

Health Care Indicators

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Contained in this regular feature of the journal is a section on each of the following four topics: community hospital statistics; employment, hours, and earnings in the private health sector; prices; and national economic indicators. These statistics are valuable in their own right for understanding the relationship between the health care sector and the overall economy. In addition, they provide indicators of the direction and magnitude of health care costs prior to the availability of more comprehensive data.

Community hospital statistics

From 1989 to 1990, community hospital operating expenses increased at the fastest rate in the past 8 years, up 11.1 percent. The American Hospital Association panel survey of community hospitals reported expenses totaling \$217 billion in 1990 (Table 1). Hospitals use labor intensively, with 54 percent of all operating expenses allocated to labor costs. From 1982 to 1987, the proportion of expenses that cover labor costs fell from 58 to 54 percent, where it has remained unchanged for the past 4 years.

In the past decade, efforts to control costs have caused a shift towards more care delivered in a less costly outpatient setting. There has been a steady decline in the proportion of operating expenses that cover services delivered on an inpatient basis throughout the 1980s. In 1981, 87 percent of expenses went to inpatient care; by 1990, this share had fallen to 76 percent. This share amounts to \$166 billion and translates into an average of \$5,021 per admission and \$765 per patient day, more than twice the size of the same statistics 9 years earlier.

This shift in the delivery of hospital care is also apparent in measures of inpatient and outpatient utilization. The number of admissions has declined in every year since 1982; the number of inpatient days has declined in every year but one. The implementation of the prospective payment system (PPS), which changed the way hospitals were paid for inpatient services, caused especially large declines in 1984 and 1985 in inpatient days and, to a lesser degree, in admissions. Since 1986, these declines have moderated, and the rate of change for admissions and inpatient days has become more similar, resulting in the average length of stay remaining unchanged at 6.6 days per admission. Outpatient visits, which include services delivered in clinics and emergency rooms, increased rapidly during the second half of the

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1980s at an average annual rate of 6.1 percent (Figure 1). This contrasts with an average annual growth in the first half of the decade of 2.2 percent. In 1990, outpatient visits reached 326 million, an increase of 6.0 percent from 1989 (Table 2). Nearly 22 million surgical operations were performed in community hospital inpatient and outpatient departments during 1990, an increase of 2.4 percent over the previous year.

Decreasing inpatient utilization has forced hospitals to downsize in order to cut costs. This is reflected in decreasing numbers of beds in the past 7 years. In 1990, community hospitals operated an average of 921,000 beds, down from over 1 million beds in operation in 1983. On average, 64.5 percent of these beds were occupied at any one time. The decline in beds failed to keep pace with the decline in inpatient days in 1990, resulting in the occupancy rate decreasing 0.4 percent to 64.5 (Figure 2).

Community hospitals employed an average 3.2 million full-time equivalent (FTE) personnel during 1990. The number of FTEs per community hospital bed has been increasing since 1987, reflecting, in part, the more intensive care delivered to a smaller number of sicker patients.

Private health sector: Employment, hours, and earnings

Levels of employment, hours, and earnings in private (nongovernment) health service establishments are shown in Table 3. These data were drawn from the Bureau of Labor Statistics (BLS) "establishment" survey of the private nonagricultural sector. Employment in the health services sector continued to exhibit growth stronger than the rest of the economy throughout 1990. An average of 8.3 million people were employed on a full-time or part-time basis in private health service establishments during the fourth quarter of calendar year 1990, a net increase of 600,000 jobs from the same quarter in 1989.

The magnitude of this increase in jobs is particularly large when compared with the net job growth of only 582,000 in the entire private sector for the same period. Net job growth is a composite statistic representing the result of employment gains and losses among industries. Including civilian jobs in the total¹ results in net nonagricultural job growth of 1,006,000, 60 percent of which came from the private health services sector.²

¹Government employment is not disaggregated for nonhospital health industries. Therefore, private health service employment is usually compared with total private sector employment (not including government).

²As of the end of the fourth quarter of 1990, there was no measurable effect on employment levels caused by the activation of reservists for the war in the Persian Gulf. Employers were instructed not to count any reservists in their tabulations of employees. However, it is unclear whether this instruction was followed, especially since some employers continued to pay and provide benefits to activated reservists.

Employment in the private health sector grew five times as fast as in the private sector as a whole from 1989 to 1990. Growth in health care sector employment accelerated for the sixth consecutive year: Employment was 7.5 percent higher in 1990 than in 1989 (Table 4). Growth in health sector employment has not yet followed the slowdown seen in the rest of the private economy. While health sector employment has continued to accelerate, employment in all private establishments has continued to decelerate for the second consecutive year, growing only 1.5 percent from 1989 to 1990 (Figure 3). In 1990, average weekly hours worked in the health sector continued to grow, up 0.3 percent from 1989, while average weekly hours worked in all private establishments decreased, down 0.4 percent from 1989.

Within the health sector, employment in offices and clinics of medical doctors showed the strongest growth, up 9.6 percent from 1989 (Table 4). This is the highest growth seen in these offices in the 1980s. Average weekly hours worked in offices and clinics of medical doctors decreased 0.5 percent in 1990. This decrease may signal hiring of part-time workers, or may be a prelude to decelerating employment growth in the future, as employers cut back hours to trim expenses. Employment in private hospitals, which accounts for nearly one-half of all health sector employment, continued to exhibit strong growth, up 6.0 percent from 1989. In 1990, growth in employment in nursing and personal care facilities also continued to accelerate, up 6.5 percent from 1989.

Health sector workers comprise 9 percent of all private employment; 9 out of every 10 health sector workers hold nonsupervisory positions. Nonsupervisory workers in these establishments worked fewer per week while earning more per hour than did nonsupervisory workers in the private economy as a whole. Nonsupervisory workers in the private health service sector worked a 32.6-hour week and earned \$10.41 an hour in 1990.

Implied nonsupervisory work-hours and payroll growth, developed from the BLS establishment survey data, are composite measures of business activity. The slowdown of the general economy can be seen in deceleration in growth in work-hours (nonsupervisory employment multiplied by average weekly hours) in all private establishments for the past 2 years. Despite this overall slowdown, growth in work-hours in private health service establishments has continued to accelerate, as it has for the sixth consecutive year. From 1989 to 1990, work-hours in all private establishments increased 1.1 percent, while work-hours in private health service establishments increased 7.8 percent (Table 5).

Nonsupervisory payrolls (nonsupervisory work-hours multiplied by average hourly earnings) increased by 14.2 percent for health service establishments in 1990, while payroll in all private establishments increased 5.0 percent (Figure 4). Within the health sector, payroll of offices and clinics of medical doctors grew the fastest, 18.0 percent, and payrolls of offices and clinics of dentists grew the slowest, 12.1 percent.

Prices

Consumer prices

Prices paid by consumers for medical care, as measured by the Consumer Price Index (CPI) for all urban consumers, rose 9.1 percent from 1989 to 1990. Medical care CPI accelerated in all four quarters of 1990 when compared with the same period in 1989. In 1990, the medical care price growth was 3.7 percentage points higher than the 5.4 percent growth of prices for all items (Tables 6 and 7). The gap between medical care and general price inflation has been growing since 1988 (Figure 5).

The growth in all items less medical care was 5.2 percent for calendar year 1990. In the four quarters of 1990, the growth of the components of general prices was relatively constant when compared with the same quarter of 1989. The exception to this was energy prices. Energy exhibited an 8.2-percent growth in 1990, with 18.3 percent of the growth occurring in the last quarter of 1990. This is primarily because of the Iraqi invasion of Kuwait in August and the subsequent uneasiness regarding oil availability and prices. Three other parts of general prices, apparel, food and beverages, and housing, had higher price growth for 1990 than exhibited for 1989. The growth for each of the four quarters in 1990, as compared with the same quarter in 1989, was fairly stable.

Medical care prices consist of two major components, services and commodities. Medical care services showed the larger growth of the two components, 9.3 percent in 1990. A subset of medical care services, professional services including physicians' and dentists', has maintained a fairly steady level of growth since 1986, increasing at an average annual rate of 6.6 percent per year. In comparison, hospital and related services has experienced large growths since 1987, slowing down only slightly from 1989 to 1990 to a rate of 10.9 percent. The decrease in the hospital growth rate is due to the deceleration of prices of other inpatient services, from 13.1 percent in 1989 to 10.7 percent in 1990. Other inpatient services covers price changes in pharmacy, laboratory tests, radiology, and operating room charges contained on an inpatient hospital bill.

Medical care services prices were 1.7 percent higher in 1990 than in 1989. However, this acceleration cannot be attributed to professional services prices (up 0.2 percent) and/or hospital and related services (down 0.6 percent). The medical care services component contains another element not included as a separate item in Tables 6 and 7—net cost of private health insurance.³ It is this element that bears the major responsibility for the acceleration in medical care services prices.

³The net cost of private health insurance is the difference between earned premiums and incurred benefits. This difference would include administrative costs, net additions to reserves, rate credits and dividends, premium taxes, and profits or losses.

The second component, medical care commodities, grew 8.4 percent from 1989 to 1990. Prescription drugs, an element of commodities, increased 10.0 percent during 1990, the highest annual growth for prescription drugs since 1983. Another element of medical care commodities, nonprescription drugs and medical supplies, grew more slowly from 1989 to 1990 than from 1988 to 1989, 5.2 percent compared with 6.0 percent. This slow growth had started in the second quarter of 1990 and stayed constant for the rest of the year.

Health care providers

Background on input price indexes

In 1979, the Health Care Financing Administration (HCFA) developed the hospital input price index. This input price index was designed to measure the pure price changes associated with expenditure changes for hospital services. The skilled nursing facility (SNF) and home health agency (HHA) input price indexes were developed in the early 1980s. These indexes are often referred to as "market baskets" because they price a consistent set of goods and services over time. Since their creation, they have played an important role helping to set payment percent increases and in understanding the contribution of input price increases to growing health expenditures.

The input price indexes, or market baskets, are Laspeyres or fixed-weight indexes that are constructed in two steps. First, a base period is selected. For example, for the PPS hospital input price index, the base period is 1987. Next, a set of cost categories such as food, fuel, and labor are identified and their 1987 expenditure amounts determined. The proportion or share of total expenditures accounted for by specific spending categories is calculated. These proportions are called cost or expenditure weights. There are 28 expenditure categories in the 1987-based hospital PPS input price index. In the next step, a price proxy is selected to match each expenditure category. The purpose of the price proxy is to measure the rate of price increase of the goods or services in that expenditure category. The price proxy index for each spending category is multiplied by the expenditure weight for the category. The sum of these products (weights multiplied by the price index) over all cost categories yields the composite input price index for any given time period, usually a fiscal year or a calendar year. The percent change in the input price index is an estimate of price change over time for a fixed quantity of goods and services purchased by a provider.

The input price indexes are estimated on a historical basis and forecasted out several years. The HCFA-chosen price proxies are forecasted under contract with Data Resources, Inc. (DRI)/McGraw-Hill. Each quarter, 1 month after the end of a calendar quarter, DRI updates its macroeconomic forecasts of wages and prices. DRI bases its new forecasts on updated historical information and revised forecast assumptions. New forecasts and estimates are done in February, May, August, and November. Some of the data in Tables 8 through 13 are forecasted and are expected to change as more recent historical data become available and subsequent quarterly forecasts are received.

The methodology and price proxy definitions used in the input price indexes are described in the *Federal Register* notices that accompany the revisions of the PPS, HHA, and SNF cost limits. A description of the current PPS input price index was published September 4, 1990 (*Federal Register*, 1990). The latest HHA regulatory input price index was published October 18, 1988 (*Federal Register*, 1988), and the latest SNF input price index was published October 2, 1987 (*Federal Register*, 1987).

Current data

Each input price index is presented in two tables: The first is a percent-change table, and the second table provides the actual index numbers from which the percentages were computed. The hospital input price index for PPS is in Tables 8 and 9. The SNF input price index is in Tables 10 and 11. The HHA input price index is in Tables 12 and 13.

Since 1988, the PPS hospital input price index has risen at a faster rate each year than economywide wage rates (average hourly earnings in the private nonagricultural sector), as shown in Figure 6. A blended wage variable is a major factor contributing to the faster growth in the hospital input price index. This wage variable consists of a blend of hospital industry wage increases and economywide wage increases adjusted for the occupational mix of hospital employees (*Federal Register*, 1990). The hospital wage variable comprises 52.2 percent of the total hospital index.

