

Differences Among Private Industry Occupational Groups in Pay Levels and Trends

As a way to report on compensation cost levels and trends, the ECI surveys white-collar workers, blue-collar workers, and service workers. The ECI suggests that there are substantial differences among these occupational groups in the structure of compensation and in the pattern of change in compensation over time. These differences can be explained by the nature of the work done in the three job groups.

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The Employment Cost Index (ECI) survey provides two different types of information—indexes of compensation cost change, and cost levels that show the structure of compensation.¹ This article reviews both types of information by major occupational groups and other occupational groupings.

The occupational groups currently specified for the ECI are from the 1990 Census of Population. The Census defines 14 major occupational groups, of which 11 are within the scope of the ECI.² (See the box for examples of occupations found in each of the major occupational groups.) These major groups are combined into three occupational categories: White-collar, blue-collar, and service workers. The occupational groups and categories, and the percent distribution of 1990³ employment in private industry, are

shown in table 1.

Table 1. Percent distribution of private industry employment among major occupational groups, 1990

Occupational category/group	Percent
All private industry workers	100.0
White collar	55.1
Professional specialty and technical	12.5
Executive, administrative, and managerial	10.5
Sales	13.1
Administrative support including clerical	19.0
Blue collar	29.8
Precision production, craft, and repair	11.6
Machine operators, assemblers, and inspectors	8.6
Transportation and material moving	4.4
Handlers, equipment cleaners, helpers, and laborers	5.2
Service	15.2

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Examples of occupations found in major occupational groups within the scope of ECI

Major occupational group	Examples of occupations included
White-collar:	
Professional specialty	Engineers, mathematicians, chemists, physicians, registered nurses
Technicians and related support technicians, airplane pilots	Dental hygienists, licensed practical nurses, mechanical engineering
Executive, administrative, and managerial	Financial and other managers, accountants and auditors
Sales	Insurance sales, cashiers
Administrative support including clerical mail clerks, insurance adjusters	Computer equipment operators, secretaries, hotel clerks, bookkeepers,
Blue collar:	
Precision production, craft, and repair butchers, power plant operators	Air conditioning mechanics, carpenters, electricians, tool and die makers,
Machine operators, assemblers, and inspectors	Metalworking machine operators, assemblers, production inspectors
Transportation and material moving	Truck drivers, railroad conductors, operating engineers
Handlers, equipment cleaners, helpers, and laborers	Construction laborers, freight, stock, and material handlers
Service	Guards, waiters and waitresses, nursing aides, janitors, barbers

The review of ECI and cost levels data in this article suggests that there are substantial differences among occupational groups. These differences are found in the structure of compensation and in the pattern of compensation cost change over time. Furthermore, the white- and blue-collar categories combine occupations that are relatively similar in structure of compensation and the pattern of change over time.

The major occupational groups examined in this article are defined for convenience in data analysis. Those groups include a variety of occupations that may have different levels of compensation cost and rates of compensation cost change.

The structure of compensation

In March 1996, compensation costs per hour worked were higher for white-collar workers (\$21.10) than for blue-collar workers (\$17.04) and service workers (\$8.61). (See table 2.) Costs for white-collar occupations varied from \$14.34 for sales workers to \$33.12 for execu-

tive, administrative, and managerial occupations. Costs for blue-collar workers ranged from \$12.07 for handlers, equipment cleaners, helpers, and laborers to \$22.12 for precision production, craft, and repair occupations. No breakdown in compensation costs for various service occupations was available.

Occupational groups do not show a consistent relationship between the level of compensation costs and the proportion benefits make up of total compensation costs. While the occupational groups with the highest compensation costs—professional specialty and technical; and executive, administrative, and managerial—were below average in benefit costs as a percentage of total compensation costs, the occupational group with the lowest compensation costs—service occupations—also had among the lowest proportion of benefit costs to total compensation costs.

There does, however, appear to be a systematic difference between white-collar and blue-collar occupa-

tions in the proportion benefits make up of total compensation. Benefits make up a larger proportion of compensation costs for blue-collar workers (31.9 percent) than for white-collar workers (26.8 percent) and service workers (24.1 percent). This relationship held when occupational groups within the blue-collar and white-collar categories were compared. Benefit costs as a percent of total compensation ranged from 22.7 percent to 28.4 percent for white-collar occupations and from 29.7 percent to 34.0 percent for blue-collar occupations.

Blue- and white-collar workers also differed in the prevalence of some individual benefits, as demonstrated in table 3.

Paid leave and nonproduction bonuses were relatively more important for white-collar workers than for other types of workers. For blue-collar and service workers, premium pay and legally-required benefits were the relatively more important benefits.

