excludes from the definition of "employee," farmers and members of their families who exchange work with other community farmers.

Supplementary benefits based on the statewide average weekly wage for the preceding year will be adjusted annually on October 1.

Payment of benefits was authorized for dependents of State, county, or city medical care employees who die from tuberculosis contracted by exposure to tuberculosis patients or contaminated material in the course of employment. An employee who contracts tuberculosis from work exposure is permitted to select a physician or medical care facility for treatment.

Mississippi

Dependent children who are full-time students are now eligible for death benefits until age 23 (previously the limit was 18 years).

Missouri

Coverage was extended to sheriffs and deputy sheriffs. Exempted from coverage are salaried corporate officers and private industries with a total gross annual payroll of under \$10,000 in the preceding year; wages paid to certain relatives are not included in calculating gross annual payroll.

Maximum weekly benefits for total disability and death were raised from \$125 to \$150. On August 13, 1981, benefits will change from a statutory amount to 66-2/3 percent of the State average weekly wage. On January 1, 1981, maximum weekly benefits for permanent partial disability will change to 66-2/3 percent of 60 percent of the State average weekly wage.

Awards were increased from \$2,000 to \$4,000 for disfigurement to the head, neck, hands, or arms.

A worker is now eligible to receive compensation for the first 3 days of an illness after a waiting period of 14 days, instead of the previous 4 weeks. The healing period for permanent partial disability was lengthened from 40 to 52 weeks.

A surviving husband is no longer required to prove dependency for benefits.

The statute of limitations for filing a claim was increased from 1 to 2 years and up to 3 years from date of injury if the employer did not file a report of injury.

Interest on unpaid workers' compensation benefits was raised from 6 to 8 percent.

References to "workmen's" were changed to "workers'" throughout the act.

New Jersey

Coverage was extended to recipients under the General Public Assistance Law.

All homeowner's or comprehensive personal liability insurance policies must cover injuries to domestic servants and household employees.

The percentage of the worker's wage on which benefits are

based for disability and, in death cases, for a spouse with children was raised from 66-2/3 to 70 percent. Maximum weekly benefits for disability and death were increased from 66-2/3 to 75 percent of the State average weekly wage. Minimum weekly benefits for total disability and death were changed from \$15 to 20 percent of the State average weekly wage, and from \$10 to \$35 for permanent partial disability.

Temporary disability benefits can now be received for 400 weeks, up from the previous 300 weeks. The number of weeks of compensation for specified losses was extended as follows: loss of a hand, from 230 to 245 weeks; loss of an arm, from 300 to 330 weeks; loss of a foot, from 200 to 230 weeks; and loss of a leg from 275 to 315 weeks. In cases of non-scheduled injury, where the disability is determined as a percentage of permanent total disability, the maximum period of compensation increased to 600 weeks from 550 weeks.

Standards for measuring occupational hearing loss were established at frequencies of 1,000, 2,000, and 3,000 Hertz. A maximum of 200 weeks of compensation is authorized for total loss of hearing and for partial disability for such periods as are proportionate to the relation which the calculated percentage loss bears to 100 percent hearing loss.

A special adjustment of benefits was established for employees receiving benefits at a rate applicable before January 1, 1980. For fiscal year 1981, the adjustment rate is 35 percent; for fiscal 1982, 75 percent; and for fiscal 1983, 100 percent. These benefits will be offset by social security disability payments, black lung payments, or an employer's share of disability pension payments.

The burial allowance was increased from \$750 to \$2,000.

Lump-sum awards are now permitted if approved by the Division of Workers' Compensation.

Either spouse is now a presumptive dependent for survivors benefits; previously, only widows were specified in the law.

For occupational disease claims, the statute of limitations will not begin to run until the claimant has actual knowledge of the condition and its relation to work. Formerly, the statute began when the claimant first had knowledge of the disability.

By enactment, "workmen's" was changed to "workers'" throughout the law.

New Mexico

Employers who are generally exempt from provisions of the Occupational Diseases Disablement Law must now file notices of acceptance, rejection, or revocation of coverage with the Superintendent of Insurance.

New York

Either alien spouse is now entitled to compensation benefits; previously, only widows were eligible.

In the event of the death of a corporation officer, the dependents are entitled to compensation from the Uninsured Employers' Fund.

The waiting period before compensation for occupational hearing loss was shortened from 6 to 3 months after removal from exposure to harmful noise. Removal from exposure may be accomplished by the use of effective ear protection devices provided by the employer.

An employee's failure to file a claim for occupational hearing loss within the required 2-year period will not bar his or her claim, if the claim is filed within 90 days after knowledge that the loss of hearing is employment-related. An employee disabled prior to October 1, 1980, will have 6 months from such date to file a claim.

Assets in Uninsured Employers' Fund are now set at a maximum of \$600,000, formerly \$300,000.

Full disclosure is required by the employer of all accidents that occur in the business operation of the employer.

North Carolina

Confirmed cases of brown lung disease or byssinosis will be compensable, regardless of the date of the employee's last injurious exposure.

Ohio

Coverage was extended to jail inmates and probationers in work relief programs.

Employers contributing to the Disabled Workers' Relief Fund will be assessed an additional 5 to 10 cents per \$100 of payroll.

The Marine Industry Fund was established to insure enrollees in the marine industry.

Oklahoma

Excluded from coverage is agricultural or horticultural employment in which the employer had a gross annual payroll of under \$100,000 (previously \$25,000) in the preceding year. Also exempted are licensed real estate sales associates or brokers who are paid solely by commission, and farm employments with annual payrolls in the preceding year of \$100,000 (formerly \$25,000).

Pennsylvania

The definition of "employee" was broadened to include any paid firefighter who is a member of a volunteer fire company during off-duty hours. Similarly, coverage was extended to all members of volunteer ambulance corps, volunteer rescue workers, and lifesaving squads.

Rhode Island

Effective the first fiscal year of 1981, coverage will be compulsory for employees of the city of Providence. Group self-insurance is now allowed for hospitals with the approval of the Director of Labor.

Legislation extended the existence of the Dr. John E. Donley Rehabilitation Center, the State's rehabilitation center, until June 30, 1983.

South Carolina

In cases of permanent partial disability, prostheses will be furnished as long as needed by the injured employee.

Employers must report all injuries that require medical or surgical attention to the Industrial Commission within 10 days after knowledge of the injury. Employers who refuse or neglect to submit the required forms, records, or reports will be fined \$50 (formerly \$10) for each offense. Also, employers who willfully refuse payment of compensation will receive fines ranging from \$100 to \$1,000, or 30 days to 6 months imprisonment, or both.

Information compiled by treatment facilities pertaining to workers' compensation claimants must be made available, upon request, to employers, carriers, attorneys, or the Industrial Commission.

South Dakota

Coverage was extended to employees of the Game, Fish, and Parks Department.

The time limit in which an employer must file an accident report was shortened from 30 to 10 days.

Tennessee

Self-insurance is now permitted with the posting of acceptable negotiable securities or a bond worth at least \$125,000, and certified evidence of financial ability to pay all claims.

Maximum weekly benefits for disability and death were increased from \$107 to \$119; and the total maximum from \$42,800 to \$47,600. A lump-sum payment of \$10,000 will be paid to a deceased employee's estate, if there are no dependents.

A joint legislative committee was established to study the State's workers' compensation system and make recommendations to the 92nd General Assembly by February 1, 1981.

An enactment expanded the definition of "total disability" from coal workers' pneumoconiosis to include employees who would be entitled to benefits under the Black Lung Benefits Act of 1972.

References to "workmen's" were changed to "workers'" throughout the law.

Vermont

The Military Department may elect coverage for employees whose salaries are paid fully or partially with Federal funds.

Virginia

Sole proprietors and partners may now elect coverage for themselves. The Secretary of Administration and Finance is authorized to implement a workers' compensation program for State employees.

Payment of compensation in a lump sum in lieu of periodic payments will be reduced by the disability retirement benefits a disabled worker or the worker's surviving dependents are entitled to receive.

Employers are required to furnish medical care and prosthetic appliances for loss of hearing injuries.

Reimbursement was authorized for employers who pay compensation and medical and vocational rehabilitation expenses while awaiting an award decision from the Industrial Commission.

A regional peer review committee will be established in each health systems area to evaluate and determine the level, quality, duration, and cost of health care services.

The Industrial Commission is authorized to order an injunction against employers who fail to comply with the work-

ers' compensation law.

The Subcommittee of the House Committee on Labor and Commerce was requested to continue its study of the factors accounting for the accelerating increases in workers' compensation premiums.

Washington

Under certain conditions, the State Fund can insure employers as a group.

Costs of supplies and equipment are now included in the coverage of vocational rehabilitation.

Wisconsin

Coverage was extended to State legislators on official travel and to State legislators serving as committee members or as members of other official bodies.

Maximum weekly benefits for permanent partial disability were raised from \$65 to \$70. The death benefit payable to parents when there are no wholly dependent survivors was increased to \$5,000, from \$2,000.

Interest was increased from 6 to 7 percent on late death benefits payments.

It is now mandatory for the Department of Industry, Labor and Human Relations to employ a specialist in physical, medical, and vocational rehabilitation.

Requests by employers for employees to submit to medical examinations must not involve travel in excess of 100 miles from the employee's home.

Payments from the Work Injury Supplemental Benefit Fund to an employee whose claim is barred by the statute of limitations will be supplemental to any payment under any Federal insurance benefit program.

All workers' compensation disability benefits will be reduced if the employee is also receiving social security disability.

