



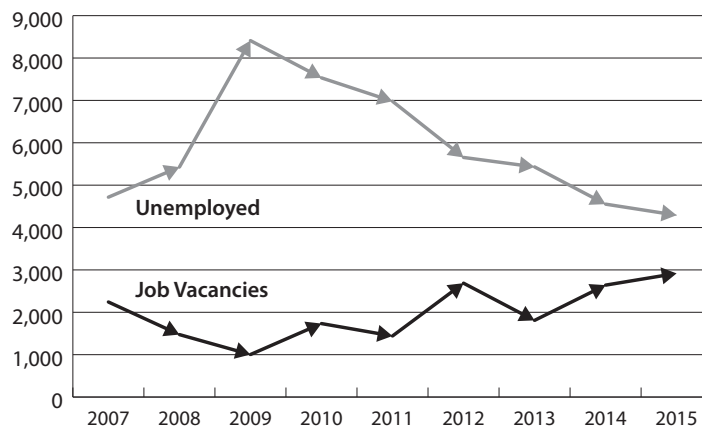
Workforce Synchronization in North Central, MN

Growth in job vacancies is considered a good sign of economic recovery. It suggests that companies are producing more or doing more business and need more workers to meet demand, which means job seekers should find it easier to get a job. Sometimes, however, the education or skill level of the workforce can be out of sync with what local employers are looking for, or the available employment opportunities do not satisfy job seekers. More often it's a little of both.

This looks to be the case in Economic Development Region 5 (EDR 5), which is made up of Cass, Crow Wing, Morrison, Todd, and Wadena counties in North Central Minnesota. Regional unemployment continues to fall as job vacancies rise, as has been the case during most of the recovery period following the Great Recession from 2007 to 2009 (see Chart 1).

Job Vacancy Survey results from the second quarter of 2015 shows 2,918 vacancies — the highest number of vacancies on record in the region, compared to 4,291 unemployed workers that were actively seeking work. While the region still has nearly 1,400 more unemployed workers than job vacancies, these trends could lead to a potential labor

Chart 1: EDR 5 Annual Job Vacancies and Unemployed Workers 2Q 2007 - 2Q 2015



Sources: DEED Job Vacancy Survey, LAUS program

shortage in the future, where regional employers may find it even more difficult to fill positions.

Still, with more job seekers than vacancies in the most recent quarter, the data initially suggest that employers should be able to fill their openings comfortably. Unfortunately, employers report that this isn't always the case, and determining why hiring difficulties persist is an inexact science that is often more complicated than it appears. This article will examine possible reasons for lingering unemployment and hiring difficulties during economic growth, the changing education and skill requirements of regional vacancies, and how well they

align with the supply of area job seekers in North Central.

Educational Attainment

The educational attainment of a community is often a major factor in how well its economy performs. A well-educated workforce can spur innovation, increase production, and promote growth. According to data from the U.S. Census Bureau's American Community Survey (ACS), nearly two-thirds (63.3%) of the workforce aged 25 to 64 years in North Central had at least some college experience, including 20 percent that had a Bachelor's degree or higher (see Table 1).

Feature:

Making Sense of Labor Market Returns to Higher Education for Older Graduates

In this issue:

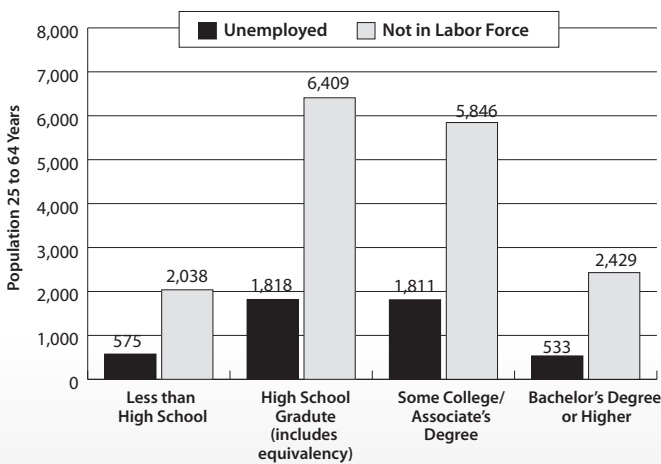
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Table 1: EDR 5 Educational Attainment, Population Aged 25 to 64 Years, 2009-2013

Education Level	Population, 25 to 64 years	In Labor Force	Percent of Labor Force	Unemployment Rate
Total Population, 25 to 64 years	82,067	65,534	100.0%	7.3%
Less than high school	5,620	3,649	5.6%	16.2%
High school graduate (includes equivalency)	26,822	20,407	31.1%	8.3%
Some college / Associate's degree	34,102	28,384	43.3%	6.9%
Bachelor's degree or higher	15,523	13,094	20.0%	4.1%

Source: American Community Survey, 5-year estimates 2009-2013

Chart 2: EDR 5 Labor Force Characteristics of the Population Aged 25 to 64 Years by Education Level



Sources: 2009-2013 American Community Survey

Workers with a high school diploma or less made up the other one-third (36.7%) of the labor force in EDR 5, and they tended to have higher unemployment rates than workers with postsecondary education. Among the unemployed who are looking for work and those who may be available now or in the future but are not currently in the labor force, there are a lot more people in North Central with some college experience than employers might realize.

The number of unemployed workers with or without postsecondary education is nearly identical in EDR 5. According to ACS estimates, there were 2,393 unemployed people with a high school diploma or less in the region, and 2,344 unemployed people who had some college or a degree. Among the population who lived in the region but were not in the labor force, there were 8,447 people with a high school diploma or less, and 8,275 people with some college or a degree (see Chart 2).

This is encouraging news for employers in EDR 5 looking to add motivated personnel to their workforce. Unfortunately for job seekers with higher educational attainment, there appear to be fewer job vacancies in the region that require or value their level of postsecondary education. The underemployment of workers leaves unused potential in the labor market, while workforce shortages and a mismatch in skill demand creates other imbalances. Raising wage offers — and expectations — may draw more workers into the labor force and engage those looking for work in a way that more nearly match their qualifications.

Educational Requirements

Looking at data from DEED's Job Vacancy Survey, there appears to be some disparity between the job requirements for vacancies that employers are posting and the education levels of workers in the region. The results of the second quarter 2015 Job Vacancy Survey show that two-thirds of vacancies in EDR 5 require a high school diploma or less (see Table 2). As a result, the median wage offer of \$10.24 for these job openings was relatively low, especially when compared to the state, which had a median wage offer of \$12.99.

Only 35 percent of job vacancies in EDR 5 required postsecondary education in 2015, which may seem low, but that number has remained relatively consistent the past few years. Considering that about 30 percent of North Central residents between the ages of 25 and 64 years have attained a postsecondary degree, this might appear to be a good match with the local workforce.

However, that counts only people who have received an Associate's, Bachelor's, or higher degree. When people with some college but no degree are factored in, the balance shifts considerably. As noted above, nearly two-thirds of EDR 5's 25 to 64 year old labor force participants have some college experience, while the other 36.7 percent have a high school diploma or less, leading to a mismatch for about 30 percent of workers who may be over-educated for the jobs available.

Education vs. Experience

When the educational attainment of a labor force doesn't align well with regional employer needs, skilled workers can be compelled to look elsewhere to utilize what they've learned. On the other hand, employers who focus primarily on specialized education requirements may disqualify candidates who have demonstrated enthusiasm the aptitude to learn new skills on the job. Employers in North Central need to find the right balance between these two requirements.

Employers need to understand their local workforce to compete with other regions that could attract their local graduates. EDR 5 has a higher percentage of workers with lower educational attainment than statewide, especially those with a high school diploma or equivalent and some college or an Associate's degree, but a lower percentage of workers with bachelor's and advanced degrees. This indicates that job seekers in the region are more likely to have vocational training or work experience alone, which could be a good match for local employers.

Table 2: EDR Job Vacancy Statistics, Second Quarter 2015

Number of Job Vacancies	Median Wage Offer	Percent of Job Vacancies Requiring:					
		Less than High School	High School or Equivalent	Vocational Education	Associate's Degree	Bachelor's Degree	Advanced Degree
2,918	\$10.24	38%	28%	13%	9%	11%	2%

Source: DEED Job Vacancy Survey, 2Q 2015

Recent Job Vacancy Survey data show how regional employers have been adjusting in the past and what they can do in the future to find more workers ready to expand on their education and experience. As North Central's economy has recovered and employers have increased their job vacancies, postsecondary requirements have been increasing as well (see Chart 3).

Education by Industry

The major hiring industries in North Central Minnesota are varied in their types of employment and occupational requirements, so a closer look at how postsecondary requirements have changed over time shows how different industries are reacting to regional workforce availability.

Healthcare and Social Assistance, Retail Trade, Educational Services, Manufacturing, Accommodation and Food Services, and Professional and Technical Services account for two-thirds (66.9%) of total employment in North Central, and typically post over two-thirds of the vacancies in the region. Combined, these industries were responsible for 80 percent of the job vacancies in the second quarter of 2015, but they reported very different education and experience requirements (see Table 3).

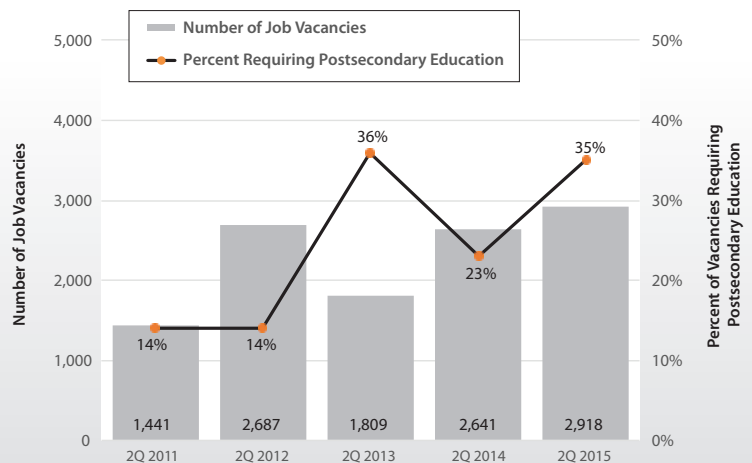
Just over half (51.4%) of the vacancies in these six industries were part-time, including two-thirds or more of the job openings in Retail Trade, Accommodation and Food Services, and Health Care and Social Assistance, which may also be contributing to lingering unemployment and underemployment in the region. This preponderance of part-time vacancies may present challenges to workers who prefer full-time employment.

On average over the past five years, less than 10 percent of vacancies in Retail Trade and Accommodation and Food Services

and only about one-third of the vacancies in Manufacturing have required postsecondary education. This shows it may be less advantageous for employers in these industries to make workforce adjustments because of the nature of the work involved.

In contrast, more than half of the vacancies in Health Care and Social Assistance and two-thirds of the openings in Educational Services have been looking for college educated workers over the past five years, while the percentage of jobs requiring postsecondary education was increasing fastest in Professional and Technical Services (see Chart 4).

Chart 3: North Central Job Vacancy Survey Statistics, 2Q 2011- 2Q 2015



Source: DEED Job Vacancy Survey

Table 3: North Central Job Vacancy Survey Statistics by Industry Second Quarter 2015

	Number of Regional Jobs, 1Q 2015	Number of Job Vacancies, 2Q 2015	Percent Requiring High School or Less	Percent Requiring Some College or Associate's	Percent Requiring Bachelor's or Higher Degree	Percent Requiring 1 or More Years of Experience	Percent Part-Time
Total, All Industries	57,668	2,918	66%	22%	13%	24%	47%
Health Care and Social Assistance	10,721	478	49%	41%	10%	15%	66%
Retail Trade	7,865	484	86%	6%	7%	14%	84%
Educational Services	6,231	236	12%	22%	66%	40%	33%
Manufacturing	6,189	199	90%	8%	3%	23%	0%
Accommodation and Food Services	5,880	656	95%	3%	1%	10%	62%
Professional and Technical Services	1,682	294	27%	50%	22%	49%	0%

Source: DEED Job Vacancy Survey 2Q 2015, Quarterly Census of Employment and Wages 1Q 2015

Despite changing skill requirements, Manufacturers appear to be consistently willing to hire workers with a high school diploma or less. In contrast, firms in the Professional and Technical Services industry appear to have made a concerted effort to hire more workers with postsecondary education over the past five years, especially those with some college or Associate's degrees. Similarly, the Healthcare and Social Assistance and Educational Services industries have reported an increase in the percentage of vacancies that require some college or an Associate's degree, perhaps in place of requiring more work experience. Overall, Educational Services had the most consistent demand for workers with a Bachelor's degree or higher.

Workforce Synchronization

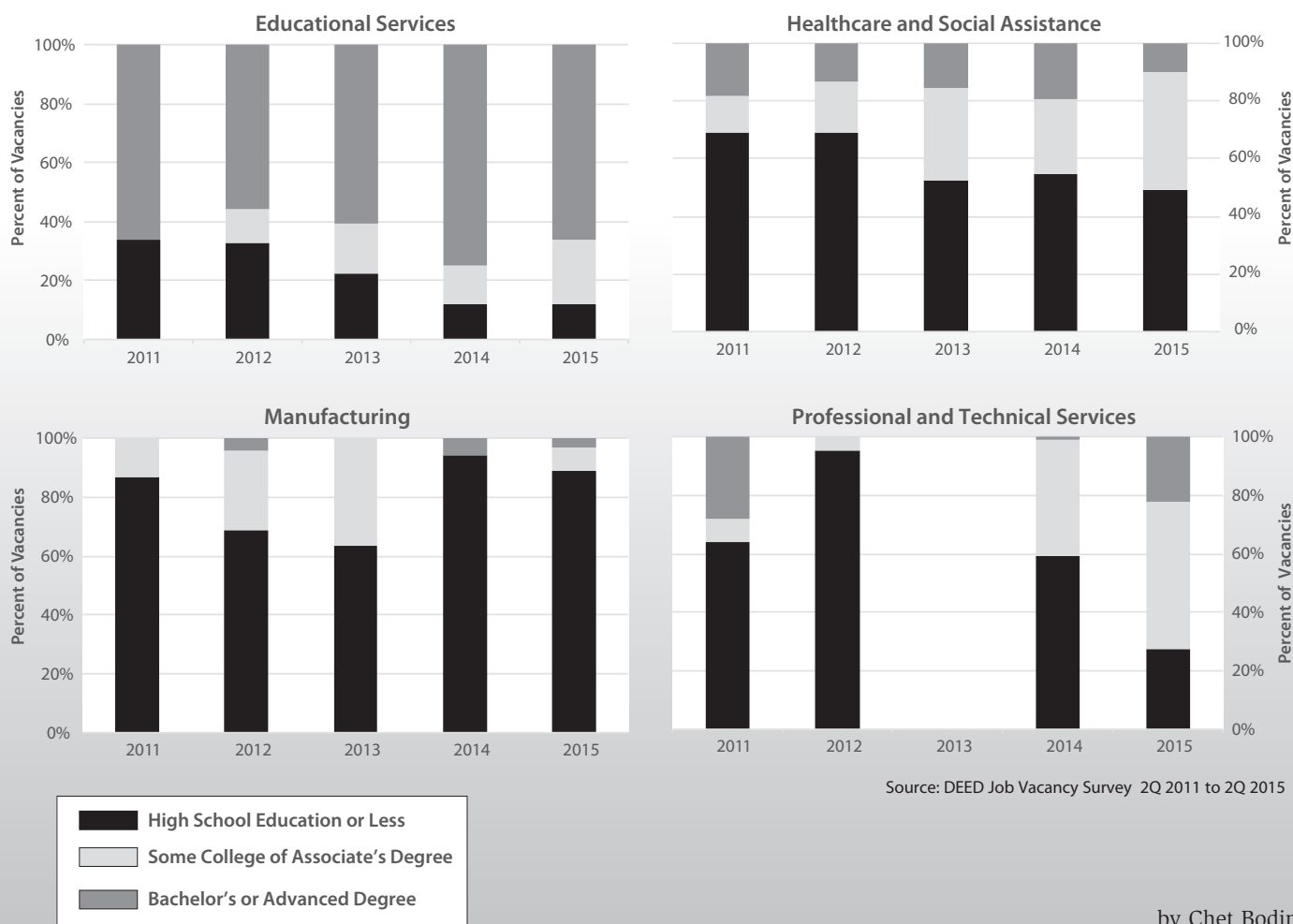
Employers in North Central reported a record number of job vacancies, which should be a great environment for job seekers. However, the number of unemployed and available job seekers has been shrinking, and it can be a challenge to match their skills

and experience to available jobs when the openings are highly compartmentalized by educational attainment.

In some industries, such as Retail Trade, Accommodation and Food Services, and Manufacturing, workers can get a job with a high school diploma or less. In other industries, such as Health Care, Educational Services, and Professional and Technical Services, workers with postsecondary education are in higher demand. This is important to know, given the number of job seekers with these qualifications. When seeking out talent, employers need to understand what job seekers are qualified for and look for in an occupation in addition to wages. They cannot afford to be bound by educational guidelines.

Regardless of their background, today's job seekers are looking for organizations and positions that allow them to learn, utilize their training, and grow professionally. Job seekers in North Central possess both experience and education that can benefit an employer depending on the area of need.