From the latter part of 1989 to 1990, the CPI, all items, rose faster than the PPS input price index. The major factor in the substantially high growth of the CPI, all items, was primarily energy-related prices (as previously discussed). During the period 1989-90, the CPI all items rose at a rate of 5.4 percent, compared with economywide wages which rose at a rate of 3.8 percent, and the PPS hospital index which rose at a rate of 4.9 percent.

In this article, we show historical information on a calendar year basis for the PPS, SNF, and HHA input price indexes. The PPS input price index has been revised, and the new base year is 1987. Table 8 shows PPS input price data for calendar years 1988 through 1990, and Table 9 shows PPS input price data for 1987 through 1990. Tables 10 and 11 show SNF input price data for calendar years 1981 through 1990. Tables 12 and 13 show HHA input price data for calendar years 1981 through 1990.

Data highlight

The largest component of the hospital input price index is labor inputs of production at 52.2 percent (Table 8). For this category, inflation is measured by the rate of growth of wages and salaries. Recent literature suggests that one of the principal subcategories of labor inputs—registered nurses—is in short supply (Newschaffer and Schoenman, 1990; Wilensky, 1988). Efforts to understand the extent of this shortage have been hampered because of a lack of national data on the rate of growth in wages and salaries paid to nurses.

A previous article presented a discussion and illustrative statistical data of salary cost trends of registered nurses during the 1980s in contrast to other associated occupational groups in order to provide perspective on the effects of a shortage (Donham, Maple, and Singer, 1990). In this article, a similar effort will be devoted to understanding the salary cost experience of another related hospital occupation—licensed practical nurses (LPNs). Survey data obtained from the "Current Population Survey" produced by the Bureau of the Census indicate that the share of total hours worked in all hospitals by LPNs declined during the decade from a high of 6.2 percent in 1983 to a low of 4.3 percent for both 1988 and 1989 (Freeland et al., 1991). This proportion constitutes about one-fifth of the hours worked by registered nurses in all hospitals, which totaled 22.8 percent in 1989.

The University of Texas Medical Branch at Galveston (1990) annually collects data on a number of hospital occupations including registered nurses, licensed practical nurses, physical therapists, and a range of other professional and technical positions employed by hospitals. The survey consists of hospitals and medical institutions that participate voluntarily. The institutions that are surveyed may vary from year to year. Nonetheless, to our knowledge, this is the only continuing national survey that provides an indication of the growth in hospital salary rates by detailed occupation. Table 14 compares the rate of growth in wages and salaries paid to LPNs with average hourly earnings (AHE) of private hospital workers and with average hourly straight-time wage rates for all professional and technical occupations in private industry, as measured by the Employment Cost Index (ECI) (Bureau of Labor Statistics, 1990). The starting rate for LPNs rose 61 percent from 1980 to 1990, while the maximum rate increased by 82 percent during that period. The rate for all private hospital workers grew even faster, 96 percent, during that time span. The wage and salary rates for all private industry professional and technical occupations experienced a rise of 76 percent, thus suggesting minimal impact of a shortage of LPNs on hospital compensation practices (Figure 7). However, in recent years, the data from the University of Texas demonstrate a widening disparity for increases in maximum rates received by LPNs over the starting rates. For example, the growth in starting rates averaged approximately 4 percent during the 2-year period 1988–90, but the maximum rates escalated by an average slightly above 8 percent for the same 2-year period (Table 15). This trend may imply difficulty in recruiting or retaining more experienced LPNs. To better understand the differential rates of increase in salaries for medical specialty occupations employed in a hospital setting, the Office of National Health Statistics will continue to monitor the data from the University of Texas annual studies as well as any other data sources that may become available.

National economic indicators

To put health-related economic trends into perspective, this section shifts focus to discuss national indicators of output, employment, and inflation. A slowdown in the

general economy, as indicated by a rising unemployment rate, started in the third quarter of 1990 and worsened as it continued into the fourth quarter of 1990. Health care indicators, in sharp contrast to overall economy indicators, showed accelerated growth for the calendar year 1990. With health care expenditure growth continuing unabated, health care will consume an even larger portion of the gross national product in 1990 than the 11.6 percent consumed in 1989 (Lazenby and Letsch, 1990).

Output and income

The gross national product (GNP), the most widely used measure of the Nation's output, increased by 5.1 percent in 1990. "Real" GNP (also called "constant dollar" or "price-deflated" GNP) declined \$23 billion, to a level of \$4.2 trillion, from the third to the fourth quarter of 1990 (Tables 16 and 17). This is the first quarter in which real GNP has decreased since the recession in 1982. Two consecutive quarters of negative real growth in GNP classifies the economy as in a recession.

Personal income rose to \$4.6 trillion during the calendar year 1990, up 5.9 percent from 1989. The growth rate for personal income has been decreasing since 1988, when the growth rate was 8.1 percent. Growth in disposable personal income (personal income net of taxes) increased 5.9 percent during 1990, following the same trends as personal income. The proportion of disposable income that was saved rather than spent (personal savings rate) dropped from a rate of 4.6 to 4.5 from 1989 to 1990. The personal savings rate began to decrease from the second to the third quarter of 1990 and by the fourth quarter was 0.6 percent lower than the same quarter a year earlier.

Employment, unemployment, and earnings

The condition of the economy is strongly reflected in the employment figures (Figure 8). The unemployment rate for all workers grew during the first, third, and fourth quarters of 1990, causing the unemployment rate for calendar year 1990 to increase to 5.5 percent. Employment for private nonagricultural workers slowed in growth during 1990 so that employment only grew 1.5 percent over the previous calendar year. In comparison, employment in health service sectors continued their accelerated growth, reaching 8.1 million jobs, a 7.5-percent expansion from 1989 to 1990.

Growth in average weekly hours for private nonagricultural workers and for health services workers moved in different directions in 1990, continuing a trend that started in 1988. Hours worked per week in private nonagricultural jobs decreased 0.4 percent from 1989 to 1990, while hours worked per week in health services jobs increased 0.3 percent during the same period. Average hourly earnings for all workers increased in 1990, but average hourly earnings for health services workers increased 2.2 percentage points faster than average hourly earnings for private nonagricultural workers.

As of the end of 1990, the factors driving job growth in the health sector seemed unaffected by the general economic slowdown. The presence of third-party payers, one contributing factor to the strong growth in the health care sector, influences utilization of health care services. Third-party payers insulate consumers from the full price of health care goods and services at the time of purchase. Health care purchases will continue during a recession, because consumers pay only a fraction of the actual price at the time services are used. Unless large numbers of people lose jobs and their ability to purchase insurance policies (more than 80 percent of which are employer-sponsored), consumption will continue to drive employment in the health care sector.

Prices

The GNP fixed-weight price index, the most comprehensive measure of price inflation, grew 4.6 percent from 1989 to 1990. The GNP implicit price deflator (which reflects changes in the composition of output as well as price inflation) rose 4.1 percent from calendar year 1989 to 1990. During the same period, the CPI for all items and all urban consumers showed an increase of 5.4 percent. The principal mover of the CPI in the four quarters of 1990 was energy prices, which have fluctuated during the last year because of the Persian Gulf situation. The Producer Price Index for finished goods grew 5.4 percent from calendar year 1989 to 1990.

Figure 1

Percent change in inpatient days and outpatient visits from the same period of previous year: 1981-90

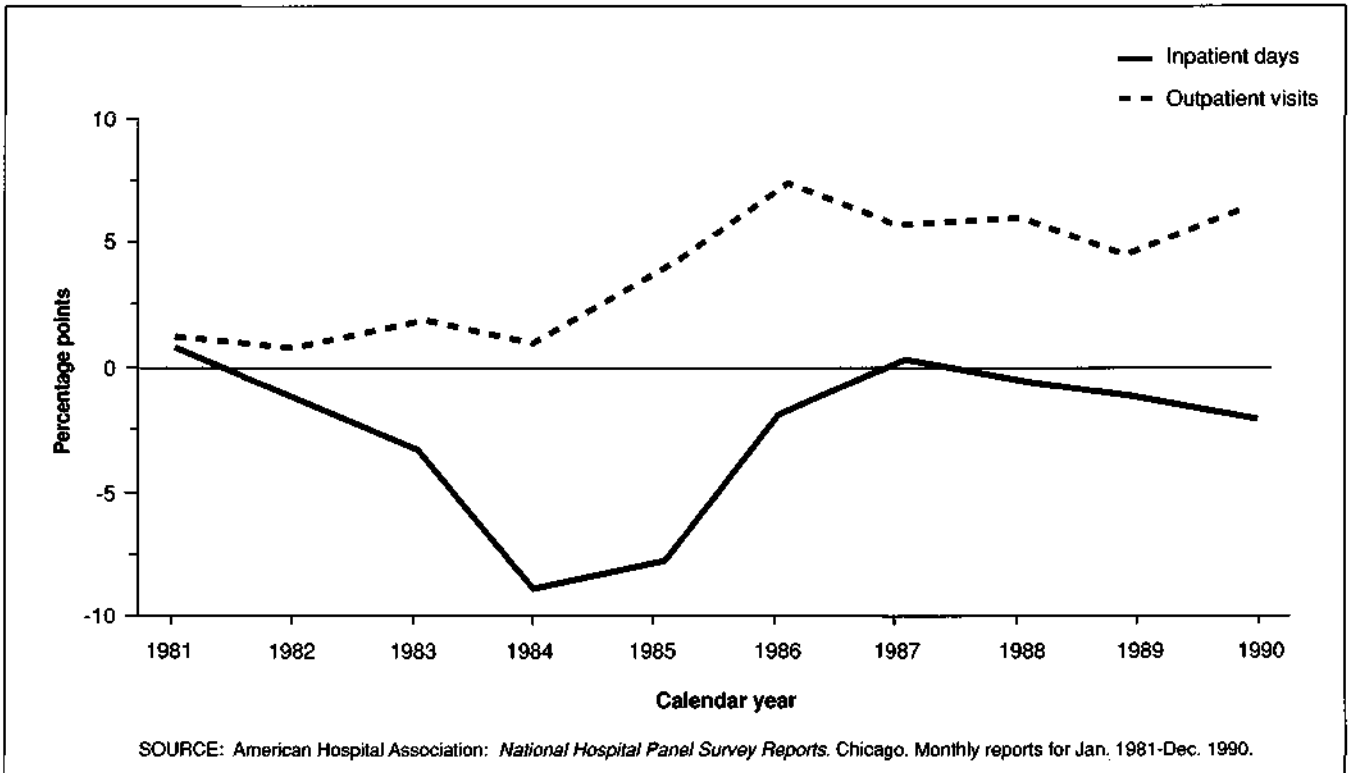


Table 2
Percent change in selected community hospital statistics: 1981-80

Item	Calendar year										Percent change from the same period of previous year			
	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1990 Q1	1990 Q2	1990 Q3	1990 Q4
Annual percent change														
Operating expenses														
Total	18.7	15.8	10.2	4.8	6.4	8.9	10.5	10.2	9.9	11.1	10.9	11.5	11.7	10.4
Labor	19.3	16.1	9.4	3.8	4.7	7.3	9.2	10.1	10.0	11.1	10.8	11.5	11.8	10.4
Nonlabor	18.0	15.5	11.3	6.2	8.6	11.0	12.0	10.3	9.8	11.1	11.0	11.5	11.6	10.3
Inpatient expense														
Amount per patient day	18.4	15.6	9.6	3.5	4.1	7.1	8.8	8.2	8.3	9.0	9.2	9.4	9.5	7.8
Amount per admission	16.9	16.2	12.4	13.3	11.3	8.6	8.6	8.8	9.3	10.7	9.3	10.9	11.5	11.4
	17.4	15.5	10.2	7.5	9.5	9.3	9.5	8.7	9.3	9.5	9.0	8.8	10.0	10.2
Utilization														
Admissions	0.8	0.0	-0.5	-3.7	-4.9	-2.1	-0.6	-0.4	-1.0	-0.5	0.1	0.6	-0.4	-2.2
Inpatient days	1.2	-0.6	-2.5	-8.6	-6.5	-1.4	0.2	-0.5	-0.9	-1.6	-0.1	-1.4	-1.8	-3.2
Adult length of stay	0.4	-0.6	-2.0	-4.7	-2.1	0.7	0.8	-0.1	0.1	-1.1	-0.2	-1.9	-1.3	-1.0
Surgical operations	1.7	-0.2	0.5	0.7	0.4	2.2	2.9	1.0	0.6	2.4	1.3	2.1	3.9	2.5
Outpatient visits	1.4	1.1	2.8	1.4	4.5	8.3	5.8	6.2	4.0	6.0	6.0	5.4	6.7	5.8
Beds	1.7	1.1	0.6	-1.1	-1.8	-1.2	-0.9	-1.3	-1.3	-0.9	-1.0	-0.8	-0.8	-1.2
Adult occupancy rate ¹	-0.1	-1.3	-2.3	-5.6	-3.0	-0.2	0.7	0.4	0.4	-0.4	0.7	-0.4	-0.6	-1.3
Full-time equivalent (FTE) personnel														
Total	5.4	3.7	1.4	-2.3	-2.3	0.4	0.7	1.1	1.6	2.1	2.4	2.4	2.1	1.4
Number per bed	3.7	2.5	0.8	-1.2	-0.4	1.6	1.6	2.4	3.0	3.1	3.4	3.3	2.9	2.7
Adjusted patient days per FTE	-3.7	-3.9	-3.3	-5.3	-2.3	0.0	1.0	0.2	-1.0	-1.7	-0.9	-1.9	-1.9	-2.3
Adjusted patient days	1.5	-0.3	-2.0	-7.4	-4.5	0.3	1.7	1.3	0.6	0.3	1.5	0.5	0.2	-0.9

¹Change in rate, rather than percent change.

