

MINNESOTA ECONOMIC

TRENDS

STACKING CREDENTIALS

DO MORE POST-SECONDARY
DEGREES PAY OFF?



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m EMPLOYMENT AND
ECONOMIC DEVELOPMENT



New Normal in the Labor Market

While it might not seem particularly noteworthy, Minnesota's annual unemployment rate finished below 4 percent in both 2015 and 2016, according to Dave Senf's story in this issue of Trends.

Why is that worth mentioning? Because Minnesota has seen only four periods in the last 70 years when unemployment finished below 4 percent in successive years, with the longest unbroken string occurring from 1995 to 2001.

One thing makes this period different from the others, though. While economic booms drove the three previous sub-4 percent labor markets, slowing labor force growth is the key factor this time.

Baby boomer retirements combined with sluggish growth in the working-age population virtually guarantees weak labor force growth over the next few decades. That, in turn, will mean fewer new jobs in the state because employers won't be able to find enough workers to expand.

The big takeaway: Get ready for continued tight labor markets in Minnesota. They are likely to be the new normal for years to come.

Alessia Leibert's cover story in this issue looks at "stackable credentials" and examines, among other things, whether they lead to better employment outcomes. Depending on the field and job opportunities that are available, multiple post-secondary credentials can be a worthwhile investment.

Elsewhere, Ellen Bendewald and Scott Godfrey write about DEED's first-of-its-kind look at workplace diversity in Minnesota. Chloe Campbell examines the growing home-based care industry, while Carrie Fink writes about the new Minnesota Apprenticeship Initiative.

A handwritten signature in black ink that reads "Monte Hanson".

Monte Hanson
Editor

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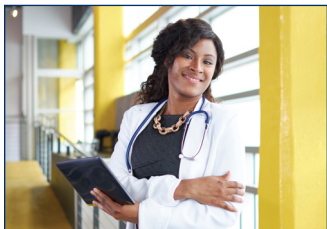
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Stackable Credentials: Myths and Reality

Completing more than one post-secondary degree can boost earnings only if it helps people move up a career ladder.



The economic return of higher education is not always the result of earning just one credential. For example, students who complete a transfer-oriented associate degree program harness the full value of their credential only after completing a bachelor's and perhaps even a master's degree.

This study explores the topic of stackable credentials with two goals. The first goal is to measure the extent of stacking in Minnesota. The second goal is to

identify which credentials require additional higher education for their full market value to emerge.

The U.S. Department of Labor defines a credential as stackable when it belongs to “a sequence of credentials that can be accumulated over time to build up an individual’s qualifications. Typically, stackable credentials help individuals move up a career ladder or along a career pathway to different and potentially higher-paying jobs.”¹

This concept of building workforce competencies block by block through shorter, more affordable credentials that help people progress through a career has become popular among higher education and job training professionals. Implicit in the concept is the idea that short training programs with low stand-alone market value can be leveraged as stepping stones to further education.

What looks good in theory may not be easy to realize in practice, however. For the investment to be worthwhile, educational credentials must lead to marketable skills, and associate degrees designed to transfer to a four-year program must lead to degree completion in that four-year program.

How Common is Credentials Stacking?

To measure the occurrence of credential stacking, we looked at how many students completed more than one type of award over time.² Table 1 shows that 223,983 graduates completed an

award up to a bachelor's degree in Minnesota from July 2006 to June 2011. Of these, 15.9 percent subsequently earned one or more additional awards within four years of the first award.

Why are educational transitions so uncommon? First, this measure slightly underestimates educational transitions because it excludes people who pursued further education outside the state. Second, the initial credential might have enough market value to make further education unnecessary. Third, students may not be aware of continuing education opportunities or may be discouraged by cost and/or hurdles of transferring credits.

Not all educational transitions can be considered “stacking.” For credentials to be stackable, some of the technical coursework and credits earned from the first credential have to carry over to the second credential. When we apply these criteria, credential stacking affects even less than 15.9 percent of the selected cohorts.

Moving from a lower- to higher-level award is more common, accounting for 11.9 percent of graduates during the selected period (see Table 2). Completing an associate degree followed by a bachelor's degree is an example of upward transition.

TABLE 1

Type of Educational Transition	Number of Graduates	Percent
Earned a credential up to a bachelor's and did not complete any further credential in Minnesota within four years	188,273	84.1%
Completed a second credential within four years	35,710	15.9%
Total who completed a post-secondary credential by age 40*	223,983	100.0%

* Some exclusions apply (see “About the Data” text box on page 7). Students who took longer than four years to complete an additional award – representing 3.9 percent of the combined student cohorts – were also excluded to avoid skewing results in favor of the 2007-2008 cohorts who had more time to complete additional credentials.

Source: Minnesota Office of Higher Education post-secondary graduation records

TABLE 2

Type of Educational Transition	Number of Graduates	Percent
No further credential within four years	188,273	84.1%
Completed a second credential lower than the first (downward transition)	3,487	1.6%
Completed a second credential of the same level as the first (horizontal transition)	5,477	2.4%
Completed a second credential higher than the first (upward transition)	2,6746	11.9%
Total who completed a post-secondary credential by age 40	223,983	100.0%

Source: Minnesota Office of Higher Education post-secondary graduation records

¹U.S. Department of Labor guidance letter (TEGL-15-10) published Dec. 15, 2010.

²This research only looks at credit-bearing post-secondary awards excluding other types of credentials such as occupational licenses, apprenticeship certificates, and short skills certificates and certifications.

Labor Market Payoffs of Stacking

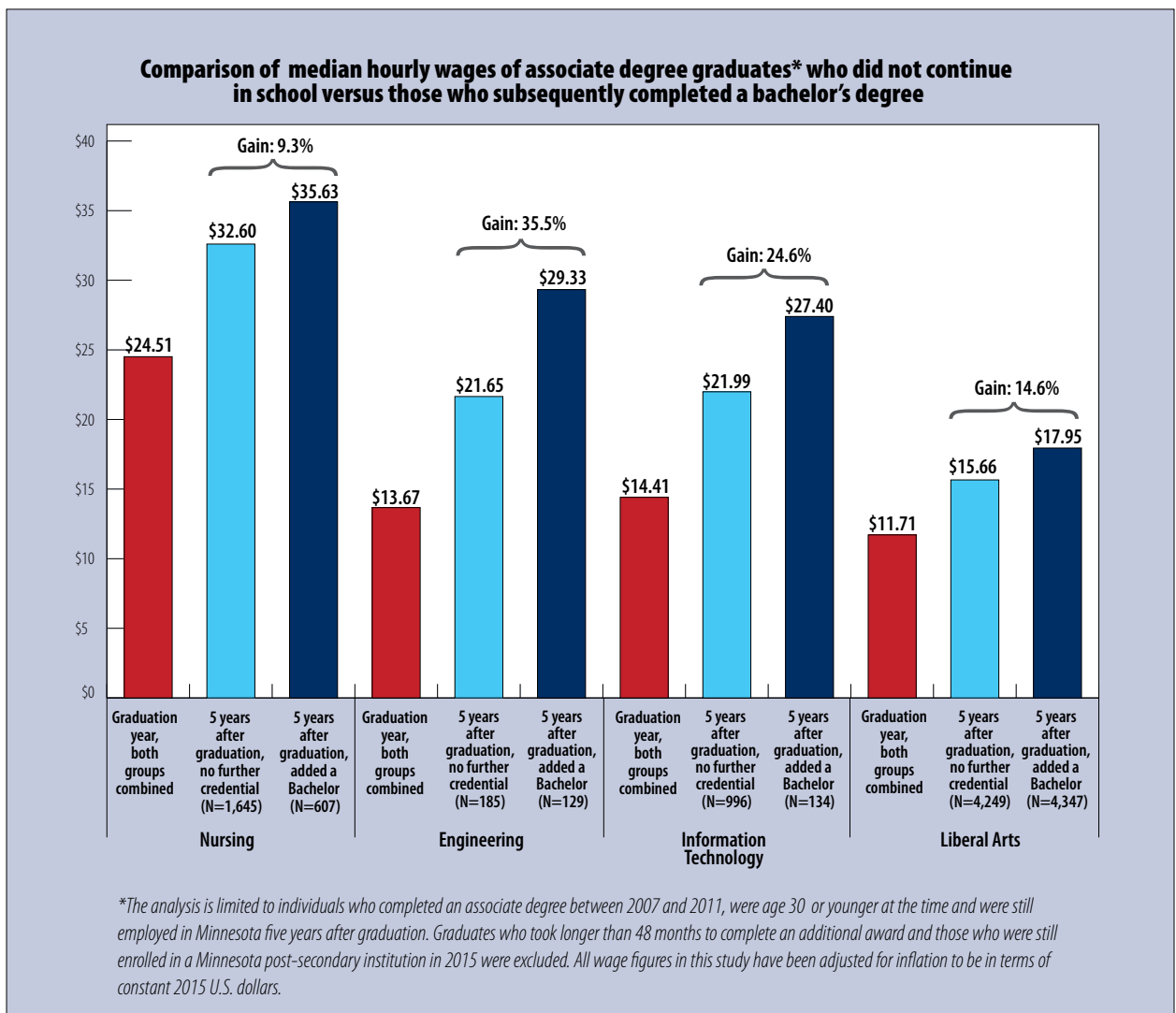
Does stacking pay off in terms of better labor market outcomes after graduation? To answer the question, we will identify specific degrees and majors where stacking is more common and track students' earnings over time to determine whether those who complete an additional credential earn higher wages than those who do not.

