Occupational Employment Statistics (OES) Highlights

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Occupational Employment and Wage Patterns in Nonmetropolitan Areas

This OES data highlight uses May 2010 estimates to examine occupational employment and wage patterns in nonmetropolitan areas[1]. Employment patterns in nonmetropolitan areas (NMAs) are different from those in metropolitan statistical areas (MSAs) in multiple ways. Some occupations are found mainly in nonmetropolitan areas, even though such areas account for just 13 percent of employment in the United States. On the other hand, there are several occupations that are almost never found in nonmetropolitan areas, and there are some occupations that are found in approximately the same proportions in both metropolitan and nonmetropolitan areas.

Tables 1 and 2 list the 10 occupations with the highest location quotients (LQs) for nonmetropolitan areas and metropolitan areas.

Table 1. Occupations with high location quotients in NMAs	
Occupation	**NMA location quotient**
Loading machine operators, underground mining	6.300
Mine shuttle car operators	5.938
Roof bolters, mining	5.494
Log graders and scalers	5.334
Logging equipment operators	5.289
Fallers	5.097
Continuous mining machine operators	5.009
Forest and conservation technicians	4.313
Slaughterers and meat packers	4.257
Forest fire inspectors and prevention specialists	4.174
Source: U.S. Bureau of Labor Statistics	

Table 2. Occupations with high location quotients in MSAs	
Occupation	**MSA location quotient**
Subway and streetcar operators	1.160
Models	1.146
Flight attendants	1.144
Semiconductor processors	1.136
Actuaries	1.134
Biochemists and biophysicists	1.134
Shampooers	1.134
Prosthodontists	1.134
Sociologists	1.133
Medical scientists, except epidemiologists	1.132
Source: U.S. Bureau of Labor Statistics	

Location quotients are useful for comparing the composition of jobs in an area relative to the average, or for finding areas that have high concentrations of jobs in **certain occupations. As measured here, a location quotient shows the occupation's share of an area'**s employment relative to the national average. For example, a location quotient of 2.0 indicates that an occupation accounts for twice the share of employment in the area than it does nationally, and a location quotient of 0.5 **indicates the area's share of** employment in the occupation is half the national share. Because the aggregated MSAs account for approximately 87 percent of total national employment, many of their location quotients are very close to 1. In contrast, NMAs have much greater variation in employment structure, thus reflecting the diversity and concentration of occupations in nonmetropolitan areas.

The occupational structure of nonmetropolitan areas exhibits several distinct patterns. Occupations that are more highly concentrated in nonmetropolitan areas tend to be production; extraction; farming, fishing, and forestry; or transportation and material moving occupations. Occupations with lower concentrations in nonmetropolitan areas tend to be arts, design, entertainment, sports, and media; business and financial operations; computer and mathematical; and life, physical, and social science occupations. There are some exceptions, but even within occupational groups found primarily in metropolitan areas, the individual occupations prevalent in nonmetropolitan areas are related to agriculture and natural resources. For example, the business-related occupations that are more heavily concentrated in

nonmetropolitan areas include buyers and purchasing agents of farm products and farm labor contractors, and the science-related occupations in nonmetropolitan areas include agricultural and food science technicians, soil and plant scientists, zoologists and wildlife biologists, conservation scientists, and foresters.

Despite the differences between occupations concentrated in metropolitan and nonmetropolitan areas, there are some occupations that are found in approximately the same proportions in both types of areas. These occupations have location quotients close to 1 in both the metropolitan and nonmetropolitan areas and include clergy, pharmacists, and speech-language pathologists. (See table 3.)

Table 3. Selected occupations with similar location quotients in metropolitan and nonmetropolitan areas		
Occupation	MSA location quotient	NMA location quotient
Clergy	0.998	1.020
Pharmacists	0.996	1.013
Speech-language pathologists	0.999	1.013
Recreation workers	1.005	1.018
Dishwashers	1.003	1.014
Source: U.S Bureau of Labor Statistics		

A closer look at employment concentrations in nonmetropolitan areas reveals certain patterns in many individual areas. For example, although NMAs generally have a higher share of their employment in occupations related to agriculture, forestry, and natural resource extraction,[2] most nonmetropolitan areas have high employment concentrations in just one or two of these sectors, and other NMAs have high location quotients in other sectors. Table 4 lists NMAs that have the highest location quotients for the occupations listed in table 2.