NOTES: Q designates quarter of year.

SOURCE: American Hospital Association: National Hospital Panel Survey Reports, Chicago, Monthly reports for Jan. 1981-Dec. 1980.

Figure 2

**Percent change in beds and level change in occupancy rates from the same period of previous year:
1981-90**

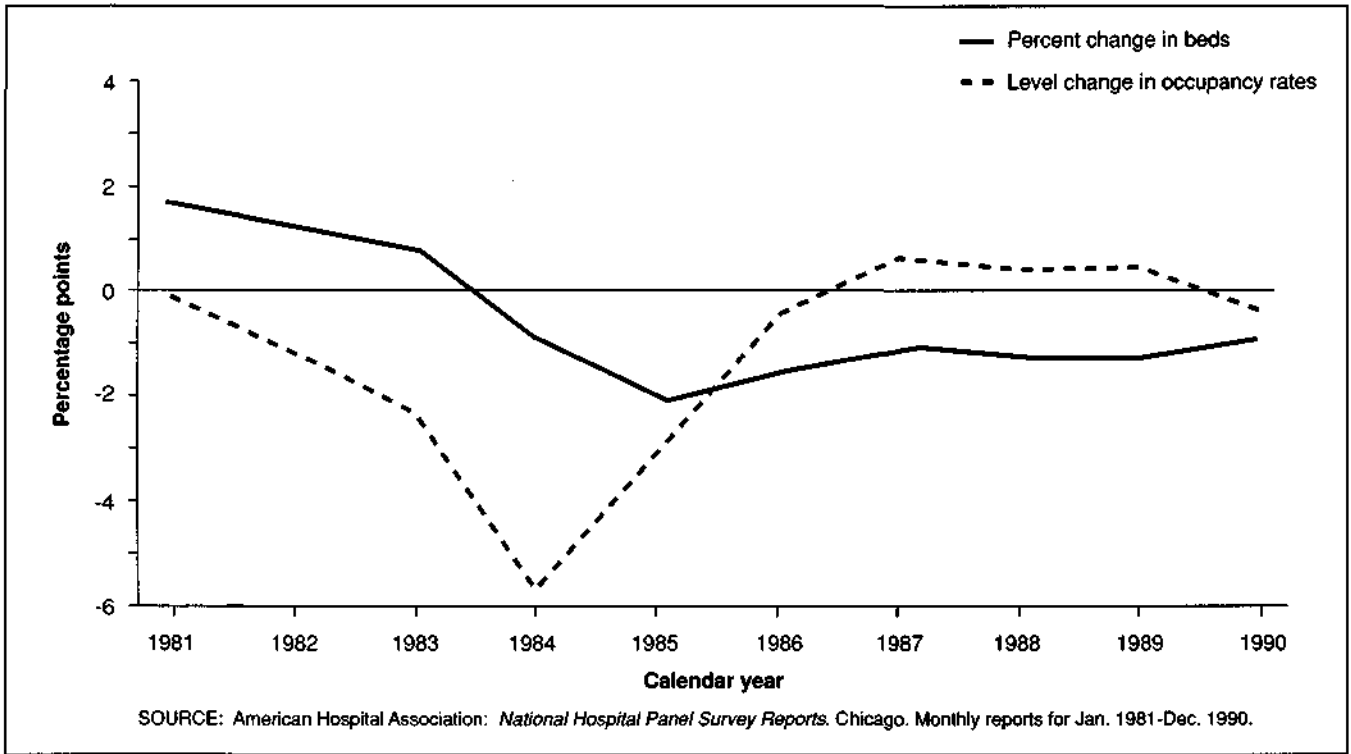


Table 3

Employment, hours, and earnings in private health service establishments, by selected type of establishment: 1982-90

Type of establishment and measure	Calendar year												
	1982	1983	1984	1985	1986	1987	1988	1989	1990	1990			
									Q1	Q2	Q3	Q4	
Health services (SIC 80)													
Total employment in thousands	5,811.8	5,988.2	6,122.3	6,298.7	6,535.7	6,805.4	7,121.0	7,550.7	8,114.3	7,872.1	8,041.0	8,208.6	8,335.5
Nonsupervisory workers:													
Employment in thousands	5,203.2	5,380.8	5,462.3	5,607.0	5,810.2	6,052.2	6,324.3	6,713.4	7,212.5	6,995.4	7,148.2	7,297.6	7,408.7
Average weekly hours	33.0	32.6	32.5	32.5	32.4	32.3	32.4	32.5	32.6	32.4	32.5	32.8	32.6
Average hourly earnings	\$6.82	\$7.39	\$7.71	\$8.06	\$8.35	\$8.70	\$9.21	\$9.83	\$10.41	\$10.24	\$10.31	\$10.47	\$10.62
Offices and clinics of medical doctors (SIC 801)													
Total employment in thousands	887.5	934.1	978.3	1,029.9	1,083.7	1,142.3	1,203.8	1,288.3	1,412.5	1,359.8	1,398.9	1,434.2	1,459.2
Nonsupervisory workers:													
Employment in thousands	732.1	790.2	820.4	857.9	900.7	946.0	992.1	1,064.0	1,166.0	1,121.9	1,154.3	1,185.2	1,202.5
Average weekly hours	32.0	31.5	30.9	30.9	31.2	31.1	31.6	31.9	31.7	31.8	31.5	31.9	31.7
Average hourly earnings	\$6.92	\$7.41	\$7.68	\$8.02	\$8.35	\$8.61	\$9.07	\$9.78	\$10.58	\$10.31	\$10.46	\$10.67	\$10.89
Offices and clinics of dentists (SIC 802)													
Total employment in thousands	384.3	407.1	425.6	439.8	458.2	470.3	484.6	502.6	522.9	514.2	520.8	526.0	530.5
Nonsupervisory workers:													
Employment in thousands	339.8	359.7	377.7	391.7	404.4	414.7	424.5	439.9	458.4	451.0	456.9	460.9	464.8
Average weekly hours	28.2	28.1	28.8	28.6	28.0	28.3	28.5	28.5	28.4	28.3	28.4	28.5	28.5
Average hourly earnings	\$6.74	\$7.12	\$7.42	\$7.88	\$8.27	\$8.50	\$8.82	\$9.41	\$10.13	\$9.88	\$10.08	\$10.22	\$10.31
Nursing and personal care facilities (SIC 805)													
Total employment in thousands	1,067.1	1,106.6	1,148.2	1,198.9	1,246.6	1,285.3	1,314.3	1,369.7	1,458.1	1,416.5	1,444.0	1,472.4	1,499.4
Nonsupervisory workers:													
Employment in thousands	968.5	1,002.3	1,038.4	1,084.7	1,126.3	1,161.2	1,187.0	1,238.3	1,316.8	1,278.6	1,304.4	1,329.7	1,354.5
Average weekly hours	31.4	31.3	31.1	31.2	31.4	31.6	31.6	31.8	32.1	31.7	31.9	32.5	32.3
Average hourly earnings	\$4.89	\$5.20	\$5.42	\$5.61	\$5.80	\$6.00	\$6.33	\$6.79	\$7.23	\$7.07	\$7.18	\$7.27	\$7.38
Private hospitals (SIC 806)													
Total employment in thousands	3,014.5	3,036.7	3,004.0	2,997.3	3,038.0	3,143.0	3,295.0	3,472.3	3,679.9	3,593.4	3,650.1	3,715.9	3,760.1
Nonsupervisory workers:													
Employment in thousands	2,766.6	2,784.3	2,732.2	2,743.2	2,768.2	2,866.9	3,010.8	3,176.4	3,369.1	3,287.8	3,340.1	3,403.5	3,445.1
Average weekly hours	34.5	34.1	34.1	34.3	34.2	34.1	34.0	34.0	34.2	34.2	34.2	34.4	34.1
Average hourly earnings	\$7.56	\$8.12	\$8.55	\$8.00	\$9.36	\$9.84	\$10.51	\$11.21	\$11.78	\$11.62	\$11.66	\$11.85	\$12.01

See footnotes at end of table.

Table 3—Continued
Employment, hours, and earnings in private¹ health service establishments, by selected type of establishment: 1982-90

Type of establishment and measure	Calendar year											
	1982	1983	1984	1985	1986	1987	1988	1989	1990	1990	1990	1990
									Q1	Q2	Q3	Q4
All private nonsupervisory establishments												
Total employment in thousands	73,729	74,330	78,472	81,125	82,832	85,190	88,150	90,844	92,031	90,436	92,272	93,011
Employment in thousands	59,497	60,070	63,415	65,586	67,018	68,976	71,383	73,474	74,560	73,104	74,791	75,445
Average weekly hours	34.8	35.0	35.2	34.9	34.8	34.8	34.7	34.6	34.5	34.2	34.5	34.8
Average hourly earnings	\$7.68	\$8.02	\$8.32	\$8.57	\$8.76	\$8.98	\$9.28	\$9.66	\$10.03	\$9.90	\$9.97	\$10.05
												\$10.18
Employment in thousands												
All hospitals	4,378.6	4,389.0	4,326.6	4,301.8	4,323.7	4,437.5	4,600.9	4,786.3	5,035.5	4,933.2	5,001.0	5,078.1
Private hospitals (SIC 806)	3,014.5	3,036.7	3,004.0	2,997.3	3,038.0	3,143.0	3,295.0	3,472.3	3,679.9	3,593.4	3,650.1	3,715.9
Federal hospitals	234.8	237.5	241.0	248.1	246.3	249.4	240.7	225.6	227.9	227.1	227.7	228.6
State hospitals	494.2	471.2	458.8	448.5	438.1	438.7	446.2	450.0	454.3	452.2	454.4	454.6
Local hospitals	635.1	643.6	622.8	607.9	601.3	606.4	619.0	638.4	673.4	660.5	668.8	679.0

¹Excludes hospitals, clinics, and other health-related establishments run by all governments.

NOTES: Data presented here incorporate conversion to the 1987 Standard Industrial Classification (SIC) and an historical reconstruction of components back to the inception of the series, whenever possible. Q designates quarter of year. Quarterly data are not seasonally adjusted.

SOURCE: U.S. Department of Labor, Bureau of Labor Statistics: *Employment and Earnings*. Washington, U.S. Government Printing Office. Monthly reports for Jan. 1982-Dec. 1990.

