

# IOWA WORKFORCE TODAY & TOMORROW

# 2004



## IOWA'S DYNAMIC WORKFORCE

Iowa Workforce,  
Today and Tomorrow  
Looks at Trends in Population,  
Employment and Jobs  
of the Future



IOWA WORKFORCE DEVELOPMENT

## **IOWA WORKFORCE DEVELOPMENT**

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## OVERVIEW



*Occupations  
requiring higher  
education are  
among the higher-  
paying Iowa jobs*



Demographic and employment information are used by economic developers, market researchers, counselors and curriculum developers for educational institutions, academic researchers, government planners, and private businesses. Occupational information on employment and wages also provides guidance for students making their first career choices and older workers considering a change of profession.

In the last decade, Iowans have grown older and more diverse. The median age (2000) stood at 36.6 years, with 38 counties recording a median age of 40 or above. In the last decade, Hispanics accounted for a third of Iowa's population growth. The most highly educated Iowans were Asians, with 43 percent earning a minimum of a bachelor's degree.

The Iowa labor force has been growing erratically since 1980, but still reached a record 1,663,000 in 2002 before inching downward. In the next 25 years, the labor force will see dramatic changes with the impending retirement of the baby boom generation and the influx of new immigrants and younger college-educated workers.

While Iowa nonfarm employment declined by 7,000 workers during 2003, it did show improvement in the second half of the year. In a prosperous year, the Iowa economy generates an average of 2,500 jobs per month. This number was negative during the recession and has been below average this year. National economic events will continue to have a strong impact on Iowa job growth.

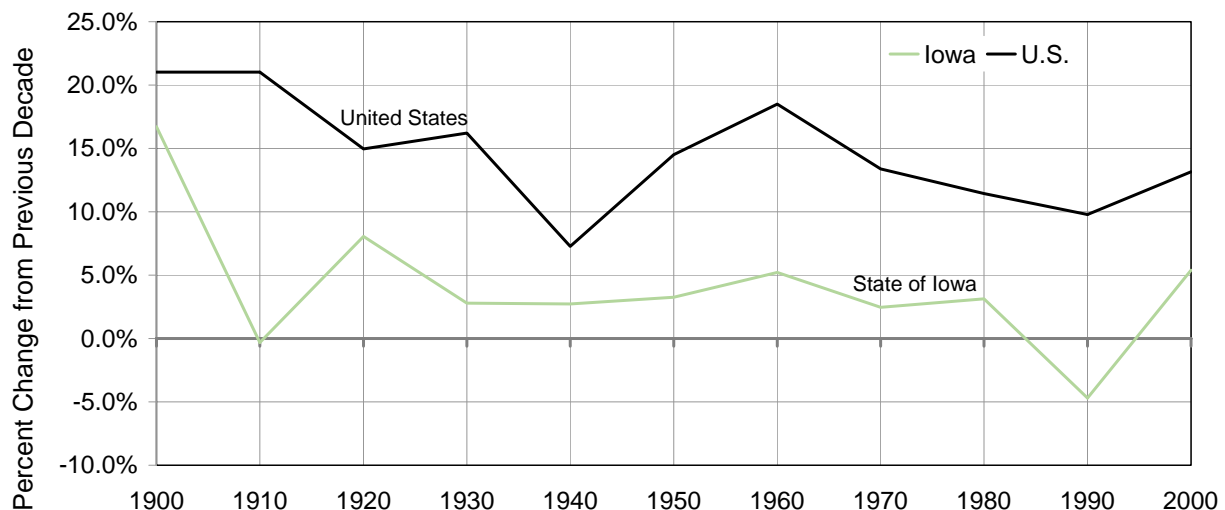
Occupations requiring higher education are among the higher-paying Iowa jobs. Computer software engineers, computer support specialists, and customer service representatives are expected to be among the faster-growing occupations. Also, the aging population will bring opportunities for workers in healthcare.

## POPULATION: THE CHANGING FACE OF IOWA

The 20<sup>th</sup> Century saw a vast increase in the population of the United States—from 76 million inhabitants in 1900 to 281 million in 2000. When the century dawned, we were an agrarian nation with 72 percent of our population living on farms and rural areas. It is the automobile that did the most to change the face of the nation: in infrastructure, economics, and culture. The century saw a movement of population, not just into cities, but to innumerable suburbs that surrounded them. Iowa has not escaped this trend.



Iowa and U.S. Population  
Percent Change 1900-2000

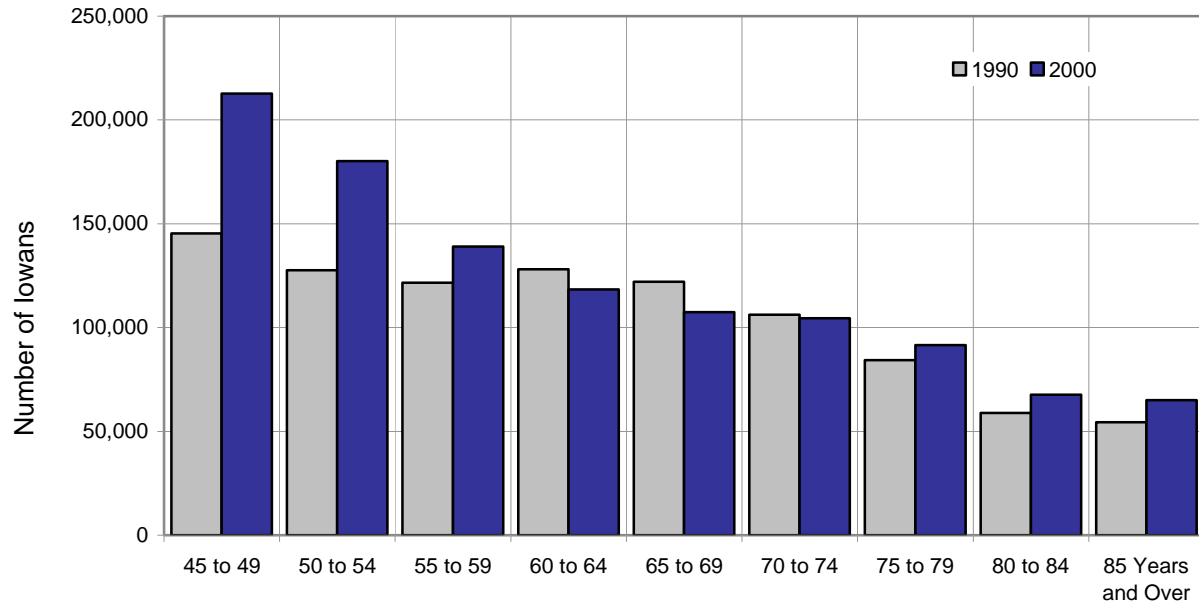


Source: Census Bureau, U.S. Department of Commerce

In the 1990s, the people of Iowa grew older and more diverse. By 2000, the median age for all Iowans was 36.6, slightly higher than the national median of 35.3. Thirty-eight counties had a median age of at least 40. All of these were in rural parts of the state. It is the growth of the baby-boom generation that has pushed the average age of the population higher. The state was fourth in terms of population older than 65 (14.9 percent), behind Florida, Pennsylvania, and West Virginia. However 2000 was the first census in half a century where the percent of Iowans over 65 was lower than the previous decade, falling from 15.3 to 14.9 percent. This was a result of the relatively low number of births in the 1920's and 1930's. The number of older Iowans can be expected to rise considerably as the leading edge of the baby-boom generation reaches age 65 in 2011.

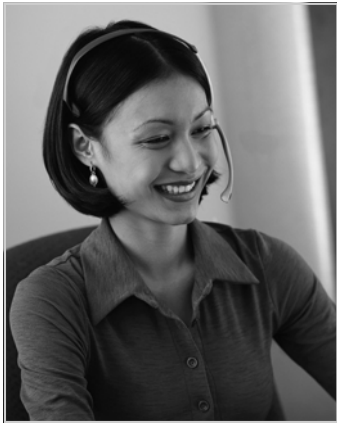
## POPULATION: THE CHANGING FACE OF IOWA

### Baby-boomers Reached Middle Age between 1990 and 2000



Source: Census Bureau, U.S. Department of Commerce

The most dramatic change in the makeup of the Iowa population during the 1990's was the migration of Hispanics into the state. Iowa is joining much of the nation in diversifying its population. Hispanics accounted for more than a third of the state's population growth during the decade. In fact, there was a 152 percent increase in the Iowa Hispanic population in the 10 year period.



