

# Targeting Industrial Growth in Southwest Iowa

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# Targeting Industrial Growth Opportunities in Southwest Iowa

## Introduction: Industrial Targeting Analytic Approach

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### Objective

This is an applied research and technical assistance project for the Southwest Iowa region comprising the counties of Adair, Adams, Cass, Fremont, Harrison, Mills, Montgomery, Page, Pottawattamie, Shelby, and Taylor. The objective of the research is to assist the region in identifying its industrial strengths, clarifying its potential for job growth, and to help educate economic development officials about their economic and social foundations. An additional objective of this research is to provide detailed economic, demographic, and occupational characteristics for the participating counties to assist in their economic development efforts and to facilitate general community economic understanding.

When we do this type of research for a cohesive economic region we usually employ what we call an “industrial targeting” approach. This approach involves isolating specific industries in which the region appears to have a clear competitive advantage relative to other regions in the state and the nation. This kind of research, when taken to its procedural end, is supplemented by additional data that help us to understand characteristics of the region’s industrial structure to include firm size, average earnings, the amount of sales that are generated in different sectors, and the overall worth of the firms to the regional economy. In our two previous industrial targeting research projects we have compiled multiple indicators to assist the participants in understanding their regional industrial strengths and their characteristics.

This group of counties, however, has declared a preference for more detailed information at the individual county level instead of highly detailed findings for the region. That choice involves a trade-off that limits the amount of regional level research that we will produce on this project.

## **Regional Economic Development Research and Programming Requirements**

The overall expected outcome of all industrial assessment processes is to bring intelligence and information to bear on area economic development activities so that scarce public and private resources are maximized towards promoting economic growth and regional stability. While we help provide the foundation research products to assist the region, the overall economic development process should be driven by participant consensus and action in three major areas:

1. The region is responsible for developing its economic development goals and identifying the specific objectives that it intends to accomplish in support of those goals.
2. The region, ultimately, is responsible for selecting the industries for targeting and recruitment that best fit with its goals and with the region's collective expectations for industrial growth. As analysts we can provide lists of desirable industries and criteria for evaluating them, but outside analysts do not select the region's goals, its industrial priorities, or the methods deployed to recruit firms.
3. The region develops procedures, programs, and activities designed to recruit industries, retain or expand existing industries, provide or otherwise facilitate technical assistance to improve industrial productivity, and, not to be forgotten, promote programs to assist small business development and entrepreneurial activity in keeping with its industrial recruitment and development goals. Economic development is a comprehensive process that is conducted in light of community and regional capacities and the collective needs of the citizenry.

In this entire process it is important for the region and the participating analysts to pay particular attention to the region's strengths, whether they are industrial, labor based, or locational, along with the region's capacity to supply public goods. When an industrial targeting approach is employed, it provides a research and procedural foundation for focusing both private and public resources in support of community and regional growth.

By using a goal-driven process for identifying industrial prospects, the region should be able to

- better identify the region's industrial needs and its capacity for growth,
- more efficiently utilize existing resources, and potentially,
- limit its reliance on or otherwise focus growth inducements, like tax abatements or other development incentives

### **Considerations in Defining the Study Region**

This region is very large, twice the number of counties that we studied before as a region. In addition, the study area has sub-regions within it. There is an eastern and a western orientation. More, there is a metropolitan and non-metropolitan influenced dimension that cannot be ignored. The city of Council Bluffs is a large presence, and within this study area, its economic size is statistically overwhelming.

To the extent practical, we will deal with the Council Bluffs issue by splitting Pottawattamie County in two when we can: one part will contain the Council Bluffs metropolitan economy (or west Pottawattamie); the other will contain the remainder of the county (or east Pottawattamie). In so doing, we actually increase our region of analysis to 12 discernible sectors or sub-economies for much of the analysis. When the analysis does not allow us to split Pottawattamie County in two, we will present summary tables both with and without the county.

This research will not produce sets of targeted industries at the regional level or, for that matter, sets of industrial targets for the participating counties. We instead will isolate the region's and each county's industrial strengths and potential industrial development opportunities.

There are two major sections in this study: Part A assesses the region's economic, demographic, and human resources capacity. Part B is a detailed industrial account analysis and summary of the participant counties' overall economic strengths, weaknesses, and development opportunities.

# Targeting Industrial Growth Opportunities in Southwest Iowa

## Part A: An Assessment of Regional Capacity

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### 1. Taking Stock of the Region: A Demographic and Economic Overview

Demographic analysis reveals many important characteristics of overall regional performance. Population change over time lets us understand the magnitude and rate of gain or loss. Changes in the composition of the population let us discern workforce capacity, social services needs, and changes in demand for education infrastructure. Determinants of population change, including migration patterns, also provide insights into both the causes and consequences of regional change.

Measures demonstrating recent economic performance in the region include job creation and relative shares of state jobs over time. Other economic indicators such as the unemployment rate can indicate levels of economic stress. The sources and levels of earnings indicate how various kinds of economic activity in the region are being rewarded.

#### Key Findings

- Southwest Iowa lost 0.2 percent of its population between 2000 and 2005. Population in Iowa grew 1.4 percent during that time.
- Regional rates of population loss among younger age groups exceed the statewide average rate of loss.
- Population loss from net out-migration slightly exceeded population gains from natural change (births minus deaths) in the region as a whole.
- The share of all jobs in Iowa that are located in located in the region's 11 counties was 5.6 percent in 2005. This share has been slowly eroding over time.
- Southwest Iowa has experienced some erosion in average wage and salary earnings per job compared to the United States, as has the State of Iowa.

## **Population Change**

The region in total has lagged the rest of the state in population growth over the past 15 years. During the 1990 to 2000 period, the area grew by 2.9 percent – just over half the rate the state grew. In the 2000 to 2005 period, the region in total has not grown contrasted with 1.4 percent growth statewide. If Pottawattamie County is removed from the assessment, the remaining 10 counties just barely grew during the previous decade, and have posted a 2.1 percent decline since 2000. The influences of proximity to the Omaha-Council Bluffs metropolitan area are quite evident for Mills and Harrison counties. All other counties are posting strong losses for the 2000 to 2005 period, with the highest rates recorded by Adams and Taylor at 4.9 percent.

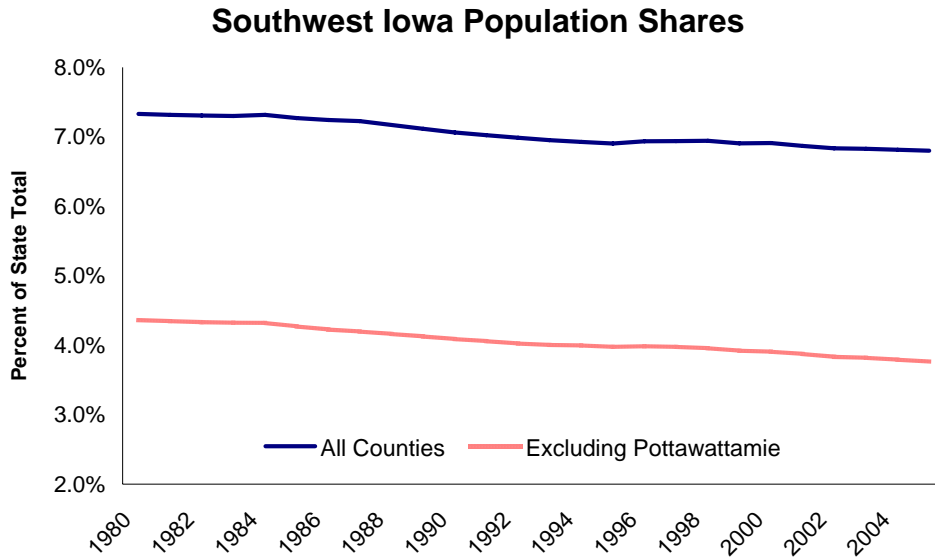
**Table 1**

**Population Changes for the Southwest Iowa Region**

	Census 1990	Census 2000	2005 Estimate	1990 to 2000 Change	Percent	2000 to 2005 Change	Percent
State of Iowa	2,776,831	2,926,324	2,966,334	149,493	5.4%	40,010	1.4%
Adair	8,409	8,243	7,859	(166)	-2.0%	-384	-4.7%
Adams	4,866	4,482	4,264	(384)	-7.9%	-218	-4.9%
Cass	15,128	14,684	14,219	(444)	-2.9%	-465	-3.2%
Fremont	8,226	8,010	7,759	(216)	-2.6%	-251	-3.1%
Harrison	14,730	15,666	15,884	936	6.4%	218	1.4%
Mills	13,202	14,547	15,284	1,345	10.2%	737	5.1%
Montgomery	12,076	11,771	11,313	(305)	-2.5%	-458	-3.9%
Page	16,870	16,976	16,253	106	0.6%	-723	-4.3%
Pottawattamie	82,628	87,704	89,738	5,076	6.1%	2,034	2.3%
Shelby	13,230	13,173	12,634	(57)	-0.4%	-539	-4.1%
Taylor	7,114	6,958	6,614	(156)	-2.2%	-344	-4.9%
Regional Total	196,479	202,214	201,821	5,735	2.9%	(393)	-0.2%
Region Excluding Pottawattamie	113,851	114,510	112,083	659	0.6%	(2,427)	-2.1%

The region's share of the state population is eroding (Figure 1). In 1980, the region held 7.3 percent of the state's people (4.3 percent excluding Pottawattamie). In 2005, the region's share was just under 6.8 percent (3.3 percent excluding Pottawattamie).

Figure 1

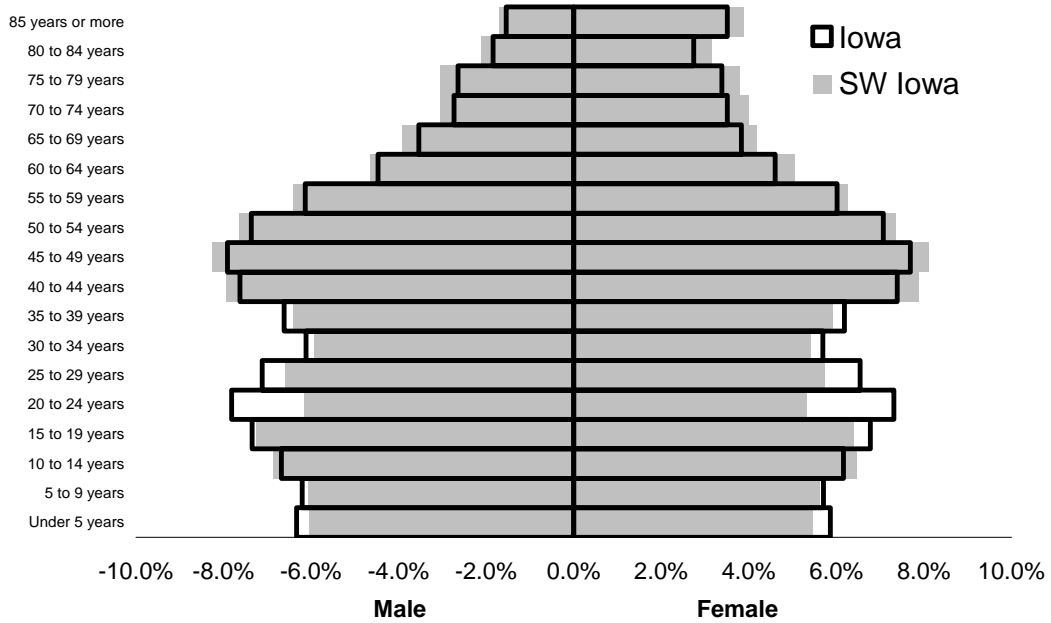


### Age Distribution

Figure 2 displays the distribution of the region's population by age group. It compares males and females in the region to the state of Iowa distribution. This comparison lets us understand where the region has age-based demographic strengths or gaps in its population composition. It is evident that the region has proportionately more elderly men and women than the state of Iowa, and it has proportionately fewer men and women of prime working ages, 20 to 34 years, with the greatest gap occurring in the 20 to 24 year age group. The region also posts proportionately fewer young children than the state average.

Figure 2

Iowa and SW Iowa Population Pyramid, 2005



This later statistic, the smaller proportions of very young people, is explored in Table 2. Here we see the compounded average annual rate of change in school enrollments in the several counties, the region, and the state. Even though there has been growth in statewide population in the past five years, we see that the state realized a -.3 percent annual average decline in public school enrollment, though the state did gain students in just the last year after 5 years of decline. The region's combined rate is five times the state erosion at -1.5 percent annually. Removing Pottawattamie County raised that loss rate to -1.6 percent annually. All have posted strong declines through 2004-05, but Cass, Pottawattamie, Page, and Harrison did report gains in 2005-06.