Figure 3
Percent change for total employment from the same period of previous year: 1983-90

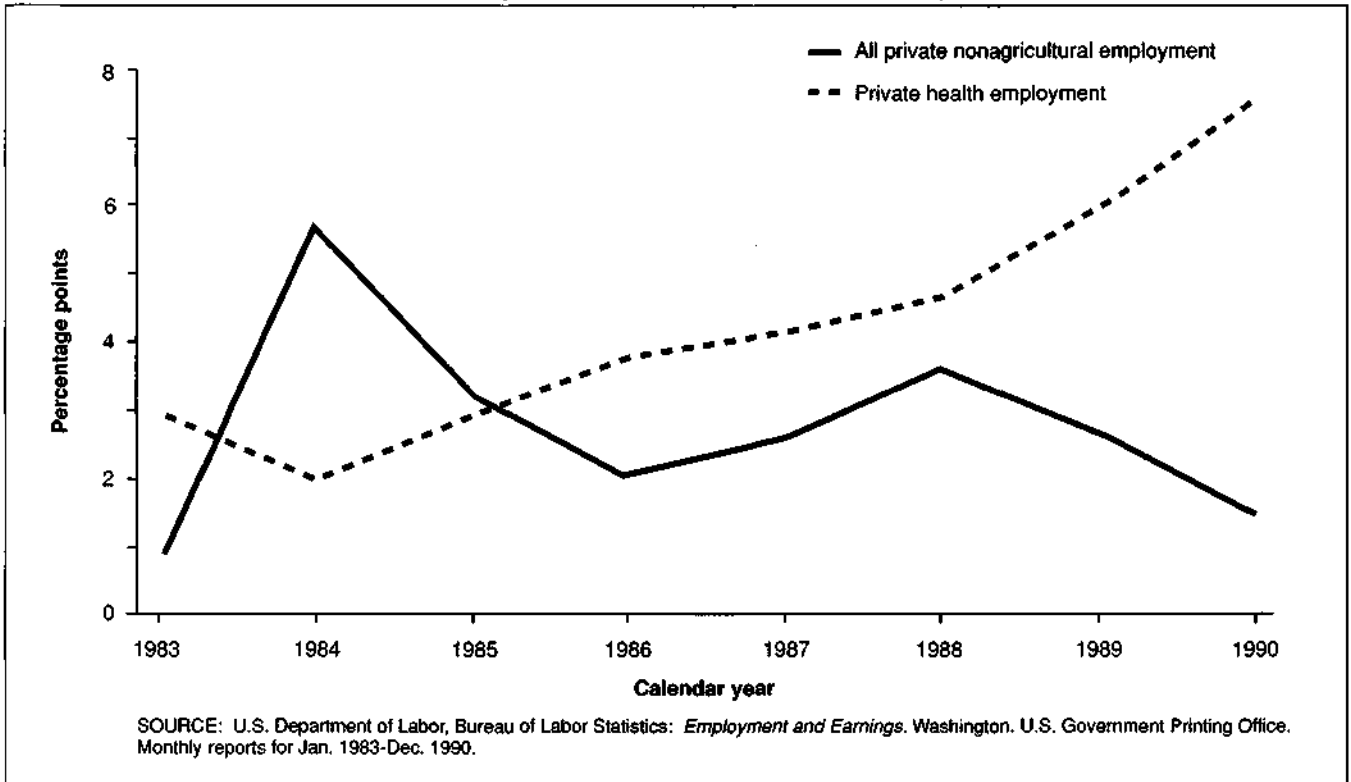


Table 4

Percent change in employment, hours, and earnings in private¹ health service establishments, by selected type of establishment: 1983-90

Type of establishment and measure	Calendar year								Percent change from the same period of previous year			
	1983	1984	1985	1986	1987	1988	1989	1990	1990 Q1	1990 Q2	1990 Q3	1990 Q4
Health services (SIC 80)												
Total employment	3.0	2.2	2.9	3.8	4.1	4.6	6.0	7.5	7.0	7.4	7.7	7.8
Nonsupervisory workers:												
Employment	3.4	1.5	2.6	3.6	4.2	4.5	6.2	7.4	6.9	7.4	7.6	7.8
Average weekly hours	-1.1	-0.4	0.0	-0.2	-0.1	0.2	0.1	0.3	0.0	0.3	0.6	0.3
Average hourly earnings	6.8	4.3	4.5	3.6	4.1	6.0	6.6	6.0	6.4	6.4	5.8	5.4
Offices and clinics of medical doctors (SIC 801)												
Total employment	5.3	4.7	5.3	5.2	5.4	5.4	7.0	9.6	9.0	9.6	10.1	9.8
Nonsupervisory workers:												
Employment	7.9	3.8	4.6	5.0	5.0	4.9	7.3	9.6	8.8	9.6	10.1	9.8
Average weekly hours	-1.6	-1.9	-0.2	1.0	-0.2	1.4	1.0	-0.5	0.0	-0.9	-0.3	-0.9
Average hourly earnings	7.1	3.6	4.3	4.2	3.1	5.3	7.8	8.2	8.1	8.6	8.3	7.9
Offices and clinics of dentists (SIC 802)												
Total employment	5.9	4.5	3.3	4.2	2.7	3.0	3.7	4.0	4.4	3.8	3.9	4.0
Nonsupervisory workers:												
Employment	5.9	5.0	3.7	3.2	2.5	2.4	3.6	4.2	4.6	4.1	4.1	4.1
Average weekly hours	-0.5	2.6	-0.9	-1.8	0.9	0.8	-0.2	-0.1	-0.4	-1.0	0.7	0.4
Average hourly earnings	5.6	4.2	6.2	4.9	2.8	3.8	6.6	7.7	6.8	8.1	8.5	7.2
Nursing and personal care facilities (SIC 805)												
Total employment	3.7	3.8	4.4	4.0	3.1	2.3	4.2	6.5	5.7	6.2	6.5	7.3
Nonsupervisory workers:												
Employment	3.5	3.6	4.5	3.8	3.1	2.2	4.3	6.3	5.6	6.1	6.4	7.3
Average weekly hours	-0.2	-0.7	0.2	0.7	0.5	0.0	1.0	0.8	0.3	0.6	0.9	1.3
Average hourly earnings	6.3	4.2	3.5	3.4	3.4	5.5	7.3	6.4	6.4	6.9	6.3	6.0
Private hospitals (SIC 806)												
Total employment	0.7	-1.1	-0.2	1.4	3.5	4.8	5.4	6.0	5.8	5.9	6.0	6.2
Nonsupervisory workers:												
Employment	0.6	-1.5	-0.4	1.3	3.6	5.0	5.5	6.1	5.8	6.0	6.1	6.4
Average weekly hours	-0.9	0.1	0.4	-0.1	-0.3	-0.5	0.1	0.7	0.9	0.9	0.6	0.3
Average hourly earnings	7.4	5.3	5.3	4.0	5.1	6.8	6.7	5.1	5.9	5.4	4.7	4.5

See footnotes at end of table.

Table 4—Continued

Percent change in employment, hours, and earnings in private¹ health service establishments, by selected type of establishment: 1983–90

Type of establishment and measure	Calendar year							Percent change from the same period of previous year			
	1983	1984	1985	1986	1987	1988	1989	1990 Q1	1990 Q2	1990 Q3	1990 Q4
All private nonagricultural establishments				Annual percent change							
Total employment	0.8	5.6	3.4	2.1	2.8	3.5	2.8	1.5	2.1	1.8	1.6
Nonsupervisory workers:											
Employment	1.0	5.6	3.4	2.2	2.9	3.5	2.9	1.5	2.1	1.8	1.6
Average weekly hours	0.5	0.5	-0.7	-0.5	0.1	-0.2	-0.3	-0.4	-0.3	-0.3	-0.6
Average hourly earnings	4.4	3.6	3.1	2.2	2.5	3.3	4.1	3.8	3.8	4.0	3.6
Employment											
All hospitals	0.2	-1.4	-0.5	0.5	2.8	3.6	4.0	5.2	5.0	5.2	5.3
Private hospitals (SIC 806)	0.7	-1.1	-0.2	1.4	3.5	4.8	5.4	6.0	5.8	5.9	6.0
Federal hospitals	1.2	1.5	2.9	-0.7	1.3	-3.5	-6.3	1.0	0.7	1.6	1.1
State hospitals	-4.7	-2.6	-2.2	-2.3	0.1	1.7	0.9	1.0	0.8	1.3	0.8
Local hospitals	1.3	-3.2	-2.4	-1.1	0.8	2.1	3.1	5.5	5.5	5.8	5.1

¹Excludes hospitals, clinics, and other health-related establishments run by all governments.

NOTES: Data presented here incorporate conversion to the 1987 Standard Industrial Classification (SIC) and an historical reconstruction of components back to the inception of the series, whenever possible. Q designates quarter of year.

SOURCE: U.S. Department of Labor, Bureau of Labor Statistics: *Employment and Earnings*. Washington, U.S. Government Printing Office. Monthly reports for Jan. 1983–Dec. 1990.

Table 5

Percent change in implied nonsupervisory payrolls and work-hours in private¹ health service establishments,
by selected type of establishment: 1983-90

Type of establishment	Calendar Year										
	1983	1984	1985	1986	1987	1988	1989	1990 Q1	1990 Q2	1990 Q3	1990 Q4
	Annual percent change										
Private health service establishments (SIC 80)											
Payrolls	9.1	5.5	7.2	7.0	8.5	10.9	13.4	14.2	14.0	14.6	14.4
Work-hours	2.2	1.1	2.7	3.4	4.1	4.7	6.2	7.8	6.9	7.7	8.3
Offices and clinics of medical doctors (SIC 801)											
Payrolls	13.6	5.6	9.0	10.4	8.1	12.1	16.8	18.0	17.6	17.9	18.9
Work-hours	6.2	1.9	4.4	6.0	4.9	6.4	8.4	9.0	8.8	8.6	9.8
Offices and clinics of dentists (SIC 802)											
Payrolls	11.3	12.0	9.5	6.2	6.3	7.1	10.3	12.1	11.3	11.4	13.6
Work-hours	5.3	7.7	2.8	1.3	3.5	3.2	3.4	4.1	4.2	3.0	4.8
Nursing and personal care facilities (SIC 805)											
Payrolls	10.0	7.2	8.2	8.1	7.2	7.8	13.0	14.1	12.8	14.1	14.3
Work-hours	3.3	2.9	4.6	4.6	3.6	2.2	5.3	7.2	5.9	6.8	7.4
Private hospitals (SIC 806)											
Payrolls	7.0	3.9	5.4	5.1	8.6	11.7	12.6	12.3	13.0	12.7	11.9
Work-hours	-0.3	-1.4	0.0	1.2	3.3	4.5	5.6	6.8	6.7	6.9	6.7
All private nonsupervisory establishments											
Payrolls	6.1	10.1	5.7	4.0	5.5	6.8	6.8	5.0	5.5	5.7	5.4
Work-hours	1.5	6.1	2.7	1.7	3.1	3.3	2.6	1.1	1.8	1.5	1.3

¹Excludes hospitals, clinics, and other health-related establishments run by all governments.

NOTES: Data presented here incorporate conversion to the 1987 Standard Industrial Classification (SIC) and an historical reconstruction of components back to the inception of the series, whenever possible. Q designates quarter of year.

SOURCE: U.S. Department of Labor, Bureau of Labor Statistics: *Employment and Earnings*. Washington, U.S. Government Printing Office. Monthly reports for Jan. 1983-Dec. 1990.

Figure 4

Percent change for nonsupervisory payrolls from the same period of previous year: 1983-90

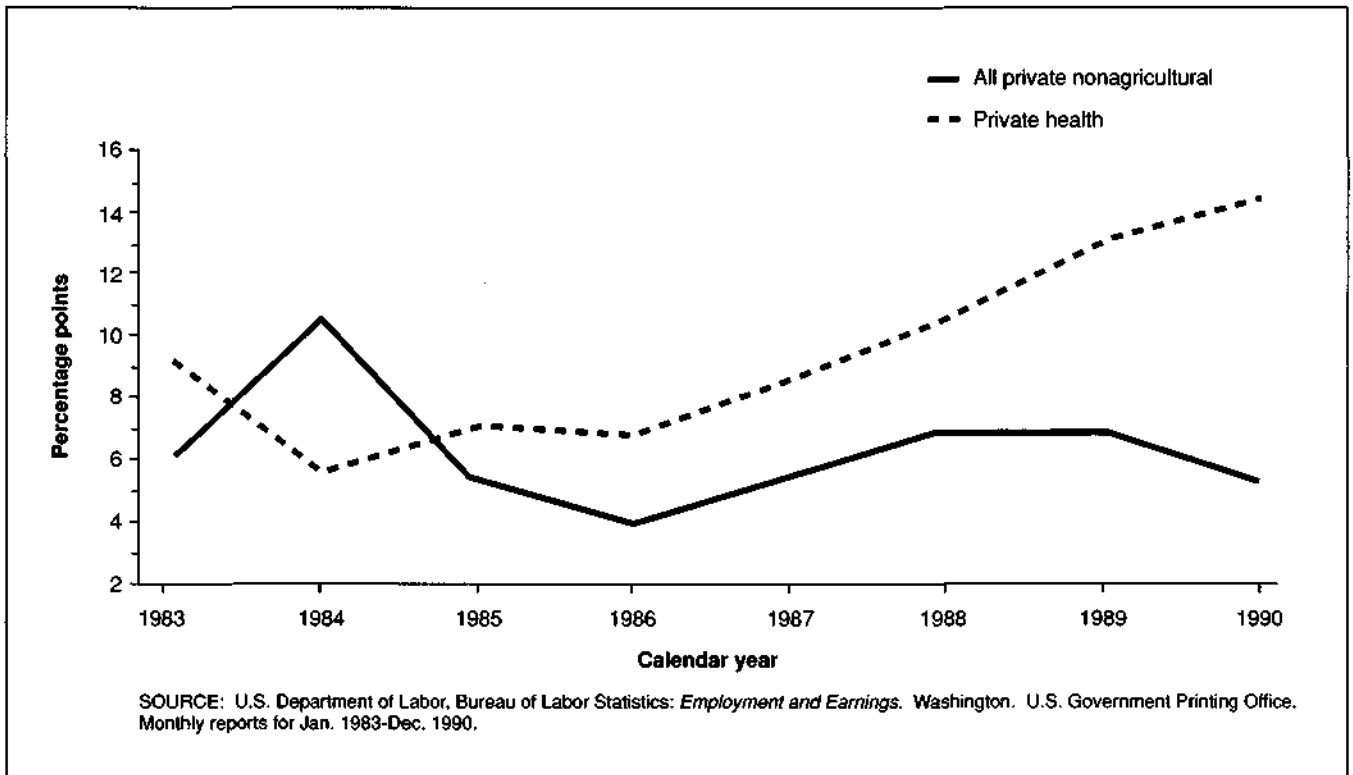


Table 6
Selected Items of the Consumer Price Index for all urban consumers: 1981-90