Transitions from a two-year to a four-year degree in the same field of study are the most common examples of stacking. Figure 1 presents three measures of labor market success for associate degree programs in four selected academic fields. These measures are:

1. Earnings right after graduation (immediate marketability of a credential).
2. Earnings five years after graduation.
3. Difference in five-year earnings between students who pursued a bachelor's degree and those who stopped at an associate degree (wage gain from added education).

Marketability is highest in registered nursing, where hourly median wages of \$24.51 indicate

FIGURE 1

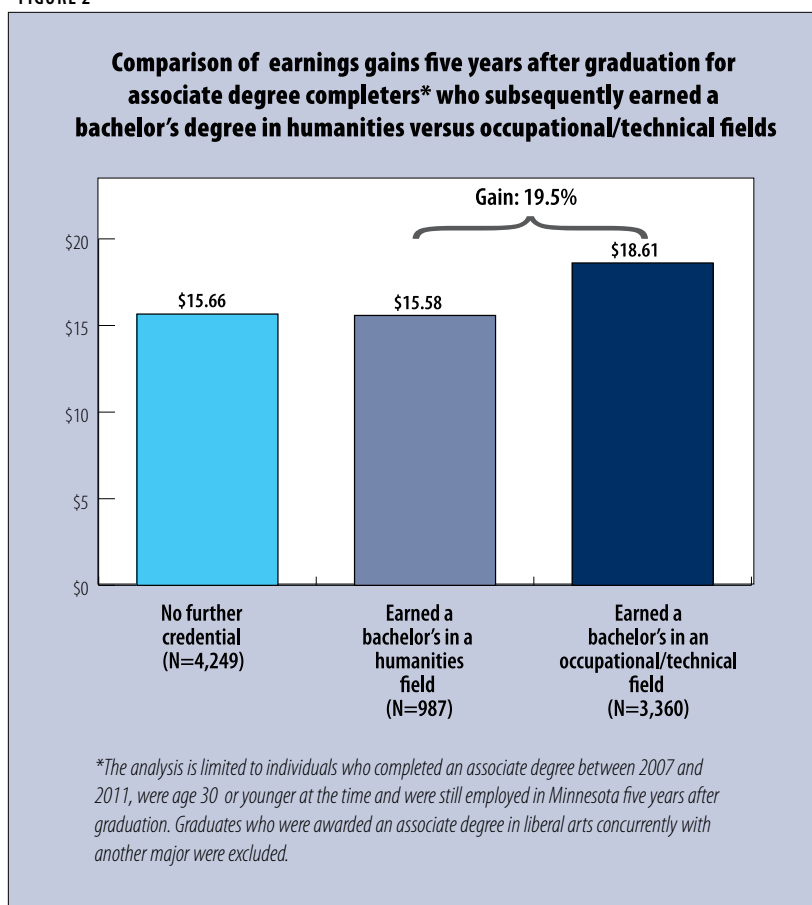


immediate employment as RNs. Wage growth over five years was strong, but those who stacked a bachelor's onto an associate degree had only a 9.3 percent wage advantage over the non-stacking group. The full added value of a bachelor's degree is realized by continuing to a master's degree, which enables entry into advanced practice nursing careers.³

An associate degree is fairly marketable in the field of information technology, with median hourly wages of \$14.41 at graduation. Those who moved on to a bachelor's degree, mostly concentrating in IT, earned 24.6 percent higher wages five years after graduation compared with those who stopped at a two-year degree.

The highest added value of a bachelor's degree seems to occur in engineering, where bachelor's completers, predominantly majoring in engineering, earned one-third (35.5 percent) more than those who did not continue. This result must be interpreted carefully. Since entry into the engineering profession requires a four-year degree, most students enroll directly in a four-year degree program. Completing the first two years of higher education at a community college and then transferring to

FIGURE 2



a four-year degree might delay career entry but can reduce the overall cost of a bachelor's degree.

In liberal arts, a program specifically designed to transfer to a four-year degree, a large number of students, 4,249, either did not continue in school or transferred but did not enroll in 2015. These individuals missed or delayed an opportunity

for stacking. Five years after graduation this group earned a median hourly wage of \$15.66 while those who continued on to a bachelor's earned \$17.95, a net difference of 14.6 percent. The earnings gain from further education was actually higher, 19.5 versus 14.5 percent, for continuing students who completed a bachelor's degree in a vocational/technical field (see Figure 2). Those who

³A master's of science degree in nursing qualifies for licensure as nurse practitioner, nurse anesthetist and clinical nurse specialist.

⁴For the purpose of this analysis we defined humanities as liberal arts, foreign languages, philosophy, religion, interdisciplinary studies, letters/english, mathematics, fine arts, and social and behavioral sciences. This definition excludes science majors. Adapted from National Center for Education Statistics, https://nces.ed.gov/surveys/ctes/tables/postsec_tax.asp.

pursued a humanities field⁴ did not experience any increase in wages five years after graduation compared to those who stopped at an associate degree.

The full returns on a liberal arts degree were realized by completing a bachelor's degree in an occupationally oriented field, for example accounting. Although wages should not be the only factor used to justify additional levels of education,

when the benefits from future earnings do not outweigh the costs of extra schooling, economic security might be at stake.

This evidence suggests that students who are not likely to transfer should be encouraged to enroll in programs that pay off at the associate degree level, and those who plan to transfer should choose their bachelor's major carefully.

Credentials Stacking in the Same Field

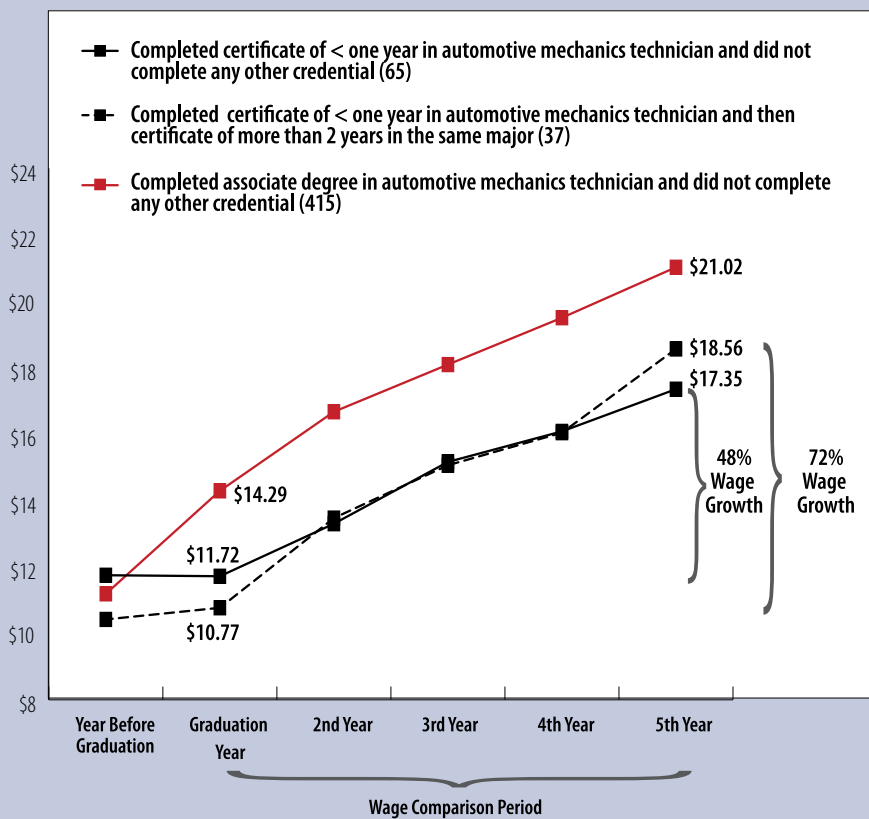
Credentials stacking is more common within the same major because all technical coursework and credits earned in the first award carry over to the next. Figure 3 presents the outcomes of stacking credentials in automotive mechanics technology. The wage growth measure from graduation to five years after illustrates how outcomes varied between those who stacked, represented by the dotted line, and those who did not, represented by the solid line.