**Table 2**  
**Public School Enrollment**

Area	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	Average Annual Percentage Change,
State of Iowa	492,022	485,932	482,210	481,226	478,319	483,482	-0.3%
Adair County	1,193	1,186	1,172	1,162	1,123	1,003	-3.4%
Adams County	704	697	686	691	613	601	-3.1%
Cass County	2,919	2,807	2,782	2,668	2,490	2,655	-1.9%
Fremont County	1,613	1,523	1,545	1,485	1,493	1,472	-1.8%
Harrison County	3,334	3,279	3,227	3,200	3,145	3,173	-1.0%
Mills County	2,768	2,724	2,691	2,711	2,717	2,680	-0.6%
Montgomery County	2,075	2,003	2,012	1,945	2,107	1,960	-1.1%
Page County	2,939	2,852	2,749	2,768	2,736	2,962	0.2%
Pottawattamie County	17,536	17,162	15,845	16,585	16,092	16,357	-1.4%
Shelby County	2,474	2,369	2,395	2,384	2,328	1,983	-4.3%
Taylor County	1,225	1,168	1,178	1,149	1,041	1,045	-3.1%
Regional Total	37,587	36,584	35,110	35,586	34,762	34,888	-1.5%
Region Excluding Pottawattamie	20,051	19,422	19,265	19,001	18,670	18,531	-1.6%

Table 3 provides another snapshot of recent changes in the area's population composition. While the state has posted a strong, -8.1 percent, decline in the number of youths under age 20, the region exceeded that loss by almost two percentage points. Where the state gained nearly 5.7 percent in the number of young adults ages 20 to 34, the region's gains were somewhat lower at 5.1 percent, and the region's decline in persons ages 35 to 44 also exceeded the state rate.

**Table 3**  
**Changes in SW Iowa Populations by Selected  
Age Groups, 2000 to 2005**

	SW Iowa	State
Under 20	-10.2%	-8.1%
Ages 20 to 34	5.1%	5.7%
Ages 35 to 44	-8.0%	-6.8%
Ages 45 to 64	15.3%	16.0%
Ages 65 and older	-2.2%	-0.2%
All Ages	-0.3%	1.3%

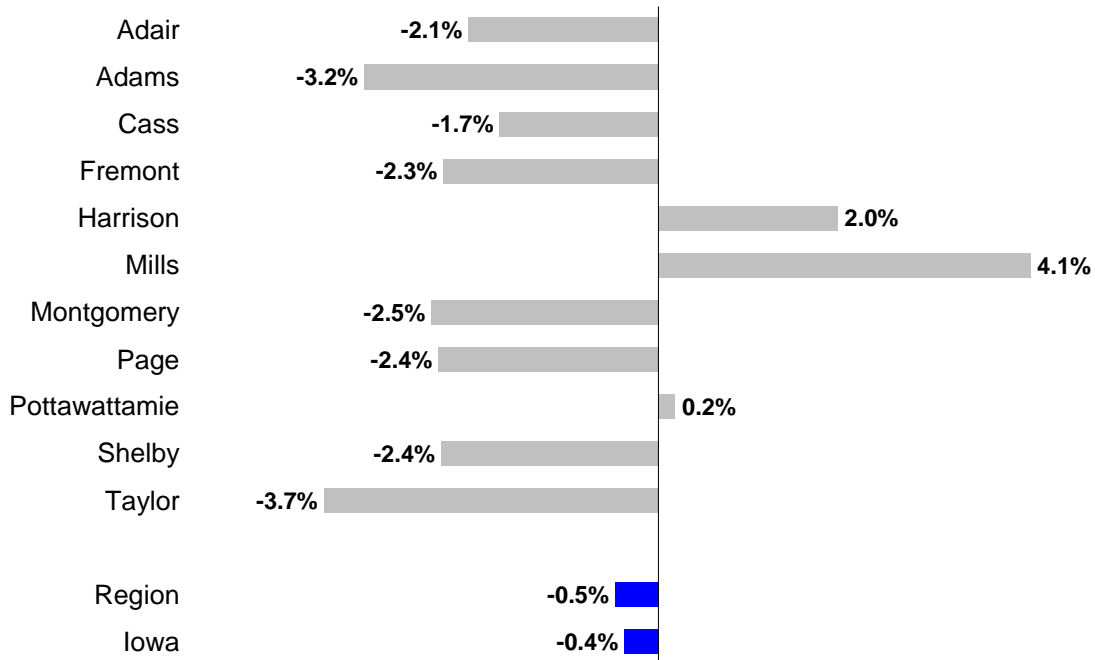
**Recent Migration and Natural Population Change**

Rural areas often have high outmigration rates. Among young adults, that is the case for this region, as evidenced in Figure 2 and Table 3 above. Figure 3 demonstrates that as a whole, the region actually posts an overall rate of outmigration very similar to the state of Iowa. The performance

among individual counties is varied. Net gains from migration in Harrison, Mills, and Pottawattamie contrast sharply with net losses in the remainder of the region. Taylor County's rate of net outmigration was lowest at 3.7 percent. Mills posted the strongest rate of net immigration at 4.1 percent.

**Figure 3**

**Rates of Net Migration, 2000 to 2005**



Migration represents the net change in an area's population over time after we factor in all resident deaths and births, also known as natural population change. Table 4 summarizes both of these key components of population change for the region for the 2000 to 2005 period. Natural change constitutes the number of births minus losses due to resident deaths. For the whole region, it gained 854 more births than it posted deaths; hence, the entire region has a positive natural growth rate. Excluding Pottawattamie County, however, gives us a natural decline of -1,029; the remaining region has a negative natural growth rate.

**Table 4**

**Components of Population Change in SW Iowa, 2000 to 2005**

	<b>Natural Change</b>	<b>Net Migration</b>	<b>Total Population Change</b>
<b>Region</b>	854	-960	-393
<b>Region Excluding Pott. Co.</b>	-1,029	-1,124	-2,328

The next component of change is all domestic and international migration. While not displayed, all of our counties have net positive international in-migration. Only Harrison and Mills, however, enjoy net domestic in-migration – migration from those already living in the U.S. When we sum all net international and domestic migration, we find the region as a whole posted a -960 in all migration, and excluding Pottawattamie County, the region migration account was -1,124. The sum of these two elements tells us the major components to population change (there is some residual change that is unaccounted). The overall region’s outmigration is partially offset by natural population gains. Without the metropolitan county, however, both natural decline and net outmigration are contributing strongly to aggregate declines in the remaining 10 counties.

**Regional Employment**

The standard way in which we measure economic change from year to year is to, literally, count jobs. This practice has its strengths and its weaknesses for a variety of reasons. As economies expand, as stores and factories are able to produce and sell their products with more confidence, there is more demand for labor and a growth in jobs. If demand is strong, over some period of time, wages will be boosted as well, further stimulating more area jobs because of worker spending. It all works in reverse. When the economy weakens, workers are laid off and aggregate household spending declines fueling more job losses.

Just counting jobs, however, often obscures important changes occurring in an economy. Not all jobs are equal. Some are full-time, benefited, and full-year jobs. Other jobs are part-time, part-year, and have no benefits. When analyzing job changes in an area, it is important to look at the kinds of jobs that are changing. There is, therefore, a qualitative aspect to job change

that should be noted. We deal more directly with the industrial composition of the regional economy in later chapters. We also look at the occupational structure of the region in the next section to further provide an objective assessment of the region's job strengths.

During the last decade, the state and the Southwest Iowa region posted persistent job gains. Table 5 illustrates recent job change amounts and rates for the region and its component counties. Between 1990 and 2000, jobs in the U.S. grew by 1.8 percent annually and the state averaged 1.6 percent growth per year. During this period of overall general economic expansion in Iowa, the region grew by 1.4 percent per year – slightly slower than the state overall. The highest rate of annual growth was in Fremont County at 2.5 percent, and the lowest in Adams at just .2 percent.

From 2000 on, however, the overall rates of state and local growth changed. The state of Iowa posted essentially zero growth through 2004. The region suffered a -.4 percent annual decline – excluding Pottawattamie County, the region posted a negative annual growth rate of -1.0 percent. Taylor and Fremont had the highest losses at -2.1 percent, and only Mills and Pottawattamie had positive growth averages for the current decade.

**Table 5****Total Jobs, Selected Years**

	Total Jobs			
	1980	1990	2000	2004
Iowa	1,541,044	1,645,944	1,934,077	1,935,029
Adair	4,426	4,484	5,678	5,607
Adams	2,846	2,855	2,922	2,741
Cass	9,348	8,578	9,631	9,163
Fremont	4,689	4,275	5,491	5,047
Harrison	6,327	6,122	7,012	6,881
Mills	6,190	5,755	6,133	6,151
Montgomery	7,247	7,029	7,300	7,181
Page	10,107	9,339	9,792	9,173
Pottawattamie	33,444	38,628	46,863	47,801
Shelby	7,226	7,092	7,522	7,238
Taylor	3,639	3,146	3,483	3,199
Region	95,489	97,303	111,827	110,182
Region Excluding Pottawattamie	62,045	58,675	64,964	62,381

	Average Annual Percentage Changes		
	1980 to 1990	1990 to 2000	2000 to 2004
Iowa	0.7%	1.6%	0.0%
Adair	0.1%	2.4%	-0.3%
Adams	0.0%	0.2%	-1.6%
Cass	-0.9%	1.2%	-1.2%
Fremont	-0.9%	2.5%	-2.1%
Harrison	-0.3%	1.4%	-0.5%
Mills	-0.7%	0.6%	0.1%
Montgomery	-0.3%	0.4%	-0.4%
Page	-0.8%	0.5%	-1.6%
Pottawattamie	1.5%	2.0%	0.5%
Shelby	-0.2%	0.6%	-1.0%
Taylor	-1.4%	1.0%	-2.1%
Region	0.2%	1.4%	-0.4%
Region Excluding Pottawattamie	-0.6%	1.0%	-1.0%

Figure 4 clearly gives us the pattern of change in total jobs realized by the region measured as a share of the state total. This pattern is also compared to the region's share of population. In 1980, the region had 7.3 percent of the state's population and 6.2 percent of all jobs. It has more population shares than job shares because it has a higher fraction of elderly. By 2005 those shares had declined to 6.6 percent of population and 5.6 percent of jobs. The region's shares of jobs rose from 1996 to 1997, but have declined since.

Figure 4

### Regional Shares of Jobs and People, 1980 to 2005

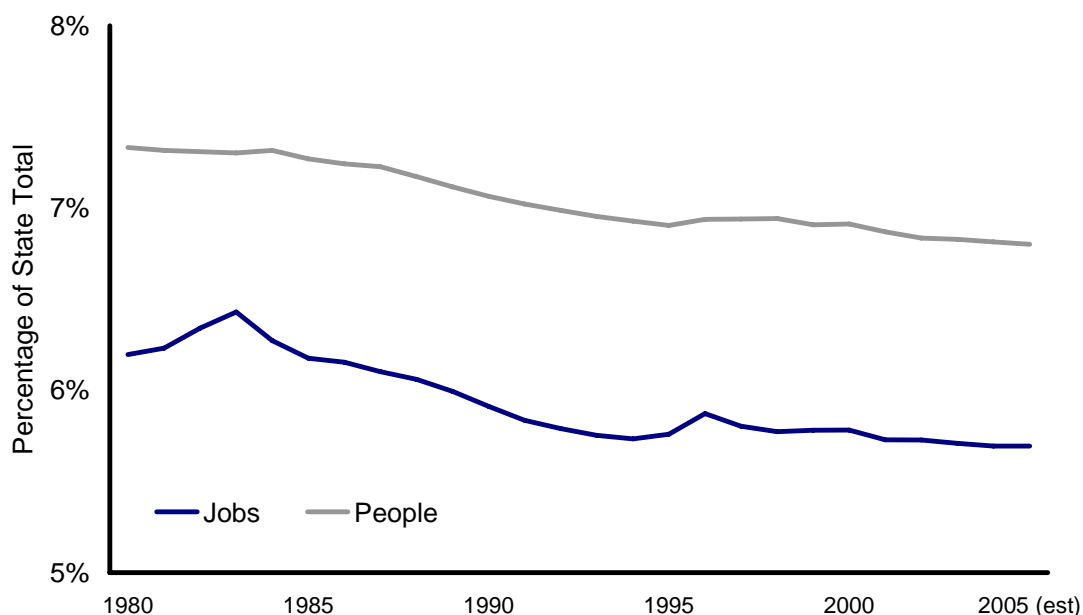
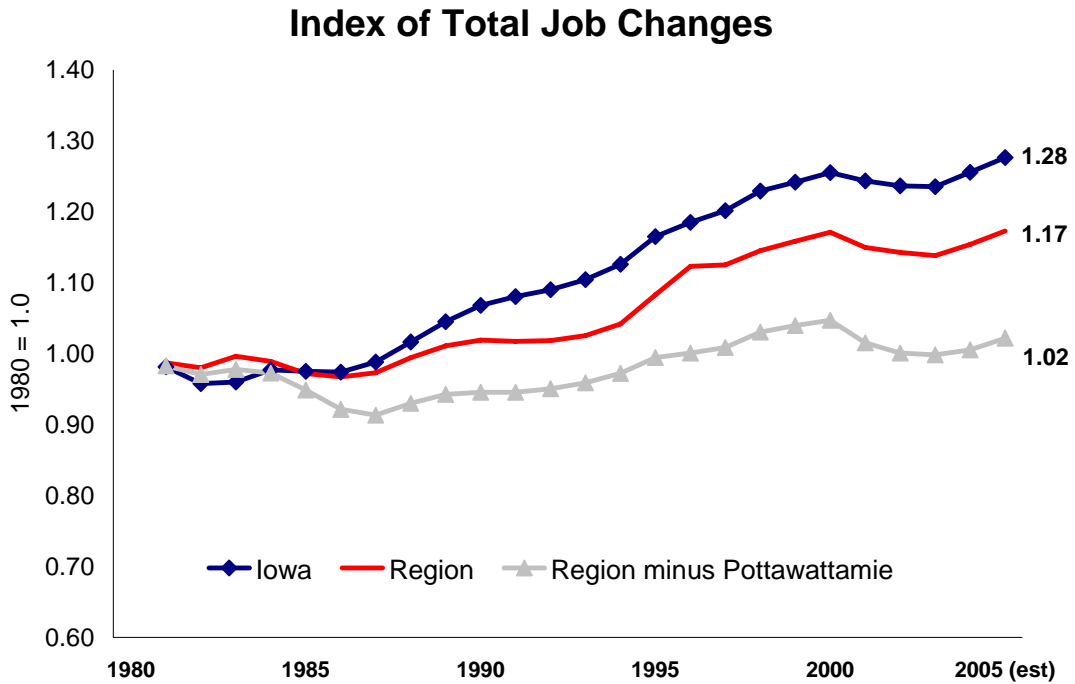


Figure 5 tracks the total rate of job growth for Iowa, the region, and the region excluding Pottawattamie County over the past two decades. In this graph, 1980 values equal 1 (or 100%), and the plots track patterns of change since that origin. We can see that the region followed the state pattern of stagnation in the early 1980s, but that it did post annual increases between 1987 and 2000. The whole regional economy grew through 2000 before turning down briefly during the recession – levels posted in 2005 for the region are just at the level realized in 2000.