The statute of limitations for initiating a compensation action was extended from 10 to 12 years. A claim for occupational deafness can not be filed until 14 days (formerly 2 months) after removal from the noisy employment. □

FOOTNOTE

¹ Arkansas, Montana, Nevada, North Dakota, Oregon, and Texas did not meet in 1980.

Workers' compensation insurance: recent trends in employer costs

Costs of insuring against work-related injuries and diseases have escalated rapidly since 1972; growing variation in premiums among States over the same period may indicate unequal rates of improvement in workers' compensation laws

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The workers' compensation program provides cash benefits, medical care, and rehabilitation services for persons who experience job-related injuries and diseases. Because each State operates its own compensation program, the levels of protection for workers and the associated costs of the plan to employers differ considerably among jurisdictions. Variations among jurisdictions in the insurance arrangements available to employers may also affect premiums: 32 States and the District of Columbia allow employers to purchase insurance from private carriers; six States only allow purchase from a State fund; and 12 States permit a choice between private carriers and State funds. In addition, all but four States allow employers with sufficient financial ability and satisfactory records for paying past claims to self-insure.¹

The existence of interstate differences in the cost of workers' compensation insurance raises certain questions with policy implications. Are the variations in premiums great enough to influence employers' decisions to locate their establishments? And, do recent trends in premium levels indicate any reluctance by States to boost program benefits and costs, for fear of losing employers to lower cost jurisdictions?

As a first step toward answering such questions, this article presents estimates of employers' costs of insurance purchased from private carriers or State funds in 47 jurisdictions² as of July 1, 1978. Historical information since 1950 is also provided for a smaller number of jurisdictions. The following discussion is a condensed

and updated version of a more comprehensive report³ that details the methodology used to derive the cost estimates.

Measuring insurance costs

Employers' costs of workers' compensation insurance may be measured in several ways. For purposes of this study, three combinations of employers that account for substantial percentages of national payroll were selected, and the costs of workers' compensation insurance for these groups of employers were determined for each State. This procedure makes possible an estimate of the differences in insurance costs which employers would encounter by moving among the States.⁴

The first combination consists of 45 types of employers for which workers' compensation insurance rates are available since 1950. This group includes 13 manufacturing, seven contracting, and 25 other types of firms, and accounts for almost 57 percent of the payroll covered by workers' compensation insurance.⁵ The second combination represents 25 types of manufacturing employers which comprise 10 percent of covered payroll; rates for this groups are available since 1958. The third combination, for which rates are only available since 1972, includes 30 manufacturing, 13 contracting, and 36 other types of employers; these 79 types of firms account for 72 percent of covered payroll.⁶

Insurance rates for each type of employer may be obtained from a State manual. These manual rates are given in dollars per \$100 of weekly earnings for each employee. Table 1 shows the average July 1, 1978, manual rates for the three combinations of employers in 47 jurisdictions. As indicated, the average manual rate for the 45 types of employers was \$1.043 per \$100 of pay-

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roll in Alabama, while the same group of employers in Alaska had a mean rate of \$2.149.

However, estimates of average manual rates provide only a beginning toward accurate interstate comparisons of workers' compensation costs. For many employers, the weekly premium is not simply the product of the manual rate and the weekly payroll. Rather, their insurance costs are influenced by premium discounts for quantity purchases, dividends received from mutual companies and participating stock companies, modifications of the manual rate resulting from the employer's own accident experience, and other factors.

Consequently, the average employer in the 45 States with private insurance carriers pays an adjusted manual rate that is 18 percent less than the published manual rate.⁷ In Ohio and West Virginia—States with State insurance funds and no private carriers—manual rates are reduced, on average, 7.5 percent and 31.4 percent respectively to arrive at adjusted manual rates.⁸

The average adjusted manual rates for the three combinations of employers as of July 1, 1978, are also found in table 1. Although the average manual rate for the 45 types of employers in Alabama was \$1.043 per \$100 of payroll, the average *adjusted* manual rate for

Table 1. Employers' average weekly costs of workers' compensation insurance in 47 jurisdictions, July 1, 1978

| Jurisdiction | Manual rates (per \$100 of payroll) | | | Adjusted manual rates (per \$100 of payroll) | | | Net costs of insurance (per employee) | | |
|----------------------|-------------------------------------|-------------------------------------|-----------------------|--|-------------------------------------|-----------------------|---------------------------------------|-------------------------------------|-----------------------|
| | 45 types of employers | 25 types of manufacturing employers | 79 types of employers | 45 types of employers | 25 types of manufacturing employers | 79 types of employers | 45 types of employers | 25 types of manufacturing employers | 79 types of employers |
| Alabama | \$1.043 | \$2.041 | \$1.295 | \$0.855 | \$1.674 | \$1.062 | \$1.544 | \$3.022 | \$1.918 |
| Alaska | 2.149 | 3.484 | 2.524 | 1.762 | 2.857 | 2.070 | 4.879 | 7.910 | 5.731 |
| Arizona | 3.055 | 5.546 | 3.686 | 2.505 | 4.548 | 3.023 | 5.294 | 9.610 | 6.387 |
| Arkansas | 1.576 | 3.023 | 1.903 | 1.292 | 2.479 | 1.560 | 2.078 | 3.986 | 2.509 |
| California | 2.604 | 5.173 | 3.238 | 2.135 | 4.241 | 2.655 | 4.816 | 9.567 | 5.989 |
| Colorado | 1.475 | 3.159 | 1.812 | 1.210 | 2.590 | 1.486 | 2.554 | 5.469 | 3.137 |
| Connecticut | 1.650 | 3.434 | 2.140 | 1.353 | 2.816 | 1.755 | 2.768 | 5.762 | 3.590 |
| Delaware | 1.742 | 3.544 | (¹) | 1.428 | 2.906 | (¹) | 2.922 | 5.944 | (¹) |
| District of Columbia | 4.271 | 8.063 | 5.098 | 3.502 | 6.612 | 4.181 | 8.199 | 15.480 | 9.788 |
| Florida | 3.221 | 5.733 | 3.764 | 2.641 | 4.701 | 3.086 | 4.793 | 8.531 | 5.600 |
| Georgia | 1.313 | 2.886 | 1.634 | 1.077 | 2.366 | 1.340 | 1.912 | 4.202 | 2.380 |
| Hawaii | 2.508 | 5.060 | 3.232 | 2.057 | 4.149 | 2.650 | 3.964 | 7.996 | 5.108 |
| Idaho | 1.569 | 2.813 | 1.961 | 1.287 | 2.307 | 1.608 | 2.238 | 4.013 | 2.797 |
| Illinois | 1.685 | 2.965 | 2.012 | 1.382 | 2.431 | 1.649 | 3.063 | 5.390 | 3.657 |
| Indiana | 585 | 1.109 | 713 | 480 | 910 | 585 | 1.015 | 1.927 | 1.239 |
| Iowa | 1.322 | 2.114 | 1.569 | 1.084 | 1.734 | 1.286 | 2.190 | 3.502 | 2.599 |
| Kansas | 1.072 | 2.061 | 1.297 | 879 | 1.690 | 1.064 | 1.659 | 3.190 | 2.008 |
| Kentucky | 1.685 | 3.737 | 2.215 | 1.382 | 3.064 | 1.816 | 2.781 | 6.166 | 3.655 |
| Louisiana | 1.844 | 4.027 | 2.359 | 1.512 | 3.302 | 1.934 | 2.909 | 6.354 | 3.721 |
| Maine | 1.684 | 3.571 | 2.038 | 1.380 | 2.929 | 1.671 | 2.581 | 5.476 | 3.125 |
| Maryland | 1.539 | 3.019 | 1.861 | 1.262 | 2.476 | 1.526 | 2.526 | 4.955 | 3.055 |
| Massachusetts | 1.674 | 3.934 | 2.166 | 1.373 | 3.226 | 1.776 | 2.757 | 6.479 | 3.567 |
| Michigan | 2.305 | 6.140 | 3.040 | 1.890 | 5.035 | 2.493 | 4.370 | 11.641 | 5.764 |
| Minnesota | 2.220 | 5.081 | 2.800 | 1.821 | 4.167 | 2.296 | 3.733 | 8.543 | 4.709 |
| Mississippi | 1.100 | 1.903 | 1.336 | 902 | 1.561 | 1.096 | 1.457 | 2.521 | 1.770 |
| Missouri | 903 | 1.771 | 1.136 | 740 | 1.452 | 932 | 1.196 | 2.345 | 1.505 |
| Montana | 1.712 | 2.781 | 2.064 | 1.404 | 2.280 | 1.692 | 2.795 | 4.539 | 3.368 |
| Nebraska | 865 | 1.573 | 1.015 | 710 | 1.290 | 834 | 1.484 | 2.698 | 1.744 |
| New Hampshire | 1.422 | 2.883 | 1.850 | 1.166 | 2.364 | 1.517 | 2.128 | 4.314 | 2.769 |
| New Jersey | 2.057 | 4.249 | 2.418 | 1.687 | 3.484 | 1.983 | 3.651 | 7.541 | 4.292 |
| New Mexico | 1.757 | 3.827 | 2.165 | 1.441 | 3.138 | 1.775 | 2.479 | 5.400 | 3.054 |
| New York | 2.158 | 4.678 | 2.639 | 1.770 | 3.836 | 2.164 | 3.844 | 8.332 | 4.701 |
| North Carolina | 649 | 1.314 | 830 | 532 | 1.077 | 680 | 899 | 1.820 | 1.149 |
| Ohio | 1.664 | 2.904 | 1.977 | 1.550 | 2.697 | 1.839 | 3.352 | 5.834 | 3.979 |
| Oklahoma | 1.763 | 4.320 | 2.293 | 1.446 | 3.542 | 1.880 | 2.654 | 6.503 | 3.451 |
| Oregon | 3.558 | 7.841 | 4.600 | 2.918 | 6.430 | 3.772 | 6.288 | 13.858 | 8.130 |
| Pennsylvania | 1.431 | 3.125 | (¹) | 1.173 | 2.563 | (¹) | 2.382 | 5.202 | (¹) |
| Rhode Island | 1.589 | 3.978 | 2.002 | 1.303 | 3.262 | 1.641 | 2.387 | 5.975 | 3.007 |
| South Carolina | 1.020 | 2.094 | 1.286 | 836 | 1.717 | 1.055 | 1.360 | 2.794 | 1.716 |
| South Dakota | 1.027 | 1.725 | 1.222 | 842 | 1.414 | 1.002 | 1.649 | 2.769 | 1.962 |
| Tennessee | 1.101 | 2.339 | 1.435 | 903 | 1.918 | 1.177 | 1.666 | 3.538 | 2.171 |
| Texas | 2.137 | 4.338 | 2.708 | 1.753 | 3.557 | 2.220 | 3.293 | 6.683 | 4.172 |
| Utah | 1.087 | 2.000 | 1.320 | 892 | 1.640 | 1.083 | 1.701 | 3.130 | 2.066 |
| Vermont | 1.067 | 1.996 | 1.267 | 875 | 1.637 | 1.039 | 1.646 | 3.079 | 1.955 |
| Virginia | 1.074 | 1.645 | 1.283 | 880 | 1.349 | 1.052 | 1.525 | 2.337 | 1.824 |
| West Virginia | 962 | 1.914 | (¹) | 690 | 1.313 | (¹) | 1.229 | 2.444 | (¹) |
| Wisconsin | 917 | 1.852 | 1.174 | 752 | 1.519 | 963 | 1.582 | 3.198 | 2.027 |