Trends in rates of change in labor costs

When examining labor cost changes over time, total compensation rather than simply wages and salaries is usually emphasized. However, in this analysis, wage and salary changes are discussed first because they have a longer data history than compensation costs. ECI data on wage and salary changes are available for most major occupational groups beginning in September 1975, while ECI data on compensation costs are only available since December 1985 for most occupational groups.

Over the entire September 1975-March 1997 period, wages and salaries rose 193.9 percent for white-collar workers and 172.7 percent for blue-collar workers. As shown in chart 1, during the late 1970s, blue-collar pay rose more rapidly than white-collar pay. It was not until June 1985 that cumulative pay gains for the two groups of workers were almost equal.

As chart 2 suggests, wage increases in private industry have shown substantial changes over time, with pattern differences between white-collar and blue-collar workers. Blue-collar pay rose relatively more rapidly than white-collar pay during 1975-81, while white-collar pay has usually risen more rapidly than blue-collar pay since 1981.

During the late 1970s, blue-collar pay increased 8.5 percent a year and white-collar pay rose at an annual rate of 7.7 percent. In contrast, between June 1981 and June 1991 white-collar wages increased, on average, 4.9 percent annually, while

blue-collar pay rose 3.8 percent annually. (See table 4.) This pattern continued into the 1990s, although the differences between the two occupational groups were not as large. Between June 1991 and March 1997, white-collar pay increased at an average annual rate of 3.1 percent, while blue-collar pay rose 2.8 percent a year. Between September 1975 and March 1997, white-collar pay rose 5.1 percent a year, on average, and blue-collar pay, 4.8 percent.

Over the 1975-81 period, average annual pay increases for blue-collar occupational groups ranged from 8.3 percent to 8.8 percent. White-collar increases ranged from 7.0 percent a year to 7.9 percent annually.

During the June 1981-June 1991 period, both white-collar and blue-collar occupations showed a substantial slowdown in the rate of wage increase compared with the September 1975-June 1981 period. This was due in part to a fall in the rate of increase in consumer prices.⁴ However, the slowdown was more dramatic for blue-collar occupations. This partly reflected the influence of increased foreign competition on manufacturing industries and deregulation on transportation industries.

Data on compensation cost changes in private industry, even for broad occupational categories, are available only from December 1979. These cost changes are consistent with the pattern of wage and salary changes. (See chart 3 and table 5.)

During the June 1981-June 1991 period, white-collar compensation rose 5.2 percent a year, while blue-collar compensation rose 4.4 percent a year. The difference between the

two occupational categories during the June 1991-March 1997 period was 3.3 percent for white-collar occupations and 3.1 percent for blue-collar occupations.

Data for occupational groups are available only for the December 1985-March 1997 period. Again, the data show systematic differences among occupational groups. (See table 6.)

During the December 1985-June 1991 period, white-collar compensation rose, on average, 4.5 percent a year, while blue-collar compensation increased 3.9 percent a year. For white-collar workers the compensation increases for major occupational groups ranged from 4.5 to 4.7 percent a year.⁵ Comparable increases for blue-collar major occupational groups ranged from 3.6 to 4.2 percent per year.

During the June 1991-March 1994 period, the compensation cost increase for white-collar occupations was similar to that for blue-collar occupations (3.6 percent and 3.7 percent per year, respectively).

Between March 1994-March 1997, however, compensation cost increases were again larger for white-collar occupations than for blue-collar occupations. White-collar occupations compensation costs rose 3.1 percent annually compared to 2.5 percent annually for blue-collar occupations. However, during that period the differences for occupational groups within the occupational categories were not systematic. Among white-collar occupations, increases ranged from 2.6 to 3.5 percent; for blue-collar occupations the range was from 2.1 to 3.4 percent.

—ENDNOTES—

¹ This article examines only data not adjusted for seasonal variation. Because for some of the time periods covered the beginning and ending dates are different months of the year, ideally the analysis would use seasonally adjusted data. However, it was decided to use not seasonally adjusted data because for most of the series examined data are not available seasonally adjusted, and even where such data are available there is little seasonal variation.

² For the ECI, four of these occupational groups are combined: professional specialty with technicians and related support occupations, and protective service occupations with service occupations, except protective and household. For some cost level tabulations, professional specialty and technical occupations are shown separately as well as combined.

³ The data are shown for 1990, rather than a more recent year, because that is the date of the

fixed employment weights for the ECI.

⁴ For a discussion of some of the factors leading to the slowdown in the rate of wage and salary gain in the early 1980s, see Albert E. Schwenk, "Trends in the differences between union and non-union workers in pay using the Employment Cost Index," *Compensation and Working Conditions*, September 1996, pp. 27-33.

