

Table 2. Unemployment rates of the experienced civilian labor force adjusted for compositional and interactional changes, 1972-85 annual averages

[In percent]

Year	Original unemployment rate	Adjusted unemployment rates	
		Changes in industrial composition	Changes in composition and interaction
1972	4.848	4.848	4.848
1973	4.156	4.156	4.150
1974	4.871	4.871	4.867
1975	7.640	7.621	7.577
1976	6.820	6.797	6.774
1977	6.132	6.114	6.105
1978	5.202	5.182	5.182
1979	5.059	5.033	5.033
1980	6.350	6.327	6.285
1981	6.771	6.739	6.689
1982	8.703	8.651	8.503
1983	8.609	8.560	8.408
1984	6.604	6.572	6.489
1985	6.334	6.334	6.229

the shift towards service industries is confirmed by chart 1, on which the original data and data adjusted for both composition and interaction have been plotted after rounding to the first decimal point.

The effect on the unemployment rate is so small because of the relative cyclical sensitivity of fast- and slow-growth industries. Unemployment rates for the relatively slow-growth manufacturing divisions are quite sensitive to the cycle. However, although employment levels continue to rise in the service industries, unemployment rates in these fast-growth industries are also sensitive to business cycles. For example, the jobless rate in the rapidly expanding retail trade industry (a major part of the service sector) also rose very sharply during recessions. By 1985, the retail trade industry accounted for almost as much of the experienced labor force as durable and nondurable manufacturing combined, and thus contributed as much weight to the aggregate unemployment rate.

Thus, it is incorrect to assume that all rapidly growing sectors are immune to the business cycle. Certainly, their cyclical sensitivity is more apparent in their unemployment rates than in their employment levels. Therefore, while the moderation hypothesis is intriguing, the empirical effect has been negligible during the past 14 years. □

—FOOTNOTES—

¹ The experienced labor force excludes those who have no previous work experience and, therefore, no attachment to a particular industry. This labor force concept is used because workers without experience cannot be meaningfully classified according to industry.

² See for example, Robert Kuttner, "The Declining Middle," *Atlantic Monthly*, July 1983; Barry Bluestone and Bennett Harrison, *The Deindustrialization of America* (New York, Basic Books, 1982); Thomas J. Di Lorenzo, "The Myth of America's Declining Manufacturing Sector," *Heritage Foundation Background* No. 321 (Washington, DC, Jan. 13, 1984); and Ronald E. Kutscher and Valerie A. Personick, "Deindustrialization and the shift to services," *Monthly Labor Review*, June 1986,

pp. 3-13.

³ Quoted in Henry F. Meyers, "The Growth in Services May Moderate Cycles," *The Wall Street Journal*, Sept. 22, 1986, p. 1.

⁴ The experienced unemployed are categorized by the industry in which they last worked. This can lead to data classification problems—for example, a worker on layoff from a durable goods manufacturing job who works in a temporary job as a taxi driver would be classified as employed in transportation and public utilities. Despite these technical concerns, industry unemployment rates provide a useful perspective on the structural trends that are the focus of this report.

⁵ This section draws heavily on Joseph Antos, Wesley Mellow, and Jack Triplett, "What is a current equivalent of unemployment rates of the past?" *Monthly Labor Review*, March 1979, pp. 36-46.

⁶ Industry classification in the Current Population Survey is somewhat different than in the Bureau of Labor Statistics establishment payroll survey in that government employees are categorized by industry—public administration, health, education, and so forth—in the CPS, rather than being aggregated in a single industry.

⁷ This assumption, which builds the best case possible for the cycle moderation hypothesis, is at least plausible in light of the consistently negative values of the interaction term.