Chart 4: Job Vacancy Educational Requirements by Industry, EDR 5 2Q 2011 to 2Q 2015



Source: DEED Job Vacancy Survey 2Q 2011 to 2Q 2015

by Chet Bodin
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Minnesota matched its pre-recession employment peak back in September 2013 and by August 2015 reached a new peak, 3 percent higher than the previous. While the Great Recession is well in the past for the state, there are still many regions struggling to regain the jobs lost during the Great Recession.

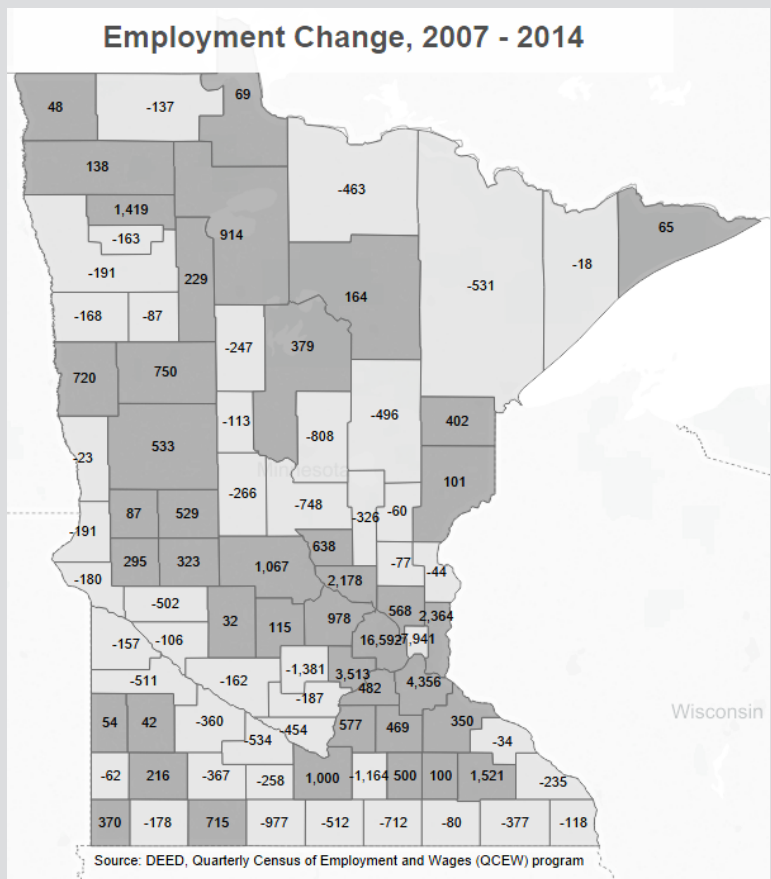
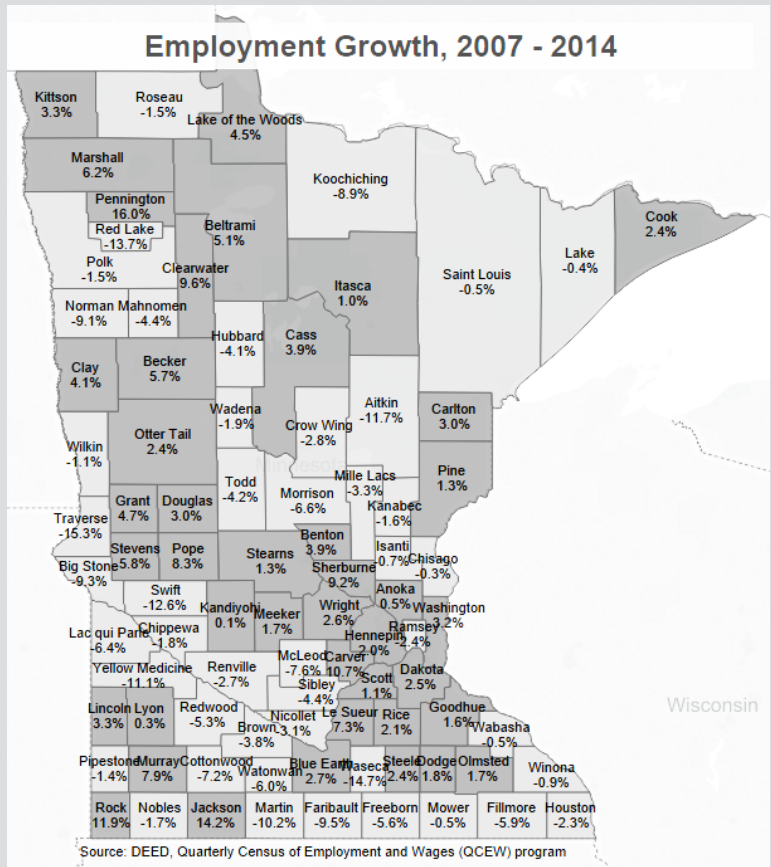
In fact, over half (45) of the counties in the state had fewer jobs in 2014 than in 2007. Some of the largest negative change occurred in Western Minnesota, led by Traverse County which still has 15.3 percent fewer jobs. Six other counties have lost one-in-ten jobs since 2007: Aitkin, Martin, Red Lake, Swift, Waseca, and Yellow Medicine Counties.

Although the share of lost jobs is greatest in smaller counties, the largest numeric losses actually occurred in Ramsey County where employment is down nearly 8,000 jobs by the end of 2014. Crow Wing, Freeborn, McLeod, Martin, Morrison, and Waseca, all have 700 less jobs in 2014 compared to 2007.

Positive job growth since the recession started eight years ago is led by Pennington County, with 16 percent more jobs in 2014 than in 2007. Carver, Jackson, and Rock Counties all gained more than 10 percent, while the most net new jobs occurred in Hennepin County thanks to an increase of 16,592 more jobs in 2014 than in 2007. Carver, Dakota, Sherburne, and Washington Counties all enjoy more than 2,000 new jobs since the recession started.

How does your county stack up?

by Luke Greiner



Labor Force Estimates

County/ Area	Labor Force			Employment			Unemployment			Rate of Unemployment		
	Sept 2015	Aug 2015	Sept 2014	Sept 2015	Aug 2015	Sept 2014	Sept 2015	Aug 2015	Sept 2014	Sept 2015	Aug 2015	Sept 2014
United States ('000s)												
(Seasonally adjusted)	156,715	157,065	155,862	148,800	149,036	146,600	7,915	8,029	9,262	5.1%	5.1%	5.9%
(Unadjusted)	156,607	157,390	155,903	148,980	149,228	146,941	7,628	8,162	8,962	4.9	5.2	5.7
Minnesota												
(Seasonally adjusted)	2,996,559	3,003,531	2,974,510	2,882,117	2,884,651	2,865,119	114,442	118,880	109,390	3.8	4.0	3.7
(Unadjusted)	2,988,729	3,016,509	2,969,485	2,892,919	2,911,894	2,866,634	95,810	104,615	102,851	3.2	3.5	3.5
Metropolitan Statistical Areas (MSA)*												
Mpls.-St. Paul MSA	1,925,078	1,944,738	1,915,020	1,864,773	1,879,445	1,848,599	60,305	65,293	66,421	3.1	3.4	3.5
Duluth-Superior MSA	142,162	142,865	142,403	135,905	136,435	136,416	6,257	6,430	5,987	4.4	4.5	4.2
Rochester MSA	116,040	118,156	116,493	112,916	114,678	113,064	3,124	3,478	3,429	2.7	2.9	2.9
St. Cloud MSA	107,903	108,087	108,715	104,609	104,436	105,056	3,294	3,651	3,659	3.1	3.4	3.4
Mankato-N Mankato MSA	57,849	57,497	58,188	56,373	55,850	56,533	1,476	1,647	1,655	2.6	2.9	2.8
Fargo-Moorhead MSA	127,856	127,616	129,506	125,207	124,772	126,627	2,649	2,844	2,879	2.1	2.2	2.2
Grand Forks MSA	54,091	53,241	54,463	52,819	51,751	52,996	1,272	1,490	1,467	2.4	2.8	2.7
Region One	49,693	49,318	48,493	48,080	47,350	46,914	1,613	1,968	1,579	3.2	4.0	3.3
Kittson	2,411	2,522	2,346	2,327	2,336	2,262	84	186	84	3.5	7.4	3.6
Marshall	5,874	5,822	5,576	5,643	5,540	5,365	231	282	211	3.9	4.8	3.8
Norman	3,467	3,505	3,309	3,350	3,368	3,181	117	137	128	3.4	3.9	3.9
Pennington	9,360	9,283	9,062	9,075	8,965	8,805	285	318	257	3.0	3.4	2.8
Polk	17,408	17,132	17,149	16,859	16,464	16,559	549	668	590	3.2	3.9	3.4
Red Lake	2,346	2,328	2,281	2,258	2,236	2,206	88	92	75	3.8	4.0	3.3
Roseau	8,827	8,726	8,770	8,568	8,441	8,536	259	285	234	2.9	3.3	2.7
Region Two	42,964	43,107	42,305	41,129	41,088	40,438	1,835	2,019	1,867	4.3	4.7	4.4
Beltrami	23,992	23,867	23,510	23,064	22,863	22,554	928	1,004	956	3.9	4.2	4.1
Clearwater	4,563	4,524	4,488	4,269	4,207	4,195	294	317	293	6.4	7.0	6.5
Hubbard	9,721	9,954	9,637	9,304	9,486	9,221	417	468	416	4.3	4.7	4.3
Lake of the Woods	2,362	2,437	2,338	2,269	2,329	2,239	93	108	99	3.9	4.4	4.2
Mahnomen	2,326	2,325	2,332	2,223	2,203	2,229	103	122	103	4.4	5.2	4.4
Region Three	162,919	164,408	163,012	155,427	156,470	155,970	7,492	7,938	7,042	4.6	4.8	4.3
Aitkin	6,692	6,713	6,766	6,414	6,404	6,451	278	309	315	4.2	4.6	4.7
Carlton	17,314	17,454	17,388	16,626	16,699	16,674	688	755	714	4.0	4.3	4.1
Cook	3,334	3,470	3,347	3,241	3,374	3,234	93	96	113	2.8	2.8	3.4
Itasca	22,176	22,634	22,081	21,009	21,253	20,959	1,167	1,381	1,122	5.3	6.1	5.1
Koochiching	6,171	6,296	6,312	5,769	5,847	5,876	402	449	436	6.5	7.1	6.9
Lake	5,729	5,921	5,774	5,541	5,690	5,581	188	231	193	3.3	3.9	3.3
St. Louis	101,503	101,920	101,344	96,827	97,203	97,195	4,676	4,717	4,149	4.6	4.6	4.1
City of Duluth	45,213	45,546	45,735	43,753	43,923	43,919	1,460	1,623	1,816	3.2	3.6	4.0
Balance of St. Louis County	56,290	56,374	55,609	53,074	53,280	53,276	3,216	3,094	2,333	5.7	5.5	4.2
Region Four	127,332	130,112	124,713	123,803	126,223	121,029	3,529	3,889	3,684	2.8	3.0	3.0
Becker	17,801	19,487	17,727	17,184	18,824	17,142	617	663	585	3.5	3.4	3.3
Clay	35,964	35,686	35,773	35,076	34,690	34,829	888	996	944	2.5	2.8	2.6
Douglas	20,269	20,791	20,088	19,744	20,201	19,517	525	590	571	2.6	2.8	2.8
Grant	3,399	3,449	3,255	3,290	3,323	3,148	109	126	107	3.2	3.7	3.3
Otter Tail	31,710	32,406	30,977	30,749	31,368	29,964	961	1,038	1,013	3.0	3.2	3.3
Pope	6,496	6,569	6,130	6,341	6,395	5,963	155	174	167	2.4	2.6	2.7
Stevens	6,187	6,234	5,535	6,058	6,104	5,396	129	130	139	2.1	2.1	2.5
Traverse	1,756	1,795	1,632	1,707	1,735	1,575	49	60	57	2.8	3.3	3.5
Wilkin	3,750	3,695	3,596	3,654	3,583	3,495	96	112	101	2.6	3.0	2.8
Region Five	82,136	83,441	81,915	78,920	79,846	78,487	3,216	3,595	3,428	3.9	4.3	4.2
Cass	14,557	15,102	14,238	13,887	14,322	13,536	670	780	702	4.6	5.2	4.9
Crow Wing	31,052	31,539	31,735	29,841	30,203	30,405	1,211	1,336	1,330	3.9	4.2	4.2
Morrison	17,093	17,267	17,094	16,449	16,549	16,380	644	718	714	3.8	4.2	4.2
Todd	13,313	13,359	12,721	12,890	12,900	12,314	423	459	407	3.2	3.4	3.2
Wadena	6,121	6,174	6,127	5,853	5,872	5,852	268	302	275	4.4	4.9	4.5
Region Six East	67,807	68,040	65,261	65,792	65,774	63,105	2,015	2,266	2,156	3.0	3.3	3.3
Kandiyohi	24,765	24,816	23,858	24,092	24,065	23,134	673	751	724	2.7	3.0	3.0
McLeod	20,297	20,510	20,146	19,657	19,798	19,449	640	712	697	3.2	3.5	3.5
Meeker	13,455	13,501	13,031	13,053	13,036	12,613	402	465	418	3.0	3.4	3.2
Renville	9,290	9,213	8,226	8,990	8,875	7,909	300	338	317	3.2	3.7	3.9

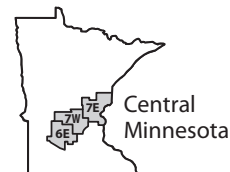
*Minneapolis-St. Paul Metropolitan Statistical Area (MSA) now includes Sherburne County in Minnesota and Pierce County in Wisconsin. St. Cloud MSA is now comprised of Benton and Stearns counties.

Numbers are unadjusted unless otherwise labeled.
Source: Department of Employment and Economic Development,
Local Area Unemployment Statistics, and North Dakota Job Service, 2015.