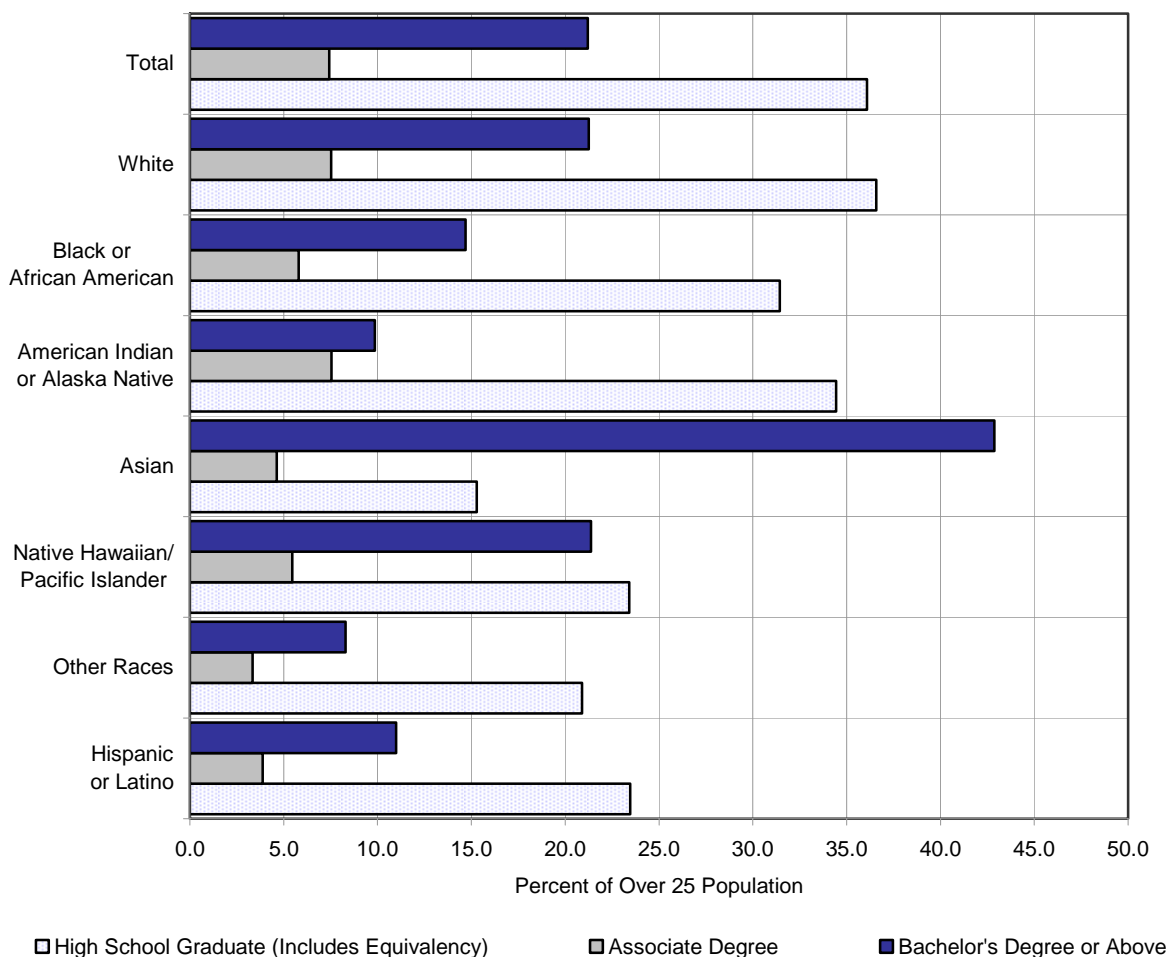
### Foreign Born Population United States and Iowa 2000

	Total Population	Foreign Born	Percent Foreign Born
United States	281,421,906	31,107,889	11.1%
Iowa	2,926,324	91,085	3.1%

Source: Census Bureau, U.S. Department of Commerce

## POPULATION: THE CHANGING FACE OF IOWA

### Educational Attainment of Iowans 2000



Source: Census Bureau, U.S. Department of Commerce

Among Iowa population groups 25 and older, 64 percent had earned a minimum of a high school education. The most highly educated Iowans were Asians, with 74 percent at least completing high school, and 43 percent earning a bachelor's or more advanced degree. This compares with 21 percent of whites and 11 percent of Hispanics with college degrees and higher. The black population recorded 31 percent who had completed high school (but not advanced beyond this level), versus 37 percent for whites. Generally, educational attainment has been increasing as younger workers replace less educated retirees. In Iowa, median earnings (1999) ranged from \$26,293 for a high school graduate to \$46,958 for an individual with an advanced degree. The significance of African Americans lagging behind whites and Asians at all education levels is that there is a direct correlation between education and income.

## POPULATION: THE CHANGING FACE OF IOWA

### Income Tied to Education 2000

	Per Capita Income	Percent with a Minimum of 12 Years of Education
White	\$20,134	65.4
Black	\$12,400	51.9
American Indian	\$12,830	51.8
Asian	\$18,279	62.8
Native Hawaiian Pacific Islander	\$21,436	50.2
Other	\$10,125	32.5
Two or More Races	\$9,063	53.0
Hispanic	\$10,848	38.3
Total	\$19,674	64.7

Source: Census Bureau, U.S. Department of Commerce

For much of the last century, Iowa was a net exporter of population. It would seem that the movement from rural to urban areas negatively impacted the State because it lacked an urban core that attracted large numbers of migrants. The Omaha MSA, which includes the cities of Omaha and Council Bluffs, contains 761,041 residents. If this were an Iowa MSA, it would contain 23 percent of Iowa's population. However, this is an interstate area with a majority residing in Nebraska.

### Iowa Urban and Rural Population 2000

	Persons				Housing Units			
	Iowa		U.S.		Iowa		U.S.	
TOTAL	2,926,324		281,421,906		1,232,511		115,904,641	
Urban	1,786,683	61.1%	222,358,309	79.0%	756,646	61.4%	89,966,555	77.6%
Inside Urbanized Areas	1,114,949	38.1%	192,338,121	68.3%	462,847	37.6%	77,297,680	66.7%
Inside Urban Clusters	671,734	23.0%	30,020,188	10.7%	293,799	23.8%	12,668,875	10.9%
Rural	1,139,641	38.9%	59,063,597	21.0%	475,865	38.6%	25,938,086	22.4%
Farm	171,374	5.9%	2,987,531	1.1%	63,438	5.1%	1,107,687	1.0%
Nonfarm	968,267	33.1%	56,076,066	19.9%	412,427	33.5%	24,830,399	21.4%

Source: Census Bureau, U.S. Department of Commerce



## POPULATION: THE CHANGING FACE OF IOWA

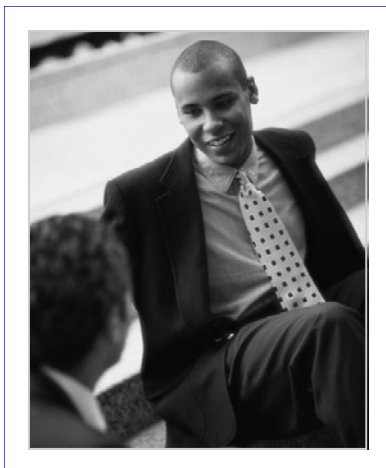
The importance of an urban core to the growth and economic development of a region cannot be overstated. Cities contribute to economic growth by concentrating a sizeable combination of skilled labor, customers and suppliers within a commuting area. In an era of globalization, cities become magnets for foreign investment. Metropolitan areas typically exhibit higher land values, higher wages, and a higher cost of living than smaller communities that may only be 50 miles from the urban core. It seems clear that businesses consider the benefits of concentration worth the additional costs. Cities make possible economies of scale. Rural communities have higher transportation costs, both for inputs from suppliers and outputs to customers. The Minneapolis-St. Paul-Bloomington MSA has a population base equal to 60 percent of the State of Minnesota and the Chicago-Naperville-Joliet MSA has a population base equal to 73 percent of Illinois. Iowa is lacking a comparable area.