Cooperative training in telecommunications: case studies

MARGARET HILTON AND RONNIE STRAW

In mid-1986, the Communications Workers of America (CWA) and American Telephone and Telegraph (AT&T) reached agreement on a 3-year contract covering 155,000 workers. The highlight of the new contract was an innovative employment security package that gives the company the flexibility to meet competition while protecting and enhancing the careers of the workers. AT&T will provide \$7 million annually to a new jointly-administered corporation, the Alliance for Employee Growth and Development, which will offer career counseling, training, and retraining to both active and laid-off AT&T employees.¹

All regular full- and part-time employees represented by CWA will be eligible for the joint training programs. In addition, laid-off CWA-represented employees may participate if they enroll within 6 months of layoff and take their severance pay in weekly installments. Laid-off workers will remain eligible for 1 year after these severance payments expire, or until they find a new job, whichever happens first.

This new agreement represents a major milestone in the history of the U.S. telecommunications industry. Training and retraining will help American industry compete in world markets. For the 650,000 workers represented by CWA, the contract was also a major step forward. Between 1983 and 1986, total employment in telephone communications dropped by 14 percent,² as new technology and increased competition caused layoffs. More than half of CWA's members are employed by the seven Regional Bell Operating

Margaret Hilton is a research economist and Ronnie Straw is director of development and research, Communications Workers of America.

Companies spun off from AT&T under the 1984 divestiture agreement. These workers also obtained major improvements in training under new contracts negotiated in August 1986, after the AT&T agreement was reached.

As CWA and AT&T begin to establish the joint training program, they can learn from past experience with both training and quality-of-worklife programs.

The quality-of-worklife strategy

Before divestiture, in the stable world of the regulated AT&T monopoly, CWA and AT&T saw the benefits of joint efforts to improve working conditions and increase productivity. A series of company surveys in the late 1970's showed that workers were dissatisfied with increasing production pressures, measurement and monitoring of work, excessive overtime, and lack of proper training. To address these problems, reduce job stress, and improve communications, the company and union agreed, as part of their 1980 national contract, to a joint quality-of-worklife process.

Quality-of-worklife had its origins in British coal mines in the 1940's. Eric Trist, a behavioral scientist now at the Wharton School, developed a new paradigm of work organization stressing autonomous work groups, broader jobs, and worker participation in decisionmaking. The concept began to appear in U.S. manufacturing industries in the 1960's, and gained momentum with a growing concern for worker satisfaction on the job. In the United States, quality-of-worklife generally takes the form of worker-management teams which meet to discuss and solve workplace problems.

When researchers from the New York Stock Exchange surveyed 49,000 corporations employing more than half of all U.S. workers, they found that quality-of-worklife-related activities had grown rapidly between 1980 and 1982.³ During this time, about 14 percent of corporations with 100 or more employees had quality-of-worklife-type programs.

Although some experts predicted that quality-of-worklife and other forms of labor-management cooperation would diminish as the economy recovered from recession in the mid-1980's, the opposite has occurred. Increased global competition and the introduction of new technology have spurred more companies to implement worker participation programs. According to *Business Week*:⁴

In the past few years, scores of companies that traditionally set the patterns in industrial relations have adopted the concept. Among them are General Electric, Ford, most GM Divisions, as well as Xerox, Honeywell, Digital Equipment and other high-tech companies. Even the financial services industry is picking up the concept.

These national trends are reflected in CWA's quality-of-worklife programs. Since 1980, about 1,000 company and union facilitators have been trained, and 3,000 joint local work force teams have met to discuss issues of concern to the company and union. In a recent study, CWA and AT&T concluded that quality-of-worklife was "worth it," with real benefits for all parties.⁵

In the present competitive, postdivestiture environment, worker participation is even more important to both CWA and the telephone companies. As Michael Maccoby, a consultant to CWA and AT&T put it:⁶

In a competitive world, the bureaucratic, industrial system is too cumbersome and expensive. Workers must be trained to understand the goals of the business and given the authority to respond to customer needs and to solve local problems. Such training and authority requires new skills, flexibility, and decentralization. When it works, everyone is involved in satisfying customers and in cutting unnecessary costs. . .

