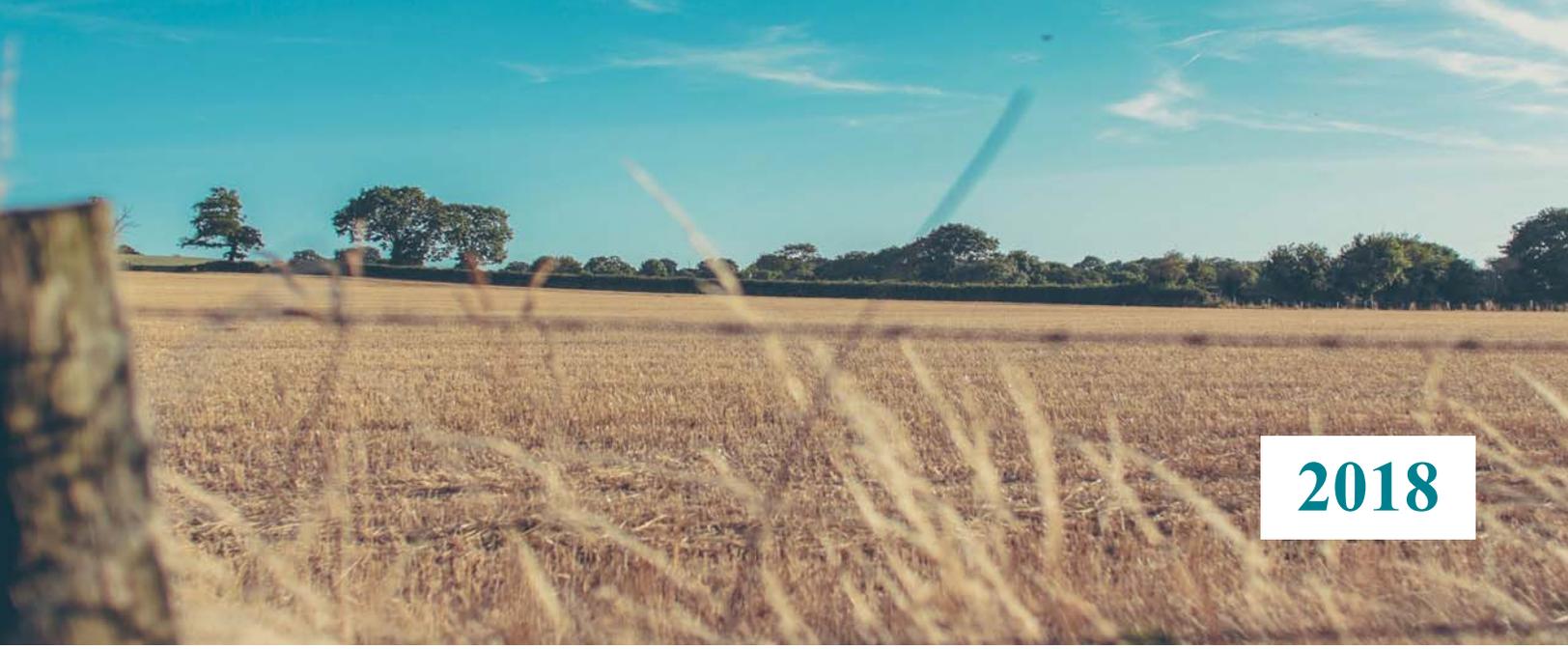


A photograph of a large industrial facility, likely a steel mill or manufacturing plant. The scene is filled with complex machinery, including conveyor belts, structural beams, and overhead cranes. The lighting is dramatic, with bright spots from overhead lights and deep shadows throughout the space.

Iowa's Workforce

and the Economy

A photograph of a vast agricultural field, possibly corn, under a clear blue sky. The foreground shows the golden-brown stalks of the crop in sharp focus, while the background features a line of trees and a bright, clear sky.

2018

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Message from the Labor Market Information Director



Welcome to the twelfth edition of Iowa's Workforce and the Economy. This annual publication contains key metrics regarding the economic conditions over the past year along with forecasts and articles regarding Iowa's labor market conditions and core initiatives.

In many ways, this past year was a continuation of the prosperous years that preceded it, and 2018 continues on that path. The state's unemployment rate has been reduced to a level not seen in nearly two decades. Meanwhile, Iowa establishments continue to build on a record-level number of jobs through mid-year. Much of the growth has been fueled by the state's manufacturing facilities, which will help spur growth in many other segments of the economy.

On the other hand, economists and businesses also understand that current economic conditions are tight for the employer and favor the job seeker. This may translate to higher wages for Iowa's workers. These conditions provide an excellent opportunity for workers to change careers or seek new opportunities they've been too apprehensive to pursue in prior years.

In addition to the usual summary of the labor force, nonfarm employment, and projections, included in this year's publication are a summary of the college retention survey, a summary on the statewide laborshed study, an overview of the manufacturing sector, and a brief summary of expanding and declining occupations.

Sincerely,

A handwritten signature in black ink that reads "Cathy Ross". The signature is written in a cursive, flowing style.

Cathy Ross
Information Technology Division Administrator and
Labor Market Information Director
Iowa Workforce Development

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Executive Summary

- Iowa's businesses added jobs for the seventh-consecutive year, although the rate of expansion has been progressively slowing over the past five years. Although positive, the rate of growth for the Hawkeye state (0.13 percent) trailed all neighboring states and the United States. Iowa's factories added jobs for the first time since 2014 due entirely to annual growth in non-durable goods manufacturing. Early signs point to continued expansion for Iowa's establishments:
 - ◆ The Iowa Association of Realtors reports that Iowa's home sales increased 3.2 percent from 2016 to 2017 and the average price of homes sold in Iowa gained \$7,700 (+4.4 percent) annually.
 - ◆ Grain prices held steady in 2017. Corn changed little versus 2016 and averaged \$3.30 in 2017. Soybeans also held steady at \$9.28.
 - Manufacturing has been the backbone of Iowa's economy for many years, and no other sector has experienced such volatility. Trailing only health care and social assistance for the number of jobs, manufacturing has steadily trended down since reaching an all-time high in 2000. In 2016, Iowa ranked fourth in the U.S. in manufacturing employment as a percentage of overall employment, following only fellow Midwestern states Indiana, Wisconsin, and Michigan. Wages have steadily increased since 2000, although employment is forecast to show slow growth over the next ten years. Much of the growth will hinge upon domestic and foreign policy.
 - The unemployment rate reached its lowest level in 17 years. While most areas of the nation trended down in unemployment in 2017, Iowa maintained its status as a low-unemployment state with the seventh-lowest rate in the United States. County rates also trended down for 95 of 99 counties.
 - ◆ Men accounted for slightly more unemployed Iowans than women (59 percent versus 41 percent).
 - ◆ Groups that experienced higher-than-average unemployment rates were:
 - ◇ Youth 16 to 19 years old (8.6 percent)
 - ◇ Less than a high school diploma (8.4 percent)
 - ◇ Black or African American (7.8 percent)
 - ◇ Hispanic (7.3 percent)
 - ◆ Among Metropolitan Areas, Davenport-Moline-Rock Island experienced the highest unemployment rate for 2017 at 4.4 percent; Ames had the lowest rate at 2.0 percent.
 - Over the next ten years (2016–26), Iowa is projected to add 154,725 jobs, a gain of 8.5 percent. Despite the growth, the labor force participation rate is expected to contract due primarily to older workers leaving the labor force. Healthcare and social assistance; trade, transportation, and utilities; and professional and business services are forecast to account for slightly over half of all jobs added (80,700 jobs).
-

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- Iowa Workforce Development released data in 2017 regarding college student retention. This survey included students from almost half of all colleges and universities in the state of Iowa (47.9 percent). The results coincide with the Future Ready Iowa goal of having 70 percent of the workforce with an education or training beyond high school by the year 2025. As such, retaining college graduates helps meet this goal. Among the key findings were:
 - ◆ 46.0 percent are likely to stay in Iowa after graduation or program completion versus 26.7 percent who are likely to leave
 - ◆ 60.2 percent of those with dependents are likely to stay in Iowa; only 16.1 percent are likely to leave
 - ◆ Over half (57.5 percent) state that they are likely to leave Iowa after graduating from a 4-year school

(The full report and data findings may be found at www.iowalmi.gov/cs)

 - Iowa's occupational patterns will continue to evolve with the changing economy. Advancements in technology will reduce the demand for executive secretaries, word processors, typists, and data entry clerks. On the other hand, technological advancement will mean increased demand for solar photovoltaic installers and wind turbine technicians. Both of these careers continue to play a key role in Iowa's economy. Additionally, automation may ultimately eliminate some professions as time moves on; however, it will also improve efficiency within businesses and factories, lower prices, raise output, and could raise the need for related business occupations involved in the decreased demand for finished goods and services.

 - The goal of Iowa's Laborshed analysis is to measure the availability and characteristics of workers within the state of Iowa using Iowa Workforce Development's Laborshed Survey. The data generated will aid state and local development officials in their facilitation of industry expansion and recruitment and their service to existing industry in the state. The 2017 Statewide Laborshed Analysis showed:
 - ◆ The current overall median hourly wage of those who are employed is \$17.00 and the median salary is \$64,000 per year.
 - ◆ The estimated wage threshold for the unemployed likely to accept employment is \$13.00 to \$15.00 per hour.
 - ◆ Survey respondents were asked to identify the industry in which they are currently working. The top industries in Iowa are healthcare and social services (15.7 percent); wholesale and retail trade (14.5 percent); manufacturing (13.1 percent); and education (12.9 percent). The largest concentration of potential available labor is employed within the professional, paraprofessional and technical occupational category (32 percent).
-

2017 Overview of the Iowa Economy

By James Morris

Iowa's continued expansion issued some warning signs

A review of Iowa's economic conditions in 2017 provided comfort for several reasons: continued decline in both the number of unemployed Iowans and the state's unemployment rate, recovery in the amount of exports after consecutive years of decline, and improvement in employment levels within both the finance and manufacturing sectors. These trends can be seen in the chart below.

Iowa Economic Indicators					
Indicators	2013	2014	2015	2016	2017
Gross Domestic Product - Iowa (\$ billions)	162.3	171.4	180.5	186.2	190.2
Exports (\$ billions)	13.9	15.1	13.2	12.1	13.2
Personal Income (billions)	\$133.5	\$137.7	\$142.8	\$144.2	\$144.7
Per Capita Personal Income	\$43,217	\$44,351	\$45,800	\$46,056	\$45,996
Median Iowa Home Sales Price	\$133,000	\$134,950	\$141,000	\$146,900	\$153,000
New Residential Housing Units Authorized	10,877	10,353	12,097	14,317	13,948
Iowa New Vehicle Registrations	141,897	142,431	147,447	137,451	140,636
Employment Statistics:	2013	2014	2015	2016	2017
Total Nonfarm Employment	1,528,200	1,546,700	1,561,400	1,571,200	1,573,200
Manufacturing Employment	214,400	217,000	216,200	213,900	216,300
Financial Activities Employment	103,700	104,100	105,700	108,000	109,200
Retail Trade	177,800	178,100	180,500	182,600	181,600
Labor Force Statistics:	2013	2014	2015	2016	2017
Total Unemployment	79,300	72,300	64,200	61,100	52,500
Percent Unemployed	4.7%	4.2%	3.8%	3.6%	3.1%
Labor Force Participation Rate	69.7%	70.4%	70.1%	69.5%	68.4%
Unemployment Insurance:	2013	2014	2015	2016	2017
Weeks Compensated	1,294,587	1,201,658	1,176,537	1,147,806	1,062,805
Average Duration (weeks)	13.70	12.90	12.70	13.0	13.4
UI Regular Benefits Paid (\$ millions)	\$418.8	\$402.6	\$417.6	\$423.5	\$402.6

Source: Labor Market Information Division, Iowa Workforce Development, Iowa Economic Development Authority, Bureau of Economic Analysis, Iowa Association of Realtors (Data may be subject to annual revision)

Closer inspection of the data reveals possible early warning signs of a weakening economy. For one, the total labor force in Iowa contracted for the second consecutive year, reducing the number of employees within the job pool for employers. Recent losses in the labor force are likely due to an increasing number of retirements, although other factors could be playing a role in these losses, such as migration to other states.

Another cause for concern is the recent trend within per capita personal income. One expected consequence of a decrease in the size of a labor pool, all else being equal, is a corresponding increase in the average wage paid within that labor pool. This increase would be a reflection of businesses competing for the smaller supply of remaining employees. In 2017, however, Iowa's per capita personal income decreased by \$60 (U.S. Bureau of Economic Analysis, 2018). This follows an anemic yearly increase of \$256 (1.0 percent) in 2016, a year which also experienced a labor force decline. In 2017, Iowa trailed only North Dakota in per capita personal income growth. Over the past four years, the state's average rank among all states was 44th.

Perhaps most troublesome trend is the slowing pace of employment growth. Following the recession, total nonfarm annual gains peaked in 2012 with an annual growth rate of 1.5 percent. Since then, the annual growth rate for nonfarm employment has trended down every year. In 2017, the rate decreased to almost no gain (2,000 jobs, or 0.1 percent). The one bright spot has been manufacturing—Iowa factories gained 2,400 jobs in 2017, which represented an increase of 1.1 percent.

Rural Iowa economies are progressing at a slower pace, and in many cases are shrinking. In this regard, Iowa is not unlike the rest of the United States. Areas outside of the metropolitan statistical areas (MSAs) have pared jobs in each of the last two years with losses totaling 5,600 jobs. By contrast, economies within the state's metropolitan areas have gained 16,500 jobs with the majority being added in the Des Moines Metropolitan area.

Retaining Iowa's Skilled Labor Force

Moving forward, Iowa's continued growth will hinge on several factors, one of which will be the availability of a capable, skilled labor force that can facilitate business expansion. A shrinking workforce could present challenges for firms looking to relocate and expand in the state. Part of this problem may be remedied by maintaining Iowa's standing as a desirable place to live, thus encouraging net migration into the state. In this regard, Iowa is a leader with the highest livability rating for 2018 (U.S. News & World Report, 2018). The state ranked highest in infrastructure (which includes internet access, energy, and transportation) and in the top 10 in health care, opportunity, and quality of life.

Another solution would be to increase retention rates of Iowa's college graduates. Improving upon those factors would help create an educated workforce and support the goals outlined by Governor Kim Reynolds for her [Future Ready Iowa](#) initiative. According to the [Iowa Talent Retention Report](#) (Iowa Workforce Development, Research and Analysis Bureau, 2018), 26.7 percent of Iowa's college students are likely to leave Iowa following graduation. Findings from this report indicate:

- Of those students that are likely to leave, over half are attending a public four-year university.
- Minorities are more likely to leave the state (16.4 percent versus 9.1 percent).
- The greatest proportion (20.1 percent) of those that are likely to leave expect a starting wage of \$28.75 per hour or higher. Among those likely to stay, 21.6 percent expect a starting wage of \$22.75 per hour or higher.

Alternatively,

- Of those likely to stay in Iowa, 52.8 percent have family in Iowa; among those likely to leave, only 20.6 percent have family in Iowa.
- Singles made up a larger proportion of those likely to stay (41.0 percent) than they did likely to leave (29.3 percent).
- Students ranked many factors regarding their post-graduation location decision. Among these were entertainment options. In general, 59.1 percent of those likely to stay feel Iowa has adequate entertainment options; among those likely to leave, only 23.8 percent feel that way.

Trade Effects on the State's Economy

Keeping and maintaining a capable labor force is just half the equation; Iowa will need to ensure that labor demand continues to remain strong and make certain the state's economy continues to grow at a rate comparable to the rest of the nation. To that end, commodities and finished products must remain affordable for both domestic and global markets. Unfortunately, some of Iowa's commodities have been recently subjected to tariffs from other countries.

In addition to cash crops such as soybeans and corn, Iowa produces several types of big-ticket, durable goods items including farm and construction machinery equipment, navigation equipment, and household appliances. All of these products have been the subject of recent tariff policies in 2018, potentially making them more expensive to overseas

consumers at least in the short-term. For producers, input prices involved in manufacturing could also be a factor in the finished good prices of products and play a role in overall demand.

Iowa exports typically do not travel far to find a foreign market. Canada and Mexico are Iowa's largest consumers of exports, totaling almost half (47.5 percent) of all goods shipped. Japan follows third at 7.6 percent, while China is a distant fourth at 4.2 percent. These statistics can be found in the figure below.