When the influences of Pottawattamie County are removed, the region's performance suffers. The remaining region's growth is significantly slower than the state and the overall region. By 2005, the state's jobs had increased 28 percent over the 1980 value, the region as a whole by 17 percent, but the remaining region without Pottawattamie County had just 2 percent more jobs than in 1980.

Figure 5



### Unemployment

A standard measure of regional or area stress is the unemployment rate. A region's labor force is composed of those persons who are employed and of those that are unemployed but are looking for work. People enter in and exit from the labor force depending on overall economic conditions. The labor force rate is simply the percentage of labor force members who are actively looking for work. The rate is a useful measure because it compares the relative need for employment in an area as compared to other places, like the state.

Table 6 lists labor statistics as gathered by the U.S. Department of Labor for 2005. Here we see that the region's unemployment rate was just 2/10<sup>ths</sup> of a percentage point above the state average for all of last year. One would not conclude that, on a weighted basis, this region was suffering significant unemployment stress.

The unemployment rate was highest in Adams County at 5.4 percent, and lowest in Shelby and Taylor County at 4.1 percent. Removing the weight of

Pottawattamie County reduces the regional unemployment rate to 4.5 percent, just under the overall state average.

**Table 6**  
**Regional Unemployment in 2005**

	Employed	Unemployed	Unemployment Rate
<b>State of Iowa</b>	1,584,100	75,700	4.6%
Adair	4,300	190	4.2%
Adams	1,930	110	5.4%
Cass	7,400	380	4.9%
Fremont	3,880	170	4.2%
Harrison	7,880	410	4.9%
Mills	7,940	360	4.3%
Montgomery	5,620	280	4.7%
Page	7,920	340	4.1%
Pottawattamie	47,340	2,620	5.2%
Shelby	6,870	290	4.1%
Taylor	3,300	140	4.1%
Regional Total	104,380	5,290	4.8%
Region Excluding Pottawattamie	57,040	2,670	4.5%

### **Sources of Income and Worker Earnings**

There derivation of incomes in an area also reveals important clues about an area economy. People receive income from working in the form of wages and salaries or normal returns to business ownership. People receive investment incomes from savings, property, and investments. Last people receive income from transfer payments from the government that take the forms of social security, medical assistance, and other general welfare payments to households and to children.

How incomes are derived in a region tells us how dependent area households are on the market versus the government for their sustenance. Areas with higher levels of elderly will have higher transfers as a component of income. Areas with more job opportunities and industrial diversification will have comparatively more earnings from work. Investment incomes also accumulate to the elderly as pensions or to active investors.



Figure 6 allows us to compare the derivation of income for our region as compared to Iowa. In Iowa the fraction of income from earnings was 68.3 percent. The Southwest Iowa region earnings percentage of income was smaller at 66.2 percent, and without Pottawattamie County, the regional average was 63.6 percent.

Transfers include welfare payments, social security, federal payments for health care and other income or food security programs. The region is much more dependent on transfers than the state at 18.4 percent compared to 14.6 percent, and that dependence increases when Pottawattamie County is removed. The fraction of income from investments in the remaining region is 16.6 percent, about the same as the state. With Pottawattamie, the investment fraction declines to 15.4 percent of income.

**Figure 6**

**Derivation of Personal Income in 2004**

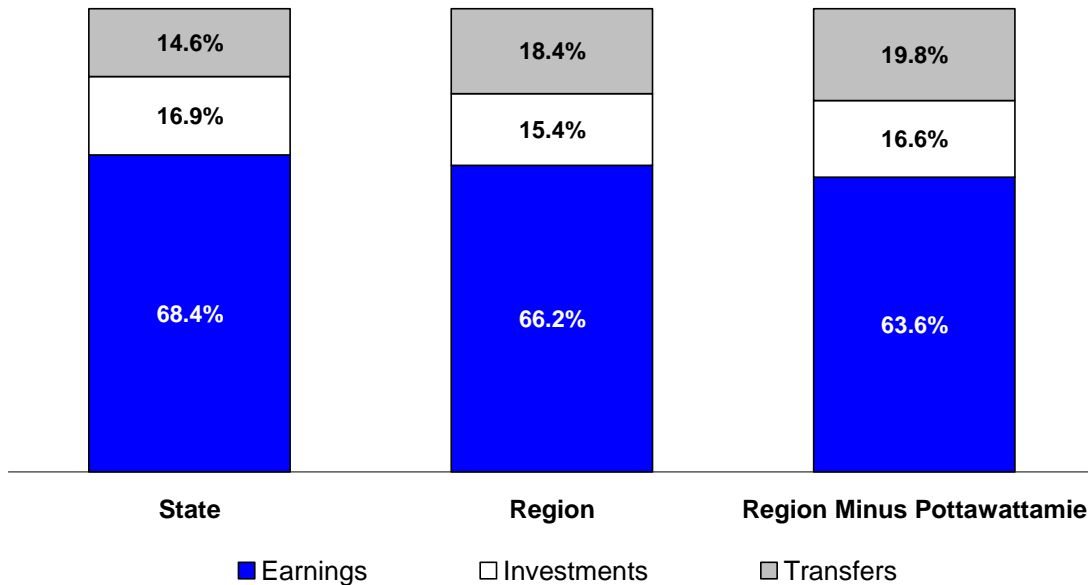
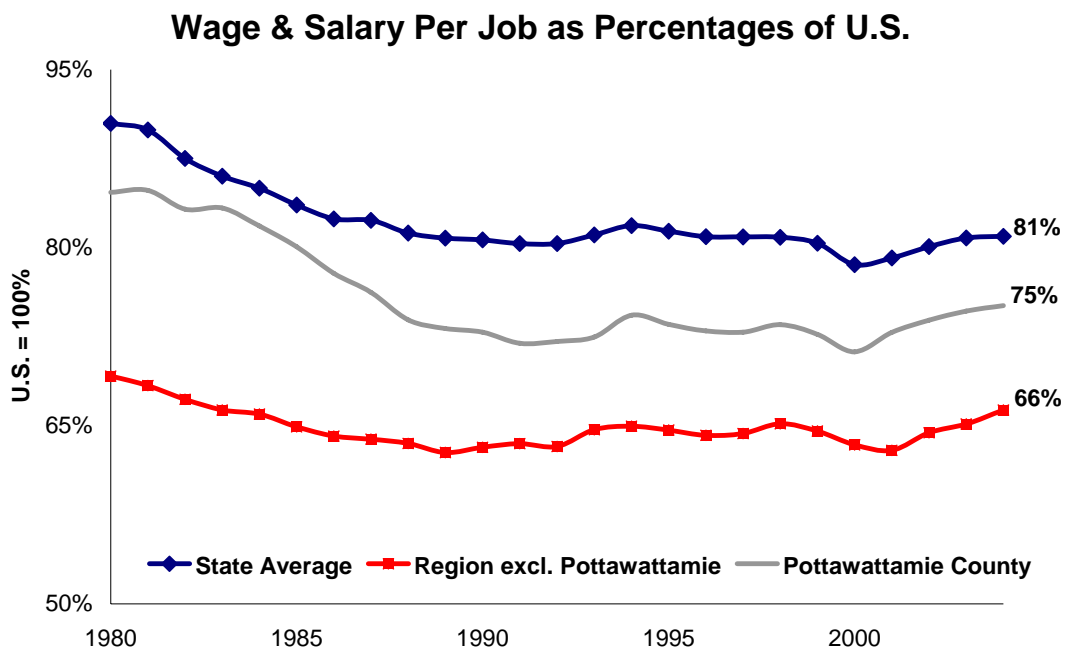


Figure 7 allows us to see what has happened to the average earnings of workers in Iowa and in the region when compared against the U.S. averages. In 1980, the average Iowa worker earned at about 90.5 percent of the U.S. average wage, and the average Southwest Iowa worker earned 85 percent of the U.S. average. Those comparative positions eroded persistently over the next two decades to the point in 2000 where Iowa workers earned per job

78.5 percent of the U.S. average and Southwest Iowa workers earned 71.2 percent per job. Excluding Pottawattamie County, the remainder of the region's average wage fell to around 62 percent of the national average by 2000. This erosion in the earnings value of labor in the region is stark. It should be noted, though, that in recent years the erosion appears to have abated slightly for the state and for the region: the state is at 81 percent, the region at 75 percent, and the region without Pottawattamie County has climbed to 66 percent of the U.S. wage per job.

**Figure 7**



Last, a few words about small businesses and entrepreneurship. In recent years the state of Iowa frequently posted the lowest rates of new firm startups in the nation. It also has frequently posted the lowest rate of firm failures in the nation. The consensus among analysts is that the state, its people and investors, tend to be highly conservative and careful about starting new businesses.

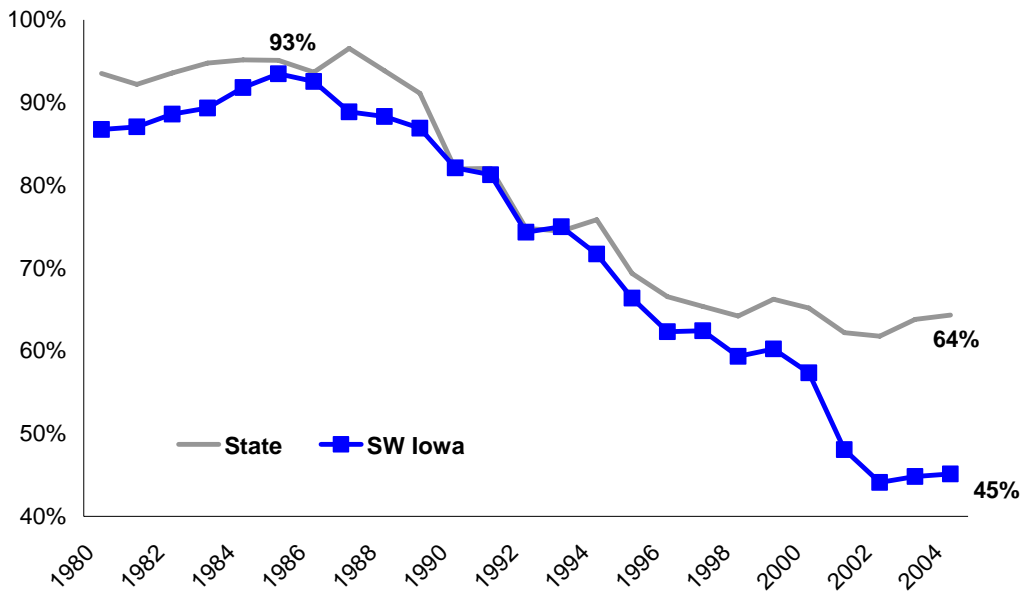
The overall returns to small business ownership can be measured in a number of ways, but the Bureau of Economic Analysis does measure both the incidence of nonfarm proprietors (either sole proprietors or simple

partnerships) and the annual incomes that they generate. Those values are displayed in Figure 8 below. The findings are dramatic.

In 1985 in both the state of Iowa and in the Southwest Iowa region, the average nonfarm proprietor's income was just under 93 percent of the U.S. average. After that, however, the returns to nonfarm proprietors relative to the U.S. plummeted. By 2004 the state average was just 64 percent of the U.S. average, and the percentage in the southwest region fell to 45 percent.

**Figure 8**

**Earnings Per Nonfarm Proprietor as a Percent of U.S. Average**



## 2. Occupational Profile of the Southwest Iowa Region

Evidence of a region's industrial structure and heritage may be found in the particular mix of occupations, knowledge, and skills that are present within its labor force. Assessment of the regional labor force characteristics provides some clues to how the region is positioned to capitalize on growth opportunities in the larger national economy. One factor important to a region's growth potential is its ability to provide an adequate supply of workers with general educational attainment levels required by employers. Another important quality of the local labor force is the presence of individuals who are willing to assume risk as entrepreneurs. Regional growth prospects are also influenced by how well the collective knowledge and skill sets of workers align with growing segments of the national economy.