The quality-of-worklife process can help achieve these goals, making the companies more competitive, which, in turn, will make CWA jobs more secure.

Training and retraining

In 1983, CWA and AT&T recognized that changes in the industry and technology made ongoing training a necessity. Their 1983 national contract directed AT&T and each Bell Operating Company to begin offering training and retraining programs. A union-management Training Advisory Board was established in each company to advise management on off-hours training for career development and retraining for new jobs within the company.

Training programs under the 1983 contract used a variety of delivery mechanisms. At Northwestern Bell headquartered in Omaha, NE, the joint board contracted with 43 community colleges to deliver free career counseling and courses to workers living throughout the five-State region. Since the program began in October 1984, 4,600 workers, or 46 percent of the 10,000 who are eligible, have participated in counseling or training, or both. The dropout rate from college courses selected by the workers, based on their career plans, was less than 5 percent.

At C&P in the Washington, DC, area, the training board has expanded courses offered after work at company locations. Because of their convenience, these classes, which emphasize basic skills such as math and reading, are very popular. The company also offers tuition assistance and home study courses. Rank-and-file participation in off-hours training was 26 percent in 1984 and 17 percent in 1985.

AT&T, Bell South, and Pacific Telesis developed extensive correspondence curricula which matched their business plans. Because of their great accessibility, these courses proved extremely popular. Most of the companies also offered tuition assistance for courses at local colleges.

CWA members have responded enthusiastically to the new training programs. At most companies, participation rates were over 10 percent, and at Pacific Telesis, AT&T, and New Jersey Bell, they were over 15 percent. Courses in basic skills, whether offered via home study or through local colleges, were especially popular. AT&T's studies of its work force indicate that "measured cognitive skills may account for as much as one-third of the productivity difference between workers."⁷

Joint processes improve training

Some of the most successful training programs have been those in which union and management used the quality-of-worklife process to develop and implement the program. When both parties are involved and committed to training, more workers participate and success rates are higher.

Columbus, OH. One example of successful joint training is found in the Columbus, OH, operator services district of AT&T Communications. This group of employees has been actively involved in quality-of-worklife since 1981.

Formerly a part of Ohio Bell, the operator services district now includes 25 managers and 370 workers, most of whom are long-distance operators. Following divestiture, quality-of-worklife has continued and grown. In addition to a district level quality-of-worklife steering committee and several subcommittees and task forces, operator circles reach every employee, with meetings every 4 months.

Through quality-of-worklife, union and management have successfully developed and delivered several types of training. First, to facilitate the work of the operator circles, all employees were trained in problem-solving techniques. The steering committee also assigned a service assistant to develop and conduct a short stress management course. About one-third of the workers have taken the course to date, and surveys show that the course has been extremely well received.⁸

The professional development subcommittee of the steering committee has been particularly active in the area of training. With input from operators in all of the offices, the subcommittee designed a 2-hour course on professionalism and customer satisfaction. A feedback survey indicated that most trainees found the course valuable in promoting professionalism and pride. They were reminded of the importance of their contribution to the company in the more competitive, postdivestiture environment.

The CWA-AT&T Training Advisory Board began mailing texts for home study courses in early 1985. When the professional development subcommittee learned about the courses, they set up after-hours study halls on company premises. Seven union and management subcommittee members began by working through the "Quick Arithmetic" course, meeting on their lunch hours to discuss problems. All seven successfully completed the course. In early 1986, these seven "coaches" organized a study hall on company premises for other interested AT&T employees. Combining the coaches with the study hall group, a total of 43 people enrolled in Quick Arithmetic and received texts, and 81 percent successfully completed the course. Based on this success, the professional development subcommittee is now coaching groups enrolled in "Basic Electricity," "English Review," and "Principles of Selective Listening" courses.