Iowa Exports by Country (2017)



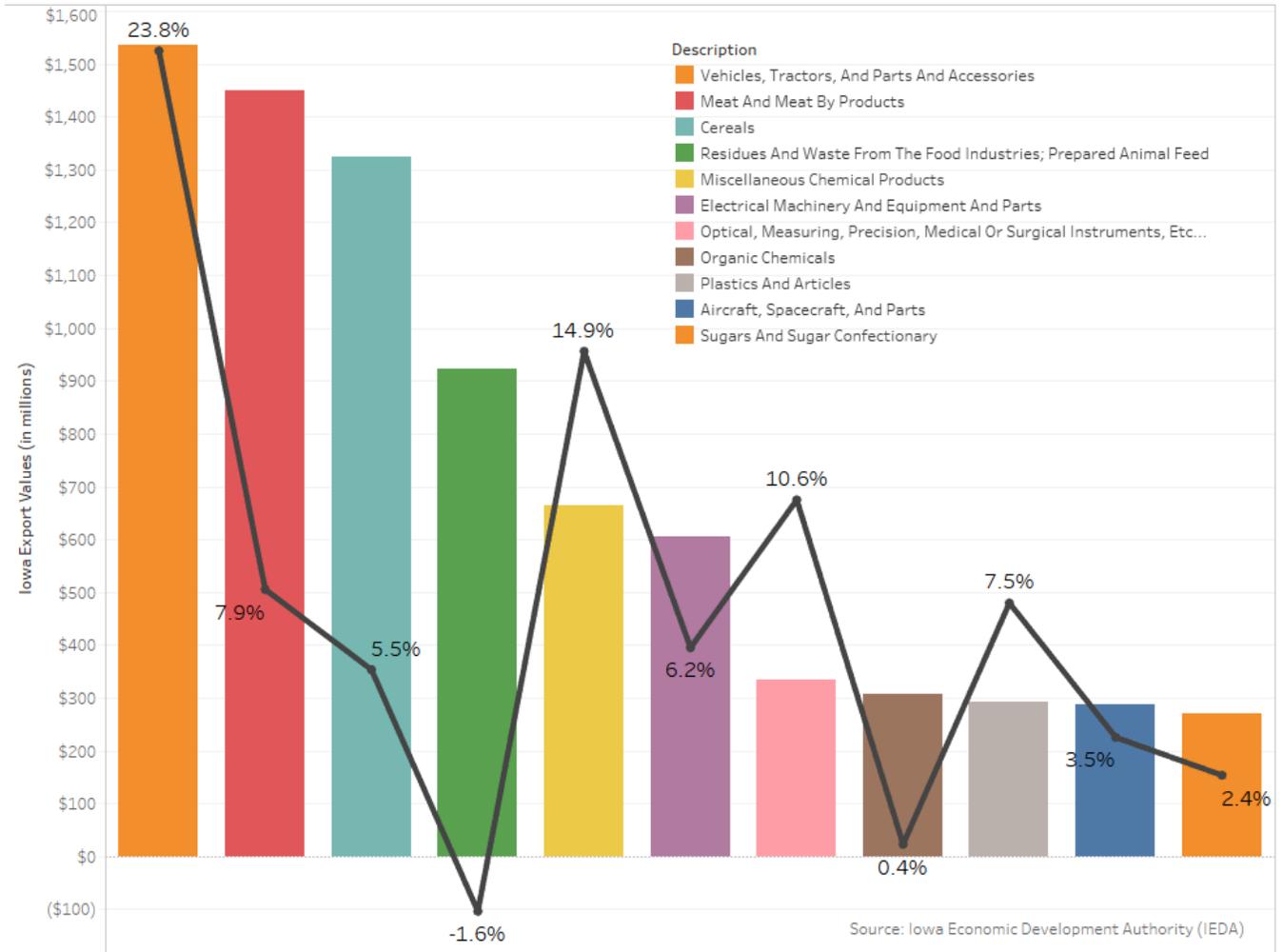
From a goods perspective, farm and construction machinery, tractors, and big-ticket appliances cover over 25 percent of all Iowa goods shipped to foreign markets, totaling \$3.6 billion annually. Meats, meat by-products, grains, and cereals combine for another 21 percent of exports, worth \$2.8 billion. The production of these finished goods represents a sizable portion of the state's manufacturing employment. Most of the overall shipments of these goods expanded since 2016 with the largest growth being in vehicles, tractors, and parts/accessories (see the figure on the next page).

Monitoring the 2018 Economy and Beyond

Through June of 2018, Iowa's economic indicators have shown signs of being resilient. According to the Current Employment Statistics survey (CES), Iowa establishments are continuing to add jobs and expand upon record levels of employment. Much of this growth has hinged on manufacturing, which will be one of the most affected sectors by the recent trade disputes. Given that manufacturing has accounted for the bulk of job growth in 2017 and Iowa is heavily reliant on manufacturing jobs, changes in demand for finished products could potentially have a larger impact on Iowa than other parts of the country.

At the same time, Iowa's unemployment rate remains at extremely low levels not previously seen since the year 2000. This tight labor market should be empowering to the Iowa job seeker to find employment opportunities that match their goals and skillset. On the other hand, businesses will need to intensify efforts to find qualified job applicants and create avenues to retain workers once they become employed.

Top Exports for Iowa in 2017 and their Annual Growth Rates



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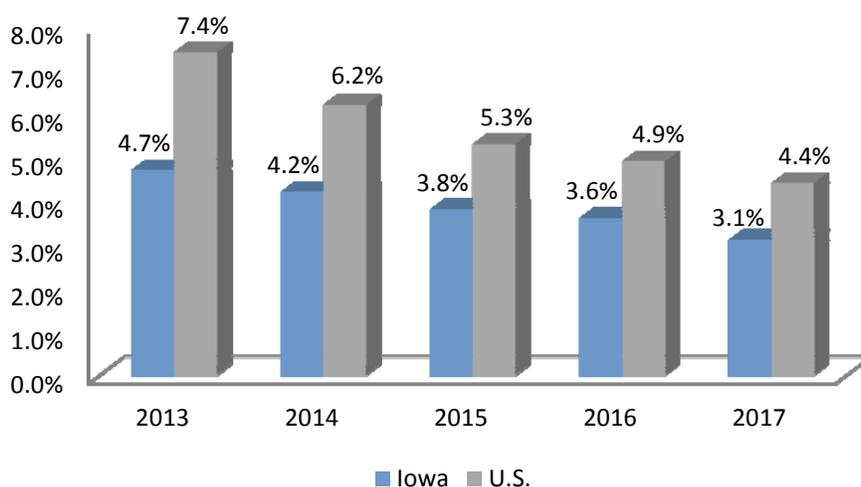
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State and Local Labor Force Trends

By Kris Henze

Iowa finished 2017 with its lowest unemployment rate in 17 years. The statewide annual average unemployment rate fell to 3.1 percent in 2017 from 3.6 percent in 2016. Meanwhile, the U.S. rate for 2017 showed some improvement, dropping to 4.4 percent in 2017 from 4.9 percent in the prior year. Iowa had the seventh-lowest unemployment rate among all states for 2017. Hawaii had the lowest unemployment rate among the states at 2.4 percent, while Alaska had the highest unemployment rate at 7.2 percent.

Figure 1. Iowa and U.S. Unemployment Rates, 2013–17



Source: Labor Market Information Division, Iowa Workforce Development, in cooperation with the Bureau of Labor Statistics, U.S. Department of Labor.

The number of unemployed persons in Iowa averaged 52,500 in 2017, down from the prior year's 61,100. Men accounted for 59 percent of the unemployed compared to 41 percent for women. Minorities and youth continued to experience the highest rates of unemployment: youth, 16 to 19 years (8.6 percent), Black or African American (7.8 percent) and Hispanic (7.3 percent). Long-term unemployment (27 weeks or longer) worsened in 2017, representing 7.7 percent of the total compared to 7.2 percent in 2016. Workers with less education continued to experience a higher unemployment rate than more educated members of the labor force with the corresponding rates being:

- those with less than a high school diploma (8.4 percent)
- high school graduates with no college (3.5 percent)
- some college or associate's degree (3.3 percent)
- Bachelor's degree and higher (0.9 percent)

Unemployment Rates Improve in All Metropolitan Statistical Areas (MSAs)

Unemployment rates improved in all of Iowa's metropolitan statistical areas (MSAs) in 2017. County unemployment rates dropped in 95 out of 99 of the states counties. The Ames MSA had the lowest unemployment rate of the nine major labor market areas at 2.0 percent. The Davenport-Moline-Rock Island MSA had the highest jobless rate at 4.4 percent. Unemployment rates for all 99 counties ranged from a low of 1.8 percent in Lyon County to a high of 5.5 percent in Lee County.

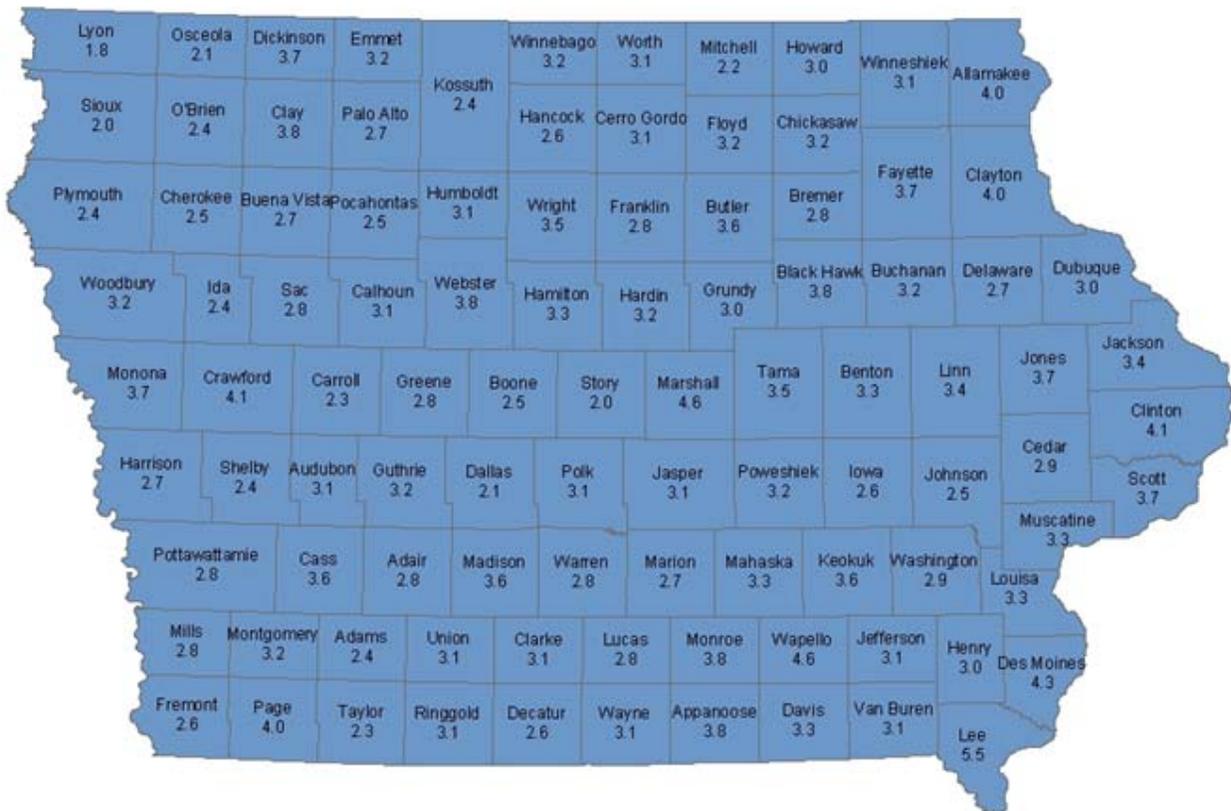
Figure 2. Metropolitan Statistical Area (MSA) Labor Force Summary, 2017 Annual Averages

Metropolitan Statistical Area (MSA)	Labor Force	Employed	Unemployed	Unemployment Rate	
				2016	2017
Ames	57,200	56,100	1,100	2.3	2.0
Cedar Rapids	142,300	137,500	4,800	3.7	3.4
Davenport-Moline-Rock Island*	189,600	181,300	8,400	5.4	4.4
Scott County (Iowa Portion)	86,100	82,900	3,200	4.5	3.7
Des Moines-West Des Moines	346,700	336,500	10,200	3.3	2.9
Dubuque	54,400	52,800	1,600	3.6	3.0
Iowa City	97,300	94,800	2,500	2.6	2.5
Omaha-Council Bluffs*	497,900	482,800	15,100	3.2	3.0
Harrison County (Iowa portion)	7,400	7,200	200	3.4	2.7
Mills County (Iowa portion)	7,300	7,100	200	3.6	2.8
Pottawattamie County (Iowa portion)	48,000	46,700	1,300	3.4	2.8
Sioux City*	90,300	87,400	2,900	3.4	3.2
Woodbury and Plymouth Counties (Iowa portion)	68,800	66,700	2,100	3.3	3.0
Waterloo-Cedar Falls	88,500	85,300	3,200	4.4	3.6

Source: Labor Market Information Division, Iowa Workforce Development

*MSA includes counties in a neighboring state

Figure 3. 2017 Annual Average Unemployment Rates by County

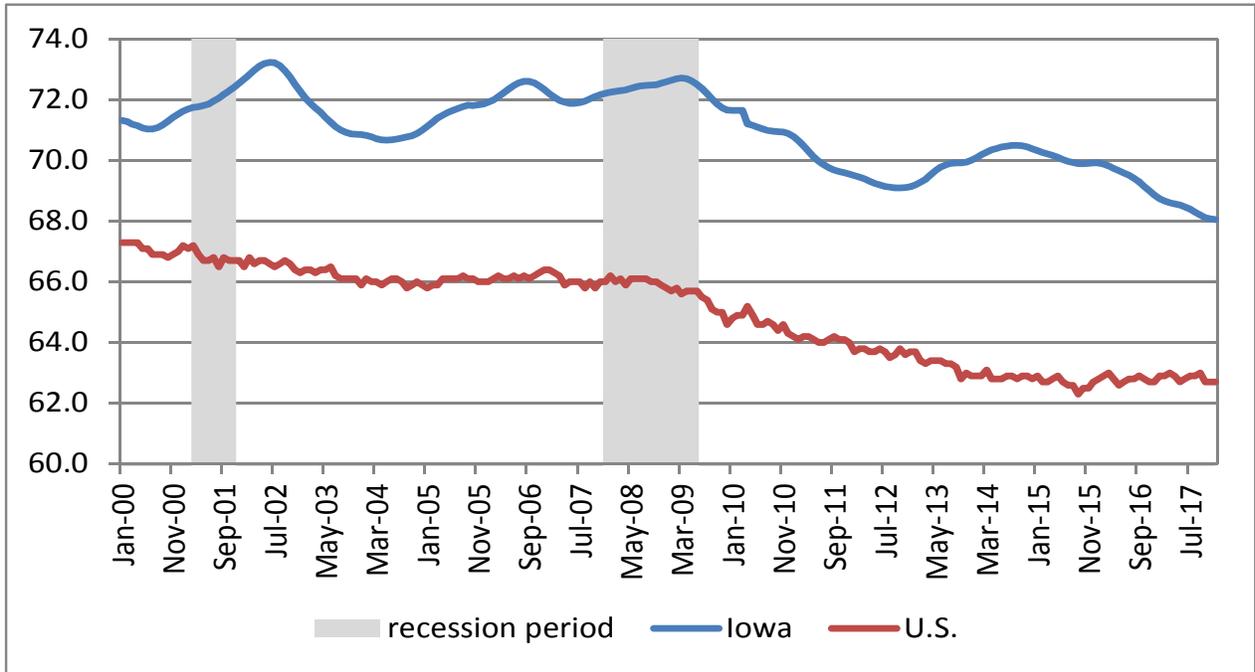


Source: Labor Market Information Division, Iowa Workforce Development

Who is not in the Labor Force?

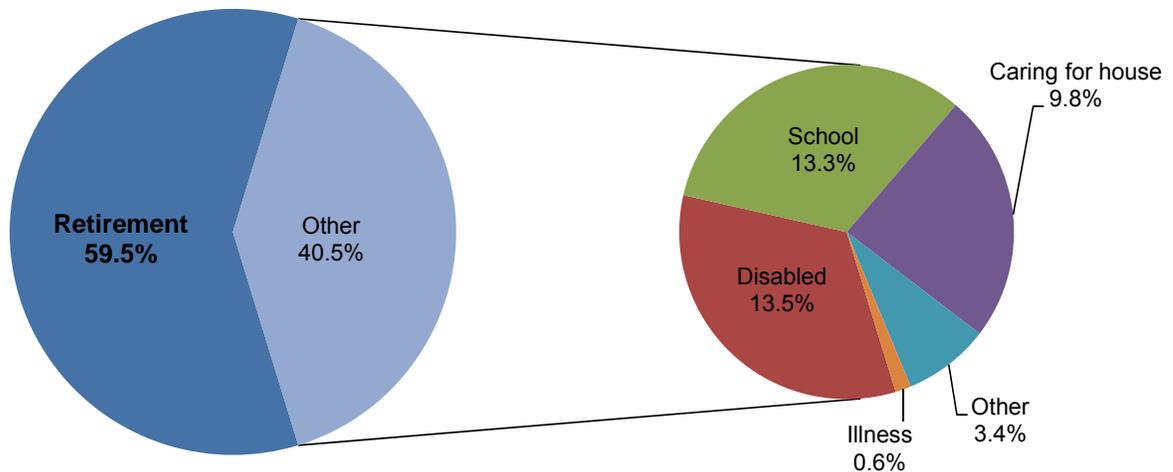
Iowa finished 2017 with a labor force participation rate of 68.1 percent (Figure 4), the lowest rate since 1987. So why are 31.9 percent of Iowa’s population (age 16 and older) not looking for work? If we examine the MICRO data from the Current Population Survey, we see in Figure 5 that 59.5 percent stated retirement as the reason they were not looking for work. Disabled people (13.5 percent) and students (13.3 percent) followed and those taking care of their house or family represented 9.8 percent. Discouragement is often thought to be the main reason people drop out of the labor force. However, in 2017 less than one percent were labeled as discouraged based on their responses to the household survey.

Figure 4. Iowa and U.S. Labor Force Participation Rates (Seasonally Adjusted)



Source: U.S. Bureau of Labor Statistics

Figure 5. Reasons for Not Participating in the Labor Force (2017)



Source: U.S. Census Bureau, Data Ferrett

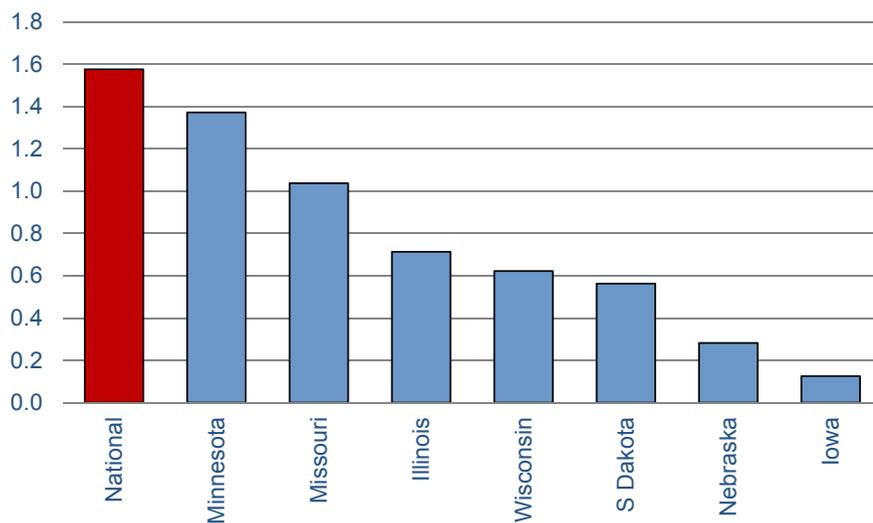
Total Nonfarm Employment Overview

By Dennis Schwartz

The Year at a Glance

Iowa's employment level continued to expand through 2017. This is the seventh consecutive year of growth, although the rate of increase has been progressively slower over the past five years. The 2017 seasonally adjusted annual average of 1,573,200 is just 2,000 (0.1 percent) above the average for 2016.