Short-term certificates in this field have good payoffs, leading to 48 percent wage growth and hourly wages of \$17.35 even without further education. Those who subsequently earned a long-term certificate experienced 72 percent wage growth.

Although the wage difference in the fifth year is small, it is enough to demonstrate that, in this particular field, completing additional coursework can help individuals qualify for higher paying, more professional positions. We expect this to be the case because the automotive service technicians and mechanics occupation typically requires post-secondary education and provides different employment opportunities at each credential attainment level.

FIGURE 3

Comparison of five-year wage growth for graduates* of automotive mechanics technician programs who subsequently earned another credential versus those who did not.



*The analysis is limited to individuals who completed an associate's degree between 2007 and 2012 in the Twin Cities 7-county metro area by age 30 and were still employed in Minnesota five years after graduation. The analysis is limited to schools located in the Twin Cities Metro area because wages in this major are affected by location of employment.

Are students in this field better off by starting with an associate degree or by completing a sequence of certificates? As shown in the graph, associate degree completers earned \$14.29 per hour upon graduation. After five years, they still held a solid wage advantage over certificate holders. Those who stacked two certificates started catching up, however. Although we'd need more years of data to determine whether the outcomes from stacking are equivalent to an associate degree, stackable certificates are a viable alternative for people who cannot commit to a two-year degree and need flexibility to complete at their own pace.

Shorter Isn't Always Better

Shorter certificates are often designed to help students who lack the time or financial resources to commit to a longer-term degree. By offering more short-term credentials, schools can increase completion rates, and students who fail to complete the longer award theoretically benefit from having a recognizable shorter credential to fall back on. Breaking down an educational pathway into smaller chunks, however, is valuable only when each chunk leads either to further education or employment at family-supporting wages. Unfortunately some training programs do not perform well from either perspective.

About the Data

DEED Unemployment Insurance Program wage records and Minnesota Office of Higher Education post-secondary graduation records were the sources for all data in this article. These were linked together and cleaned to form the Workforce Data Quality Initiative (WDQI) database.

The dataset includes the following:

- 320,727 graduates who obtained post-secondary credentials from July 2006 to June 2014 at 149 private and public post-secondary institutions in Minnesota. The graduates had a valid Social Security number, were between the ages of 19 and 40 at the time of graduation with the first award, and either did not earn a second award or earned a second award within four years of the previous award. This allowed the earnings of students to be followed for five years, with at least one year of earnings after completion of the second award.

The dataset excludes the following:

- Graduates who went to work for the federal government, were self-employed or left the state. These workers are not covered by Minnesota's Unemployment Insurance Program.
- Graduates older than 40 at the time of graduation, because people are less likely to engage in educational transitions after that age.
- Non-resident aliens, because they are more likely to leave the state right after graduation.

Figure 4 presents wages of certificate holders in child development and related services, including programs in child care provider and child care management. Those who stopped at a certificate, whether short or long in duration, were still earning poverty wages five years after graduation. The few who stacked towards an associate degree (see dotted lines in Figure 4) experienced higher wage growth, at 29.4 percent, but ended up with hourly wages below \$15.

Figure 5 tracks people who started from an associate degree in child development and related services. The results confirm the findings in Figure 4. Associate degrees in this field do not pay off unless leveraged toward a bachelor's, yet only 40 people completed this transition and only 16 in a field related to early childhood. The 13 people who majored in early childhood education and teaching experienced the best results, moving from \$10.29 to \$18.70 per hour (81.7 percent growth

in wages) because a bachelor's degree from an approved training program allows completers to pass a licensing exam and work as public school preschool teachers.⁵

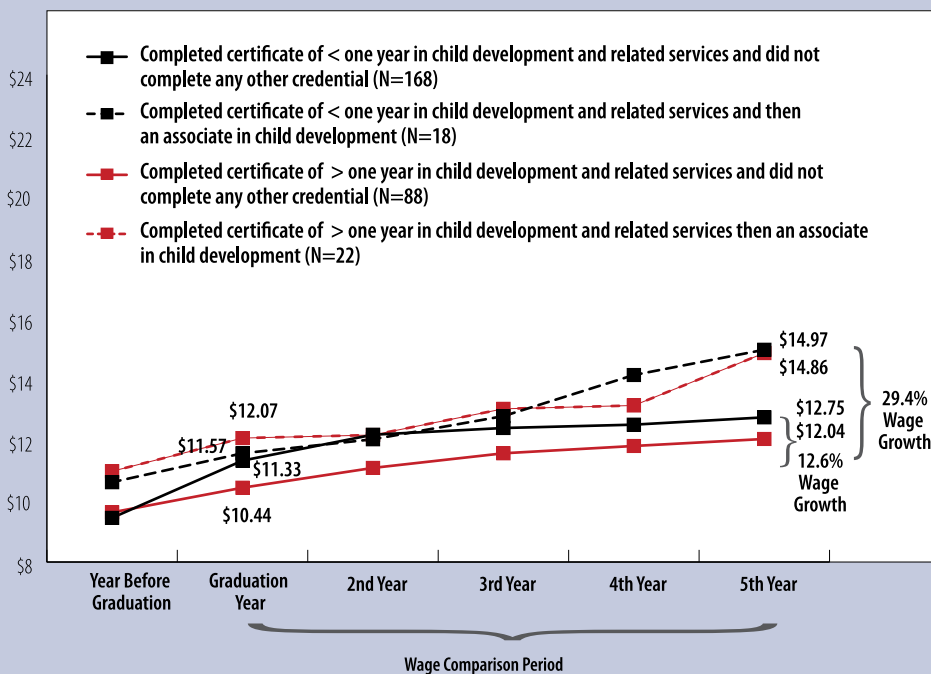
Since there is no road to a teaching career for people who fall short of a four-year degree, either the associate degree must be redesigned to enhance transferability or graduates will remain stuck in jobs that do not require college.

Employers, on the other end, have an important role to play in professionalizing their industry. If day care centers and other early childhood education service providers want to increase the quality of their workforce, they should establish career ladders and pay a wage premium to college-educated staff. This would encourage more people to enter and persist in early childhood-related academic fields. It is hard to justify investing in higher education when credential holders end up competing for the same jobs and wages as those without a degree.

Comparing the outcomes of short-term programs in automotive mechanics technologies versus those in child development is instructive. In the first case, the credential is valued by employers, and continuing

FIGURE 4

Comparison of five-year wage growth for graduates* in child development and related services who subsequently earned other credentials versus those who did not.



*The analysis is limited to individuals who completed a certificate between 2007 and 2012 by age 30 and were still employed in Minnesota five years after graduation.

on to a longer certificate helps people advance along a career path. In the second case, the credential is neither immediately marketable nor effective as a stepping stone to the degree necessary to career advancement – a bachelor's degree.

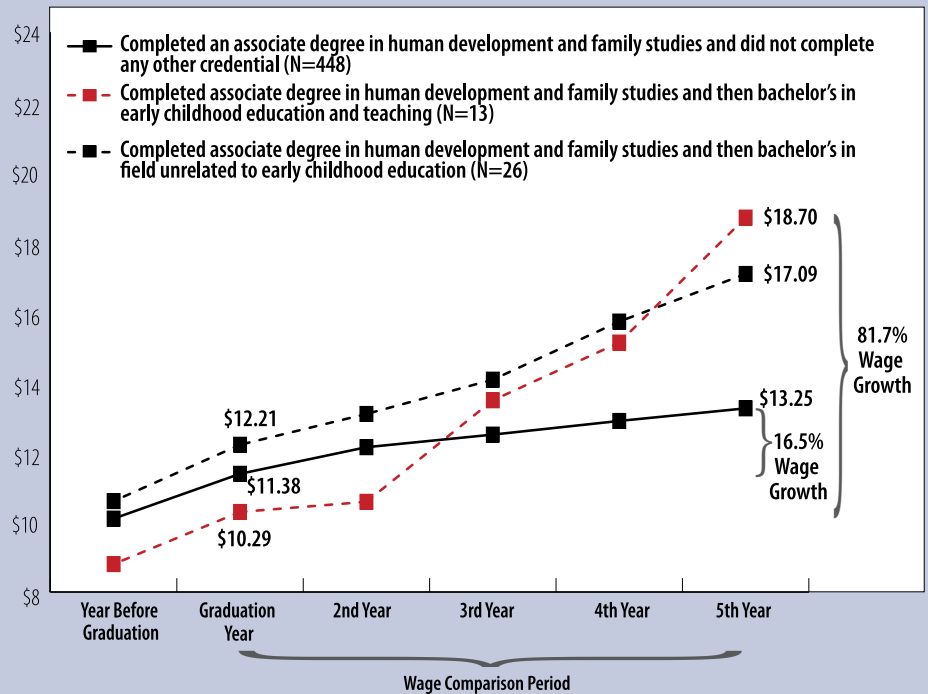
In general, certificates in the skilled trades and engineering technologies pay off even without further education, whereas certificates in service occupations, such as child care, bookkeeping, administrative assisting services or cosmetology, are less rewarded. The difference stems from the types of occupations the programs are designed to prepare for. Short-term programs with no evidence of marketability should be discouraged. Schools should monitor program performance and focus on ensuring that students succeed in programs that independently offer enough labor market payoffs to justify the cost of schooling.