In contrast, national completion rates for AT&T employees

who attempted the home study course on their own were much lower.⁹ Of the 12,328 employees who had enrolled in February through September 1985, only 3,778, or 31 percent had passed their final test by December of that year.¹⁰ At C&P Telephone, completion rates for off-hours correspondence courses averaged 55 percent, compared with 85 percent completion for those who enrolled in classroom training. By creating a classroom situation, the Columbus quality-of-worklife team has overcome the low motivation that usually leads to high dropout rates. An active union-management partnership has improved the quality of training.

Pacific Northwest Bell. Success with quality-of-worklife led managers at Pacific Northwest Bell to extend joint decisionmaking in late 1984. They established a group of three internal Organizational Change Consultants. The consultants reported to management, CWA, and the International Brotherhood of Electrical Workers, respectively, but were all housed within the company and worked as a team.

One of the first problems assigned to the consultants related to time and materials charging. Because installers were uncertain about whether and how they could charge for work on equipment and wiring not owned by Pacific Northwest Bell, they were charging customers at a very low rate. The company, seeing little revenue generated by the labor hours spent, had stopped marketing the technicians' services. A report on the legal and financial aspects of billing was produced, but this highly detailed information was not reaching the installers who actually did the work.

To address this problem, the consultants involved a cross-section of interested parties, including a core group of six managers chosen by the department directors and four craftspeople chosen by the local unions. Seeing the need for more expertise, this group brought in managers who were knowledgeable about rates and tariffs; a manager and two CWA members from the business office; and an expert wiring craftsworker. The task force agreed to two goals—increasing revenues and increasing job security.

Two course developers from the company learning center and two technicians developed the curriculum for a 1-day pilot class on time and materials charging. Following trials of the pilot, the subcommittee switched to a longer format of two 6-hour days. The training was aimed not only at teaching the installers how and what to charge, but also why they should keep accurate records—to increase their job security. The committee had agreed to measure the revenues generated by time and materials charging so that these revenues could be weighted against labor costs in layoff decisions.

In March, April, and May of 1985, the course was delivered to about 400 installers. Three instructors—all technicians—brought the training to installation and maintenance groups throughout Washington and Oregon. The results of the training have been phenomenal, as shown by the pattern of revenues generated from work on equipment not owned by Pacific Northwest. In January 1985, before the course, revenues totalled \$589. In April, when half of the workers

had completed the training, \$21,000 was generated from the outside work. By February 1986, billing for customized work and charges reached \$180,000. Total revenues for 1985 and the first 2 months of 1986 were about \$1.4 million, or nearly twice the task force's projection of \$831,000.

As a result of the course, installers' services are now marketed aggressively. For example, if an installation crew drives by a construction site on their way from another job, they stop and bid on the work. They also know how much to charge for working on outside equipment, such as doing testing for AT&T.

In addition to achieving the company's goal of enhancing revenues, the task force's efforts have led to increased job security for installation and maintenance technicians. Demand for their services has grown with increased bidding on jobs and more installers have been hired, providing CWA members in other job titles with opportunities for promotions or transfers into this work group. Future layoffs are unlikely because the savings in labor costs must be weighed against the revenues generated by the installers.

A second training problem was identified through the annual Work Relationships Survey, conducted as part of the ongoing quality-of-worklife process. Systems technicians, who work on computer-telephone hookups and other special systems, indicated that they were unhappy with the quality of their training. Training was mostly provided in learning laboratories where employees independently studied textbooks and tapes, and raised questions to managers who were sometimes available. This training structure did not give the technicians the skills needed to deal with equipment vendors and competitors in the postdivestiture world, nor did it include training on digital equipment, which was planned to be completely installed by 1987.

A more detailed survey of the technicians' knowledge of math and electronics revealed that they needed more knowledge on the fundamentals of electronics. A manager who was instrumental in the surveys and training called upon the Joint Occupational Change Consultants. This team set up a task force of systems technicians, chosen by CWA local presidents, line managers, course developers, and representatives of Lake Washington Vocational Technical Institute. This group first met in May 1985.