### Iowa Cities and Towns A Quarter Century of Growth

City	2000 Population	Percent of State	1970 Population	Percent of State	Pop. Change 1970-2000	% Change 1970-2000
West Des Moines	46,403	1.59	16,441	0.58	29,962	182.24
Ankeny	27,117	0.93	9,151	0.32	17,966	196.33
Iowa City	62,220	2.13	46,850	1.66	15,370	32.81
Urbandale	29,072	0.99	14,434	0.51	14,638	101.41
Ames	50,731	1.73	39,505	1.40	11,226	28.42
Cedar Rapids	120,758	4.13	110,642	3.92	10,116	9.14
Clive	12,855	0.44	3,005	0.11	9,850	327.79
Bettendorf	31,275	1.07	22,126	0.78	9,149	41.35
Coralville	15,123	0.52	6,130	0.22	8,993	146.70
Johnston	8,649	0.30	222	0.01	8,427	3795.95
Marion	26,294	0.90	18,028	0.64	8,266	45.85
Altoona	10,345	0.35	2,883	0.10	7,462	258.83
Cedar Falls	36,145	1.24	29,597	1.05	6,548	22.12
Norwalk	6,884	0.24	1,745	0.06	5,139	294.50
North Liberty	5,367	0.18	1,055	0.04	4,312	408.72
Grimes	5,098	0.17	834	0.03	4,264	511.27
Indianola	12,998	0.44	8,852	0.31	4,146	46.84
Hiawatha	6,480	0.22	2,416	0.09	4,064	168.21
Waukeee	5,126	0.18	1,577	0.06	3,549	225.05
Pleasant Hill	5,070	0.17	1,535	0.05	3,535	230.29

Source: Census Bureau, U.S. Department of Commerce

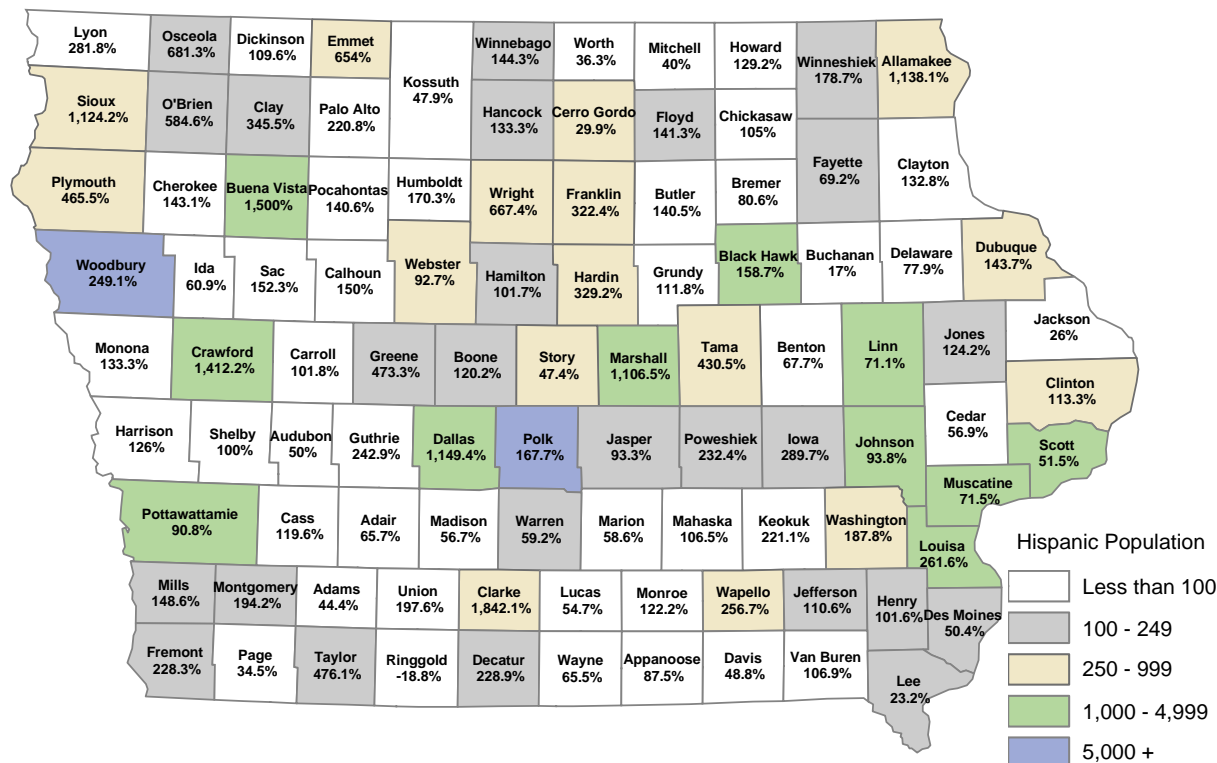
## POPULATION: THE CHANGING FACE OF IOWA



An urban area consists of more than a central city. Often, it contains a conglomeration of smaller cities.

These may serve as 'bedroom communities', feeding workers to the central city. However, they may also form major economic centers in their own right. These urban areas allow residents to be close to schools, hospitals, and a variety of shopping opportunities. The population density of a metropolitan area requires extensive services, which in turn generates jobs. Companies with national and international customer bases locate in and around these areas because of access to transportation, in addition to a large skilled labor pool within commuting distance of their facilities.

### Explosive Growth Rates in Hispanic Population 1990-2000



Source: Census Bureau, U.S. Department of Commerce

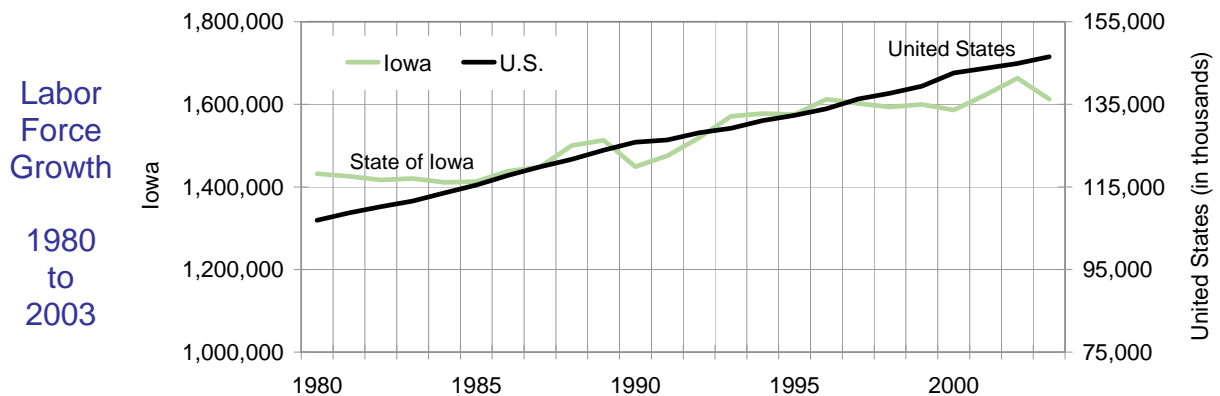
## LABOR FORCE

Iowa's labor force has shown an erratic and slow growth pattern since 1980. The statewide labor force grew by one percent or more in only eight of the last twenty-four years. During the first half of the 1980's, the state's labor force was negatively impacted by a severe recession that coincided with a farm crisis. It took until 1988 for the number of workers in the state to reach the 1.5 million mark. The record level for the state's labor force was reached in 2002 at 1,663,000. The U.S. labor force, on the other hand, reflected consistent, steady growth for every year over the past twenty-four years. For twenty of the twenty-four years, the number of workers in the nation grew by one percent or better. In 2003, the U.S. labor force reached a record level of 146,510,000.

The fact that Iowa's labor force is growing more slowly does not necessarily mean that slower economic growth will result. Due to increased productivity, the statewide economy is able to produce more from the same number of workers. Figures for the U.S. economy show that workers today are roughly four times as productive as they were in the late 1940's.

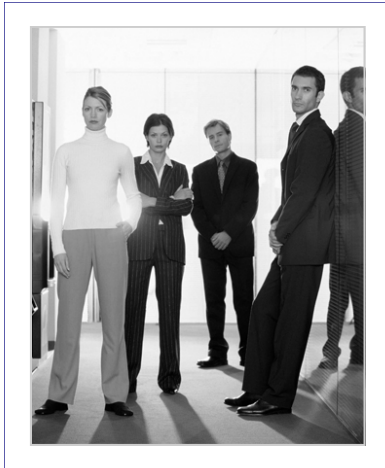
The labor force of the next 25 years will undergo a dramatic transformation brought on by the mass retirement of baby boomers and an influx of new immigrants and younger, college-educated workers to fill the void. The baby boom generation (born 1946-1964) represents the largest percentage of the labor force. Many of the older baby boomers, who are currently in their mid to late fifties, have started to retire. This upcoming surge in baby boom retirements has many employers and government planners concerned that a widespread labor shortage will occur during the 2015 to 2025 period. These concerns are intensified by the fact that the age cohort just behind the baby boom generation—those roughly 20 to 35—is significantly smaller.

However, labor shortages may not prove to be as dire as Iowa's demographics would lead one to believe. Older workers are living longer, and this means that many of them will work longer as well. Also, the generation below age 20, referred to as the "echo boom," is more like the baby boom generation in size.