Credentials Stacking in a Related Field

Although credential stacking across fields of study is rare, biology is worth mentioning. Biology graduates who stopped at a bachelor's degree experienced strong wage growth (52.8 percent) leading to a median hourly wage of \$22 five

FIGURE 5

Comparison of five-year wage growth for associate degree graduates* in human development and family studies who subsequently earned other credentials versus those who did not.

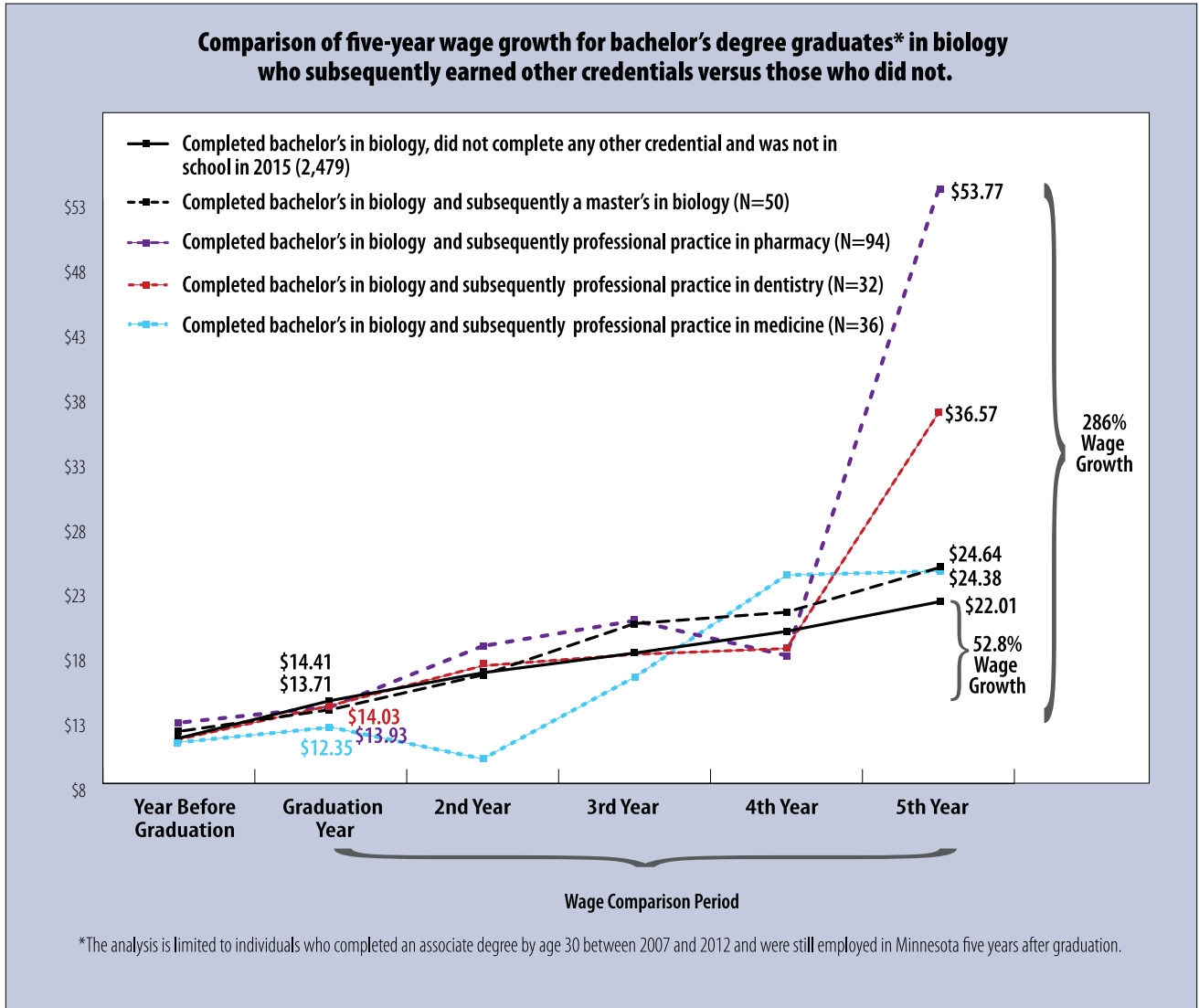


*The analysis is limited to individuals who completed an associate degree by age 30 between 2007 and 2012 and were still employed in Minnesota five years after graduation.



⁵The state of Minnesota requires public school preschool teachers to hold a bachelor's degree or higher from an approved early childhood education training program. Upon successful completion of an approved program, and upon passing the Minnesota Teacher Licensure Examinations (MTLE) basic skills exam, one is eligible for licensure. <http://www.preschoolteacher.org/minnesota/#earn-degree>

FIGURE 6



years after graduation (see Figure 6). Those who continued on to a master's degree in biology slightly improved their earning power, but they were in the minority. Most continuing students switched to a health care-related program where the payoffs were often higher. The biology curriculum overlaps with health care programs, facilitating credit transfer – an example of stacking.

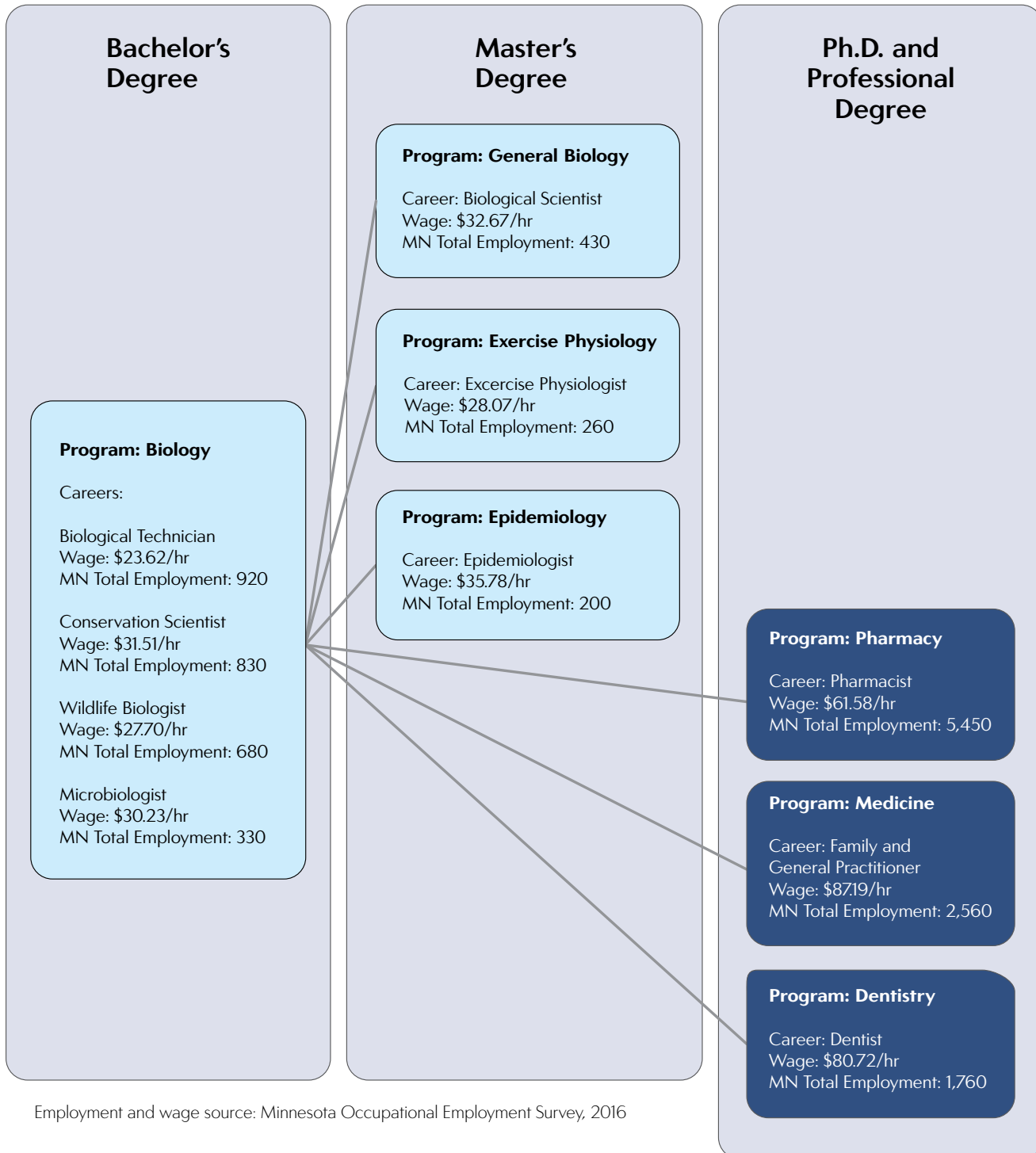
Graduates who continued on to a professional practice in dentistry and pharmacy experienced the strongest wage growth: 286 percent and 195 percent, respectively. Since these programs typically took at least four years to complete, a five-year horizon is not enough to appreciate the long-term wage effect. Medicine programs are particularly intense and leave little time for work, as can be