The consultants split the task force into three committees. The curriculum committee, which included skilled systems technicians, brainstormed about topics to cover, evaluated textbooks, and interviewed candidates for the instructor and assistant instructor jobs. The human factors committee dealt with transportation, housing, and contract issues. The finance committee obtained group accommodations from a motel near the school and tracked total course costs. The skills of the consultants and the energy of the committee members met with success. By September 1985, the first class began the 3-week "Telecommunications I" course.

Although participation (on company time) was voluntary, 95 percent of the system technicians signed up for the

course. They were so enthusiastic about the training that their supervisors also wanted to participate. In June 1986, 8 classes of 20 technicians and 5 classes of 22, including 10 first-level supervisors, had finished the course. Of these 270 trainees, there were no dropouts and only one failure. Following a summer break, three more classes met. As of November 1986, about 300 technicians and supervisors had been trained and no one else had dropped out or failed. The participants were enthusiastic about the quality of the instructors, the extensive modern laboratory, and relaxed camaraderie among the trainees. Also, they preferred the classroom setting to their earlier self-paced instruction.

In general, dropout rates from off-hours correspondence courses at Pacific Northwestern have ranged from 56 to 67 percent between 1982 and 1985. Although completion rates are probably higher for on-hours training, the problem of lack of motivation in self-paced courses remains.

Management was pleased that the off-site electronics course was less expensive than in-house training. Tuition costs reflected a State subsidy to the vocational technical school of about 31 cents per dollar. Technicians who have completed the course were more comfortable dealing with outside vendors, called on their supervisors less often, and were more motivated to work.

The success of "Telecommunications I" has led to further joint training efforts. Management and union representatives have begun developing "Telecommunications II," a more advanced course, covering digital electronics and microprocessors. The instructor for Telecommunications I has surveyed managers, trainees, and technicians to identify training needs and develop the curriculum for the second course. Continued joint training in electronics will increase productivity and employment security as the company installs digital equipment.

FOR AT&T AND CWA, the success of the courses at Pacific Northwest Bell and AT&T Columbus provides a model of working together. In both examples, union and management were active participants in designing and delivering training. The quality-of-worklife process, which facilitated these successes, can help CWA and AT&T set common goals to use the new joint training fund effectively and to work together to deliver beneficial training programs.

Joint training enhances productivity and competitiveness for employers, while helping individuals reach career goals. As national and international competition grows, companies that develop their human capital through such innovative approaches will survive and prosper. □

— FOOTNOTES —

¹ The International Brotherhood of Electrical Workers obtained similar training programs for their 41,000 AT&T employees in June 1986. However, the IBEW did not create a separate, jointly-owned corporation to deliver training and career counseling.

² Bureau of Labor Statistics, *Employment and Earnings*, February 1986.

³ William C. Freund and Eugene Epstein, *People and Productivity: The New York Stock Exchange Guide to Financial Incentives and the Quality of Work Life* (Homewood, IL, Dow Jones-Irwin, 1984), p. 128.

⁴ John Hoerr and Michael A. Pollock, "Management Discovers the Human Side of Automation," *Business Week*, Sept. 29, 1986, p. 74.

⁵ U.S. Department of Labor, Bureau of Labor-Management Relations and Cooperative Programs, *Quality of Work Life: AT&T and CWA Examine Process After Three Years* 1985, p. iii.

⁶ *Ibid.*, p. vii.

⁷ Mary L. Tenopyr, "Cognitive Skills and Job Performance," *High Schools and the Changing Workplace* (Washington, National Academy Press, 1984).

⁸ Communications Workers of America Research Staff and AT&T Communications Research Staff, *The Emergence of Second Generation Quality of Work Life Models in AT&T Communications: A Pilot Study*, 1986, p. 8.

⁹ The five most widely used home study courses are Robert A. Carman and Marilyn J. Carman, *Quick Arithmetic*, 2nd ed. (John Wiley and Sons); Donald H. Sanders, *Computers Today* (McGraw-Hill); Robert N. Anthony, *Essentials of Accounting*, 3rd ed. (Addison-Wesley); *Principles of Selective Listening* (Argyle Publishing); and Patricia M. Fergus, *Spelling Improvement* (McGraw-Hill).