Figure 1. 2016 to 2017 Employment Growth Rate (%)



Source: U.S. Bureau of Labor Statistics

When compared to surrounding states, Iowa's rate of employment growth was well below the 2017 combined average of 0.8 percent, trailing all of the six other states for the third consecutive year. From 2016 to 2017, Nebraska had the next-lowest rate, gaining 0.3 percent employment. Minnesota led the pack with a growth rate of 1.4 percent (Figure 1). Minnesota stands alone as the only surrounding state whose growth rate in 2017 was greater than that of 2016.

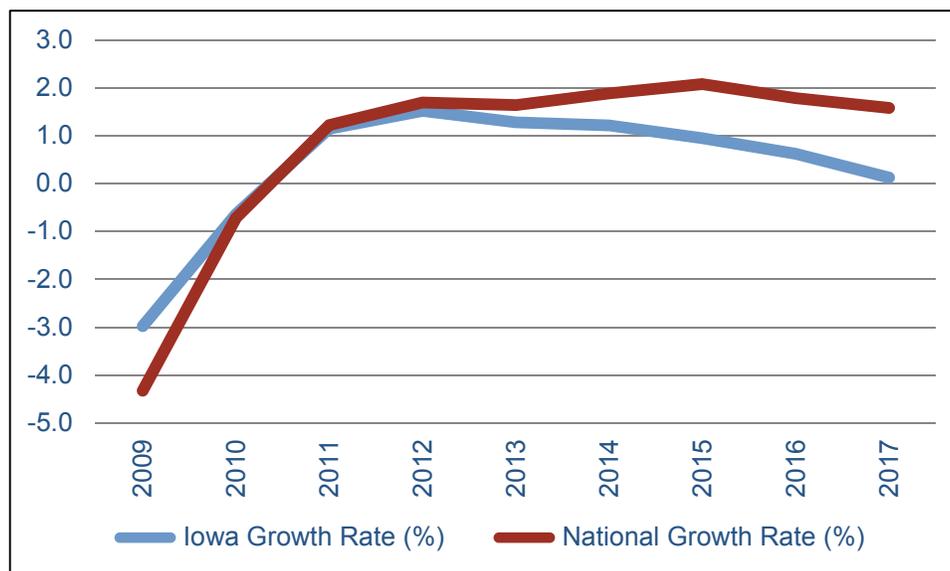
The gap between Iowa's annual employment growth rate and that of the U.S. has steadily grown from 2011 to 2017. Iowa's 2011 growth rate of 1.2 percent was nearly identical to that of the national rate, whereas from 2016 to 2017 Iowa's growth rate was 0.1 percent versus the national rate of 1.6 percent, a difference of 1.5 percent (Figure 2).

Nonfarm Employment Industry Movement

The majority of the state's super-sectors experienced gains in nonfarm employment from 2016 to 2017. Industries adding jobs included: manufacturing, financial activities, professional and business services, education and health services, leisure and hospitality, and government. Total private sector employment shed 400 jobs.

Manufacturing employers added jobs for the first time since 2014. The gain is entirely attributable to a much-needed boost in non-durable goods manufacturing which increased by 3,000 jobs. Employment in durable goods manufacturing continued to decline for the third consecutive year, although the rate of reduction is significantly less than the two previous years. Health care and social assistance continues to add jobs, averaging an additional 1,500 jobs per year. There has been only one year since 1990 that the industry has shed jobs, which was 1998 with a job loss of 200. This is the only industry that can boast jobs gains through the most recent recession.

Figure 2. Iowa vs. National Growth Rate



Source: U.S. Bureau of Labor Statistics

Based on Iowa Workforce Development's long-term industry employment projections (2016 to 2026), jobs in health care and social assistance will continue to grow for the foreseeable future. It is estimated that industry employment in Iowa will grow 15.2 percent (32,535 jobs) by 2026 (<https://www.iowaworkforcedevelopment.gov/industry-projections>).

In contrast, construction businesses pared more jobs in 2017 than any other industry, shedding 4,700 jobs, or 5.8 percent of the industry's total employment. This is the first annual loss in construction since 2010. The next closest industry in terms of jobs lost is other services which trimmed 1,200 jobs, or 2.0 percent of the industry's total employment.

Other Economic Indicators

Grain prices changed very little from 2016 based on Iowa State University Extension and Outreach data (annual averages). The price Iowa farmers received for corn averaged \$3.30 in 2017, down just \$0.10 from 2016. This is the fifth consecutive year of price declines for corn, bringing values significantly lower (50.5 percent) than the most recent high of \$6.67 which occurred in 2012. Soybean prices held steady for the third consecutive year, adding just \$0.01 per bushel in 2017 for an annual average value of \$9.28. Corn and soybean prices are projected to see minimal increases through 2018.

According to the Iowa Association of Realtors, home sales in Iowa enjoyed a gain of 3.2 percent from 2016 to 2017. The number of closed sales edged up from 42,671 in 2016 to 44,023 in 2017. The average sale price of homes also increased, gaining just over \$7,700 (4.4 percent) from 2016 and is now \$181,298.

According to 2017 data from the U.S. Census Bureau Building Permits Survey, the total number of new privately owned housing units authorized in Iowa, including single and multiple unit structures, decreased 2.6 percent (-369 units). The decrease follows two prior years of double-digit gains. The last time Iowa saw an annual reduction was 2014 (-4.8 percent). Fewer structures were authorized in every category of single- and multi-unit (2 or more units) structures.

Iowa Industry Employment Projections Update

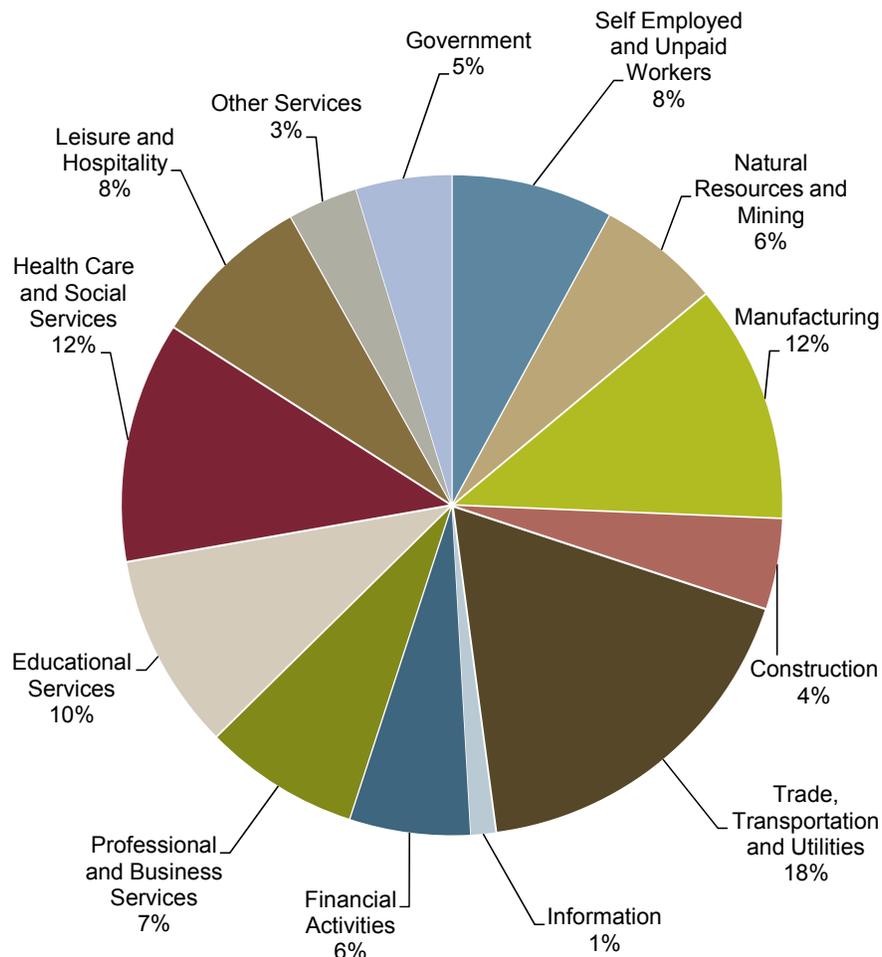
By Dan Brown

Iowa Industry Projections, 2016–26

The 2016–26 Iowa Industry Projections illustrate projected employment change from a major industry perspective over the next decade. Industry employment projections are shown in terms of numeric change (growth or decline in the total number of jobs) and percent change (the rate of job growth or decline). Employment totals in this section cover wage and salaried workers, agriculture, and the self-employed. This group of workers is projected to rise by 154,725 from 2016 to 2026, an increase of 8.5 percent.

The overall labor force participation rate is projected to decline as older workers leave the labor force, constraining economic growth. The aging population will also spur an increase in the demand for healthcare services, resulting in the healthcare industry accounting for a large share of new jobs projected through 2026. Three major industries are expected to account for 52.2 percent (80,705 jobs) of the state's job growth. These industries are Health Care and Social Assistance; Trade, Transportation, and Utilities; and Professional and Business Services.

Figure 1. Percent Distribution of Employment by Industry Sector, 2016



Source: Labor Market Information Division, Iowa Workforce Development

Changes in the age composition of the population and in labor force participation rates of the different age, gender, race, and ethnic groups will also affect growth. The shares of both the youth and the prime age groups in the labor force are projected to decline, whereas older workers will continue to increase their share to approximately one-quarter of the labor force by 2026. The 75-and-older age group is expected to have the fastest growth, followed by 65-to-74 year olds. Since 1996, labor force growth for men has been lagging that for women, and this trend is expected to continue over the 2016–26 decade.

Although manufacturing is still one of the largest industries in Iowa with 2016 employment at 213,695 jobs, it is expected to only add about 4,265 jobs over the 10-year projection period, an increase of 2.0 percent.

It is important to note that these forecasts rely on the assumption of full employment for the economy during the projected year. Therefore, the projections are not necessarily a forecast of the future, but rather an indication of what should be expected to occur given this assumption. When this assumption is not realized, actual employment will differ from the projections.

Industries are defined according to the 2017 North American Industry Classification System (NAICS), a system used by the federal government to classify establishments into industry categories based on their primary business activity in Iowa. Industries fall into either goods- or service-providing sectors.

Figure 2. Iowa Major Industry Projections, 2016–26

Industry	2016	2026	Growth	Percent Growth
Total Wage and Salary Employment	1,821,755	1,976,480	154,725	8.5%
Self Employed and Unpaid Salary Workers	144,200	153,065	8,865	6.1%
Natural Resources and Mining	109,110	108,460	-650	-0.6%
Trade, Transportation and Utilities	324,070	345,495	21,425	6.6%
Construction	80,770	93,475	12,705	15.7%
Manufacturing	213,695	217,960	4,265	2.0%
Information	22,650	21,765	-885	-3.9%
Financial Activities	108,120	125,860	17,740	16.4%
Professional and Business Services	138,425	165,165	26,740	19.3%
Educational Services	177,200	189,785	12,585	7.1%
Health Care and Social Assistance	214,355	246,890	32,535	15.2%
Leisure and Hospitality	142,495	156,085	13,590	9.5%
Other Services	62,265	66,940	4,675	7.5%
Government	84,395	85,545	1,150	1.4%

Source: Labor Market Information Division, Iowa Workforce Development

(Note: Totals may not equal due to rounding.)

The goods-producing sectors are:

Construction. Establishments in this sector include residential and non-residential building companies and electrical contracting firms. This industry is projected to grow 15.7 percent over the 10-year period, which equates to 12,705 new jobs and is the largest amount for the goods-producing sectors. Most of the increase (8,455) will occur in the specialty trade industry, which is expected to grow by 16.7 percent. The construction industry is expanding nicely, making up for jobs lost during the 2006–16 decade.

Manufacturing. Examples of businesses in this sector includes those that make computer chips, machinery, ethanol, and other goods. Manufacturing is projected to expand by 4,265 jobs over the 10-year projection period. The areas in this industry that will add 1,000 jobs or more are: chemical, food, wood, and machinery production. While new manufacturing jobs will be added over the projection period, these employment gains will not make up for the job

losses that occurred over the last decade. One factor contributing to the loss of jobs in manufacturing is a change in skills requirements. In the past, many manufacturing jobs were considered low skill and had fewer educational requirements than other occupations. Over the last few decades, manufacturing plants have become more automated, thus requiring skills that are more technical.

Natural resources and mining. Establishments in this sector include farms, forestry, fishing, and mining companies. The main component of this industry is crop and livestock production, which will have a decrease of about 2,145 jobs. Support activities for agriculture will add 1,365 jobs. Mining employment in Iowa had about 2,120 jobs in 2016, and will show a small increase of 110 jobs by 2026.

The service-providing sectors are:

Educational services. This sector includes state and local public education, private schools, and other providers of education. As the number of high school graduates increases, and a greater number of older workers seek additional training in their fields to keep pace with new job requirements, the demand for educational services will continue to grow. Education is expected to add about 12,585 jobs by 2026.

Financial activities. Included in this sector are finance, insurance, real estate, and rental services organizations. Financial activities and insurance will add approximately 16,220 jobs, a 17.3 percent increase, over the projection period. Real estate and rental leasing is projected to add 1,530 jobs. The increase in real estate employment can likely be attributed to continued improvements in the construction industry and the housing and rental market. The turnaround in these areas is expected to gain strength during the 2016–26 period.

Health care and social assistance. Health care and social assistance providers, including public and private providers of health care and private providers of social assistance, are part of this sector. Examples include hospitals, doctors' offices, and assisted living facilities. This industry is expected to see substantial growth due to the number of employees who will be needed to provide healthcare to an aging population. In addition, employment in the home health care industry will see rapid growth over the projection period. This growth is due to patient preference and shifts in federal funding toward in-home or community-based care. In total, this employment in this industry is expected to increase by 15.2 percent, or 32,535 jobs. Ambulatory health care is expected to add the most jobs, at 14,605, while nursing and residential care facilities will grow by 6,010 (10.8 percent). Social assistance will follow with the addition of 7,515 jobs, while hospital employment will increase by 4,405 (6.7 percent).

Information. This sector includes print, software, and database publishing firms; movie, video, and sound production and distribution establishments; broadcasting and telecommunications providers; and information and data processing providers. The industry will reflect decreases of employment in the publishing and telecommunications areas (-1,295). This loss is due primarily to a decrease in the distribution of print materials as more information becomes available via the Internet, e-readers, and tablets, although some loss could also be attributed to decreased demand for cable and satellite communications. The largest increase in this sector will be the internet service providers industry, which is projected to add 295 jobs for an increase of 8.7 percent.

Leisure and hospitality. Establishments in this sector are hotels, casinos, restaurants, sports teams, theme parks, performing arts companies, and arcades. This industry is expected to add 13,585 jobs between 2016 and 2026. Most of these jobs (9,225) will be in food service and drinking places, which will expand by 9.1 percent over the projection period. Amusement, gambling, and recreation industries will account for an increase of 1,305 jobs, while hotels and motels are expected to add about 2,535 jobs.

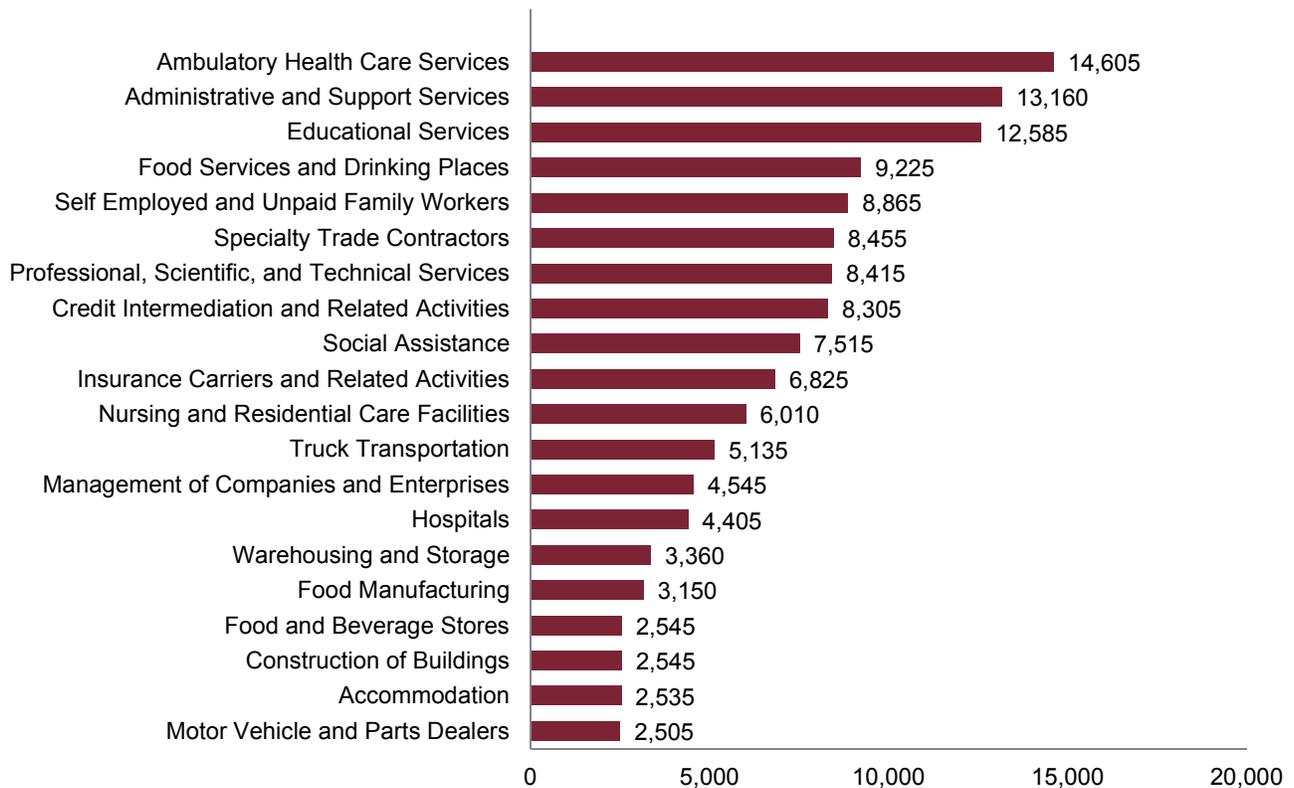
Professional and business services. Examples include temporary help firms, consulting services, and waste management establishments. This industry is expected to experience strong growth over the projection period, increasing by 26,740 jobs, or 19.3 percent. Eighty-three percent of this increase will come from the professional, scientific, technical services and administrative support industries, which will add 22,195 jobs. Much of the growth in jobs in this sector is being driven by the short-term use of contract workers or consultants rather than use of full-time employees. This lowers the cost for firms because these short-term employees are hired for specific jobs and are able to keep up with new regulations and newer technology more easily than full-time employees. An example of this would be the current shift towards electronic recordkeeping in the healthcare industry.