¹ Data are not available.

the group was \$0.855, reflecting the 18-percent reduction. Adjusted manual rates may be interpreted as the cost of workers' compensation insurance as a percentage of payroll; thus, for the 45 types of Alabama employers, premiums were the equivalent of 0.855 percent of payroll.

The average weekly insurance premium per worker provides another measure of employers' costs of workers' compensation. The adjusted manual rate multiplied by the State's average weekly wage yields the approximate net cost of insurance to policyholders.⁹ Again according to table 1, the average weekly net cost of insurance as of July 1, 1978, for the 45 types of employers in Alabama was \$1.544 per employee.

Historical data

Information on employers' costs of workers' compensation insurance is available for the 45 types of employers for selected years since 1950. Data for 20 States are available for 8 years between 1950 and 1978; data for eight more States are available for 6 years between 1958 and 1978; 42 jurisdictions have data for 1972, 1975, and 1978; and by 1978, 47 jurisdictions may be compared.

The average adjusted manual rates for the 45-employer group are shown in table 2. As indicated, Alabama employers expended, on average, the equivalent of 0.282 percent of payroll on workers' compensation premiums in 1950, compared with 0.855 percent in 1978. Table 3 presents the approximate net cost to the same group of policyholders for several years between 1950 and 1978. These results show, for example, that the employers in Alabama expended a weekly average of \$0.136 per worker on premiums in 1950, and \$1.544 in 1978.

The data in tables 2 and 3 are valuable for tracing changes in workers' compensation costs over time in a particular State, but the volume of information makes it difficult to comprehend general developments. Tables 4 and 5 provide a compact summary of these data, permitting evaluation of interstate trends.

Table 4, for example, illustrates the changes over time in the average adjusted manual rates for the various combinations of States. Each State's observation was weighted by the size of the State's labor force in 1970 to provide results which are representative of the national experience.

The mean adjusted manual rate in the 20 States was the equivalent of 0.471 percent of payroll in 1950, 0.651 percent in 1972, and 1.185 percent in 1978. Of particular interest is the rise in cost between 1972 and 1978, which was more than double the 1950-72 increase. The average employer in the 28- and 42-jurisdiction comparisons also experienced large increases in premiums between 1972 and 1978. Data for the latter combination of jurisdictions indicate that the average employer spent an amount equal to 1.461 percent of payroll on work-

Table 2. Average weekly adjusted manual rates per \$100 of payroll for 45 types of employers in 47 jurisdictions, selected years, 1950 to 1978

| Jurisdiction | Year | | | | | | | |
|----------------------|---------|---------|---------|---------|---------|---------|---------|---------|
| | 1950 | 1954 | 1958 | 1962 | 1965 | 1972 | 1975 | 1978 |
| Alabama | \$0.282 | \$0.310 | \$0.348 | \$0.364 | \$0.437 | \$0.479 | \$0.599 | \$0.855 |
| Alaska | | | | | | 832 | 1,721 | 1,762 |
| Arizona | | | | | | 1,385 | 2,178 | 2,505 |
| Arkansas | | | | | | 915 | 1,038 | 1,292 |
| California | | | 707 | 858 | 1,183 | 1,102 | 1,406 | 2,135 |
| Colorado | | | | | | 649 | 654 | 1,210 |
| Connecticut | 660 | 838 | 812 | 762 | 689 | 697 | 827 | 1,353 |
| Delaware | | | | | | 578 | 736 | 1,428 |
| District of Columbia | | | | | | 737 | 1,404 | 3,502 |
| Florida | | | | | | | | 2,641 |
| Georgia | | | | | | 501 | 760 | 1,077 |
| Hawaii | | | | | | 960 | 1,335 | 2,057 |
| Idaho | 519 | 664 | 581 | 582 | 667 | 865 | 1,283 | 1,287 |
| Illinois | 437 | 497 | 514 | 609 | 624 | 657 | 1,002 | 1,382 |
| Indiana | 358 | 363 | 410 | 398 | 430 | 385 | 417 | 480 |
| Iowa | | | | | | 451 | 662 | 1,084 |
| Kansas | | | | | | 575 | 766 | 879 |
| Kentucky | 390 | 369 | 394 | 448 | 558 | 668 | 1,065 | 1,382 |
| Louisiana | | | | | | | | 1,512 |
| Maine | 415 | 398 | 340 | 370 | 337 | 520 | 981 | 1,380 |
| Maryland | 501 | 600 | 661 | 747 | 854 | 816 | 1,009 | 1,262 |
| Massachusetts | | | 859 | 1,034 | 1,141 | 1,106 | 1,171 | 1,373 |
| Michigan | 476 | 416 | 450 | 694 | 715 | 914 | 1,238 | 1,890 |
| Minnesota | | | 653 | 692 | 738 | 854 | 1,240 | 1,821 |
| Mississippi | 638 | 727 | 758 | 988 | 980 | 751 | 902 | 902 |
| Missouri | | | | | | | | 740 |
| Montana | 590 | 644 | 792 | 721 | 845 | 948 | 1,565 | 1,404 |
| Nebraska | 572 | 474 | 437 | 527 | 447 | 529 | 789 | 710 |
| New Hampshire | 528 | 586 | 531 | 495 | 560 | 534 | 746 | 1,166 |
| New Jersey | | | 911 | 1,054 | 1,039 | 1,224 | 1,233 | 1,687 |
| New Mexico | 463 | 858 | 838 | 863 | 945 | 787 | 1,069 | 1,441 |
| New York | | | | | | 864 | 973 | 1,770 |
| North Carolina | 392 | 512 | 473 | 492 | 474 | 420 | 433 | 532 |
| Ohio | | | 627 | 813 | 820 | 885 | 1,109 | 1,550 |
| Oklahoma | | | | | | | 1,052 | 1,446 |
| Oregon | | | 630 | 1,007 | | 1,491 | 2,074 | 2,918 |
| Pennsylvania | | | 355 | 396 | 386 | 387 | 776 | 1,173 |
| Rhode Island | 829 | 930 | 831 | 834 | 842 | 767 | 899 | 1,393 |
| South Carolina | 658 | 607 | 567 | 690 | 696 | 609 | 590 | 836 |
| South Dakota | 537 | 400 | 315 | 392 | 389 | 511 | 635 | 842 |
| Tennessee | | | | | | 664 | 710 | 903 |
| Texas | | | | | | | | 1,753 |
| Utah | 524 | 545 | 502 | 422 | 531 | 503 | 766 | 892 |
| Vermont | 398 | 457 | 524 | 505 | 595 | 514 | 588 | 875 |
| Virginia | | | | | | 391 | 539 | 880 |
| West Virginia | | | 268 | 345 | 404 | 428 | 671 | 660 |
| Wisconsin | | | 523 | 556 | 603 | 505 | 581 | 752 |

Note: Dashes indicate data not available.

ers' compensation premiums in 1978.¹⁰

The average adjusted manual rate for any year obviously reflects some State data which are higher than the mean and some which are lower. For example, the mean adjusted rate for the 20 States was 0.471 percent of payroll in 1950, but the average employer in Alabama paid only 0.282 percent of payroll for workers' compensation insurance while his or her counterpart in Rhode Island paid 0.829 percent. A statistic providing a convenient summary of the extent of variation among the States around the mean cost is the standard deviation.¹¹ The larger the standard deviation, the greater the variation among the States in the percentage equivalent of payroll expended on workers' compensation insurance. The data in table 4 indicate that over time the

magnitude of such variation has increased.