¹⁰ AT&T Communications Corporate Learning and Development Organization, *Training/Retraining 1985 Results and Measurements*, table 3.

New data on workers belonging to unions, 1986

An estimated 17 million wage and salary employees were union¹ members in 1986, unchanged from 1985. In comparison, union membership declined an average of about 817,000 a year between 1979 and 1983 and 361,000 a year between 1983 and 1985.

Because of the increase in total wage and salary employment—from 94.5 to 96.9 million—union members as a proportion of all wage and salary employees fell from 18.0 to 17.5 percent between 1985 and 1986.

Union membership and employment data were obtained from the Current Population Survey (CPS), conducted by the Bureau of the Census for the Bureau of Labor Statistics. The CPS compiles data on workers identified by their membership in unions or by their representation at work by a union, whether or not they were members. The data covered only employed wage and salary workers, not those who were self-employed, retired, or laid-off.

Industry. Two of the eight major industry groups—Federal, State, and local government and transportation, communications, and public utilities—had union membership proportions approximately double the 17.5 percent national average. Manufacturing and construction also had higher proportions than the national average, 24 and 22 percent, respectively. In mining, the proportion of union members was the same as the national average. Among the other

industry groups (wholesale and retail trade; services; and finance, insurance, and real estate), union membership was less than 8 percent of employment.

Occupation. Operators, fabricators, and laborers (including machine operators, assemblers, transportation workers, cleaners, and helpers) and precision production, craft, and repair were the most heavily unionized major occupational groups, with 30 and 29 percent union membership, respectively. Membership rates were less than 15 percent among the other major occupational groups.

Demographic characteristics. While a larger proportion of male workers than female workers belonged to unions (22 and 13 percent, respectively), the pattern of union membership proportions by age bracket was similar for both men and women. The proportion of workers belonging to unions was smallest for workers age 16 to 24 for both men and women (9 and 5 percent, respectively). As worker age rose, so did the percentage belonging to unions, with the highest unionization rate occurring for both men and women in the 45- to 64-year-old bracket.

Earnings. Full-time workers represented by unions had higher median usual weekly earnings than those without representation (\$439 compared with \$325). This relationship existed in 6 of the 8 major industry groups (exceptions were mining and finance, insurance, and real estate) and among the occupational groups (with the exception of managerial and professional specialty workers). Similarly, among black and white workers of both sexes, those covered by a collective bargaining agreement had higher weekly earnings than those that were not represented.

For detailed data, see Larry T. Adams, "Union Membership of Wage and Salary Employees in 1986," *Current Wage Developments*, February 1987, pp. 3-8. □

—FOOTNOTE—

¹ "Union" is defined to include traditional labor unions and employee associations that represent employees in collective bargaining.

Occupational pay structure in cigarette manufacturing plants

Straight-time earnings of production and related workers in the cigarette manufacturing industry averaged \$14.81 an hour in July 1986, according to a Bureau of Labor Statistics occupational wage survey.¹

Pay levels among occupations selected to represent the industry's wage structure, workers' skills, and manufacturing operations ranged from \$11.40 an hour for material handling laborers to \$17.90 for maintenance electricians.

Cigarette making-machine operators, the most numerous group studied separately, averaged \$14.96 an hour—\$15.01 for filter cigarettes and \$13.74 for nonfilter cigarettes. The only other groups with at least 2,000 employees were machine adjusters, who averaged \$17.73 an hour and packers, who averaged \$15.02 an hour. (See table 1.)

Earnings of individual workers reflect the similarity of rates paid by the establishments in the survey. Commonly, workers' pay varied by no more than 50 cents an hour in each of four surveyed jobs, and by no more than \$1 an hour in five others. For example, nearly two-thirds of the cigarette making-machine operators earned between \$15 and \$15.50 an hour, and three-fifths of the carpenters earned between \$17.50 and \$18 an hour. Also, differences in earnings of individual workers within the same occupation and establishment seldom exceeded 15 percent.

