Occupational Pay in Private Goods- and Service-Producing Industries

BY ROBERT W. VAN GIEZEN

Pay advantages generally vary by occupational group—white-collar positions tend to be higher paying in goods-producing industries, while blue-collar jobs are the higher paid ones in service-producing industries. However, the pay advantage in the service-producing sector masks the wide dispersion between the high earnings of workers in transportation and utilities establishments and the low earnings in retail trade and service outlets.

This article focuses on the earnings differences between the two sectors and the differences in earnings within the sectors.

This article and the following one,"Occupational Pay Across Regions in 1994" by John Buckley, focus on selected occupational pay data available from the Bureau's Occupational Compensation Survey Program (OCSP). A primary goal of the program is to produce detailed locality pay data for selected occupations. Regional and national data are obtained by sampling 90 metropolitan and 70 nonmetropolitan areas. Each year the OCSP produces a national summary bulletin that contains extensive tabular data from the surveys. The summary articles presented here highlight aspects of the surveys not treated in the national summary. Robert Van Giezen's article compares pay in goods-producing industries to that in service-producing industries. John Buckley discusses pay differences among the Nation's four regions for selected high-incidence jobs.

For a more complete discussion of the scope of the OCSP and the occupational definitions used in the survey, see *Occupational Compensation Survey: National Summary, 1994,* Bulletin 2479, Bureau of Labor Statistics, June 1996.

-Editor's Note-

Introduction

The private sector of the economy comprises the goods-producing and the service-producing sectors. The goods-producing sector consists of three major industries—mining, construction, and manufacturing. Within manufacturing are two major subcategories: durable goods and nondurable goods manufacturing. Durable goods manufacturers produce such items as furniture, machinery, and transportation equipment. Examples of nondurable manufacturing include food and tobacco products, textiles and apparel, and paper and petroleum products. The service-producing sector consists of transportation and utilities; wholesale trade; retail trade; finance, insurance, and real estate; and services. Within the service-producing sector are such diverse industries as railroads, banks, schools, and hospitals.

Employment and pay trends

The American economy has undergone major changes over the past half century, evolving from one dominated by manufacturing to one dominated by service-producing industries. Data from the Bureau's payroll series shed light on these changes.

In 1945, a little over half of the 34 million employees on nonfarm payrolls in private industry were employed in goods-producing industries, with nearly 90 percent of

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them working in manufacturing.[1] By 1994, only 1 in 4 of the nearly 95 million private sector workers were employed in goods-producing industries, the manufacturing component of which had declined to a little over three-fourths of the sector's employment. In contrast, the service-producing sector underwent dramatic growth over the last several decades and by 1994 accounted for three-fourths of the workers in private industry. Growth has been especially strong in the retail trade; finance, insurance, and real estate; and service industries. Workers in service industries account for one-third of the private economy's workers compared with one-eighth in 1945.

Average hourly earnings for all private sector production or nonsupervisory workers in 1964 was $2.36 and ranged from a low of $1.75 in retail trade to a high of $3.55 in construction. Average hourly earnings in 1994 had risen to $12.68 for nonsupervisory workers in goods-producing industries, 20 percent higher than the average hourly pay of $10.48 received by workers in service-producing industries. Average hourly pay for workers in service-producing industries ranged from $7.49 in retail trade to $13.66 in transportation and utilities.[2]

In the last 30 years, the pay relationships between goods- and service-producing occupations also have changed. Relative earnings for construction and retail trade dropped between 1964 and 1994. For example, in 1994, retail trade workers earned 67 percent of the average pay of all private sector workers, a drop from the 74-percent level in 1964. (See chart 1.) The earnings advantage of construction workers dropped from 50 percent to 32 percent above all private workers for the same period. Relative earnings for other industry divisions increased. This was especially true for service workers whose pay disadvantage rose from 18 percent below to 1 percent below the average for all private sector workers.

Current employment levels

Employment data from the Bureau's Occupational Compensation Survey Program (OCSP) show similar patterns.[3] In 1994, private sector establishments covered by the survey included nearly 50 million workers, of whom approximately 16 million were in goods-producing and 34 million in service-producing industries. Although goods-producing industries account for about 32 percent of total employment, the higher proportion of workers in these industries recorded by OCSP is due to the lower proportion of these workers in smaller establishments excluded from the OCSP. (See chart 2.)