Labor Force Estimates

County/ Area

County/ Area	Labor Force			Employment			Unemployment			Rate of Unemployment		
	Sept 2015	Aug 2015	Sept 2014	Sept 2015	Aug 2015	Sept 2014	Sept 2015	Aug 2015	Sept 2014	Sept 2015	Aug 2015	Sept 2014
Region Six West	23,774	23,891	23,192	23,011	22,964	22,454	763	927	738	3.2%	3.9%	3.2%
Big Stone	2,666	2,723	2,582	2,580	2,615	2,512	86	108	70	3.2	4.0	2.7
Chippewa	7,054	7,066	6,896	6,834	6,802	6,675	220	264	221	3.1	3.7	3.2
Lac Qui Parle	3,622	3,601	3,555	3,507	3,456	3,432	115	145	123	3.2	4.0	3.5
Swift	4,960	5,044	4,803	4,774	4,821	4,638	186	223	165	3.8	4.4	3.4
Yellow Medicine	5,472	5,457	5,356	5,316	5,270	5,197	156	187	159	2.9	3.4	3.0
Region Seven East	84,917	85,758	84,574	81,720	82,236	81,050	3,197	3,522	3,524	3.8	4.1	4.2
Chisago	28,732	29,079	28,554	27,758	27,991	27,498	974	1,088	1,056	3.4	3.7	3.7
Isanti	20,261	20,478	20,164	19,569	19,726	19,380	692	752	784	3.4	3.7	3.9
Kanabec	8,729	8,865	8,729	8,321	8,397	8,270	408	468	459	4.7	5.3	5.3
Mille Lacs	12,641	12,800	12,578	12,104	12,209	11,978	537	591	600	4.2	4.6	4.8
Pine	14,554	14,536	14,549	13,968	13,913	13,924	586	623	625	4.0	4.3	4.3
Region Seven West	228,298	229,740	228,324	221,238	222,010	220,577	7,060	7,730	7,747	3.1	3.4	3.4
Benton	21,264	21,307	21,465	20,532	20,498	20,643	732	809	822	3.4	3.8	3.8
Sherburne	49,196	49,683	48,896	47,568	47,939	47,122	1,628	1,744	1,774	3.3	3.5	3.6
Stearns	86,639	86,780	87,250	84,077	83,938	84,413	2,562	2,842	2,837	3.0	3.3	3.3
Wright	71,199	71,970	70,713	69,061	69,635	68,399	2,138	2,335	2,314	3.0	3.2	3.3
Region Eight	66,817	66,681	65,003	64,869	64,729	63,048	1,948	1,952	1,955	2.9	2.9	3.0
Cottonwood	5,834	5,806	5,573	5,524	5,533	5,326	310	273	247	5.3	4.7	4.4
Jackson	6,547	6,559	6,299	6,293	6,350	6,032	254	209	267	3.9	3.2	4.2
Lincoln	3,400	3,458	3,275	3,325	3,374	3,176	75	84	99	2.2	2.4	3.0
Lyon	15,437	15,259	15,333	15,067	14,857	14,930	370	402	403	2.4	2.6	2.6
Murray	5,009	4,997	4,842	4,871	4,842	4,706	138	155	136	2.8	3.1	2.8
Nobles	11,522	11,461	11,203	11,195	11,145	10,900	327	316	303	2.8	2.8	2.7
Pipestone	5,224	5,238	4,851	5,102	5,112	4,725	122	126	126	2.3	2.4	2.6
Redwood	8,006	8,125	7,948	7,755	7,850	7,689	251	275	259	3.1	3.4	3.3
Rock	5,838	5,778	5,679	5,737	5,666	5,564	101	112	115	1.7	1.9	2.0
Region Nine	129,682	130,371	129,340	125,755	126,004	125,087	3,927	4,367	4,253	3.0	3.3	3.3
Blue Earth	38,237	37,997	38,505	37,233	36,871	37,357	1,004	1,126	1,148	2.6	3.0	3.0
Brown	14,490	14,713	14,054	14,043	14,206	13,597	447	507	457	3.1	3.4	3.3
Faribault	7,497	7,587	7,490	7,235	7,298	7,217	262	289	273	3.5	3.8	3.6
Le Sueur	15,575	15,800	15,463	15,075	15,215	14,881	500	585	582	3.2	3.7	3.8
Martin	10,043	10,363	10,066	9,651	9,956	9,674	392	407	392	3.9	3.9	3.9
Nicollet	19,612	19,500	19,683	19,140	18,979	19,176	472	521	507	2.4	2.7	2.6
Sibley	8,558	8,681	8,355	8,279	8,374	8,075	279	307	280	3.3	3.5	3.4
Waseca	9,524	9,631	9,700	9,182	9,255	9,315	342	376	385	3.6	3.9	4.0
Watsonwan	6,146	6,099	6,024	5,917	5,850	5,795	229	249	229	3.7	4.1	3.8
Region Ten	276,688	279,245	276,001	268,831	270,387	267,453	7,857	8,858	8,548	2.8	3.2	3.1
Dodge	11,237	11,445	11,198	10,889	11,066	10,856	348	379	342	3.1	3.3	3.1
Fillmore	11,103	11,342	11,004	10,758	10,945	10,651	345	397	353	3.1	3.5	3.2
Freeborn	16,225	16,256	16,128	15,718	15,689	15,556	507	567	572	3.1	3.5	3.5
Goodhue	26,874	27,147	26,747	26,085	26,270	25,902	789	877	845	2.9	3.2	3.2
Houston	10,349	10,318	10,337	10,053	9,971	10,005	296	347	332	2.9	3.4	3.2
Mower	20,342	20,466	20,261	19,803	19,876	19,622	539	590	639	2.6	2.9	3.2
Olmsted	81,889	83,312	82,544	79,795	80,995	80,173	2,094	2,317	2,371	2.6	2.8	2.9
City of Rochester	60,237	61,268	60,712	58,648	59,530	58,926	1,589	1,738	1,786	2.6	2.8	2.9
Rice	35,609	35,737	35,083	34,488	34,445	33,908	1,121	1,292	1,175	3.1	3.6	3.3
Steele	21,376	21,437	21,503	20,765	20,737	20,851	611	700	652	2.9	3.3	3.0
Wabasha	11,811	12,057	11,747	11,474	11,672	11,384	337	385	363	2.9	3.2	3.1
Winona	29,873	29,728	29,449	29,003	28,721	28,545	870	1,007	904	2.9	3.4	3.1
Region Eleven	1,645,704	1,662,406	1,637,356	1,594,340	1,606,818	1,581,023	51,364	55,588	56,333	3.1	3.3	3.4
Anoka	190,285	192,170	189,265	184,079	185,493	182,495	6,206	6,677	6,770	3.3	3.5	3.6
Carver	54,162	54,701	53,776	52,619	53,056	52,089	1,543	1,645	1,687	2.8	3.0	3.1
Dakota	232,636	234,936	231,401	225,634	227,353	223,694	7,002	7,583	7,707	3.0	3.2	3.3
Hennepin	675,541	682,424	672,355	654,352	659,546	649,164	21,189	22,878	23,191	3.1	3.4	3.4
City of Bloomington	46,851	47,375	46,724	45,430	45,790	45,070	1,421	1,585	1,654	3.0	3.3	3.5
City of Minneapolis	229,431	231,945	228,413	222,079	223,842	220,319	7,352	8,103	8,094	3.2	3.5	3.5
Ramsey	278,506	281,476	277,184	269,219	271,333	266,998	9,287	10,143	10,186	3.3	3.6	3.7
City of St. Paul	153,128	154,820	152,292	147,696	148,856	146,477	5,432	5,964	5,815	3.5	3.9	3.8
Scott	77,909	78,696	77,471	75,736	76,322	75,080	2,173	2,374	2,391	2.8	3.0	3.1
Washington	136,665	138,003	135,904	132,701	133,715	131,503	3,964	4,288	4,401	2.9	3.1	3.2



Industrial Analysis

Overview

Minnesota lost 5,700 jobs (0.2 percent), seasonally adjusted, in September. With the loss, the state gave back nearly all of the estimated 6,000 jobs it added in August. Educational and Health Services, which added 1,800 jobs in August, lost 2,200 (0.4 percent) in September. Other significant decreases occurred in Other Services (down 2,500 or 2.2 percent), Construction (down 1,700, 1.6 percent), and Trade, Transportation, and Utilities (1,900, 0.4 percent). Leisure and Hospitality (up 2,400 or 0.9 percent) and Professional and Business Services (up 1,800, 0.5 percent) added the most jobs on the month, and it was the second consecutive month of significant growth for both supersectors. Over the year, employment in the state was up by 35,242 jobs (1.2 percent). Once again, all of the growth was thanks to service providers (up 37,695 or 1.6 percent), as goods producers lost 2,453 jobs (0.6 percent) on the year, with most of that loss coming from a decline of 2,170 (1.8 percent) in Construction.

Mining and Logging

Employment in Mining and Logging was down by 100 jobs (1.5 percent) in September, following the addition of 600 jobs combined over the previous two months. Employment in Mining and Logging remains down over the year as well, with the supersector off by 429 jobs (5.8 percent) from September 2014.

Construction

Construction employment was down sharply in September as the supersector lost 1,700 jobs (1.6 percent). This was the third straight month of seasonally adjusted job losses in Construction, after

the supersector had added 4,600 jobs over the first six months of 2015. Employment in Construction also remains down over the year, losing 2,170 jobs (1.8 percent) since September of 2014. While Residential Building Construction remained up, adding 759 jobs (2.9 percent), Heavy and Civil Engineering Construction lost 1,067 jobs (5.4 percent), and Specialty Trade Contractors lost 1,862 (2.5 percent).

Manufacturing

Manufacturing employment was down slightly in September, with the supersector losing 100 jobs (0 percent) as Durable Goods manufacturers lost 700 jobs (0.3 percent). Non-Durable Goods manufacturers couldn't quite make up the difference, adding just 600 jobs (0.5 percent). Annually, Manufacturing employment remained just barely up, holding on to 146 (0 percent) more jobs than in September 2014. While Durable Goods Manufacturing's performance remains strong annually, up 2,681 jobs (1.3 percent), an annual loss of 2,535 jobs (2.2 percent) in Non-Durable Goods Manufacturing continues to be a drag on the supersector's employment growth.

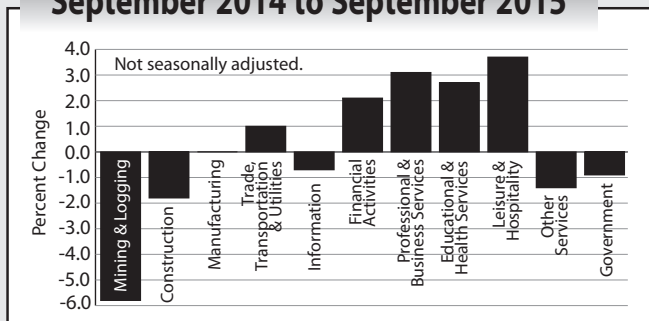
Trade, Transportation, and Utilities

Employment in Trade, Transportation, and Utilities was down in September, with the supersector losing 1,900 jobs over the month. Both Wholesale and Retail Trade shed jobs (down 1,200 or 0.9 percent and 1,100 or 0.4 percent, respectively), while Transportation, Warehousing, and Utilities added just 400 jobs (0.4 percent). The picture looks better on an annual basis, where the supersector has added 5,312 jobs (1 percent) over the year, with growth in Retail Trade (up 6,670 jobs or 2.3 percent) and Transportation, Warehousing, and Utilities (up 1,261, 1.3 percent). The loss of 2,619 (2 percent) in Wholesale Trade was broad-based, with all three component subsectors (Durable Goods Merchant Wholesalers, Nondurable Goods Merchant Wholesalers, and Wholesale Electronic Markets and Agents and Brokers) losing employment over the year.

Information

The Information supersector lost 500 jobs (0.9 percent) on a seasonally adjusted basis in September. Employment remained down on the year as well, with 357 (0.7 percent) fewer jobs in Information than there were in 2014. Publishing Industries (except Internet) lost 574 jobs (2.8 percent) while Telecommunications lost 243 jobs (1.8 percent).

MN Employment Growth September 2014 to September 2015



Source: Department of Employment and Economic Development, Current Employment Statistics, 2015.

*Over-the-year data are not seasonally adjusted because of small changes in seasonal adjustment factors from year to year. Also, there is no seasonality in over-the-year changes.

Financial Activities

The Financial Activities supersector lost 600 jobs (0.3 percent) in September. This marked the first monthly job loss since March, a span during which the supersector added a total of 4,500 jobs. The monthly loss was driven by a drop of 700 jobs (0.5 percent) in the Finance and Insurance sector, while Real Estate and Rental and Leasing added 100 jobs (0.3 percent). Over the year, Financial Activities added 3,744 jobs (2.1 percent), with a gain of 2,858 jobs (2.1 percent) in Finance and Insurance and 886 (2.3 percent) in Real Estate and Rental and Leasing.

Professional and Business Services

Professional and Business Services was one of few bright spots in the state labor market in September, adding 1,800 jobs (0.5 percent) for the month. The growth comes thanks to a large increase in Administrative and Support and Waste Management and Remediation Services, which added 2,400 jobs (1.7 percent). The supersector also performed well over the year, adding 11,109 jobs (3.1 percent), with the addition of 2,127 jobs (1.5 percent) in Professional, Scientific, and Technical Services and 9,740 jobs (7.1 percent) in Administrative and Support and Waste Management and Remediation Services more than covering for the loss of 758 jobs (1 percent) in Management of Companies and Enterprises.

Educational and Health Services

Educational and Health Services lost 2,200 jobs (0.4 percent) in September. Component sector Health Care and Social Assistance dropped 1,300 jobs (0.3 percent) while Educational Services lost 900 (1.3 percent). However, employment remains solidly up over the year, with 13,497 (2.7 percent) more jobs than in September 2014. Most of those jobs came from Health Care and Social Assistance, which added 11,702 jobs (2.7 percent), while the smaller Educational Services sector added 1,795 (also 2.7 percent).

Leisure and Hospitality

Leisure and Hospitality had the best performance of any supersector in September, adding a seasonally adjusted 2,400 jobs (0.9 percent). Accommodation and Food Services added 2,800 jobs (1.3 percent) while Arts, Entertainment, and Recreation lost 400

(0.9 percent). Annually, the supersector added 9,714 jobs (3.7 percent). Arts, Entertainment, and Recreation added 5,536 jobs (13 percent) while Accommodation and Food Services added 4,178 (1.9 percent) in spite of a drop of 1,677 (5.8 percent) in the Accommodation subsector.

Other Services

Other Services lost 2,500 jobs (2.2 percent) in September. The supersector's employment remained down on the year as well, off by 1,615 jobs (1.4 percent) from September 2014. While Repair and Maintenance added jobs (up 628 or 2.9 percent), Personal and Laundry Services lost 1,070 jobs (3.7 percent), and Religious, Grantmaking, Civic, Professional, and Similar Organizations lost 1,173 (1.9 percent).

Government

Government employers lost 300 jobs (0.1 percent) in September, with all of that decline coming from State Government, which shed 2,100 jobs (2.1 percent). Local Government added 1,700 jobs (0.6 percent), and Federal Government employers added 100 (0.3 percent). For the year, Government employment is down by 3,709 jobs (0.9 percent).

by Nick Dobbins

Seasonally Adjusted Nonfarm Employment

In 1,000's

Industry	September 2015	August 2015	July 2015
Total Nonagricultural	2,856.4	2,862.1	2,856.1
Goods-Producing	426.8	428.7	429.0
Mining and Logging	6.7	6.8	6.5
Construction	106.5	108.2	108.4
Manufacturing	313.6	313.7	314.1
Service-Providing	2,429.6	2,433.4	2,427.1
Trade, Transportation, and Utilities	522.7	524.6	524.9
Information	52.4	52.9	52.8
Financial Activities	182.2	182.8	181.1
Professional and Business Services	366.3	364.5	360.3
Educational and Health Services	513.0	515.2	513.4
Leisure and Hospitality	264.5	262.1	257.9
Other Services	112.0	114.5	114.4
Government	416.5	416.8	422.3

Source: Department of Employment and Economic Development
Current Employment Statistics, 2015.

Regional Analysis

Minneapolis-St. Paul-Bloomington Metropolitan Statistical Area (MSA)

Employment in the Minneapolis-St. Paul-Bloomington MSA was down in September as the metro lost 3,503 jobs (0.2 percent) on the month. Government employment added 15,254 jobs (6.7 percent) with the largest part of the increase 11,110 (16.3 percent) in Local Government Educational Services as employees began to return for the fall. However, this increase was more than overcome by smaller numbers of job losses in a variety of industry groups. Chief among the losses was a drop of 3,979 (4.9 percent) in Mining, Logging, and Construction as the summer season began winding down. Other supersectors to shed jobs included Trade, Transportation, and Utilities (down 3,963, 1.1 percent), Leisure and Hospitality (down 5,823, 3 percent), and Other Services (down 3,388, 4.2 percent). Over the year, the Twin Cities metro added 35,154 jobs (1.8 percent). Employment in Other Services dropped sharply, down by 3,353 (4.2 percent) over the year, joining Government (down 1,117 or 0.5 percent) and Information (down 224 or 0.6 percent) as the only supersectors to lose jobs on the year

Duluth-Superior MSA

The Duluth-Superior MSA added 338 jobs (0.2 percent) in September. Most supersectors lost jobs on the month, but a large increase in Government employment (up 1,909 or 7.9 percent) covered those losses. Educational and Health Services (up 63 or 0.2 percent) and Mining, Logging, and Construction (up 29 or 0.3 percent) also added jobs in September. Leisure and Hospitality (down 1,082 or 6.8 percent) and Professional and Business Services (down 114 or 1.3 percent) were among the supersectors with the biggest job losses. Annually, employment in Duluth was

up by 695 jobs (0.5 percent). The Other Services supersector, which was among the biggest over-the-month job losers, showed the largest proportional growth over the year, adding 263 jobs (4.4 percent). Other noteworthy annual growth occurred in Educational and Health Services (up 653 or 2.1 percent), Mining, Logging, and Construction (down 267, 2.6 percent), and Professional and Business Services (116, 1.4 percent).

Rochester MSA

The Rochester MSA dropped 1,061 jobs (0.9 percent) in September, which represents the largest proportional decline in any MSA in the state. Rochester is the only MSA not to see significant growth in Government employment in September (down 30 or 0.2 percent), and it also had uncommon job losses in Educational and Health Services (down 370 or 0.8 percent), both of which likely contributed to its weaker-than-normal performance. Annually, employment in Rochester was up by 413 jobs (0.4 percent), with notable growth in Trade, Transportation, and Utilities (up 432 or 2.5 percent) and Information (up 126 or 6.3 percent), among other industry groups.

St. Cloud MSA

Employment in the St. Cloud MSA was up 1,011 jobs (1 percent) over the month. The growth came largely on the strength of an additional 1,584 jobs (11.8 percent) in Government employment, with 1,444 of that coming from State Government. The only other supersector in the MSA to add jobs was Professional and Business Services, which was up just 120 (1.5 percent). Every other supersector lost jobs in September. Annually, St. Cloud lost 213 jobs (0.2 percent), making it the only metro area in Minnesota to lose employment

on the year. The largest numeric and proportional employment decline came in Mining, Logging, and Construction, which lost 270 jobs (4.1 percent).

Mankato-North Mankato MSA

Employment in the Mankato-North Mankato MSA was up by 1,004 (1.8 percent) in September. While most of that gain came from Government employment (up 844, 10.5 percent), the private sector chipped in with the addition of 160 jobs (0.3 percent). Service providers did most of the heavy lifting, adding 989 jobs (2.2 percent) to the goods producers' 15 (0.1 percent). Over the year, Mankato's employment was essentially flat, adding 17 jobs (0 percent) with goods producers adding 145 jobs (1.4 percent) and service providers losing 128 (0.3 percent).