Table 5 traces the net cost to policyholders for the 45 types of employers between 1950 and 1978. The average employer in the 20 States spent \$0.249 per week on workers' compensation premiums for each worker in 1950, \$0.945 in 1972, and \$2.468 in 1978. Again, the sharp increase in costs after 1972 is evident from data for each combination of jurisdictions. In 1978, the mean weekly premium for employers in the 42 jurisdictions was just over \$3.09 per worker.¹²

Table 5 also shows the extent of variation among the States around the net cost to policyholders. In 1950, when the average cost was \$0.249 per worker per week

Table 3. Average weekly net costs of insurance per employee for 45 types of employers in 47 jurisdictions, selected years, 1950 to 1978

| Jurisdiction | Year | | | | | | | |
|----------------------|---------|---------|---------|---------|---------|---------|---------|---------|
| | 1950 | 1954 | 1958 | 1962 | 1965 | 1972 | 1975 | 1978 |
| Alabama | \$0.136 | \$0.163 | \$0.242 | \$0.281 | \$0.369 | \$0.611 | \$0.938 | \$1.544 |
| Alaska | | | | | | 1.627 | 4.127 | 4.879 |
| Arizona | | | | | | 2.066 | 3.985 | 5.293 |
| Arkansas | | | | | | 1.040 | 1.447 | 2.078 |
| California | | | 631 | 858 | 1,296 | 1,755 | 2,746 | 4,816 |
| Colorado | | | | | | .968 | 1.196 | 2.554 |
| Connecticut | 353 | 548 | 627 | 669 | 663 | 1,008 | 1,467 | 2,768 |
| Delaware | | | | | | 835 | 1,304 | 2,922 |
| District of Columbia | | | | | | 1,219 | 2,847 | 6,199 |
| Florida | | | | | | | | 4,793 |
| Georgia | | | | | | 629 | 1,169 | 1,912 |
| Hawaii | | | | | | 1,306 | 2,229 | 3,964 |
| Idaho | 253 | 396 | 409 | 447 | 561 | 1,063 | 1,933 | 2,238 |
| Illinois | 261 | 363 | 443 | 588 | 660 | 1,029 | 1,925 | 3,063 |
| Indiana | 197 | 245 | 326 | 357 | 422 | 576 | 766 | 1,016 |
| Iowa | | | | | | 644 | 1,159 | 2,190 |
| Kansas | | | | | | 767 | 1,253 | 1,659 |
| Kentucky | 205 | 237 | 299 | 380 | 518 | 949 | 1,856 | 2,781 |
| Louisiana | | | | | | | | 2,909 |
| Maine | 195 | 229 | 236 | 286 | 286 | 687 | 1,588 | 2,581 |
| Maryland | 266 | 390 | 507 | 639 | 800 | 1,154 | 1,750 | 2,526 |
| Massachusetts | | | 660 | 888 | 1,073 | 1,569 | 2,037 | 2,757 |
| Michigan | 271 | 290 | 370 | 655 | 740 | 1,493 | 2,480 | 4,370 |
| Minnesota | | | 519 | 620 | 724 | 1,237 | 2,203 | 3,733 |
| Mississippi | 273 | 382 | 469 | 671 | 729 | 856 | 1,261 | 1,457 |
| Missouri | | | | | | | | 1,196 |
| Montana | 310 | 414 | 600 | 584 | 750 | 1,330 | 2,695 | 2,795 |
| Nebraska | 303 | 306 | 335 | 468 | 435 | 782 | 1,430 | 1,484 |
| New Hampshire | 250 | 339 | 363 | 385 | 477 | 589 | 1,179 | 2,128 |
| New Jersey | | | 759 | 993 | 1,072 | 1,872 | 2,312 | 3,651 |
| New Mexico | 249 | 565 | 650 | 722 | 866 | 957 | 1,594 | 2,479 |
| New York | | | | | | 1,326 | 1,830 | 3,844 |
| North Carolina | 167 | 267 | 291 | 335 | 354 | 501 | 634 | 899 |
| Ohio | | | 509 | 755 | 834 | 1,352 | 2,077 | 3,352 |
| Oklahoma | | | | | | | 1,673 | 2,654 |
| Oregon | | | 541 | 949 | | 2,269 | 3,872 | 6,268 |
| Pennsylvania | | | 280 | 346 | 369 | 554 | 1,365 | 2,382 |
| Rhode Island | 404 | 555 | 586 | 656 | 726 | 993 | 1,427 | 2,387 |
| South Carolina | 284 | 321 | 353 | 500 | 553 | 700 | 832 | 1,360 |
| South Dakota | 274 | 250 | 233 | 330 | 358 | 706 | 1,077 | 1,649 |
| Tennessee | | | | | | 866 | 1,134 | 1,666 |
| Texas | | | | | | | | 3,293 |
| Utah | 283 | 361 | 392 | 365 | 504 | 678 | 1,267 | 1,701 |
| Vermont | 192 | 270 | 365 | 396 | 511 | 684 | 963 | 1,646 |
| Virginia | | | | | | 478 | 808 | 1,525 |
| West Virginia | | | 200 | 279 | 358 | 563 | 1,069 | 1,229 |
| Wisconsin | | | 412 | 494 | 587 | 751 | 1,060 | 1,582 |

Note: Dashes indicate data not available.

Table 4. Means and standard deviations¹ of adjusted manual rates for 45 types of employers in various combinations of jurisdictions, selected years, 1950 to 1978

(Percent of total payroll)

| Year | 20 jurisdictions ² | | 28 jurisdictions ³ | | 42 jurisdictions ⁴ | |
|------|-------------------------------|--------------------|-------------------------------|--------------------|-------------------------------|--------------------|
| | Mean | Standard deviation | Mean | Standard deviation | Mean | Standard deviation |
| 1950 | 0.471 | 0.108 | | | | |
| 1954 | .512 | .145 | | | | |
| 1958 | .521 | .133 | 0.587 | 0.172 | | |
| 1962 | .599 | .150 | .689 | .212 | | |
| 1965 | .623 | .150 | .750 | .277 | | |
| 1972 | .651 | .171 | .776 | .276 | 0.774 | 0.271 |
| 1975 | .871 | .284 | 1.006 | .302 | .995 | .328 |
| 1978 | 1.185 | .446 | 1.409 | .488 | 1.461 | .543 |

¹ Results are based on data in table 2. Weights are each jurisdiction's total nonagricultural employment from *Employment and Earnings Statistics for States and Areas, 1939-70*, Bulletin 1370-8, (Bureau of Labor Statistics, 1971).

The weighted standard deviations were calculated using a formula provided by Cornell University Professors Paul F. Velleman and Philip J. McCarthy, to whom we express our appreciation.

² The 20-jurisdiction combination consists of: Alabama, Connecticut, Idaho, Illinois, Indiana, Kentucky, Maine, Maryland, Michigan, Mississippi, Montana, Nebraska, New Hampshire, New Mexico, North Carolina, Rhode Island, South Carolina, South Dakota, Utah, and Vermont.

³ The 28-jurisdiction combination includes the 20 States listed in footnote 2 plus California, Massachusetts, Minnesota, New Jersey, Ohio, Pennsylvania, West Virginia, and Wisconsin.

⁴ The 42-jurisdiction combination includes the 28 States in footnote 3 plus Alaska, Arizona, Arkansas, Colorado, Delaware, District of Columbia, Georgia, Hawaii, Iowa, Kansas, New York, Oregon, Tennessee, and Virginia.

Note: Dashes indicate data not available.

in the 20 States, the standard deviation among the States was \$0.056. By 1978, however, the mean weekly cost per worker was \$2.468—up almost 10-fold since 1950—while the standard deviation (\$1.113 in 1978) had grown nearly 20-fold over the same period.

The adjusted manual rate is probably the most useful and comprehensive measure of cost because, as previously noted, it may be interpreted as the percentage equivalent of payroll expended on workers' compensation insurance premiums. Chart 1 shows the trend in the average adjusted manual rates for the 45 types of employers in the 20 States for which there are comparable data since 1950.

The solid line in chart 1 tracks the weighted mean of the rates for the eight observations (years) available. The surrounding light area delineates the values of the