There are major differences in the composition between goods- and service-producing industries within individual area economies which heavily influence pay levels. Among the largest 10 metropolitan areas, the proportion of goods- to service-producing industry employment varies widely. The area with the highest proportion of employment in goods-producing industries is Detroit with 37 percent, where nearly all employees are in manufacturing. The area with the largest percentage of private industry workers in service-producing industries is Washington, with over 90 percent. The average percentage of the work force in service-producing industries was 77.5 percent in the 10 largest metropolitan areas.

Pay differences between goods- and service-producing industries

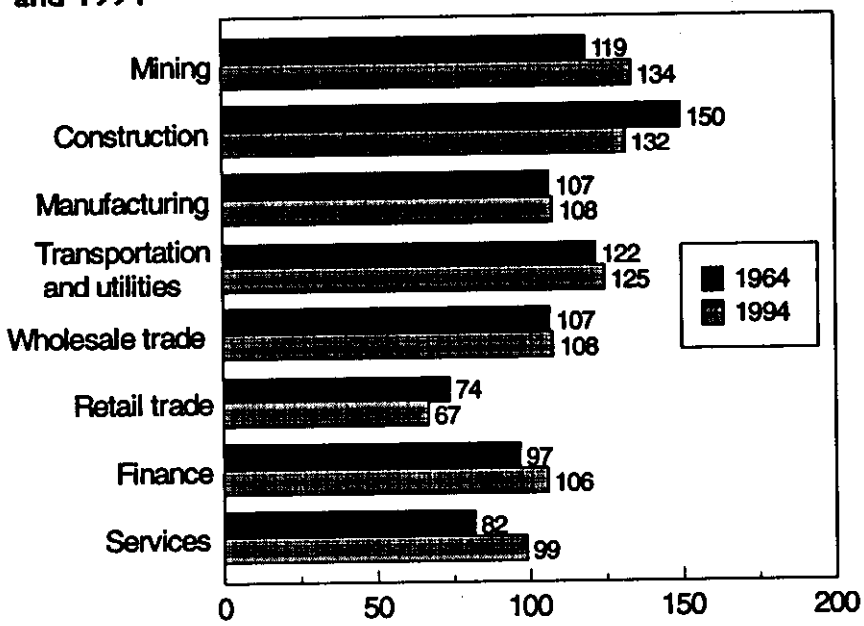
Surveys of occupational pay are conducted in 160 different localities. Data from these areas are sampled to represent the United States, excluding Alaska and Hawaii. To facilitate pay comparisons, the Bureau developed measures of relative pay for broad occupational groups. These measures, or pay relatives, express pay levels as a percent of the national pay level. Pay relatives are computed by dividing pay for an occupational group in a particular industry by the corresponding national pay level and multiplying by 100. For example, a pay relative of 105 indicates that pay rates in the industry averaged five percent above national pay levels.

Pay differences between goods- and service-producing industries vary by occupational group. (See table 1.) In goods-producing industries, white-collar administrative and clerical workers enjoyed a pay advantage of 3 and 4 percentage points, respectively, over their counterparts in service industries. While earning levels for professional workers were nearly identical in goods- and service-producing industries, technical workers averaged a 4-percent pay advantage in the service-producing sector. Among blue-collar occupational groups, service-producing industries were higher paid in general, with material movement occupations enjoying a 6-percentage point advantage and maintenance workers enjoying a 7-point advantage.

Differences also were found among specific professional and administrative occupations. Earnings were generally higher in goods-producing industries for white-collar professional, administrative, and clerical occupations. (See table 2.) However, for the job with the greatest number of workers, engineer, level IV, there was a small pay advantage to workers in service-producing industries. (See box in the following article regarding survey occupations and work levels.)

