

## D. A Comparison of Occupational Employment and Wages in Metropolitan Areas and Nonmetropolitan Areas

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Less than 20 percent of all people work in nonmetropolitan areas in the United States, and their average hourly wage is over \$3 less than that of people in metropolitan areas. However, by occupation, the concentration of workers and their wages in nonmetropolitan areas vary considerably from the national averages. Overall average salaries are higher in metropolitan areas than in nonmetropolitan areas, but there are some exceptions. While most jobs are more likely to be located in metropolitan areas, some jobs are more likely to be found in nonmetropolitan areas. This article explores the difference in occupational wages and employment in metropolitan areas and nonmetropolitan areas.

### Wages

Occupations in metropolitan areas commonly have a higher mean wage. In fact, the mean wage across all occupations in metropolitan areas is \$18.38, whereas the mean wage across occupations in nonmetropolitan areas is \$14.30. Out of the 801 detailed occupations in the OES survey, 658 had a higher wage in metropolitan areas, 17 a higher wage in nonmetropolitan areas. The remaining 126 were not significantly different. Of the 658 detailed occupations with a higher wage in metropolitan areas, the difference ranged from \$0.14 to \$34.70. In four occupational groups, every single detailed occupation had a higher mean wage in metropolitan areas: legal occupations, healthcare support occupations, food preparation and serving related occupations, and building and grounds maintenance occupations. Table D1 shows the detailed occupations with the highest percentage of wage premium for workers in metropolitan areas.

Twelve of the 17 detailed occupations with a higher mean wage in nonmetropolitan areas were found in 4 occupational groups: four of the 12 were healthcare practitioner and technical occupations, 4 were production occupations, 2 were transportation and material moving occupations, and 2 were

construction and extraction occupations. Of the 17 detailed occupations with a higher wage in nonmetropolitan areas, the difference ranged from \$0.53 to \$11.12. These occupations are shown in table D2.

### Employment

The nationwide concentration of workers in metropolitan areas can be found throughout most types of occupations. Each one of the 22 major occupational groups had more employment in metropolitan areas than rural areas, ranging from a low of 68.5 percent of farming and fishing workers to a high of 95 percentage of computer and mathematical workers being located in metropolitan areas. At the detailed occupational level, 770 of the 801 occupations had a higher percent of employment in metropolitan areas. The occupations with the highest concentration of workers in metropolitan areas are shown in table D3.

Although most of the detailed occupations follow the trend of higher employment in metropolitan areas, there are still some exceptions. For example, 82 percent of mining roof bolters were found in nonmetropolitan areas, while only 18 percent were found in metropolitan areas. The 20 occupations with more employment in nonmetropolitan areas are shown in chart D1, along with their shares of employment in both metropolitan areas and nonmetropolitan areas.

Another way to compare employment in metropolitan and nonmetropolitan areas is to compare the distribution of employment among the occupational groups. For example, office and administrative support occupations make up 18.2 percent of all metropolitan employment, but only 15.2 percent of nonmetropolitan employment. Conversely, 12 percent of nonmetropolitan area workers are production workers, while only 7.2 percent of metropolitan area workers are in this group. Chart D2 shows the proportion of workers in each occupational group in metropolitan areas and nonmetropolitan areas.

### Relationship between wages and employment concentration

Production occupations and transportation and material moving occupations were two of the three occupational

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Table D1. Occupations with the largest percent wage premiums in metropolitan areas, May 2004

Occupation	Metropolitan mean wage	Nonmetropolitan mean wage	Difference	Percent difference
Airline pilots, copilots, and flight engineers .....	\$131,270	\$59,090	\$72,180	122
Broadcast news analysts .....	29.04	13.78	15.26	111
Makeup artists, theatrical and performance .....	15.91	7.96	7.95	100
Prosthodontists .....	70.83	37.32	33.51	90
Political scientists .....	41.45	22.40	19.05	85
Producers and directors .....	35.49	19.37	16.12	83
Actors .....	22.83	13.36	9.47	71
Radio and television announcers .....	16.74	9.81	6.93	71
Astronomers .....	48.13	28.66	19.47	68
Fashion designers .....	31.38	18.90	12.48	66

