

Minnesota's Evolving Labor Market

A record number of Minnesotans are working, but their occupations and how much they are paid are changing as the state transitions to a knowledge-based economy.

In case you haven't been paying attention lately, more Minnesotans than ever before are getting up each day and heading off to work. Both of Minnesota's monthly employment gauges have recently recorded all-time monthly highs on a seasonally adjusted basis. Minnesota's nonfarm wage and salary employment reached a record high of 2.79 million in August, while household employment reached a record high 2.83 million in May.¹ New monthly highs for both employment series should become more common now that pre-recession peaks have been topped and job growth is on pace toward a 13-year high in 2013.

You may be wondering why the variation in employment estimates in those two measures. The big difference is that household employment includes self-employment, while wage and salary employment excludes the self-employed. There is also the place of residency versus place of employment divergence, the differing treatment for holding multiple jobs, and the

farm versus nonfarm difference.² By either measure, however, employment has recovered from the Great Recession. Household employment has climbed 128,000 from its August 2009 low, while wage and salary employment has increased 165,000 since bottoming out in September 2009.

Job growth during the recovery, however, hasn't been an exact mirror image of job loss during the recession. While employment levels are a little above or slightly below pre-recession levels for most Minnesota sectors, payroll numbers are way below pre-recession levels in manufacturing and construction and significantly above pre-recession levels in health care and social assistance, private education services and management of companies. Manufacturing and construction jobs are down by double-digit percentages since 2007, while health care and social assistance, private education services and management of companies jobs are up by double-digit percentages since 2007.

As Minnesota's industrial mix of employment shifts, the state's occupational mix also shifts. Jobs in occupations concentrated in expanding industries increase while jobs in occupations concentrated in shrinking industries decrease. Roughly half of all Minnesota manufacturing employment is in production occupations, while construction occupations account for 64 percent of construction sector employment. Education, training and library occupations make up 52 percent of private education jobs, while 50 percent of jobs in the health care and social assistance sector are in either health care practitioners or health care support occupations.

Minnesota's occupational mix has obviously shifted some over the last four years, reflecting the industry mix shift that occurred during and after the recession. Shifting occupational mix, however, is not breaking news. The state's occupational mix is continuously shifting with the economy. Both the Minnesota and national economies are undergoing a long-running

structural transformation from industry-based to knowledge-based economies. The Great Recession accelerated the transformation that has been ongoing over the last three decades.

Tracking shifts in Minnesota's occupational mix, especially relative to the U.S. occupational mix, is a handy tool for gauging Minnesota's success in transitioning into a knowledge-based economy. Occupational

employment in Minnesota is available from two surveys, the Occupational Employment Statistics (OES) survey and the American Community Survey (ACS).³ One key difference between the two surveys is that OES collects occupational data from employers, while occupational data in ACS is collected from workers. The other key difference is that OES excludes the self-employed, while ACS includes the self-employed.

Minnesota's occupational employment for 2012 as reported by the two surveys is shown in Table 1, with the 800 occupations in Minnesota aggregated into 22 major occupational groups. The third and fourth columns measure how Minnesota's occupational mix compares with the national mix based on the relative employment shares of each occupational group. Management occupations in OES accounted for 6.1 percent

TABLE 1

Minnesota's Occupational Mix Relative to U.S. Occupational Mix - 2012

	OES - 2012 Employment	ACS - 2012 Employment	OES - 2012 Relative to U.S.	ACS - 2012 Relative to U.S.	OES - 2012 Annual Median Wage	ACS - 2012 Median Annual Earnings	Wage Category
Total Employment	2,641,110	2,786,812			37,593	35,789	
Management	161,560	296,708	25	11	96,104	62,491	Very High
Legal	17,750	26,611	-14	-18	78,929	62,332	Very High
Health Care Practitioners and Technical	153,280	162,474	-1	3	65,123	52,256	Very High
Computer and Mathematical	83,090	85,693	15	19	76,594	69,589	Very High
Business and Financial Operations	143,980	158,421	11	20	61,194	54,331	Very High
Architecture and Engineering	50,850	54,619	6	8	70,487	68,565	Very High
Protective Service	41,870	37,710	-36	-39	38,621	41,406	High
Life, Physical and Social Science	23,600	27,639	5	14	60,484	50,231	High
Installation, Maintenance and Repair	89,390	84,152	-13	-8	44,176	41,638	High
Education, Training and Library	153,110	165,940	-10	-2	45,333	35,519	High
Construction and Extraction	81,230	120,116	-20	-14	49,853	39,571	High
Community and Social Service	49,930	55,763	31	22	41,223	38,225	High
Arts, Design, Entertainment, Sports and Media	38,400	55,024	8	3	43,548	34,560	High
Transportation and Material Moving	161,020	162,744	-9	-5	32,440	29,546	Low
Production	214,480	199,499	23	19	33,989	31,607	Low
Office and Administrative Support	400,220	369,232	-8	-2	34,954	30,740	Low
Health Care Support	93,160	67,802	17	-5	26,973	21,362	Low
Farming, Fishing and Forestry	3,220	18,721	-63	-5	28,415	22,691	Low
Sales and Related	271,500	289,207	-3	-5	26,608	30,606	Very Low
Personal Care and Service	105,200	109,808	36	7	22,850	16,240	Very Low
Food Preparation and Serving Related	223,370	144,952	-5	-10	19,001	11,207	Very Low
Building and Grounds Cleaning and Maintenance	80,910	93,977	-6	-17	24,129	17,204	Very Low