This section examines several characteristics of the regional workforce, highlighting particular areas of strength or possible vulnerability relative to the nation's overall workforce.

### Key Findings

- The Southwest Iowa workforce is, on average, slightly older than the national workforce. This is especially pronounced among workers in management, business, and financial occupations.
- The educational attainment of the region's workforce is slightly lower than the national average. The region's agricultural sector workers are the exception, as they have relatively high educational attainment compared to national averages.
- Compared to the state, the region shows a relative deficit of college-educated workers under the age of 40.
- Rates of self-employment in nonfarm sectors are lower in Southwest Iowa than in similar regions in the United States.
- The region's occupational mix shows specialization in agriculture, transportation, and construction and other trades.
- The region's industries collectively demand high levels of knowledge in mechanical, chemistry, biology, and food-production areas. They demand skills in operation and control, equipment maintenance, financial and material resource management, operation monitoring, science, and repairing.
- The region does not demonstrate strength in some of the more rapidly growing occupations in the national economy.

## **Age Distribution**

A region's workforce must be continuously replenished by younger workers as older workers retire. In Southwest Iowa, about 22 percent of workers were age 55 or older according to the 2000 Census. This was higher than the average of 16.5 percent for the nation's workforce. Now, seven years later, the youngest of these workers are 3 years from their expected retirement age, and many of the older workers may have already retired. The region's demographic profile suggests that replacing these workers will present a challenge.

The percentage of workers nearing retirement age varies by kind of occupation, with some occupations demonstrating a relatively older age profile than others. Figure 9 illustrates by detailed occupation the percentage of workers age 55 or older in the Southwest Iowa region and the United States (*this data set, PUMS Region 01200, includes Council Bluffs, but excludes Adair, Adams and Taylor Counties*). In general, the following may be observed.

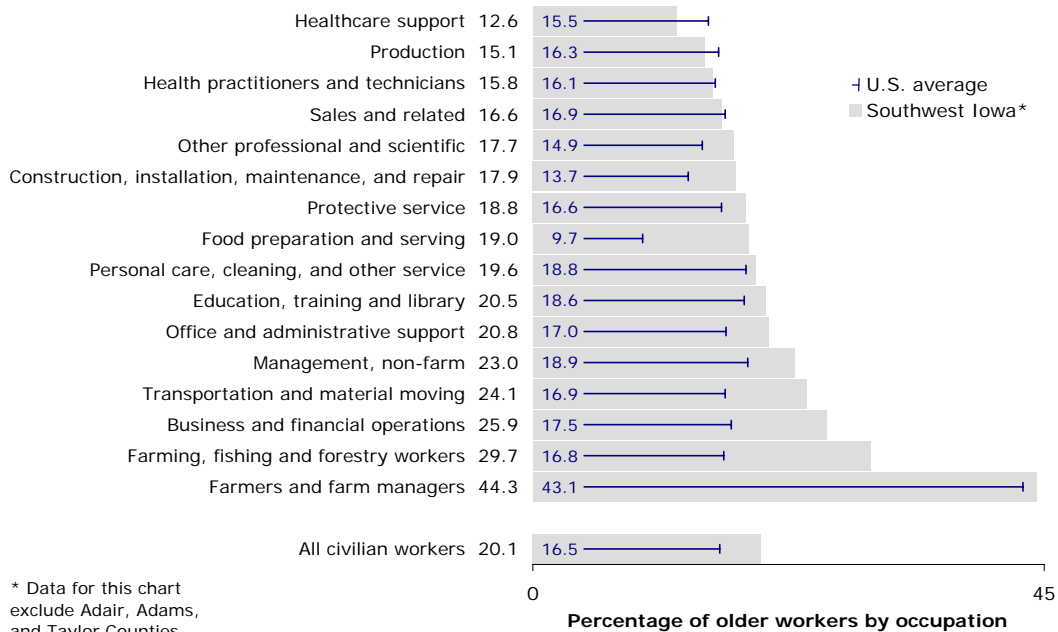
- Occupations with typically lower educational requirements or high physical demands generally employ low fractions of older workers. For example, in the United States, fewer than 10 percent of workers in food preparation and serving (such as restaurant workers) and 14 percent of construction and similar workers were over the age of 55 in 2000.
- Workers in several kinds of professional and scientific occupations such as architects and engineers, natural and social scientists, and artists also demonstrated relatively lower fractions of workers age 55 or older in 2000, possibly because workers in these occupations tend to move into management positions as their careers progress.
- Occupations that require higher investment in education, more experience, or both tend, in contrast, to be dominated by older workers. Examples include managers and educators, with the number of workers age 55 and older representing 18.9 percent and 18.6 percent of total employment in these occupations nationally.
- Other occupations attracting a slightly older workforce nationally included personal care and other services, such as barbers, child care workers, and housekeeping and janitorial workers.

Several occupations in Southwest Iowa have relatively high fractions of older workers compared to the national average for those same occupations. For example, 23 percent of workers in management occupations in the region were age 55 or older in 2000, compared to 19 percent nationally. Among all farmers and farm managers in the region, the percentage over 55 was similar to the nation. Other occupational groups with relatively older workers, on average, included farm workers, business occupations, transportation and materials handling, food service workers, and construction workers.

This comparison may help the region to identify occupations that will likely experience high levels of worker turnover within the next decade.

**Figure 9**

**Percentage of Workers Age 55 or Older by Kind of Occupation, 2000**



**Educational Attainment**

Another important aspect of a region’s labor force is the educational composition of its adult population. In Table 7 we see that the region has proportionately more residents with just a high school diploma or less (56.4 percent) than the state average (50.0 percent). At the upper end of the

education range, 14.7 percent of the residents ages 25 or older had a college bachelors degree or advanced degree compared to 21.2 percent for the whole state. Stated differently, a person in the SW Iowa region is 30 percent less likely to have at least a four-year degree than the average Iowan. Taylor County had the highest percentage of persons with a high school diploma or less at 63.3 percent, and Page County and Cass had the highest incidence of bachelor's degree or higher adults at 16.6 percent. The lowest percent of four-year college graduates was found in both Adams and Taylor Counties at 12 percent. Controlling for Pottawattamie County has negligible effect on the regional outcomes in this instance.

**Table 7**

**Educational Attainment In Southwest Iowa**

	<b>No High School Diploma</b>	<b>Percent</b>	<b>High School Degree Only</b>	<b>Percent</b>	<b>Some College, No Degree</b>	<b>Percent</b>	<b>Associates Degree</b>	<b>Percent</b>	<b>Bachelor's Degree or Higher</b>	<b>Percent</b>
<b>State of Iowa</b>	263,436	13.9%	683,942	36.1%	405,748	21.4%	140,640	7.4%	402,090	21.2%
Adair	695	12.2%	2,754	48.4%	1,145	20.1%	463	8.1%	638	11.2%
Adams	484	15.5%	1,297	41.4%	741	23.7%	233	7.4%	376	12.0%
Cass	1,454	14.1%	4,159	40.4%	2,311	22.4%	659	6.4%	1,713	16.6%
Fremont	831	15.0%	2,356	42.4%	1,239	22.3%	355	6.4%	776	14.0%
Harrison	1,572	15.0%	4,628	44.1%	2,273	21.7%	686	6.5%	1,328	12.7%
Mills	1,624	16.8%	3,541	36.6%	2,302	23.8%	621	6.4%	1,574	16.3%
Montgomery	1,476	18.2%	3,304	40.7%	1,701	20.9%	596	7.3%	1,047	12.9%
Page	1,695	14.5%	4,577	39.3%	2,728	23.4%	724	6.2%	1,931	16.6%
Pottawattamie	9,101	16.0%	22,431	39.3%	12,944	22.7%	3,966	7.0%	8,571	15.0%
Shelby	1,201	13.4%	4,113	45.9%	1,692	18.9%	577	6.4%	1,374	15.3%
Taylor	796	16.7%	2,221	46.6%	896	18.8%	282	5.9%	571	12.0%
<b>Regional Total</b>	<b>20,929</b>	<b>15.5%</b>	<b>55,381</b>	<b>40.9%</b>	<b>29,972</b>	<b>22.1%</b>	<b>9,162</b>	<b>6.8%</b>	<b>19,899</b>	<b>14.7%</b>
<b>Region Excluding Pottawattamie</b>	<b>11,828</b>	<b>15.1%</b>	<b>32,950</b>	<b>42.1%</b>	<b>17,028</b>	<b>21.7%</b>	<b>5,196</b>	<b>6.6%</b>	<b>11,328</b>	<b>14.5%</b>

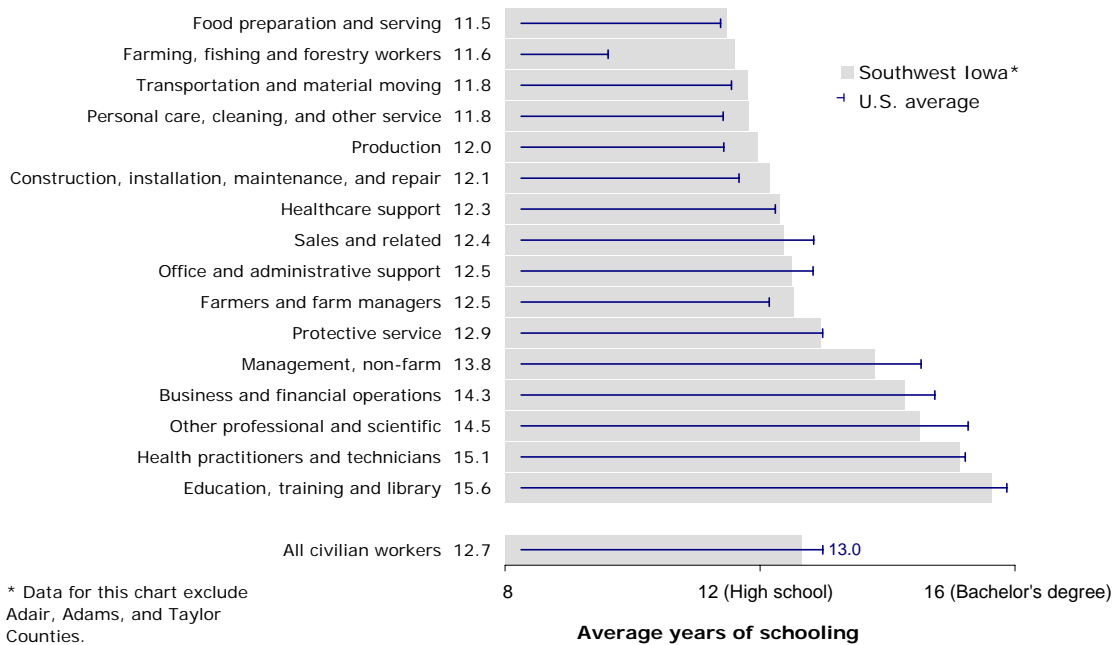
As demonstrated in Table 7, the Southwest Iowa workforce has, on average, a slightly lower educational attainment than the national workforce. We can examine the average educational attainment of the region's workers in more detail to identify specific areas in which they resemble or differ from workers in the United States. In Figure 10, the educational attainment of workers is expressed in terms of the average years of education per worker instead of the percentage of workers attaining a specific degree. Workers in all occupations in the Southwest Iowa region average 12.7 years of education, which is equivalent to slightly more than a high school diploma. Workers in the United States average 13 years of schooling. By specific occupation, the lowest average educational attainment is found in the food preparation and

serving occupations, which include restaurant workers. The highest average educational attainment in the region is found among education, training, and library occupations.

Farmers, farm managers, and other agricultural workers in the Southwest Iowa region have relatively high levels of educational attainment compared to the United States average. Workers in construction and production occupations in the region also average slightly higher educational attainment than similar workers nationwide. In contrast, the educational attainment of the region's nonfarm managers, business and financial professionals, and other professional and scientific workers are lower than the national averages.

**Figure 10**

**Average Educational Attainment of Workers by Kind of Occupation, 2000**

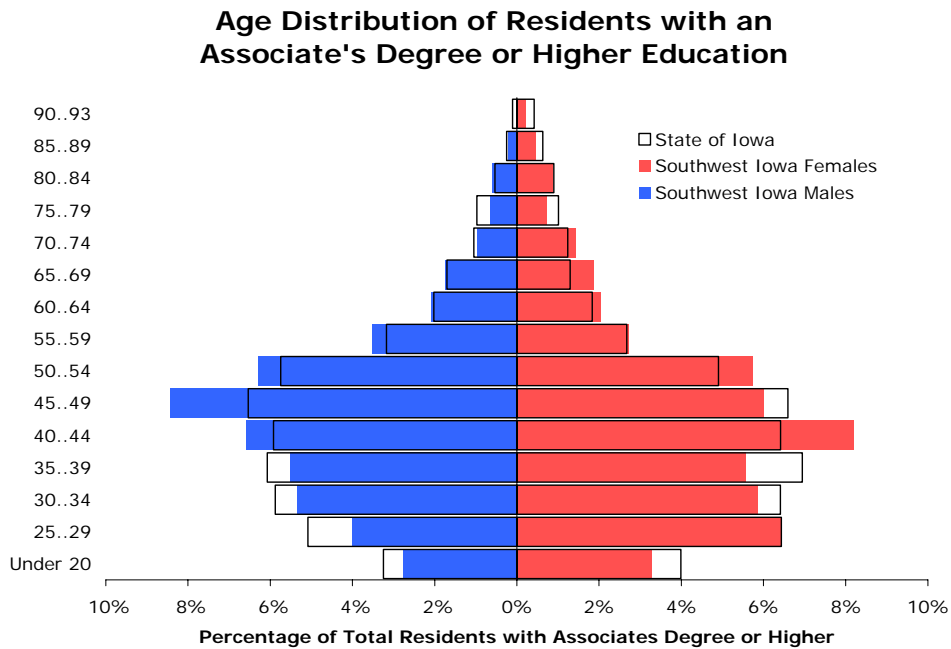


Another important consideration is how much of the region's collective educational attainment is concentrated in its older workforce. Iowa and many other Midwestern states are experiencing net outmigration of young, college-educated workers, raising concerns about their future ability to compete for industries and employers that demand educated workers.