Table D2. Occupations with higher wages in nonmetropolitan areas, May 2004

Occupation	Nonmetropolitan mean wage	Metropolitan mean wage	Difference	Percent difference
Orthotists and prosthetists .....	\$37.75	\$26.63	\$11.12	29
Dancers .....	15.57	11.88	3.69	24
Health diagnosing and treating practitioners, all other .....	55.31	43.40	11.91	22
Bridge and lock tenders .....	19.2	15.94	3.26	17
Physicians and surgeons, all other .....	75.41	65.28	10.13	13
Continuous mining machine operators .....	18.28	16.23	2.05	11
Gas compressor and gas pumping station operators .....	23.07	20.53	2.54	11
Tire builders .....	18.72	16.62	2.10	11
Mathematicians .....	42.94	38.90	4.04	9
First-line supervisors/managers, protective service workers, all other .....	21.56	19.59	1.97	9
Mining machine operators, all other .....	18.18	16.62	1.56	9
First-line supervisors/managers of farming, fishing, and forestry workers .....	19.19	18.00	1.19	6
Paper goods machine setters, operators, and tenders .....	15.69	14.74	0.95	6
Crushing, grinding, and polishing machine setters, operators, and tenders .....	14.21	13.42	0.79	6
Family and general practitioners .....	68.98	65.77	3.21	5
Shoe and leather workers and repairers .....	9.94	9.49	0.45	5
Postal service clerks .....	20.24	19.71	0.53	3

groups with the largest difference in employment shares among those with a higher concentration in nonmetropolitan areas. Interestingly enough, those two occupational groups also contain more than one-third of the detailed occupations with a higher mean wage in nonmetropolitan areas. The

Table D3. Occupations with the largest concentration of employment in metropolitan areas, May 2004

Occupation	Percent metropolitan employment
Entertainers and performers, sports and related workers, all other .....	99.0
Mathematical scientists, all other .....	99.0
Political scientists .....	98.9
Airline pilots, copilots, and flight engineers ....	97.9
Computer software engineers, systems software .....	97.8
Computer hardware engineers .....	97.6
Medical scientists, except epidemiologists ...	97.4
Actuaries .....	97.4
Multimedia artists and animators .....	97.3
Prosthodontists .....	97.3

detailed occupations show the same relationship between wage premium and employment. For example, 5 of the 10 occupations with the highest wage premiums in nonmetropolitan areas (bridge and lock tenders; continuous mining machine operators; gas compressor and gas pumping station operators; tire builders; and mining machine operators, all other) have a concentration of employment higher than the national average of 16 percent. The same can be seen in occupations concentrated in metropolitan areas. The occupation titled airline pilots, copilots, and flight engineers has the highest wage premium, 122 percent, and has a 98-percent concentration of metropolitan employment. In fact, 8 of the 10 occupations with the highest wage premiums in metropolitan areas have a concentration of employment higher than the national average of 84 percent.

Chart D3 shows the correlation between the percentage of metropolitan employment and the percentage of metropolitan wage premium, which have an overall positive correlation of 0.3.

The positive slope in the trend line shows that a higher percentage of metropolitan employment generally corresponds to a higher percentage of wage premium, and the