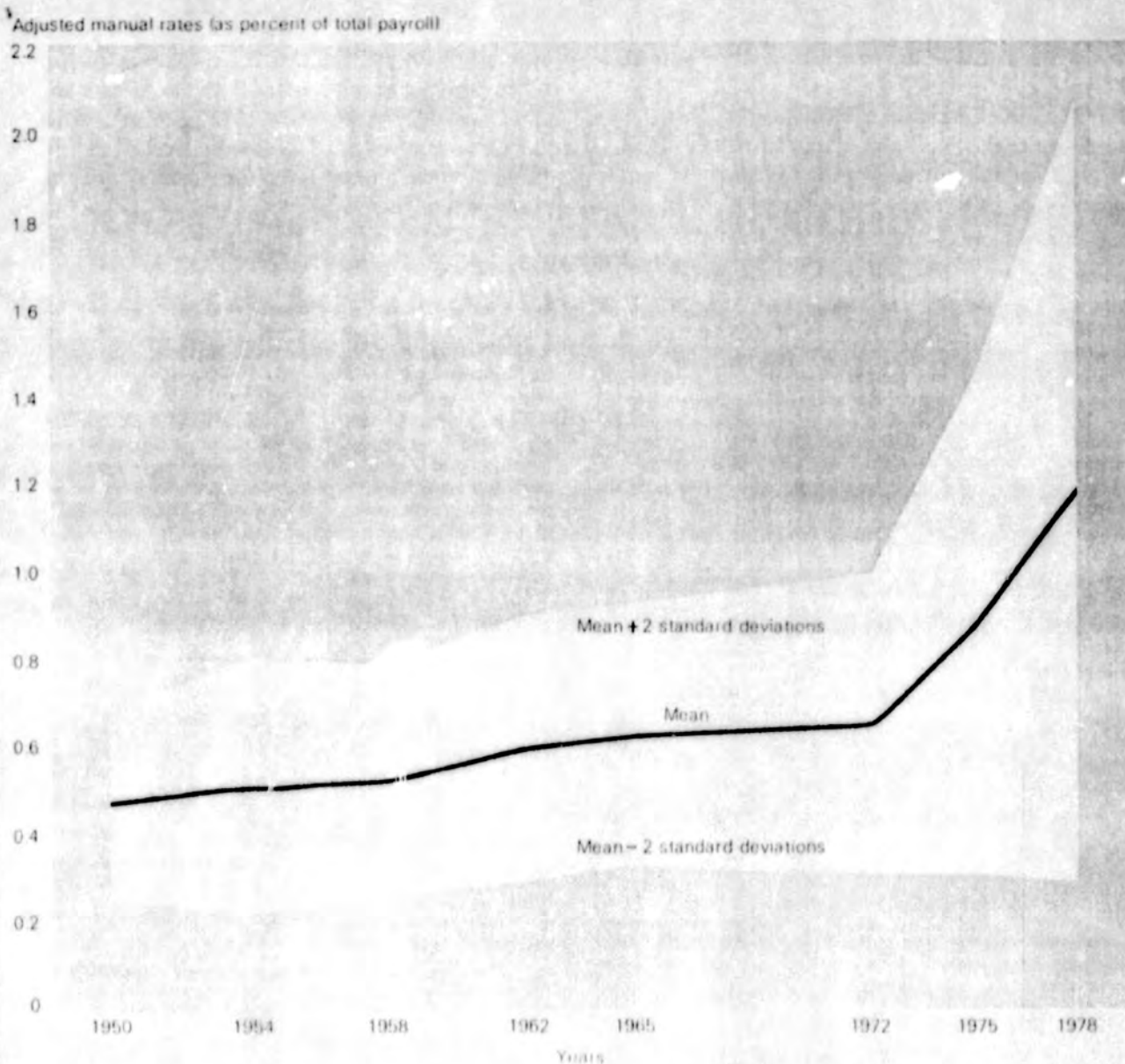
Table 5. Means and standard deviations¹ of net weekly costs of insurance for 45 types of employers in various combinations of jurisdictions, selected years, 1950 to 1978

| Year | 20 jurisdictions | | 28 jurisdictions | | 42 jurisdictions | |
|------|------------------|--------------------|------------------|--------------------|------------------|--------------------|
| | Mean | Standard deviation | Mean | Standard deviation | Mean | Standard deviation |
| 1950 | \$0.249 | \$0.056 | | | | |
| 1954 | .330 | .092 | | | | |
| 1958 | .399 | .104 | \$0.472 | \$0.153 | | |
| 1962 | .518 | .139 | .625 | .215 | | |
| 1965 | .590 | .154 | .760 | .317 | | |
| 1972 | .945 | .311 | 1.160 | .461 | \$1.150 | \$0.454 |
| 1975 | 1.563 | .610 | 1.848 | .643 | 1.817 | .689 |
| 1978 | 2.468 | 1.113 | 3.000 | 1.197 | 3.093 | 1.328 |

¹ Results are based on data in table 3. See footnotes to table 4 for other information pertaining to this tabulation.

Note: Dashes indicate data not available.

Chart 1. Means and standard deviations of adjusted manual rates for employers in 20 States, selected years, 1950 to 1978



NOTE: Assuming a normal distribution, adjusted manual rates for approximately 95 percent of the States should fall within ± 2 standard deviations of the mean.

adjusted manual rates that are within 2 standard deviations of the mean. This range (mean ± 2 standard deviations) is a useful statistical measure because, assuming a normal distribution, approximately 95 percent of the individual State averages will fall within the interval.

Chart 1 and tables 3 and 4 tell a consistent story: on average, employers' premiums for workers' compensation insurance have increased sharply since 1972, and at the same time, cost differences among jurisdictions have widened considerably.

MANY FACTORS outside the purview of this article influence the level of and trend in workers' compensation insurance premiums, including the extent of litigation, differing legal interpretations of statutory provisions, the local cost of medical and rehabilitation services for victims of job-related injuries and diseases, and the approach used by the State to compensate permanent partial disabilities.¹³ However, recent increases in the multistate premium averages may also be explained in part by the States' modifications of their programs in

response to recommendations contained in the 1972 Report of the National Commission on State Workmen's Compensation Laws.¹⁴ Similarly, there are several possible reasons for the growth of interstate variations in costs, the most controversial being differences among States in the extent of improvement in their laws since 1972.¹⁵

The National Commission unanimously advised that Federal workers' compensation standards be enacted in 1975 if States had not adopted its 19 essential recommendations by that time. An underlying rationale for

mandated standards was to reduce interstate differences in employers' insurance premiums. The Commission considered these variations a likely impediment to State reform of workers' compensation programs; State legislatures might perceive the higher costs of better insurance plans as an incentive for employers to locate in other, lower cost jurisdictions. If the growth in interstate cost differentials since 1972 is related to unequal rates of improvement in State statutes,¹⁶ the case for Federal minimum standards for workers' compensation is considerably strengthened. □

FOOTNOTES

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¹The enumerated insurance arrangements pertain to private sector employers which are the focus of this article. These data are from C. Arthur Williams, Jr., and Peter S. Barth, *Compendium on Workmen's Compensation* (Washington, Government Printing Office, 1973). Because information on self-insurers is limited, and such employers account for a small percentage of benefit payments, these firms are excluded from the analysis.

²Programs in Nevada, North Dakota, Washington, and Wyoming allowed insurance only through a State fund, and the insurance classifications were not comparable with those in the remaining 47 jurisdictions. Therefore, these States were excluded from the analysis.

³John F. Burton, Jr., "Workers' Compensation Costs for Employers," *Research Report of the Interdepartmental Workers' Compensation Task Force*, Vol. 3 (Washington, Government Printing Office, 1979), pp. 9-32. An errata sheet for this study is available from the author.

⁴Some employers provide benefits in addition to workers' compensation to their employees who are disabled by work-related injuries or diseases. To the extent that these benefits are integrated with workers' compensation benefits, the changes in total costs for work-related disability benefits resulting from interstate movements by employers may vary from the cost differences examined in this article. There are insufficient data to make an estimate of the interstate differences in the costs of these additional benefits.

⁵In five States included in this study, employers' liability for workers' compensation premiums is limited to a maximum amount of an employee's weekly earnings ("covered pay"). In Massachusetts, for example, premiums are based on only the first \$300 of weekly pay. Thus, in some States, payroll covered by workers' compensation insurance is less than total payroll.

⁶Table 3 in *Research Report of the Task Force* provides a detailed description of each of the 79 types of employers and information on the percent of payroll in 28 States accounted for by the various combinations of employers. Examples of manufacturing employers are bakeries, foundries, and furniture mills. Contracting employers include firms doing plumbing, concrete work, and street construction. "Other" establishments include retail stores, hospitals, and general employers of sales and clerical workers.

⁷The derivation of the 18-percent difference between manual rates and adjusted manual rates is provided in Section D of *Research Report of the Task Force*. The 18-percent figure is a national average based on experience in 34 jurisdictions. The actual difference will vary somewhat among States, depending on such factors as the relative importance of mutual companies, participating stock companies, and nonparticipating stock companies.

⁸Section D of *Research Report of the Task Force* explains the derivation of the percentages used to reduce manual rates in order to calculate adjusted manual rates in Ohio and West Virginia.

⁹As explained in Section F of *Research Report of the Task Force*, the net cost to policyholders in a State (or other jurisdiction) is calculated by multiplying the product of the adjusted manual rate and the

State's index number (which measures the State's earnings relative to U.S. earnings in 1970) by the national average of weekly earnings for workers covered by the unemployment insurance program. For 1976 (the latest year for which data were available when the tables for this article were prepared), the latter figure was \$203.88.

¹⁰The text indicates that in the 42 jurisdictions, the 45 types of employers spent, on average, 1.461 percent of payroll on workers' compensation premiums in 1978. This combination of jurisdictions and employers was chosen to provide historically comparable data. For the largest combination of employers (79) and jurisdictions (44) shown in table 1, the average employer spent the equivalent of 1.843 percent of payroll on workers' compensation premiums in 1978, based on weighted observations.

The 1.843-percent figure is close to Daniel Price's estimate that premium costs nationally (including Federal and self-insurance, but excluding programs financed by general revenue, such as the black lung program) were 1.85 percent of payroll in 1978. Price's estimate is included in "Workers' Compensation: 1978 Program Update," *Social Security Bulletin*, October 1980, pp. 3-10.

¹¹For a comparison of the estimating procedures used by Price and Burton, involving 1975 data, see *Research Report of the Task Force*, footnote 35.

¹²For an elementary discussion of the standard deviation, see Daniel H. Suits, *Statistics: An Introduction to Quantitative Economic Research* (Chicago, Rand McNally and Co., 1963), pp. 38-52.

¹³For the largest combination of employers (79) and jurisdictions (44) shown in table 1, the average employer spent \$3.915 per week per worker on workers' compensation insurance in 1978, based on weighted observations.

¹⁴For a discussion of some of these factors, see John F. Burton, Jr., *The Significance and Causes of the Interstate Variations in the Employers' Costs of Workmen's Compensation* (Ph.D. diss., University of Michigan, 1965). The results of a study of interstate cost differences associated with various approaches to permanent partial disability benefits may be found in John F. Burton, Jr. and Wayne Vroman, "A Report on Permanent Partial Disabilities under Workers' Compensation," *Research Report of the Interdepartmental Workers' Compensation Task Force*, Vol. 6 (Washington, Government Printing Office, forthcoming).