seen from the initial declines in wages.

Health care programs are appealing to biology students because they can open the door to more remunerative careers, as shown in Figure 7. Health care programs, displayed inside the dark blue-colored boxes, prepare for jobs in large occupations with, typically, higher wages than the careers accessible through

FIGURE 7

Stacking Opportunities from a Bachelor's Degree in Biology



biology programs in the light blue boxes. The lines represent the actual movement of students who stacked these credentials.

Such connections between program pathways are critically important because they allow people to enter careers that are in higher demand than those accessible from the majors of first choice. Schools should strive to facilitate transferability across programs and increase students' awareness of opportunities for

stacking in areas that might otherwise be overlooked.

Horizontal Transitions

Horizontal transitions combine two credentials of the same level, theoretically enabling students to expand their skills and land higher paid jobs than those accessible through training in just one field. In practice, however, horizontal transitions often involve switching field of study and losing previously

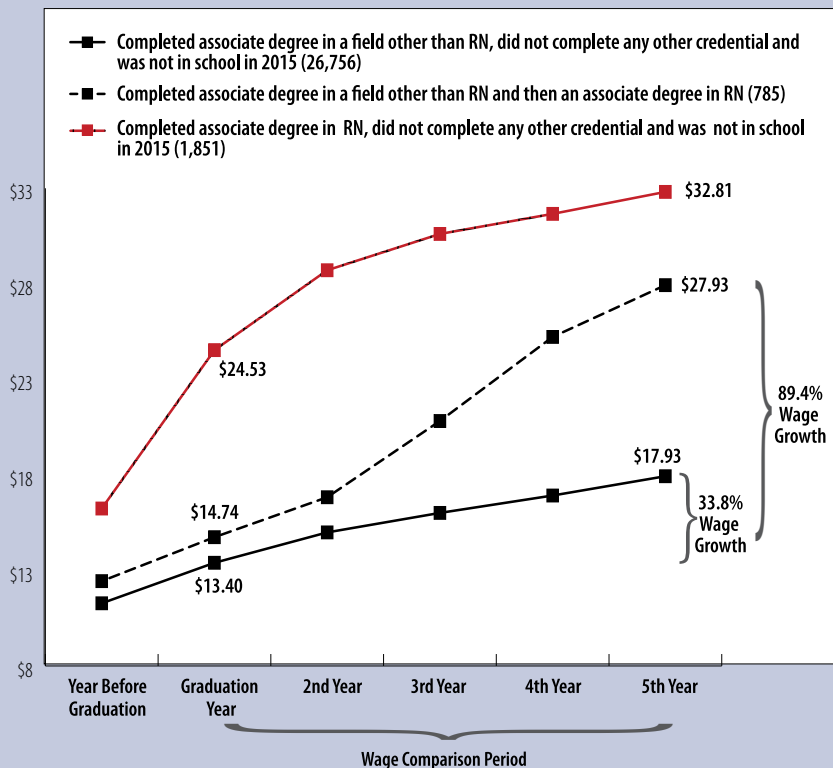
earned credits. Among associate and bachelor's degree completers who subsequently earned a degree of the same level (the horizontal transitions presented in Table 2), almost 10 percent switched to registered nursing. The effects of these transitions on wages are presented in Figure 8.

Associate degree holders who went back to school to complete a two-year registered nursing program experienced much more rapid earnings growth (89.4 percent versus 33.8 percent) than those who completed just one degree in a non-nursing field. These transitions do not meet the definition of stacking because coursework does not carry over from the first to the second credential and the sequence of training programs does not align with a career ladder.

Rather, they probably represent a change in career goals driven by the realization that registered nursing offers better job prospects compared with the major of first choice. Despite the notable improvement in labor market outcomes, people who pursued nursing as a second choice spent two more years in school and delayed career entry, a financially burdensome option. In comparison, those who entered an RN program directly were already earning \$24.53 per hour upon graduation with wages climbing to \$32.81 after five years.

FIGURE 8

Comparison of five-year wage growth for associate degree graduates* who subsequently earned another associate degree versus those who did not.



*The analysis is limited to individuals who completed associate degree by age 30 between 2007 and 2012 and were still employed in Minnesota five years after graduation.

Students should consult their academic advisers to make sure that their educational choices target careers where post-secondary education is compensated and market conditions are favorable.

Is Credentials Stacking Worth It?

Initiatives aimed at creating more entry and exit points into an educational pathway can help students enter the workforce sooner and with less debt. However, the evidence presented in this article – limited to young completers⁶ – shows that earning multiple post-secondary credentials helps only if employment opportunities exist at the different points of educational attainment.

The promise of stackable credentials may not play out in practice because educational attainment does not always translate into career mobility and better jobs. Students should think carefully about the options that are ahead. Is there a credential stacking option in the chosen academic field? Are earnings prospects enough to recoup the cost of more schooling? Are there good job opportunities if one decides not to pursue further education?

These findings lead to the following recommendations

for schools, students and employers to expand the use and effectiveness of credentials-stacking in Minnesota:

- Schools should use labor market information to demonstrate employer demand for credentials⁷ and design educational pathways with the purpose of developing marketable workforce skills.
- Schools should enhance transferability of credits to ensure that people who continue on get credit for what they have already learned. Shorter stackable certificates and articulation agreements between community colleges and universities should be pursued not just to boost graduation rates but to build marketable skills in areas where a credential is needed for career entry.
- Schools should set up a strong system of student advising, which is the most critical piece in the effort to promote stackable credentials. If students are not adequately informed about employment opportunities and earnings prospects in occupations associated with an educational track, even the best pathway design won't improve choices and outcomes.

- Employers would be well advised to reward academic credentials in the form of higher wages and/or career advancement opportunities. Industries that do not offer career ladders commensurate with educational attainment might face difficulties recruiting college-educated workers as the labor market tightens.
- Finally, students should think clearly about their occupational goals before committing to an educational path.

In conclusion, for stackable credentials to be a viable option for students, higher education institutions should design their programs and pathways taking into account labor market conditions and students' outcomes. Employers also have an important role to play by partnering with schools to ensure that efforts to enhance stackability and portability of credentials translate into actual career readiness and advancement opportunities for students. ■

⁶A separate research would be needed to examine the labor market payoffs of stacking for older students who already have considerable work experience.

⁷DEED has developed the Graduate Employment Outcomes tool (<https://apps.deed.state.mn.us/lmi/etd/Results.aspx>) for use by prospective students/trainees as well as post-secondary institutions to evaluate the labor market alignment of Minnesota training and education programs.