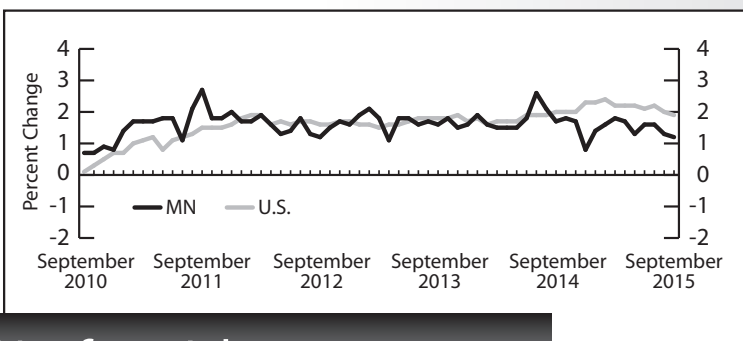
Fargo-Moorhead MSA

The Fargo-Moorhead MSA added 2,759 jobs (2.0 percent) in September, with Government employment (up 2,765 or 17.3 percent) once again driving the growth. The sharpest decline in jobs came in Mining, Logging, and Construction, which lost 268 (2.8 percent). Over the year, the Fargo-Moorhead MSA added 1,493 jobs (1.1 percent). Notable sources of growth included Leisure and Hospitality (up 1,003 or 7.1 percent), Government (up 602 or 3.3 percent), and Financial Activities (up 361 or 3.4 percent). As was the case over the month, the largest employment decline came from Mining, Logging, and Construction, which lost 324 jobs (3.3 percent) on the year.

Grand Forks-East Grand Forks MSA

Employment in the Grand Forks-East Grand Forks MSA was up by 2,263 (4.0 percent) in September. This was by far the largest proportional increase of any MSA in the state for the month. As was the case elsewhere, Local Government employment drove the growth, up 1,575 (37.7 percent), contributing to the addition of 2,193 jobs among all Government employers. Over the year, employment in the MSA was up by 920 (1.6 percent). The biggest numerical growth came in Trade, Transportation, and Utilities, which added 650 jobs (5.1 percent) while the largest proportional growth was in Mining, Logging, and Construction, which added 305 jobs (8.7 percent). Educational and Health Services employment had the most notable decline, down 273 (2.9 percent).

Source: Department of Employment and Economic Development, Current Employment Statistics, 2015; Bureau of Labor Statistics, U.S. Department of Labor, Current Employment Statistics, 2015.



Total Nonfarm Jobs U.S. and MN over-the-year percent change

by Nick Dobbins

Employer Survey of Minnesota Nonfarm Payroll Jobs, Hours and Earnings

Numbers are unadjusted.

Note: State, regional and local estimates from past months (for all tables pages 11-13) may be revised from figures previously published.

Industry	Jobs* (Thousands)			Percent Change: From**		Production Workers Hours and Earnings					
	Sept 2015	Aug 2015	Sept 2014	Aug 2015	Sept 2014	Average Weekly Earnings		Average Weekly Hours		Average Hourly Earnings	
						Sept 2015	Sept 2014	Sept 2015	Sept 2014	Sept 2015	Sept 2014
TOTAL NONFARM WAGE AND SALARY	2,872.4	2,881.9	2,837.1	-0.3%	1.2%	—	—	—	—	—	—
GOODS-PRODUCING	440.6	448.3	443.1	-1.7	-0.6	—	—	—	—	—	—
Mining and Logging	7.0	7.2	7.4	-2.0	-5.8	—	—	—	—	—	—
Construction	118.2	122.8	120.4	-3.7	-1.8	—	—	—	—	—	—
Specialty Trade Contractors	72.9	75.8	74.7	-3.8	-2.5	\$1,108.51	\$1,116.83	36.5	38.3	\$30.37	\$29.16
Manufacturing	315.4	318.3	315.2	-0.9	0.0	827.17	842.52	41.4	42.0	19.98	20.06
Durable Goods	202.7	204.7	200.0	-1.0	1.3	818.07	840.84	40.7	42.9	20.10	19.60
Wood Product Manufacturing	10.9	11.1	11.0	-1.9	-1.0	—	—	—	—	—	—
Fabricated Metal Production	43.8	44.2	42.6	-0.9	2.9	—	—	—	—	—	—
Machinery Manufacturing	33.0	33.1	32.6	-0.3	1.1	—	—	—	—	—	—
Computer and Electronic Product	45.6	46.1	45.0	-1.1	1.3	—	—	—	—	—	—
Navigational, Measuring, Electromedical and Control	25.5	25.7	25.3	-0.8	0.8	—	—	—	—	—	—
Transportation Equipment	11.6	11.7	11.7	-0.6	-0.9	—	—	—	—	—	—
Medical Equipment and Supplies Manufacturing	16.0	16.1	15.5	-0.6	2.9	—	—	—	—	—	—
Nondurable Goods	112.7	113.6	115.2	-0.8	-2.2	840.65	845.29	42.5	40.6	19.78	20.82
Food Manufacturing	45.9	46.3	47.5	-0.9	-3.3	—	—	—	—	—	—
Paper Manufacturing	31.8	31.8	33.1	0.0	-3.9	—	—	—	—	—	—
Printing and Related	22.9	22.9	23.8	-0.1	-3.8	—	—	—	—	—	—
SERVICE-PROVIDING	2,431.8	2,433.7	2,394.1	-0.1	1.6	—	—	—	—	—	—
Trade, Transportation, and Utilities	522.2	526.5	516.9	-0.8	1.0	—	—	—	—	—	—
Wholesale Trade	129.5	133.2	132.1	-2.8	-2.0	904.16	965.99	39.5	39.3	22.89	24.58
Retail Trade	295.0	299.3	288.3	-1.5	2.3	437.12	408.61	29.2	29.0	14.97	14.09
Motor Vehicle and Parts	34.9	35.0	33.5	-0.2	4.4	—	—	—	—	—	—
Building Material and Garden Equipment	26.1	27.0	25.8	-3.4	1.1	—	—	—	—	—	—
Food and Beverage Stores	51.4	52.3	51.0	-1.9	0.6	—	—	—	—	—	—
Gasoline Stations	24.5	24.8	24.1	-1.4	1.5	—	—	—	—	—	—
General Merchandise Stores	61.3	61.3	60.4	0.0	1.5	356.08	316.44	30.1	29.3	11.83	10.80
Transportation, Warehouse, Utilities	97.8	94.0	96.5	4.0	1.3	—	—	—	—	—	—
Transportation and Warehousing	84.6	80.8	83.4	4.7	1.4	700.73	631.89	34.4	34.7	20.37	18.21
Information	51.9	52.7	52.3	-1.4	-0.7	868.15	769.96	35.8	33.8	24.25	22.78
Publishing Industries	19.9	20.1	20.5	-1.0	-2.8	—	—	—	—	—	—
Telecommunications	13.3	13.3	13.5	-0.3	-1.8	—	—	—	—	—	—
Financial Activities	182.2	184.6	178.4	-1.3	2.1	—	—	—	—	—	—
Finance and Insurance	142.2	143.3	139.4	-0.8	2.1	877.85	884.66	35.1	35.5	25.01	24.92
Credit Intermediation	54.8	55.9	54.5	-1.9	0.6	721.07	718.59	34.7	34.9	20.78	20.59
Securities, Commodity Contracts, and Other	18.9	18.8	18.5	0.8	2.0	—	—	—	—	—	—
Insurance Carriers and Related	67.5	67.9	65.0	-0.7	3.7	—	—	—	—	—	—
Real Estate and Rental and Leasing	40.0	41.2	39.1	-3.1	2.3	—	—	—	—	—	—
Professional and Business Services	367.2	372.0	356.1	-1.3	3.1	—	—	—	—	—	—
Professional, Scientific, and Technical Services	142.6	145.1	140.5	-1.7	1.5	—	—	—	—	—	—
Legal Services	17.9	18.1	18.0	-1.1	-0.5	—	—	—	—	—	—
Accounting, Tax Preparation	16.5	16.7	15.6	-1.5	5.2	—	—	—	—	—	—
Computer Systems Design	38.3	38.5	33.4	-0.4	14.7	—	—	—	—	—	—
Management of Companies and Enterprises	76.9	77.9	77.6	-1.3	-1.0	—	—	—	—	—	—
Administrative and Support Services	147.8	149.0	138.0	-0.8	7.1	—	—	—	—	—	—
Educational and Health Services	512.2	508.8	498.7	0.7	2.7	—	—	—	—	—	—
Educational Services	67.9	61.0	66.1	11.4	2.7	—	—	—	—	—	—
Health Care and Social Assistance	444.3	447.8	432.6	-0.8	2.7	—	—	—	—	—	—
Ambulatory Health Care	142.7	144.1	138.9	-0.9	2.8	1,257.58	1,214.50	35.9	34.7	35.03	35.00
Offices of Physicians	67.9	68.1	66.4	-0.3	2.2	—	—	—	—	—	—
Hospitals	106.6	106.8	104.7	-0.2	1.8	—	—	—	—	—	—
Nursing and Residential Care Facilities	106.0	107.7	105.6	-1.6	0.4	458.93	436.30	29.4	29.4	15.61	14.84
Social Assistance	88.9	89.2	83.4	-0.3	6.7	—	—	—	—	—	—
Leisure and Hospitality	273.4	283.4	263.7	-3.5	3.7	—	—	—	—	—	—
Arts, Entertainment, and Recreation	48.0	53.6	42.5	-10.5	13.0	—	—	—	—	—	—
Accommodation and Food Services	225.4	229.8	221.2	-1.9	1.9	—	—	—	—	—	—
Food Services and Drinking Places	198.4	200.5	192.5	-1.0	3.0	262.06	255.67	20.7	21.2	12.66	12.06
Other Services	112.0	114.6	113.6	-2.3	-1.4	—	—	—	—	—	—
Religious, Grantmaking, Civic, Professional Organizations	62.2	63.2	63.3	-1.7	-1.9	—	—	—	—	—	—
Government	410.6	391.1	414.3	5.0	-0.9	—	—	—	—	—	—
Federal Government	31.6	31.6	31.2	-0.3	1.0	—	—	—	—	—	—
State Government	104.4	93.5	106.9	11.6	-2.3	—	—	—	—	—	—
State Government Education	63.2	54.3	65.7	16.5	-3.7	—	—	—	—	—	—
Local Government	274.6	265.9	276.2	3.3	-0.6	—	—	—	—	—	—
Local Government Education	125.8	111.2	129.1	13.1	-2.5	—	—	—	—	—	—

Note: Not all industry subgroups are shown for every major industry category.

* Totals may not add because of rounding.

** Percent change based on unrounded numbers.

Source: Department of Employment and Economic Development, Current Employment Statistics, 2015.

Employer Survey of Twin Cities Nonfarm Payroll Jobs, Hours and Earnings

Numbers are unadjusted.

Note: State, regional and local estimates from past months (for all tables pages 11-13) may be revised from figures previously published.

Industry	Jobs* (Thousands)			Percent Change From**		Production Workers Hours and Earnings					
	Sept 2015	Aug 2015	Sept 2014	Aug 2015	Sept 2014	Average Weekly Earnings		Average Weekly Hours		Average Hourly Earnings	
						Sept 2015	Sept 2014	Sept 2015	Sept 2014	Sept 2015	Sept 2014
TOTAL NONFARM WAGE AND SALARY	1,944.2	1,947.7	1,909.1	-0.2%	1.8%	—	—	—	—	—	—
GOODS-PRODUCING	272.3	277.2	269.3	-1.8	1.1	—	—	—	—	—	—
Mining, Logging, and Construction	77.8	81.8	77.6	-4.9	0.2	—	—	—	—	—	—
Construction of Buildings	17.3	17.8	16.5	-2.9	4.9	—	—	—	—	—	—
Specialty Trade Contractors	51.7	53.9	50.6	-4.1	2.2	\$1,202.68	\$1,248.58	37.2	38.8	\$32.33	\$32.18
Manufacturing	194.5	195.4	191.7	-0.5	1.5	871.66	874.49	41.0	42.4	21.26	20.62
Durable Goods	133.1	133.8	130.7	-0.5	1.8	846.25	865.96	41.1	43.0	20.59	20.12
Fabricated Metal Production	29.9	30.1	29.1	-1.0	2.6	—	—	—	—	—	—
Machinery Manufacturing	20.3	20.4	20.1	-0.3	1.2	—	—	—	—	—	—
Computer and Electronic Product	36.4	36.9	36.0	-1.2	1.2	—	—	—	—	—	—
Navigational, Measuring, Electromedical and Control	23.7	23.9	23.7	-0.8	0.3	—	—	—	—	—	—
Medical Equipment and Supplies Manufacturing	14.8	14.8	14.1	-0.3	4.7	—	—	—	—	—	—
Nondurable Goods	61.4	61.7	61.0	-0.4	0.7	919.82	909.53	40.7	41.0	22.60	22.20
Food Manufacturing	14.9	15.0	15.2	-0.7	-2.3	—	—	—	—	—	—
Printing and Related	15.2	15.1	15.5	0.3	-2.2	—	—	—	—	—	—
SERVICE-PROVIDING	1,671.9	1,670.5	1,639.7	0.1	2.0	—	—	—	—	—	—
Trade, Transportation, and Utilities	343.2	347.2	342.2	-1.1	0.3	—	—	—	—	—	—
Wholesale Trade	93.7	95.8	96.4	-2.2	-2.8	901.71	917.16	38.7	38.6	23.30	23.73
Merchant Wholesalers - Durable Goods	47.4	48.4	47.6	-2.0	-0.5	—	—	—	—	—	—
Merchant Wholesalers - Nondurable Goods	27.5	28.0	27.7	-1.6	-0.5	—	—	—	—	—	—
Retail Trade	182.0	185.9	179.8	-2.1	1.2	472.45	443.53	30.5	30.1	15.49	14.74
Food and Beverage Stores	30.5	31.2	30.2	-2.2	1.0	—	—	—	—	—	—
General Merchandise Stores	38.5	38.9	37.4	-1.0	3.1	369.72	330.80	31.2	30.5	11.85	10.86
Transportation, Warehouse, Utilities	67.5	65.5	66.0	3.0	2.3	—	—	—	—	—	—
Utilities	8.0	8.0	7.8	0.1	1.7	—	—	—	—	—	—
Transportation and Warehousing	59.5	57.5	58.1	3.5	2.3	763.73	791.12	36.7	41.4	20.81	19.10
Information	39.2	39.6	39.4	-1.0	-0.6	—	—	—	—	—	—
Publishing Industries	16.2	16.4	16.2	-1.0	-0.3	—	—	—	—	—	—
Telecommunications	9.7	9.7	9.9	-0.1	-1.9	—	—	—	—	—	—
Financial Activities	149.1	150.7	145.0	-1.0	2.9	—	—	—	—	—	—
Finance and Insurance	116.6	117.4	112.7	-0.7	3.4	890.69	945.18	33.7	34.4	26.43	27.50
Credit Intermediation	39.8	40.5	39.2	-1.7	1.5	—	—	—	—	—	—
Securities, Commodity Contracts, and Other	16.6	16.7	16.7	-0.3	-0.6	—	—	—	—	—	—
Insurance Carriers and Related	57.2	57.5	55.7	-0.6	2.7	—	—	—	—	—	—
Real Estate and Rental and Leasing	32.6	33.3	32.3	-2.1	1.0	—	—	—	—	—	—
Professional and Business Services	315.0	317.2	301.6	-0.7	4.4	—	—	—	—	—	—
Professional, Scientific, and Technical Services	128.0	128.9	121.6	-0.7	5.3	—	—	—	—	—	—
Legal Services	15.2	15.4	15.2	-1.2	-0.1	—	—	—	—	—	—
Architectural, Engineering, and Related	16.9	17.2	16.7	-1.7	1.6	—	—	—	—	—	—
Computer Systems Design	33.0	33.4	30.8	-1.3	7.1	—	—	—	—	—	—
Management of Companies and Enterprises	69.8	70.4	70.5	-0.8	-1.0	—	—	—	—	—	—
Administrative and Support Services	117.1	118.0	109.5	-0.7	7.0	—	—	—	—	—	—
Employment Services	57.2	56.4	53.6	1.4	6.6	—	—	—	—	—	—
Educational and Health Services	316.6	313.1	306.9	1.1	3.2	—	—	—	—	—	—
Educational Services	41.8	37.4	44.0	11.8	-5.1	—	—	—	—	—	—
Health Care and Social Assistance	274.8	275.7	262.8	-0.3	4.6	—	—	—	—	—	—
Ambulatory Health Care	87.3	87.5	83.7	-0.3	4.3	—	—	—	—	—	—
Hospitals	63.7	63.7	61.8	0.1	3.2	—	—	—	—	—	—
Nursing and Residential Care Facilities	60.0	60.6	58.4	-1.0	2.8	—	—	—	—	—	—
Social Assistance	63.8	63.9	59.0	-0.2	8.2	—	—	—	—	—	—
Leisure and Hospitality	188.8	194.6	180.2	-3.0	4.8	—	—	—	—	—	—
Arts, Entertainment, and Recreation	35.1	39.0	32.6	-9.8	7.9	—	—	—	—	—	—
Accommodation and Food Services	153.7	155.7	147.6	-1.3	4.1	278.86	288.42	21.6	22.8	12.91	12.65
Food Services and Drinking Places	140.1	141.6	133.6	-1.0	4.8	269.98	281.68	20.8	22.1	12.98	12.74
Other Services	76.5	79.8	79.8	-4.2	-4.2	—	—	—	—	—	—
Repair and Maintenance	14.0	14.4	14.3	-2.9	-2.3	—	—	—	—	—	—
Religious, Grantmaking, Civic, Professional Organizations	41.5	43.2	43.1	-4.0	-3.7	—	—	—	—	—	—
Government	243.5	228.3	244.7	6.7	-0.5	—	—	—	—	—	—
Federal Government	20.5	20.5	20.3	-0.1	1.2	—	—	—	—	—	—
State Government	71.8	64.3	72.4	11.6	-0.9	—	—	—	—	—	—
State Government Education	43.2	37.8	44.0	14.3	-1.9	—	—	—	—	—	—
Local Government	151.3	143.5	152.0	5.4	-0.5	—	—	—	—	—	—
Local Government Education	79.4	68.3	81.1	16.3	-2.1	—	—	—	—	—	—

Note: Not all industry subgroups are shown for every major industry category.