Source: Labor Market and Economic Research Bureau, Iowa Workforce Development

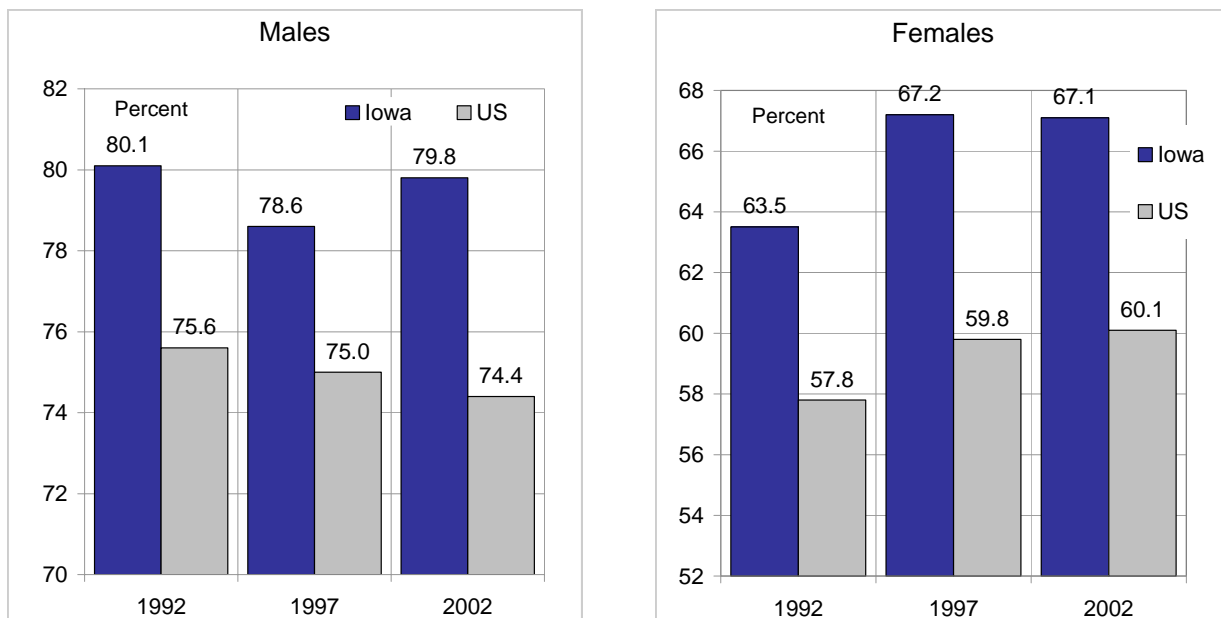
## LABOR FORCE



One of Iowa's strengths is its historically high labor force participation rate. This particular measure represents the proportion of the non-institutional population 16 and over that is employed or seeking employment. Over the years, Iowa's labor force participation rate has consistently exceeded comparable rates reported for the U.S. and has ranked with the group of states reporting the higher rates. In 2002, Minnesota reported the highest labor force participation rate for total population at 75.7 percent followed by South Dakota at 73.4 percent. Iowa, along with Nebraska, ranked in third place with a participation rate of 73.2 percent. However, for youth 16 to 19 years of age, Iowa's participation rate of 66.4 percent ranked first in the nation.

There are a number of factors that influence labor force participation, particularly family circumstances (marital status and the presence of dependent children), work experience, and level of education. In fact, one of the reasons for Iowa's high labor force participation rate may be the educational attainment of its labor force. According to the 2000 Census, 28.6 percent of the state's population 25 years of age and over had an associate degree, bachelor's degree or graduate or professional degree.

### Iowa Labor Force Participation Rates for Selected Groups



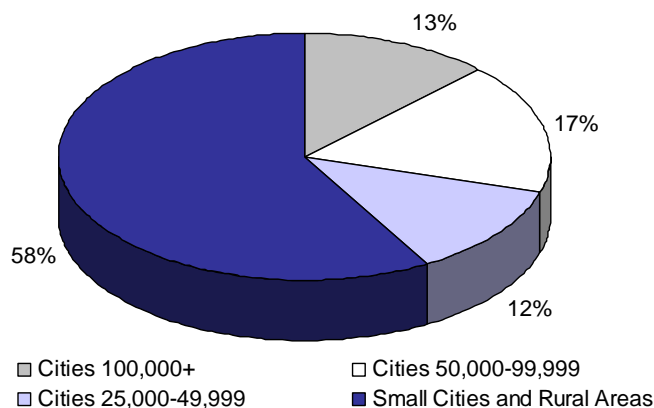
Source: Geographic Profile of Employment and Unemployment, 2002, Bureau of Labor Statistics, U.S. Department of Labor

## LABOR FORCE

Although 58 percent of Iowa's labor force resides in its small towns and rural areas, the state's labor force is highly mobile. According to information compiled from the *Census 2000 County-to-County Worker Flow Files* (Census Bureau, U.S. Department of Commerce), travel time is not an obstacle that prevents Iowans from getting to their jobs. While the average commute to work in the state is 18.5 minutes, 257,911 Iowans spend at least an hour per day driving to and from work.



Where Iowa's Labor Force Resides



Source: Labor Market and Economic Research Bureau,  
Iowa Workforce Development

*The labor force of  
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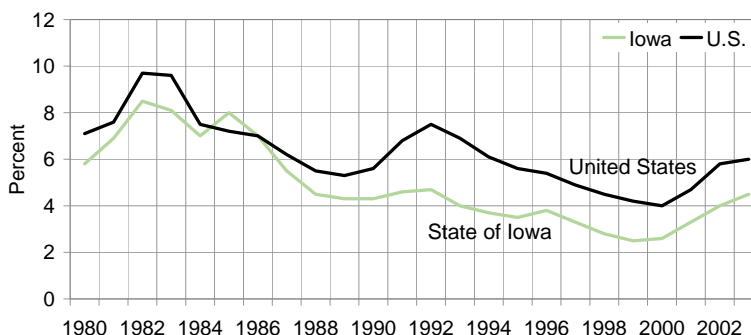
Following several years of atypically high unemployment during the 1980's, low unemployment became the norm in the state throughout the 1990's. In fact, in 1999, Iowa had the lowest unemployment rate in the nation at 2.5 percent. Also, Iowa's unemployment rate was consistently lower than the nation's jobless rate for twenty-two of the past twenty-four years.

Iowa's historical unemployment trend reinforces the fact that the unemployment rate is a "lagging" indicator, which usually reaches business cycle peaks and troughs after changes in general economic activity. During each recessionary period that occurred over the past twenty-four years, the state's unemployment rate typically reached a peak about two years after the onset of the recession. This pattern is evident for the recessions that began in 1980, 1990 and 2001. For the most recent recession that started in March 2001, unemployment was reported at a relatively low rate of 3.3 percent for the year. By 2003, the "jobless" recovery had pushed the state's unemployment rate to 4.5 percent.

## LABOR FORCE



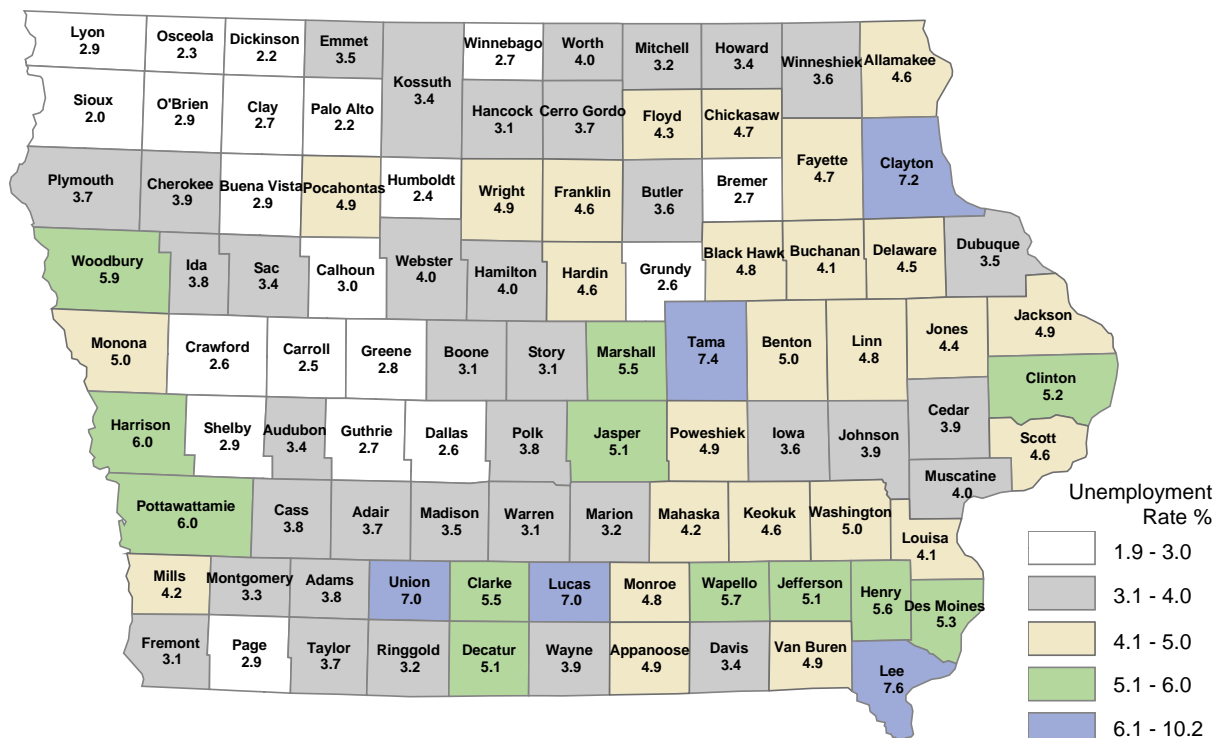
Iowa and U.S. Unemployment Rates: 1980-2003



Source: Labor Market and Economic Research Bureau,  
Iowa Workforce Development

Unemployment rates reported for Iowa's counties in 2003 ranged from a low of 2.6 percent in Carroll County to a high of 10.2 percent in Tama County. In general, the counties with higher unemployment tended to be located in eastern and southern Iowa. Tama County's unemployment rate rose to the double-digit level due to the temporary closing of the Meskwaki Casino, which involved approximately 1,000 workers.

