

# Comparing Trends in Components of the Employment Cost Index

BY WAYNE M. SHELLY

The Employment Cost Index (ECI) frequently is used to analyze recent trends in the costs associated with employee compensation. A convenient way to do this is to compare ECI series amongst themselves as well as over time by looking at their 12-month percent changes. The 12-month period allows for the elimination of seasonal patterns that can be misleading in shorter time frames. It also allows for easy comparison to other data, such as the Consumer Price Index, or an individual's pay raise. For example, in December 1996, the 12-month change for wages and salaries in private industry was 3.4 percent, while the change for benefit costs was 2.0 percent. Looking back a few years shows a different relationship between wages and salaries and benefits. In December 1992, private industry wages and salaries rose 2.6 percent, while benefit costs increased 5.2 percent.

## Background

This article examines the changes in compensation costs among various series over several years. Data from the ECI for private industry are used to look at these changes. The ECI measures the change in the cost of labor to employers. Since it also includes the costs of benefits,<sup>1</sup> along with wages and salaries,<sup>2</sup> it provides a comprehensive measure of an important part of the costs of operating a business. Changes in labor costs may affect the prices charged for products, the amount invested in new technology or training, or profits of the company. Comparing compensation changes by various categories of workers provides clues to changes in the economy.

Analysts looking for more current or emerging trends use the 3-month seasonally adjusted percent changes. The

seasonally adjusted series removes the seasonal patterns leaving the trend and other nonseasonal growth for analysis.<sup>3</sup>

While both 12-month and 3-month percent changes provide valuable information, analyses of longer time periods allow an additional perspective. In any one quarter, small changes tend to go unnoticed. However, small changes that occur frequently may be compounded, signaling structural changes in the economy or the way employees are compensated for their labor. Another possibility is that two sectors move back and forth with one sector outpacing the other for a couple of years, then the other sector catching up and surpassing it.

The major limitation to long-term analyses is that fewer series are available in the earlier years of the ECI. Wage and salary cost data from the ECI for private industry were first collected for September 1975. Benefit cost data for private industry began in December 1979. Combining wages and salaries with benefit costs allowed a component series—compensation costs—to be published.

Over time, the ECI expanded by adding additional detailed series—industry, occupation, bargaining status, metropolitan area status, and geographic region. The first ECI news release<sup>4</sup> contained 21 series. Today, there are 303 series. Thus, any long-term analyses must recognize the need to study different time periods, making the comparisons more difficult.

Since the pricing of benefits is such an important part of the ECI, this analysis starts with December 1979, when benefit cost data were first introduced into the index. The pricing of benefits generally is more complicated than the pricing of wages and salaries<sup>5</sup> and, consequently, there are fewer benefit cost series: 10 are published for private industry, 9 of which began in 1979. This article examines wages and salaries and benefits for eight of these series<sup>6</sup>:

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## All private industry workers

1. Wages and salaries
2. Benefits

## Occupation

3. White collar
4. Blue collar

## Private industry sector

5. Goods producing
6. Service producing

## Bargaining status

7. Union
8. Nonunion

In addition, the article examines compensation cost data for some more detailed series: By industry division, major occupational group, geographic region, and by bargaining status. However, because these more detailed series began in the mid-1980s, they are compared separately from the first set of data.

## Wages and salaries vs. benefits in private industry

Total compensation costs for private industry workers, as measured by the ECI, increased 121 percent between December 1979 and December 1996. Wages and salaries, which made up approximately 72 percent of total compensation in March 1996,<sup>7</sup> increased 107 percent, while benefit costs, which make up about 28 percent, increased 160.5 percent. (See chart 1.) A different way of looking at the change is in dollar terms. For example, if total compensation for 1 hour of labor in December 1979 cost \$10.00, that same unit of labor would cost \$22.10 in December 1996. However, the mix between wages and salaries and benefits would differ because of the different rates of growth in the two components. Although the change in benefit costs outpaced wages and salaries for most of the period, the change was not uniform. From 1979 to 1987, benefit costs rose approximately one-third more than wages and salaries (70.1 percent for benefits and 53.0 percent for wages and salaries). For the last 2 of these years, the increases were about the same for both components. Over the 1987-95 period, however, benefit costs grew by almost two-thirds more than wages and salaries (50.2 percent for benefits and 30.8 percent for wages and salaries). But in 1995, benefit cost increases fell below wage and salary increase. From December 1994 to December 1996, benefit cost increases were only two-thirds of the wage and salary increase (4.2 percent for benefits and 6.3 percent for wages and salaries).