Minnesota's Growing Home-Based Care Industry

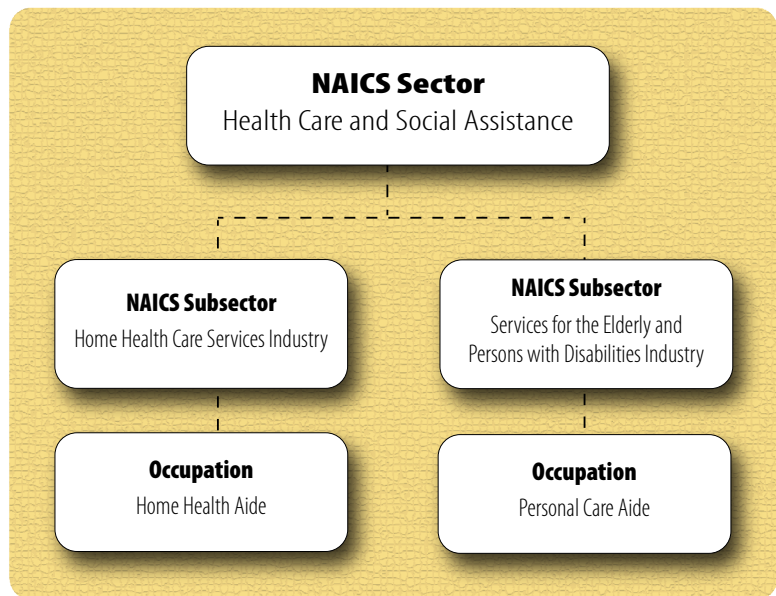
Demand for home-based services that support older adults and people with disabilities is growing with the increasing needs of an aging population.

Services that enable elderly and people with disabilities to receive care and support while living independently are becoming increasingly important as the population ages.

This article spotlights two sectors that provide those services – the home health care services industry and the services for the elderly and persons with disabilities industry.

The home health care services industry provides skilled nursing care in the home, primarily employing home health aides. Services include personal care, homemaker and companion services, physical therapy, medical social services, medications, medical equipment and supplies, counseling, 24-hour home care, occupation and vocational therapy, diet and nutrition, speech therapy, and high-tech care such as intravenous therapy.

The services for the elderly and persons with disabilities industry provides nonresidential social assistance services to



improve quality of life for the elderly, people diagnosed with intellectual and developmental disabilities, or people with physical disabilities. Personal care aides and others provide day care, nonmedical home care or homemaker services, social activities, group support, companionship and other services.

History of Home-Based Care Services

The need for these two industries is not new. Nearly 150 years ago members of the Good Cheer Society of Nashua, N.H., grew concerned about the health and wellness of the city's underprivileged citizens. Initially members visited homes of the poor and brought "jam, jelly and flowers to spread some cheer, but soon found a much greater need – families that were cold and children that were sick."¹

Determined to help in a meaningful way, members donated fuel and clothing and helped mothers take care of their sick children. In 1902, the Society hired its first nurse and several years later hired a supervisor and additional nurses to make home visits. By 1936 the Society had raised enough money to purchase a building to provide nursing and child welfare services. For many years the Society met the health needs

of the community's poorest residents and provided the only bedside nursing care available outside the family.

By 1963, more than 1,100 home health care agencies were operating in the United States. The industry received a dramatic boost in 1965 when President Lyndon Johnson signed Medicare and Medicaid into law as an amendment to the Social Security Act. Medicare made home care services available to Americans 65 and older.

In 1972 these benefits were extended to Americans under 65 with certain disabilities and Americans of all ages with permanent kidney disease. Medicaid initially provided insurance to Americans receiving cash assistance from the government and has since grown to cover low-income families, pregnant women, people of all ages with disabilities and people who need long-term care.

A landmark ruling by the U.S. Supreme Court in 1999 in *Olmstead v. L.C.* deemed the segregation of people with disabilities to violate Title II of the Americans with Disabilities Act. The court held that public entities must provide community-based services to people with disabilities within certain limitations.² The ruling prompted states, including

TABLE 1

Home Health Care Services

Year	Establishments	Employment
2015	471	23,795
2014	485	23,300
2013	458	21,434
2012	437	19,764
2011	432	19,026
2010	416	19,054
2009	394	18,095
2008	370	15,999
2007	316	14,375
2006	281	13,290
2005	240	12,555
2004	202	11,475
2003	181	10,754
2002	159	9,849
2001	146	9,194
2000	145	9,335

Source: Quarterly Census of Employment and Wages

Minnesota, to ensure that their policies complied with the law and led to increased demand for home-based health care services.

Industry Growth, 2000 to 2015

More recently, the aging population has increased demand for home-based care services. The oldest baby boomers turned 70 in 2016. So while demand for home health care services has been strong, growth is expected to surge over the next decade and beyond.

¹<https://www.hhlc.org/>

²https://www.ada.gov/olmstead/olmstead_about.htm

TABLE 2

Services for the Elderly and Persons with Disabilities

Year	Establishments	Employment
2015	919	39,403
2014	884	36,727
2013	830	32,425
2012	859	30,536
2011	838	30,277
2010	729	29,008
2009	697	28,481
2008	637	26,144
2007	600	23,507
2006	615	22,125
2005	598	19,496
2004	543	17,072
2003	498	14,051
2002	421	11,114
2001	382	9,432
2000	363	8,387

Source: Quarterly Census of Employment and Wages

Quarterly Census of Employment and Wages (QCEW) data show the number of establishments in the industry more than tripled between 2000 and 2015, while employment grew by 154.9 percent with the addition of 14,460 jobs over that period (see Table 1).

The services for the elderly and persons with disabilities industry has also grown in conjunction with policies that encourage independent living in the aging population. Over the same 15-year period, 2000 to 2015, the



number of establishments in this industry grew by 153.1 percent, while employment increased by 369.8 percent with the addition of 31,016 jobs (see Table 2).

Future Growth and Challenges

The Minnesota State Demographic Center projects that one in five Minnesotans will be 65 or older by 2030, and they will outnumber the 18 and under population by 2035.

In January 2015, about 38,500 Minnesotans were enrolled in the state’s Medical Assistance Elderly Waiver program, which provides long-term care services for older adults. Based on population projections, enrollment in the program will grow to 59,300 people in 2030 and 71,500 in 2040.³

In less than 20 years, Minnesota’s older adult population will be approaching 1.26 million. Enrollment in the state Medical Assistance program (Minnesota’s version of Medicaid) is projected to increase 85 percent to 71,500. There is no doubt that the home health care services industry will experience tremendous growth and challenges as it expands to meet the public need.

The December issue of Minnesota Employment Trends profiled two occupations in these industries: home health aides and personal care aides. While there is strong demand and growth in both occupations, low wages and a tight labor market are making the positions difficult to fill. The question for policymakers is how to address current and future challenges facing the industry. ■

³ http://mn.gov/admin/assets/demographic-considerations-planning-for-mn-leaders-msdc-march2016_tcm36-219453.pdf

The New Normal

Slow workforce growth combined with modest job growth adds up to tight labor markets becoming the norm in Minnesota.

Minnesota's annual average unemployment rate was 3.9 percent in 2016 and 3.8 percent in 2015.

The state annual average unemployment rate has been below 4 percent only 16 years since 1950 – roughly one out of every four years during the past seven decades.¹ Unemployment below 4 percent in consecutive years is even more unusual, occurring over only four periods during the last seven decades.

The first was 1952-53 during the Korean War, when unemployment averaged 3.8 percent. Unemployment averaged 3.3 percent over the five-year period of 1966 and 1970, while the state's best run of low unemployment was from 1995 through 2001, when unemployment averaged 3.4 percent for seven years.

Most of us weren't looking for jobs or hiring employees during the 1950s or '60s, but many of us were around during the boom years of the late 1990s.

Job ads were everywhere back then, plastered on storefronts, broadcast on radio and TV, and advertised on billboards.

The end of the '90s was easily the best job market in years for Minnesotans who were looking for jobs, switching careers or bargaining for higher wages. Similar signs of a tightening job market are popping up today in Minnesota. But until the unemployment rate slips below 3 percent, the current tight labor market falls short of 1999 and 2000, when unemployment averaged 2.8 percent.

Minnesota's current labor market differs from the boom years of the 1990s in a number of ways, but one underlying trend makes today markedly different from past tight job markets: slowing labor force growth.

The tight labor market of the late 1990s surfaced after 19 consecutive years (1983 to 2001) of expanding employment. Employment, measured by household employment, climbed

37 percent during that period, or roughly 1.6 percent annually, boosted by annual average labor force gains of 1.5 percent.²

This time around, it took only seven straight years of job growth (2010 to 2016) and only a 7 percent household employment increase (slightly less than 1 percent annually) to drain most of the state's labor slack and push unemployment below 4 percent. Labor force growth, even more so than job growth over the last seven years, has slowed, averaging just 0.5 percent.