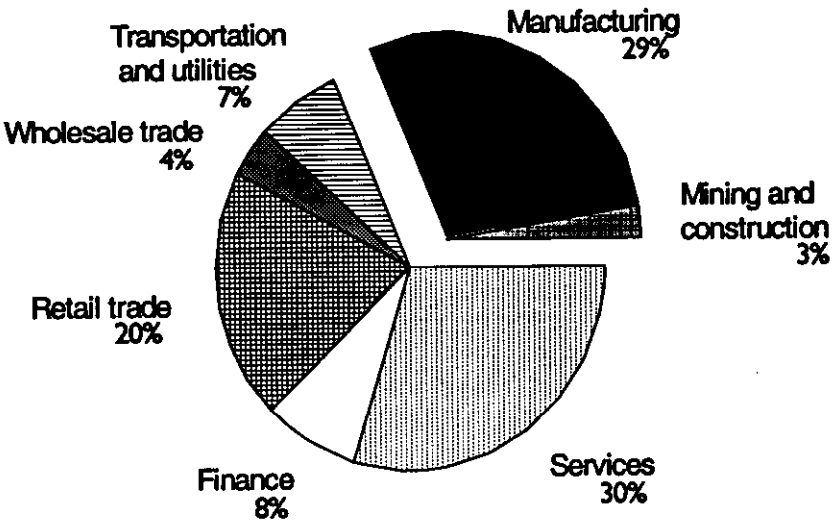
Among the blue-collar occupations, the pay advantage of service-producing workers described above is generally consistent with that described for the maintenance and material groups described above. (See table 3.) For general maintenance workers, however, employees in goods-producing industries enjoy a 10-percent pay advantage over

Chart 1. Relative earnings of private sector production or nonsupervisory workers by industry division, 1964 and 1994



(All private industry = 100 percent)

Chart 2. Workers covered by the Occupational Compensation Survey program by private industry division, September 1994



(All private industry = 100 percent)

their service-producing counterparts. This pay advantage is caused by differences in the distribution of workers in this job compared to that of most other maintenance occupations. The relatively high-paying transportation and utilities industry employed over half of maintenance workers in the occupations shown in table 3 with one exception—less than 3 percent of general maintenance workers were employed in transportation and utilities.

There was a dramatic difference, however, in the earnings of janitors and guards, level I, in the goods- versus service-producing industries. Janitors in goods-producing establishments enjoyed a nearly 50-percent pay advantage, and guards, level I, nearly a 40-percent advantage over comparable workers in service-producing industries. This is in striking contrast to the pay advantage of other blue-collar workers found overall in the service-producing sector.

Pay differences within goods-producing industries

Earnings were 2 percent higher in the construction industry for professional workers, the only occupational group for which a comparison was available, than they were for such workers elsewhere within the goods-producing sector. Pay relatives for occupational groups studied separately within manufacturing industries were relatively uniform, ranging from 3 percent below to 3 percent above the national average. (See table 1.) Earnings were higher in nondurable industries for professional, administrative, and technical workers. For clerical and maintenance workers, earnings were higher in durable manufacturing industries.

Pay differences within service-producing industries

Comparisons of earnings differentials between goods- and service-producing industries often mask differences within these major industries. And, those within service-producing industries were larger than those between the goods-producing and service-producing sectors. (See table 1.) Pay relatives in transportation and utilities were the highest of all occupational groups studied. The earnings advantage enjoyed by transportation and utilities workers ranged from 4 percent for the professional workers to 34 percent for material movement occupations. Earnings advantages were 8 percent for administrative workers, 13 percent for the technical workers, 17 percent for clerical workers, and 26 percent for maintenance workers. Pay relatives were lowest in the services industries for blue-collar and technical workers; for administrative and clerical workers, earnings were lowest in retail trade.

Conclusion

Workers in goods-producing industries generally enjoyed a pay advantage in white-collar occupations while earnings for blue-collar jobs were higher in service-producing industries. Most workers in goods-producing industries were employed in manufacturing. The pay advantage enjoyed by workers in service-producing industries masked the wide dispersion between the high earnings of workers in transportation and utilities and the low earnings in retail trade and services. Service-producing occupations which enjoyed a pay advantage generally were dominated by workers in transportation and utilities. Pay in service-producing industries was lower where employment in retail trade and services was predominant.

—ENDNOTES—

[1] *Employment and Earnings*, June 1995, page 69.

[2] *Employment and Earnings*, June 1995, pages 69-72.