⁵ As noted in the footnote to the table, separate data were not available for sales workers.

Table 2. Total compensation costs per hour worked and benefits as a proportion of those costs, by occupational category/group, private industry, March 1996

Occupational category/group	Total compensation	Benefit cost as a percent of compensation
All private industry	\$17.49	28.1
White-collar occupations	21.10	26.8
Professional specialty and technical	29.19	27.2
Professional specialty	30.80	27.0
Technical	24.84	27.9
Executive, administrative, and managerial	33.12	27.3
Sales	14.34	22.7
Administrative support including clerical	14.93	28.4
Blue-collar occupations	17.04	31.9
Precision production, craft, and repair	22.12	31.7
Machine operators, assemblers, and inspectors	15.48	34.0
Transportation and material moving	16.96	31.5
Handlers, equipment cleaners, helpers, and laborers	12.07	29.7
Service occupations	8.61	24.1

Table 3. Percent distribution for components of benefit cost, by occupational category, private industry, March 1996

Benefit component	All workers	White-collar workers	Blue-collar workers	Service workers
Total benefits	100.0	100.0	100.0	100.0
Paid leave	22.8	26.5	17.5	17.4
Supplemental pay	10.0	9.5	11.6	6.8
Premium pay	4.1	2.1	7.5	3.4
Shift pay	1.2	1.1	1.3	1.4
Nonproduction bonuses	4.9	6.5	2.8	1.9
Insurance	23.2	22.6	24.4	21.7
Retirement and savings	11.2	11.7	11.4	6.3
Legally-required benefits	32.4	29.0	34.4	48.3

Table 4. Average annual percent changes in wages and salaries by occupational category/group in private industry, selected periods, 1975-97

Occupational category/group	Sep. 1975- June 1981	June 1981- June 1991	June 1991- Mar. 1997	Sep. 1975- Mar. 1997
All private industry workers	8.1	4.4	3.0	5.0
White-collar occupations	7.7	4.9	3.1	5.1
Professional specialty and technical	7.9	5.2	3.2	5.4
Executive, administrative, and managerial	7.0	4.9	3.2	5.0
Sales	(¹)	4.2	2.9	(¹)
Administrative support including clerical	7.9	4.8	3.3	5.2
Blue-collar occupations	8.5	3.8	2.8	4.8
Precision production, craft, and repair	8.3	4.0	2.9	4.8
Machine operators, assemblers, and inspectors	8.8	3.9	2.9	4.9
Transportation and material moving	8.5	3.1	2.6	4.4
Handlers, equipment cleaners, helpers and laborers ...	8.7	3.6	3.0	4.8
Service occupations	8.2	4.3	2.8	4.9

¹ Data for sales workers were first available in March 1977.

Table 5. Average annual percent change in compensation costs by occupational category in private industry, selected periods, 1979-97

Occupational category	Dec. 1979- June 1981	June 1981- June 1991	June 1991- Mar. 1997	Dec. 1979- Mar. 1997
All private industry workers	10.2	4.8	3.2	4.2
White-collar occupations	10.3	5.2	3.3	4.4
Blue-collar occupations	10.4	4.4	3.1	3.9
Service occupations	10.5	4.9	2.9	4.1

Table 6. Average annual percent change in compensation costs by occupational category/group in private industry, selected periods, 1985-97

Occupational category/group	Dec. 1985- June 1991	June 1991- March 1994	Mar. 1994- Mar. 1997	Dec. 1985- Mar. 1997
All private industry workers	4.3	3.6	2.9	3.7
White-collar occupations	4.5	3.6	3.1	3.9
Professional specialty and technical	4.7	4.3	2.6	4.1
Executive, administrative, and managerial	4.5	3.2	3.4	3.9
Sales	(¹)	2.4	3.5	(¹)
Administrative support including clerical	4.6	4.0	3.0	4.0
Blue-collar occupations	3.9	3.7	2.5	3.4
Precision production, craft, and repair	3.8	3.6	2.5	3.4
Machine operators, assemblers, and inspectors	4.2	3.8	2.3	3.6
Transportation and material moving	3.6	3.6	2.1	3.2
Handlers, equipment cleaners, helpers and laborers ...	3.8	3.5	3.4	3.6
Service occupations	4.0	3.4	2.5	3.5

¹ Data for sales workers are available only from March 1986.