Figure 11 compares the composition of the college-educated workforce in the Southwest Iowa region to the state of Iowa. It shows the percentage of all workers who have an associate's degree or higher educational attainment by age group and gender. Compared to the state, a higher fraction of college-educated residents in Southwest Iowa are ages 40 or older, and that is especially true of males. The region shows a relative deficit of college-educated workers under the age of 40.

**Figure 11**



**Self-Employed Workers**

Because many regional economic development efforts are focusing on promotion of entrepreneurship and small business development, special attention to characteristics of entrepreneurs in the region is warranted. Entrepreneurship is a concept with no single definition or measure. For our purposes, the percentage of workers who are self-employed serves as a proxy measure of entrepreneurship. Self-employed workers represent a sizeable and important component of the regional workforce.

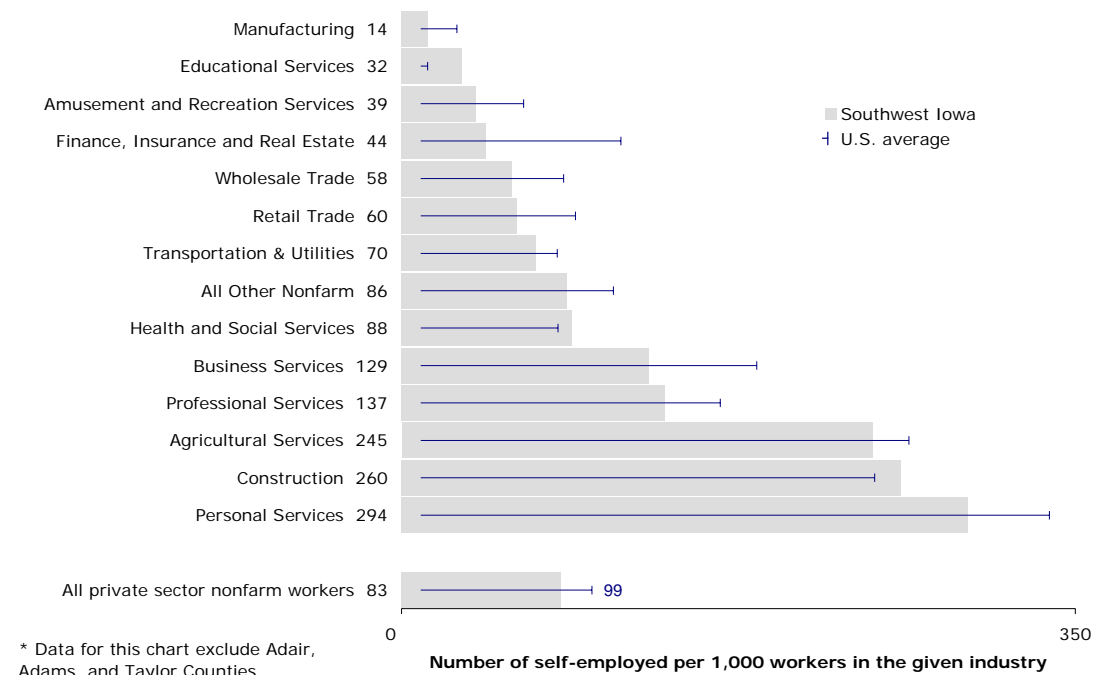
In the Southwest Iowa region, as displayed in Figure 12, the incidence of self-employment is slightly lower than for similar regions across the United

States (those comprising a mix of metropolitan and non-metropolitan territory). Per 1,000 workers in nonfarm, private industries in Southwest Iowa, 83 workers are self-employed. The comparable average in the United States is 99 workers.

The highest incidence of self-employment in Southwest Iowa occurs in the personal services and construction sectors. The lowest incidence of self-employment occurs in the manufacturing and educational services sectors. Compared to national averages, the Southwest Iowa region demonstrates relatively higher levels of self-employment in three sectors: educational services, health and social services, and construction. The region lags national average rates of self-employment in all other nonfarm sectors of the economy. The differences are most notable in manufacturing; amusement and recreation; finance, insurance and real estate; retail and wholesale trade; and business services.

**Figure 12**

**Incidence of Nonfarm Self-Employment by Industry**



## Occupational Mix

The occupational characteristics of workers in the Southwest Iowa region, as would be expected, align closely with its industrial structure and its largely rural nature. The region shows specialization in agricultural and transportation-related occupations. Notably absent within the region are specializations in occupations that are usually concentrated in highly urbanized areas, such as sales and other business-related occupations.

Figure 13 compares the occupational structure of the region’s workforce (excluding Council Bluffs residents) with the occupational structure of the nation’s workforce. Differences are expressed in worker equivalents per 1,000 workers. Occupations listed at the top are less in evidence within the region than might be expected, and occupations near the bottom are more in evidence within the region. So, for example, for every 1,000 workers in the region, there are 14 fewer workers in sales and related occupations than if its occupational structure resembled the national average. In contrast, there are 27 more farmers and farm managers per 1,000 workers in Southwest Iowa than national averages would suggest.

**Figure 13**

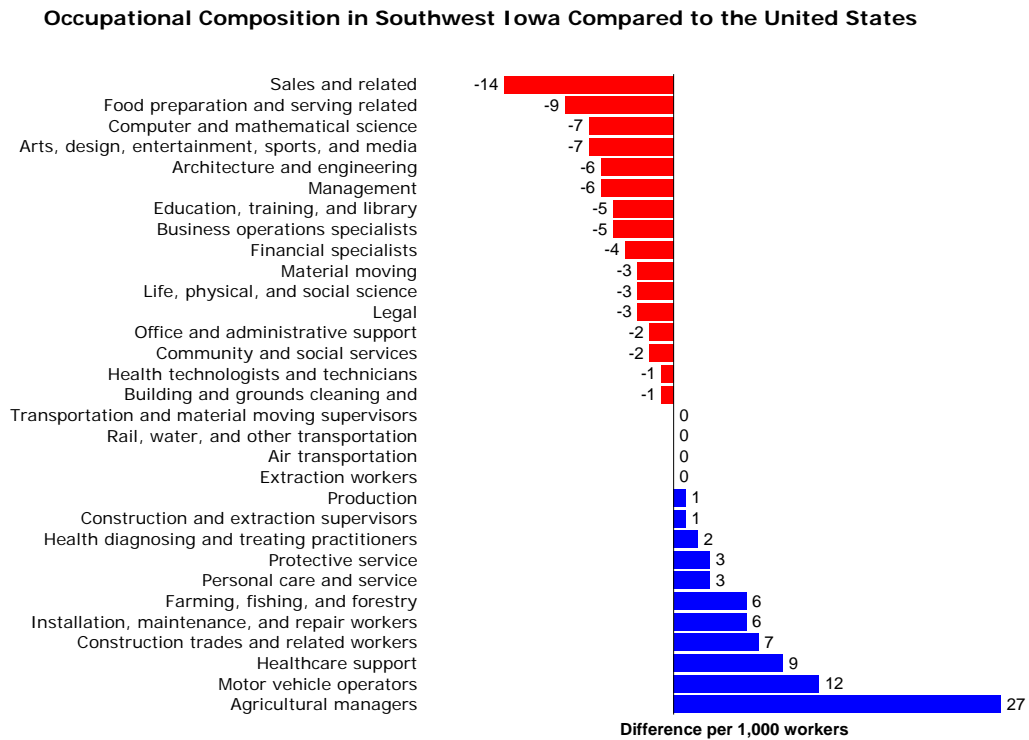


Figure 13 is very important because it quickly and vividly demonstrates the categories of industrial specialization in evidence in the region. It also demonstrates, relatively speaking, which occupations are, potentially in surplus and which are in deficit relative to industries that might be searching for those occupations. Last it helps to demonstrate numerically and visually the region's capacity to support different kinds of business growth considering this very important fact: businesses need, no matter the region's other capacities, workers appropriate to the products or the services that they produce.

### **Knowledge and Skill Content of Regional Jobs**

As the national economy evolves over time, certain types of knowledge and skills emerge or decline in importance. In this next section we deploy a national database of occupational characteristics to gauge the knowledge areas and skills that are currently most in demand in the national economy. This database includes ratings for the level and importance of 26 knowledge areas and 23 skills by detailed occupation. Each occupation's rating is weighted by total employment in that occupation nationally. The weights are then used to construct an average, cross-occupational rating for the level and importance of each knowledge area or skill. The weighted average ratings indicate the types of knowledge and skills demanded by the aggregate national economy.

Using similar procedures, we can construct regionally-weighted values for the level and importance of each knowledge area or skill within the Southwest Iowa regional economy. In the next portions of this report, we compare the regional economy to the national economy.


In each table, the knowledge areas, skills, or occupations are listed in descending order by national importance. Their placement from left to right indicates their regional importance in Southwest Iowa compared to the nation. Items listed in the left-most columns indicate the region demands relatively less, and items listed in the right-most column indicate the region demands relatively more of the item (this analysis excludes the city of Council Bluffs).

### Knowledge Requirements

In the current national economy, the following knowledge areas have the highest average importance and levels across all types of jobs: customer and personal service, English language, mathematics, administration and management, and education and training, clerical, and computers and electronics. Compared to the nation, the Southwest Iowa economy has lower demand for knowledge in five of these seven areas.

As displayed in Figure 14, as compared to the U.S., the Southwest Iowa region's economy demands relatively more knowledge in mechanical, chemistry, biology, and food production areas. All of these are in moderate to comparatively low demand in the national economy.

**Figure 14**

		Regional Knowledge Requirements		
		Lower than U.S. Average	Similar to U.S. Average	Higher than U.S. Average
National Level and Importance*  	High	Customer and Personal Service English Language	Mathematics Administration and Management	
	Moderate	Education and Training Clerical Computers and Electronics	Sales and Marketing Psychology Public Safety and Security Law and Government Personnel and Human Resources	Mechanical
			Production and Processing Economics and Accounting Communications and Media Engineering and Technology Transportation Design	Chemistry
	Low		Sociology and Anthropology Therapy and Counseling Telecommunications Building and Construction Geography Physics Medicine and Dentistry	Biology
			Philosophy and Theology Foreign Language	Food Production
			History and Archeology Fine Arts	

\* National ratings by detailed occupation for 33 knowledge areas were weighted by occupational employment to obtain an average score that describes the level and importance of each knowledge area in the national labor force as a whole. Regional values were similarly constructed based on the region's occupational employment profile. The regional average scores for each knowledge area were then compared to the national average scores.

## Skill Requirements

In the current national economy, the following skills have the highest average importance and levels across all types of jobs (Figure 15): active listening, reading comprehension, speaking, critical thinking, active learning, and time management. The Southwest Iowa region demands relatively less of active listening, reading comprehension, and critical thinking skills.

Compared to the nation, the Southwest Iowa region's economy demands relatively higher skills in operation and control; management of financial resources; equipment maintenance; management of material resources; operation monitoring; science; and repairing. All of these skill areas tend toward the bottom of the list as measured by national demand levels.

**Figure 15**

**Skill Requirements in the Southwest Iowa Economy, Compared to National Averages**

	Regional Skill Requirements		
	Lower than U.S. Average	Similar to U.S. Average	Higher than U.S. Average
<p>National Level and Importance*</p>	Active Listening Reading Comprehension Critical Thinking	Speaking Active Learning Time Management	
	Learning Strategies Complex Problem Solving	Coordination Instructing Writing Monitoring Social Perceptiveness Judgment and Decision Making Service Orientation Mathematics	
		Persuasion Equipment Selection Negotiation Management of Personnel Resources Troubleshooting Operations Analysis Quality Control Analysis	Operation and Control Management of Financial Resources Equipment Maintenance
		Systems Evaluation Systems Analysis Technology Design Installation Programming	Management of Material Resources Operation Monitoring Science Repairing

\* National ratings by detailed occupation for 35 skill areas were weighted by occupational employment to obtain an average score that describes the level and importance of each skill area in the national labor force as a whole. Regional values were similarly constructed based on the region's occupational employment profile. The regional average scores for each skill area were then compared to the national average scores.

**Prospects for Growth and Regional Occupational Alignment**

Figure 16 illustrates how the region’s occupational specialization aligns with projected national occupational growth rates. Reading from top to bottom, the figure shows that in the current national economy, the following three occupations are projected to grow at the fastest rates: healthcare support, computer and mathematical science, and health practitioners. The Southwest Iowa region currently demonstrates specialization in only healthcare, and shows comparative relative weakness in the computer and mathematical group. The region has specialization in two other occupational groups with relatively high growth projections nationally. These are motor vehicle operators and protective service occupations.