* Totals may not add because of rounding.

** Percent change based on unrounded numbers.

Source: Department of Employment and Economic Development, Current Employment Statistics, 2015.

Employer Survey

Industry

	Duluth-Superior MSA					Rochester MSA				
	Jobs			% Chg. From		Jobs			% Chg. From	
	Sept 2015	Aug 2015	Sept 2014	Aug 2015	Sept 2014	Sept 2015	Aug 2015	Sept 2014	Aug 2015	Sept 2014
TOTAL NONFARM WAGE AND SALARY	136,429	136,091	135,734	0.2%	0.5%	115,720	116,781	115,307	-0.9%	0.4%
GOODS-PRODUCING	17,227	17,292	17,493	-0.4	-1.5	15,615	16,109	15,814	-3.1	-1.3
Mining, Logging, and Construction	9,949	9,920	10,216	0.3	-2.6	4,424	4,649	4,560	-4.8	-3.0
Manufacturing	7,278	7,372	7,277	-1.3	0.0	11,191	11,460	11,254	-2.3	-0.6
SERVICE-PROVIDING	119,202	118,799	118,241	0.3	0.8	100,105	100,672	99,493	-0.6	0.6
Trade, Transportation, and Utilities	25,332	25,446	25,408	-0.4	-0.3	17,938	17,724	17,506	1.2	2.5
Wholesale Trade	3,360	3,368	3,376	-0.2	-0.5	2,565	2,604	2,559	-1.5	0.2
Retail Trade	15,308	15,307	15,519	0.0	-1.4	12,382	12,267	12,101	0.9	2.3
Transportation, Warehouse, Utilities	6,664	6,771	6,513	-1.6	2.3	2,991	2,853	2,846	4.8	5.1
Information	1,359	1,387	1,396	-2.0	-2.7	2,120	2,141	1,994	-1.0	6.3
Financial Activities	5,462	5,497	5,438	-0.6	0.4	2,746	2,766	2,794	-0.7	-1.7
Professional and Business Services	8,572	8,686	8,456	-1.3	1.4	5,790	5,792	5,932	0.0	-2.4
Educational and Health Services	31,583	31,520	30,930	0.2	2.1	45,237	45,607	45,147	-0.8	0.2
Leisure and Hospitality	14,719	15,801	14,789	-6.8	-0.5	10,311	10,656	10,167	-3.2	1.4
Other Services	6,184	6,380	5,921	-3.1	4.4	3,661	3,654	3,689	0.2	-0.8
Government	25,991	24,082	25,903	7.9	0.3	12,302	12,332	12,264	-0.2	0.3

Employer Survey

Industry

	St. Cloud MSA					Mankato MSA				
	Jobs			% Chg. From		Jobs			% Chg. From	
	Sept 2015	Aug 2015	Sept 2014	Aug 2015	Sept 2014	Sept 2015	Aug 2015	Sept 2014	Aug 2015	Sept 2014
TOTAL NONFARM WAGE AND SALARY	107,112	106,101	107,325	1.0%	-0.2%	55,422	54,418	55,405	1.8%	0.0%
GOODS-PRODUCING	21,811	22,035	22,089	-1.0	-1.3	10,384	10,369	10,239	0.1	1.4
Mining, Logging, and Construction	6,268	6,381	6,538	-1.8	-4.1	--	--	--	--	--
Manufacturing	15,543	15,654	15,551	-0.7	-0.1	--	--	--	--	--
SERVICE-PROVIDING	85,301	84,066	85,236	1.5	0.1	45,038	44,049	45,166	2.2	-0.3
Trade, Transportation, and Utilities	21,540	21,603	21,644	-0.3	-0.5	--	--	--	--	--
Wholesale Trade	4,784	4,794	4,546	-0.2	5.2	--	--	--	--	--
Retail Trade	12,905	12,969	13,288	-0.5	-2.9	--	--	--	--	--
Transportation, Warehouse, Utilities	3,851	3,840	3,810	0.3	1.1	--	--	--	--	--
Information	1,590	1,594	1,611	-0.3	-1.3	--	--	--	--	--
Financial Activities	4,853	4,903	4,825	-1.0	0.6	--	--	--	--	--
Professional and Business Services	8,156	8,036	8,247	1.5	-1.1	--	--	--	--	--
Educational and Health Services	21,580	21,592	21,281	-0.1	1.4	--	--	--	--	--
Leisure and Hospitality	8,864	9,157	8,925	-3.2	-0.7	--	--	--	--	--
Other Services	3,679	3,726	3,654	-1.3	0.7	--	--	--	--	--
Government	15,039	13,455	15,049	11.8	-0.1	8,920	8,076	8,792	10.5	1.5

Employer Survey

Industry

	Fargo-Moorhead MSA					Grand Forks-East Grand Forks MSA				
	Jobs			% Chg. From		Jobs			% Chg. From	
	Sept 2015	Aug 2015	Sept 2014	Aug 2015	Sept 2014	Sept 2015	Aug 2015	Sept 2014	Aug 2015	Sept 2014
TOTAL NONFARM WAGE AND SALARY	141,122	138,363	139,629	2.0%	1.1%	58,436	56,173	57,516	4.0%	1.6%
GOODS-PRODUCING	19,636	19,614	20,145	0.1	-2.5	7,937	7,913	7,421	0.3	7.0
Mining, Logging, and Construction	9,425	9,693	9,749	-2.8	-3.3	3,800	3,939	3,495	-3.5	8.7
Manufacturing	10,211	9,921	10,396	2.9	-1.8	4,137	3,974	3,926	4.1	5.4
SERVICE-PROVIDING	121,486	118,749	119,484	2.3	1.7	50,499	48,260	50,095	4.6	0.8
Trade, Transportation, and Utilities	30,451	30,535	30,240	-0.3	0.7	13,375	13,280	12,725	0.7	5.1
Wholesale Trade	9,289	9,386	9,190	-1.0	1.1	2,000	2,036	1,974	-1.8	1.3
Retail Trade	16,066	16,171	15,821	-0.7	1.6	9,101	8,967	8,596	1.5	5.9
Transportation, Warehouse, Utilities	5,096	4,978	5,229	2.4	-2.5	2,274	2,277	2,155	-0.1	5.5
Information	3,233	3,232	3,310	0.0	-2.3	610	615	616	-0.8	-1.0
Financial Activities	10,901	10,960	10,540	-0.5	3.4	1,784	1,777	1,754	0.4	1.7
Professional and Business Services	16,032	16,101	16,339	-0.4	-1.9	3,108	3,186	3,145	-2.5	-1.2
Educational and Health Services	21,586	21,501	21,490	0.4	0.5	9,282	9,469	9,555	-2.0	-2.9
Leisure and Hospitality	15,219	15,141	14,216	0.5	7.1	6,145	5,952	6,045	3.2	1.7
Other Services	5,305	5,285	5,192	0.4	2.2	2,063	2,042	2,063	1.0	0.0
Government	18,759	15,994	18,157	17.3	3.3	14,132	11,939	14,192	18.4	-0.4

Source: Department of Employment and Economic Development, Current Employment Statistics, and North Dakota Job Service, 2015.

Minnesota Economic Indicators

Highlights

After four straight months of 0.2 percent increases, the **Minnesota Index** climbed 0.3 percent in September. The index picked up speed despite the largest wage and salary employment drop in 12 months. Job loss was offset by an uptick in weekly manufacturing hours and a decline in the unemployment rate. The U.S. index advanced 0.2 percent for the sixth straight month. Minnesota's index advanced faster than the U.S. index for the second straight month. Minnesota's index is up 3.1 percent over the year compared to the 3.2 gain recorded by the U.S. index.

Adjusted Wage and Salary Employment declined by 5,700 jobs in September with most of the loss in the private sector. September's drop was the largest since last September. Private sector payrolls fell by 5,400 jobs while public sector payrolls were trimmed by 300 jobs, both seasonally adjusted. Job cutbacks were highest in Other Services, in Educational and Health Services, in Trade, Transportation, and Utilities, and in Construction. Payroll numbers expanded only in Professional and Business Services and in Leisure and Hospitality.

Manufacturing has lost jobs for five straight months, the longest losing streak since 2009. A slowing global economy along with a stronger dollar seems to be taking a toll on Minnesota manufacturers. Trade, Transportation, and Utilities has also lost jobs over the last four months which also hasn't occurred since 2009. The 2,500 drop in

Other Services employment is likely to be revised lower as September's plunge was the largest on record.

Minnesota's unadjusted over-the-year job growth was 1.2 percent in September, the lowest annual gain since January 2014. The U.S. rate also dropped to 1.9 percent, its lowest rate since last January. Minnesota's job growth has lagged behind U.S. growth for nine months in a row.

Minnesota's adjusted online **Help-Wanted Ads** ticked down 2.4 percent in September. U.S. online advertising also fell, inching down 2.6 percent. Online job ads are up 9.0 percent in Minnesota compared to 12 months ago, suggesting that labor demand remains robust in the state. Online help-wanted ads nationally are up 5.0 percent from a year ago.

Minnesota's **Purchasing Managers' Index (PMI)** bounced up in September to 53.0. Minnesota's PMI index continues to come in higher than the U.S. (50.2) and Mid-American (47.7) indices. Both of these indices fell in September. A PMI above 50 indicates an expansionary economy, and a reading below 50 suggest a sluggish economy over the next three to six months. Minnesota's index is pointing towards moderate economic expansion for the rest of the year.

Adjusted Manufacturing Hours climbed for the third month in a row to 41.0 in September. The factory workweek hasn't been this high since February. The longer factory workweek is consistent with a higher PMI but inconsistent with falling manufacturing employment.

Manufacturing Earnings, after accelerating sharply in August, dropped sharply in September, falling to \$818.30, the smallest paycheck in over three years.

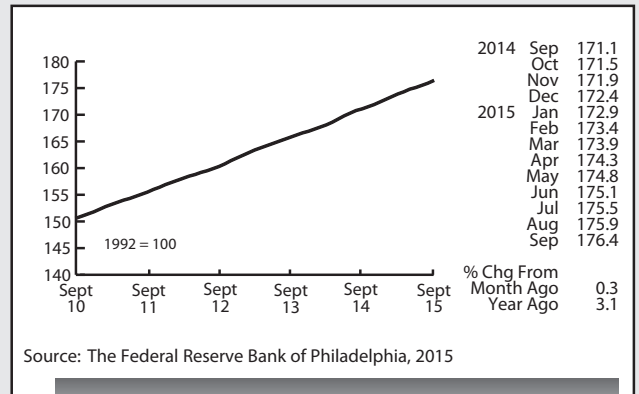
After reaching an 18-month high last month,

the **Minnesota Leading Index** slipped slightly in September to 2.17. The index has average 1.65 since 2010 so the 2.17 reading suggests that Minnesota's economic growth over the next six months will be above the average rate achieved over the last five years. Minnesota's leading index has been running above the U.S. leading index for the last three months, implying that economic growth in Minnesota will be stronger than nationally during the last few months of 2015 and the first few months of next year.

Adjusted Residential Building Permits dipped slightly in September to 1,679 but on an unadjusted basis were 20.3 percent higher than a year ago. Residential permits have totaled 13,536 through September compared to 11,359 over the same period last year. That is a 19.1 percent increase in permit activity in 2015 compared to 2014.

Adjusted Initial Claims for Unemployment Benefits (UB) dropped in September to 18,351. As of September, initial claims have averaged 0.69 percent of total wage and salary employment. That is the fourth lowest average over the last 45 years. Only the boom years of 1998, 1999, and 2000 have recorded lower levels. The highest levels were recorded in 1975, 1980, 1982, and 2009. Those were all recession years while the boom years were periods of tight labor markets with low unemployment and labor shortages across many industries. Labor shortages are developing in Minnesota which may be acting as a drag on job growth.

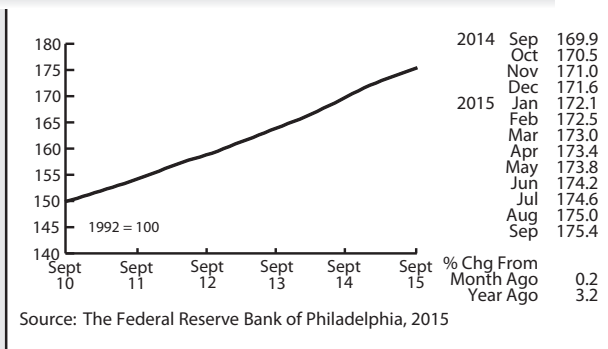
by Dave Senf



Source: The Federal Reserve Bank of Philadelphia, 2015

Minnesota Index

United States Index

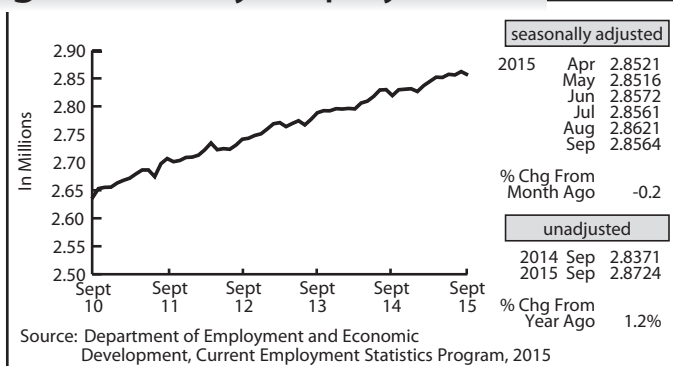


Source: The Federal Reserve Bank of Philadelphia, 2015

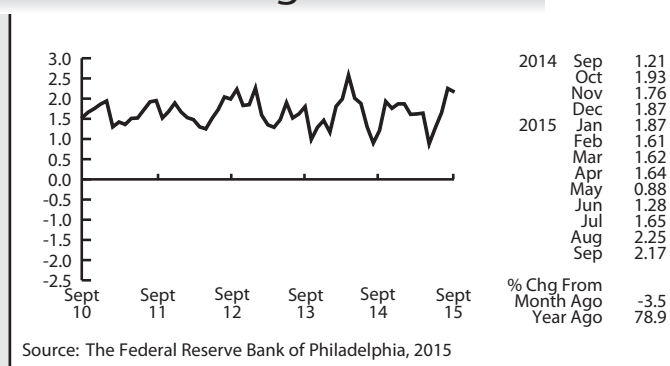
Note: All data except for Minnesota's PMI have been seasonally adjusted. See the feature article in the Minnesota Employment Review, May 2010, for more information on the Minnesota Index.