Table 4. NMAs with the highest location quotients for selected occupations			
Area	**Occupation**	**Employment**	**NMA location quotient**
Eastern Utah	Loading machine operators, underground mining	180	154.6
East Kentucky	Mine shuttle car operators	580	205.6
East Kentucky	Roof bolters, mining	840	164.0
North Idaho	Log graders and scalers	110	118.5
Natchitoches, Louisiana	Logging equipment operators	580	39.3
Southwest Mississippi	Fallers	180	37.3
Other Nevada	Continuous mining machine operators	1,040	198.4
Northern Mountains Region of California	Forest and conservation technicians	1,500	94.2
Southwest Minnesota	Slaughterers and meat packers	3,130	36.9
South Arkansas	Forest fire inspectors and prevention specialists	50	32.7
Source: U.S Bureau of Labor Statistics			

Following the general occupational pattern for NMAs, the Eastern Utah NMA has a strong emphasis on mining and oil and gas extraction occupations. In addition to underground mining loading machine operators, the occupations with the highest location quotients are rotary drill operators, oil and gas; helpers—extraction workers; derrick operators, oil and gas; and earth drillers, except oil and gas. Similarly, the East Kentucky NMA has a high concentration of jobs in mining. In addition to mine shuttle car operators, the occupations with the highest location quotients in this area are roof bolters, mining; extraction workers, all other; continuous mining machine operators; and helpers—extraction workers. The North Idaho; Natchitoches, Louisiana; and Southwest Mississippi areas have high concentrations of workers in occupations related to forestry and logging. In addition to log graders and scalers, the North Idaho nonmetropolitan area has high concentrations of forest and conservation technicians and foresters.

Another way to find employment patterns in NMAs is to look for occupations that are in high concentrations in the majority of NMAs. For example, occupations that are frequently found in relatively high concentrations in nonmetropolitan areas include correctional officers and jailers, primary and secondary school teachers, counselors

and social workers, court reporters, emergency medical technicians, animal control workers, and occupations concentrated in local government or the post office.

A less common pattern is that some states have nonmetropolitan areas that appear to be specialized in certain sectors. For instance, nonmetropolitan areas in Arkansas, Mississippi, South Carolina, Tennessee, Indiana, and North Carolina have higher concentrations of production employment. Another example is the science-oriented nonmetropolitan areas in Alaska, California, Idaho, and Montana.

Some nonmetropolitan areas are unique because they have relatively high shares of employment in occupations that are more commonly found in metropolitan areas. For example, areas in Alaska, Maryland, Hawaii, and New Mexico have high concentrations of occupations related to science, tourism, or technology. Tables 5, 6, and 7 show the diversity of employment in nonmetropolitan areas in Alaska, Maryland, and Hawaii.

Table 5. Selected occupations in Alaska with location quotients greater than 20		
Area and occupation	Employment	Location quotient
Railbelt / Southwest Alaska		
Gaming and sports book writers and runners	180	24.3
Meat, poultry, and fish cutters and trimmers	3,150	35.0
Ship engineers	110	21.3
Zoologists and wildlife biologists	220	22.5
Southeast Alaska		
Captains, mates, and pilots of water vessels	240	29.9
Commercial pilots	180	22.6
Sailors and marine oilers	370	43.4
Ship engineers	110	43.6
Tour guides and escorts	290	36.4
Zoologists and wildlife biologists	230	48.4
Source: U.S Bureau of Labor Statistics		

The two NMAs in Alaska have high location quotients in occupations related to fishing, tourism, and the great outdoors. Both areas have high concentrations of zoologists and wildlife biologists as well as ship engineers. The areas differ in that the Southeast NMA has higher concentrations of tour guides and escorts; sailors and marine oilers; commercial pilots; and captains, mates, and pilots of water vessels, whereas the Railbelt/Southwest NMA has higher concentrations of gaming and sports book writers and meat, poultry, and fish cutters and trimmers.

In Hawaii, many of the occupations with high location quotients are related to travel and tourism. Dancers, as well as tour guides and escorts, have the highest LQs, 20.7 and 19.2, respectively. High location quotients do not necessarily imply high employment levels, especially for relatively small areas or occupations with low overall employment. For example, although anthropologists and archaeologists have an LQ of 6.0 in the nonmetropolitan area of Hawaii, the employment is still only 40.