Item	Calendar year													
	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990 Q1	1990 Q2	1990 Q3	1990 Q4	
All items	90.9	96.5	99.6	103.9	107.6	109.6	113.6	118.3	124.0	130.7	128.0	129.3	131.6	133.7
All items less medical care	91.4	96.8	99.6	103.7	107.2	108.8	112.6	117.0	122.4	128.8	126.3	127.5	129.6	131.7
Apparel and upkeep	95.3	97.8	100.2	102.0	105.0	105.9	110.6	115.4	119.6	124.1	120.8	125.2	123.3	127.1
Energy	97.7	99.1	99.9	100.9	101.6	88.2	88.6	89.2	94.3	102.1	96.5	97.3	103.8	110.8
Food and beverages	93.5	97.3	99.5	103.2	105.6	109.1	113.5	118.2	124.9	132.1	130.7	131.3	132.7	133.7
Housing: shelter	90.5	96.9	99.1	104.0	109.8	115.8	121.2	127.1	132.8	140.0	136.9	138.6	141.9	142.5
Medical care	82.9	92.5	100.6	106.9	113.5	122.0	130.1	138.6	149.3	162.8	157.4	160.8	164.8	168.2
Medical care services ¹	82.8	92.6	100.7	106.7	113.2	121.9	130.0	138.3	148.9	162.7	157.1	160.5	164.7	168.4
Professional services	85.9	93.2	99.8	107.0	113.6	120.8	128.8	137.5	146.4	156.1	152.2	155.0	157.7	159.5
Physicians' services	84.9	92.9	100.1	107.0	113.3	121.5	130.4	139.8	150.0	160.8	156.5	159.8	162.6	164.5
Dental services	86.4	93.1	99.4	107.5	114.2	120.6	128.8	137.5	146.0	155.8	152.3	154.4	157.1	159.3
Hospital and related services	79.1	90.3	100.5	109.2	116.1	123.1	131.6	143.9	160.5	178.0	171.5	174.5	180.3	185.8
Hospital room	78.1	90.4	100.6	109.0	115.4	122.3	131.1	143.3	158.1	175.4	169.7	172.2	177.6	182.1
Other inpatient services ²	NA	NA	NA	NA	NA	NA	103.9	114.0	128.9	142.7	136.7	139.4	144.7	150.0
Outpatient services ²	NA	NA	NA	NA	NA	NA	103.3	112.5	124.7	138.7	134.0	136.3	140.1	144.4
Medical care commodities	83.7	92.3	100.2	107.5	115.2	122.7	130.9	139.9	150.8	163.4	158.5	162.3	165.0	167.9
Prescription drugs	80.8	90.2	100.1	109.7	120.1	130.4	140.8	152.0	165.2	181.7	175.5	180.2	183.8	187.2
Nonprescription drugs and medical supplies ²	NA	NA	NA	NA	NA	NA	103.1	108.1	114.6	120.6	118.0	120.1	121.2	123.2
Internal and respiratory over-the counter drugs	84.2	93.3	100.3	106.4	112.2	117.7	123.9	130.8	138.7	145.9	142.6	144.9	146.4	149.8
Nonprescription medical equipment and supplies	86.5	94.5	100.4	105.1	109.6	115.0	119.6	123.9	131.1	138.0	135.2	138.1	139.8	139.9

¹Includes net cost of private health insurance not shown in professional services or hospital and related services.

²December 1986 = 100.

NOTES: 1982-84 = 100.0 unless noted. Q designates quarter of year. Quarterly data are not seasonally adjusted. NA designates not available.

SOURCE: U.S. Department of Labor, Bureau of Labor Statistics: CPI Detailed Report Washington, U.S. Government Printing Office, Monthly reports for Jan. 1981-Dec. 1990.

Table 7

Percent change in selected items of the Consumer Price Index for all urban consumers: 1981-90

Item	Calendar year										Percent change from the same period of previous year			
	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990				
All items	10.3	6.1	3.2	4.3	3.5	1.9	3.7	4.1	4.8	5.4	5.2	4.6	5.5	6.2
All items less medical care	10.3	5.9	2.9	4.1	3.4	1.6	3.4	3.9	4.6	5.2	5.0	4.3	5.3	6.0
Apparel and upkeep	4.8	2.6	2.5	1.8	2.9	0.8	4.4	4.3	2.8	4.6	3.6	4.6	5.7	4.7
Energy	13.6	1.5	0.8	1.0	0.7	-13.2	0.4	0.8	5.7	8.2	8.0	0.2	6.8	18.3
Food and beverages	7.9	4.1	2.2	3.8	2.3	3.3	4.1	4.1	5.7	5.8	6.5	5.4	5.6	5.5
Housing: shelter	11.7	7.1	2.3	2.3	5.6	5.5	4.7	4.8	4.5	5.4	5.0	5.2	6.0	5.4
Medical care	10.8	11.6	8.7	6.2	6.2	7.5	6.6	6.5	7.7	9.1	8.5	9.0	9.3	9.5
Medical care services ¹	10.7	11.9	8.7	6.0	6.0	7.7	6.6	6.5	7.6	9.3	8.5	9.1	9.6	9.8
Professional services	10.3	8.5	7.2	7.1	6.2	6.4	6.6	6.7	6.4	6.6	6.2	6.6	6.9	6.9
Physicians' services	11.0	9.4	7.7	7.0	5.8	7.2	7.4	7.2	7.3	7.2	6.6	7.3	7.4	7.4
Dental services	9.6	7.8	6.7	8.1	6.3	5.6	6.7	6.8	6.2	6.7	6.5	6.3	6.9	6.8
Hospital and related services	14.3	14.1	11.4	8.6	6.3	6.0	6.9	9.3	11.5	10.9	10.9	10.8	10.9	11.1
Hospital room	14.8	15.7	11.3	8.3	5.9	6.0	7.2	9.2	10.3	10.9	11.1	11.2	11.1	10.4
Other inpatient services	NA	NA	NA	NA	NA	NA	NA	9.7	13.1	10.7	10.3	10.1	10.7	11.7
Outpatient services	NA	NA	NA	NA	NA	NA	NA	8.9	10.9	11.2	11.8	11.2	10.6	11.2
Medical care commodities	10.9	10.3	8.6	7.3	7.1	6.6	6.7	6.9	7.8	8.4	8.5	8.3	8.3	8.2
Prescription drugs	11.5	11.7	11.0	9.6	9.5	8.6	8.0	7.9	8.7	10.0	10.1	10.0	9.9	9.7
Nonprescription drugs and medical supplies	NA	NA	NA	NA	NA	NA	NA	4.9	6.0	5.2	5.6	5.0	5.1	5.2
Internal and respiratory over-the-counter drugs	12.4	10.8	7.5	6.2	5.4	4.9	5.3	5.5	6.1	5.2	5.3	4.6	5.0	5.7
Nonprescription medical equipment and supplies	9.3	9.3	6.2	4.6	4.4	4.9	4.0	3.6	5.8	5.3	5.9	5.7	5.2	4.3

¹Includes net cost of private health insurance not shown in professional services or hospital and related services.

NOTES: Q designates quarter of year. NA designates not available.

SOURCE: U.S. Department of Labor, Bureau of Labor Statistics: CPI Detailed Report Washington, U.S. Government Printing Office. Monthly reports for Jan. 1981-Dec. 1990.

Figure 5

Percent change in measures of price inflation from the same period of previous year: 1981-90

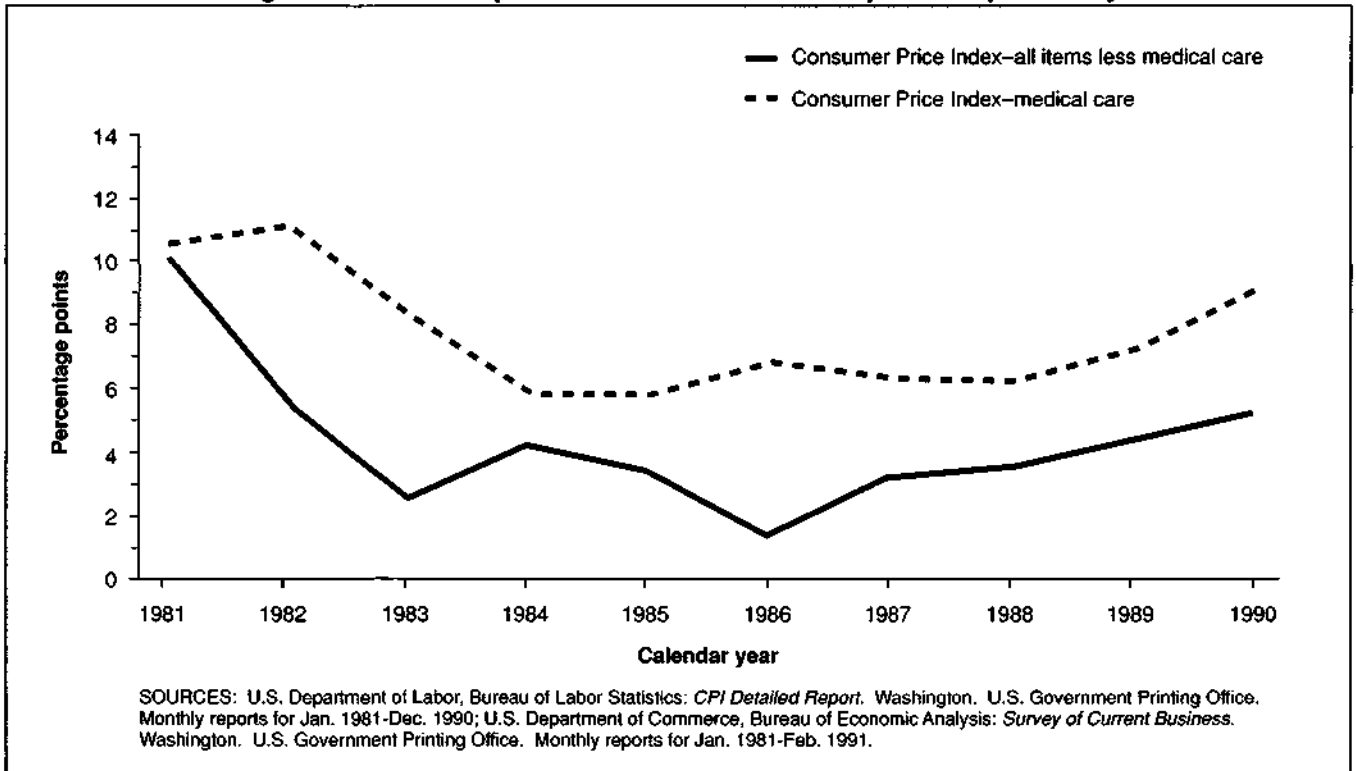


Table 8
Percent change in calendar year periods for the prospective payment system hospital input price index, by expense category: 1988-90

Expense category ¹	Base year weights 1987 ²	Calendar year		
		1988	1989	1990
Total	100.000	5.1	5.4	4.9
Wages and salaries	52.212	4.5	4.9	5.1
Employee benefits	9.497	6.2	6.9	7.9
Other professional fees	1.649	4.5	4.6	4.9
Energy and utilities	2.376	-1.7	7.4	9.6
Fuel oil, coal, and other fuel	0.625	-5.2	13.6	22.1
Electricity	1.143	0.6	3.2	3.0
Natural gas	0.343	-2.7	6.0	-2.3
Motor gasoline	0.229	-2.4	13.5	21.0
Water and sewerage maintenance	0.036	5.5	6.1	6.7
Professional liability insurance	1.433	24.2	0.6	-0.1
All other	32.839	5.3	5.8	3.7
Other products	21.788	5.8	6.1	3.3
Pharmaceuticals	3.873	7.9	9.1	8.9
Food	3.299	4.3	4.5	4.0
Direct purchase	2.111	4.5	4.5	3.5
Contract service	1.188	4.0	4.6	4.7
Chemicals and cleaning products	3.126	11.9	7.5	-1.5
Surgical and medical instruments	2.672	1.7	4.1	2.6
Photographic supplies	2.623	2.2	8.8	3.9
Rubber and plastics	2.323	6.2	3.0	0.9
Paper products	1.399	9.0	6.5	1.2
Apparel	1.142	3.0	2.1	2.6
Minor machinery and equipment	0.497	2.6	3.7	2.8
Miscellaneous products	0.833	2.5	5.1	4.9
Other services	11.051	4.3	5.1	4.4
Business services	3.845	4.4	5.5	5.0
Computer and data processing	1.992	7.5	7.3	5.2
Transportation and shipping	1.233	3.1	5.0	5.6
Telephone	0.987	0.0	1.0	0.4
Blood services	0.588	1.2	5.5	0.2
Postage	0.372	10.1	3.1	0.0
Other—labor intensive	1.233	3.4	3.7	3.9
Other—nonlabor intensive	0.800	4.1	4.8	5.4

¹Data sources used to estimate the input price index relative weights and choice of price proxies were taken from the *Federal Register*, (1990).