Trade, transportation, and utilities. Included in this sector are wholesale and retail trade establishments, airports, messenger services and power plants. Utility companies will continue to invest in newer technology which will create a more productive workforce; hence, real output is projected to increase while the number of new employees needed to produce that output will have very little growth. This will result in a gain of only about 30 jobs over the 10-year period. The large job increases in this sector will occur in truck transportation (5,135) and warehousing (3,360). Wholesale and retail trade will increase by 1,765 and 10,630 jobs, respectively. These gains will result from continued improvement in the economy, fueling stronger consumer spending. The postal service will experience large reductions (-760) by the projection year of 2026 due to further increases in the use of the Internet for email communication, bill payment, and digital subscriptions.

Other services. Businesses found in this industry include repair and maintenance firms, laundry services, and religious, civic and professional organizations. The industry is expected to expand by 4,670, with most of the jobs occurring in religious, civic, and professional organizations with 2,185 new jobs. This sector will expand by 7.5 percent.

Government. This sector consists of establishments that administer government programs and provide for public safety. Federal, state, and local government (excludes education and hospitals) are classified here. The federal government will lose about 85 jobs as cuts in government spending continues during the 10-year projection period. Local government will experience moderate growth, creating 1,330 jobs for an increase of 2.4 percent. State government will continue a slow reduction to the year 2026, losing an estimated 95 jobs.

Figure 3. Iowa’s Top Twenty Subsectors for Job Growth, 2016–26



Source: Labor Market Information Division, Iowa Workforce Development

Shifting Occupational Patterns in Iowa

By Daniel Edwards and James Morris

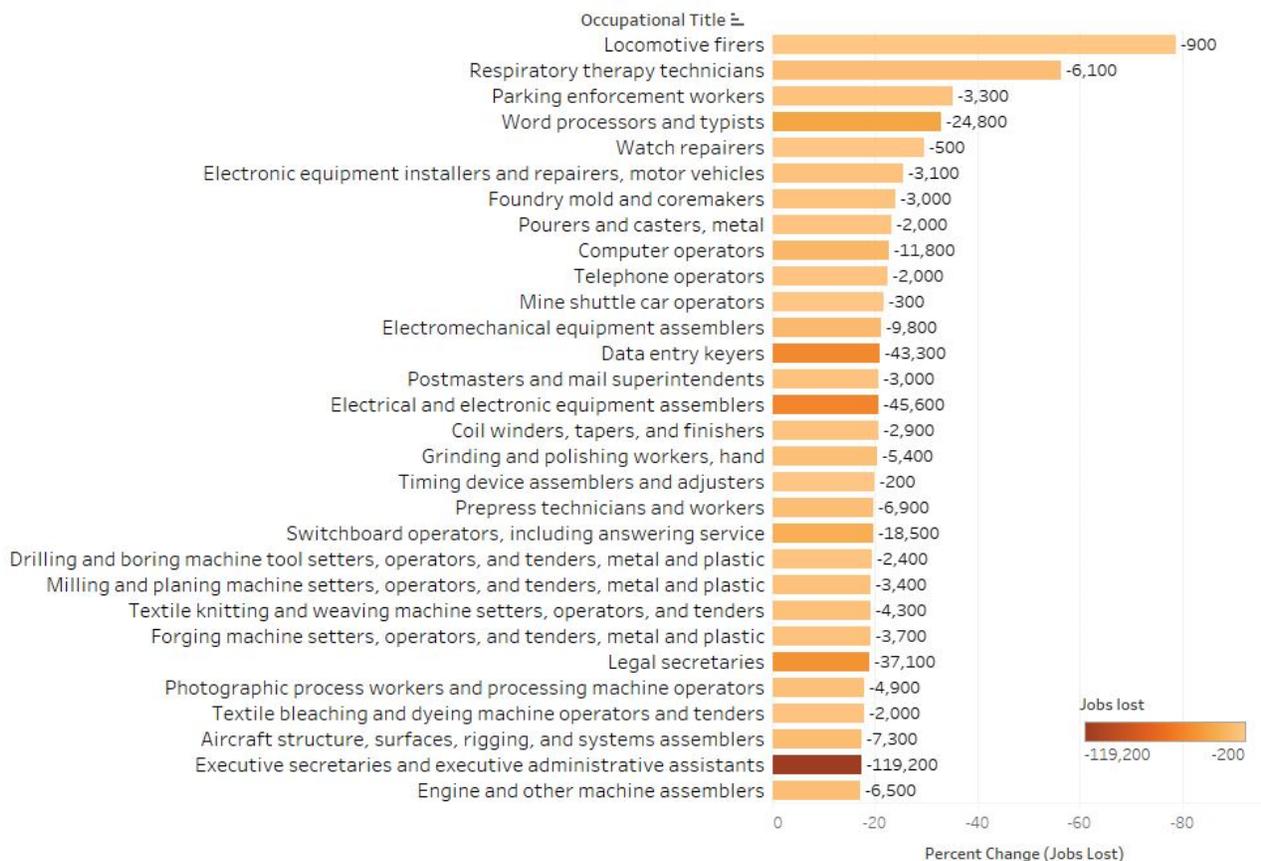
Occupations Growing and Shrinking Around the Nation

Estimating employment and job market conditions over several years can be a formidable task. Aside from trying to predict future economic conditions, economists must also predict occupational growth while accounting for changes in technology and their correlated effects on demand. Just because certain occupations have high demand levels now doesn't assure that this will be true a decade from now. Advancements in technology have meant that VCR repair isn't as valuable of a skill now as it was in the 1980s. Decades before that, affordable refrigeration meant demand for the local milk man faded. Additionally, shifting consumer preferences, such as abandoning print media and cable television, have equated to declines in the number of electrical equipment installers and printing technicians.

A fast employment rate of growth or decline does not always translate to a large addition or deletion of occupations. A job may be projected to grow by 30 percent, but due to its small numeric size, may add only 5 occupations. In contrast, a large occupation estimated to have a numeric growth of 300, can result in a small 5 percent growth rate.

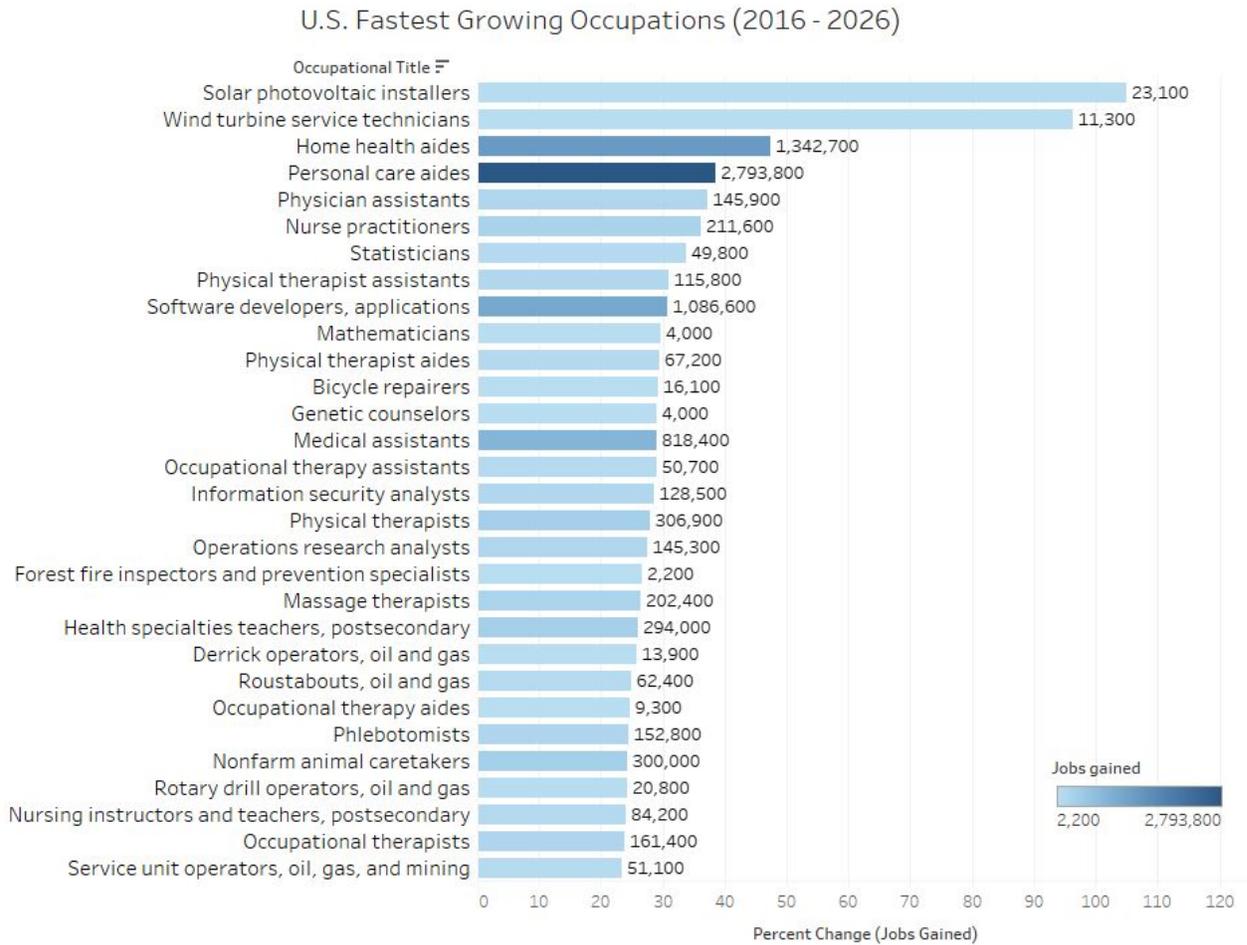
The figure below lists those occupations which have the lowest projected growth for the U.S. as reported by the Bureau of Labor Statistics.

U.S. Fastest Declining Occupations (2016 - 2026)



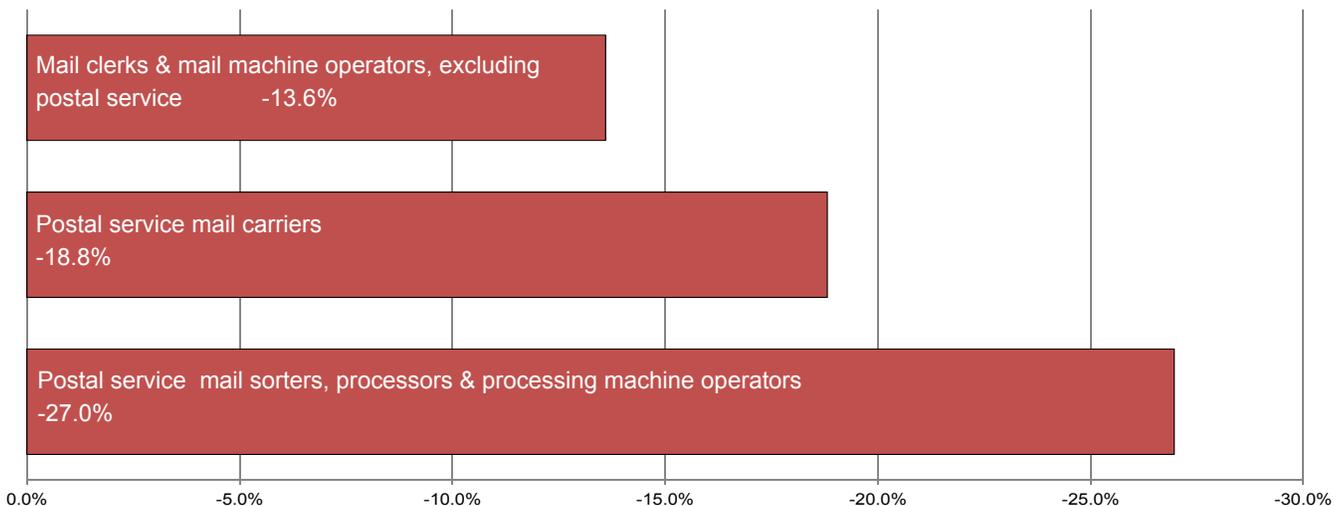
By percentage, no single occupation is forecast to lose more jobs than locomotive firers (-78.6 percent). Other occupations scheduled to pare jobs by 2026 in the U.S. include respiratory therapy technicians, parking enforcement workers, word processors, and watch repairers. In each of these cases, advancements in communication equipment and technology have impacted growth.

Alternatively, technology has fueled the advancement of several new occupations. The figure below illustrates the fastest growing occupations in the U.S. by 2016.



Advancements in technology within the energy sector has facilitated the two fastest growing occupations: solar photovoltaic installers and wind turbine service technicians, both of which are booming occupations in Iowa. While technology has driven some of the growth, the largest movements are generally within health care occupations. These jobs represent inelastic demand and are necessary to care for an aging and growing population.

Projected Decline in Employment in Iowa’s Mail Industry as a Percentage of Current Employment, 2016–26

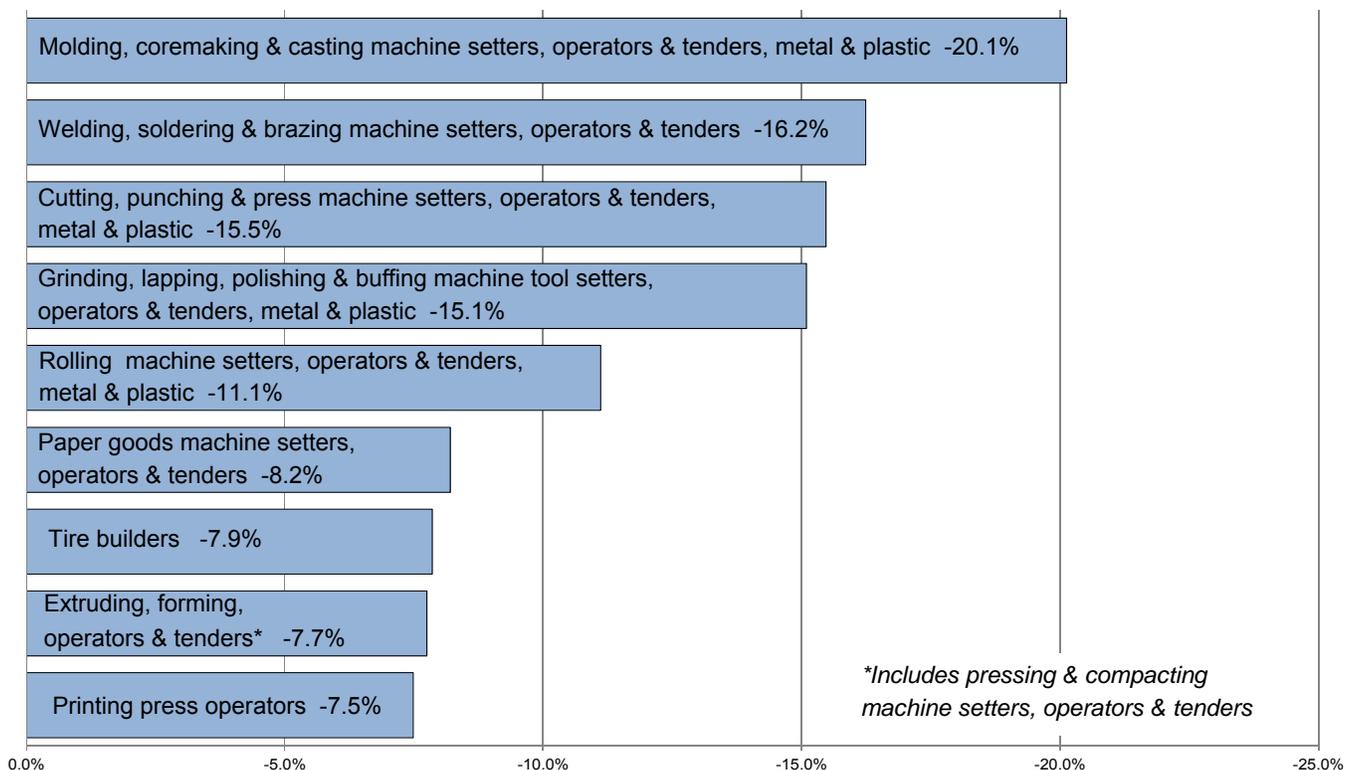


Occupational Shifts in Iowa

Declines within some industries are expected by the public. One prime example is postal services. Both nationally and in Iowa, postal employment is declining due to shifts in consumer preferences away from printed letters, catalogs, and business correspondence toward electronic media. Electronic correspondence from businesses saves operating costs which should trickle down to the consumer, whereas digital communication between smart phones and computers is nearly instantaneous for personal contacts. Understandably, occupations associated with the postal service are not expected to grow over the next several years.

Manufacturing plays a substantial role in Iowa's economy, so it is necessary to monitor occupational growth associated with production. Overall, production occupations are estimated to add jobs despite fears of automation. In total, 5,160 jobs are estimated to be added by 2026. Unlike the postal service, many job losses within manufacturing industries may stem from shifting from labor-intensive to automated processes. This is a natural progression within factories as they work to remain profitable and efficient. The figure below represents the occupations forecast to lose the largest percentage of jobs by 2026.