Chart D1. Occupations concentrated in nonmetropolitan areas, May 2004

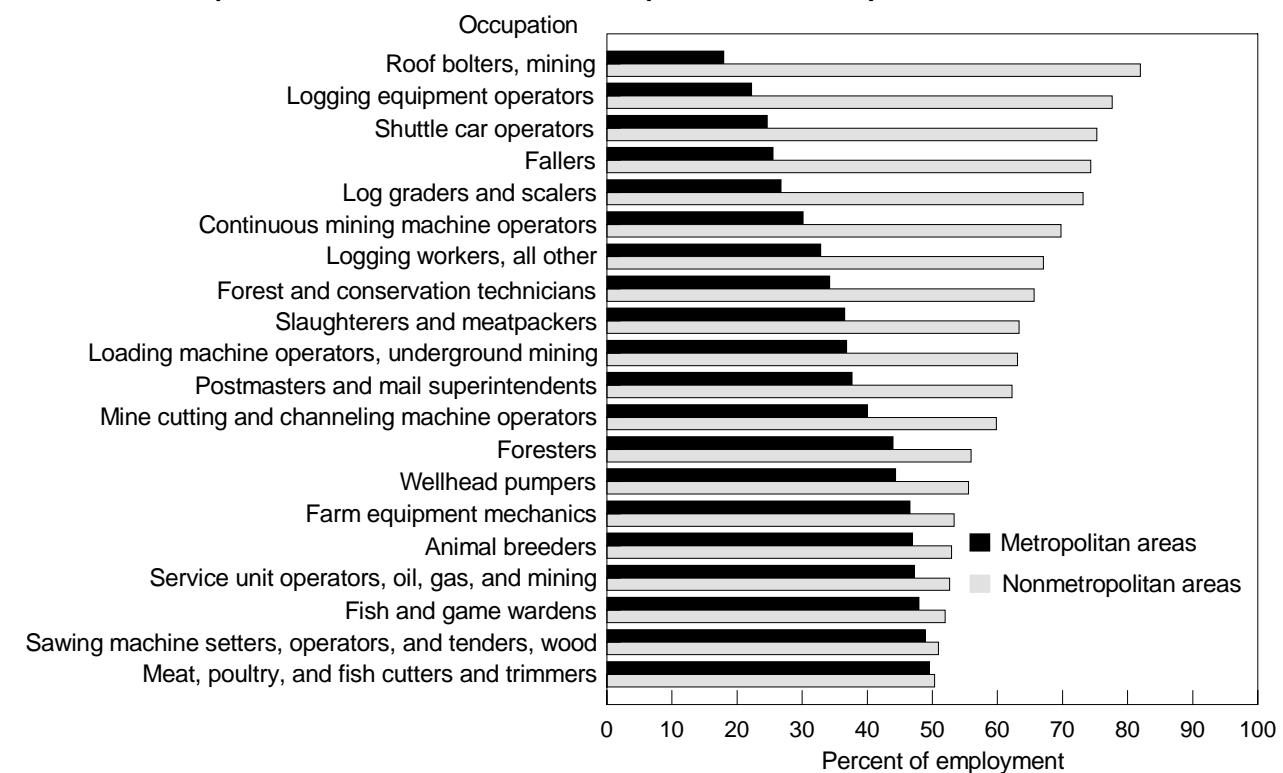
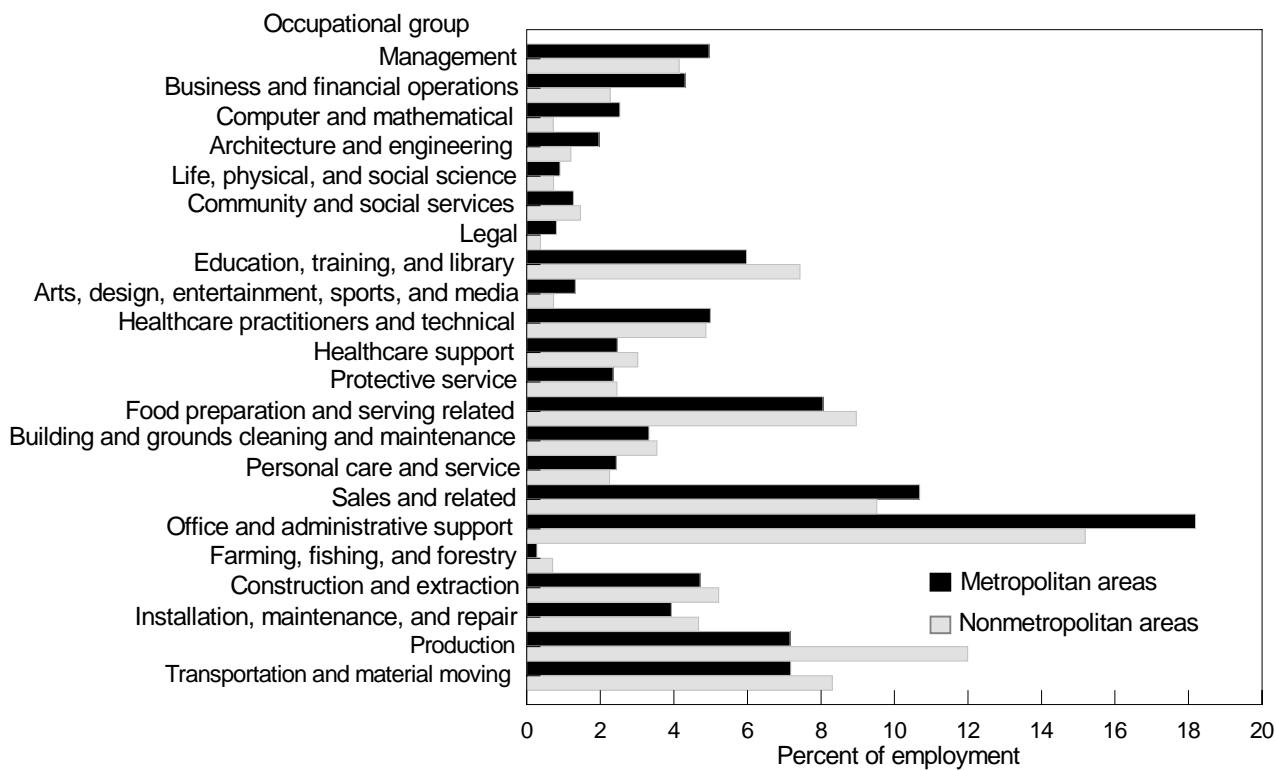
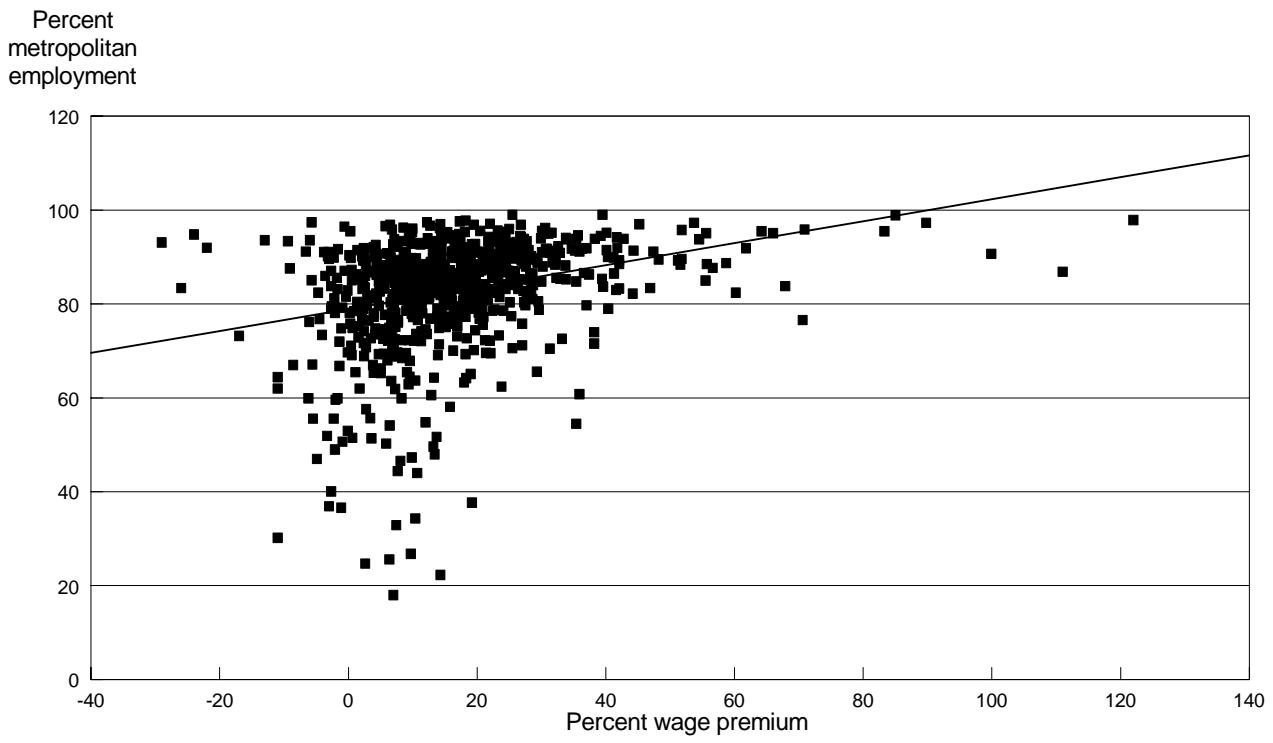


Chart D2. Distribution of employment in metropolitan and nonmetropolitan areas, May 2004



**Chart D3. Correlation between percent metropolitan employment and percent wage premium, May 2004**



higher the concentration in nonmetropolitan areas, the higher are the relative wages in nonmetropolitan areas. However, there are exceptions to this general correspondence: the points in the top-left hand corner of the graph have the opposite relationship of a higher percentage of metropolitan employment together with a wage premium for workers in nonmetropolitan areas. These occupations include ortho-tists and prosthetists, all other health diagnosing and treating practitioners, and dancers. There are no data points in the lower right-hand corner of the graph, indicating that it is rare to have a high percentage of wage premium together with a low percentage of metropolitan employment.

### Conclusion

In general, average wages in metropolitan areas are higher than in rural areas for workers in the same occupation. There also are more jobs in metropolitan areas. There appears to be a slight correlation between the concentration of workers in metropolitan areas and their wages relative to the workers in the same occupation in nonmetropolitan areas. Similarly, the occupations that are more plentiful in nonmetropolitan areas have relatively higher mean wages in those areas. There are exceptions to this generalization, but it does give a sense of the variability of an occupation's mean wage between a metropolitan and nonmetropolitan area and the types of occupations that are concentrated in these areas. ■