## White-collar, blue-collar, and service occupations in private industry

For classification purposes, ECI separates occupational cost data into three main categories: White-collar, blue-collar, and service occupations. The first two categories each are further broken down into four major occupational

groups. The white-collar category consists of: Professional, specialty, and technical workers; executive, administrative, and managerial occupations; sales occupations; and administrative support, including clerical occupations. Blue-collar occupations consist of: Precision production, craft, and repair occupations; machine operators, assemblers, and inspectors; transportation and material moving occupations; and handlers, equipment cleaners, helpers, and laborers. The last category—service occupations—is not broken down any further.

Compensation costs for white-collar workers outpaced those for blue-collar workers between 1979 and 1996 (129.4 percent and 110.4 percent, respectively). While this phenomenon has occurred in both wages and salaries and benefits, it was more pronounced in wages and salaries.

Chart 2 shows that wage and salary costs for white-collar workers rose 116.3 percent while blue-collar increases were 94 percent from 1979-96. Increases for both series were approximately the same from 1979 to 1982 (26.2 percent for white collar and 25.6 percent for blue collar). From 1982 to 1996, white-collar wage and salary cost increases were almost one-third more than blue-collar cost increases (71.4 for white collar and 54.4 for blue collar).

The difference in benefit cost increases has been less than that for wages and salaries. As seen in chart 3, benefit costs increased among white-collar workers by 168.1 percent and among blue-collar workers by 150 percent between 1979 and 1996. This was a 12.1-percent difference over the 17-year period.

As seen in the following table, compensation data for all nine major occupational groups are available from March 1986. During the period March 1986 to December 1996, total compensation costs increased 50.7 percent for white-collar workers and 44.3 percent for blue-collar workers. Service occupations, which make up the final major occupational group, increased by 44.2 percent.

Major occupational group	Percent increase
White-collar occupations	50.7
Professional, specialty and technical	53.5
Administrative support, including clerical	52.3
Executive, administrative, and managerial occupations	49.5
Sales occupations	46.2
Blue-collar occupations	44.3
Machine operators, assemblers, and inspectors	46.7
Handlers, equipment cleaners, helpers, and laborers	46.5
Precision production, craft, and repair occupations	43.3
Transportation and material moving occupations	40.2
Service occupations	44.2

Excluding sales occupations, the white-collar occupations had greater increases in compensation than the blue-collar and service occupations. Compensation for sales occupations, which is affected by volume of sales because many

incumbents are paid on commission, had cumulative increases similar to all occupations excluding sales from March 1986 to June 1991. However, since June 1991, sales occupations have lagged behind all occupations excluding sales. When the volume of sales changes, so does salespersons' commissions, which are part of wages and salaries. Thus, sales occupations show more volatility than the other occupational groups.

### Goods-producing vs. service-producing industries

Wages and salaries for goods-producing industries increased 99.1 percent from 1979 to 1996 (see chart 4.) Service-producing industries increased 112.5 percent. From December 1979 to June 1982, service-producing industries increased 26.5 percent and goods-producing industries increased 25.6 percent. From June 1982 to December 1988, service-producing wage and salary costs increases one-fourth more than goods-producing industries (28.9 percent and 22.8 percent, respectively). From December 1988 to December 1996, service-producing industries wage and salary costs increased 30.4 percent and goods-producing industries increased 29.1 percent.

Differences in benefit costs between the two sectors was less pronounced than for wages and salaries as seen in chart 5. From 1979 to 1996, goods-producing industries' benefit costs increased 155.9 percent and service-producing industries' benefit costs increased 164.7 percent.