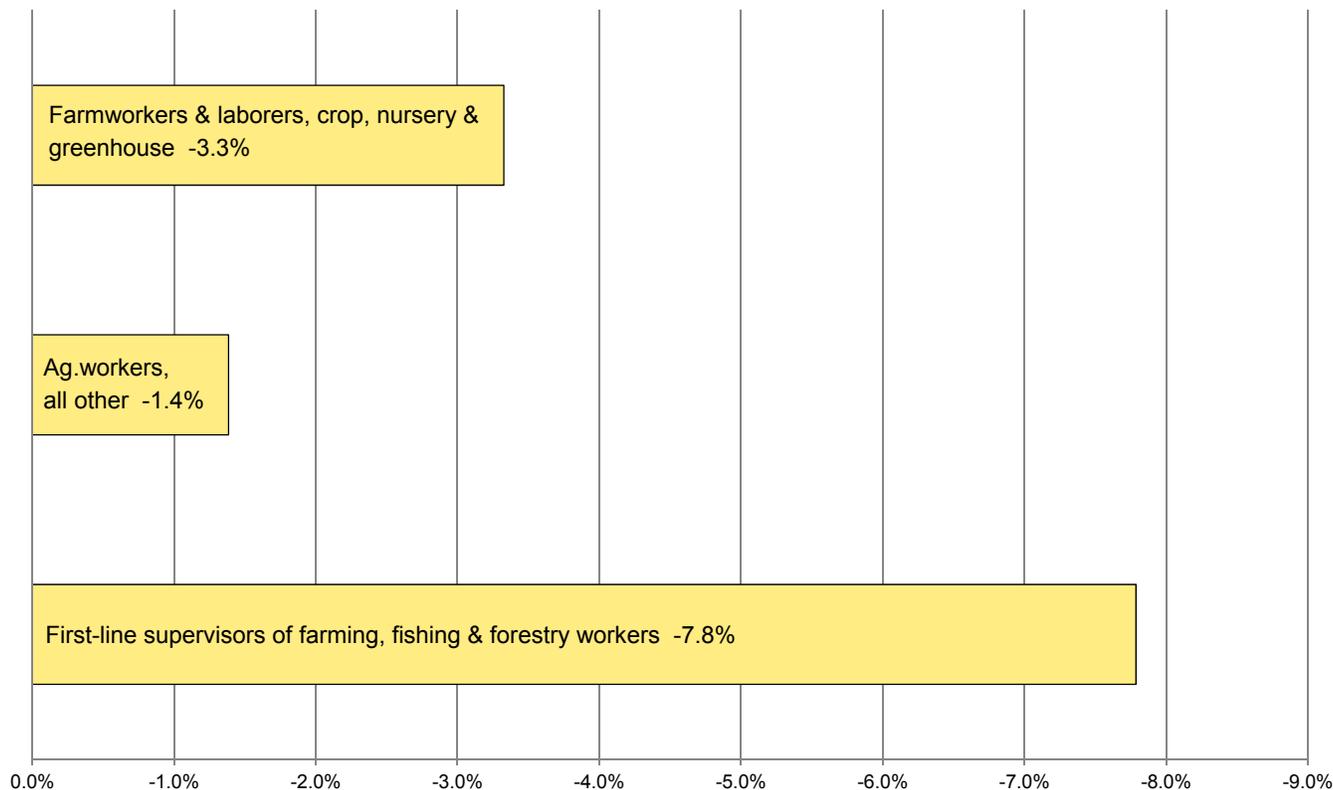
Projected Decline in Employment in Iowa's Various Manufacturing Occupations as a Percentage of Current Employment, 2016–26



Unfounded Fears of Automation

As technology advances, invariably the discussion moves to the impact on the labor market and the resulting loss of jobs. It is true that advancement in technology often times has a substantial impact on the labor market, with the most obvious example of technology replacing labor being the agricultural sector. In 1900, approximately 40 percent of employment in the U.S. was in agriculture. Currently, that value has fallen to about 1.6 percent. However, even in this example, technological improvements have steadily improved yields and lowered prices, thus allowing larger segments of the population to specialize in other areas of the economy. In the case of manufacturing, automation should correlate to greater efficiency and translate to lower costs for the consumer, and potentially increase demand for finished goods in most cases. If demand increases, some of jobs lost to automation may be filled elsewhere in the factory where automation did not take place. These transitions away from labor-intensive processes are a necessary growing pain that factories often times must go through to remain competitive with both domestic and foreign markets.

Projected Decline in Employment among Agricultural Workers in Iowa as a Percentage of Current Employment, 2016–26



In other industries, automation has already replaced certain occupations with little disruption in the workforce and, in many cases, has been embraced by the public. It is not uncommon to skip cashiers and pay for your own groceries at the local market. Callers needing information from their local banks or other businesses may be helped through automated answering services without ever speaking to a live agent. These technological advancements have thus far not resulted in many jobs lost and have helped businesses reduce operating costs.

Sources

Iowa Workforce Development, Labor Market Information Division, Occupational Projections Program

Bureau of Labor Statistics, U.S. Department of Labor. Employment Projections, <https://www.bls.gov/emp/tables/fastest-declining-occupations.htm>

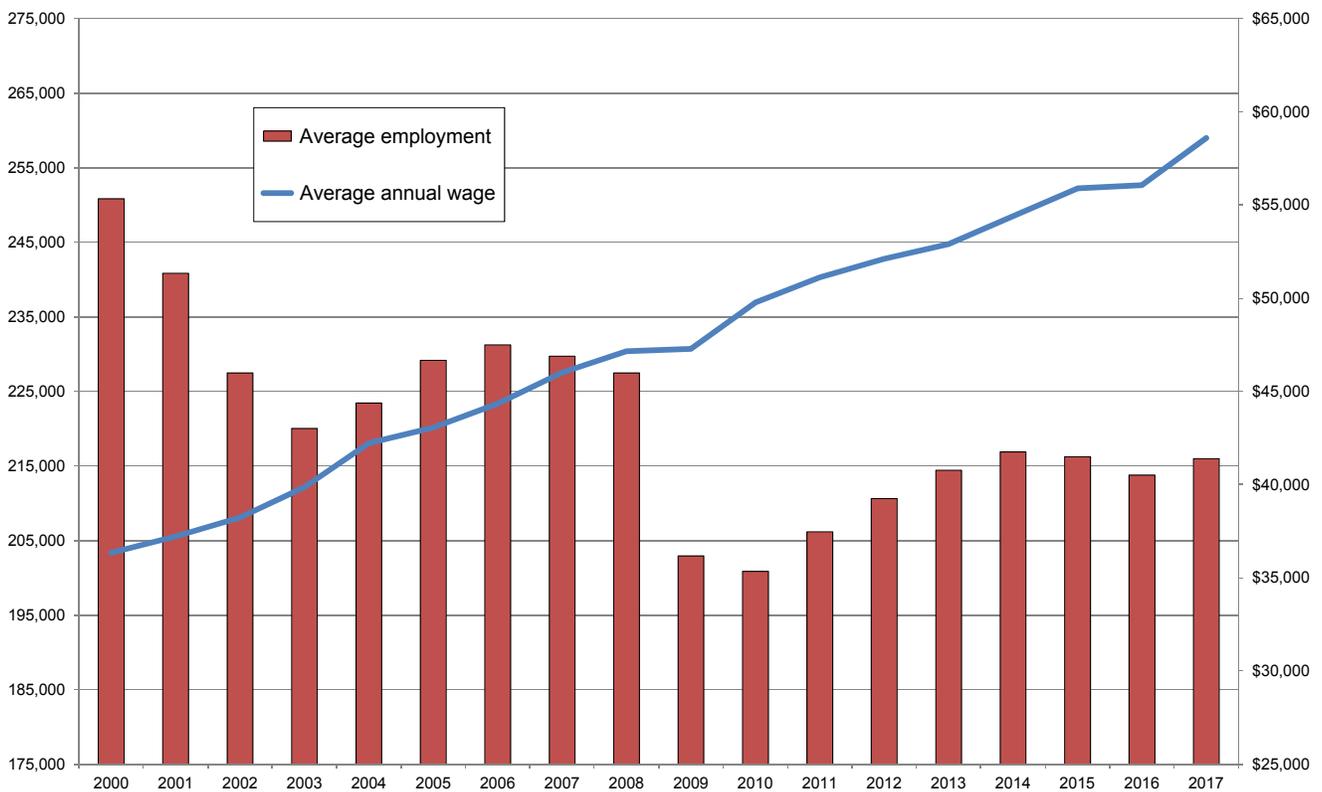
Sector Spotlight: Manufacturing

By Daniel Edwards

Manufacturing Overview

Few sectors in Iowa have experienced such volatility as manufacturing. Previously the largest sector in the state by employment, manufacturing in Iowa has followed the path taken by the sector nationwide. Employment in domestic manufacturing has generally declined since the 1970s, unable to compete with lower costs of inputs in foreign markets. Figure 1 illustrates this decline in Iowa since 2000, but also highlights manufacturing's steady increase in average annual wage. Further, it draws attention to the sector's modest rebound in employment since 2010, a trend that may continue as food manufacturing increases its presence in the state.

Figure 1. Average Annual Employment and Wage in Iowa's Manufacturing Sector, 2000–17



Source: Labor Market Information Division, Iowa Workforce Development

Manufacturing Sector Employment and Wage Trends

Manufacturing averaged 215,982 employees in Iowa in 2017, making it the second-largest sector in the state by employment behind healthcare and social assistance (223,381 workers). The number of people working in manufacturing in Iowa has declined by 13.9 percent since 2000, when average employment was 250,850.

The average annual wage for manufacturing in Iowa has risen from \$36,343 in 2000 to \$58,604 in 2017, a 61.3 percent increase. This is slightly below the increase of 64.9 percent for all covered employment in Iowa over the same time period. Despite this, the 2017 average annual wage of \$58,604 in manufacturing was higher than that of all but five other sectors, including healthcare and social assistance, which had an average annual wage of \$44,649.

Manufacturing Subsector Employment and Wage Trends

Looking more closely at the subsector level within manufacturing, one can see there are sizeable differences between the growth of employment and wages within Iowa's two largest manufacturing subsectors: food and machinery. Food manufacturing employment has expanded significantly from 2013 through 2017, growing by 8.8 percent. The beverage and tobacco product manufacturing subsector had the highest rate of increase in the manufacturing sector—37.6 percent—increasing from 1,643 jobs in 2013 to 2,260 in 2017. Employment in machinery manufacturing, meanwhile, has declined by 8.9 percent over the same time period. Another notable decrease in employment can be seen in the transportation equipment manufacturing subsector, where the number of employees has fallen by 15.2 percent in the last five years. These changes can be seen in Figure 2 below.

Wages in the manufacturing sector have generally risen across the board since 2013; Figure 2 highlights this increase among Iowa's largest subsectors. Strikingly, there was an 18.1 percent increase in average annual wage in the computer and electronic product manufacturing subsector from 2013 to 2017. Among subsectors not shown below, wood product manufacturing had the largest increase in average annual wage during this time period—18.0 percent—growing from \$45,190 to \$53,337.

Figure 2. Average Annual Employment and Wage in Iowa's Largest Manufacturing Subsectors, 2013 and 2017

NAICS	Subsector	Avg employment		Change		Avg annual wage		Change	
		2013	2017	Raw	Percent	2013	2017	Raw	Percent
311	Food	50,427	54,846	4,419	8.8%	\$46,805	\$52,948	\$6,143	13.1%
325	Chemical	9,922	11,488	1,566	15.8%	\$63,394	\$72,120	\$8,726	13.8%
326	Plastics & Rubber Products	10,724	11,738	1,014	9.5%	\$48,223	\$52,202	\$3,979	8.3%
332	Fabricated Metal	20,249	20,087	-162	-0.8%	\$47,408	\$51,990	\$4,582	9.7%
333	Machinery	41,526	37,839	-3,687	-8.9%	\$61,583	\$66,661	\$5,078	8.2%
334	Computer & Electronic Product	12,368	11,753	-615	-5.0%	\$84,025	\$99,237	\$15,212	18.1%
336	Transportation Equipment	16,528	14,013	-2,515	-15.2%	\$47,752	\$51,310	\$3,558	7.5%
31-33	Manufacturing	214,410	215,982	1,572	0.7%	\$52,910	\$58,604	\$5,694	10.8%
0	All Covered Employment	1,496,659	1,540,448	43,789	2.9%	\$41,110	\$46,073	\$4,963	12.1%

Source: Labor Market Information Division, Iowa Workforce Development

Manufacturing Industry Employment and Wage Trends

One trend at the industry group level in manufacturing is an employment increase in animal slaughtering and processing. Employment in this group has expanded from an average of 27,878 employees in 2013 to an average of 30,414 in 2017, an increase of 9.1 percent or 2,536 employees. For context, employment in the entire food manufacturing subsector increased by 4,419 employees from 2013 to 2017; animal slaughtering and processing accounted for 57.4 percent of that increase.

Another trend at the industry level in manufacturing since 2000 is the expansion of ethanol in Iowa. Employment in the ethyl alcohol manufacturing industry has grown from an average of 26 employees in 2000 to an average of 1,939 employees in 2017. Further, the average annual wage in this industry has increased from \$22,754 to \$69,978 in the same time period. While this industry's employment represents only 0.9 percent of Iowa's total manufacturing employment, its importance to the state's economy will make it politically relevant for years to come.

Comparing Manufacturing in Iowa to Manufacturing in Other States

In 2017, when the state had 215,882 manufacturing employees, Iowa ranked fourth in the country in manufacturing employment as a percentage of total covered employment, at 14.0 percent. Figure 3 compares Iowa to other Midwestern states and the United States average, which was 8.6 percent. Other Midwestern states that ranked in the top five nationally were Indiana (#1, 17.6 percent), Wisconsin (#2, 16.4 percent), and Michigan (#3, 14.3 percent).

Among the states shown in Figure 3, only North Dakota had a rate of manufacturing employment that was less than the national average.

Figure 3. Manufacturing As a Percentage of Total Covered Employment among Midwestern States, 2017

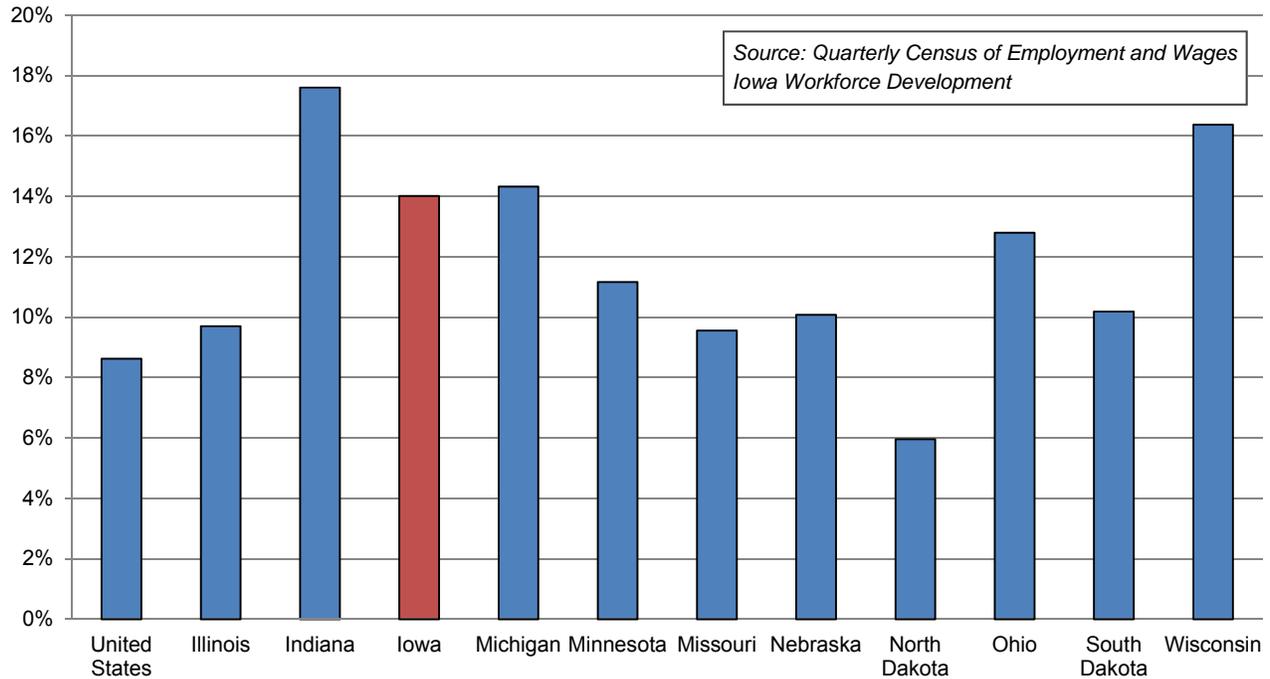
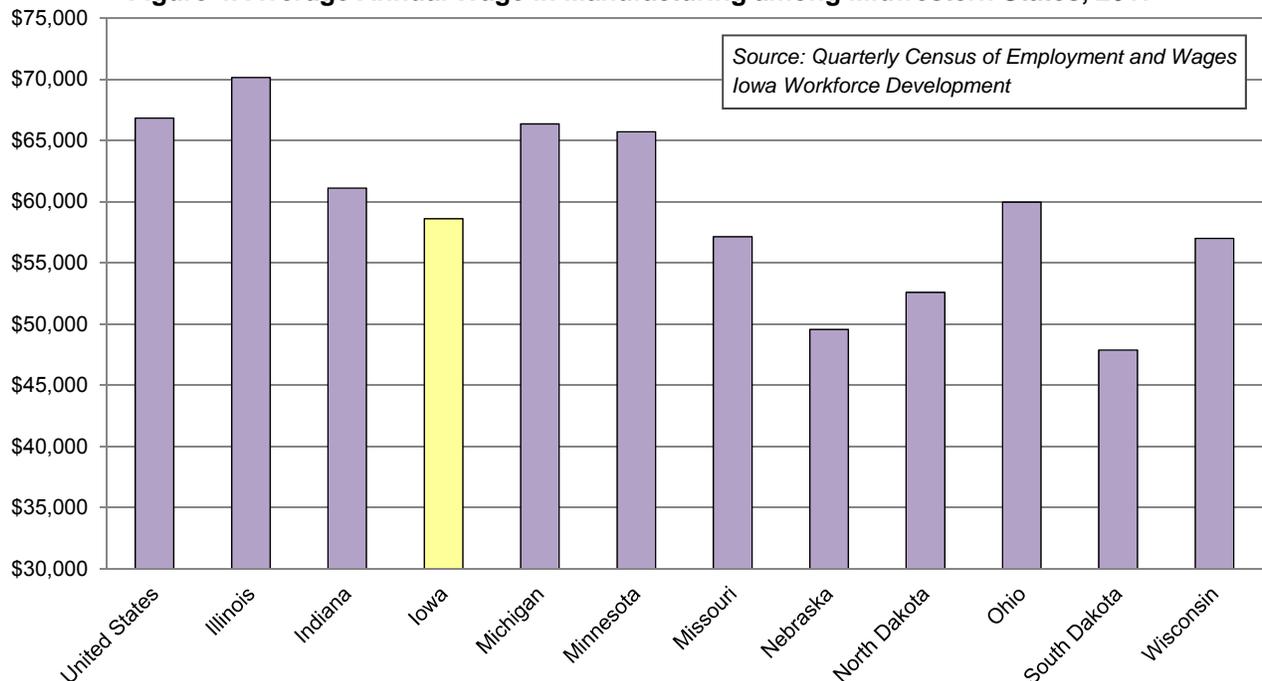


Figure 4. Average Annual Wage in Manufacturing among Midwestern States, 2017



Despite having the fourth-largest manufacturing sector in the country relative to its total covered employment, Iowa's manufacturing ranked 28th nationally in average annual wage in 2017, at \$58,617. In fact, as illustrated by Figure 4, every Midwestern state except Illinois had an average annual wage that was lower than the national average of \$66,835 in 2017. Some of this can likely be attributed to the fact that the cost of living is lower in Iowa and other Midwestern states, therefore allowing employers and employees to agree upon lower wages.