Minnesota Economic Indicators

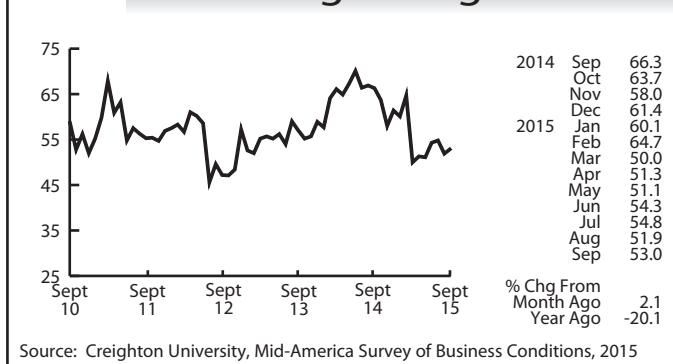
Wage and Salary Employment



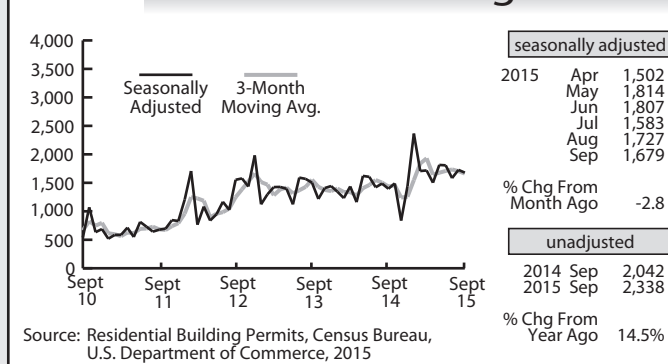
Minnesota Leading Index



Purchasing Managers' Index



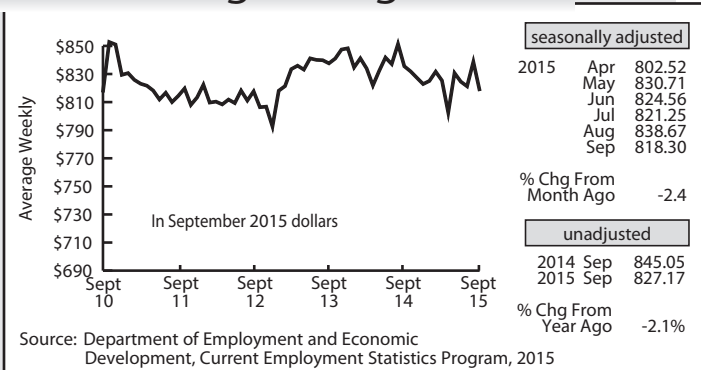
Residential Building Permits



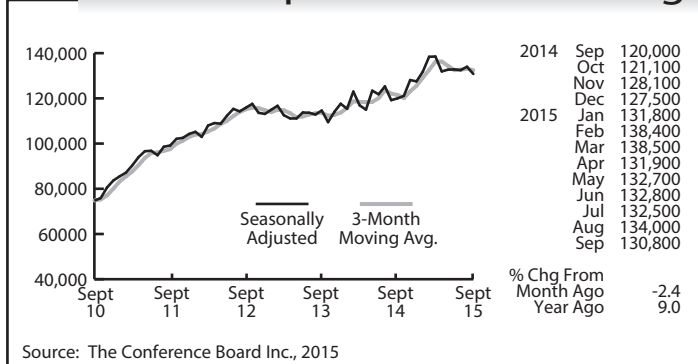
Average Weekly Manufacturing Hours



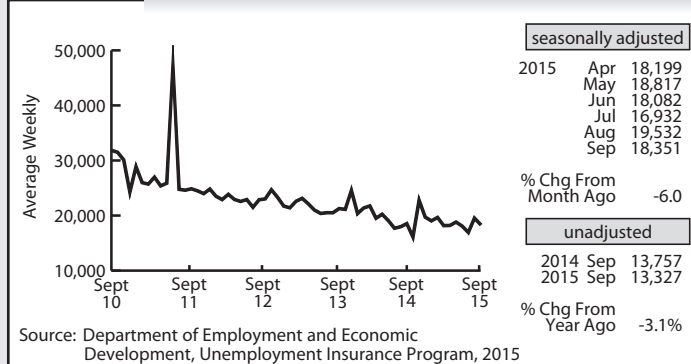
Manufacturing Earnings



Online Help-Wanted Advertising



Initial UB Claimants



Review

Minnesota Employment



DEED

Labor Market Information Office

1st National Bank Building
332 Minnesota Street, Suite E200
St. Paul, MN 55101-1351
651.259.7400 (voice)
1.888.234.1114 (toll free)
651.296.3900 (TTY)
1.800.657.3973 (TTY toll free)
e-mail :
DEED.lmi@state.mn.us
Internet :
mn.gov/deed/lmi

Labor Market Information

Help Line:

651.259.7384

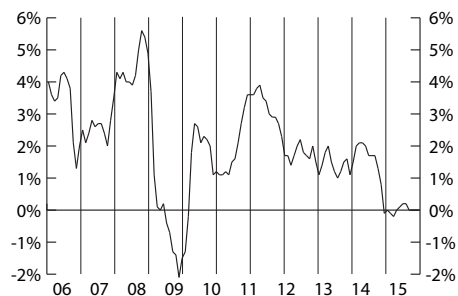
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U.S. Consumer Price Index for All Urban Consumers (CPI-U)

The Consumer Price Index for All Urban Consumers (CPI-U) decreased 0.2 percent in September on a seasonally adjusted basis the U.S. Bureau of Labor Statistics reported today. The energy index fell 4.7 percent in September, with all major component indices declining. The gasoline index continued to fall sharply and was again the main cause of the all items decrease. The indices for fuel oil, electricity, and natural gas declined as well. The indices for food and for all items less food and energy both accelerated in September. The food index rose 0.4 percent, its largest increase since May 2014. The index for all items less food and energy rose 0.2 percent in September. The all items index was essentially unchanged for the 12 months ending September after posting a 0.2 percent increase for the 12 months ending August.

Percent Change From One Year Ago



For more information
on the U.S. CPI
or the semi-annual
Minneapolis-St. Paul CPI, call:
651.259.7384
or toll free 1.888.234.1114.

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What's Going On?

FREE Career Fair

Robotics Alley will host a free Career Fair and Career Development Workshops from 1:30-4:45 p.m., Wed., Dec. 2 at the Hyatt Regency Minneapolis.

This event will bring together a variety of Twin Cities companies looking to hire talented engineers and other skilled workers. There will be plenty of networking opportunities for job seekers in the fields of manufacturing, engineering and other robotics and technology-related areas.

Workshops include:

2:30-3:15 p.m. — How to Navigate LinkedIn,
Mike Lang, DEED

3:30-4:15 p.m. — Careers in Demand — Know
Your Market, Tim O'Neill, DEED

These events are open to the public and walk-ins are welcome. For more information, see <http://www.roboticsalley.org/>.

Minnesota
Department of Employment and Economic Development



Making Sense of Labor Market Returns to Higher Education for Older Graduates

Data Sources:

The sources for all data in this article are the Minnesota Department of Employment and Economic Development Unemployment Insurance wage records and claims records and the Minnesota Office of Higher Education post-secondary graduation records.

Included in the initial dataset:

38,630 graduates who earned a sub-baccalaureate award from July 2009 to June 2012 at 133 private and public post-secondary institutions in Minnesota and were between 26 and 55 years of age at the time of graduation. Graduates who earned more than one degree during school years 2010, 2011, and 2012 were classified according to the highest degree obtained. Graduates older than 55 represented only 1.7 percent of the total and have been excluded for the sake of simplicity.

Included in the smaller longitudinal dataset used for measuring wage outcomes:

20,747 graduates who earned a one- to two-year award in Minnesota, were between 26 and 55 years of age at the time of graduation, had a valid Social Security Number, and were employed in Minnesota both three years before and three years after graduation. Graduates who were self-employed, employed with the federal government, or employed out of state are not included in the longitudinal dataset because they are not covered by Minnesota's Unemployment Insurance program.

Over the past several years rates of enrollment of students over age 25 has been on the rise. Today, the growth in the adult student population is one of the most significant trends in higher education. Adult students are likely to choose a sub-baccalaureate award (i.e., a certificate or Associate's degree) with flexible course scheduling that allows them to stay in their jobs and attend school part time. In Minnesota half (49 percent) of those who earned a sub-baccalaureate award as their highest degree from July 2009 to June 2012 were over 25 at the time of graduation, and 30 percent were over 30.

One of the main challenges to implementing performance measurement in post-secondary programs targeted at adult students, including job training programs, is the inappropriateness of indicators based on post-college experiences only, which fail to take into account the influence of pre-college work experience on job placement rates and earnings gains.

The question addressed by this article is how prior work experience can be measured and used to explain differences in labor market outcomes among older undergraduate completers. Measures of labor market success tailored around this emerging

population of learners can help higher education institutions demonstrate impact and target student counseling activities to those most in need.

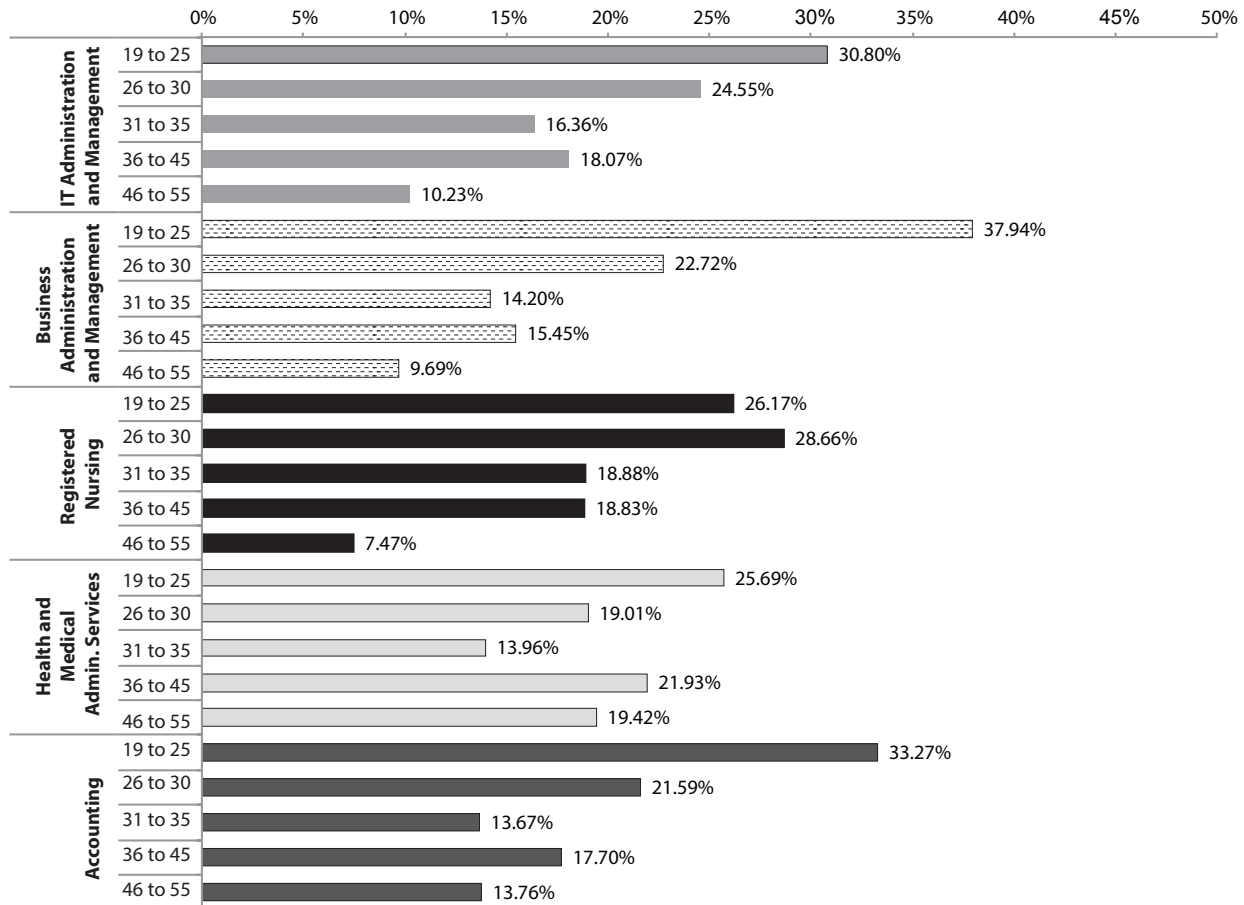
What Do Non-traditional Age Students Study in College?

Non-traditional age undergraduate students consist of many subgroups, each with unique backgrounds, educational needs, and goals. They might be in school to improve their occupational skills to advance in their current career, prepare for a completely different career, or simply for enjoyment. Some may return to college after having dropped out because of personal, financial, or other reasons. Among those who completed a sub-baccalaureate award in Minnesota from July 2009 to June 2012, 62 percent were females and 70 percent graduated from a two-year community college.

To put a face on this diverse population let's look at majors where the greatest numbers of completers over age 30 were concentrated. The five largest sub-baccalaureate level majors with a proportion of older completers higher than 40 percent are shown in Figure 1.

Figure 1

Largest Majors with the Highest Concentration of Completers Age 31-55, All Sub-baccalaureate Awards, Classes of 2010, 2011, 2012



Source: Minnesota Office of Higher Education

Their technical/occupational orientation makes them popular with adult learners as tickets for in-demand careers. For example, an Associate’s degree in Registered Nursing is required to obtain a license to practice as an RN, and some Accounting programs meet the requirements to earn a CPA certificate.

The Challenges of Measuring Older Graduates’ Success in the Labor Market After College

Increased wages are a clear goal for investing in education. However, in the case of graduates over age 30 it

is more difficult to quantify wage increases, let alone determine if they are attributable to educational attainment. Given their ages, many students were employed prior to enrollment, with different work histories leading to large disparities in earnings even when educational characteristics are the same.

As an example let’s compare the experiences of three individuals who completed an Associate’s degree in IT Network and System Administration. First, an IT desktop technician with 10 years of experience uses the newly acquired IT credential to get promoted to a supervisory role in the same firm. Second, a machinist uses the IT

credential to apply for an entry-level job in IT after having lost his previous job in manufacturing. Third, a female engineering technician uses the IT credential to start a brand new career after having been out of the job market for three years to raise her children. Even if the program is exactly the same, the impact on individuals is likely to be different, with different baseline wages that will influence aggregate outcomes.

Table 1 compares outcomes for programs in similar majors but different participants’ age mix. Associate’s degree programs in Computer Programming in 2011 served predominantly young

Table 1

Comparison of Earnings Outcomes for Students who Completed Associate’s Degrees in Information Technology Majors With a Different Age Mix, Class of 2011

Major	Percent Students Older than 26 at Graduation	Median Hourly Wage 12 Months after Graduation	Median Hourly Wage 24 Months after Graduation	Net Wage Increase	Wage Growth
Computer Programming	43%	\$13.95	\$16.74	\$ 2.79	20%
Network and System Administration	71%	\$17.57	\$19.25	\$ 1.68	10%

students. Aggregate results show first year wages of \$13.95/hr, which in a young cohort represent initial earnings capacity. In contrast, Associate’s degree programs in Network and System Administration had an older age profile with only 29 percent completing by age 25 and the remaining 71 percent completing after age 25. When the age distribution is skewed towards older completers, first year wages are likely to be higher and wage growth over time is likely to be slower. In this case Network and System Administration led to a median wage of \$17.57/hr 12 months after graduation versus \$13.95/hr in Computer Programming and a wage growth rate of 10 percent versus 20 percent in Computer Programming.

We can’t tell from these results which program performed better because the concentration of older completers in the second program biases the comparison. A greater number of participants had prior work experience which led to higher wages after graduation.

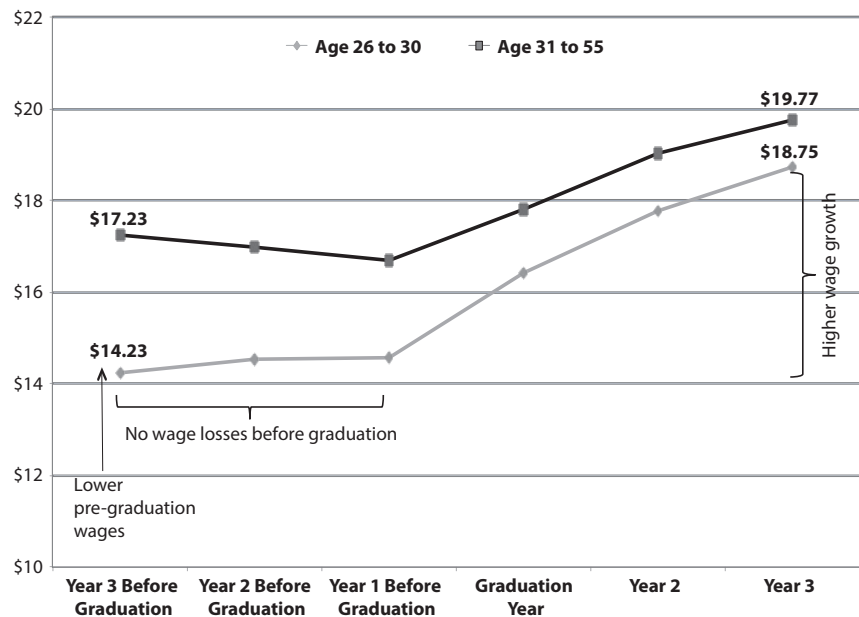
A visual example will demonstrate the differences in earnings outcomes

between younger and older completers. Using nine years of wage records we created a dataset of individuals who completed a one-to-two year award from July 2009 to June 2012¹ and had wage records in Minnesota both three years before graduation and again three years after

graduation but were not necessarily employed every quarter in between. This approach allows us to track the same type of information on the same subjects over time.² We then broke down completers into two age groups and compared their wages over a six-year period (Figure 2).

Figure 2

Median Hourly Wage Trends for Completers* of One- to Two-Year Programs (Certificates and Associate’s) by Age at Graduation



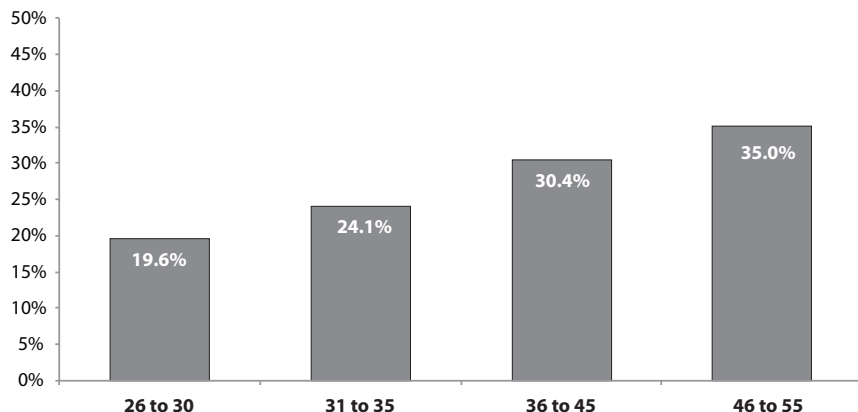
*The data represent only individuals who were employed in Minnesota three years before and three years after graduation. All wage figures have been adjusted for inflation to be in terms of constant 2014 U.S. dollars.