To look at a finer level of detail, compensation data have been available since March 1986 for all industry divisions (except mining) and, in some cases, for sub-industry detail. From 1986 through 1996, compensation for service-producing industries increased 48.8 percent and goods-producing industries increased 46.7 percent. Breakouts for compensation increases in industry divisions are as follows:

Industry	Percent increase
Goods producing	46.7
Manufacturing - Nondurable goods	49.4
Manufacturing - Durable goods	48.0
Construction	42.8
Service producing	48.8
Service industries	56.4
Wholesale trade	51.5
Finance, insurance, and real estate	45.3
Public utilities	44.6
Retail trade	42.8
Transportation	41.5

NOTE: Data for mining are not published.

Service industries, which include a wide variety of services for individuals, businesses, and government (such as health services, business services, and educational services) showed a different rate of growth between the first and second halves of the 11-year period. From March 1986 to

June 1991, service industries increased 30.7 percent. From June 1991 to December 1996, the increase slowed to 19.6 percent.

### Union vs. nonunion

For the December 1979-December 1996 period, compensation costs for nonunion workers, at 121.8 percent, were slightly higher than for union workers, at 116.6 percent. The difference was due to larger wage and salary growth for nonunion workers. Changes in benefit costs were about the same for both groups.

Chart 6 shows that wages and salaries grew faster for union workers from 1979 to 1986. Since 1986, however, the reverse has been true. Over the entire 17-year period, nonunion wages and salaries have increased by 109.7 percent, while those of union members increased by 96.6 percent.

As seen in chart 7, from 1979 to 1996, cumulative union increases for benefit costs were about the same as those for nonunion workers. Union benefit costs increased 160.1 percent and nonunion benefit costs increased 160.5 percent.

Additional industry and occupational data by bargaining status are available from 1981 and 1987, respectively. Since June 1981, compensation costs for union workers has increased 84.5 percent, while that for nonunion workers has increased 92.6 percent. In the goods-producing sector, union increases were 81.0 percent, while nonunion increases were 88.1 percent. In service-producing industries, compensation costs increases for union workers were 89.5 percent and nonunion increases were 95.6 percent.

Since June 1987, union compensation costs increased 40.6 percent and nonunion increased 43.1 percent. Among unionized blue-collar workers, total compensation costs increased 39.1 percent compared to 40.7 percent for their nonunion counterparts. In manufacturing, blue-collar worker compensation costs increased 43.1 percent for both union and nonunion workers.

### Conclusion

Employers' costs of providing compensation to their employees has more than doubled since 1979. However, the two components of compensation—wages and salaries and benefits—have grown at different rates. Benefit costs have grown faster than wages and salaries since 1979. Thus, benefit costs are now a larger percent of total compensation. Second, the increases have varied among series. The data indicate that, among the various series examined in this article, the widest difference was between white-collar and blue-collar occupations. This gap has grown rather steadily since 1982. For industry, occupation, and bargaining status, the gap was more pronounced in the wage and salary component than in the benefits component.

Among industry sectors, the service-producing sector's compensation cost increases have outpaced those in the goods-producing sector, although not by as much as those among occupations.

By bargaining status, nonunion compensation cost increases were slightly ahead of union increases. Unlike the occupational and industry comparisons, however, the trend

was not consistent. Until 1986, union compensation increases were greater; but since then nonunion compensation increases have been greater.

—ENDNOTES—

<sup>1</sup> Benefits included in the ECI are: Paid leave (vacations, holidays, sick leave, and other leave); supplemental pay (premium pay for overtime, shift differentials, and nonproduction bonuses such as lump-sum payments in lieu of wage increases); insurance benefits (life, health, sickness and accident, and long-term disability); retirement and savings benefits (defined benefit and defined contribution); legally required benefits (Social Security, Federal and State unemployment insurance, workers' compensation, and other legally required benefits such as State temporary disability); and other benefits (severance pay and supplemental unemployment plans).