²Category weights may not sum to total because of rounding.

NOTES: Data for 1988 and 1989 are historical. Data for 1990 are partly historical and partly forecasted. The following is an example of how a percent change is calculated: Use the index levels shown in Tables 9, 11, and 13. Choose the calendar year period for which you would like to calculate the percent change (e.g., year-end 1990). Now, take the calendar year period previous to the period you want (e.g., year-end 1989). Finally, compute a percent change using the two periods.

SOURCES: Health Care Financing Administration, Office of the Actuary; Data from the Office of National Health Statistics, Division of Health Cost Analysis. First quarter 1991 forecasts are made by Data Resources, Inc./McGraw-Hill.

Table 9
Calendar year index levels for the prospective payment system hospital input price index,
by expense category: 1987-90

Expense category ¹	Base year weights 1987 ²	Calendar year			
		1987	1988	1989	1990
Total	100.000	101.1	106.2	111.9	117.3
Wages and salaries	52.212	101.1	105.6	110.8	116.4
Employee benefits	9.497	100.8	107.1	114.5	123.3
Other professional fees	1.649	101.1	105.7	110.5	115.9
Energy and utilities	2.376	101.6	99.9	107.3	120.6
Fuel oil, coal, and other fuel	0.625	105.9	100.4	114.1	145.4
Electricity	1.143	99.4	100.0	103.2	107.2
Natural gas	0.343	98.6	96.0	101.8	101.5
Motor gasoline	0.229	105.7	103.1	117.0	148.2
Water and sewerage maintenance	0.036	101.3	106.8	113.3	121.0
Professional liability insurance	1.433	103.4	128.4	129.2	129.0
All other	32.839	101.0	106.3	112.5	117.3
Other products	21.788	101.1	106.9	113.5	116.7
Pharmaceuticals	3.873	102.1	110.2	120.2	130.9
Food	3.299	100.6	104.9	109.7	114.4
Direct purchase	2.111	100.4	104.9	109.6	113.8
Contract service	1.188	100.9	105.0	109.9	115.3
Chemicals and cleaning products	3.126	102.0	114.1	122.7	120.5
Surgical and medical instruments	2.672	100.5	102.2	106.3	108.8
Photographic supplies	2.623	100.5	102.7	111.8	116.7
Rubber and plastics	2.323	100.9	107.1	110.4	111.3
Paper products	1.399	101.2	110.2	117.4	119.1
Apparel	1.142	100.1	103.1	105.2	108.0
Minor machinery and equipment	0.497	100.4	103.0	106.7	109.7
Miscellaneous products	0.833	100.6	103.1	108.4	114.4
Other services	11.051	101.0	105.1	110.5	115.5
Business services	3.845	101.1	105.6	111.4	117.3
Computer and data processing	1.992	101.8	108.6	116.7	123.8
Transportation and shipping	1.233	101.5	104.7	109.9	115.0
Telephone	0.987	99.7	99.3	100.3	101.8
Blood services	0.588	98.9	100.1	105.6	106.6
Postage	0.372	100.0	110.1	113.5	113.5
Other—labor intensive	1.233	100.6	104.0	107.8	111.8
Other—nonlabor intensive	0.800	101.1	105.2	110.3	116.5

¹Data sources used to estimate the input price index relative weights and choice of price proxies were taken from the *Federal Register* (1990).

²Category weights may not sum to total because of rounding.

NOTES: Data for 1987 through 1989 are historical. Data for 1990 are partly historical and partly forecasted. Index levels are based on fiscal year 1987 (ending 3rd quarter 1987) index = 100.

SOURCES: Health Care Financing Administration, Office of the Actuary; Data from the Office of National Health Statistics, Division of Health Cost Analysis. First quarter 1991 forecasts are made by Data Resources, Inc./McGraw-Hill.

Table 10
Calendar year percent change in the skilled nursing facility input price index,
by expense category: 1981-90

Expense category ¹	Base year weights 1977 ²	Calendar year									
		1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
Total	100.00	9.6	7.3	5.5	4.3	3.1	2.9	3.4	5.0	6.5	6.3
Wages and salaries	63.02	9.0	7.7	6.4	4.2	3.4	3.4	3.5	5.4	7.3	6.4
Employee benefits	7.60	10.7	9.9	6.6	3.9	1.3	4.0	3.0	5.1	4.3	5.8
Food	9.74	5.4	2.6	2.0	3.7	0.3	2.5	3.3	4.3	5.2	4.7
Direct purchase	4.93	3.1	1.1	1.8	3.5	-1.8	1.8	2.4	4.5	4.5	4.0
Contract service	4.81	7.8	4.0	2.2	3.8	2.2	3.2	4.2	4.1	5.8	5.3
Fuel and other energy	4.27	17.4	6.8	2.4	3.2	0.6	-8.0	-0.4	1.0	3.9	9.9
Electricity	1.21	15.0	9.9	3.2	6.4	3.5	1.5	-0.5	1.4	2.8	2.6
Natural gas	0.91	13.2	20.7	16.7	0.7	-0.6	-4.9	-4.6	-0.6	2.8	1.3
Fuel oil and coal	1.66	21.4	-1.1	-6.1	2.2	-1.8	-19.3	0.7	0.2	4.7	22.3
Water and sewerage maintenance	0.49	12.0	11.9	8.3	6.6	6.0	5.4	5.3	5.5	6.1	6.9
All other	15.37	11.4	7.7	4.3	5.3	4.8	4.1	4.7	4.9	5.6	6.1
Drugs	1.50	11.7	11.1	10.7	9.2	9.2	8.8	9.1	7.9	9.1	8.8
Supplies	3.28	10.3	6.1	3.2	4.3	3.5	1.9	3.7	4.1	4.8	5.6
Health services	1.21	11.0	9.4	7.7	7.0	5.8	7.2	7.4	7.2	7.3	7.4
Other business services	4.59	13.1	9.0	3.5	5.3	5.1	5.1	4.2	4.5	4.9	5.3
Miscellaneous	4.79	10.3	6.1	3.2	4.3	3.5	1.9	3.7	4.1	4.8	5.6

¹Data sources used to estimate the input price index relative weights and choice of price proxies were taken from the *Federal Register* (1987).

²Category weights may not sum to total because of rounding.

NOTES: Data for 1988 and 1989 are historical. Data for 1990 are partly historical and partly forecasted. The following is an example of how a percent change is calculated: Use the index levels shown in Tables 9, 11, and 13. Choose the calendar year period for which you would like to calculate the percent change (e.g., year-end 1990). Now, take the calendar year period previous to the period you want (e.g., year-end 1989). Finally, compute a percent change using the two periods. Fourth quarter 1990 forecast is used because of the unavailability of the first quarter 1991 forecast.

SOURCES: Health Care Financing Administration, Office of the Actuary; Data from the Office of National Health Statistics, Division of Health Cost Analysis. Fourth quarter 1990 forecasts are made by Data Resources, Inc./McGraw-Hill.

Table 11
Calendar year index levels in the skilled nursing facility input price index, by expense category: 1981-90

Expense category ¹	Calendar year										
	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	
Total	100.00	143.4	153.9	162.3	169.3	174.4	179.5	185.7	195.0	207.6	220.7
Wages and salaries	63.02	139.0	149.6	159.2	166.0	171.7	177.5	183.7	193.6	207.9	221.1
Employee benefits	7.60	147.2	161.9	172.6	179.3	181.8	189.1	194.8	204.8	213.6	225.9
Food	9.74	137.9	141.5	144.4	149.6	150.1	153.9	159.0	165.8	174.5	182.7
Direct purchase	4.93	133.7	135.2	137.6	142.5	139.9	142.5	145.9	152.4	159.2	165.6
Contract service	4.81	142.2	148.0	151.3	157.0	160.4	165.6	172.5	179.6	190.1	200.2
Fuel and other energy	4.27	188.6	201.4	206.2	212.9	214.1	196.9	196.0	196.0	205.7	226.1
Electricity	1.21	152.9	168.1	173.5	184.5	191.1	193.9	192.9	195.6	201.1	206.3
Natural gas	0.91	172.1	207.7	242.4	244.1	242.5	230.7	220.0	218.6	224.8	227.8
Fuel oil and coal	1.66	238.3	235.7	221.4	226.3	222.3	179.4	180.6	181.0	189.5	231.8
Water and sewerage maintenance	0.49	139.1	155.7	168.6	179.7	190.5	200.7	211.4	223.0	236.5	252.7
All other	15.37	150.5	162.2	169.2	178.1	186.7	194.2	203.4	213.5	225.4	239.1
Drugs	1.50	136.9	152.1	168.4	183.9	200.8	218.5	238.3	257.1	280.5	305.3
Supplies	3.28	150.0	159.2	164.3	171.4	177.5	180.8	187.5	195.1	204.5	216.0
Health services	1.21	145.2	159.8	171.1	183.0	193.6	207.6	222.9	238.9	256.5	275.5
Other business services	4.59	157.3	171.5	177.5	186.9	196.3	206.3	215.0	224.7	235.8	248.3
Miscellaneous	4.79	150.0	159.2	164.3	171.4	177.5	180.1	187.5	195.1	204.5	216.0

¹Data sources used to estimate the input price index relative weights and choice of price proxies were taken from the Federal Register (1987).

²Category weights may not sum to total because of rounding.

NOTES: Data for 1988 and 1989 are partly historical and partly forecasted. Fourth quarter 1990 forecast was used because of the unavailability of the first quarter 1991 forecast.

SOURCE: Health Care Financing Administration, Office of the Actuary; Data from the Office of National Health Statistics, Division of Health Cost Analysis. Fourth quarter 1990 forecasts are made by Data Resources, Inc./McGraw-Hill.

Table 12
Calendar year percent change in the home health agency input price index,
by expense category: 1981-90

Expense category ¹	Base year weights 1976 ²	Calendar year									
		1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
Total	100.00	11.9	10.0	6.5	5.0	4.5	3.4	4.6	6.0	6.1	5.3
Wages and salaries	65.14	12.3	11.2	7.4	5.3	5.2	4.0	5.1	6.8	6.7	5.2
Employee benefits	7.90	10.7	9.9	6.6	3.9	1.3	4.0	3.0	5.1	4.3	5.8
Transportation	4.87	12.1	4.1	2.4	4.4	2.6	-3.9	3.0	3.1	5.0	4.6
Office costs	2.79	13.1	9.0	3.5	5.2	5.1	5.1	4.2	4.5	4.9	5.3
Rent	1.35	8.7	7.6	5.8	5.2	6.1	5.8	4.1	3.8	3.9	3.9
Nonrental space occupancy	1.17	17.4	6.7	2.4	3.2	0.5	-8.2	-0.4	1.0	4.0	10.1
Medical and nursing supplies and equipment	2.81	9.3	9.3	6.2	4.6	4.4	4.9	4.0	3.6	5.8	5.3
Contract services	6.87	11.9	10.1	6.5	5.0	4.5	3.4	4.6	6.0	6.1	5.3
Miscellaneous	7.10	10.3	6.1	3.2	4.3	3.5	1.9	3.7	4.1	4.8	5.6

¹Data sources used to estimate the input price index relative weights and choice of price proxies were taken from the *Federal Register* (1988).