¹The analysis focuses on sub-baccalaureate awards of one to two years in length (certificates or Associate’s Degrees) because we expect a higher market value for those than for shorter awards.

²Although individuals who temporarily exited and then re-entered the labor market are not captured in all cross-sectional observations, they are captured in the first and last observations.

Figure 3

Share of One- to Two-Year Program Completers* Who Reported a Permanent Layoff Within 30 Months Prior to Graduation, by Age at Graduation Classes of 2010, 2011, 2012



*The data represent only individuals who were employed three years before and three years after graduation in order to compare only individuals who had jobs and lost them.

Looking at wages *before*, not just *after* graduation, reveals important differences. The 31 to 55 group, who had already begun a career before entering school, started from higher wages but suffered wage losses before graduation. Their aggregate real wages rebounded after graduation resulting in a six-year wage growth of 15 percent. The younger group started from median wages of \$14.22/hr, much lower than the older cohort, and then experienced a 32 percent growth rate, double that of the older cohort.

Why do these age groups behave so differently? Here are a few possible explanations:

1. As shown in Figure 3, the 31 to 55 age group is more likely to represent individuals who experienced a permanent job loss before graduation. The presence of these individuals in the older cohort causes a downward trend in aggregate wages before graduation

because the jobs that were lost paid more than the newly found ones. This demonstrates the importance of controlling for other factors besides age, for example the presence of a layoff.

2. The impact of educational attainment on earnings appears higher for younger students because employers tend to give more weight to academic credentials when they have little other information on work experience, as is often the case with candidates in their 20s. In contrast, older job applicants with gaps in work history or obsolete experience can face barriers even if they recently obtained a marketable credential.

3. There are diminishing returns on human capital investments such as education and on-the-job training. Even though 35 year olds may have the same marginal productivity as 65 year olds, as reflected in equal wage rates, the gains from investing in schooling are maximized right after

high school and increase with age at a diminishing rate.³

These are all reasons why programs serving predominantly older students cannot be expected to yield the same high rates of wage growth after graduation as programs with younger participants. The added value of schooling for adult learners is harder to demonstrate because their diverse backgrounds often mask some of the most positive effects. The remainder of the article will focus on strategies to overcome this challenge by correcting for work experience characteristics which skew aggregate earnings results.

Using Work Experience to Model the Impact of Schooling

Using nine years of Minnesota wage records and nine years of Unemployment Insurance claims records we identified three mutually exclusive work experience categories described below and illustrated in Figure 4:

1. Continuous Employment, defined as being employed every quarter from three years before to three years after graduation without reporting a permanent layoff prior to graduation. This group represented 44 percent of the total. Some people voluntarily switched jobs, but the majority — 58 percent — stayed with the same firm both before and after graduation. Tenure indicates that jobs before and after completion were in the same field, and employers might have offered tuition assistance and/or opportunities for professional growth within the organization.

³According to University of Chicago's Gary Becker's theory of human capital (*Human Capital*, 1964), additional earnings attributable to human capital obtained from work experience are subject to diminishing returns. As workers approach retirement, average earnings tend to decrease.

2. Interrupted Employment, defined as not being employed every single quarter and not reporting a permanent layoff before graduation. This group represented 31 percent of the total. Reasons for interruptions in employment can vary from voluntarily quitting a job or taking time off work, to a temporary lay-off, or even a permanent layoff that was not eligible for UI benefits or was not reported. Not unexpectedly, tenure with the same employer is rare in this group, observed in only 22 percent of the cases.

3. Laid off from Employment, defined as having filed for Unemployment Insurance benefits as a permanently laid-off worker

sometime within 30 months prior to graduation. These individuals, representing one fourth (25 percent) of the total, went back to school with a greater sense of urgency and stress than others. If jobs in their field disappeared during the Great Recession, they had no choice but to retrain in a new field in hopes of getting back to work at a family-sustaining wage. Gaps in employment were widespread: only 19 percent worked every quarter over the six year period. About one half (51.3 percent) of graduates in this group participated in a publically funded re-employment program before graduation that may have included full tuition coverage. Finding these individuals, likely to be low-income, in the labor market

three years after graduation is already a sign of success.

Although these categories are a simplification of extremely complex labor force participation dynamics, they capture the likely *challenges* faced after graduation. Understanding this is critical to establishing the right context and measurement baselines for interpreting earnings outcomes in such a diverse group of graduates.

Figure 5 shows pre- and post-graduation wages for individuals who were between 26 and 30 at graduation, comparing the three work experience groups to see if their outcomes look different.

Figure 4

Predominant Work Experience Patterns of Students Over Age 25 Who Graduated from a One- to Two-Year Program and Were Employed in Minnesota Three Years Before and Three Years after Program Completion

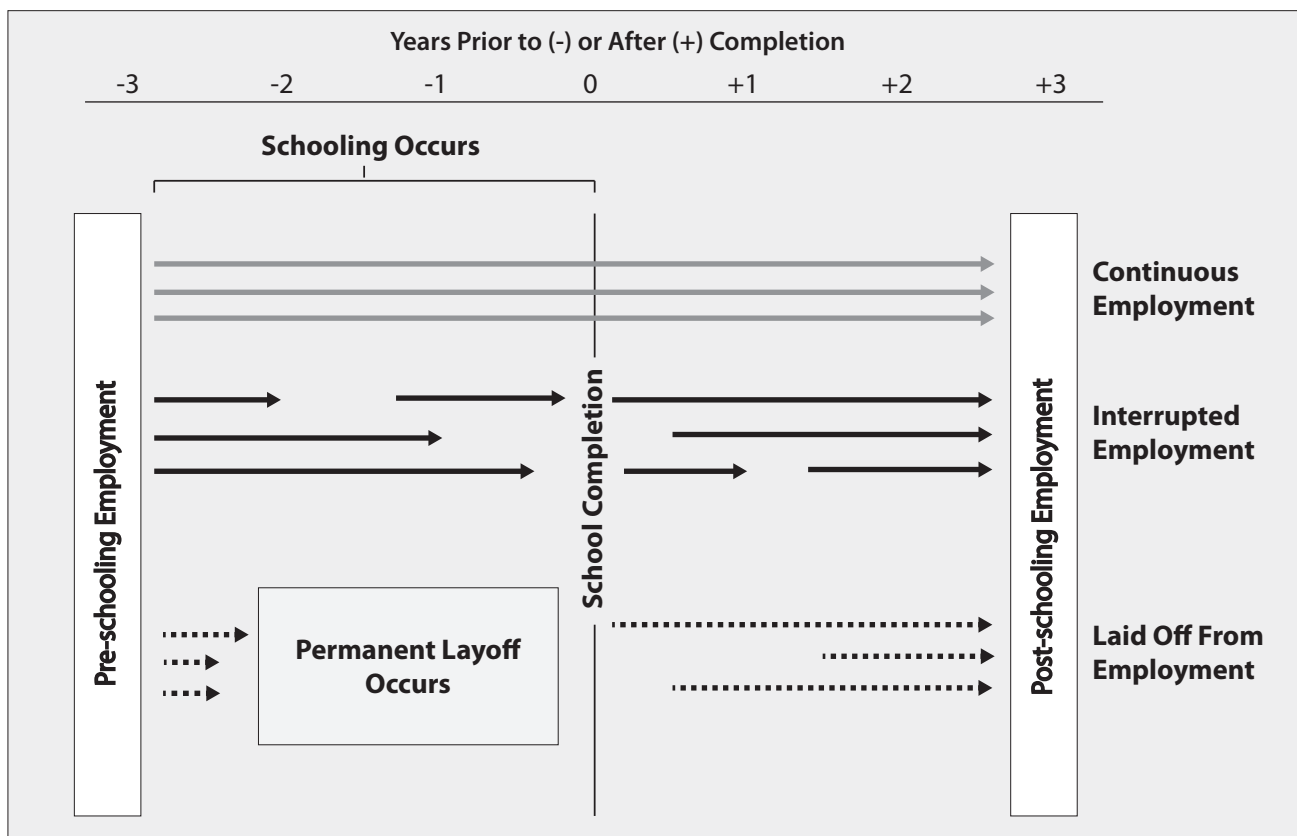
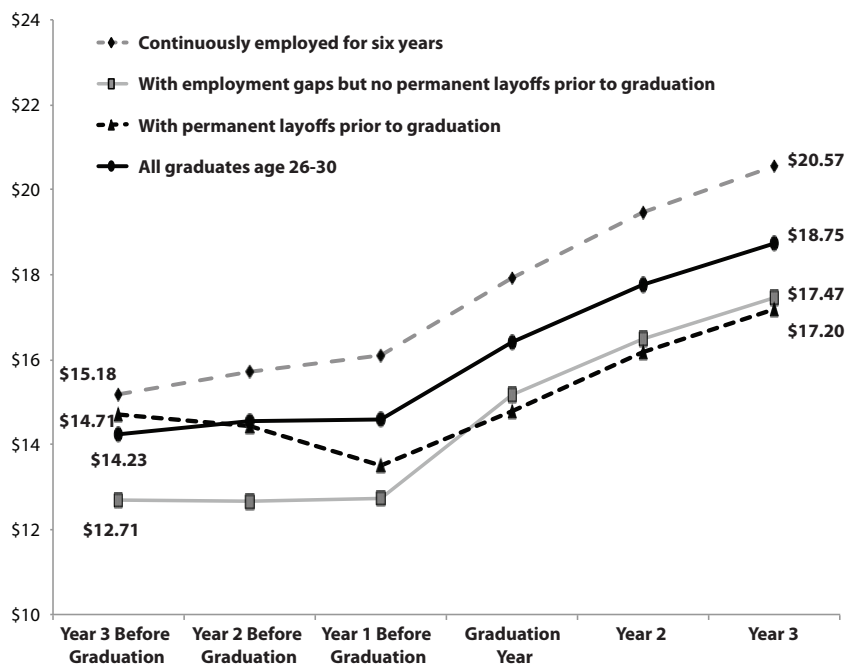


Figure 5

Median Hourly Wage Trends for Completers of One- to Two-Year Programs Aged 26-30 at Graduation by Work Experience Characteristics

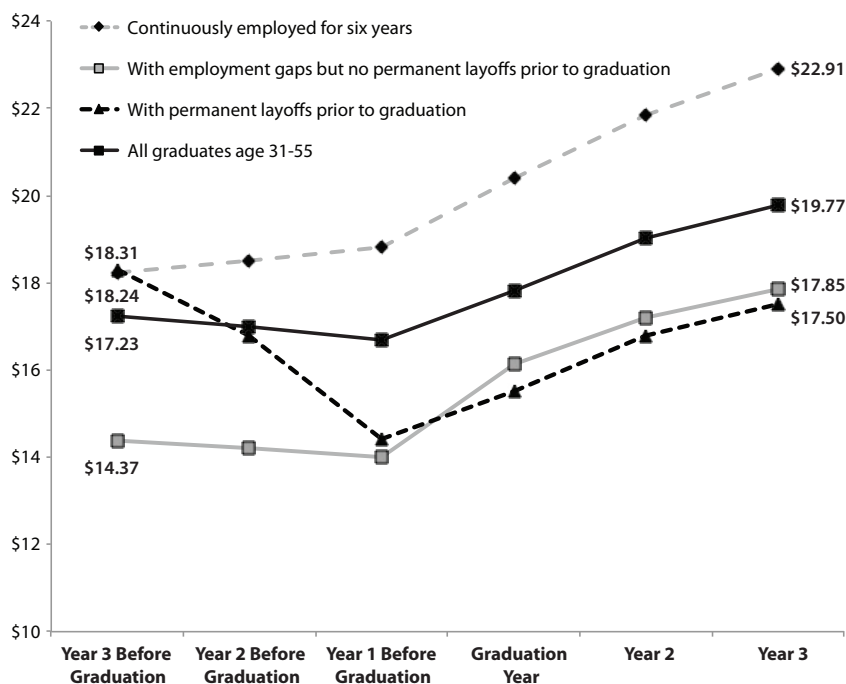


Wages three years before graduation, which we'll use as the baseline from which to measure net growth over six years, are pretty similar across groups. Each group experienced wage growth, but only the permanently laid-off saw earnings decline prior to graduation from involuntary job changes. Those with employment gaps but no permanent layoffs experienced flat wages prior to graduation followed by a rapid increase during graduation year, indicating that the new jobs paid better than the old ones. The group with no gaps in employment started with higher wages and experienced much smoother wage growth, typical of individuals who continue working in the same field or follow a fairly continuous career path.

The solid black line, representing aggregate earnings for same-age individuals, shows six-year growth of 32 percent which is not too far from either group's outcome. Although this aggregate result hides differences in work experience patterns, it does not misrepresent the typical wage growth. This allows us to trust the aggregate results for younger completers even when participants come from diverse work experience backgrounds.

Figure 6

Median Hourly Wage Trends for Completers of One- to Two-Year Programs Aged 31-55 at Graduation by Work Experience Characteristics



This is not true for completers over age 30 because the effect of prior work experience accumulates over time and widens the earnings gaps both before and after graduation. Figure 6 reveals the exact same trends as Figure 5 but with more dramatic differences across work experience characteristics. Wages three years before graduation ranged from \$14.37 to \$18.24/hr, and the gap grew bigger after graduation. Wages among the permanently laid-off dropped sharply before

graduation and climbed slowly but not enough to avoid a 4 percent wage decline, while the continuously employed group enjoyed a smooth increase from a median of \$18.24 to \$22.91/hr (26 percent growth). This time the aggregate line, representing a 15 percent wage growth, is too simplistic as a measure, because it hides important differences in outcomes within this population of students.

This example demonstrated how work experience characteristics, in addition to age, can help decompose the effects of schooling on earnings and set up peer comparison groups that more clearly reveal the added value of credentials attainment. Findings for each group will be presented next.

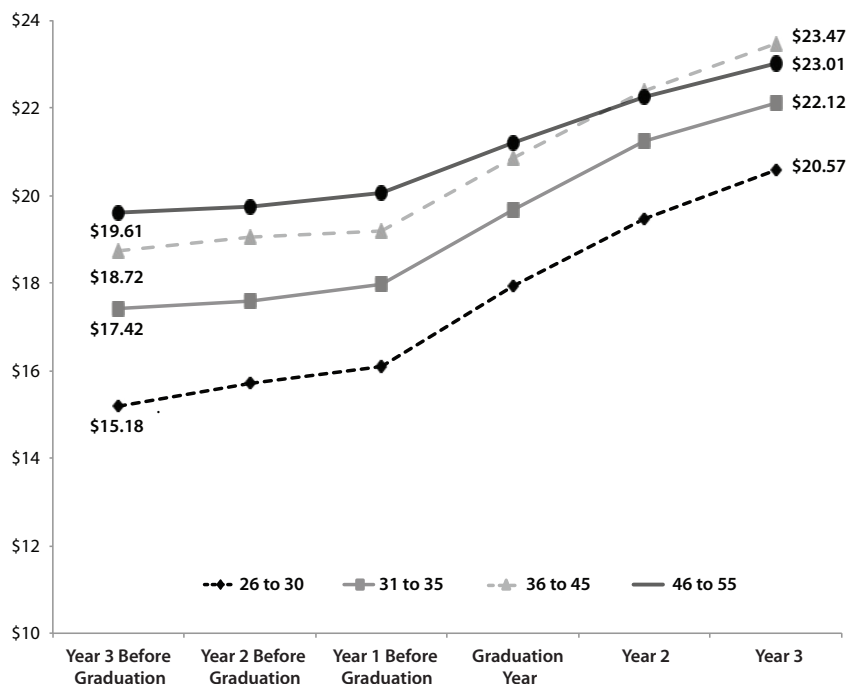
Continuous Employment

Figure 7 shows that individuals with steady employment and no permanent layoff had a smooth wage increase in every age group.

Correcting for work status has removed one of the main sources of disparity, revealing the net value of completing a credential. Still, even after this correction we see an age-related effect: earnings growth rates decline as age at completion increases. The 26 to 30 age group experienced a 35 percent wage growth compared to 17 percent among the 46 to 55 group. This evidence seems to confirm the theory of diminishing returns on human capital investment, with important implications for students. Since educational investments made late in life will have a shorter period of time over which the higher wages will be earned, high school students with an interest in furthering their education

Figure 7

Median Hourly Wage Trends for Completers of One- to Two-Year Programs Who Were Continuously Employed from Three Years Before to Three Years After Graduation by Age Group



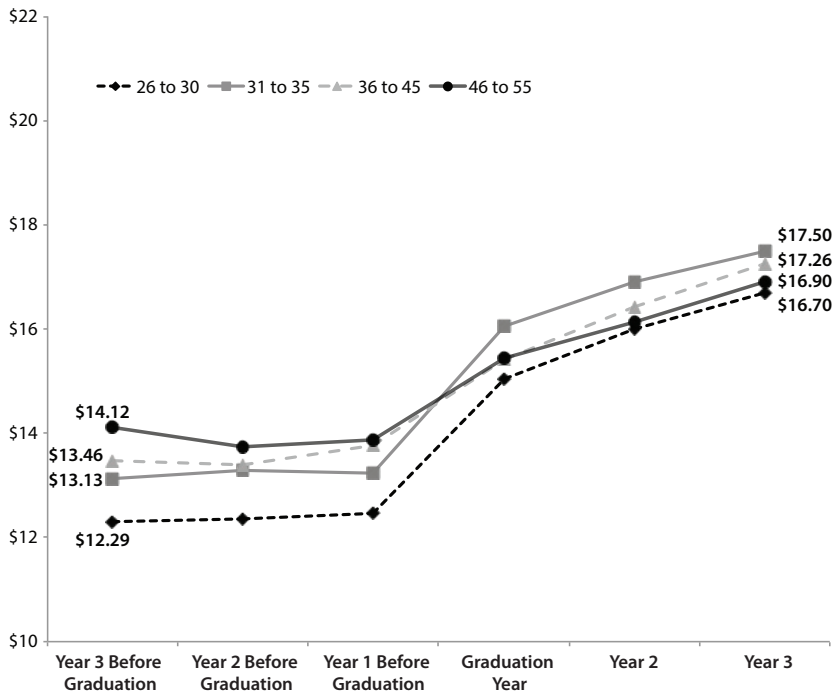
should be encouraged not to delay enrollment and completion of an undergraduate program.