Projecting the Future of Manufacturing in Iowa

Each year, Iowa Workforce Development's Labor Market Information Division publishes 10-year employment projections using previously reported data. As shown in Figure 5, these projections predict that Iowa's manufacturing sector will grow by 2.0 percent between 2016 and 2026, whereas all covered employment is projected to expand by 9.1 percent. This underscores the reality that while the manufacturing industry is projected to grow, it will likely only do so at a snail's pace in comparison to the rest of Iowa's economy.

Large manufacturing subsectors that are projected to increase in employment in Iowa are food products; wood products; chemicals; machinery; transportation equipment; and furniture and related products. Meanwhile, large subsectors that are expected to atrophy in employment are printing and related support activities; plastics and rubber products manufacturing; primary and fabricated metal manufacturing; computer and electronic product manufacturing; and electrical equipment, appliance, and component production.

Some of these projections have already borne themselves out in the employment data released in 2017. For example, food manufacturing averaged 54,846 employees in 2017, which is just 669 employees short of its 2026 projection of 55,515. Likewise, computer and electronic product manufacturing saw its average employment fall to 11,753 in 2017, a figure that is already lower than its 2026 projection of 11,760.

It should be noted that these employment projections rely on fluid economic conditions which evolve over time. Changes to foreign trade and tariff policy, particularly between China and the United States, could have a significant impact on Iowa's agriculture and manufacturing sectors.

Figure 5. Manufacturing Subsector Employment Projections, 2016–26

NAICS	Subsector	Est Emp (2016)	Proj Emp (2026)	Change	Percent Change
311	Food	52,365	55,515	3,150	6.0%
312	Beverage & Tobacco	2,005	2,240	235	11.7%
313	Textile Mills	120	105	-15	-12.5%
314	Textile Product Mills	620	565	-55	-8.9%
315	Apparel	955	670	-285	-29.8%
316	Leather & Allied Product	230	195	-35	-15.2%
321	Wood Product	8,790	10,085	1,295	14.7%
322	Paper	3,640	3,400	-240	-6.6%
323	Printing & Related Support Activities	6,460	5,855	-605	-9.4%
324	Petroleum & Coal Products	335	365	30	9.0%
325	Chemical	11,105	12,120	1,015	9.1%
326	Plastics & Rubber Products	11,380	10,865	-515	-4.5%
327	Nonmetallic Mineral Product	5,670	5,745	75	1.3%
331	Primary Metal	6,960	6,535	-425	-6.1%
332	Fabricated Metal	20,195	19,780	-415	-2.1%
333	Machinery	38,115	39,125	1,010	2.6%
334	Computer & Electronic Product	11,970	11,760	-210	-1.8%
335	Electrical Equip., Appliance & Component	6,605	6,160	-445	-6.7%
336	Transportation Equipment	15,460	16,275	815	5.3%
337	Furniture & Related Product	6,865	7,340	475	6.9%
339	Miscellaneous	3,850	3,260	-590	-15.3%
31-33	Manufacturing	213,695	217,960	4,265	2.0%
0	All Covered Employment	1,718,305	1,875,175	156,870	9.1%

Source: Labor Market Information Division, Iowa Workforce Development

Updating Separations Methodology— Advancement of the Occupational Projections

By Brent Paulson

Background and Purpose

To ensure a more accurate reflection of the future's workforce, the Bureau of Labor Statistics (BLS) continually seeks to improve data quality through continuous refinements in methodological development. The 2016–26 occupational projections will reveal a major advancement in this development regarding job openings. Years in the making, the new separations methodology will replace the existing replacements methodology that has been in place since the 1990s. It has been thoroughly researched and tested to generate more accurate projections data.

The purpose of the new separations methodology remains as it was with the former replacements methodology: to provide estimates of workers who leave their occupation and need to be replaced by new workers. However, the replacements methodology only captured workers who took a traditional career path by staying in the same industry or occupation until retirement, and reflected primarily retirement or death as a reason for exiting the workforce. The separations methodology, in contrast, accounts for different types of job changes. In a constantly evolving workforce, these changes can include not only retirement or death but the changing of careers, promotions to management, or the completing of retraining programs.

Primary reasons for the change include methodological advances, flaws in the replacements methodology, and a more dynamic economy as a result of a changing workforce. To better capture today's workforce trends, the separations methodology was developed to differentiate between workers who are leaving the labor force entirely and those who are changing jobs and leaving an occupation. This allows the BLS to measure more separations than before, better account for the changes in the workforce, and reflect in greater detail what is being told from BLS partners in workforce, education, and the private sector. Simply put, the separations methodology will provide greater accuracy on openings due to workforce developments.

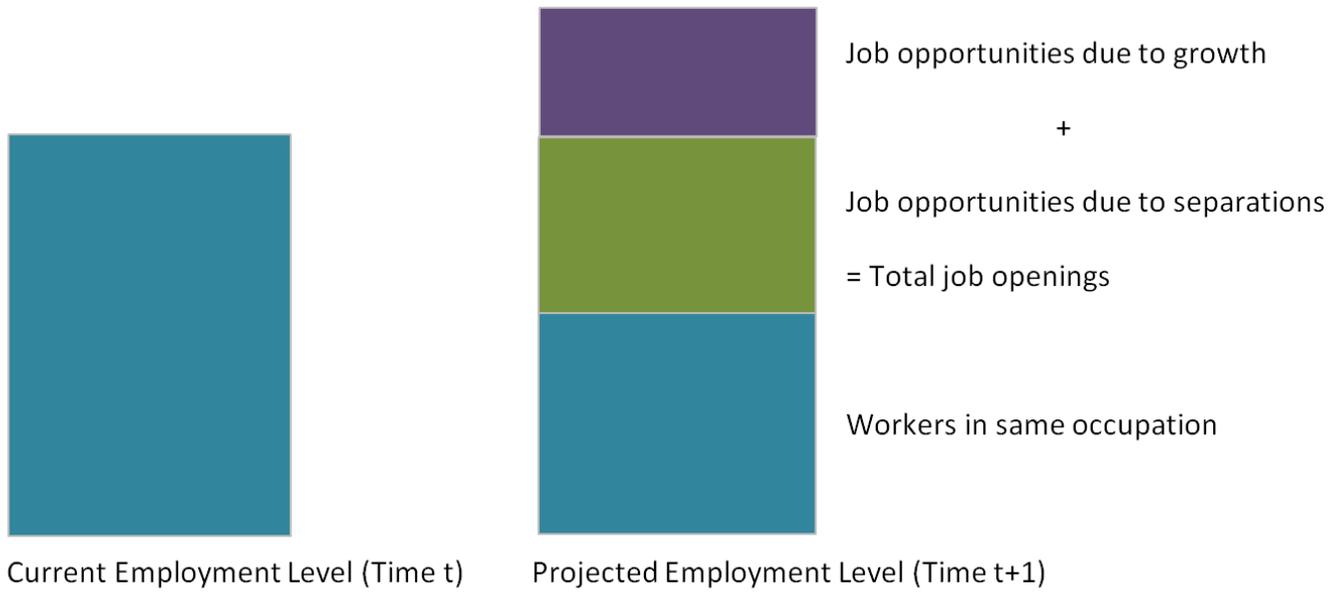
Major Differences

As can be ascertained, major differences between the two methodologies stem not from conceptual factors but rather methodological. The replacements methodology is not inaccurate per se but deemed incapable of meeting the data quality needs of today's fast changing workforce. The new numbers for openings under the separations methodology are significantly higher in most cases as a result of reflecting additional separations.

This is particularly true for occupations that require less education and are therefore subject to higher separation rates due to their lower pay and greater workplace instability (i.e., fast food occupations) but also those that are primarily self-employed such as construction workers. Individuals working 'gigs' like driving for a ride-share service, however, would not be counted in the separations methodology because these occupations are not primary ones. These higher separation numbers exist because the separations methodology better accounts for workers leaving the occupation more frequently, meaning more replacement workers will be needed.

The methodology captures two types of separations: workers who leave the labor force entirely and workers who leave their occupation for a different job. This can be depicted in Figure 1 where an occupation's employment level is altered by both job opportunities due to separations (leaving the labor force or leaving for another occupation) and job opportunities due to growth. These job opportunities make up total job openings for an occupation.

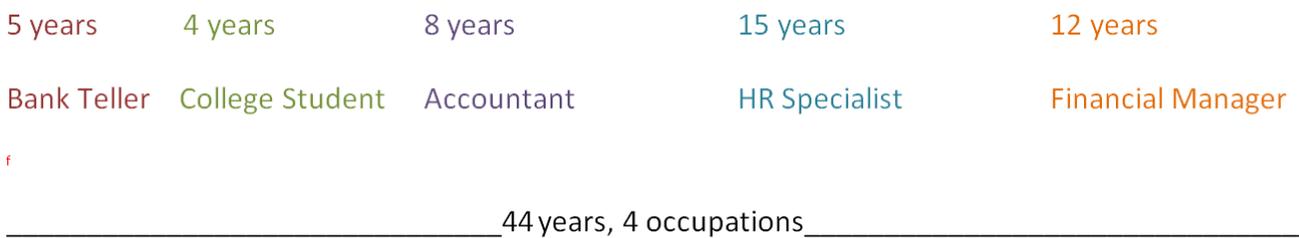
Figure 1. Total Job Openings



Longitudinal and retrospective survey data from BLS demographic data, or the Current Population Survey, identify workers who separate from their occupation, whereas the old method used panel data and demographics to estimate the number of workers who leave. Regressions are run to identify the characteristics of workers that make them likely or not likely to either leave the labor force or transfer to a different occupation. The results of these regressions then are applied to current demographic data to estimate future separations.

An example of separations in action is the ever changing career of Allie, who has held multiple occupations throughout her professional career as Figure 2 illustrates.

Figure 2. Allie’s Separations in Action



Allie’s many career twists and turns include a stint as a bank teller, returning to college for further education and/or retraining, obtaining subsequent positions as an accountant and a human resources specialist, and finally moving into a financial management position. Over the course of 44 years, Allie held jobs in four different occupations and a college experience. Each time she left an occupation, she created an opening for someone else to replace her. Even though every person’s career path varies, certain trends are common:

- Transfers between occupations are more common at younger ages, as workers explore possible careers
- Movements out of the labor force are more common at older ages, when workers retire

The separations methodology will have identified workers like Allie who leave an occupation, enter another, or simply leave the workforce for whatever reason.

Impact and Importance

Projections are devised to provide people a sense of what is expected to happen to occupations in the future. They help us determine:

- What areas of the economy are expected to see growth, decline and what areas of the economy are growing the fastest
- What occupations will have more openings than others, allowing stakeholders to better prepare and train the workforce

However, forecasts are not an exact science and no methodology is expected to capture the exact number of openings in the workforce. Nor are past projections an accurate representation of the workforce when actual employment data or new projections are released. When new projections are released, old projections become obsolete. Further, to compare historical trends to current projections, a practitioner should use actual employment figures from the time period (and not compare openings under different methodologies).

Projections are essentially best used for:

- Relative comparisons for occupations
- To help inform where training for the future workforce should be focused
- Not determining specific targets, such as the exact number of people who should go through a training program

Keep in mind that the separations methodology is based on national data and is meant to be used by states as a guide to state-level projections. In fact, state and regional projections will vary and evolve by geography and time just like the national data. The challenge for states is in the interpretation of the data and the trends that develop over time. In recognizing an evolving workforce, states can focus on the impacts the data have on identifying in-demand occupations and pending training needs. These actions provide justification to the importance of more accurate projections. This is the task for the separations methodology.

Technical Resources

Language used for this article stem entirely from documents prepared by and/or for BLS.

Users can access the new Separations methodology through the Bureau of Labor Statistics' website:

- www.bls.gov/emp/ep_separations_methods.htm

Additional information and frequently asked questions can be found at:

- https://www.bls.gov/emp/ep_separations_faqs.htm
-

Retaining Iowa's Talent: Post-Graduation Location and Employment Plans

By Katie Lippold

Iowa Workforce Development's (IWD) Labor Market Information Division released a report in November 2017 regarding college student retention. The report was based upon a survey distributed to college students across the state of Iowa. Students enrolled in community colleges, state universities, and private institutions (both for-profit and non-profit) including career/technical schools participated in the survey. IWD's researchers coordinated with registrar offices from the varying postsecondary institutions across the state to distribute the online survey by email to students between March and May of 2017. This timing was intentionally selected to align

with as many graduating/completing students as possible. The online survey was optimized for use on computers, tablets and smart phones. Nearly half of all the institutions contacted participated (47.9 percent) including all three public universities and 12 of our 15 community colleges. Over 8,600 total surveys from students were used in the analysis provided in the report.

The purpose of the survey was to gather information regarding students' intentions to either remain in Iowa or locate outside of Iowa following graduation or upon program completion. In addition, the survey asked students to rate sets of factors by their level of importance when deciding where to locate and then to provide their perception of Iowa when it came to those same factors. There were four categories provided to the students for which they provided how important they felt they were and to which level they agreed Iowa provided the factor. These categories included: employment considerations (availability of job opportunities, competitive wages, etc.); financial considerations (the affordability of housing, healthcare, taxes, etc.); quality of life (the condition of roads, suitability for raising a family, crime rate, diversity, etc.); and entertainment options (availability of outdoor recreation, cultural attractions, night life options, etc.).

This study has been conducted by IWD three times (2008, 2013, and 2017). The latest iteration included more in-depth analysis than previous years and is timely in that it coincides with the state of Iowa's Future Ready Iowa initiative which has a goal of increasing the percentage of Iowa's workforce with an education beyond high school to 70 percent by the year 2025. One approach to meeting this goal is to retain that educated population we survey in the state. This study attempts to discover why students choose to locate where they do and therefore provides the state the opportunity to either form policy around those decisions and/or work at adjusting their perceptions in order to retain these educated individuals.

The 2017 study showed that 46.0 percent of students that have begun to consider where they will locate following graduation or upon program completion are likely to remain in Iowa. In addition, 26.7 percent indicated they are likely to leave the state. While it is helpful to compare these two groups regarding what they find important in their location decision, particularly to see how they differ, the real opportunity lies with those 27.3 percent that indicated they are unsure about where they will locate. Determining what can be done to retain these students may be helpful in moving

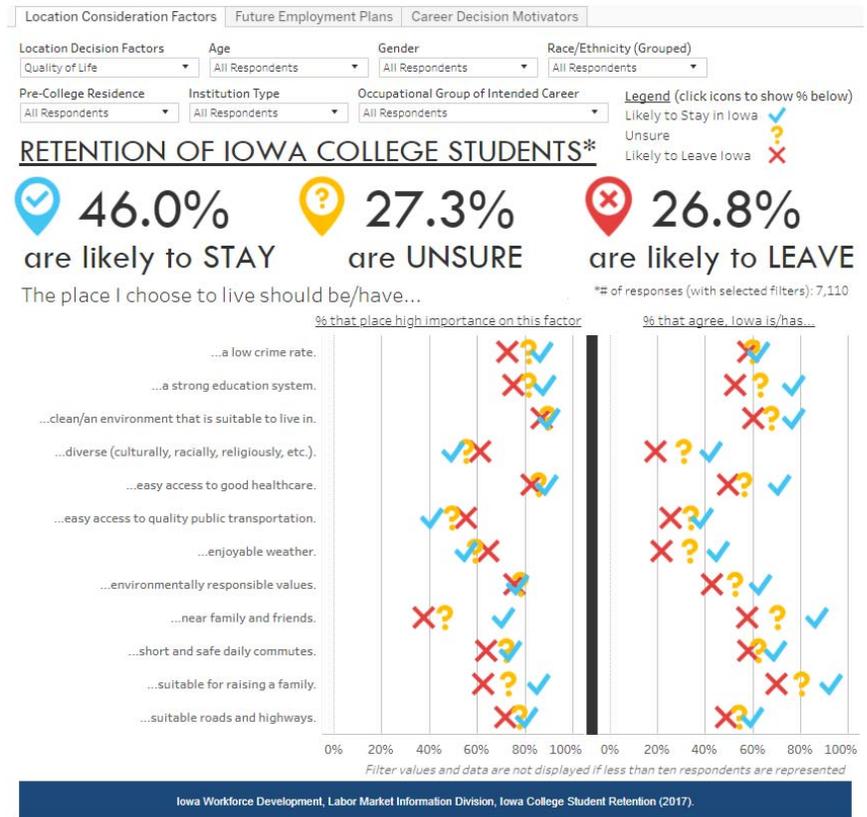


the needle in the right direction toward that 70 percent goal of Future Ready Iowa.

In today's current economic climate where available workforce is one of the most important issues states are confronted with—along with growing the skills of that available workforce to fill those “middle-skill” occupations—determining a way to entice students who have the necessary skills to fill the growing number of openings to stay in Iowa is vital to the development and growth of our economy.