Iowa 2003 Annual Average Unemployment Rates by County



Source: Labor Market and Economic Research Bureau, Iowa Workforce Development

## INDUSTRY TRENDS

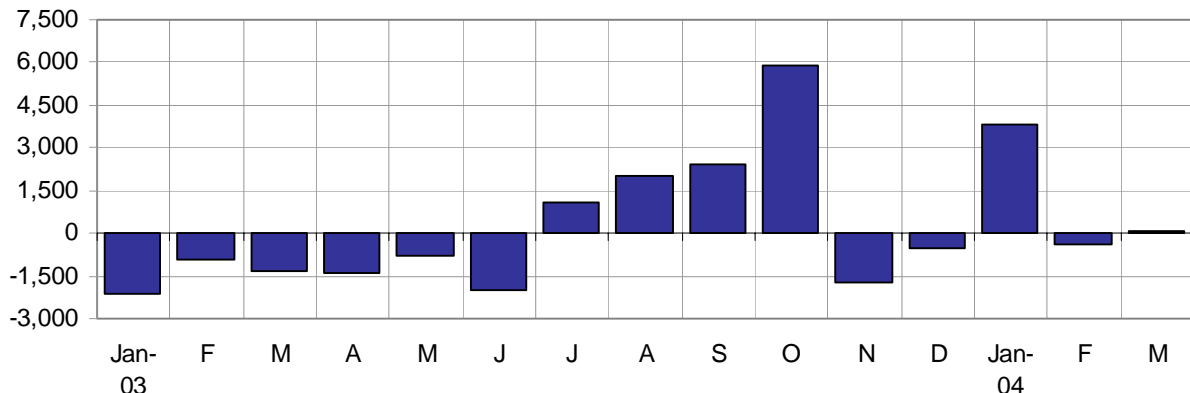
While real gross domestic product, the stock market, and consumer and business spending showed improvement after the 2001 recession, total nonfarm employment for the U.S. and Iowa continued to contract through the third quarter of 2003. For 2003 as a whole, net payroll employment was down by 7,000 in Iowa. This was substantially less than the loss of 18,300, which was reported for 2002. Eighteen states experienced an increase in nonfarm jobs in 2003. Nevada grew the fastest of any state, increasing its nonfarm jobs by 3.4 percent. The states that reported the larger percentage losses in nonfarm jobs were Oklahoma, Massachusetts, Kansas, Colorado and Michigan.



The second half of 2003 seems to have marked the turning point for the Iowa economy. Beginning in July 2003, nonfarm employment began to rebuild after more than two years of steady job losses. After reaching a pre-recession peak of 1,484,700 in March 2000, nonfarm employment had tumbled to a level of 1,435,300 by June 2003. As in previous recessions, the heaviest job losses were incurred by the state's manufacturing industry. In prosperous times, the Iowa economy gains an average of 2,500 jobs per month. Last year, monthly changes were mostly negative and, through the middle of 2004, Iowa job growth was only 500 per month. To return to solid, well-balanced economic growth, job gains will need to occur in all of the state's industries.

*In prosperous times, the Iowa economy gains an average of 2,500 jobs per month*

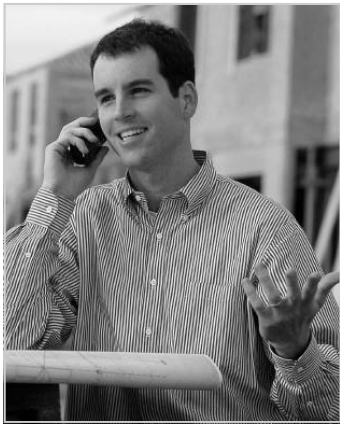
Monthly Change in Statewide Nonfarm Employment  
Jan. 2003 - Mar. 2004



Source: Employment Statistics Bureau, Iowa Workforce Development



## INDUSTRY TRENDS



*The finance industry, which reacted positively to historically low interest rates, added 1,400 workers*

Despite the lingering effects of the 2001 recession, two major industry sectors grew by over 1,000 workers in 2003. The finance industry, which reacted positively to historically low interest rates, added 1,400 workers. Much of this expansion occurred in the Cedar Rapids and Des Moines areas. Meanwhile, education and health services added 1,700 workers. Expansion in health care and social assistance accounted for about two-thirds of the gains in this sector.

Job losses in manufacturing eased in 2003, but the sector still accounted for the single largest drop in nonfarm employment. The larger decreases in the sector occurred in fabricated metal products, machinery manufacturing, and computer and electronics product manufacturing. The second largest decrease was reported for the trade, transportation and utilities sector, where the annual job loss of 2,300 was split between wholesale and retail trade. The transportation and warehousing segment of the sector experienced a small gain in 2003.

Over the past ten years, jobs expanded at the faster rates in construction; professional and business services; and financial activities. Manufacturing was the only industry sector to lose employment during the decade. Both the beginning and the end of the period were marked by similar economic circumstances. In 1993 and 2003, the Iowa economy was recovering from a recession.

### Metropolitan Areas



Three of the state's eight metropolitan areas added jobs in 2003. Several hundred jobs were added in Dubuque and Iowa City, while Scott County reported gains of only 200. In Iowa City, education and health generated the largest number of jobs, while Dubuque's growth was distributed among several industries. Leisure and hospitality experienced the largest increase in Dubuque last year. A major share of this gain was due to the opening of the Grand Harbor Resort and Water Park and the National Mississippi River Museum and Aquarium. Cedar Rapids and Sioux City



## INDUSTRY TRENDS

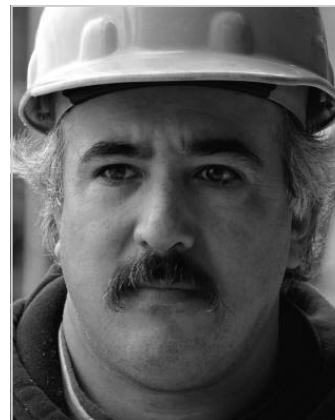
registered the largest losses among the metropolitan areas, with Sioux City reporting much of its downturn in manufacturing. Cedar Rapids lost jobs in manufacturing, information and professional and business services.

### Outlook

A number of factors will contribute to an improved economic environment in 2004. Although the economy is unlikely to grow as quickly as it did in the 1990's, the U.S. economy is expected to grow about 4 percent this year compared with 4.5 percent in 1999. Also, the economy will perform differently than it did in the past because of productivity. Even as the economy improves, companies will continue to do more with less to compete in the global marketplace.

The fact that businesses have finally begun to spend on equipment and software is an encouraging sign. Until recently, the lack of business investment was the missing link in the current recovery. In third quarter 2003, rising corporate profits boosted personal computer shipments 15.7 percent, the biggest increase since 2000. As PC sales rebound, spending on peripherals will also increase. Also, after three consecutive years of decline, worldwide spending on hardware is expected to increase by 4.8 percent in 2004. This increased spending on equipment will be bolstered by rising corporate profits, low inventory-to-sales ratios, and the improved outlook for orders.

U.S. businesses should also benefit from the weaker dollar that will generate an increase in overseas sales. Throughout 2003, the U.S. dollar fell against other major currencies like the euro and yen. This has been a definite advantage for American companies since each foreign sale translates to more dollars. The currency slide is expected to continue throughout 2004.