²Category weights may not sum to total because of rounding.

NOTES: Data for 1988 and 1989 are historical. Data for 1990 are partly historical and partly forecasted. Data for 1991 are forecasted. Fourth quarter 1990 forecast is used because of the unavailability of the first quarter 1991 forecast.

SOURCE: Health Care Financing Administration, Office of the Actuary: Data from the Office of National Health Statistics, Division of Health Cost Analysis. Forecasts are made by Data Resources, Inc./McGraw-Hill.

Table 13

Calendar year index levels in the home health agency input price index, by expense category: 1981-90

Expense category ¹	Base year weights 1976 ²	Calendar year									
		1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
Total	100.00	158.4	174.3	185.7	195.0	203.9	210.7	220.4	233.7	248.0	261.3
Wages and salaries	65.14	156.4	173.8	186.8	196.7	207.0	215.2	226.3	241.7	257.7	271.3
Employee benefits	7.90	163.5	179.7	191.6	199.1	201.8	210.0	216.3	227.4	237.1	250.9
Transportation	4.87	169.1	176.1	180.3	188.3	193.3	195.8	191.4	197.3	207.1	216.7
Office costs	2.79	169.4	184.7	191.2	201.2	211.4	222.1	231.5	242.0	254.0	267.4
Rent	1.35	143.8	154.8	163.7	172.2	182.8	193.4	201.4	209.1	217.2	225.8
Nonrental space occupancy	1.17	212.6	226.9	232.4	239.8	241.1	221.4	220.5	222.8	231.6	255.0
Medical and nursing supplies and equipment	2.81	142.8	156.2	165.9	173.6	181.2	190.0	197.5	204.7	216.6	228.1
Contract services	6.87	158.3	174.3	185.7	195.0	203.9	210.7	220.5	233.8	248.1	261.3
Miscellaneous	7.10	159.8	169.6	175.0	182.5	189.0	192.6	199.7	207.8	217.8	230.1

¹Data sources used to estimate the input price index relative weights and choice of price proxies were taken from the Federal Register (1988).

²Category weights may not sum to total because of rounding.

NOTES: Data for 1988 and 1989 are historical, data for 1990 are partly historical and partly forecasted. The following is an example of how a percent change is calculated: Use the index levels shown in Tables 9, 11, and 13. Choose the calendar year period for which you would like to calculate the percent change (e.g., year-end 1989). Now, take the calendar year period previous to the period you want (e.g., year-end 1988). Finally, compute a percent change using the two periods. Fourth quarter 1989 forecast is used because of the unavailability of the first quarter 1991 forecast.

SOURCE: Health Care Financing Administration, Office of the Actuary, Data from the Office of National Health Statistics, Division of Health Cost Analysis. Forecasts are made by Data Resources, Inc./McGraw-Hill.

Figure 6

Percent change in prospective payment system hospital input price index, Consumer Price Index, and average hourly earnings: 1988-90

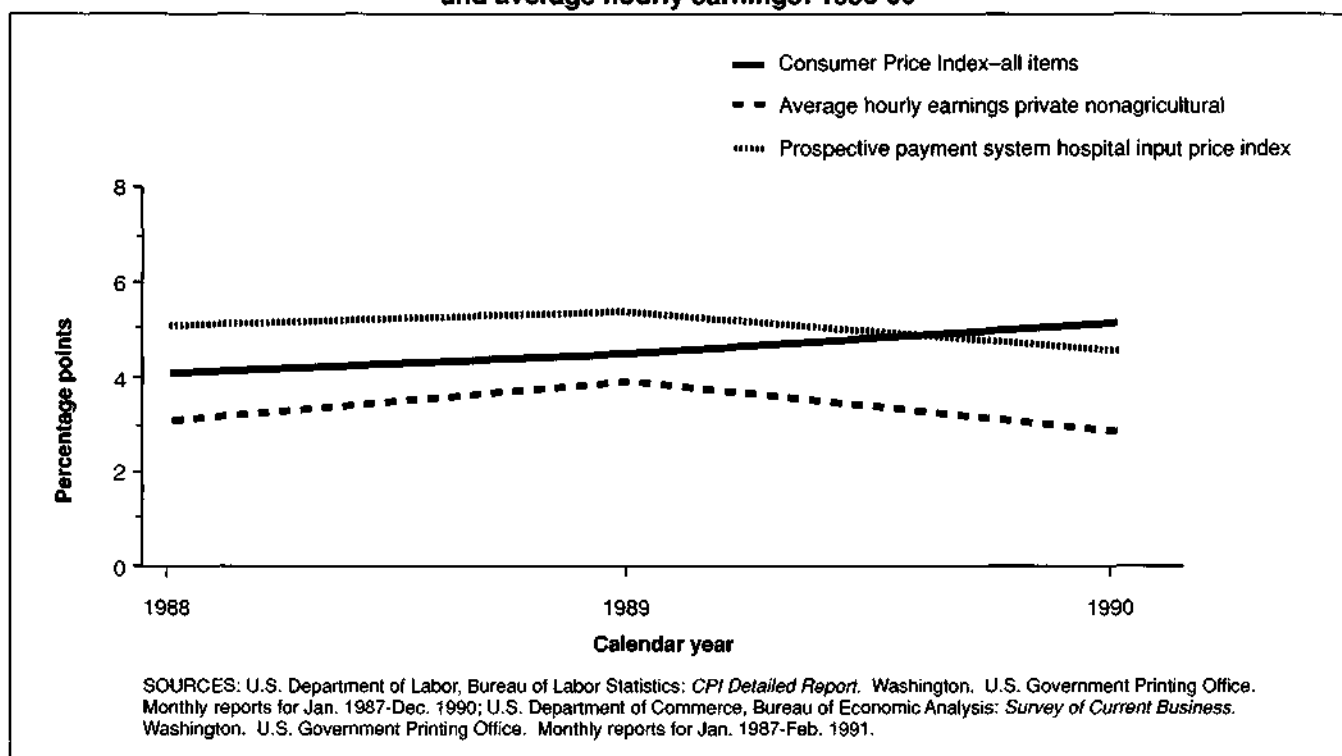


Table 14

Yearly index levels of wages and salaries of licensed practical nurses in comparison with hourly earnings of private hospital workers and professional-technical occupations: 1980-90

Year	Licensed practical nurses		AHE ¹	ECI ²
	Starting rate	Maximum rate	Private hospital workers	Professional and technical occupations in private industry
1980	100.0	100.0	100.0	100.0
1981	111.2	113.6	112.1	110.1
1982	121.7	122.9	125.1	120.5
1983	125.2	130.2	135.4	127.7
1984	129.6	131.7	142.4	136.4
1985	132.9	139.2	150.1	141.7
1986	139.7	144.9	155.9	147.6
1987	141.9	148.6	163.6	153.3
1988	149.2	155.7	174.8	160.7
1989	156.3	173.6	185.9	167.7
1990	161.2	181.9	196.0	175.7

¹Data for average hourly earnings (AHE) were from the second quarter of each year.

²Data for changes in the Employment Cost Index (ECI) for wages and salaries were from the second quarter of each year. ECI data are collected for the pay period including the 12th day of the survey month of June, which is consistent with survey information from the University of Texas Medical Branch, reflecting salaries as of July 1 of each respective survey year.

SOURCES: (University of Texas Medical Branch at Galveston, 1980-90); U.S. Department of Labor, Bureau of Labor Statistics: *Employment and Earnings* monthly reports for Jan 1980-Dec. 1990 and *Employment Cost Indexes and Levels, 1975-90*, Bulletin 2372, Oct. 1990. Washington. U.S. Government Printing Office.

Figure 7

Cumulative growth of wages and salaries for hospital licensed practical nurses (LPNs), all hospital workers, and professional and technical occupations during the 1980s

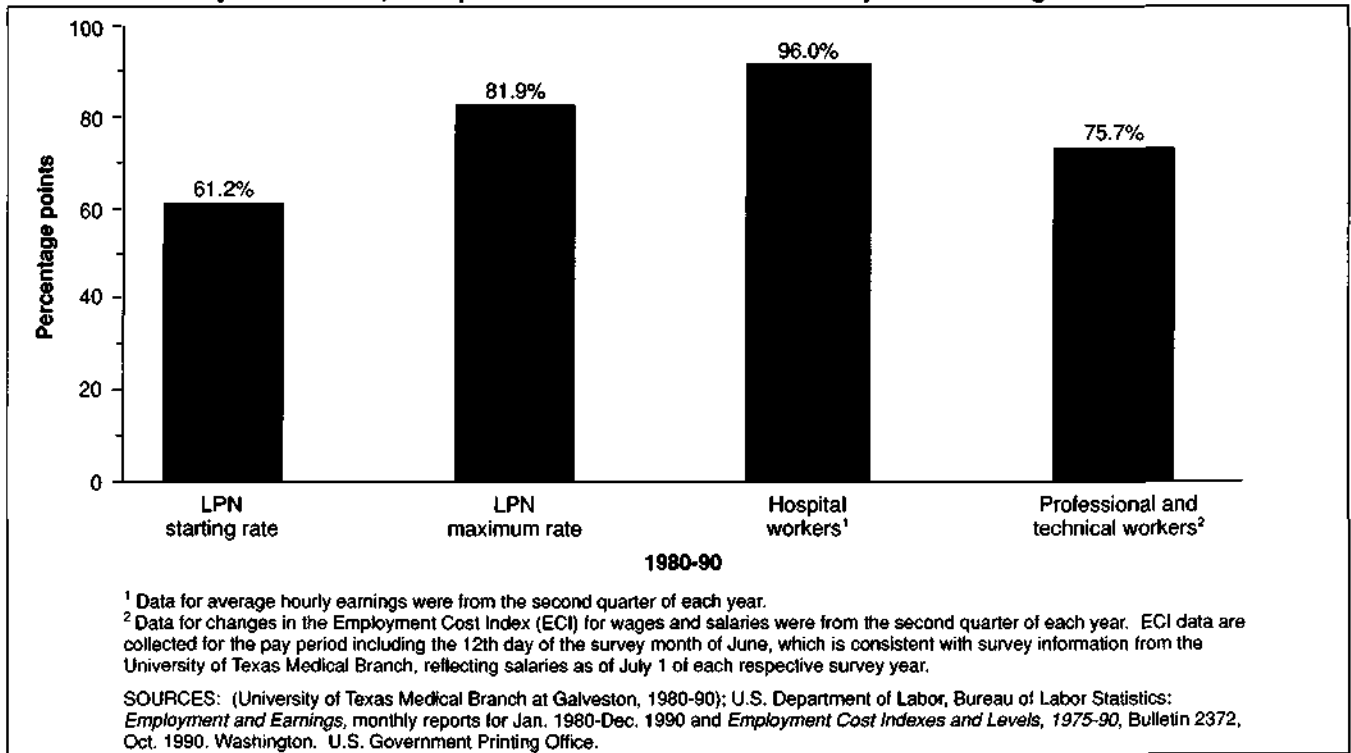


Table 15

Percent change of wages and salaries of licensed practical nurses in comparison to hourly earnings of private hospital workers and professional-technical employees: 1980-90

Year	Licensed practical nurses		AHE ¹	ECI ²	
	Starting rate	Maximum rate	Private hospital workers	Private hospital workers	Professional and technical workers in private industry
1980	—	—	—	—	—
1981	11.2	13.6	12.1	—	10.1
1982	9.4	8.2	11.6	—	9.4
1983	2.9	5.9	8.3	—	6.0
1984	3.5	1.2	5.1	—	6.8
1985	2.6	5.7	5.4	—	3.9
1986	5.1	4.1	3.9	—	4.1
1987	1.6	2.5	4.9	4.8	3.9
1988	5.1	4.8	6.9	5.9	4.8
1989	4.8	11.5	6.3	6.9	4.3
1990	3.1	4.8	5.4	6.2	4.8

¹Data for average hourly earnings (AHE) were from the second quarter of each year.

²Data for changes in the Employment Cost Index (ECI) for wages and salaries were from the second quarter of each year. ECI data are collected for the pay period including the 12th day of the survey month of June, which is consistent with survey information from the University of Texas Medical Branch, reflecting salaries as of July 1 of each respective survey year.

SOURCES: (University of Texas Medical Branch at Galveston, 1980-90); U.S. Department of Labor, Bureau of Labor Statistics: *Employment and Earnings* monthly reports for Jan. 1980-Dec. 1990 and *Employment Cost Indexes and Levels*, 1975-90, Bulletin 2372, Oct. 1990. Washington. U.S. Government Printing Office.