The full report can be found by visiting www.iowalmi.gov/cs. A data visualization was also created, using the Tableau software platform, to accompany the release of the full report. The visualization is a dynamic opportunity to disseminate the data as it allows users to interact with the information by applying filters specific to the location factors, demographics, institution-type, and intended career of

the survey-taker. This type of deeper-dive analysis is important when determining what specifically motivates the decisions of different groups of people, which are not analyzed in the full report, and especially allows for that analysis of the “unsure” population. The data visualization is also available at the above website.

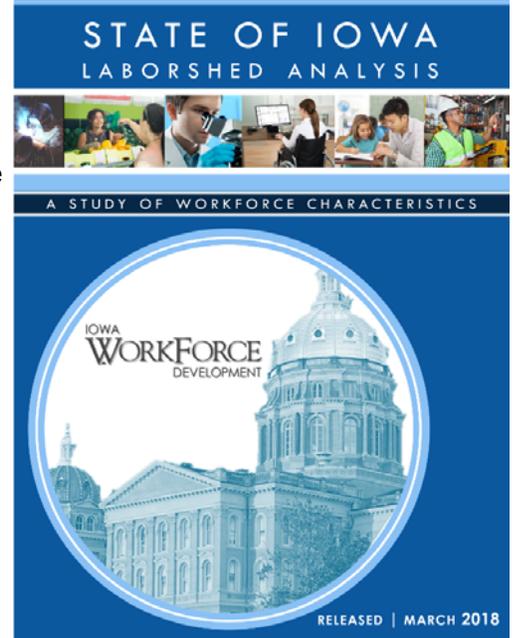


State of Iowa 2017 Laborshed Analysis

By Craig Trotter

The goal of Iowa’s Laborshed analysis is to measure the availability and characteristics of workers within the state of Iowa using Iowa Workforce Development’s Laborshed Survey. The data generated will aid state and local development officials in their facilitation of industry expansion, recruitment, and their service to existing industries in the state. These entities require detailed data describing the characteristics of the available labor force including current and desired wage rates and benefits; job qualifications and skills; age cohorts; residence and work locations; employment requirements and obstacles; and the distances individuals are willing to travel for employment.

Community Laborshed analyses are a valuable and unique resource for local economic development. Regional Laborshed analyses are an aggregation of individual Laborshed areas into a defined region. Regional Laborshed reports assist businesses, developers and site selectors in identifying the strengths of a region. This information is then used for retaining or expanding their existing businesses or attracting prospective new employers into the area.



Wage Requirements

The 2017 Statewide Laborshed Analysis showed the current overall median hourly wage of those who are employed is \$17.00 and the median salary is \$64,000 per year. Respondents are asked if they are paid on either an hourly or salaried basis; hourly wages are not converted to annual salaries. The breakdown of respondents who indicated a type of compensation is as follows: 52.4 percent state they are currently receiving an hourly wage, followed by 34.0 percent who receive an annual salary, 10.3 percent who are paid on an alternative basis and 3.3 percent who are on commission.

Select the Group to Analyze:

All
 Currently Employed
 Likely to Accept/Change Employment
 Unlikely to Accept/Change Employment

Current/Lowest Considered: Hourly/Annual:

Current/Last Hourly Wage
 Lowest Considered Annual Salary

Select the Category to Show Wages for:

Industry
 Occupational Category



Overall Current/Last Median Hourly Wage:

\$17.00



Iowa Workforce Development, Labor Market Information Division, 2017 Statewide Laborshed Survey.

Select the Group to Analyze:

All
 Currently Employed
 Likely to Accept/Change Employment
 Unlikely to Accept/Change Employment

Current/Lowest Considered: Hourly/Annual:

Current/Last Hourly Wage
 Lowest Considered Annual Salary

Select the Category to Show Wages for:

Industry
 Occupational Category



Overall Current/Last Median Annual Salary:

\$64,000



Iowa Workforce Development, Labor Market Information Division, 2017 Statewide Laborshed Survey.

Demographics of the Employed

The gender breakdown of those respondents who are employed is 51.2 percent female and 48.8 percent male. The average age of the employed is 47 years old. Roughly three-fourths (77.5 percent) of the employed respondents within the state have some post high school education: 4.5 percent are trade certified, 2.5 percent have vocational training, 16.8 percent have an associate degree, 24.8 percent have an undergraduate degree, and 13.0 percent hold a postgraduate or professional degree.

Wage Requirements - Unemployed Likely to Change

Wages are one of three important factors for unemployed individuals. The estimated wage threshold for the unemployed likely to accept employment is \$13.00 to \$15.00 per hour. This threshold illustrates the wage range required to attract 66 to 75 percent of applicants. The lowest median hourly wage that unemployed respondents are willing to accept is \$11.00 per hour. At their prior employment, the unemployed received a median hourly wage of \$13.50 per hour.

Industries and Occupations of the Employed

Survey respondents were asked to identify the industry in which they are currently working. The top industries in Iowa are healthcare and social services (15.7 percent); wholesale and retail trade (14.5 percent); manufacturing (13.1 percent); and education (12.9 percent). The greatest percentage of occupations respondents are employed in office and administrative support (14.6 percent); management (10.5 percent); education, training and library (9.6 percent); followed by production (8.1 percent).

Percent of Workforce by Occupational Category

As shown in the chart below, the largest concentration of potential available labor is employed within the professional, paraprofessional and technical occupational category (32 percent). The agricultural occupational category represents the smallest sector of workers likely to change employment. Individuals employed within the service (34.0 percent); clerical and administrative support (26.2 percent); and sales (26.2 percent) occupational categories are the most likely to change employment.

	% of All Employed Likely to Change by Occupational Category	% of Employed Likely to Change within Each Occupational Category
Professional, Paraprofessional & Technical	32.0%	22.8%
Production, Construction & Material Handling	22.4%	26.1%
Clerical/Administrative Support	15.2%	26.2%
Service	14.8%	34.0%
Managerial/Administrative	7.6%	20.2%
Sales	6.7%	26.2%
Agriculture	1.3%	20.7%
Total	100%	-

Job Search Resources

Residents living in the state of Iowa are undoubtedly exposed to numerous sources by which employers communicate job openings and new hiring. For those employed likely to change, 79.1 percent are using the internet and 19.9 percent are using newspapers. Top internet sites used for job searches include: www.indeed.com, www.monster.com, www.linkedin.com, www.iowajobs.org and www.careerbuilder.com. Top newspapers used include: *The Des Moines Register*, *The Gazette-Cedar Rapids*, *Telegraph Herald-Dubuque*, *Quad-City Times* and *Omaha World Herald*.

The full report can be found by visiting www.iowaworkforcedevelopment.gov/laborshed-studies.

Iowa Economic Development Authority

Projects: January – December 2017

Region 1

Dubuque - Cottingham & Butler Insurance Services, Inc., is headquartered in Dubuque and employs over 800 employees nationwide. The firm provides a full suite of risk management and employee benefits services. The board awarded Cottingham & Butler \$80,000 in direct financial assistance as well as tax benefits via the High Quality Jobs (HQJ) program for this expansion project. The project has a capital investment of \$2.3 million and will create 20 jobs incented at a qualifying hourly wage of \$22.37.

Dubuque - Flexsteel Industries manufactures furniture for residential and commercial applications. In 1936, the company located its headquarters in Dubuque and has since expanded manufacturing and distribution throughout North America. With the deterioration of its current 120-year-old manufacturing facility, Flexsteel is proposing to construct a new plant with modern technology and capabilities. The company was awarded \$1 million in direct financial assistance, to assist solely in the demolition and rehabilitation of the existing facility, as well as tax benefits for this \$29 million capital investment. Through this transition, Flexsteel will retain 200 jobs, of which 30 will meet the qualifying wage threshold of \$21.18 per hour.

Dubuque - Heartland Financial USA, Inc., is a multibillion-dollar bank holding company, headquartered in Dubuque, that offers uniquely different banking solutions for business and personal clients. Heartland plans to hire additional employees, expand its facility by leasing additional space and remodel to accommodate this increase in personnel. The board awarded Heartland \$80,000 in direct financial assistance as well as tax benefits from the HQJ program for this \$1.6 million capital investment. The project is expected to create 31 jobs, of which 20 are incented at or above a qualifying wage of \$22.37 per hour.

Dubuque - Wave Reaction, Inc., is a software company with products designed to encourage the use of environmentally friendly reusable containers instead of disposable packaging. The company provides services to the agricultural and construction markets, automotive suppliers, container manufacturers, and logistics companies. The board approved direct financial assistance of \$45,000 and tax benefits for Wave Reaction to move its operations from Illinois to Dubuque to expand its services in the reusable container management market. The proposed project will have a capital investment of \$1.87 million and is expected to create 20 jobs, 12 of which are incented at a qualifying wage of \$21.18 per hour.

Peosta - Camso, the Road Free company, is a world leader in the design, manufacturing, and distribution of off-road tires, wheels, rubber tracks, and undercarriage systems to serve the material handling, construction, agricultural, and powersports industries. The company is planning to relocate to a new building within Peosta and purchase machinery and equipment. The board awarded Camso \$30,400 in direct financial assistance as well as tax benefits from the HQJ program for this project. The \$4.5 million capital investment is set to create 40 jobs, eight of which are incented at a qualifying hourly wage of \$21.18.

Region 2

Charles City - Cambrex Charles City, Inc., a subsidiary of Cambrex Corporation of East Rutherford, New Jersey, manufactures Active Pharmaceutical Ingredients (APIs) and pharmaceutical intermediates for both generic and branded human pharmaceutical markets for clinical trials and commercial supply. Cambrex currently supplies APIs for the treatment of ADHD, smoking cessation, oncology, and Crohn's disease, among other things. Cambrex is planning a \$27 million expansion project to increase manufacturing capacity as a result of the rapid growth they've experienced. The board awarded Cambrex \$125,000 in direct financial assistance as well as tax benefits via the HQJ program. The project is expected to create 29 new jobs exceeding the qualifying wage of \$16.85 per hour.

Charles City - Zoetis, Inc., is a global animal health company headquartered in Parsippany, New Jersey, with a manufacturing facility in Charles City, Iowa. Zoetis has been in the business of manufacturing animal health medicines and vaccines for over 60 years. The company is planning a \$54 million expansion project to increase manufacturing capacity. The board awarded the company tax benefits via the HQJ program. The project is expected to create six jobs incented at a qualifying wage of \$16.83.

Mason City - The board approved HQJ program tax benefits for Cargill Kitchen Solutions, which is proposing an expansion of its Mason City facility. The company produces value-added further processed egg products and breakfast entrees for North America. The project represents a \$9.8 million capital investment and is expected to create 44 jobs, of which 26 are incented at a qualifying wage of \$16.79 per hour. The project includes the accommodation of an additional production line and freezer space.

Region 3 & 4

Alton - Global Aquaculture Supply Company (GASC), LLC, plans to manufacture and distribute positive pressure air domes that house multiple aquaculture production ponds. The company is constructing a new facility in Alton. GASC was awarded \$64,000 in direct financial assistance as well as tax benefits for this \$3 million capital investment. The project is expected to create eight jobs incented at a qualifying wage of \$19.60 per hour.

Emmetsburg - POET-DSM Marketing, LLC, is a wholly-owned subsidiary of POET-DSM Advanced Biofuels, LLC. The company produces cellulosic ethanol from corn stover biomass procured from producers in the area surrounding the POET-DSM Project Liberty biorefinery outside of Emmetsburg in Palo Alto County. POET-DSM Marketing's On-site Manufacturing (OSM) of enzymes project enables the production of enzyme mixtures in a fermentative process at the Project LIBERTY cellulosic ethanol manufacturing site in Palo Alto County. Project activities include construction and operation of the OSM facility. The board awarded the company tax benefits via the HQJ program based on a qualifying hourly wage of \$19.38. This project represents a capital investment of \$29 million and is expected to create 10 jobs, of which six are incented.

Milford - Liberty Diversified International (LDI) is a family of manufacturing companies including paper and packaging, building products, and workplace environments. One of LDI's subsidiaries, Safco Products Co., recently partnered with Mayline Office Furniture to expand its product lines. The company is purchasing an existing facility in Milford to increase manufacturing capacity because of rapid growth. The board awarded LDI \$500,000 in direct financial assistance, as well as tax benefits via the HQJ program for this nearly \$15 million capital investment. The project is expected to create 100 new jobs at a qualifying wage of \$16.83 per hour.

Orange City - K2W Precision Inc. has rapidly grown into a manufacturer for the racing industry. The company currently offers four different product lines: racing wheels, oil pans, shock absorbers, and steering racks. This project will include the purchase of an existing facility and a subsequent expansion. The board awarded K2W Precision Inc. tax benefits via the HQJ program. The plan has a capital investment of \$3.4 million and will create 10 jobs, of which nine are incented at a qualifying hourly wage of \$19.85.

Region 5

Fort Dodge - CJ Bio America Inc. is a subsidiary of CJ Cheiljedang, a South Korean conglomerate. CJ Bio America falls within the biopharma segment and was founded in the U.S. in 2011 in Fort Dodge as a flagship for the company's North American bio business. At this plant, CJ Bio America produces lysine, an essential amino acid, with a primary target of swine and poultry growers. The company was awarded tax benefits via the HQJ program for a \$46 million capital investment that involves construction of new production buildings to allow the company to expand its portfolio. The project is expected to create 18 jobs incented at a qualifying wage of \$17.56 per hour.

Region 6

Marshalltown - Tug Kay Consulting is a technology consulting company that assists companies in making improvements throughout the product development process with a focus on the improvement of work processes to generate a positive return on investment (ROI). The company is planning to create 23 jobs at a qualifying wage of

\$18.19 per hour and locate in Marshalltown to house office, meeting, demonstration, R & D, technology, development, and testing facilities. The board awarded Tug Kay Consulting a \$100,000 loan/forgivable loan and tax benefits via the High Quality Jobs (HQJ) program for this \$685,000 capital investment.

Region 7

Cedar Falls - Initially named Hawkeye Corrugated Box, BCI Hawkeye Division was founded in Cedar Falls in 1967. The company currently services over 400 customers in North America, manufacturing corrugated boxes, retail displays, and other packaging. BCI Hawkeye is planning to build a new facility and relocate their business there. Upon completion of the project, the business plans to invest in new machinery that will enable expansion into additional markets. The board awarded the project tax benefits via the HQJ program. The project has a capital investment of \$13.5 million and will create five jobs incented at a qualifying hourly wage of \$17.29.

Independence - Geater Machining & Manufacturing Co (GMM) has been servicing the aerospace, electronics, and high-tech industries since 1962. The company offers a variety of secondary manufacturing processes that help eliminate the need to send machined and fabricated parts to multiple vendors. GMM is set to expand the current facility to accommodate an increase in production. The project has a capital investment of \$1 million and is expected to create six jobs, one of which is incented at a qualifying wage of \$16.53 per hour. The board awarded the expansion tax credits via the HQJ program.

Waterloo - Crystal Distribution Services, Inc., began operation in the Waterloo area in the late 1800s by cutting ice from the local river and distributing it around the country. Today, Crystal provides temperature-controlled warehouse and repackaging services to food processing companies in Iowa and around the globe. The company is constructing a new 50,000 square-foot freezer space to continue to provide quality service to both current and prospective customers. The project has a capital investment of \$5.5 million and will create one additional job at a qualifying wage of \$17.29 per hour. The board awarded this project tax benefits via the HQJ program.

Waterloo - Tyson Fresh Meats Inc., a subsidiary of Tyson Foods, Inc., is a leading supplier of premium beef and pork. The business is planning to expand and renovate its existing building in Waterloo. The board awarded Tyson tax benefits from the HQJ program. This project represents a \$28 million capital investment and is expected to create 245 jobs incented at or above the qualifying wage of \$17.29 per hour.

Region 8

Panora - Nutriom, LLC, provides an innovative way of drying food to maintain the flavor and functionality of the original product without adding chemicals, preservatives or any other additives. The company is planning to establish operations in Panora and transfer assets to Crystal Freeze Dry/Panora Foods, LLC, upon commencement of its Iowa operations. This \$6.5 million capital investment was awarded \$150,000 in direct financial assistance as well as tax benefits from the HQJ program. The project is expected to create 30 jobs, 17 of which are incented at a qualifying hourly wage of \$19.92.

Region 9

Bettendorf - Arconic, Inc., formerly known as Alcoa, Inc., has had its Davenport Works facility in Riverdale since 1948. The plant produces aluminum sheet and plate for a variety of industries. Arconic plans to purchase and install new machinery that will enable the company to offer a more complete package to its clients and continue its growth at the Riverdale facility. The board awarded Arconic \$1,500,000 in direct financial assistance, as well as tax benefits from the HQJ program for this project. This \$159.6 million capital investment is expected to create 30 jobs and retain 250 jobs incented at a qualifying wage of \$18.30 per hour.

Davenport - Sterilite Corporation is the largest plastic housewares company in North America. The company manufactures products ranging from food storage containers and laundry products to home storage and organization products. Sterilite plans to build a manufacturing and distribution facility in Davenport. The company was awarded \$1,011,000 in direct financial assistance as well as tax benefits from the HQJ program for this \$73 million capital investment. The project is expected to create 500 jobs, of which 100 are incented at a qualifying wage of \$18.74 per

hour.

DeWitt - Latham Pool Products is the largest manufacturer of swimming pool components and pool accessories in North America. The business plans to lease and renovate an existing building and surrounding ground to create a manufacturing facility and outdoor warehouse in DeWitt. Latham was awarded tax benefits through the HQJ program for this \$2 million capital investment. The project is expected to create 23 jobs, of which three are incented at a qualifying wage of \$18.36 per hour.

Eldridge - Lewis Machine & Tool Co. is a U.S. General Services Administration (GSA) approved contractor. The company designs and manufactures small arms and components that are currently in service with the U.S. forces and many countries around the world. The manufacturer was awarded \$250,000 in direct financial assistance as well as tax benefits. The company's \$7.3 million capital investment project includes the construction of a facility in Eldridge and is expected to create 178 jobs, of which 50 are incented at a qualifying hourly wage of \$18.74.