Labor force growth in Minnesota and nationally hit an inflection point right around the turn of the century. It was no coincidence that slowing workforce growth occurred at the same time that the peak of the baby boom generation (baby boom births peaked in 1957) was 35 to 45 years old, the age bracket with the highest labor force participation rate historically.

Labor force participation also

¹Unemployment and other labor force measures for Minnesota are available at <http://mn.gov/deed/data/data-tools/laus/>. The method of estimating Minnesota's unemployment rate changed in 1976 so that only data from 1976 and on is online. The 1950 to 1966 data used here were judged reliable enough to gain a longer historical perspective.

²Household employment used here estimates the number of Minnesotans who are either self-employed or hold a wage and salary job across all industries including agriculture. Job data from the Current Employment Statistics (CES, also known as payroll or establishment employment), which is more commonly used, provides estimates of wage and salary employment in the state excluding agriculture employment as well as self-employment. CES employment increased by 250,000 between 2010 and 2016 compared with 182,000 in household employment.

reached its high point around 2000, corresponding to the peak of the baby boomers reaching their prime working years. Much of the rise in labor force participation came from women, including Mary Richards, moving into the workforce at higher rates than in the past. More women entering the workforce also leveled off around 2000.

Slower growth in the state’s working-age population and more baby boomers entering retirement guarantees slower labor force growth over the next few decades, which in turn guarantees slower job growth.

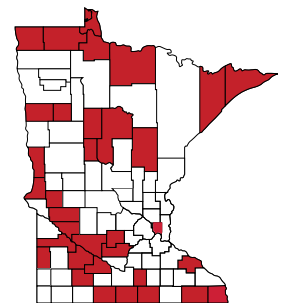
Minnesota won’t need the roaring job growth days of the 1990s to keep unemployment rates low and workers hard to find. Slow workforce growth combined with even modest job growth adds up to tight labor markets becoming the norm rather than the exception as in the past.³

Slowing or even declining labor force growth hasn’t developed overnight. Only four Minnesota counties had smaller labor force levels in 2000 than in 1990. By 2007, however, 33 counties had already recorded their largest annual total labor force estimates (see Figure 1). The workforces in these counties peaked sometime during the 1990 to 2007 period and have been declining since. In some of those counties, the labor force is partially recovered after dropping, but not enough to top their peak labor force total.

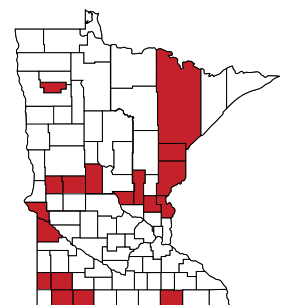
Peak labor force total was reached in 19 other counties during the Great Recession (2008 to 2010, the second map in Figure 1). The labor force in another 11 counties peaked sometime between 2011 and 2015. Only 21 counties recorded their highest labor force total ever in 2016. As displayed, most of those counties were in the Twin Cities, Rochester or St. Cloud metropolitan statistical areas. More counties will turn red in Figure 1, as peak labor force totals are reached over the next few decades if labor force projections hold. **T**

FIGURE 1

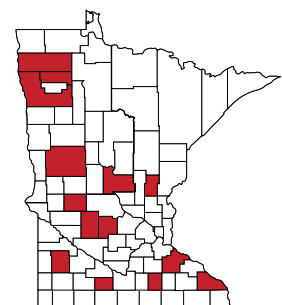
Counties With Labor Force That Peaked Between 1990 - 2007



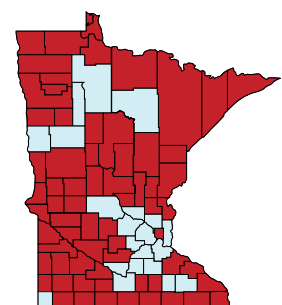
Counties With Labor Force That Peaked Between 2008 - 2010



Counties With Labor Force That Peaked Between 2011 - 2015



Counties With Labor Force Still Growing in 2016



Source: Local Area Unemployment Statistics (LAUS), <https://apps.deed.state.mn.us/lmi/laus/Default.aspx>

³Minnesota’s slowing labor force growth has been covered in more detail in a number of reports, including <https://mn.gov/bms-stat/assets/in-the-shadow-of-the-boomers-labor-force-outlook-msdc-dec2013.pdf>, <http://www.gwdc.org/docs/publications/gwdb-annual-report.pdf> and <http://www.research.umn.edu/business/documents/OVPR%20Immigrant%20Workforce%20Development%20Report.pdf>. A national perspective on the labor force slowdown is presented at <https://www.bls.gov/opub/mlr/2015/article/labor-force-projections-to-2024-1.htm>.

Workforce Diversity in Minnesota

A first-of-its-kind study of Minnesota businesses found that size matters when it comes to workplace diversity.

In spring 2016, work at DEED revealed employers wanted more information on ways to successfully attract workers from communities of color. In response, DEED reached out to employers to better understand how they are approaching the issue of workforce diversity. This produced a first-of-its-kind look at workplace diversity in Minnesota.

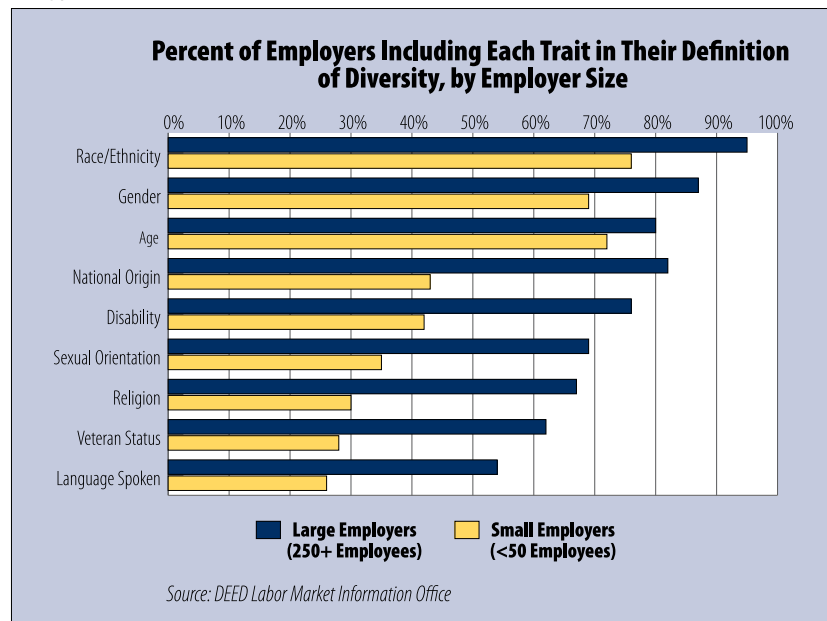


How Do Employers Define Diversity?

When talking about diversity at their business or organization, 75 percent or more of employers say they are referring to race/ethnicity, gender and age. Less than one-third of employers say they are referring to concepts like personal values or beliefs, personality type or criminal background.

These tendencies differ based on the size of the employer's workforce. Employers with fewer than 50 workers are more likely to say they don't talk about diversity. When they do talk about diversity, they tend to refer to race/ethnicity, age and gender.

FIGURE 1



Methodology

DEED Labor Market Information analysts constructed a sample from approximately 7,000 respondents to the Second Quarter 2015 Job Vacancy Survey. The sample was created to allow results to be representative of businesses of the same size, in the same region and in the same industry.



The survey was administered to 3,158 employers using paper and electronic mailings and surveys. Employers with obtainable email addresses completed an online survey. All others were mailed a paper survey that included a link to complete the survey online.

Employers were given five weeks to complete the survey. DEED successfully contacted 2,904 employers, of which 1,049 responded, for a response rate of 36 percent.

In contrast, employers with 250 or more workers are more likely to use a broad definition of diversity, referring to race/ethnicity, gender, national origin, age, disability, sexual orientation, religion, veteran status and language spoken (see Figure 1).

Do Employers Think They Have a Diverse Workforce?

When defined as employing one or more people from communities of color, 80 percent of employers say they have a diverse workforce. Again, the size of an employer's workforce

matters. About 99 percent of those employing 250 or more workers say they are diverse compared with 48 percent of employers with fewer than 50 workers.

When compared to their customer base and the residents of their community, about 60 percent of employers say their workforce is about as or more racially diverse than these groups. Around a quarter of employers say the opposite, indicating that the racial diversity of their workforce does not yet reflect the racial diversity of their community or customer base.

Are Employers Actively Diversifying?