<sup>2</sup> Wages and salaries are defined as the hourly straight-time wage rate or, for workers not paid on an hourly basis, straight-time earnings divided by the corresponding hours. Straight-time wage and salary rates are total earnings before payroll deductions, excluding premium pay for overtime and for work on weekends and holidays, shift differentials, and nonproduction bonuses such as lump-sum payments provided in lieu of wage increases. Production bonuses, incentive earnings, commissioned payments, and cost-of-living adjustments are included in straight-time wage and salary rates.

<sup>3</sup> *BLS Handbook of Methods*, appendix A, "A Seasonal Adjustment Meth-

odology," Bulletin 2490, Bureau of Labor Statistics, April 1997, pp. 231-233.

<sup>4</sup> U.S. Department of Labor News Release, USDL 76-940, June 18, 1976, "The Bureau of Labor Statistics Introduces the First Measure of Wage and Salary Rate Trends From Its New Employment Cost Index."

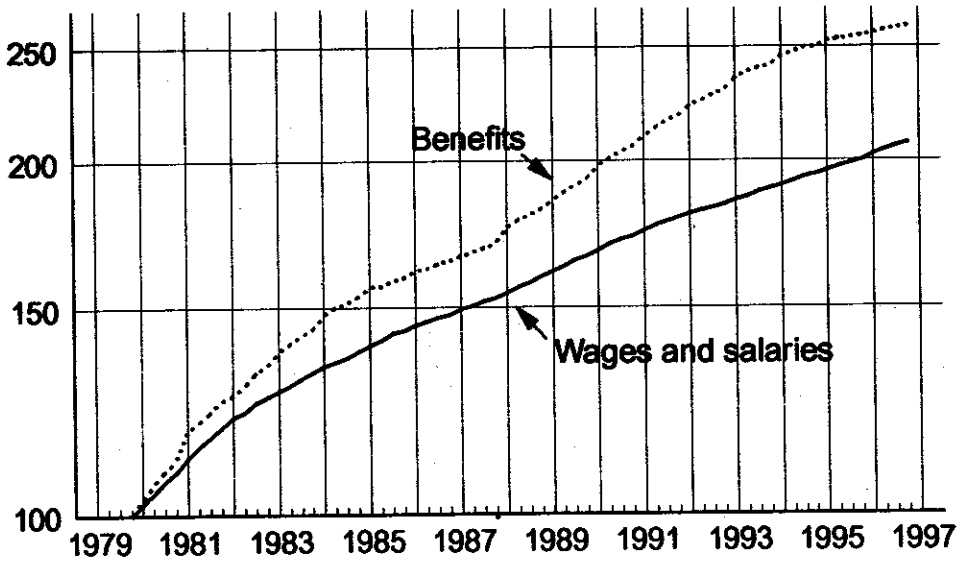
<sup>5</sup> Usually, calculating wages and salaries is straight-forward. By definition, wages are expressed as an hourly rate, and salaries typically have an expected number of hours associated with the time period (e.g., weekly or monthly) that can provide an estimate of hours worked. However, benefit costs are frequently independent of the hours worked. For example, health insurance premiums are usually a fixed cost, set annually, and amount of vacation time is often based on length of service. Also, since benefits are not always offered, they can have a zero cost, while wages and salaries cannot be zero.

<sup>6</sup> Series for manufacturing and nonmanufacturing are excluded from this article because they are similar to the goods-producing and service-producing series.

<sup>7</sup> U.S. Department of Labor News Release, USDL 96-424, October 10, 1996, "Employer Costs for Employee Compensation—March 1996."