*Manufacturing  
accounted for the  
single largest drop  
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employment in  
2003*



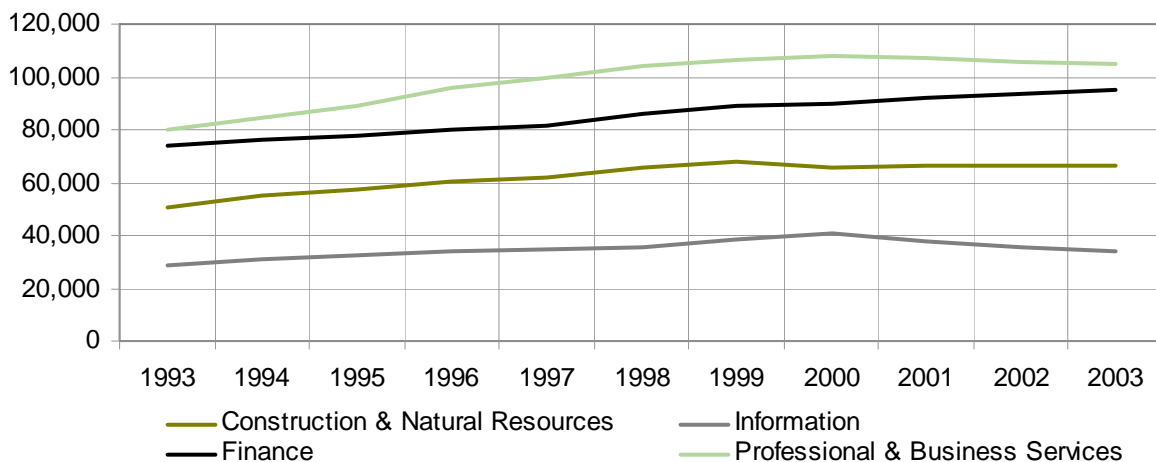
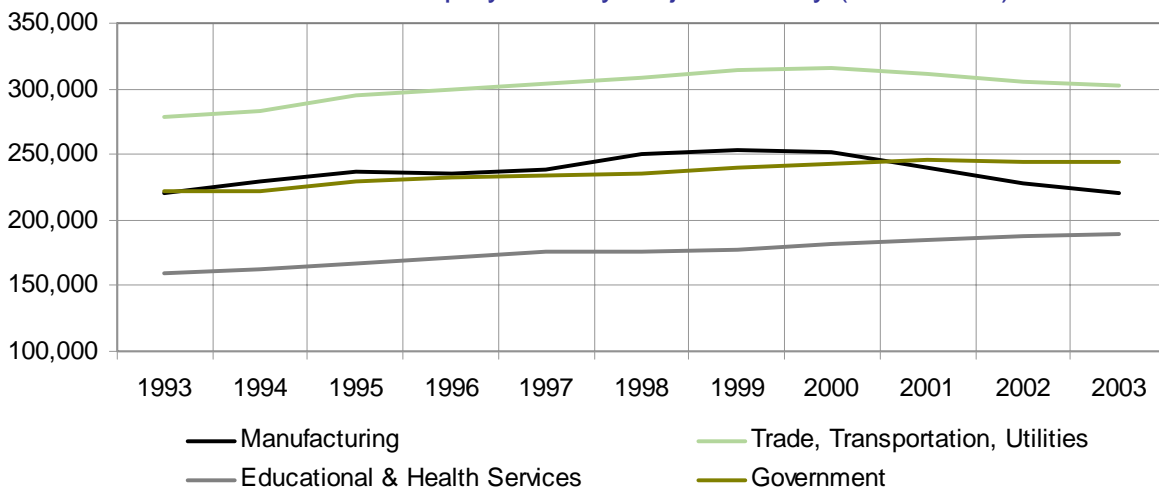
## INDUSTRY TRENDS



Finally, inventories are building and are expected to be a major contributor to output and gross domestic product in 2004. The pickup in demand that occurred during the second and third quarters of 2003 left inventories extremely low. Meanwhile, companies are not being rewarded for delaying orders since the prices of many materials are heading higher.

For example, the prices of commodities such as steel, copper and lumber are skyrocketing due to strong demand from China. This, when combined with rising interest rates, could have a negative impact on the strong housing market and the jobs that come with it.

Iowa Nonfarm Employment by Major Industry (1993-2003)



Source: Employment Statistics Bureau, Iowa Workforce Development

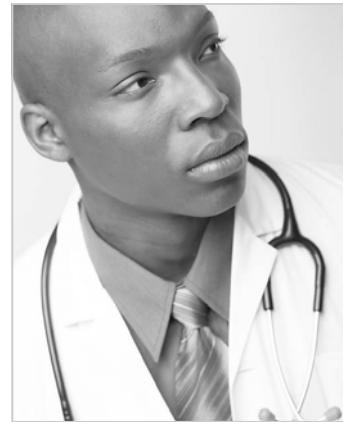
## HOT JOBS

Hot Jobs are occupations that generally have above average employment prospects and more favorable conditions for mobility and advancement than occupations with slow or declining employment. They can be analyzed from two standpoints—percent growth and numeric change. A percent change can be large for an occupation, indicating that the job has faster than average growth. At the same time, the numeric change can be small, signifying a lack of employment opportunities. Therefore, one must evaluate both pieces of data when reviewing occupational information in order to gain a more insightful picture of the future. In this article we will look at Iowa Occupational Projections for the 2000-2010 period.

For example, the number of jobs for *retail salespersons* is expected to climb by 7,210 during the current decade. Yet, this is a very large occupation and provides jobs for more than 46,000 Iowans, so the expected growth only amounts to 16 percent. Even though retail salesperson is not a fast-growing occupation, it is still expected to provide a large number of new jobs for qualified applicants.

Nationally, the fastest-growing opportunities range from *speech language pathologists* (+39 percent) to *Computer Software Engineers* (expected to double). *Occupational therapist assistants* will experience both a relatively low (compared to other fast-growing jobs around the United States) rate of change at 40 percent and total growth number of 6,600.

The National data have six occupations in both the high percentage and high numeric growth categories. These are *computer software engineers, applications*; *computer software engineers, systems software*; *computer systems analysts*; *computer support specialists*; and *home health aides*, in addition to *personal and home care aides*. Iowa has three occupations that are among both the fast growing and the largest job growth. They are *computer software engineers, applications*; *computer support specialists*; and *customer service representatives*.



*Among Iowa's  
fastest growing  
jobs are computer  
software  
engineers,  
computer support  
specialists, and  
customer service  
representatives*



## HOT JOBS

### 2003 Higher Education Brings High-Paying Jobs

Occupational Title	Employment	Mean Annual Wage	Mean Hourly Wage	Mean of the First One-Third
Family And General Practitioners	1,480	\$171,290	\$82.35	\$52.25
Dentists	800	163,170	78.45	41.39
Chief Executives	2,880	131,720	63.33	29.23
Education Teachers, Postsecondary	750	98,090	N.A.	N.A.
Lawyers	3,110	92,670	44.55	22.34
Veterinarians	720	90,380	43.45	17.14
Health Specialties Teachers, Postsecondary	960	88,190	N.A.	N.A.
Engineering Managers	1,740	85,450	41.08	29.17
Biological Science Teachers, Postsecondary	610	79,180	N.A.	N.A.
Computer And Information Systems Managers	2,290	77,290	37.16	23.69
Pharmacists	2,710	76,530	36.79	27.14
Financial Managers	5,090	76,000	36.54	20.63
General And Operations Managers	16,830	75,950	36.51	17.18
Marketing Managers	1,470	74,150	35.65	20.41
Sales Managers	2,860	72,870	35.04	19.35
Personal Financial Advisors	580	72,730	34.97	14.47
Education Administrators, Postsecondary	1,310	71,140	34.20	18.53
Education Administrators, Elementary And Secondary School	2,290	66,820	N.A.	N.A.
Industrial Production Managers	2,070	66,640	32.04	20.65
Securities, Commodities, And Financial Services Sales Agents	1,920	66,340	31.89	12.81
Transportation, Storage, Distribution Managers	960	65,820	31.65	18.45
Human Resources Managers	1,450	64,230	30.88	18.11
Construction Managers	1,530	63,940	30.74	18.11
Physician Assistants	690	63,330	30.45	22.73
Public Relations Managers	500	63,090	30.33	17.16
Electrical Engineers	1,280	63,090	30.33	23.15
Computer Software Engineers, Applications	2,090	62,640	30.11	18.21
Administrative Services Managers	3,860	62,530	30.06	17.60
Civil Engineers	1,270	61,390	29.52	20.76
Art, Drama, And Music Teachers, Postsecondary	810	60,790	N.A.	N.A.
Computer Systems Analysts	4,710	59,490	28.60	21.02
Purchasing Managers	780	59,090	28.41	16.53
Mechanical Engineers	2,220	58,510	28.13	20.62
English Language, Postsecondary	580	57,630	N.A.	N.A.
Electronics Engineers, Except Computer	500	57,550	27.67	20.14

*N.A. - Hourly wage rates are not collected for occupations in Education.*

*Although data for entry wages are not collected by the Occupational Employment Statistics (OES) Survey, the mean of the first third of the distribution is a common measure of the average entry wage for an occupation.*

*Source: Labor Market and Economic Research Bureau, Iowa Workforce Development*

## HOT JOBS

The majority of the fastest-growing occupations can be found in two major occupational groups; *computer* and *healthcare*. In Iowa, 32 percent of the occupations are computer-related and 28 percent are healthcare-related. The remaining eight occupations can be found in the areas of *Office and Administrative Support*, *Community and Social Services*, *Personal Care and Services*, *Transportation and Material Moving*, *Sales*, *Construction and Extraction*, *Installation, Maintenance and Repair*, and *Production*.