[3] The survey excludes establishments with fewer than 50 workers, the Federal Government, and private households. Alaska and Hawaii are also excluded.

Table 1. Pay relatives for occupational groups, private industry, United States, 1994

Industry Division	Occupational group					
	Professional	Administrative	Technical	Clerical	Maintenance	Material Movement
Private industry	100	100	100	100	100	100
Goods producing	100	102	99	103	99	96
Construction	102	-	-	-	-	-
Manufacturing	100	101	99	103	99	96
Durable goods	99	100	99	103	99	97
Nondurable goods	103	103	101	102	96	97
Service producing	100	99	103	99	106	102
Transportation and utilities	103	105	113	109	115	110
Wholesale trade	99	100	-	100	91	97
Retail trade	-	97	-	93	-	96
Finance, insurance, and real estate	-	98	-	98	-	-
Services	99	99	100	98	91	82

NOTE: Dashes indicate that data did not meet publication criteria. For each occupational group, average pay level for private industry in the United States = 100.

Table 2. Average weekly earnings and relative1 pay levels of selected professional, administrative, technical, and clerical occupations, private industry, goods-producing and service-producing industries, September 1994

Occupation and levels	Private industry	Goods-producing	Service-producing
	Professional		
Accountant III	$ 774	$ 786 (102)	$ 763 (99)
Attorney III	1368	1474 (108)	1343 (98)
Engineer IV	1099	1094 (100)	1113 (101)
	Administrative		
Buyer II	647	647 (100)	644 (100)
Computer programmer II	624	643 (103)	617 (99)
Computer system analyst II	892	912 (102)	886 (98)
Personnel specialist III	765	787 (103)	751 (98)
	Technical		
Computer operator II	434	445 (103)	431 (99)
Drafter II	479	464 (97)	506 (106)
Engineering technician IV	739	731 (99)	760 (103)
	Clerical		
Accounting clerk II	359	363 (101)	358 (100)
General clerk II	314	313 (100)	315 (100)
Order clerk I	328	365 (111)	312 (95)
Key entry operator I	317	323 (102)	316 (100)
Secretary III	538	556 (103)	529 (95)
Switchboard operator-Receptionist	338	342 (101)	336 (99)
Word processor II	451	465 (103)	449 (100)

[1] Relative pay levels, shown in parentheses, indicate the relative pay of goods-producing and service-producing industries as a percent of all industry pay in the United States. For example, average pay for accountant III in goods-producing industries is 2 percent higher than the nationwide average for the job.

Table 3. Average weekly earnings and relative[1] pay levels of selected blue-collar occupations, private industry, goods-producing and service-producing industries, September 1994

Occupation	Private industry	Goods-producing	Service-producing
	Maintenance		
General maintenance worker	$10.16	$10.84 (107)	$ 9.86 (97)
Maintenance electrician	17.73	17.63 (99)	18.19 (103)
Maintenance electronics technician II	17.52	16.75 (96)	17.92 (102)
Maintenance machinist	16.58	16.12 (97)	19.62 (118)
Maintenance mechanic, machinery	16.26	15.87 (98)	18.95 (117)
Maintenance mechanic motor vehicle	15.33	14.71 (96)	15.58 (102)
Maintenance pipefitter	18.94	19.11 (101)	17.46 (92)
	Material Movement		
Forklift operator	$10.48	10.36 (99)	$11.02 (105)
Material handling laborer	9.18	9.30 (101)	9.06 (99)
Order fillers	9.24	9.06 (98)	9.32 (101)
Shipping/receiving clerk	10.13	10.32 (102)	9.86 (97)
Truckdriver, tractor-trailer	13.69	12.25 (89)	14.22 (104)
Warehouse specialist	12.01	11.45 (95)	12.35 (103)
	Service		
Guard I	6.62	9.04 (137)	6.47 (98)
Janitor	7.17	10.31 (144)	6.79 (95)

[1] Relative pay levels, shown in parenthesis, indicate the relative pay of goods-producing and service-producing industries as a percent of all industry pay in the United States. For example, average pay for general maintenance worker in goods-producing industries is 7 percent higher than the nationwide average for the job.