Such concentrations of earnings largely reflect the principal method of pay in the industry. All of the workers were paid on a time basis, and nearly two-thirds were under systems providing a single rate for a specific job. Range of rate plans covered the other workers.

The \$14.81 average for all production workers in July 1986 was 41 percent higher than the \$10.47 recorded by a previous survey in June 1981.² This increase, accompanied by a 27-percent decline in employment, averaged 7.1 percent annually. In comparison, the wage and salary component of the Bureau's Employment Cost Index registered an average annual increase of 5.0 percent in nondurable goods manufacturing over roughly the same period.

With lower employment came changes in the occupational composition of the work force. Since the 1981 survey, for example, the number of inspectors dropped by one-half and cigarette making-machine operators by one-third; partly attributable to new, multifunctional equipment. Moreover, cigarette catchers—15 percent of the production workers 20 years ago, but just 1 percent in June 1981—were not identified separately for the current study.

All of the production workers were in establishments providing paid holidays, paid vacations, and at least part of the cost of various health and insurance plans. Nearly two-thirds of the cigarette workers received the industry maximum of 13 holidays annually. Typical vacation provisions were 2 to 6 weeks with pay, depending on years of service.

All establishments provided employer-paid retirement pension plans (in addition to Social Security). Retirement severance plans applied to slightly more than two-fifths of the work force.

The nine cigarette manufacturing establishments within the scope of the survey (plants with 50 workers or more) employed 23,913 production workers in July 1986. Two-thirds of the workers were employed in establishments located in metropolitan areas,³ and nearly four-fifths were in establishments employing 2,500 workers or more. Slightly more than one-half of the workers were employed in North

Table 1. Number of workers and average hourly earnings in cigarette manufacturing plants, selected occupations, July 1986

Department and occupation	Number of workers	Average hourly earnings ¹
All production workers	23,813	\$14.81
Maintenance		
Carpenters	34	17.49
Electricians	350	17.90
Machinists	398	17.65
Fabrication		
Adjusters, machine	2,607	17.73
Cigarette making-machine operators	2,885	14.96
Filter cigarettes	2,773	15.01
Nonfilter cigarettes	112	13.74
Cigarette machine packers	2,869	15.02
Inspection		
Cigarette making inspectors	200	13.57
Cigarette packing inspectors	458	13.30
Material movement		
Laborers, material handling	213	11.40
Power-truck operators	842	13.40
Forklift	835	13.40
Truckdriver	46	13.48
Custodial		
Guards	100	12.57
Guards I	83	12.86

¹ Excludes premium pay for overtime and for work on weekends, holidays, and late shifts. Incentive payments, such as those resulting from piecework or production bonus systems, and cost-of-living pay increases (but not bonuses) were included as part of the workers' regular pay. Excluded are performance bonuses and lump-sum payments of the type negotiated in the auto and aerospace industries, as well as profit-sharing payments, attendance bonuses, Christmas or yearend bonuses, and other nonproduction bonuses.

NOTE: Overall occupations may include data for workers in subclassifications in addition to those shown separately.

Carolina; the remainder were in Georgia, Kentucky, and Virginia.

Filter cigarettes were the primary product manufactured in establishments employing 96 percent of the production workers. The remaining workers were in establishments primarily producing nonfilter cigarettes. Seventy percent of the workers were in establishments producing only cigarettes. However, when a secondary tobacco product was produced, it was always smoking tobacco.

Cigarette plants reporting a majority of their production workers under collective bargaining agreements employed seven-tenths of the industry's work force. The major union in the industry is the Bakery, Confectionery, and Tobacco Workers International Union (AFL-CIO). Under these contracts, workers receive quarterly cost-of-living adjustments (COLA) of 1 cent for each 0.3-percentage-point increase in the BLS Consumer Price Index. Besides COLA, the contracts typically include provisions for wage adjustments—either cents-per-hour or percentage additions to base rates.