A special case of continuous employment is represented by

tenured individuals, defined here as individuals who worked at the same company before and after graduation for a total of at least four years. Tenure suggests that jobs

Figure 8

Median Hourly Wage Trends for Female Completers of One- to Two-Year Programs Who Were Discontinuously Employed by Age Group



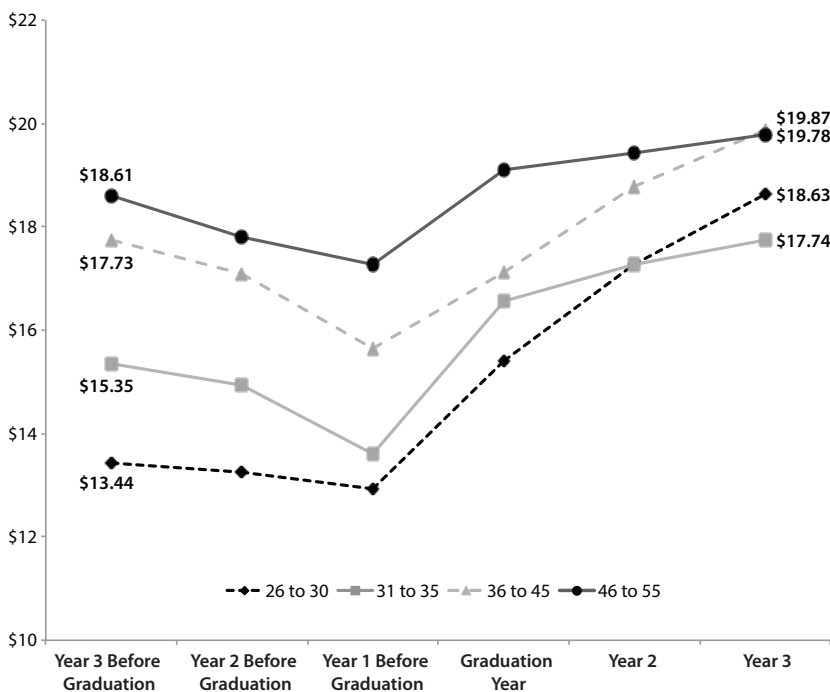
before and after graduation were in the same field, and employers might have offered tuition assistance and opportunities for career advancement within the organization. Tenured individuals were overwhelmingly concentrated in the Healthcare sector (39 percent), particularly Hospitals, indicating the industry’s commitment to investing in enhancing the skills of its incumbent workforce.

Interrupted Employment

Individuals employed discontinuously encountered more difficulties in the labor market than those employed continuously but fared better than those with a permanent layoff. The overwhelming majority, 77 percent, switched employer and 68 percent switched industry after graduation, suggesting that a career change might have been a primary goal for returning to school. Lack of tenure has another important implication. This group is unlikely to have received tuition assistance or permission to take time off from their employer to attend school.

Figure 9

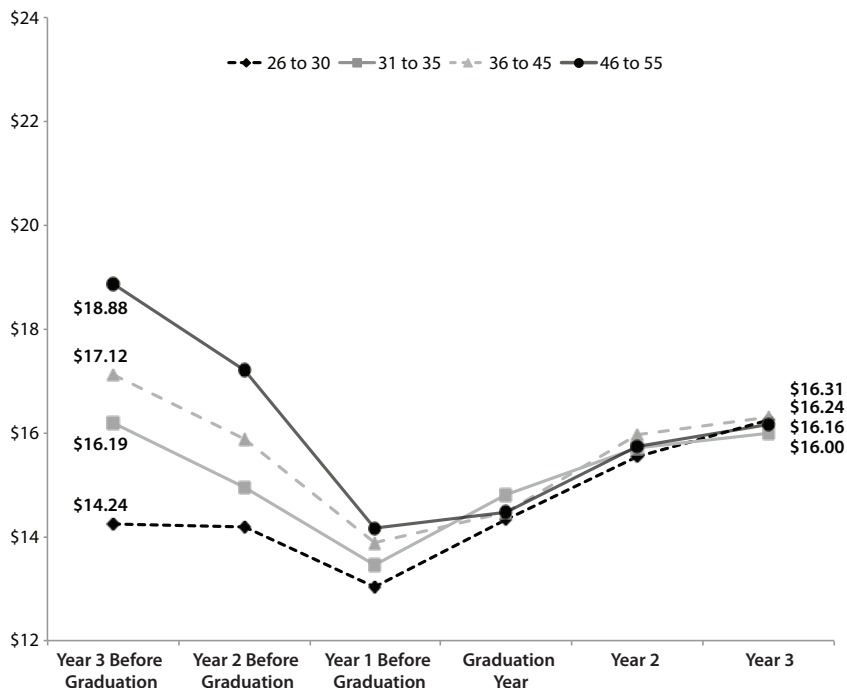
Median Hourly Wage Trends for Male Completers of One- to Two-Year Programs Who Were Discontinuously Employed by Age Group



Findings are reported separately in the graphs below for males and females to illustrate how gender plays an important role in determining labor market outcomes for older students.⁴ Females, who represented 66 percent of completers in this group, started with median wages which were lower than males with similar age and education,⁵ but posted wage gains immediately after graduation indicating a successful re-integration into the job market (Figure 8).

Figure 10

Median Hourly Wage Trends for Female Completers of One- to Two-Year Programs Who Reported a Permanent Layoff Within 30 Months Before Graduation by Age Group



Not every major led to such positive outcomes. Women older than 30 who pursued an Associate’s degree in Registered Nursing went from a median wage of \$14.28/hr to \$28.41/hr (almost 100 percent growth) while those who pursued a certificate or Associate’s degree in Health and Medical Administrative Services went from \$12.63 to \$14.59/hr (15 percent growth). Earnings growth was also influenced by prior experience in a related industry and an individual’s ability to enter a related industry after graduation. In both the case of Registered Nursing and Health and Medical Administrative Services, wages for individuals who were employed in the healthcare industry

three years after graduation had grown more than twice as much relative to those who were employed outside the health care industry.

This leads to the important conclusion that prior work experience in a related industry in combination with an in-demand degree can make a big difference in the employment outcomes of adult learners.

Among males we observe much higher starting wages than among females, especially in the older and more experienced age groups (see Figure 9). Both males and females experienced stagnant or declining wages before graduation, suggesting that the necessity to schedule work

around school pushed some students into lower-pay occupations. Wage declines were more common among men probably because 15 percent of them experienced temporary layoffs before graduation compared to 4 percent of women, and males’ layoffs occurred predominantly in the construction field. Even if the layoffs were only temporary, the fact that they occurred in an industry that was losing jobs at a high rate during the prolonged housing market crisis forced individuals to work in unrelated fields for lower wages.

Wage growth over the six-year period was positive for every age and gender category indicating that the economic recovery combined with the completion of a credential helped people get back onto a career track or at least reverse a negative trend.

Laid Off From Employment

Individuals over age 35 are disproportionately represented in this group, making up 45 percent of the total. Although we do not know for sure what motivated them to enroll in school, a permanent layoff may have pushed some to seek job training who would otherwise never have chosen college as an option. Their outcomes are considerably worse than other groups because gaps in employment were longer and some of the jobs lost in the time period 2007-2010 did not come back despite the economic recovery.

Results for females, displayed in Figure 10, reveal how job losses affected different age groups differently. Only the youngest cohort

⁴We excluded from the wage comparison individuals who re-enrolled in school after graduation and completed a higher degree in 2013, because gaps in employment are likely to be caused by prolonged schooling and wages might reflect a higher educational attainment. They represented only 3.7 percent of this group.

⁵Gender differences grow larger with age because they are correlated with other differences that play out over one’s life, including choice of major and work participation patterns.

(26 to 35) was able to post wage gains. Regardless of starting wage levels, all age groups ended up with median wages of about \$16 an hour.

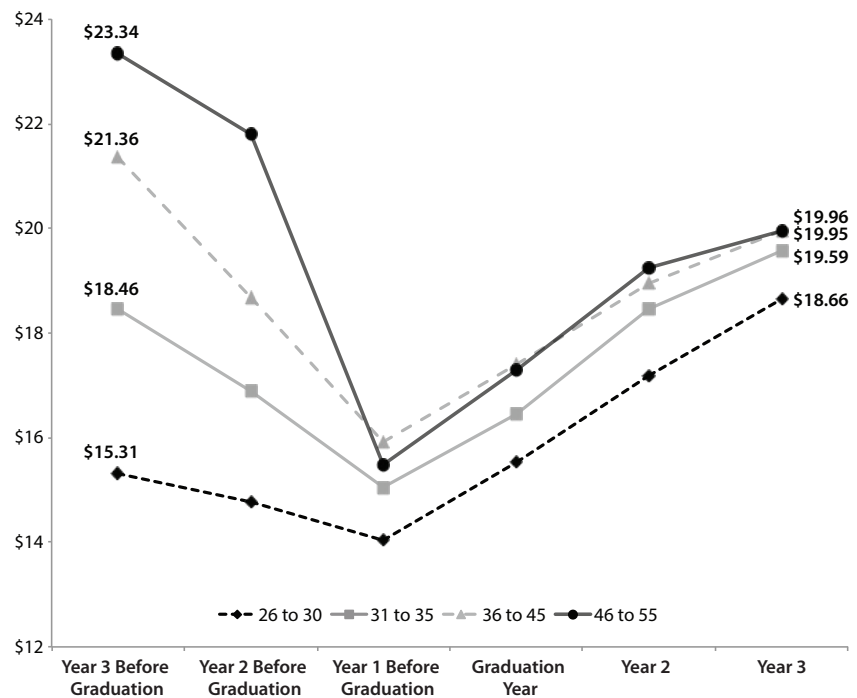
The 46 to 55 cohort was hit the hardest, experiencing a wage decrease of 14 percent, suggesting that some completers failed to get back into jobs that paid as well as those that were lost. Thirty-eight percent of these mid-aged women were laid off from clerical, low skilled jobs such as retail store assistants, customer service representatives, and book-keeping clerks. Previous low-skill work experience probably restricted their ability to achieve higher wages after graduation, and without re-training they may not even have found jobs.

Results for males tell a similar story. Only the young cohorts — 26 to 35 — achieved wage gains three years after graduation (see Figure 11). Older cohorts were laid off from jobs paying over \$20 an hour and, taken as a whole, did not manage to get back into equally compensated jobs.

Twenty-eight percent of male completers over age 35 were laid off from Manufacturing jobs, especially Machinists, Assemblers, and Printing Machine Operators.⁶ Massive job losses in Manufacturing during the Great Recession forced individuals to re-train in other fields. Among graduates who had been laid off from production occupations only 31 percent chose to major in fields related to Manufacturing (Precision Production and Engineering Technologies), while the rest re-trained in a completely different field such as IT, Healthcare, and Business.

Figure 11

Median Hourly Wage Trends for Male Completers of One- to Two-Year Programs Who Reported a Permanent Layoff Within 30 Months Before Graduation by Age Group



From this analysis we see that permanent job losses hurt more than temporary gaps in employment and that the youngest group of completers benefited the most from post-secondary education in terms of earnings growth under every work experience circumstance. In other words, investments in education at a younger age pay off more rapidly in the labor market, and work experience characteristics are not as consequential before age 30 as they are after age 30. Finally, perhaps an even more important question to ask for those who graduate after age 30 is *what would labor market outcomes have been without training?* Alternative labor market metrics presented next should also be taken into consideration when defining

success for the older student population.

Employment Outcomes of Schooling for Graduates Over Age 30

A discussion of labor market returns to college for older graduates would not be complete without mentioning the effect of schooling on employment. The value of education is not limited just to earnings but includes the likelihood of ensuring a job and increased working time after graduation. Since results vary dramatically by area of study, we will limit the presentation to the five majors mentioned at the beginning of the article and displayed in Figure 1.

⁶Unemployment Insurance claims data also include information on occupation of employment at the time of layoff, which helps us better understand the challenges faced by this group of students.

Table 2 displays wages, employment, and full-time status for individuals who graduated between age 31 and 55 in those same majors.

We can notice that both gender and major influence outcomes, but choice of major matters more than gender. Women who completed a sub-baccalaureate award in Registered Nursing earned a median hourly wage of \$27.39. This is \$12 more than women who completed a certificate in Health and Medical Administrative Services. These differences stem from the types of careers each major prepares completers for and the level of demand compared to supply. Such low median wages for Health and Medical Administrative Services graduates indicate that many entered the desired career but had to start from bottom-level salaries or did not find a job in a field related to their academic background. Probably too many graduated in this field relative to the available job openings in careers such as Health Information/Medical Records Technicians, Medical Administrative Assistants, and Medical Secretaries.



Table 2

**Wage and Employment Outcomes of One- to Two-Year Program Completers Age 31-55, Classes of 2010, 2011, 2012
Examples of Majors with Highest Concentrations of Completers Age >30**

Major	Median Hourly Wage 2nd Year After Graduation by Gender		Percent With Wage Records in MN		Percent of Those With Wage Records That Were Employed Full-time Year-round	
	Males	Females	Year Before Graduation	2nd Year After Graduation	Year before graduation	2nd Year After Graduation
Network and System Administration	\$ 20.10	\$18.16	68.4%	82.7%	30.4%	56.9%
Business Administration and Management	\$ 20.57	\$19.05	76.0%	81.1%	54.6%	58.9%
Registered Nursing	\$29.04	\$27.39	80.0%	88.5%	15.4%	41.3%
Health and Medical Administrative Services	\$16.68	\$ 14.73	53.2%	71.4%	26.6%	47.0%
Accounting	\$17.07	\$16.07	67.8%	83.6%	37.1%	50.3%

In terms of employment, attaining a post-secondary credential had a positive impact both in terms of ensuring a job and increasing full-time year-round employment. Full-time employment increased dramatically from the year before graduation to two years after graduation especially in Nursing, indicating huge improvements in job quality.⁷

Knowing participants' employment situation before graduation helps explain the impact of training. For example, we can tell that those who completed a program in Business were already stably employed the year before graduation. Seventy-six percent had jobs of which 54.6 percent were full-time. These individuals predominantly enrolled in school for professional development, not to rebound from a job loss. In contrast, almost half (47 percent) of those completing a program in Health and Medical Administrative Services had been out of the Minnesota labor market the year before graduation. An increase in employment from 53.1 to 71.4 percent represents an improvement given participants' circumstances prior to graduation.

This analysis demonstrates the need for taking into account non-wage labor market outcomes for programs that serve primarily older completers and the critical importance of providing guidance to adult students selecting a major.

by Alessia Leibert
Labor Market Information Office
Minnesota Department of Employment and Economic Development

Conclusions and policy implications

The shift to an older age mix of college students has huge implications for educational program design, delivery, and accountability measurements. Post-secondary program planners and workforce program administrators need to be particularly careful when interpreting labor market outcomes for programs targeted at predominantly older participants. The intent of this study was to explain the challenges and propose a few strategies to analyze labor market outcomes for non-traditional age students.

Here is a summary of findings:

- ◆ Starting college directly after high school has advantages in terms of future earnings potential. However, a variety of circumstances can create a need for older workers to pursue training to transition to new careers or upgrade their skills. The market value of educational programs that predominantly serve non-traditional age participants should be measured through more years of data, not just immediately after graduation, and non-wage metrics such as employability, job stability, and increases in hours worked. Ideally, comparison groups should be based not only on age and educational characteristics but also on work experience characteristics.

- ◆ Work experience characteristics accumulate over a person's life, influencing not only the reasons and timing for adults returning to school but also their chances of success after completion of an academic credential. Since some patterns of education and work experience lead to better outcomes than others, finding the right type of training is as important to labor market success as completing a credential. It is critical that older students be guided towards in-demand fields where they can leverage their previous work experience without taking too much time away from the labor market for their educational investments to be worthwhile.

While the analysis outlined in this article relies on data sources not readily available to researchers and practitioners, it introduces the types of analyses that can be done with longer time series of data. Given the rising importance of non-traditional students, educators and policy-makers need a more tailored approach to measure success and track their progress in meeting adult learners' diverse educational needs.



⁷Full-time year-round employment is an indicator of job quality because it is typically associated with access to health care and/or retirement benefits.