¹⁵(Washington, Government Printing Office, 1972).

¹⁶Laws in effect on January 1, 1980, in 52 jurisdictions (including the District of Columbia and Puerto Rico) were on average in compliance with 12.03 of the 19 essential recommendations of the National Commission, according to information provided in January 1980 by the Division of State Workers' Compensation Standards of the Employment Standards Administration, U.S. Department of Labor. The range among the jurisdictions in 1980 was considerable, with Montana, New Hampshire, and Ohio in compliance with at least 15.5 of the essential recommendations, while Arkansas, Mississippi, and Tennessee were in compliance with 8.5 or fewer of the recommendations.

¹⁷The assumed relationship between cost increases and improvements in State laws from 1972 to 1978 are being examined in an ongoing study by John F. Burton, Jr.

used, in general, less than the most advanced techniques and equipment because of financial restraints and because good work could be done with less than the best. Now, the combination of the advance of the science and the societal demands [is] saying that it's high time that the geodynamic techniques . . . move into the forefront of modern technology” And while modernization won't require orders-of-magnitude increases in money, “It will involve support that's not well in hand right now.”

—LEE GREATHOUSE

Finding Better Ways for 'Finding People for Jobs and Jobs for People'

THE U.S. EMPLOYMENT SERVICE was established in the Depression to aid workers in finding jobs and employers in finding workers. Since publication of its first edition in 1939, the *Dictionary of Occupational Titles—DOT*—has been a vital tool in performing that task. The fourth edition was published in 1977 and provides definitions of more than 12,000 occupations, classifies them according to the type and complexity of work involved, and is supplemented by descriptions of the “worker traits” necessary for adequate performance in each occupation. The *Dictionary* is “by far the most comprehensive source of occupational definitions available in the United States,” according to a recent report by a National Research Council committee, and it influences how jobs are structured in major sectors of the economy.

The *Dictionary* is also flawed and inadequate, according to its detractors. Some people say a volume of job titles and definitions is an anachronism that should be replaced by a computer-based system of simple “keywords.” The Committee on Occupational Classification and Analysis, of the National Research Council Assembly of Behavioral and Social Sciences, was formed at the request of the U.S. Department of Labor's Employment and Training Administration to consider the future of its *DOT* and underlying research program.

Work, Jobs, and Occupations: A Critical Review of the Dictionary of Occupational Titles. Committee on Occupational Classification and Analysis; Assembly of Behavioral and Social Sciences, National Research Council. Ann R. Miller, et al., eds. (National Academy Press, 1980; 452 pp.; ISBN 0-309-03093-5; \$14.50).

The committee's report—*Work, Jobs, and Occupations: A Critical Review of the Dictionary of Occupational Titles*—follows its study of how the *Dictionary* is designed and what it is intended to do and an examination of: (1) whether "computerization" can better serve the needs of the Employment Service; (2) whether there are needs beyond those of the Employment Service met by the *DOT* and not otherwise satisfied; and (3) whether, if the program that produces the *DOT* is continued, changes are needed to improve its adequacy and usefulness. Ann R. Miller, of the University of Pennsylvania Population Studies Center, chaired the committee.

'Catalogue of Occupations in the U.S. Economy'

The introduction to the latest *Dictionary* describes its primary purpose in "finding people for jobs and jobs for people":

"Work is organized in a variety of ways. As a result of technological, economic, and sociological influences, nearly every job in the economy is performed slightly differently from any other job. Every job is also similar to a number of other jobs.

"In order to look at the millions of jobs in the U.S. economy in an organized way, the *DOT* groups jobs into 'occupations' based on their similarities and defines the structure and content of all listed occupations. Occupational definitions are the result of comprehensive studies of how similar jobs are performed in establishments all over the nation and are composites of data collected from diverse sources. The term 'occupation,' as used in the *DOT*, refers to this collective description of a number of individual jobs performed, with minor variations, in many establishments."

The format and contents of the fourth edition may not always live up to the intentions of its compilers, but, the committee said, "there is an important and continuing need for a comprehensive, reliable catalogue of occupations in the U.S. economy as well as descriptions of the work performed in each occupation." The "dictionary" feature of the *Dictionary*, "providing a standardized terminology and standardized definitions of that terminology, is essential." Further:

"Some proponents of the matching of jobs and applicants by computer have suggested that keywording obviates the necessity for defined titles, since descriptions of a particular job and of a particular worker's attributes can be entered directly into the computer matching system without the intervening mechanism of a title. Such a conclusion seems to us

unrealistic because it fails to recognize the role that the occupational title plays in everyday language and in the labor market. The occupational title is shorthand (or, perhaps better, 'short talk'). An employer placing a job order for a Computer Programmer does not expect to describe what a programmer does but only the particular requirements, within the general category of programmer, for a particular job. An applicant with experience as a Lumber Scaler is certainly better served if the placement interviewer knows or can find in the dictionary what a lumber scaler does, because local terminology may vary and because the interviewer may then be able to suggest other occupations that make use of similar skills."

The *DOT* was designed to serve the needs of the Employment Service, but it is used also by other government agencies, educational institutions, corporations, and nonprofit organizations for career and vocational counseling, reference, research, personnel management, and placement. And much of its content is the stuff of collective bargaining and contract negotiation. For tens of thousands of people who use it, the committee said, "the *DOT* serves as the major source of occupational data currently available and would be sorely missed if it were discontinued."

However:

"Substantial improvements in the procedures and products of the occupational analysis program are required in order to meet the national need for occupational information."

Finding a Job with the DOT

The fourth edition lists and defines 12,099 occupations and provides information on 16,702 synonymous or related job titles. Each occupation is identified by a nine-digit code and is defined in terms of the tasks performed. *DOT* listings are printed in code number sequence (an index lists job titles alphabetically) and local Employment Service offices list job openings in the same order.

Thus an unemployed shirt presser, for example, can go to the local Employment Service office, learn from an interviewer that any openings for shirt pressers would be filed under code number 363.685-026, and know at a glance if a job is available. The arrangement of job openings might also lead him to other jobs with similar codes—363.685-022

(Presser, Handkerchief) or 363.686-010 (Flatwork Finisher)—for which he might be qualified and in which he might be interested.

Most job placements are made that way, the committee said, but the method sometimes fails:

"To cite two simple examples, one cannot expect an applicant looking for a job as a ticket taker to know that openings are listed under 344.667-010 (Ticket Taker, Amusement and Recreation) and under 911.667-010 (Ticket Taker, Ferryboat) or one with experience as a radio dispatcher to know that both 379.362-010 (Dispatcher, Radio) and 919.162-010 (Dispatcher, Traffic or System) may include possible job openings."

And, the committee noted, "there are undoubtedly many occupations whose similarity is less immediately obvious." A worker would be denied opportunities for change and advancement if his job search is limited to openings with the same old occupational code, but how can interviewers help him find other jobs for which he might be qualified? The committee advised that "a major activity of the occupational analysis program should be investigation of cross-occupational linkages that indicate possible transferability of skills or experience. . . ."

As practical matters, the committee suggested that "occupations with high interchangeability rates could be listed together in job banks" or that the same job opening could be included at several places "in much the same way that books are cross-referenced in a library catalogue."

Data Collection and Analysis Procedures

Questions of organization aside, "the comprehensiveness, reliability, and accuracy of the *DOT* are in large part a function of the data collection and analysis procedures used to produce it," according to the committee. How adequate were those procedures? The "production of the *DOT* is seriously underdocumented," and the committee based its report in part on review of technical manuals prepared to assist job analysts and on data prepared by job analysts.

Compilation of the latest edition began shortly after the third edition was published in 1965. Job analysts from 11 field offices conducted more than 75,000 on-site observations of jobs and gathered additional information from trade and professional organizations.

"Both the coverage of occupations and the quality of the descriptions proved to be uneven," the committee said. "Industries were assigned by using the third edition industry designations, and a major portion of the total data collection effort was spent trying to verify and update third edition occupations. These practices were efficient in some ways, but they were also rather conservative, minimizing the probability of incorporating newly emerging jobs . . . or of picking up changes in existing jobs."

The committee expressed its concern that "instructions about how to study jobs appear to have been insufficient and inadequate." The *Handbook for Analyzing Jobs*—intended to be every analyst's basic guidebook—was not published until halfway through the analysis process. Even so, "there appears to have been surprising uniformity among field centers," but the committee cautioned that "there was certainly room for considerable variation, which may have adversely affected the quality and comparability of the data collected."

'Uneven Coverage of the Labor Force'

The *Dictionary* reflects a "very uneven coverage of the labor force," the committee said. Coverage is "disproportionately concentrated" in manufacturing occupations; certain other occupations, including trade and services, are "substantially underrepresented":

"While it may be that production process occupations are, in fact, more finely differentiated in the economy than are other occupations, there is no evidence that this is so. An equally plausible explanation is that *DOT* data collection procedures, which tend to concentrate on manufacturing plants, create a bias toward more detailed coverage of production process occupations than of other types of work."

Nearly two thirds of the definitions in the latest *DOT* were based either solely on a third edition definition or on the new analysis of only one or two jobs. The committee recognized that "there may indeed be a number of occupations for which multiple on-site observations would be redundant and wasteful," but "in the absence of information regarding the heterogeneity or homogeneity of job content within occupations, the extent to which the occupational descriptions rest on such limited observations raises some question about their adequacy."

As part of information-gathering for the *Dictionary* analysts rated jobs according to "worker functions" and "worker traits."