Chart 1. Cumulative percent change in Employment Cost Index, private industry, wages and salaries, by occupational category, 1975-97

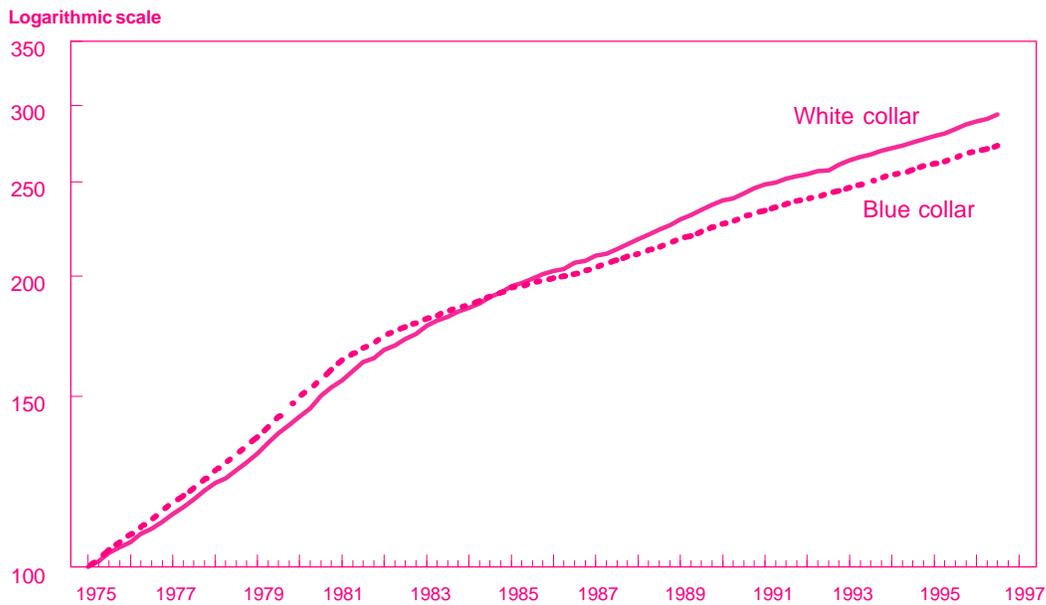


Chart 2. Percent wage and salary changes from the Employment Cost Index for 12-month periods ending March, June, September, and December, private workers by occupational category, 1976-97

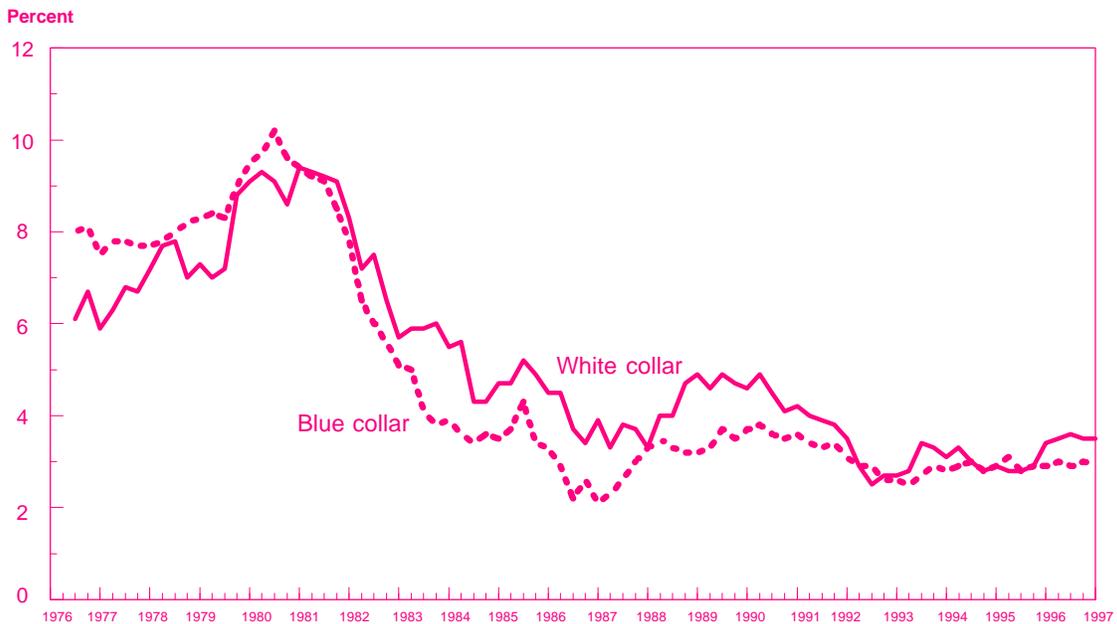


Chart 3. Percent changes in compensation from the Employment Cost Index for 12-month periods ending March, June, September, December, private industry workers by occupational category, 1980-97