Table 16

Selected national economic indicators: 1981-90

Indicator	Calendar year												
	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1990	1990	1990
										Q1	Q2	Q3	Q4
Gross national product													
Billions of dollars	\$3,053	\$3,166	\$3,406	\$3,772	\$4,015	\$4,232	\$4,516	\$4,874	\$5,201	\$5,464	\$5,443	\$5,515	\$5,521
Billions of 1982 dollars	\$3,249	\$3,166	\$3,279	\$3,501	\$3,619	\$3,718	\$3,845	\$4,017	\$4,118	\$4,156	\$4,155	\$4,173	\$4,150
Implicit price deflator (1982 = 100.0)	93.9	100.0	103.9	107.8	111.0	113.8	117.4	121.3	126.3	131.5	131.0	132.3	133.1
Employment, hours, and earnings													
Unemployment rate, all workers	7.6	9.7	9.6	7.5	7.2	7.0	6.2	5.5	5.3	5.5	5.3	5.6	5.9
Private nonagricultural workers:													
Total employment in thousands	NA	73,729	74,330	78,472	81,125	82,832	85,190	88,150	90,644	92,031	92,272	93,011	92,403
Average weekly hours	NA	34.8	35.0	35.2	34.9	34.8	34.8	34.7	34.6	34.5	34.5	34.8	34.4
Average hourly earnings	NA	\$7.68	\$8.02	\$8.32	\$8.57	\$8.76	\$8.98	\$9.28	\$9.66	\$10.03	\$9.97	\$10.05	\$10.18
Health services workers:													
Total employment in thousands	NA	5,812	5,988	6,122	6,299	6,536	6,805	7,121	7,551	8,114	8,041	8,209	8,336
Average weekly hours	NA	33.0	32.6	32.5	32.5	32.4	32.3	32.4	32.5	32.6	32.5	32.8	32.6
Average hourly earnings	NA	\$6.92	\$7.39	\$7.71	\$8.06	\$8.35	\$8.70	\$9.21	\$9.83	\$10.41	\$10.31	\$10.47	\$10.62
Personal income and savings													
Income in billions	\$2,521	\$2,671	\$2,839	\$3,109	\$3,325	\$3,526	\$3,766	\$4,071	\$4,384	\$4,645	\$4,622	\$4,679	\$4,717
Disposable income in billions	\$2,128	\$2,261	\$2,428	\$2,669	\$2,839	\$3,013	\$3,195	\$3,479	\$3,726	\$3,946	\$3,926	\$3,969	\$4,000
Savings in billions	\$159	\$154	\$131	\$164	\$125	\$125	\$93	\$146	\$172	\$178	\$195	\$167	\$161
Personal savings rate	7.5	6.8	5.4	6.2	4.5	4.2	2.9	4.2	4.6	4.5	5.0	4.2	4.0
Price¹													
Gross national product fixed-weight price index (1982 = 100.0)	94.2	100.0	104.1	108.2	111.9	114.9	118.9	123.9	129.5	135.4	134.6	136.0	137.5
Consumer Price Index, all items													
All items less medical care	90.9	96.5	99.6	103.9	107.6	109.6	113.6	118.3	124.0	130.7	129.3	131.6	133.7
Apparel and upkeep	91.4	96.8	99.6	103.7	107.2	108.8	112.6	117.0	122.4	128.8	127.5	129.6	131.7
Energy	95.3	97.8	100.2	102.0	105.0	105.9	110.6	115.4	118.6	124.1	125.2	123.3	127.1
Food and beverages	97.7	99.1	99.9	100.9	101.6	88.2	88.6	89.2	94.3	102.1	97.3	103.8	110.8
Housing: shelter	93.5	97.3	99.5	103.2	105.6	109.1	113.5	118.2	124.9	132.1	130.7	132.7	133.7
Medical care	90.5	96.9	99.1	104.0	109.8	115.8	121.2	127.1	132.8	140.0	138.6	141.9	142.5
Medical care	82.9	92.5	100.6	106.9	113.5	122.0	130.1	138.6	149.3	162.8	160.8	164.8	168.2
Producer Price Index,² finished consumer goods													
	96.6	100.0	101.3	103.3	103.9	101.4	103.6	106.2	112.1	118.2	116.3	118.4	121.9

¹Base period = 1982-84, unless noted.

²Formerly called the "Wholesale Price Index."

NOTES: Q designates quarter of year. Quarterly data are not seasonally adjusted. NA designates not available.

SOURCES: U.S. Department of Commerce, Bureau of Economic Analysis; Survey of Current Business, Washington, U.S. Government Printing Office, Monthly reports for Jan. 1981-Feb. 1991; U.S. Department of Labor, Bureau of Labor Statistics; Employment and Earnings, Washington, U.S. Government Printing Office, Monthly reports for Jan. 1981-Dec. 1990.

Table 17
Percent change in selected national economic indicators: 1981-90

Indicator	Calendar year										Percent change from the same period of previous year			
	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990				
Annual percent change														
Gross national product	11.7	3.7	7.6	10.8	6.4	5.4	6.7	7.9	6.7	5.1	5.4	5.2	5.3	4.4
Billions of dollars	1.9	-2.5	3.6	6.8	3.4	2.7	3.4	4.5	2.5	0.9	1.3	1.0	1.1	0.4
Billions of 1982 dollars	9.6	6.5	3.8	3.8	3.0	2.6	3.1	3.3	4.1	4.1	3.9	4.1	4.3	4.0
Implicit price deflator														
Employment, hours, and earnings	0.4	2.1	-0.1	-2.1	-0.3	-0.2	-0.8	-0.7	-0.2	0.2	0.1	0.0	0.3	0.6
Unemployment rate, all workers ²														
Private nonagricultural workers:														
Total employment	NA	NA	0.8	5.6	3.4	2.1	2.8	3.5	2.8	1.5	2.1	1.8	1.6	0.6
Average weekly hours	NA	NA	0.5	0.5	-0.7	-0.5	0.1	-0.2	-0.3	-0.4	-0.3	-0.3	-0.3	-0.6
Average hourly earnings	NA	NA	4.4	3.6	3.1	2.2	2.5	3.3	4.1	3.8	3.8	4.0	3.9	3.6
Health services workers:														
Total employment	NA	NA	3.0	2.2	2.9	3.8	4.1	4.6	6.0	7.5	7.0	7.4	7.7	7.8
Average weekly hours	NA	NA	-1.1	-0.4	0.0	-0.2	-0.1	0.2	0.1	0.3	0.0	0.3	0.6	0.3
Average hourly earnings	NA	NA	6.8	4.3	4.5	3.6	4.1	6.0	6.6	6.0	6.4	6.4	5.8	5.4
Personal income and savings														
Income	11.6	5.9	6.3	9.5	7.0	6.0	6.8	8.1	7.7	5.9	6.1	5.9	6.3	5.5
Disposable income	10.9	6.3	7.4	9.9	6.4	6.2	6.0	8.9	7.1	5.9	6.2	6.2	6.0	5.3
Savings	16.5	-3.4	-15.2	25.7	-23.6	-0.4	-25.9	57.4	18.0	3.8	0.8	15.5	7.7	-7.8
Personal savings rate ¹	0.3	-0.7	-1.4	0.8	-1.7	-0.3	-1.3	1.3	0.4	-0.1	-0.3	0.4	0.1	-0.6
Prices ²														
Gross national product fixed-weight price index (1982 = 100.0)	9.3	6.2	4.1	3.9	3.4	2.7	3.5	4.2	4.5	4.6	4.5	4.3	4.6	4.8
Consumer Price Index, all items	10.3	6.1	3.2	4.3	3.5	1.9	3.7	4.1	4.8	5.4	5.2	4.6	5.5	6.2
All items less medical care	10.3	5.9	2.9	4.1	3.4	1.6	3.4	3.9	4.6	5.2	5.0	4.3	5.3	6.0
Apparel and upkeep	4.8	2.6	2.5	1.8	2.9	0.8	4.4	4.3	2.8	4.6	3.6	4.6	5.7	4.7
Energy	13.6	1.5	0.8	1.0	0.7	-13.2	0.4	0.8	5.7	8.2	8.0	0.2	6.8	18.3
Food and beverages	7.8	4.1	2.2	3.8	2.3	3.3	4.1	4.1	5.7	5.8	6.5	5.4	5.6	5.5
Housing: shelter	11.7	7.1	2.3	4.9	5.6	5.5	4.7	4.8	4.5	5.4	5.0	5.2	6.0	5.4
Medical care	10.8	11.6	8.7	6.2	6.2	7.5	6.6	6.5	7.7	9.1	8.5	9.0	9.3	9.5
Producer price index, ³ finished consumer goods	9.0	3.5	1.3	2.0	0.6	-2.4	2.2	2.5	5.6	5.4	5.7	3.2	5.4	7.4

¹Change in rate, rather than percent change.

²Base period = 1982-84, unless noted.

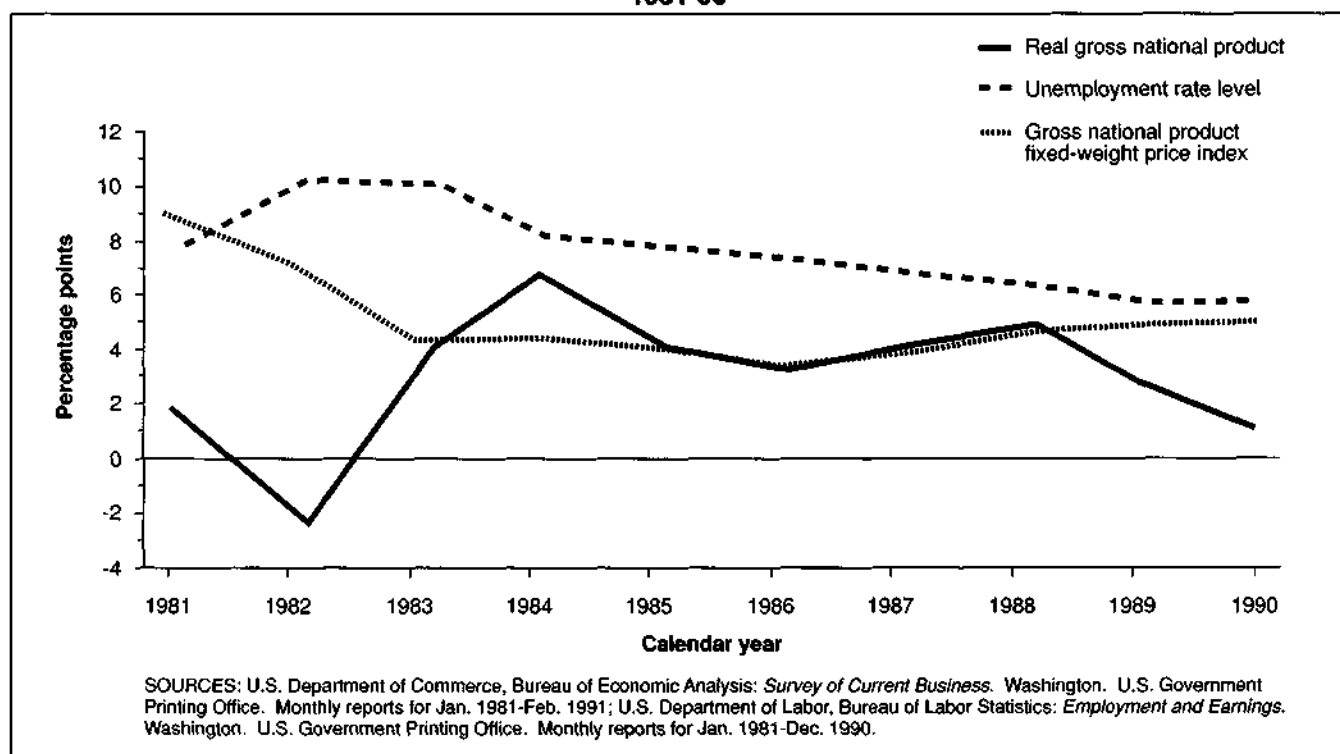
³Formerly called the "Wholesale Price Index."

NOTES: Q designates quarter of year. NA designates not available.

SOURCES: U.S. Department of Commerce, Bureau of Economic Analysis: Survey of Current Business. Washington. U.S. Government Printing Office. Monthly reports for Jan. 1981-Feb. 1991; U.S. Department of Labor, Bureau of Labor Statistics: Employment and Earnings. Washington. U.S. Government Printing Office. Monthly reports for Jan. 1981-Dec. 1990.

Figure 8

Percent change in indicators of national economic activity from the same period of previous year: 1981-90



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