"Worker function" ratings form the fourth, fifth, and sixth digits of the occupation code and, according to the *Dictionary*, "indicate the total level of complexity at which the worker performs" in relation to the data ("information, knowledge, conceptions . . . obtained by observation, investigation, interpretation, visualization, and mental creation"), people (and "animals dealt with on an individual basis as if they were human"), and things encountered on the job.

Information on "worker traits" is compiled as a part of job analysis but is not included in the *DOT* (a computer tape is available but, as of December 1980, the Department of Labor had not yet published a printed version). Information was collected on 43 variables intended to reflect training times required for different jobs; aptitudes, temperaments, and interests required of workers; and physical demands and working conditions.

According to the committee there are "serious questions regarding the adequacy of the worker trait and worker function variables." The latter are supposed to measure the complexity of an occupation but, the committee noted, the *Handbook for Analyzing Jobs* fails to define what is meant by "complexity."

"The precise meaning of the 'training times' variables is equally unclear," the committee said; their validity "has been called into question by the extremely high correlations . . . between them and measures of the social status or prestige of occupations." Variables of worker aptitudes, interests, and temperaments "reflect a theory of vocational preference for which the empirical support is weak The idea that the adequate performance of particular jobs requires workers with certain traits may seem reasonable enough, but the constancy of such traits as attributes of individual personality has not been adequately established"

'Changes in the Occupational Structure'

The "worker traits" and the scales used to rate them were devised after World War II by piecing together several sources. New methods are needed, the committee said:

"Changes in the occupational structure and related institutions since the development of these scales, e.g., a shift from a predominantly manufacturing to a service economy and changes in school curricula, may

have undermined the capacity of these scales to measure the content and requirements of jobs accurately, especially jobs that have recently emerged or changed. . . . Scales that more or less adequately reflected the state of the art of vocational trait measurement at midcentury are now outdated. This condition serves to underscore the urgency of adopting a new strategy in producing the *DOT* that includes as an intrinsic aspect continuous research and technical improvement of the document as a whole and of each of its components."

Despite their deficiencies, the information on "worker functions" and "worker traits" is the "most comprehensive set of occupational characteristics currently available," the committee said. "As such," and with certain refinements, "their use should be continued."

Meanwhile, the committee said, "development of a new set of scales of occupational characteristics is a research activity that should be undertaken prior to the publication of the next edition of the *DOT* and then continued as an ongoing activity"

That recommendation was one of several made by the committee, and it reflects two themes common to most of them. First:

"The collection and dissemination of occupational information by the occupational analysis program should be a continuous process; activity should not fluctuate with the timing of new editions"

And:

"A permanent, professional research unit of high quality should be established to conduct technical studies designed to improve the quality of the Dictionary of Occupational Titles as well as basic research designed to improve understanding of the organization of work in the United States."

"[T]he gravest difficulty lies not in specific areas but in the general lack of a research orientation," the committee said.

"The early editions of the *Dictionary of Occupational Titles* were at the forefront of the occupational analysis of their time. For later editions this is no longer true: the program has been allowed to stagnate. It will not become a vital force again unless the importance of quality research . . . is recognized."

—KATHY S. HEGGEMEIER

Energy issues—and their impact on money, jobs, the environment, and cherished ways of life—are dividing America along sharp new regional lines.

Energy: When Regions Collide

The debate is noisy, sometimes harsh. It occasionally descends to the level of the bumperstickers ("Drive

Fast, Freeze a Yankee") that are among its trademarks. Still, the underlying issue—the conflict of region against region over America's energy resources—is much more than a clash of selfish interests. It is the principal challenge to interstate cooperation in this decade; it is also a primary concern of national domestic policy, because the skill with which we develop, manage and share our own resources will determine our degree of dependence on other nations.

Energy is an economic wedge that is dividing East from West, and, in so doing, overwhelming America's traditional North-South sectional tensions. From the viewpoint of a Western state, regional solidarity is one line of defense against the risk that outside interests will extract the state's wealth, destroy its landscape, and cripple its way of life. That is the view of a state such as Montana, which imposes a tough severance tax on coal—and now finds itself defending that tax in the U.S. Supreme Court. From the perspective of a Northeastern

David F. Salisbury

Energy: When Regions Collide

state, regionalism can mean joining with other states to guard against the threat that rising energy costs will accelerate an already serious economic decline. From this perspective, the tax that Montana considers part of the solution will be seen as part of the problem.

In Washington, D.C., the question is one of national policy: whether the federal government should act to correct imbalances between regions, or whether it should allow them to happen without intervention.

Initially, the unavoidable result of regionalism is conflict. Minnesota Representative Ken Nelson, chairman of NCSL's Energy Committee, notes that, "The energy issue will inevitably lead to increased friction within our federation of states." The challenge is to rise above that friction, to translate conflict into cooperation, and to forge the institutional apparatus necessary to deal with natural resource issues, of which energy is but the first.

The West's "alienation" is not a new story. What needs to be emphasized is that the West is emerging as a regional power primarily out of defensiveness. This is particularly true of the Rocky Mountain states. This area currently produces 26 percent of the nation's

Energy is the most potentially divisive issue for the nation because 'serious talk about energy involves a great deal of money. There may never have been so rich a sweepstakes in American history.'

—'Energy Futures'

coal, and production is expected to climb to over 50 percent by 1990. Thirty-six of the nation's synthetic fuel plants are projected for the Rocky Mountain region. In the Overthrust Belt, which stretches from Canada to Mexico through Montana, Wyoming, Colorado, Utah, New Mexico and Arizona, there are an estimated 15 million barrels of oil and 100 trillion cubic feet of natural gas reserves, which energy companies are feverishly developing. Also, much of the nation's nuclear waste is transported to this region.

Add to this, Pentagon plans for the MX missile system in Utah and Nevada—in itself the biggest construction project in the history of man—and the result is an unprecedented degree of industrial pressure.

"We don't want the West turned into one vast trailer town sitting in a lunar landscape," Colorado Governor Richard D. Lamm has proclaimed. Although hyperbole, his comment accurately reflects the degree of concern that many Westerners feel.

Traditionally, this area has been actively prodevelopment. But recent years have seen an increase in environmental consciousness. Although this has been divisive in the past, the magnitude of looming energy impacts are forging new alliances, particularly between Western urban environmentalists and rural agricultural interests.

An example of energy issues creating new friendships comes from Wyoming. There, a considerable controversy is simmering over proposals to build pipelines to carry coal slurry to the Southeastern states.

Although the fiercest fighting has been with the railroads who fear these pipelines will skim the cream off their newly profitable coal transportation business, Wyoming farmers and environmentalists joined forces out of concern over the amount of water that will be required to sluice large quantities of coal over such a pipeline.

"It's one of nature's ironies that these rich coal deposits are in areas that are water-deficient," Hugh Hudson of the U.S. Geological Survey has observed.

State officials, as well, have expressed concern that the federal right of eminent domain sought by the pipeline developers might override jealously held state water rights.

"Sufficient water is physically, although not necessarily legally, available in three western coal-producing areas studied to service both existing uses at present levels and a substantial number of coal slurry pipelines as well. However, pipelines do compete directly with other possible future uses," stated the latest review of this issue by the Congressional Office of Technology Assessment (OTA).

Uncertainties in the amount of water that the area's Indian tribes and the federal government can legally claim complicate the issue considerably. Also, slurry pipelines will compete for water directly with the synthetic fuels plants projected for the region.

Similarly, the almost inconceivable scale of proposed development in this area, which contains only 3 percent of the nation's population, has overshadowed the parochial differences between the states to such an extent that they have forged an unprecedented alliance. This intergovernmental innovation is the Western Governor's Policy Office. Established in 1977, WESTPO was created to give the area's governors the capability to formulate policy

at a regional level and respond as a unified front to federal initiatives, particularly on energy.

"Since the early 1970s the Rocky Mountain and Northern Plains states have accumulated more multistate experiences in coping with energy and natural resource development issues than any other contiguous group of states in the nation. These states have replaced the South as the region with the strongest sense of identity and have undertaken one of the most significant experiences in intergovernmental relations since the Civil War," writes Lynton R. Hayes, a University of West Florida political scientist, in his book *Energy, Economic Growth, and Regionalism in the West*.

Regionalism: A Guide to the Players in the Game

Much of the sectional rivalry over energy has been channeled through regional organizations, several of which are growing in strength and influence. Not all of them are concerned exclusively with energy, but some have made it their primary concern and all are involved with the issue. Here is a guide to some of the major organizations:

Coalition of Northeast Governors (CONEG)—Officially established in the summer of 1976, it includes the governors of New York, New Jersey, Pennsylvania, Connecticut, Rhode Island, Massachusetts, Vermont and Maine. It has been active in developing and implementing federal funding formulas that "target" more federal money to their region.

Council for Northeast Economic Action—This organization consists of representatives of government, industry, labor and financial organizations in the Northeast. Its purpose is to consolidate pertinent economic research and apply this to development of regional policy.

Great Lakes Governors' Caucus—This group includes the governors of Illinois, Indiana, Minnesota, Ohio, Pennsylvania and

Wisconsin. It is studying economic problems of common interest to its respective states and initiating legislative changes in areas of mutual concern.

Northeast-Midwest Congressional Coalition—Headed by U.S. Representative Robert W. Edgar of Pennsylvania, the Coalition is an alliance of more than 200 members of Congress from 18 states. These include: Connecticut, Delaware, Illinois, Indiana, Iowa, Maine, Maryland, Massachusetts, Michigan, Minnesota, New Hampshire, New Jersey, New York, Ohio, Pennsylvania, Rhode Island, Vermont and Wisconsin. Its stated objective is to "develop positive and aggressive legislative initiatives aimed at reviving the economies of the coalition states."