Region 10

Cedar Rapids - Highway Equipment Company (HECO) was founded in 1939 and manufactures deicing spreaders and road maintenance equipment, along with agricultural equipment, such as crop nutrient applicators. HECO's Hi-Way and New Leader brands serve growers and ag retailers as well as municipal customers and contractors across the country. The business is proposing to build a facility in Cedar Rapids that will allow for year-round testing of spread patterns, allowing the company to expand the research and development capabilities. The project has a capital investment of \$1.35 million and will create 14 jobs at a qualifying wage of \$24.91 per hour. The board awarded the project tax benefits via the HQJ program for this expansion.

Cedar Rapids - Lil' Drug Store Products is the number one supplier of health and beauty care (HBC) products to the convenience store channel. The business markets a complete assortment of HBC products to over 100,000 convenience stores across the U.S. Additionally, the company's category management services business delivers insights and analytics to over 45,000 convenience stores across the U.S. The wholesaler is building a new distribution center and office in Cedar Rapids to serve as the company's headquarters. The board awarded the company tax benefits via the HQJ program to create 11 jobs, eight of which are incented at a qualifying wage of \$24.70 per hour. The project will have a capital investment of \$13 million.

Cedar Rapids - Walsma & Lyons, Inc., is a wholesale distributor of fresh fruits and vegetables, representing growing shipping districts from across the United States. The business is under contract with a major national food service company to set up a fresh produce distribution hub to service several distribution centers. These centers are located across the Midwest, including a facility in Iowa. Walsma & Lyons plans to improve an existing building in Cedar Rapids, making it usable for fresh produce distribution. This project represents a \$300,000 capital investment. The company was awarded tax benefits via the HQJ program. The project is expected to create 22 jobs, of which two are incented at a qualifying hourly wage of \$24.70.

Coralville - CIVCO Medical Solutions, a leading manufacturer of ultrasound guidance devices and infection control products, plans to expand its Multi-Modality Imaging (MMI) business at its Iowa facilities in Coralville and Kalona. CIVCO's MMI business offers a broad range of solutions and products for radiology, regional anesthesia, vascular access, men's and women's health, cardiology, surgery, and critical care. The company is proposing an expansion of its corporate office in Coralville to accommodate future business growth. The board awarded the project \$100,000 in direct financial assistance as well as tax benefits for this \$1.1 million capital investment. The expansion will create 20 jobs, 13 of which are incented at the laborshed wage of \$24.19 per hour.

Hiawatha - Crystal Group is an employee-owned company that designs, manufactures, integrates, and supports rugged computer-based systems for intelligence and critical control applications in government and industrial segments. The company has out-grown its current building and additional space is needed. The project represents an \$18.6 million capital investment and includes a new office and manufacturing facility within Hiawatha. The board awarded the company \$100,000 in direct financial assistance as well as tax benefits via the HQJ program. The project is expected to create 45 jobs, of which 20 are incented at a qualifying wage of \$24.70 per hour.

Marion - Marion Process Solutions specializes in the design and manufacture of custom mixers for the food, chemical, mineral, plastics, and biomass industries. The company plans to construct a facility adjacent to their existing manufacturing facility in Marion. This new addition will serve as a testing facility, which will allow customers to test their solutions on-site to design the optimal configuration for new mixers. The board awarded the company tax benefits via the HQJ program for this \$1.5 million capital investment. The project is expected to create three jobs incented at or above a qualifying wage of \$24.91 per hour.

Marion - Weems Industries, Inc., d/b/a Legacy Manufacturing Co., has been operating since 1986, offering a wide range of professional grade service and maintenance equipment for automotive, industrial, contractor, agricultural, and marine markets throughout North America. Legacy's Flexzilla® branded hose products have opened up markets for the company in the lawn and garden and outdoor power categories. Weems is proposing a 200,000 square-foot expansion of its current facility in Marion to allow for continued growth. The board awarded the project tax benefits via the HQJ program for this \$12 million expansion that will create 13 jobs, one of which is incented at a qualifying hourly wage of \$24.91.

Monticello - ORBIS Corporation provides reusable plastic containers, pallets, dunnage, and bulk systems that drive supply chain efficiency and reduced waste for the industrial/automotive, food and beverage, and consumer goods/retail supply industries. The company plans to construct an addition to its existing manufacturing plant in Monticello. The addition will consolidate warehousing operations for ORBIS' catalog business, currently being conducted in multiple locations throughout the Midwest. ORBIS received tax benefits from the HQJ program for this \$4.7 million capital investment. The project is expected to create two jobs incented at a qualifying wage of \$16.59 per hour.

Norway - Headquartered in Norway, Iowa, Frontier Natural Products Co-op has been a leading supplier of organic herbs, spices, and aromatherapy products since 1976. The co-op's products can be found in mainstream grocery, natural product, and online retailers throughout the United States and Canada. The board awarded the company tax benefits via the HQJ program to construct a building for flammable storage, an Innovation Center, and to improve sustainability initiatives. The project has a capital investment of \$3.1 million and will create two jobs, of which one is incented at a qualifying hourly wage of \$24.91. Additionally, seven jobs will be retained at the same qualifying wage.

Swisher - Cedar Ridge Vineyard, LLC, located in Swisher, produces distilled spirits, primarily whiskey, and wine. This project includes the expansion of the existing distillery and stillhouse to increase production, the addition of new equipment, and the construction of additional warehousing to hold aging spirits. The board awarded Cedar Ridge tax benefits from the HQJ program for this \$2 million capital investment. The project is expected to create six jobs incented at a qualifying hourly wage of \$24.32.

Region 11

Ames - Barilla America, Inc., established in 1877 in Parma, Italy, ranks today as one of the top Italian food manufacturers. The company owns 30 production sites, including one in Ames. Barilla is proposing an expansion of its existing facility to add two production lines associated with packaging equipment and warehousing. A partner project will include the expansion of silo storage and rail capacity of the Ames Mill. The project has a capital investment of \$64 million and will create 41 jobs, nine of which are incented at a laborshed wage of \$24.12 per hour. The board awarded Barilla incentives via the HQJ program that included direct financial assistance in the amount of \$375,000 as well as tax benefits.

Ankeny - Hy-Vee has 244 food stores in eight states with 23,227 full time employees and operates convenience stores, car washes, wine and spirits stores, and pharmacies. The company is proposing a project to construct a new 202,000 square-foot building to assemble food kits and manufacture bakery products and ready-to-eat foods. Products manufactured at this site will be distributed to all 244 Hy-Vee store locations, as well as future sites. The board awarded this expansion tax benefits via the HQJ program. This project has a capital investment of \$64.4 million and is expected to create 209 jobs, of which nine are incented at a qualifying hourly wage of \$27.92.

Ankeny - Perishable Distributors of Iowa (PDI) is a subsidiary of Hy-Vee, Inc., with a corporate office and 350,000 square-foot warehouse facility in Ankeny. PDI is proposing a 108,000 square-foot expansion, which will include

additional docks, floral distribution warehouse, and additional freezer space. This project has a capital investment of \$21.6 million and is expected to create one job at a qualifying wage of \$27.92 per hour. The board approved tax benefits via the HQJ program.

Des Moines - Accordia Life and Annuity Company is a Des Moines-based subsidiary of Global Atlantic Financial Group Limited, a financial services company focusing on the U.S. retirement, life insurance, and reinsurance markets, currently employs over 200 people in Des Moines. The board awarded the company tax benefits through the HQJ program for new leased space and improvements for their Des Moines office. This \$10 million capital investment is expected to create an additional 65 jobs, of which 54 are incented at a qualifying wage of \$27.92 per hour. Seventeen jobs will also be retained at the same qualifying wage.

Des Moines - Siegwerk, a global company headquartered in Germany, develops custom ink portfolios to match customers' requirements. The Des Moines location is the firm's North American headquarters, which has customers throughout the United States and Canada. Siegwerk provides innovative ink formulations, which have exactly the right properties and functionality for customer applications for a variety of uses. The board approved tax benefits via the HQJ program for the company's proposed project that includes the development of a new warehouse to support its flexible packaging business unit. The new warehouse will be adjacent to the existing manufacturing plant and corporate office and will solidify Siegwerk's presence in Iowa, while positioning the location for future growth. The project will have a capital investment of \$10 million and will retain two jobs at a qualifying wage of \$27.92 per hour.

Des Moines - Voya Financial, Inc., and its subsidiaries, are a retirement, investment, and insurance company serving 13.6 million individual and institutional customers in the U.S. The company is consolidating employees from around the metro into one location within the Hub Tower in downtown Des Moines. This \$9.8 million capital investment also includes the creation of 15 new jobs, 11 of which are incented at the laborshed wage of \$27.92 per hour. The board awarded the project tax benefits via the HQJ program.

Grimes - Farmers Edge is a global leader in decision agriculture. By combining hardware and software innovation with advisors on the ground, Farmers Edge gives growers the data needed to make informed decisions on the farm. Originating in Pilot Mound, Manitoba, in 2005, the company is active in five countries: Canada, U.S., Brazil, Russia, and Australia. The board awarded Farmers Edge tax benefits via the HQJ program to construct a soil testing laboratory in Grimes to serve Farmers Edge U.S. operations. The project has a capital investment of \$2.2 million and will create five new jobs, one of which is incented at a qualifying hourly wage of \$29.12.

Huxley - Continental Manufacturing Chemist (CMC) provides contract packaging services for consumer products companies that wish to outsource their manufacturing. CMC manufactures liquids, gels, pastes, and ointments for well-known and up-and-coming consumer brands. With a \$6.9 million capital investment in Huxley, the company's expansion plans will double its existing footprint in Iowa. The investment includes the acquisition and build out for a new facility, as well as manufacturing machinery and equipment. The board approved direct financial assistance in the amount of \$600,000, as well as tax benefits via the HQJ program for this expansion. The project is expected to create 48 jobs, 19 of which are incented at a qualifying hourly wage of \$24.12.

Newton - Global Fiberglass Solutions (GFSI), Inc., is a fiberglass recycling, material science, and green products company that develops quality infrastructure and building products from recycled fiberglass. The company plans to create an innovative processing and manufacturing facility/operation in Newton using recycled materials, mostly fiberglass, from decommissioned wind blades and other products. This project represents a \$6 million capital investment and is expected to create 57 jobs, of which 30 are incented at or above a qualifying hourly wage of \$18.12. The board awarded GFSI tax benefits from the HQJ program.

Newton - TPI Composites, LLC, is a world leader in composites manufacturing, focusing in the areas of clean energy solutions. The company, known for its focus on the wind industry, is planning to diversify and manufacture bus bodies for electric-powered passenger buses. The board awarded TPI Composites \$1,000,000 in direct financial assistance, as well as tax benefits via the HQJ program for this expansion project. The project has a capital investment of \$6 million and will create 351 jobs at a qualifying hourly wage of \$18.12 per hour.

Norwalk - Windsor Window Company is a manufacturer of premium aluminum clad wood windows, extruded vinyl windows, and patio doors in West Des Moines. The company markets products throughout the United States with a customer base that is primarily distributor and window dealer accounts. Windsor Window is expanding window and door operations and requires additional manufacturing space. The company's expansion will include a new facility located on Norwalk's certified site. The board awarded Windsor Window tax benefits via the HQJ program to create 35 jobs, six of which are incented at a qualifying hourly wage of \$23.18. The project will have a capital investment of \$10.5 million.

Urbandale - Compressor Controls Corporation (CCC) has specialized in turbomachinery controls for over 35 years. The company serves customers in a broad range of industries, including oil, gas, chemical, petrochemical, refineries, liquid natural gas (LNG), and power generation facilities. The board awarded CCC \$32,500 in direct financial assistance from the HQJ program for this \$434,000 capital investment. The project consists of remodeling CCC's existing facility to maintain headquarter operations in Urbandale and is expected to retain 82 jobs at a qualifying hourly wage of \$27.92.

Urbandale - John Deere is a world leader in providing advanced products and services including agricultural, forestry, construction, and consumer/commercial lawn equipment. The John Deere Intelligent Solutions Group is the company's development facility specializing in developing advanced software and hardware technologies used in maximizing crop yields and improving food production infrastructure. The company, currently located in a leased facility in Urbandale, is considering the purchase of land and erecting a building to house their employees. John Deere was awarded tax benefits from the HQJ program. This project represents a \$32.6 million capital investment and is expected to create 31 jobs and retain 20 jobs incented at a qualifying wage of \$29.12 per hour.

Waukee - The Iowa Economic Development Authority (IEDA) Board and the Waukee City Council took action to support a more than \$1.3 billion data center. Apple plans to purchase 2,000 acres of land in Waukee. The first phase of the project is two state-of-the-art data center facilities. They will serve North American users of iMessage, Siri, the App Store and other Apple services. Like all Apple data centers, the proposed facilities will run entirely on renewable energy. The IEDA Board approved tax incentives of \$19.65 million via the HQJ program for the project that will create at least 50 jobs at a qualifying wage of at least \$29.12 per hour.

West Des Moines - Zirous, Inc., is an information technology and consulting company serving clients throughout the Midwest. The company has partnered with both Oracle and Hortonworks to offer its technology benefits to customers as the only Oracle Platinum Partner in Iowa and one of a handful of Hortonworks partners in the state. Zirous' \$550,000 capital investment project is expected to create 11 new jobs at a qualifying wage of \$27.92 per hour. The board approved tax incentives via the HQJ program for this expansion project in West Des Moines.

Region 12

Sioux City - C2C Express is a logistics management, linehaul, and parcel delivery company. Founded in 2012, the company's headquarters in Sioux City with locations in Des Moines, Ottumwa, and Norfolk, Nebraska. The company has planned expansions for Kansas City and Sioux Falls, South Dakota. The board awarded the company tax benefits via the Targeted Jobs (TJ) Withholding Tax Credit program to retain 13 jobs at or above the average county wage of \$18.74 per hour. The project has a capital investment of \$60,000.

Sioux City - Superior Industrial Mechanical, Inc., will be a mechanical contractor offering mechanical piping, pipe welding, plumbing, project management, fabrication, and equipment installation. The company's project includes the acquisition of a 25,000-square foot building and the necessary machinery and equipment to start the business. Superior Industrial Mechanical, Inc., was awarded tax benefits via the TJ Withholding Tax Credit program. The \$848,000 capital investment project is expected to create 26 jobs, of which 20 are incented at a qualifying wage of \$18.72 per hour.

Region 13

Clarinda - Novae Corp., founded in 1995 in Northeast Indiana, acquired the assets of H&H Trailers, LLC, in Clarinda, making it the second largest trailer manufacturer in North America. The company, via a \$3.6 million capital investment, plans to upgrade its existing facility through remodeling and the purchasing of new equipment. The board awarded Novae Corp. \$300,000 in direct financial assistance as well as tax benefits through the HQJ program. The project is expected to create 74 jobs, of which 73 are incented at a qualifying wage of \$15.41 per hour.

Council Bluffs - Rasmussen Mechanical Services (RMS) provides mechanical services to commercial, industrial, and institutional clients throughout the central U.S. The company's services include boiler repair, HVAC, and industrial burner services. RMS is acquiring an existing building in Council Bluffs for warehousing and manufacturing services, as well as a relocation of its corporate accounting department from Sioux City. The company's accounting employees in Sioux City will either retain their duties at the current facility or transfer to other positions within the Sioux City facility—no employees will transfer to Council Bluffs. The board awarded RMS tax benefits via the HQJ program based on a qualifying hourly wage of \$19.08. Additionally, the company received tax benefits through the TJ Withholding Tax Credit program based on a qualifying hourly wage of \$17.93. This project represents a capital investment of \$6.5 million and is expected to create 12 jobs, of which 11 are incented.

Council Bluffs - Tyson Prepared Foods, Inc., a wholly-owned subsidiary of Tyson Foods, Inc., owns and operates a prepared food facility in Council Bluffs. This facility produces pepperoni and dry sausage goods. This proposed project will add additional building square footage and equipment to increase capacity. The company was awarded tax benefits from the HQJ program for this \$51 million capital investment. The project is expected to create 50 jobs, of which six are incented at a qualifying wage of \$22.90 per hour.

Region 14

N/A

Region 15

Fairfield - Faircast, Inc., purchased the Fairfield Casting foundry that operated for more than 90 years in Fairfield until it closed on June 15, 2017. The firm is hiring some of the former employees and plans to reopen the foundry. Faircast's project has a capital investment of \$3.2 million and will include improvements to the foundry and the purchase of new machinery and equipment. The board approved direct financial assistance in the amount of \$600,000, as well as tax benefits via the HQJ program. The project will create 89 jobs, 75 incented at a qualifying hourly wage of \$19.52.

Oskaloosa - Clow Valve Company operates a metal casting facility and machine shop in Oskaloosa producing valves and fire hydrants for water distribution systems. Products produced by the company are marketed throughout the United States. Clow Valve is planning a \$13.5 million expansion that will include upgrading equipment such as an iron melt coreless furnace, a brass melting furnace, automated machinery, and pollution control equipment. The board awarded Clow Valve tax credits via the HQJ program to create six new jobs at a qualifying wage of \$19.63 per hour.

Region 16

Mount Pleasant - Beck's Superior Hybrids, Inc., is the largest family-owned company in the U.S. that produces, processes, and sells seeds. With Iowa being one of the fastest growing markets for Beck's Hybrids, the company plans to expand its Mount Pleasant processing capacity to meet the increase in demand. This \$10.9 million capital investment was awarded tax benefits from the HQJ program. The project is expected to create 10 jobs at or above a qualifying hourly wage of \$16.56.

Mount Pleasant - ContiTech USA, Inc., a division of Continental AG, is a producer of rubber and plastics technology with locations across the globe. The company will be expanding its current facility in Mount Pleasant to house the company's additional product lines. The board awarded ContiTech \$325,000 in direct financial assistance as well as tax benefits through the HQJ program for this \$11 million capital investment. The project is expected to create 41 jobs incented at a qualifying hourly wage of \$16.04.

Mount Pleasant - Lomont Molding, LLC, is a custom plastic molder that specializes in low-pressure structural foam and high-pressure solid injection molded thermoplastic parts. Lomont is expanding its footprint in Mount Pleasant with additional warehouse space adjacent to the current manufacturing plant. The company received tax benefits from the HQJ program for this \$2.6 million capital investment. The project is expected to create two jobs incented at a qualifying wage of \$16.04 per hour.

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