Among the region’s other occupational specialties, projected national growth rates are lower. These include construction, installation, maintenance and repair, and farm-related occupations. As would be expected the farm-related occupations have the lowest projected growth rates nationally owing to the historically persistent replacement of farm labor with technology.

**Figure 16**

**Regional Occupational Specialization and Projected Job Growth Rates**

		Specialization Level in Southwest Iowa		
		Low	Average	High
 Projected National Employment Growth Rate	High Growth	Computer and mathematical science	Health practitioners Health technologists and technicians Personal care and service	Healthcare support
		Community and social services Business operations specialists	Education, training, and library	
		Financial specialists	Building and grounds Air transportation	
		Life, physical, and social science Food preparation and serving Legal		Motor vehicle operators
		Arts, entertainment, and media		Protective service
	Moderate Growth	Architecture and engineering	Transportation supervisors	Construction workers Installation, maintenance, and repair
		Sales and related	Management	Construction supervisors
			Material moving workers Office and administrative support Extraction workers	
			Production Rail and other transportation	
	Decline			Farming, fishing, and forestry workers Farmers and farm managers

### 3. Regional Industrial Summary

This section profiles the comparable size and broad industrial composition of the Southwest Iowa economy. Here we are looking at much more particular characteristics of the regional economy. We show the region's aggregate competitive positions, pointing out industrial strengths and weaknesses. We also show how each county in the region contributes to overall industrial activity.

These data are derived from an input-output summary of the regional economy that was compiled by a non-governmental source.\* The data are presented in concordance with the North American Industrial Classification schema at the "2-digit" level, which allows us to identify the major sectors of the regional economy. Later tables in this report are organized at the county level and at much higher industrial detail.

There is an important dimension to this section and in the section that follows. The region has 11 counties, but the Pottawattamie County exerts a very strong influence. To better describe the effects of Pottawattamie County, we divided it, within our modeling system, into the Council Bluffs area and the remainder of the county. That gives us an additional area in our region, but also lets us demonstrate the economic composition of the non-Council Bluffs portion of Pottawattamie County. We carry this forward into the next major section of the research where we provide much more detail about the composition of the entire economic area as well as high detail about its constituent members.

#### **Key Findings**

- The Council Bluffs economy contributes more than one third of output, jobs and value added to the Southwest Iowa economy.
- Although the manufacturing sector was the largest contributor to regional value added, Southwest Iowa does not demonstrate a comparative advantage in this sector compared to the state.
- The region demonstrates a strong competitive advantage in agriculture.

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\* The county-level data for this region were compiled by the Minnesota Implan Group, Inc. This company provides estimates of industrial data summarized down to the county level. These data are based largely on existing U.S. Bureau of Labor Statistics, Bureau of Economic Analysis, and Census Bureau data sets that are compiled annually or quinquennially by federal agencies. Gaps in data are filled using "clean and structure" techniques to estimate missing data by apportioning broad categorical remainders into categories where data were either missing or suppressed. As a consequence, some of the industrial details in more highly disaggregated tables are estimates.



## Measures of Total Industrial Activity

Table 8 lists several measures of industrial activity. In 2004, according to this summary, there were 105,917 jobs in the region producing \$10.64 billion in industrial output. Industrial output is, roughly, the sales value of all production by all industries and governments in the area. Payroll to workers in the region was \$2.66 billion, returns to sole proprietors were \$655 million, payments made to investors were \$1.455 billion, indirect tax payments to governments was \$395.1 million, and total value added, the sum of the preceding four categories, was \$5.175 billion.\* All manufacturing accounted for \$3.02 billion of the region's output, followed by agriculture at \$1.345 billion. All governments came in third in this category with \$1.28 billion in output value. The top five sectors for jobs were all governments at 14,895, retail trade at 12,744, health care and social services with 11,998 jobs, agriculture at 10,606, and manufacturing at 10,427.

**Table 8**

**Summary Industrial Accounts for the Southwest Iowa Region, 2004**

*All financial amounts in millions*

	Total Industrial Output	Jobs	+ Employee Compensation	+ Proprietor Income	+ Other Property Income	+ Indirect Business Taxes	= Value Added
Ag, Forestry, Fish & Hunting	1,344.7	10,606	44.1	367.9	121.3	29.5	562.9
Mining	32.3	183	4.3	2.9	5.8	0.6	13.6
Utilities	266.6	497	42.4	7.1	80.3	26.3	156.1
Construction	475.3	4,966	139.2	48.5	31.6	2.9	222.1
Manufacturing	3,017.0	10,427	462.7	28.3	191.7	17.8	700.5
Wholesale Trade	421.7	3,895	142.7	15.8	64.5	65.2	288.2
Transportation & Warehousing	433.9	4,235	140.8	23.2	52.5	7.0	223.5
Retail trade	667.8	12,744	213.3	36.7	73.2	88.3	411.5
Information	232.2	1,658	40.0	6.4	23.1	4.9	74.4
Finance & insurance	313.7	2,382	86.1	6.2	119.3	5.3	216.9
Real estate & rental	211.0	2,232	18.9	23.4	69.9	18.5	130.6
Professional- scientific & tech svcs	210.8	2,440	61.5	28.5	17.2	2.7	109.9
Management of companies	38.8	267	16.4	0.0	5.6	0.3	22.4
Administrative & waste services	152.4	3,671	49.0	10.7	13.9	2.2	75.8
Educational svcs	25.9	816	12.3	0.4	1.0	0.4	14.1
Health & social services	671.1	11,998	325.1	17.9	29.2	5.4	377.7
Arts- entertainment & recreation	79.1	2,050	30.1	5.5	4.9	6.5	46.9
Accommodation & food services	390.6	7,561	120.8	3.0	50.9	26.9	201.6
Other services	370.2	8,395	119.4	32.2	21.2	17.0	189.8
Government & non NAICs	1,284.4	14,895	590.8	0.0	478.1	67.4	1,136.4
<b>Totals</b>	<b>10,639.3</b>	<b>105,917</b>	<b>2,660.0</b>	<b>664.6</b>	<b>1,455.1</b>	<b>395.1</b>	<b>5,174.8</b>

Table 9 presents the same information without the Council Bluffs influence. For the remaining region, 67,119 jobs produced \$6.7 billion in industrial output. When we deconstruct value added in the remaining area, we find

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\* It is much preferred to compare value added when describing the size of an economy because it is highly analogous to gross regional industrial product, which is the standard way in which we gauge state and national economic performance over time.

\$1.52 billion in labor incomes, \$554 million in returns to proprietors, \$907.5 million to investors, and \$217 million in indirect tax payments.

**Table 9**

**Summary Industrial Accounts for the Southwest Iowa Region Excluding Council Bluffs, 2004**

*All financial amounts in millions*

	Total Industrial Output	Jobs	+ Employee Compensation	+ Proprietor Income	+ Other Property Income	+ Indirect Business Taxes	= Value Added
Ag, Forestry, Fish & Hunting	1,342.7	10,546	43.7	367.1	121.4	29.5	561.6
Mining	31.0	176	4.0	2.8	5.5	0.6	12.9
Utilities	77.8	194	11.6	1.7	20.7	7.0	40.9
Construction	273.2	2,960	74.2	30.7	17.7	1.6	124.2
Manufacturing	1,794.9	6,147	277.1	15.1	103.8	10.0	406.0
Wholesale Trade	216.2	2,129	72.6	8.6	33.1	33.4	147.8
Transportation & Warehousing	239.2	2,416	67.5	17.8	25.0	3.2	113.4
Retail trade	362.8	7,407	98.4	29.4	50.6	46.4	224.8
Information	182.0	1,296	33.5	2.7	17.5	3.6	57.2
Finance & insurance	210.4	1,670	55.5	4.6	84.8	3.0	148.0
Real estate & rental	106.7	1,142	7.2	14.7	33.8	8.8	64.5
Professional- scientific & tech svcs	110.1	1,268	32.5	14.6	7.0	1.3	55.4
Management of companies	19.4	171	7.1	0.0	2.5	0.2	9.8
Administrative & waste services	99.1	2,087	27.2	7.3	9.9	1.4	45.9
Educational svcs	12.8	422	5.4	0.2	1.1	0.3	6.9
Health & social services	325.8	6,416	155.5	11.2	11.8	2.9	181.3
Arts- entertainment & recreation	30.1	768	7.6	3.3	4.4	2.1	17.5
Accommodation & food services	119.2	3,194	29.4	1.9	9.3	5.2	45.8
Other services	206.4	5,461	68.2	20.1	6.4	9.3	104.0
Government & non NAICs	936.0	11,251	439.2	0.0	341.3	46.7	827.3
Totals	6,695.9	67,119	1,517.5	553.7	907.5	216.6	3,195.3

**Comparative Measures by Sector**

Table 10 shows just how dominant manufacturing was to the entire Southwest Iowa economy in 2004. Manufacturing was 28.4 percent of industrial output, agriculture followed at 12.6 percent, followed by all government at 12 percent. Output, however, is a crude measure of industrial activity in a region. It is more appropriate to use either jobs or value added to gauge the overall value of industrial activity to a region and its communities.

Using those more standard measures, manufacturing had 9.8 percent of the region's jobs yielding 13.5 percent of the region's value added. Agriculture produced a slightly higher percentage of the jobs, 10 percent, and almost 11 percent of value added. The region's highest fractions of jobs and total value added were found in the governments sectors: governments were 14.1 percent of jobs and 22.1 percent of value added. Retail jobs were 12.0 percent of the total, but only 8 percent of value added. Also, health and social services were 11.3 percent of jobs, but just 7.3 percent of value added.

When the value added percentage exceeds the jobs percentage, that sector is more prosperous relative to the rest of the economy and usually generates higher payroll than the regional average. When it is lower, as in the retail or the health and social services averages, it means that the average job pays less than the regional average.

**Table 10**

**Summary Industrial Accounts for the Southwest Iowa Region,  
2004, as Percentages of Regional Totals**

	Total Industrial Output	Jobs	Value Added
Ag, Forestry, Fish & Hunting	12.6%	10.0%	10.9%
Mining	0.3%	0.2%	0.3%
Utilities	2.5%	0.5%	3.0%
Construction	4.5%	4.7%	4.3%
Manufacturing	28.4%	9.8%	13.5%
Wholesale Trade	4.0%	3.7%	5.6%
Transportation & Warehousing	4.1%	4.0%	4.3%
Retail trade	6.3%	12.0%	8.0%
Information	2.2%	1.6%	1.4%
Finance & insurance	2.9%	2.2%	4.2%
Real estate & rental	2.0%	2.1%	2.5%
Professional- scientific & tech svcs	2.0%	2.3%	2.1%
Management of companies	0.4%	0.3%	0.4%
Administrative & waste services	1.4%	3.5%	1.5%
Educational svcs	0.2%	0.8%	0.3%
Health & social services	6.3%	11.3%	7.3%
Arts- entertainment & recreation	0.7%	1.9%	0.9%
Accomodation & food services	3.7%	7.1%	3.9%
Other services	3.5%	7.9%	3.7%
Government & non NAICs	12.1%	14.1%	22.0%
Totals	100.0%	100.0%	100.0%

Table 11 has the same information, but without the effects of Council Bluffs. While manufacturing output is about the same at 26.8 percent, the overall importance of agriculture grows sharply to 20.1 percent, followed at a distant third by governments at 14.0 percent. In terms of overall job shares and value added, government jobs are 17 percent of the remaining region and 26 percent of all value added. Second are agriculture jobs at 15.7 percent and 17.6 percent of value added. Retail trade jobs are 11.0 percent, yet only 7.0 percent of value added, followed by health and social services at 9.6 percent and only 5.7 percent of value added. Then we get manufacturing at 9.2 percent of jobs, but at a much higher 12.7 percent of value added.

**Table 11**

**Summary Industrial Accounts for the Southwest Iowa Region  
Excluding Council Bluffs as Percentages of Regional Totals in 2004**

	Total Industrial Output	Jobs	Value Added
Ag, Forestry, Fish & Hunting	20.1%	15.7%	17.6%
Mining	0.5%	0.3%	0.4%
Utilities	1.2%	0.3%	1.3%
Construction	4.1%	4.4%	3.9%
Manufacturing	26.8%	9.2%	12.7%
Wholesale Trade	3.2%	3.2%	4.6%
Transportation & Warehousing	3.6%	3.6%	3.5%
Retail trade	5.4%	11.0%	7.0%
Information	2.7%	1.9%	1.8%
Finance & insurance	3.1%	2.5%	4.6%
Real estate & rental	1.6%	1.7%	2.0%
Professional- scientific & tech svcs	1.6%	1.9%	1.7%
Management of companies	0.3%	0.3%	0.3%
Administrative & waste services	1.5%	3.1%	1.4%
Educational svcs	0.2%	0.6%	0.2%
Health & social services	4.9%	9.6%	5.7%
Arts- entertainment & recreation	0.4%	1.1%	0.5%
Accommodation & food services	1.8%	4.8%	1.4%
Other services	3.1%	8.1%	3.3%
Government & non NAICs	14.0%	16.8%	25.9%
Totals	100.0%	100.0%	100.0%

**Comparative Measures by County**

The preceding tables allow us to gauge sectoral strength in the regional economy; Table 12 shows which counties or areas accounted for which components of industrial activity in the region. The Council Bluffs economy had 37.1 percent of output, 36.3 percent of jobs, and 38.3 percent of value

added. When using jobs as a measure, Page, Cass and the remainder of Pottawattamie County account for another quarter of the jobs. Adams and Taylor combined account for 5.6 percent of jobs and just 4.8 percent of value added. Like before, if the area has a higher value added percentage than jobs, we can assume that earnings are, on average, higher in that area than the regional average. That is noticeably true for Council Bluffs and the remainder of Pottawattamie County. For Fremont, Harrison, and Montgomery, their respective fractions are very similar. For the remaining counties, their value added shares lag their job shares.