Northeast-Midwest Institute—Under the direction of Thomas Cochran, this is a nonprofit, independent research center concerned with issues and policy affecting the Northeast and Midwest.

New England Congressional Caucus—Founded in 1972 by the 25 members of Congress from the New England states, this was the first regional caucus to establish a full-time staff. Its efforts have focused primarily

on energy and transportation problems.

Southern Growth Policies Board (SGPB)—Organized in 1971 as a public, nonprofit interstate agency, SGPB is authorized by an agreement approved by 13 state legislatures: Alabama, Arkansas, Florida, Georgia, Kentucky, Louisiana, Mississippi, North Carolina, South Carolina, Oklahoma, Tennessee, Virginia and West Virginia. Its goals are planning for growth in the South. It has been a major opponent of CONEG in the skirmishing over funding formulas.

Western Governors Policy Office (WESTPO)—This organization was formed in 1977 as a result of a successful experiment, the Western Governors Regional Energy Policy Office. Participants include the governors of Alaska, Arizona, Colorado, Idaho, Montana, New Mexico, North Dakota, Utah and Wyoming. The catalyst in its formation was the federal projections of massive energy development in the area, such as a five-fold increase in coal production. Its primary purpose is to develop energy and resource development policy of regional interest and to present a unified front in responding to federal energy policy.

Actually, since the mid-70s, Western sectionalist rhetoric has decreased. Leaders like Wyoming Governor Ed Herschler have begun to stress the possibilities of cooperation with the federal government. In a recent speech, for example, Herschler stressed the necessity for such a partnership in the development of synfuels: "a partnership which will insure that the health of our citizens and environment of the West will not be compromised."

Of course, regional energy concerns are not confined to the West. It is of particular concern in the industrial Northeast as well. On top of the region's serious structural economic problems, rising energy costs have frustrated Northeastern hopes to reverse long-standing economic deterioration.

According to historical economist W.W. Rostow of the University of Texas at Austin, this is an unfortunate twist to an overall pattern of industrial development. Almost universally, areas that industrialize later tend to catch up with those that develop earlier. Because the South and West were later in industrializing than the Northeast, their economies have been growing more rapidly and the relative economic differences have been diminishing. This pattern was benign until 1972-73. Then the nation experienced a drastic upswing in the price of natural resources, including energy.

"The rise in food and energy prices accelerated the development of many Sunbelt states which exported energy and agricultural resources to the rest of the country

while it decelerated the already slower rate of expansion in the Northeast and North Central industrial states. [This] upswing . . . hit the two northern regions hardest. They had committed themselves to enlarged public and private services at a time when their manufacturing base, with high obsolescence in certain sectors, was declining and the rate of population increase was slowing down," Professor Rostow asserts.

This situation led to a number of responses in the Northeast. One was the formation of several regional organizations. A second was the outbreak of a controversy over purported regional inequities in federal funding and the effect of this on the Northeast's economic fortunes. Beginning in 1976, a series in the *New York Times* (later a *Business Week* special) and a *National Journal* report fanned the flames of sectionalism by arguing that federal expenditures substantially favored the swiftly growing Sunbelt at the expense of the Northeast.

Based on the widely disputed assumption that the difference between the federal taxes a region pays and the amount of federal money expended in the area is an adequate measure of the equity of its relationship to the federal government, these articles gave the region's leaders a convenient scapegoat and led to a concentrated political attack on federal funding formulas.

Subsequently, Robert W. Rafuse, Jr., in an analysis prepared for the National Governors' Association, criticized this literature as "more intent on stirring up regional emotions than on understanding the problems." Professor Rostow agrees. He maintains "that the major regional changes in the country have been determined by deep and understandable historical forces; they have only been marginally shaped by the balance of federal tax and expenditure flows." And he considers energy the most potentially divisive issue for the nation.

The reason for this is simple. It's money. As *Energy Futures: Report of the Energy Project of the Harvard Business School* states: "To put it bluntly, serious talk about energy involves a very great deal of money. There may have never been so rich a sweepstakes in American history."

There has been considerably more discussion about the flow of funds between the United States and the Middle East as a result of rising energy prices than there has been about the flow of funds among regions within the country. But this issue made its appearance in the media last year and has been gaining currency.

Many of the same states that will be profiting from oil decontrol are already profiting from the natural gas decontrol act passed earlier.



Although not a prominent part of the debate at the time, the windfall profits tax is an example of the problem. The Treasury estimates that the top four oil-producing states—Alaska, Texas, Louisiana and California—may reap \$128 billion or more in taxes and royalties over the coming decade due to oil price decontrol.

Awareness of the potential drain of money from the Northeast led U.S. Senator Edward Kennedy (D-Mass.) to make a substantial excise tax a condition for his support of the Carter Administration's oil decontrol proposals.

In turn, Northeast interests managed to divert much of this tax revenue back into their region. In March 1980, Congress passed the \$237 billion revenue-raising measure. Half of this will go to reduce individual and corporate income tax while a quarter is to assist those with low in-

comes pay their energy bills. Northeast population centers will benefit from the tax reductions and, by tying direct assistance of the poor to the severity of the heating season, they managed to target a majority of this to their region as well.

This, in turn, led James Nugent, a Texas Railroad Commissioner, to complain that Texas is being shortchanged. Texas oil producers, he asserted, will pay 55 percent of the total tax, but the state will get only 3 percent of the low-income energy assistance fund that the tax will finance. Nugent grouched, "Protection from the heat is just as necessary as protection from the cold."

Still, Texas and the other oil-producing states managed to fight off a larger financial threat: the consuming states' efforts to tax them on their windfall in increased taxes and royalties.

Oil, of course, is only part of the total energy picture. Many of the same states that will be benefiting from oil decontrol are already profiting from the natural gas decontrol act passed earlier. New Jersey, for instance, has estimated that its citizens will pay an extra \$105 million over the next five years to Texas and Louisiana in the form of passed-on severance taxes.

A severance tax is a tax collected on nonrenewable resources "severed" from land within a state's boundary. As Texans are profiting from their oil and gas severance taxes, however, they are losing on other states' coal severance taxes. This has led the city of Austin to join with 11 Midwestern and Southwestern utilities and four coal companies in contesting Montana's 30 percent coal severance tax.

Although Montana's is the highest severance tax in the nation by percentage, in terms of the total revenue generated, it is small in comparison to the oil severance taxes of Texas and Louisiana. In fiscal 1980, Montana collected \$94.6 million from severance tax, Texas received over \$15.5 billion and Louisiana over \$500 million. Six other states (Alaska, Florida, Kentucky, New Mexico and Wyoming) surpassed Montana in severance tax revenue, according to Census Bureau figures.

The reasons for Montana's high tax can be found in the state's history. In times past, parts of Montana were dominated almost entirely by the Anaconda Copper Company, and many in the state have vowed never again to be "colonized" by out-of-state interests. As a result, Montana hiked its severance tax to 30 percent in 1975.

Part of this money is used for roads, buildings, schools and utilities in mining areas. The remainder goes into a

state trust fund that totals \$30 million and is expected to grow to \$4 billion by the end of the century. The precise purpose of this trust is ill-defined, but it is generally intended to provide an economic base for the state after the coal is gone.

Montanans such as State Senator Thomas E. Towe stoutly maintain that these revenues increase the cost of the electricity to Midwest consumers less than their own states' sales tax and are essential to break the "boom and bust" cycle that has plagued Montana's economy since the turn of the century.

The utility-coal company suit argues that this tax is excessive—"an OPEC-like revenue maximization." The argument was unsuccessful in state court, but the U.S. Supreme Court has agreed to hear the case. The complainants warn that, should they lose, energy-rich states will have a virtually unlimited right to raise these taxes.

The political profitability of the coal tax issue has led to a congressional attack as well. Already, Texas congressmen have enthusiastically authored a bill that would limit state severance taxes to 12.5 percent even though the Southern governors have publicly opposed such a measure. And U.S. Representative Philip R. Sharp (D-Ind.) has proposed an even stronger measure.

So far, these bills have not gone anywhere. If they fail, and if producing states begin hiking their energy taxes, Minnesota's State Representative Nelson warns that the consuming states will "begin looking around for what they produce that they can raise taxes on to compensate for rising energy costs."

Montana's is the highest severance tax in the nation by percentage, but the total revenue it generates is small in comparison to the oil severance taxes of Texas and Louisiana.



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If the conflict continues to escalate, in short, the result could be a kind of domestic trade war, triggered by rising energy costs.

The severance tax fight, characterized by U.S. Representative Robert W. Edgar (D-Penn.) as "the issue of the 80s," poses a serious question for state power as well. Severance taxes are traditional revenue sources for states, and a number of state leaders see such limitations as a dangerous precedent.

An even more serious threat to growing state power is the proposed Energy Mobilization Board (EMB). In some versions of this agency, hotly debated by the last Congress, the EMB would have power to override state and local laws that impede the construction of energy projects considered crucial. Although blocked by an unusual coalition of liberals and conservatives, observers say the issue is "smoldering," not dead.

Because of the pervasiveness of energy and the complexity of the U.S. economy, the future is clouded. But there is little doubt that energy-induced stresses and strains will create unprecedented tensions among the different regions. As Thomas H. Cochran, Executive Director of the Northeast-Midwest Institute, has observed, "Each state and every region has individual needs that must be accommodated within the structure of a national energy policy. This thing is not going to be wrapped up in a month or a year. It's going to be played out over the years in many settings. We're only beginning to understand some of the regional implications of energy, and they are very complicated. We're in for a long haul."

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