**Chart 1. Employment Cost Index, private industry, wages and salaries and benefits, cumulative change**

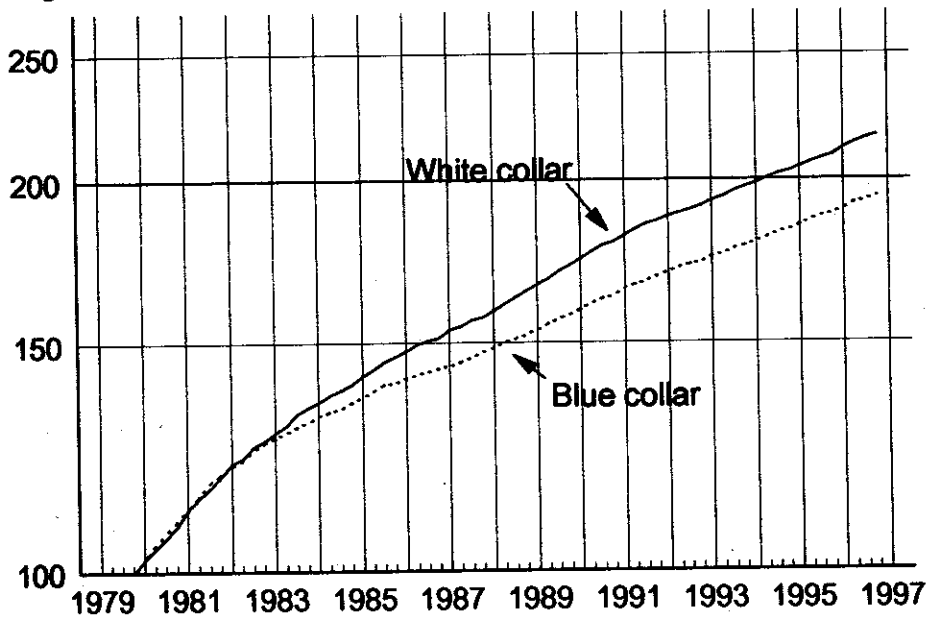
Logarithmic scale



See note at the end of chart 7.

**Chart 2. Employment Cost Index, private industry, wages and salaries, by occupational category**

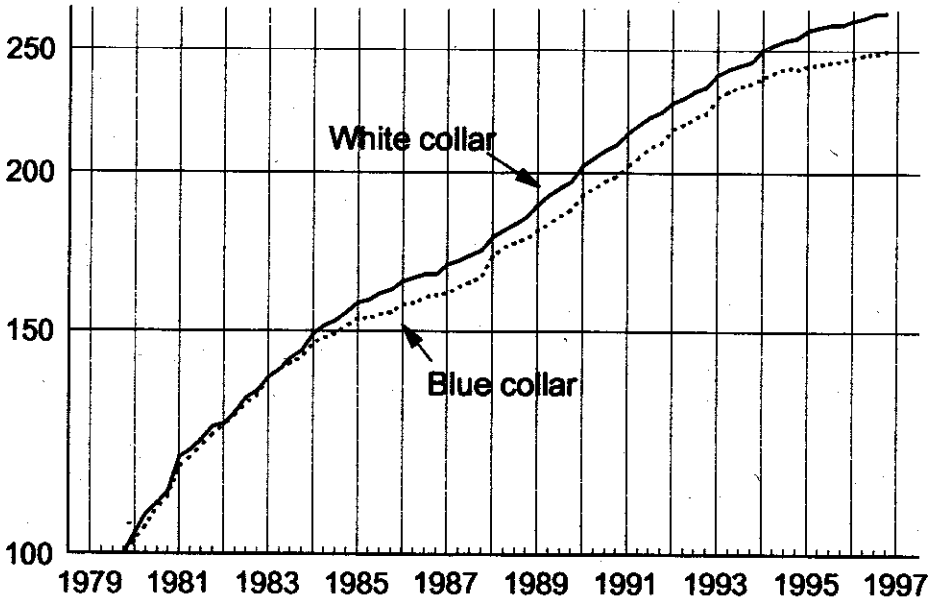
Logarithmic scale



See note at the end of chart 7.