Source: Occupational Employment Statistics (OES) and American Community Survey (ACS)



of all employment in Minnesota, compared with 4.9 percent nationally. Minnesota has a 25 percent higher concentration of management occupations than the U.S.

Meanwhile, legal occupations as a percent of total employment are lower in Minnesota (0.7 percent) than nationally (0.8 percent). Minnesota's lower share translates into the state having 14 percent fewer legal occupation jobs than the country as a whole. Minnesota has a higher concentration of jobs in 10 occupational groups than the U.S. and a lower concentration in 12 occupational groups.

Are the 10 occupational groups in Minnesota with higher employment concentrations the right kind of jobs that offer better pay and stronger growth outlooks than nationally?

Insight into what kind of jobs are being created in Minnesota compared with the U.S. is provided by sorting occupational groups into four wage levels — very high, high, low and very low — based on 2012 median annual earnings and tracking employment of the four wage groups over time relative to national growth. The wage group assignment for each occupational group is listed in the last column in Table 1.

Minnesota's share of national employment as measured by the two surveys has been on the upswing over the last few years after tailing off a bit during the middle of the last decade (see Figure 1). The state's share of national employment was 2.03 percent for OES employment and 1.95 percent for ACS employment in 2012. Minnesota's lower share of ACS employment compared with the OES share suggests self-employed jobs account for a smaller share of employment in Minnesota than nationally. Put another way, wage and salary jobs in Minnesota account for a larger share of employment than nationally.

Minnesota's share of very-high-wage jobs has tailed off since 2006 based on OES data, but has climbed sharply since 2010 based on ACS data. Minnesota's share of very-high-wage occupations is higher than its share of total employment. The opposite holds for high-wage occupations, with Minnesota's share of high-wage employment below the state's share of total employment.

OES data show Minnesota's share of high-wage occupations declining over the last decade. The ACS showed similar declines three years ago but increasing shares over the last few years. The conflicting

stories presented by the two occupational surveys are likely due to the two big ways that the surveys differ. Remember, OES excludes self-employed and most agriculture-related employment, while ACS includes self-employed and agriculture-related employment.

One possible theory on why Minnesota is capturing higher shares of very-high-wage and high-wage employment in the ACS data and not in the OES data is that Minnesota's 1099 (freelance, independent contract) economy is expanding at a faster clip than nationally. Minnesota's self-employment in occupations such as management, life sciences, architecture and engineering, education, construction and installation may be increasing faster than nationally, thereby generating Minnesota's increasing share of very-high-wage and high-wage employment in the ACS data. There has been a lot of anecdotal talk of the 1099 economy but little evidence of it in employment data. Perhaps the divergence in the ACS and OES data is hard evidence of expanding 1099 activity.

The two sources of occupational data are also telling divergent stories about Minnesota's low-wage and very-low-wage occupations relative to the nation. The OES data show Minnesota's share of low-wage and very-low-wage occupations increasing since the recession. ACS data show the state's share as flat for low-wage occupations and decreasing for very-low-wage occupations.

Since OES and ACS are survey-based, both datasets inherently have some noise attached. The noise may be the source of the differing trends, or the differing trends displayed by the two occupational datasets may be providing useful information on how Minnesota's labor market is evolving. ■

FIGURE 1



¹Nonfarm wage and salary employment is also known as payroll, establishment or CES employment and is available at <http://mn.gov/deed/ces>. Household employment is also called LAUS (Local Area Unemployment Statistics) employment and is available at <http://mn.gov/deed/laus>.

²More information comparing Minnesota employment data is available at <http://mn.gov/deed/data/data-tools/>.

³For more details on the two surveys, see "A Look at Occupational Data," Minnesota Economic Trends, March 2013, <http://mn.gov/deed/newscenter/publications/trends/march-2013/occupational-data.jsp>.