**Table 12**

**Industrial Summaries by County or Area**

Summary all Counties	Total Industrial Output	Jobs	Value Added
Adair	4.6%	4.6%	4.7%
Adams	2.4%	2.6%	2.3%
Cass	7.9%	8.1%	7.5%
Fremont	4.7%	3.9%	4.0%
Harrison	5.5%	6.1%	5.9%
Mills	4.5%	5.7%	5.4%
Montgomery	7.4%	6.3%	6.3%
Page	7.5%	8.7%	7.6%
Pottawattamie without Council Bluffs	9.3%	7.7%	9.1%
Council Bluffs	37.1%	36.6%	38.3%
Shelby	6.3%	6.8%	6.3%
Taylor	2.7%	3.0%	2.5%

**Regional Industrial Competitive Strengths**

Table 13 compares the major industrial values found in Southwest Iowa to those of the state of Iowa. This table is very instructive and gives a good idea of the region’s comparative strengths and weaknesses vis à vis the state of Iowa. The first set of values to understand are the column totals. These are “expected” values. They represent the region’s total shares of state activity in the categories measured. The region had 5.3 percent of the state’s industrial output, 5.6 percent of jobs, and generated 5.3 percent of the state’s value added.

Now that we know the expected values, we can look to where the region has categorical strengths and weaknesses. My measure of strength and weakness is a value that is a half of a percentage point or more above or below the expected value in at least two of the categories. Amounts in blue

and bold typeface are areas that were much higher than the expected values. Those in red and italic typeface are much below the expected values.

In terms of the aggregated value of output, the region has several strong sectors. Agriculture, mining, and utilities exceed their expected shares by larger margins. Transportation and warehousing, health and social services, accommodation and food services, other services and governments also show higher shares. In aggregate, the region is weak in manufacturing jobs, construction, information, finance and insurance, real estate, professional services, management of companies, administrative services, and educational services. It is interesting to note that, overall, despite the strong casino presence in the region, the region as a whole otherwise does not deviate meaningfully from the expected values in arts, entertainment, and recreation services.

**Table 13**  
**Summary Industrial Accounts for the Southwest Iowa Region, 2004,**  
**as Percentages of State Totals**

Southwest Iowa	Total Industrial Output	Jobs	Value Added
<b>Ag, Forestry, Fish &amp; Hunting</b>	<b>10.1%</b>	<b>8.5%</b>	<b>11.2%</b>
<b>Mining</b>	<b>10.1%</b>	<b>9.4%</b>	<b>6.3%</b>
<b>Utilities</b>	<b>7.3%</b>	<b>6.0%</b>	<b>6.3%</b>
<i>Construction</i>	<i>4.7%</i>	<i>4.8%</i>	<i>5.0%</i>
<i>Manufacturing</i>	<i>4.5%</i>	<i>4.7%</i>	<i>4.0%</i>
Wholesale Trade	5.6%	5.7%	5.0%
<b>Transportation &amp; Warehousing</b>	<b>6.2%</b>	<b>5.9%</b>	<b>5.8%</b>
Retail trade	6.5%	5.6%	5.4%
<i>Information</i>	<i>3.8%</i>	<i>4.7%</i>	<i>2.8%</i>
<i>Finance &amp; insurance</i>	<i>2.1%</i>	<i>2.4%</i>	<i>2.5%</i>
<i>Real estate &amp; rental</i>	<i>3.7%</i>	<i>4.9%</i>	<i>3.4%</i>
<i>Professional- scientific &amp; tech svcs</i>	<i>3.6%</i>	<i>3.6%</i>	<i>3.2%</i>
<i>Management of companies</i>	<i>3.1%</i>	<i>3.0%</i>	<i>3.1%</i>
<i>Administrative &amp; waste services</i>	<i>3.9%</i>	<i>4.6%</i>	<i>3.7%</i>
<i>Educational svcs</i>	<i>1.8%</i>	<i>2.3%</i>	<i>1.9%</i>
<b>Health &amp; social services</b>	<b>5.8%</b>	<b>6.4%</b>	<b>5.4%</b>
Arts- entertainment & recreation	5.1%	6.0%	5.0%
<b>Acomodation &amp; food services</b>	<b>8.2%</b>	<b>6.3%</b>	<b>9.7%</b>
<b>Other services</b>	<b>6.8%</b>	<b>8.1%</b>	<b>7.4%</b>
<b>Government &amp; non NAICs</b>	<b>6.7%</b>	<b>6.1%</b>	<b>6.8%</b>
Totals	5.3%	5.6%	5.3%

There are many fewer comparative strengths in evidence in Table 14 after removing the effects of the Council Bluffs economy. The expected values are 3.3 percent of output, 3.6 percent of jobs, and 3.3 percent of value added. Now, only agriculture, mining, and governments have significantly higher shares than the overall regional average. Competitive weakness is evident in utilities, construction, manufacturing, wholesale, finance and insurance, real estate, professional services, company management, administrative services, educational services, recreation, and accommodation services.

**Table 14**

**Summary Industrial Accounts for the Southwest Iowa Region  
Excluding Council Bluffs, 2004, as Percentages of State Totals**

Southwest Iowa	Total Industrial Output	Jobs	Value Added
<b>Ag, Forestry, Fish &amp; Hunting</b>	<b>10.1%</b>	<b>8.4%</b>	<b>11.2%</b>
<b>Mining</b>	<b>9.7%</b>	<b>9.0%</b>	<b>6.0%</b>
<i>Utilities</i>	<i>2.1%</i>	<i>2.4%</i>	<i>1.7%</i>
<i>Construction</i>	<i>2.7%</i>	<i>2.9%</i>	<i>2.8%</i>
<i>Manufacturing</i>	<i>2.7%</i>	<i>2.8%</i>	<i>2.3%</i>
<i>Wholesale Trade</i>	<i>2.9%</i>	<i>3.1%</i>	<i>2.6%</i>
Transportation & Warehousing	3.4%	3.4%	2.9%
Retail trade	3.6%	3.3%	2.9%
Information	3.0%	3.7%	2.2%
<i>Finance &amp; insurance</i>	<i>1.4%</i>	<i>1.7%</i>	<i>1.7%</i>
<i>Real estate &amp; rental</i>	<i>1.9%</i>	<i>2.5%</i>	<i>1.7%</i>
<i>Professional- scientific &amp; tech svcs</i>	<i>1.9%</i>	<i>1.9%</i>	<i>1.6%</i>
<i>Management of companies</i>	<i>1.5%</i>	<i>1.9%</i>	<i>1.4%</i>
<i>Administrative &amp; waste services</i>	<i>2.6%</i>	<i>2.6%</i>	<i>2.2%</i>
<i>Educational svcs</i>	<i>0.9%</i>	<i>1.2%</i>	<i>0.9%</i>
Health & social services	2.8%	3.4%	2.6%
<i>Arts- entertainment &amp; recreation</i>	<i>2.0%</i>	<i>2.2%</i>	<i>1.9%</i>
<i>Accomodation &amp; food services</i>	<i>2.5%</i>	<i>2.7%</i>	<i>2.2%</i>
<b>Other services</b>	<b>3.8%</b>	<b>5.3%</b>	<b>4.0%</b>
<b>Government &amp; non NAICs</b>	<b>4.9%</b>	<b>4.6%</b>	<b>5.0%</b>
Totals	3.3%	3.6%	3.3%

## Targeting Industrial Growth Opportunities in Southwest Iowa

### Part B: Regional and County Industrial Summaries

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This part of the report introduces the participants to several tables itemizing the industrial structure and key characteristics of the regional economy. We describe eight accompanying figures in detail and explain how to read them and the importance of the information. We only describe the information as it pertains to the region, presented both with and without the influence of Council Bluffs, we do not repeat the descriptive process for each county. The county tables are contained in a separate appendix. Readers may look back to the regional descriptions for guidance on the meaning of the individual county tables and how to interpret them.

#### Southwest Iowa Regional Industrial Summary

We summarize eight sets of information for the region as a whole and for the region excluding the influences of Council Bluffs.

#### **Figures 17 & 18 – Components of Industrial Output**

In Figure 17 we itemize the components of industrial output for the region. SW Iowa generated \$10.64 billion in industrial output, a measure analogous to sales. In so doing, it made \$5.46 billion in payments for inputs, \$3.48 billion or 64 percent of which had to be imported into the region, and it made \$5.175 billion in payments to value added, about 64 percent of which was paid as labor incomes to employees or to proprietors.

This figure also reveals how output is ultimately allocated. Of the \$10.64 billion in regional industrial output, \$1.97 billion found its way into intermediate industrial inputs. These are sales among firms in the region. Households consumed \$2.86 billion of all production, all governments \$.95 billion, and exports consumed \$4.38 billion. For the region, 41 percent of industrial production went to export sales.

In all, \$8.67 billion of the region's output went to satisfy final demand. Households are an important component of all economies. For the region, 33 percent of all final demand production is consumed by area households.



The graphical displays at the bottom show first, on the left, the allocation of outlays (where industries made payments), and, on the right, the allocation of all industry receipts (where industries in the regions sold their goods and services).

Figure 18 lists the exact same information, but excludes the Council Bluffs area from the analysis creating the nonmetropolitan territory of the region.<sup>1</sup> Nonmetropolitan SW Iowa had \$6.7 billion in industrial output. In producing this output, that economy made \$3.5 billion in payments for inputs, \$2.35 billion or 67 percent of which were imported. In producing its output, the region is estimated to have made \$3.2 billion in payments to value added, about 65 percent of which accumulated as labor income to employees or to proprietors.

Intermediate sales to other industries accounted for \$1.14 billion of the output. Households consumed \$1.6 billion of the region's output, and governments \$.673 billion. Exports were \$2.966 of output or 44 percent of the area's output.

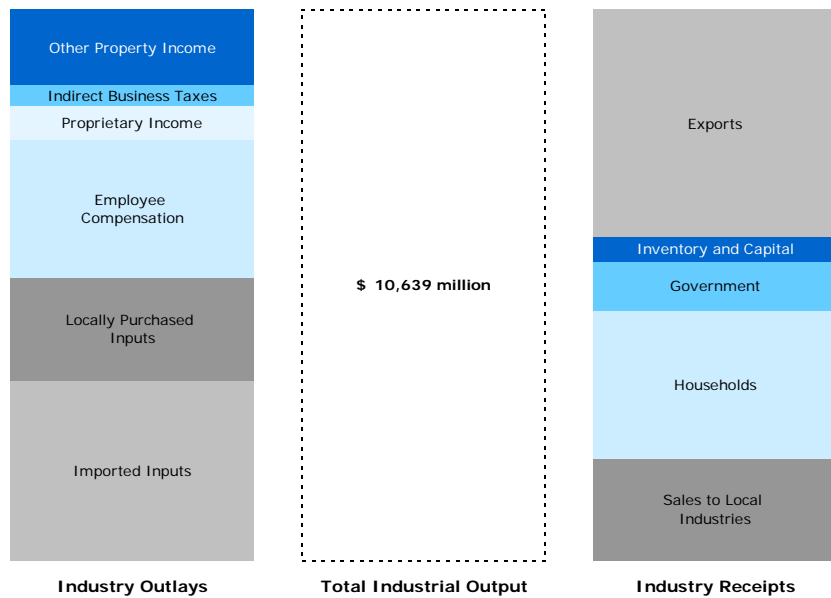
The nonmetropolitan area is more export-dependent than the region as a whole, and a lower fraction of the \$5.6 billion in production that satisfied final demand is consumed by households. Just under 29 percent of final demand is consumed by households.

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<sup>1</sup> Within our modeling system, Pottawattamie County was split into the Council Bluffs region and the remainder of the county. Effectively, then, we've added another region of scrutiny to our analysis that allows readers to either add or subtract the influences of this important metropolitan area.