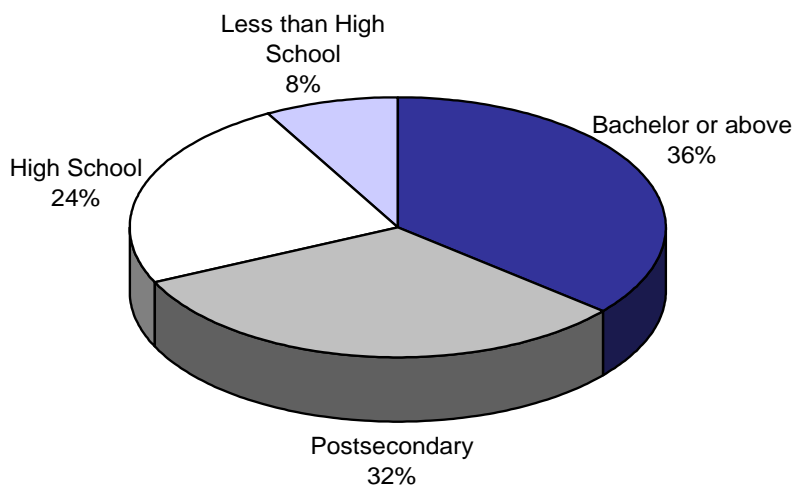
The demand for computer-related occupations will exist as long as the business service industry, in particular information technology and the computer and data processing services, continue its vigorous growth and as businesses require more sophisticated and complex technology.

In addition, the surge in electronic commerce has created a need for new and more complicated applications including computer security systems for the Internet and intranets. As more business is conducted via computers, businesses become more vulnerable to viruses and hackers and will require experts in the field to prevent such occurrences.



*The majority of the fastest-growing occupations can be found in two major occupational groups; computer and healthcare*

**Iowa's Fastest-Growing Jobs Demand Higher Education**



Source: Labor Market and Economic Research Bureau,  
Iowa Workforce Development



## HOT JOBS

Businesses are also collecting progressively more data and require a reliable computer system team that can manage large databases of key information, provide upgrades and customization to include the latest technology, resolve problems and provide technical support.

As our population ages, Iowans will require more health care services and will also experience the development of medical advancements that provide treatment for chronic ailments. This will result in increased demand for healthcare workers. Job opportunities are anticipated for technicians as they will be expected to provide services performed in the past by highly paid workers such as dentists, pharmacists, physicians and therapists.

Fast-growing occupations usually require postsecondary education or above and can be found in occupations that require higher level skills such as critical thinking and time management. For Iowa and the nation, over 65 percent of the fastest-growing occupations fall into this category. In Iowa, of the remaining occupations six will require high school education and only two less than high school education level. For the nation, two will require a high school education and five less than high school.

### Iowa's Top 20 Fastest Growing Jobs 2000 - 2010

Occupational Title	Iowa Percent Change	2003 Iowa Wages	U.S. Percent Change	2003 U.S. Wages
Computer Software Engineers, Applications	82	\$31.77	100	\$36.42
Computer Support Specialists	81	18.00	97	20.50
Computer Software Engineers, Systems Software	57	NS	90	37.69
Network & Computer Systems Administrators	73	24.29	82	28.43
Network Systems & Data Communications Analysts	75	27.29	77	29.84
Desktop Publishers	48	13.17	67	16.15
Database Administrators	52	25.44	66	29.54
Personal & Home Care Aides	47	8.62	62	8.18
Computer Systems Analysts	44	28.54	60	31.82
Medical Assistants	40	11.33	57	11.99
Social & Human Service Assistants	37	11.59	54	12.24
Physician Assistants	47	31.28	53	31.15
Medical Records & Health Information Technicians	42	11.66	49	12.77
Computer & Information Systems Managers	44	36.62	48	45.78
Physical Therapist Aides	36	10.17	46	10.00
Occupational Therapist Aides	NS	NS	45	12.21
Physical Therapist Assistants	39	14.37	45	17.67
Audiologists	29	22.96	45	25.23
Computer & Information Scientists, Research	NS	31.85	40	40.64
Occupational Therapist Assistants	28	16.08	40	18.04

NS - Not Surveyed in Iowa

Source: Labor Market and Economic Research Bureau, Iowa Workforce Development

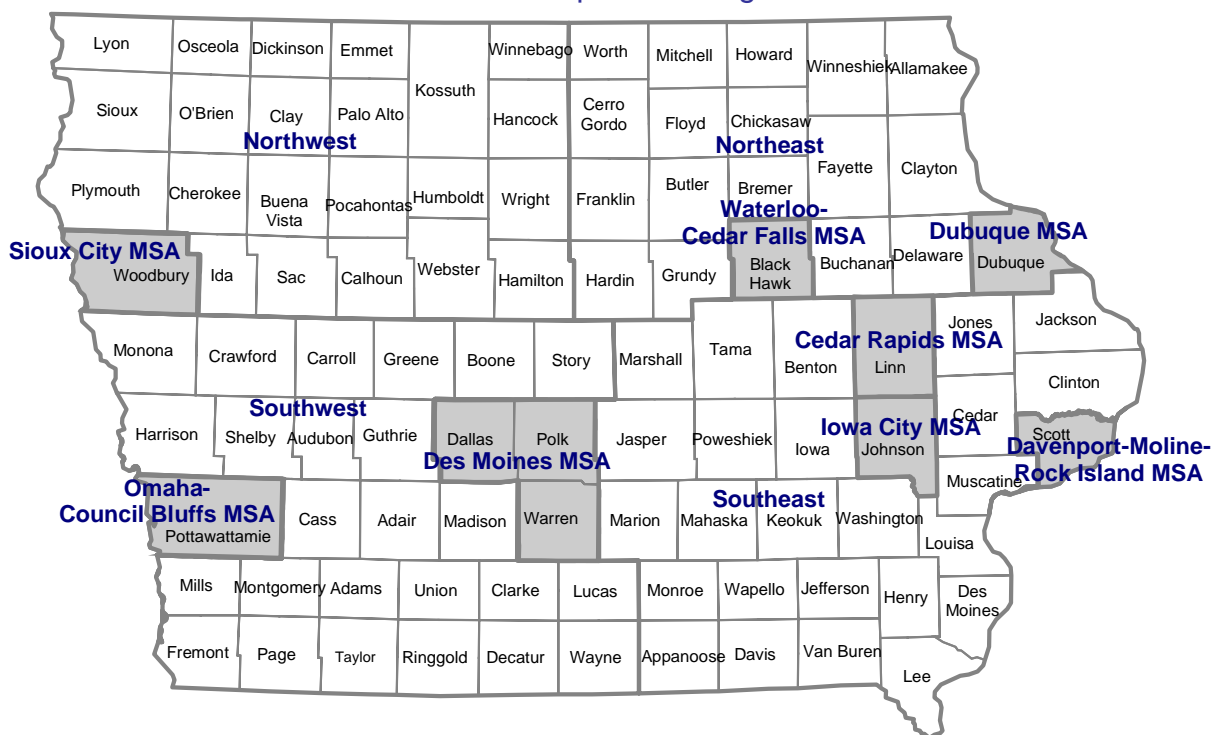


# OCCUPATIONAL CONCENTRATION

## Occupational Concentration

For purposes of occupational analysis, Iowa has been divided into eight Metropolitan Statistical Areas (MSA's) and four non MSA quadrants. Each of these has distinct characteristics in terms of occupational concentrations. Setting itself apart from the traditional "industry-based" form of regional economic examination is an evolving focus on the *occupational* makeup of an economic area and the skills associated with its workforce. This is in contrast to an emphasis on an industry's *product*.

Iowa's Occupational Regions\*



\* Iowa Occupational Regions are distinct Iowa areas for which the Occupational Employment Statistics (OES) Program

Source: Labor Market and Economic Research Bureau, Iowa Workforce Development

The 23 occupational groupings used for this study are adopted from the Office of Management and Budget (OMB), *Standard Occupational Classification Manual, 2000*. This Standard Occupational Classification (SOC) system is designed to encompass all jobs in the U.S. economy. Employment estimates for each occupational group were taken from the 2002 *Iowa Occupational Employment Statistics (OES) Wage Survey, Iowa Statewide and Substate Areas*. The OES Wage Survey is a collection of occupational and wage data gathered from Iowa employers and conducted through a cooperative effort between Iowa Workforce Development (IWD) and the U.S. Bureau of Labor Statistics (BLS).