**Chart 3. Employment Cost Index, private industry, benefits, cumulative change, by occupational category**

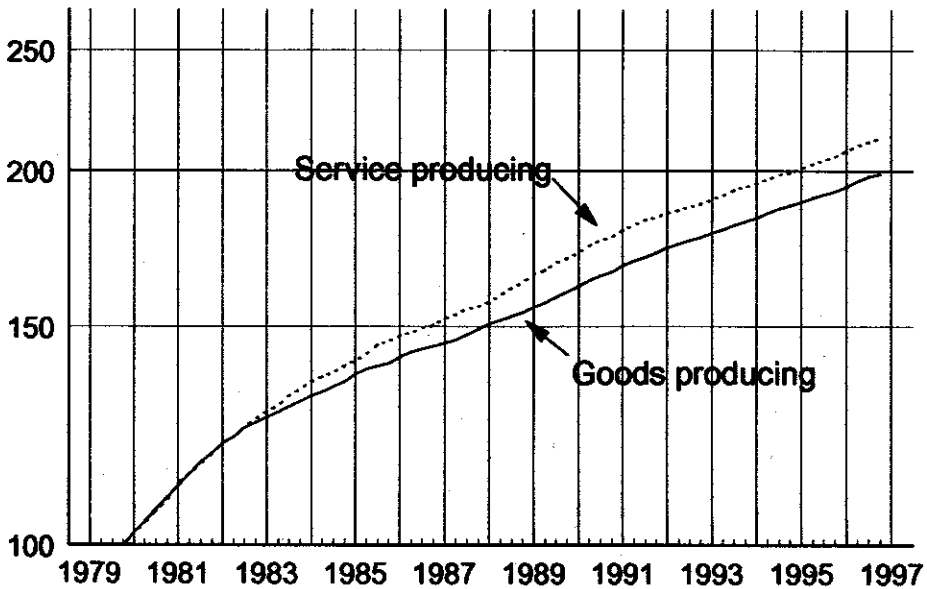
Logarithmic scale



See note at the end of chart 7.

**Chart 4. Employment Cost Index, private industry, wages and salaries, cumulative change, by industry sector**

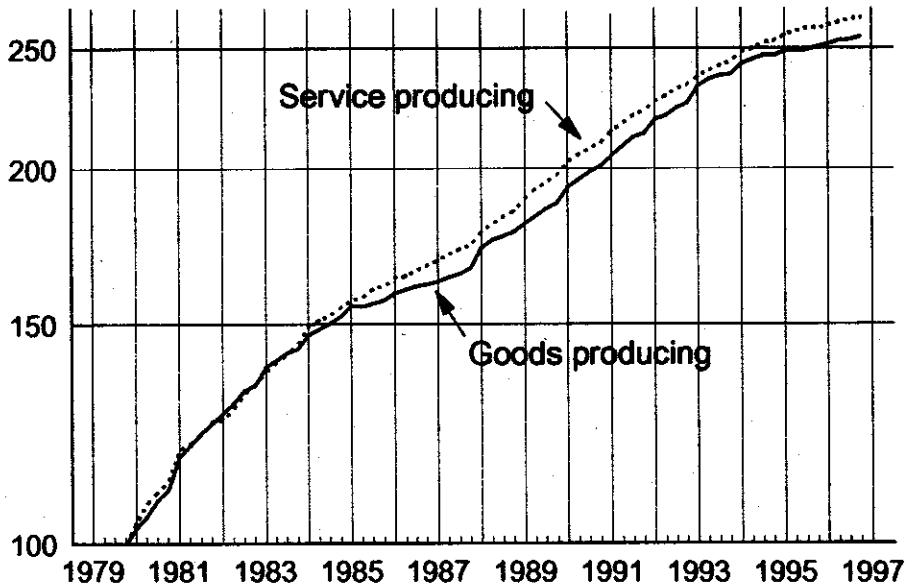
Logarithmic scale



See note at the end of chart 7.