A COMPREHENSIVE BULLETIN on the study, *Industry Wage Survey: Cigarette Manufacturing, July 1986*, BLS Bulletin 2276, may be purchased from the Bureau of Labor Statis-

tics, Publication Sales Center, P.O. Box 2145. Chicago IL 60690, or the Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402. □

—FOOTNOTES—

¹ Earnings data exclude premium pay for overtime and for work on weekends, holidays, and late shifts. Incentive payments, such as those resulting from piecework or production bonus systems, and cost-of-living pay increases (but not bonuses) were included as part of the workers' regular pay. Excluded are performance bonuses and lump-sum payments of the type negotiated in the auto and aerospace industries, as well as profit-sharing payments, attendance bonuses, Christmas or yearend bonuses, and other nonproduction bonuses.

² See *Industry Wage Survey: Cigarette Manufacturing, June 1981*, Bulletin 2132 (Bureau of Labor Statistics, June 1982).

³ Metropolitan Statistical Areas as defined by the U.S. Office of Management and Budget through June 1983.

Employer-sponsored health insurance for retirees: the need and the cost

Retirees in the private sector are finding employer-sponsored health insurance an increasingly important benefit, according to a recent report by the U.S. Department of Labor's Pension and Welfare Benefits Administration. Some highlights:

Although Medicare is the principal source of health coverage for the elderly, private health insurance, especially coverage provided through employer-sponsored group plans, provides an important supplement. The significance of private health benefits is likely to continue to grow as early retirement becomes even more common, life expectancy increases, and the older population grows.

Coverage. In 1983, an estimated 4.6 million retirees and 2.3 million dependents were covered by private sector employers' health insurance programs. Among retirees and dependents age 65 and over, 4.3 million persons were covered, or 16 percent of this segment of the population.

Group health insurance is a key consideration to those contemplating early retirement because Medicare is not available before age 65. An estimated 1.6 million retirees

and 1 million dependents under 65 were covered by employer-sponsored programs.

Employer-sponsored group insurance generally provides better coverage for health services than other private health insurance programs. Although cost-sharing does vary widely between firms, employers pay an average of 58 percent of the premiums under group insurance plans.

No systematic sample data are available on the criteria used by employers to determine eligibility for retiree health benefits. However, scattered data indicate that, to be eligible for benefits, employees usually have had to work for a firm for at least 10 years, and in some cases for as many as 20 years.

Funding. Prefunding of retiree health benefits is rare. Almost all firms finance these benefits on a pay-as-you-go basis.

The Deficit Reduction Act of 1984 virtually precludes prefunding for retiree medical benefits. (A concern of the Congress was potential tax abuse.) An alternative would be prefunding as an incidental benefit to a pension plan under section 401 (h) of the Internal Revenue Code. Retirees' benefits funded under this section, however, are not afforded the same level of protection as pension benefits.

The present value of the accrued liability for retiree health benefits is estimated to have been \$98.1 billion in 1983. This accrued liability represents the present value of benefits that both active and retired employees had "earned" as of the end of 1983.

If employers had been prefunding retiree health insurance, the 1985 annual accrual for new benefit liabilities would have been an estimated \$750 million.

Medicare tax rates are currently inadequate to sustain the program through the 1990's, and concerns about the Federal deficit suggest that Medicare benefits are unlikely to increase in the near future. The continuing rise in health care costs over the past decade has resulted in many companies reducing their health care benefits or increasing costs to beneficiaries, including retirees.

The report, "Employer-Sponsored Retiree Health Insurance," was prepared by the Office of Policy and Research, Pension and Welfare Benefits Administration. Copies may be obtained by writing to the Department of Labor, Office of Policy and Research, Pension and Welfare Benefits Administration, Washington, DC 20210 or by calling 202-523-9505. □