## OCCUPATIONAL CONCENTRATION

In determining employment strengths and weaknesses per occupational region, *location quotients* (LQs) were employed. The location quotient measures the competitiveness in a local area. An LQ of 1.00 indicates a region is competitive, with its share of activity. An LQ greater than 1.00 indicates the local area has a high level of competitiveness and an LQ of less than 1.00 indicates the area has a low level of competitiveness, and is exporting more jobs than it imports.

Comparisons of LQs can be made between any of Iowa's eight MSA's (Cedar Rapids, Davenport-Moline-Rock Island, Des Moines, Dubuque, Iowa City, Omaha-Council Bluffs, Sioux City, and Waterloo-Cedar Falls) and four non MSA regions (Northeast, Northwest, Southeast, Southwest).

A comparison of MSA and non MSA regional LQ data supports the generally held opinion that higher growth and better paying professional jobs are most prevalent in metropolitan areas. For example, a state LQ comparison from the table, Iowa Occupational Location Quotients for MSA's and Regions demonstrates that the Management, Business/Financial, Computer, and Engineering SOC professions are much stronger (higher LQs) in the MSA's than other parts of Iowa. Conversely, the non MSA regions record large concentrations of workers in the Farming, Construction, Maintenance/Repair, Production, and Transportation categories.

The LQ data indicate that the Sioux City and Waterloo-Cedar Falls MSA's match up quite similarly in terms of occupational concentration as do the LQs of the Cedar Rapids and Omaha-Council Bluffs MSA's. This similarity would indicate similar workforce bases. With the exception of certain categories in Southwest Iowa, the non MSA regional areas also share similar LQs. It is also striking that no MSA or region is entirely self-sufficient; that is, none possess all of its LQs above the state mean (or "1.00"). In fact, each MSA has at a minimum two LQs that fall below state and/or national means (as defined by a margin greater than 0.25, or 0.74 or less) with some MSA's and regions with upwards of five, six, and seven deficient LQs.

In Iowa, the Des Moines and Iowa City MSA's appear to be the hot spots for higher occupational LQs as well as for population and job growth. These MSA's have certain inherent advantages that allow them to maintain high job concentrations in the relatively well-paid Management, Business/Financial, Computer, Engineering, Science, Social Services, Legal, Education, and Healthcare jobs. Des Moines is the state capital as well as a large insurance and agricultural center, with a close proximity to Iowa State University in Ames. Likewise, Iowa City is home to the University of Iowa (with a large medical college) and is close to the Cedar Rapids MSA.



## OCCUPATIONAL CONCENTRATION

### Iowa Occupational Location Quotients for Metropolitan Statistical Areas (MSA's)

	Location Quotient *									
Management	1.05	1.18	1.28	0.87	0.88	1.06	0.85	0.90		
Business/Financial	1.14	1.32	1.94	0.93	0.78	1.23	0.83	0.65		
Computer/Mathematical	2.23	0.95	1.90	0.95	1.79	2.42	0.43	0.52		
Architecture/Engineering	1.95	1.14	0.96	0.82	1.59	1.16	0.72	0.85		
Life, Physical, and Social Sciences	0.64	0.56	1.11	0.25	4.13	1.19	0.35	0.41		
Community and Social Services	0.81	0.75	0.95	0.97	0.84	0.76	0.98	0.88		
Legal	1.08	0.76	2.04	0.60	0.58	1.15	0.96	0.84		
Education	0.94	0.89	0.72	0.89	1.28	0.79	0.82	1.08		
Arts, Design, Entertainment, and Sports	1.25	1.09	1.32	1.10	1.08	1.11	0.70	0.94		
Healthcare Practitioner	0.86	0.99	0.92	1.15	1.70	1.11	1.19	1.01		
Healthcare Support	0.70	0.81	0.68	0.95	0.99	0.82	0.91	0.93		
Protective Services	0.91	1.38	1.22	0.63	0.79	1.18	0.85	0.68		
Food Preparation	0.84	0.97	0.86	1.08	1.03	0.85	1.01	1.15		
Building/Grounds Cleaning and Maintenance	0.90	1.06	1.01	0.91	1.00	0.97	1.12	1.08		
Personal Care	0.69	1.11	0.85	0.94	0.97	1.09	0.87	0.95		
Sales	1.09	0.97	1.10	1.10	0.96	1.10	1.06	1.03		
Office/Administrative	1.08	1.00	1.24	0.96	1.06	1.17	0.96	1.00		
Farming, Fishing, and Forestry	0.23	0.60	0.45	0.56	0.38	0.28	0.37	0.46		
Construction	1.02	1.04	0.98	1.19	0.82	1.09	1.05	0.88		
Installation, Maintenance, and Repair	1.30	0.98	0.90	0.94	0.74	0.94	0.93	0.90		
Production	0.66	0.95	0.49	1.16	0.60	0.56	1.29	1.38		
Transportation	1.19	0.99	0.85	0.94	0.88	1.03	1.10	0.82		
	Metropolitan Statistical Areas									

Continued on the next page...

Source: Labor Market and Economic Research Bureau, Iowa Workforce Development

\* Location quotients adjust for absolute numbers so that large and small employment levels can be compared. In this case, the occupational composition of regions of Iowa is compared with the State as a whole. For purposes of this analysis, Iowa is considered self-sufficient in all occupations. Each occupation has been assigned a location quotient of 1.00 at the State level. If an occupation, within a metropolitan area or region, records a location quotient greater than 1.00, it indicates a strength, perhaps a surplus, or percent of employment in specific occupation greater than required to meet purely local needs. Analysts suggest disregarding location quotients falling between 0.75 and 1.25. They are more concerned with data below 0.75 and above 1.25. Extreme location quotients in either direction may require further analysis.

## OCCUPATIONAL CONCENTRATION

### Iowa Occupational Location Quotients for Occupational Employment Statistics (OES )Regions

	Location Quotient *							
Management	Northeast Iowa (Region 1)	0.85	Northwest Iowa (Region 2)	0.98	Southwest Iowa (Region 3)	0.99	Southeast Iowa (Region 4)	0.91
Business/Financial		0.64		0.73		0.64		0.69
Computer/Mathematical		0.33		0.31		0.65		0.58
Architecture/Engineering		0.66		0.59		0.94		1.13
Life, Physical, and Social Sciences		0.70		0.85		2.05		0.56
Community and Social Services		1.02		0.86		1.82		0.90
Legal		0.57		0.79		0.73		0.60
Education		1.17		1.06		1.27		1.07
Arts, Design, Entertainment, and Sports		0.95		0.83		0.88		0.78
Healthcare Practitioner		1.10		0.95		0.99		0.84
Healthcare Support		1.37		1.40		1.31		0.99
Protective Services		0.71		0.93		0.87		1.08
Food Preparation		1.04		1.02		1.14		0.97
Building/Grounds Cleaning and Maintenance		1.08		0.97		1.07		0.84
Personal Care		1.02		0.98		1.16		0.94
Sales		0.87		0.87		0.98		0.87
Office/Administrative		0.90		0.80		0.95		0.92
Farming, Fishing, and Forestry		1.89		1.77		1.55		1.53
Construction		1.26		0.84		1.05		0.95
Installation, Maintenance, and Repair		0.96		1.09		0.88		1.05
Production		1.30		1.43		0.87		1.56
Transportation		0.91		1.20		0.85		1.01
		OES Regions						

Source: Labor Market and Economic Research Bureau, Iowa Workforce Development

\* Location quotients adjust for absolute numbers so that large and small employment levels can be compared. In this case, the occupational composition of regions of Iowa is compared with the State as a whole. For purposes of this analysis, Iowa is considered self-sufficient in all occupations. Each occupation has been assigned a location quotient of 1.00 at the State level. If an occupation, within a metropolitan area or region, records a location quotient greater than 1.00, it indicates a strength, perhaps a surplus, or percent of employment in specific occupation greater than required to meet purely local needs. Analysts suggest disregarding location quotients falling between 0.75 and 1.25. They are more concerned with data below 0.75 and above 1.25. Extreme location quotients in either direction may require further analysis.

## **WHAT LABOR MARKET INFORMATION CAN DO FOR IOWANS?**

The Iowa Workforce Development (IWD) Policy and Information Division serves a variety of customer groups by providing a wide range of economic and demographic information. If you found *Iowa Workforce Today and Tomorrow* informative and useful, the following information sources may be of value.

### **Economic Developers**

Employment, Industry, and Occupational Trends  
Iowa Industry and Occupational Projections  
State and Local Area Data and Analysis  
Commuting Patterns  
Laborshed Studies

### **Employers**

Affirmative Action Data  
Wage Data by Industry and Occupation  
Current and Future Employment Trends  
Current Local Labor Market Conditions  
Industry Trends and Analysis

### **Individuals**

Career Information  
Occupational and Industry Outlooks  
Occupational Wage Data

### **Educators and Trainers**

Occupational Wage Data  
Occupational Trends  
Demographics on Population and Workforce

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# IOWA

## WORKFORCE

TODAY & TOMORROW

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