**Chart 5. Employment Cost Index, private industry, benefits, cumulative change, by industry sector**

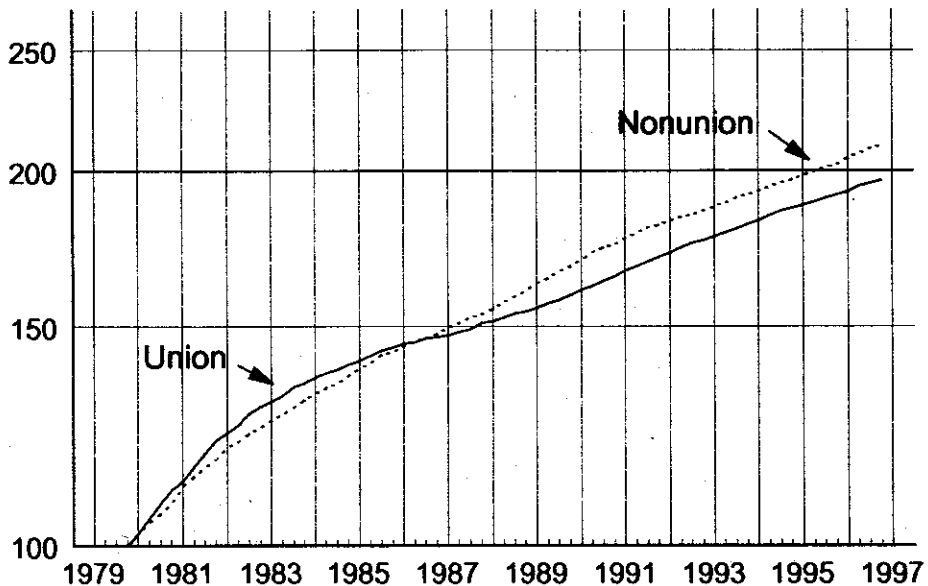
Logarithmic scale



See note at the end of chart 7.

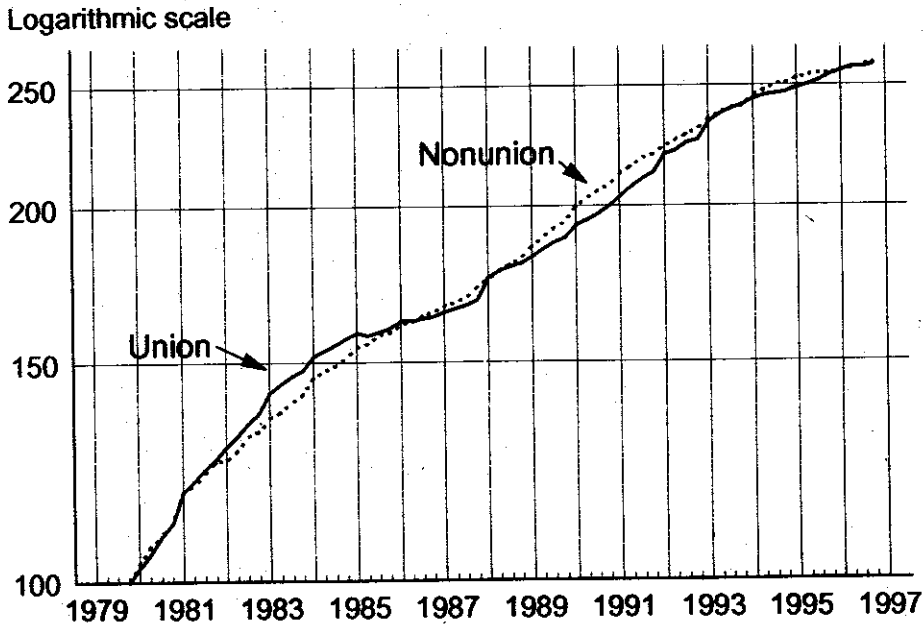
**Chart 6. Employment Cost Index, private industry, wages and salaries, cumulative change, by bargaining status**

Logarithmic scale



See note at the end of chart 7.

**Chart 7. Employment Cost Index, private industry, benefits, cumulative change, by bargaining status**



NOTE: A logarithmic scale is used, rather than a linear scale, so that the same percentage gains take up the same amount of vertical distance. To allow consistent comparisons, all values for the beginning of each series were set to 100. Percent changes can be calculated by comparing two logarithmic values. For example, the percent change between logarithmic value of 150 and 200 is  $[(200 - 150)/150] \times 100 = (50/150) \times 100 = 33.3 \times 100 = 33.3$ .