At both the managerial and entry levels, over 50 percent of employers say they are actively trying to increase the racial diversity of their workforces. Once again, these tendencies vary based on the size of an employer's workforce. Employers with 250 or more workers were more likely to be actively trying to increase racial diversity in both entry-level positions (77 percent compared with 29 percent) and managerial positions (78 percent compared with 23 percent) as compared to employers with fewer than 50 workers (see Figure 2).

Why Are Employers Seeking to Diversify Their Workforces?

Research has shown significant benefits from diversifying the workforce, from increased group problem-solving abilities to harder working team members.¹ We hypothesized that employers who have internalized this research would also be more likely to have policies and practices intended to cultivate diversity, so first we asked why they would seek to increase the racial diversity of their workforce (see Table 1).

Common in this literature are studies linking workforce diversity to higher profits or

share price of large corporations and experiments on the problem-solving abilities of small groups. Missing from it is the business case for diversity among smaller employers.

Reflecting this gap in the literature, our small employer respondents are much more likely to report not knowing any reasons to increase racial diversity. The most-cited reason among employers of any size for increasing racial diversity is simply to attract the best applicants; the majority of large employers also cite improving work environment or culture and improving racial equity.

What Are Employers Doing to Diversify Their Workforces?

The literature on best practices in diversity management is vast but is largely theoretical and intuitive rather than evidence-based.² At a high level, these best practices include broad recruitment strategies, mentorship and training opportunities, strong commitment from leadership, and accountability to diversity goals. We asked our employer respondents about multiple concrete strategies found in this literature, some of which do reflect a bias toward large employers (see Table 2).

FIGURE 2

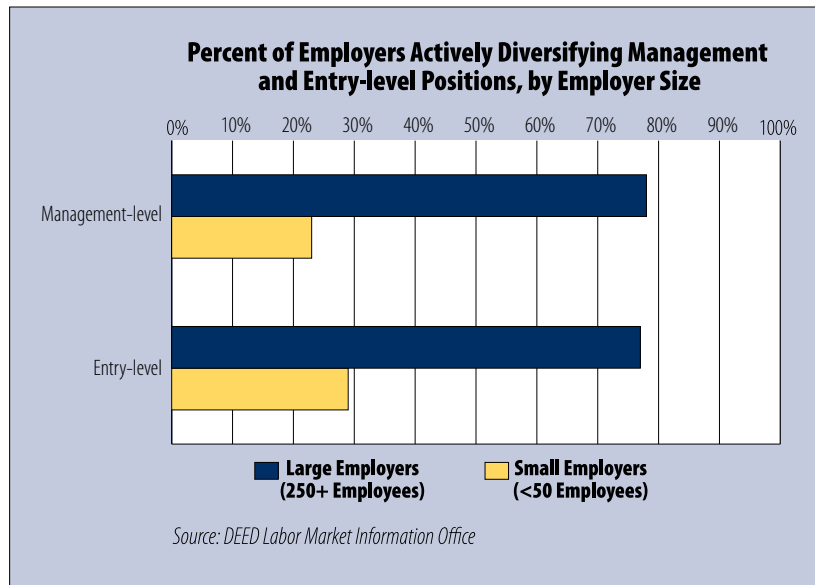


TABLE 1

Answer to “Please indicate any reasons that your business or organization would seek to increase racial diversity. Check all that apply.”

	Employer Size		
	Small	Medium	Large
To attract the best applicants	54%	65%	78%
To improve work environment or culture	23%	43%	65%
To improve racial equity	22%	39%	61%
To increase customer appeal	15%	26%	42%
To increase employee productivity	15%	19%	30%
Other - Write In	5%	10%	14%
Not applicable	18%	10%	6%
Unsure/ don't know	20%	9%	3%

Source: DEED Labor Market Information Office

¹See, for instance, “How Diversity Can Drive Innovation” in the December 2013 issue of Harvard Business Review and “How Diversity Makes Us Smarter” in the Oct. 1, 2014, issue of Scientific American.

²See “Managing Diversity in Corporate America: An Exploratory Analysis” by Jefferson P. Marquis et al. from the RAND Corporation.

Each of the strategies we ask about is more common among large employers, most of whom are re-evaluating minimum job qualifications and paying for professional development, and whose leadership is communicating a clear commitment to diversity. Small- and medium-sized employers are relatively more likely to have a formal mentoring program than to participate in hiring events focused on people of color; the

opposite is true among large employers, suggesting the right mix of best practices differs by employer size.

Conclusions

While providing insights into the current state of workforce diversity in Minnesota, these results also raise new questions. Is there a business case for diversity that can appeal to small employers? Does successful

diversity management look different for small employers than it does for large? Future research will need to address these questions to ensure employers at all levels are better prepared to benefit from Minnesota’s changing workforce demographics. ■

TABLE 2

Answer to “Which of the following initiatives or practices has your business or organization engaged in within the last three years?”

	Employer Size		
	Small	Medium	Large
Recruitment and retention initiatives			
Ensure that stated minimum qualifications are truly required and not simply preferred	42%	56%	68%
Pay for professional development of employees	36%	49%	61%
Make diversity training available to all employees	13%	32%	53%
Participate in hiring events focused on people of color	6%	17%	45%
Support a formal mentoring program among employees	17%	24%	36%
Other	3%	5%	9%
None of the above	37%	19%	6%
Leadership practices			
Senior leadership communicate commitment to diversity	14%	35%	59%
Develop a clear business rationale for increased diversity	9%	18%	37%
Devote an office, department or task force to increasing diversity	1%	11%	34%
Include progress on diversity goals in at least one manager’s job review	1%	9%	29%
None of the above	76%	53%	27%
Establish explicit goals for the use of women- or minority-owned suppliers	5%	7%	13%

Source: DEED Labor Market Information Office

Learning the Ropes

Participants in the new Minnesota Apprenticeship Initiative will receive on-the-job training and classwork in high-growth occupations.

The Minnesota Apprenticeship Initiative (MAI) is on track to bring 1,000 people into newly registered apprenticeship programs in 30 high-growth occupations in Minnesota in the next five years.

The U.S. Department of Labor's American Apprenticeship Initiative awarded a \$5 million grant in September 2015 that is helping 70 Minnesota employers expand and create new registered apprenticeship programs in industries that typically don't have apprenticeships. Participants will receive classroom and on-the-job training.

Participating employers are eligible to receive up to \$5,000 for each registered apprentice, covering the cost of support activities, supplies and materials, instruction costs and more.

DEED and the Minnesota Department of Labor and Industry are partnering in the program, providing outreach and recruitment, assessments, adult basic education, support services,



and on-the-job and industry-recognized credential training.

The grants will focus on five industries that need assistance with workforce development and talent acquisition but historically have not been affiliated with the apprenticeship model: advanced manufacturing, agriculture, health care services, information technology and transportation.

Those high-growth industries were chosen based on employer needs and data showing they will be facing labor shortages in the next 10 years.

A statewide outreach effort explained some of the benefits of the program to employers and dispelled myths about apprenticeships. Benefits for employers include higher skilled workers, better productivity, more diverse workforces and reduced turnover. Workers will have the opportunity to gain skills, advance their careers and earn better pay.

The grants are designed to help employers create long-term, sustainable registered apprenticeship programs that continue beyond the life of the grant.

One program goal is to target and recruit under-represented Minnesotans into registered apprenticeships, including people of color, women, veterans, people with disabilities and young adults.

Owens Corning

MAI's first registered apprenticeship program was signed in July 2016 at Owens Corning in Minneapolis. The business makes roofing products (shingles and accessories) and insulation.

Owens Corning employee Brandon Carlsen is a maintenance mechanic apprentice. He is completing related classes at Hennepin Technical College, including courses in pneumatic components, advanced programmable logic controllers and fluid power technology.

His on-the-job training includes preventive and corrective maintenance, troubleshooting, and pipefitting and plumbing (welding, fabrication, brazing, soldering and other jointing processes).


Carlsen was already employed at Owens Corning. Recognizing his work ethic and desire to learn, managers developed their registered apprenticeship program with him in mind.



Brandon Carlsen

Carlsen has been in the program for nine months, and managers say he has far exceeded their expectations. Other Owens Corning employees have inquired about joining the program, and the company has used the program as a tool for recruiting new job candidates.

Owens Corning has enrolled two more apprentices since Carlsen began and plans to enroll a total of 10 under the MAI grant. When Carlsen finishes the program this fall, he will mentor new apprentices.

More details about the program are available at www.dli.mn.gov/aai.asp. 

COURTESY: MINNESOTA DEPARTMENT OF LABOR AND INDUSTRY

Meet

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