Table 6. Selected occupations in Hawaii/Maui/Kauai with location quotients greater than 6		
Occupation	**Employment**	**Location quotient**
Anthropologists and archeologists	40	6.0
Captains, mates, and pilots of water vessels	210	6.2
Reservation and transportation ticket agents and travel clerks	980	6.8
Transportation attendants, except flight attendants	230	7.7
Baggage porters and bellhops	480	9.1
Transportation security screeners (federal only)	500	10.0
Concierges	290	12.3
Tour guides and escorts	680	19.2
Dancers	280	20.7
Source: U.S. Bureau of Labor Statistics		

The three NMAs in Maryland present a strong contrast to the areas in Alaska and Hawaii. Two of the areas in Maryland are similar: in both the Upper Eastern Shore and Garrett County, motorboat mechanics and service technicians is the occupation with the highest location quotient. A unique NMA **is St. Mary's County** in Maryland, where aerospace engineers have the highest LQ (34.8) in the state as well as the highest LQ among all NMAs for this occupation. Other occupations with LQs over 30 are logisticians (32.5) and computer and information research scientists (30.5). The rest of the occupations presented in table 7 are engineering and business related, with technical writers rounding out the occupations shown.

Table 7. Selected occupations in Maryland with location quotients greater than 6		
Area and occupation	Employment	Location quotient
Upper Eastern Shore		
Court reporters	80	8.0
Motorboat mechanics and service technicians	150	16.5
Garrett County, Maryland		
Automotive and watercraft service attendants	40	6.1
Motorboat mechanics and service technicians	40	25.7
St. Mary's County, Maryland		
Aerospace engineers	890	34.8
Computer and information research scientists	250	30.5
Computer hardware engineers	150	7.0
Electrical and electronics engineering technicians	400	8.4
Engineering technicians, except drafters, all other	530	24.6
Engineers, all other	490	10.7
Logisticians	1,110	32.5
Management analysts	1,090	6.2
Operations research analysts	270	13.3
Technical writers	100	7.1
Source: U.S Bureau of Labor Statistics		

Wages in nonmetropolitan areas

Wages in nonmetropolitan areas tend to be lower than the national average. In fact, mean wages in all except eight nonmetropolitan areas are below the U.S. hourly mean of $21.35. Wages may be lower in most nonmetropolitan areas because workers in metropolitan areas have higher wages for the same occupations, because employment in nonmetropolitan areas tends to be in lower paying occupations, or through a combination of both factors. Nonmetropolitan areas with the highest wages are Los Alamos County, New Mexico; **and St. Mary's County,** Maryland. (See table 8.) Both of these areas have high shares of high-paying science and engineering occupations.

Table 8. Nonmetropolitan areas with the highest all-occupations mean wages	
Area	**Hourly mean wage**
Los Alamos County, NM	$36.42
St. Mary's County, MD	29.12
Railbelt/Southwest Alaska	23.69
North Central Massachusetts	23.64
Southeast Alaska	22.33
Nantucket Island and Martha's Vineyard	21.93
Western New Hampshire	21.76
Northwestern Connecticut	21.40
Mother Lode Region of California	21.20
Southwestern Wyoming	21.03

The aggregate metropolitan and nonmetropolitan location quotients are based on a special tabulation of May 2010 OES data performed for the purposes of this highlight; location quotients, employment levels, and wages for all occupations and individual areas are available at **www.bls.gov/oes/oes_dl.htm/**. Complete May 2010 OES data are available from the OES home page at **www.bls.gov/oes**. This highlight was prepared by John I. Jones. For more information, please contact the OES program at **www.bls.gov/oes/home.htm#contact**.

Notes

[1] The OES program defines 170 nonmetropolitan areas, with each state having between 1 and 6 (except New Jersey, which has none). They may include micropolitan areas, but do not include any portion of a metropolitan statistical area. The largest nonmetropolitan area is in Kansas and covers employment of more than 375,000. The smallest nonmetropolitan areas are in Rhode Island and parts of Maryland, Massachusetts, and California and have fewer than 15,000 covered workers each.

[2] The program does not survey farms, but it does cover agriculture support services; logging; and federal, state, and local government, which employ workers in farming and forestry-related occupations.