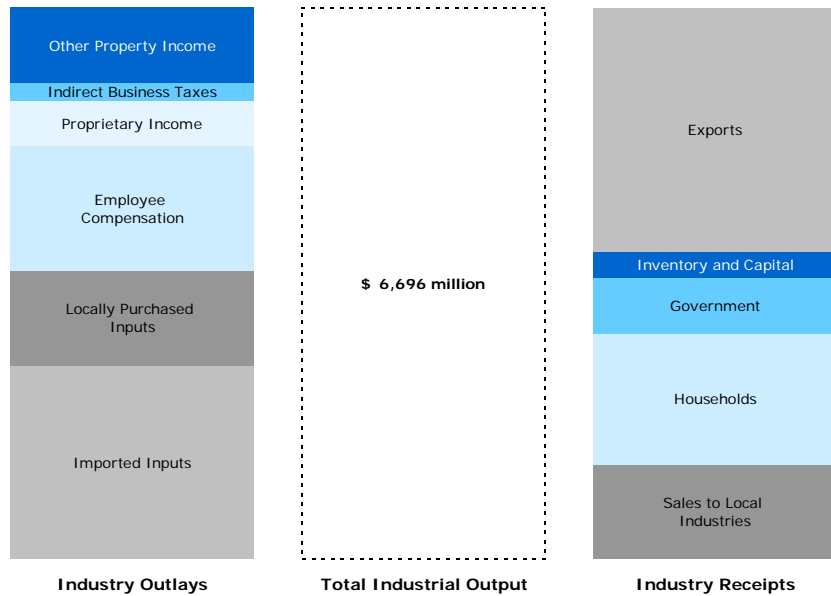
**Figure 17**  
**Components of Industrial Output**  
**Southwest Iowa Region, 2004**

		\$ millions	% of total	
<b>Industrial Inputs</b>	{	Imported Inputs.....	3,476.3	
		Local Inputs.....	1,988.3	
		<b>Total Industrial Inputs.....</b>	<b>5,464.6</b>	
<i>plus</i>				
<b>Value Added</b>	{	Employee Compensation.....	2,660.0	51.4
		Proprietary Income.....	664.6	12.8
		Indirect Business Taxes.....	395.1	7.6
		Other Property Income.....	1,455.1	28.1
		<b>Total Value Added.....</b>	<b>5,174.8</b>	<b>100.0</b>
<i>equals</i>				
<b>Industrial Output</b>		<b>Total Output.....</b>	<b>10,639.3</b>	
<i>sold to</i>				
<b>Intermediate</b>		Local Industry Demand.....	<b>1,968.9</b>	
<i>and</i>				
<b>Final Demands</b>	{	Households.....	2,860.1	33.0
		Government.....	946.6	10.9
		Inventory and Capital.....	479.5	5.5
		Exports.....	4,384.1	50.6
		<b>Total Final Demands.....</b>	<b>8,670.4</b>	<b>100.0</b>



**Figure 18**  
**Components of Industrial Output**  
**Nonmetropolitan Southwest Iowa, 2004**

		\$ millions	% of total	
<b>Industrial Inputs</b>	{	Imported Inputs.....	2,349.9	
		Local Inputs.....	1,150.7	
		<b>Total Industrial Inputs.....</b>	<b>3,500.6</b>	
<i>plus</i>				
<b>Value Added</b>	{	Employee Compensation.....	1,517.5	47.5
		Proprietary Income.....	553.7	17.3
		Indirect Business Taxes.....	216.6	6.8
		Other Property Income.....	907.5	28.4
		<b>Total Value Added.....</b>	<b>3,195.3</b>	<b>100.0</b>
<i>equals</i>				
<b>Industrial Output</b>		<b>Total Output.....</b>	<b>6,695.9</b>	
<i>sold to</i>				
<b>Intermediate</b>		Local Industry Demand.....	<b>1,138.3</b>	
<i>and</i>				
<b>Final Demands</b>	{	Households.....	1,604.8	28.9
		Government.....	672.8	12.1
		Inventory and Capital.....	314.1	5.7
		Exports.....	2,966.0	53.4
		<b>Total Final Demands.....</b>	<b>5,557.6</b>	<b>100.0</b>



## **Figures 19 & 20 – Contributions by Industrial Sector**

The next figures provide two important dimensions of information. First, by the major categories of industrial output, value added, and employment it displays the amounts and the rankings of industries in terms of their respective contributions to regional totals. Next, it allocates industrial output, value added, and earnings, a subset of value added, on a per job basis. This table gives a sense of inter-industrial productivity levels.

For the region, in terms of output, manufacturing led at \$3.02 billion, followed next by agriculture at \$1.38 billion. We exclude governments from the outputs comparison because private and public sector output comparisons require careful scrutiny and interpretation. Manufacturing led the value added ranking, followed by all governments, and then agriculture. The jobs ranking was led by all other services, followed by professional services, and then governments. The communications and information sector along with the wholesale sector were the least important sectors in all categories.

The next section gives the per job statistics. Readers should first assess the lines comparing the regional all-industry values to statewide averages. Output per worker for all industries was about 15 percent less than the state average. Value added was 11 percent less and earnings per job were 11.6 percent less.

By industry, manufacturing led in terms of output per job, followed by transportation and utilities, and next by communications and information. Value added per job was led by the transportation and communication sector followed by the finance, insurance, and real estate portion of the economy. Earnings per job were led by manufacturing, transportation and utilities, and by wholesale trade.

Even though the communications and information sector and the wholesale sector rank near the bottom in output, on a per job basis both sectors ranked very strongly in the region.

There is another index that can be calculated. Value added per job is a standard measure of productivity in an industry. Value added in any one of

the industrial sectors per job can be compared to the regional total to get a sense of the differences in production in different industries. For example, the region's transportation and utilities value added per job is a full 64 percent higher than the regional average and productivity in retail trade is 34 percent below the regional average. For different purposes, an index can be applied to the earnings per job. Manufacturing earnings were 50 percent above the regional average and retail jobs were 37.5 percent below.

For the nonmetropolitan portion of the region, Figure 20, we find that manufacturing followed by agriculture are the leading producers of output. Ag is number one on value added, trailed by government and then manufacturing. Government ranks tops on jobs, followed by agriculture and all other services. Across the board, wholesale and communications and information are the poorest ranked sectors.

Without Council Bluffs in the mix, output per job is 15 percent less than the state average. Value added is 13 percent less than the state average, and earnings are 13 percent less.

Manufacturing had the most output per job, followed by communications and information and then by agriculture. Value added per job was led by the finance, insurance, and real estate sector; wholesale was next followed by manufacturing. Manufacturing topped the earnings per job ranking, then came agriculture, and government.

On a comparative productivity basis using per job value added, the financial sector posted an amount that was 59 percent above the regional average. By comparison, the retail sector's value was 36 percent below the regional average. The earnings index revealed that manufacturing was 54 percent above the regional average and other services were 48 percent below.

Figure 19

**Contributions by Industrial Sector  
Southwest Iowa Region, 2004**

**Total Industrial Output, Value Added, and Employment**

Industry Group	Output		Value Added		Employment	
	\$ millions	Rank	\$ millions	Rank	Jobs	Rank
Agriculture and Mining.....	1,377.0	2	576.5	3	10,790	5
Construction.....	475.3	9	222.1	11	4,966	7
Manufacturing.....	3,017.0	1	700.5	1	10,430	6
Wholesale Trade..... <sup>1</sup>	421.7	10	288.2	10	3,895	10
Retail Trade..... <sup>1</sup>	667.8	6	411.5	7	12,743	4
Transportation and Utilities.....	700.5	5	379.6	8	4,733	8
Communications and Information.....	232.2	11	74.4	12	1,659	12
Finance, Insurance, and Real Estate.....	524.6	8	347.5	9	4,614	9
Professional and Social Services..... <sup>2</sup>	907.7	4	501.6	6	15,254	2
Other Services.....	1,023.8	3	529.3	4	20,474	1
Household & Government Enterprises..... <sup>3</sup>	652.8	7	504.8	5	1,902	11
Government ..... <sup>4</sup>	.....	.....	638.8	2	14,461	3
<b>Totals, All Industries*</b> .....	<b>10,639.3</b>		<b>5,174.8</b>		<b>105,921</b>	

**Average Output, Value Added, and Earnings per Job**

Industry Group	Output		Value Added		Earnings	
	\$ Per Job	Rank	\$ Per Job	Rank	\$ Per Job	Rank
Agriculture and Mining.....	127,615	4	53,431	5	38,859	5
Construction.....	95,716	7	44,732	7	37,791	6
Manufacturing.....	289,260	1	67,158	4	47,078	1
Wholesale Trade..... <sup>1</sup>	108,263	6	74,004	3	40,693	3
Retail Trade..... <sup>1</sup>	52,407	9	32,288	9	19,616	10
Transportation and Utilities.....	148,006	2	80,192	1	45,099	2
Communications and Information.....	139,992	3	44,857	6	27,950	9
Finance, Insurance, and Real Estate.....	113,706	5	75,320	2	29,176	8
Professional and Social Services.....	59,509	8	32,884	8	29,219	7
Other Services.....	50,006	10	25,851	10	18,558	11
Government..... <sup>4</sup>	.....	.....	.....	.....	39,235	4
<b>Average, All Industries**</b> .....	<b>100,446</b>		<b>48,855</b>		<b>31,387</b>	
<b>Average, State of Iowa</b> .....	<b>117,583</b>		<b>54,845</b>		<b>35,496</b>	

<sup>1</sup> Values for the wholesale and retail trade sectors reflect only their trade margins on the goods they purchase and resell.

<sup>2</sup> Private sector education and health services are included in the professional and social services group.

<sup>3</sup> Household and government enterprises engage in activities resembling those of business entities. Household transactions include private households employing workers in activities primarily concerned with the operation of the household; transactions between households for used and secondhand goods; and the imputed rental value received by households for their owner-occupied dwellings. Government enterprises include public utilities, passenger transit, and other public enterprises with characteristics of business entities.

<sup>4</sup> Government output and value added measures are not comparable with private industries; therefore, total government output, output per job and average value added per job values are not reported.

\* Total industrial output for the region equals the total output for all non-government industries plus government value added.

\*\* All-industry average output and value added per job includes values for household and government enterprises and the government sector. This may deflate the average output per job values in regions with relatively high concentrations of government employment.

Figure 20

## Contributions by Industrial Sector Nonmetropolitan Southwest Iowa, 2004

### Total Industrial Output, Value Added, and Employment

Industry Group	Output		Value Added		Employment	
	\$ millions	Rank	\$ millions	Rank	Jobs	Rank
Agriculture and Mining.....	1,373.7	2	574.6	1	10,723	2
Construction.....	273.2	9	124.2	11	2,960	7
Manufacturing.....	1,794.9	1	406.0	3	6,148	6
Wholesale Trade..... <sup>1</sup>	216.2	10	147.8	10	2,129	10
Retail Trade..... <sup>1</sup>	362.8	6	224.8	6	7,406	5
Transportation and Utilities.....	317.1	8	154.3	9	2,609	9
Communications and Information.....	182.0	11	57.2	12	1,297	12
Finance, Insurance, and Real Estate.....	317.2	7	212.5	8	2,810	8
Professional and Social Services..... <sup>2</sup>	448.7	5	243.6	5	8,105	4
Other Services.....	467.4	4	216.2	7	10,337	3
Household & Government Enterprises..... <sup>3</sup>	469.0	3	360.3	4	1,710	11
Government ..... <sup>4</sup>			473.8	2	10,885	1
<b>Totals, All Industries*</b> .....	<b>6,695.9</b>		<b>3,195.3</b>		<b>67,119</b>	

### Average Output, Value Added, and Earnings per Job

Industry Group	Output		Value Added		Earnings	
	\$ Per Job	Rank	\$ Per Job	Rank	\$ Per Job	Rank
Agriculture and Mining.....	128,106	3	53,583	5	38,939	2
Construction.....	92,291	7	41,952	7	35,444	6
Manufacturing.....	291,942	1	66,035	3	47,529	1
Wholesale Trade..... <sup>1</sup>	101,559	6	69,422	2	38,175	4
Retail Trade..... <sup>1</sup>	48,983	9	30,356	8	17,260	10
Transportation and Utilities.....	121,533	4	59,148	4	37,729	5
Communications and Information.....	140,355	2	44,123	6	27,897	8
Finance, Insurance, and Real Estate.....	112,868	5	75,630	1	29,200	7
Professional and Social Services.....	55,357	8	30,061	9	27,068	9
Other Services.....	45,221	10	20,912	10	16,003	11
Government..... <sup>4</sup>					38,597	3
<b>Average, All Industries**</b> .....	<b>99,762</b>		<b>47,606</b>		<b>30,860</b>	
<b>Average, State of Iowa</b> .....	<b>117,583</b>		<b>54,845</b>		<b>35,496</b>	

<sup>1</sup> Values for the wholesale and retail trade sectors reflect only their trade margins on the goods they purchase and resell.

<sup>2</sup> Private sector education and health services are included in the professional and social services group.

<sup>3</sup> Household and government enterprises engage in activities resembling those of business entities. Household transactions include private households employing workers in activities primarily concerned with the operation of the household; transactions between households for used and secondhand goods; and the imputed rental value received by households for their owner-occupied dwellings. Government enterprises include public utilities, passenger transit, and other public enterprises with characteristics of business entities.

<sup>4</sup> Government output and value added measures are not comparable with private industries; therefore, total government output, output per job and average value added per job values are not reported.

\* Total industrial output for the region equals the total output for all non-government industries plus government value added.

\*\* All-industry average output and value added per job includes values for household and government enterprises and the government sector. This may deflate the average output per job values in regions with relatively high concentrations of government employment.

## **Figures 21 & 22 – Composition of Industrial Outlays by Major Sector**

The information in this figure provides inter-industrial detail on exactly where industries in our region make their payments (their outlays). Values for the state of Iowa are also displayed for comparison.

The region overall is less likely to purchase inputs from local sources, and more likely, therefore, to purchase imported inputs. Employee compensation, as a percentage of all outlays, is similar, but proprietary incomes are higher in the region because of the higher fraction of farmers. All other categories are quite similar to the state.

As all imported inputs amount to spending that leaves the region, we focus on that dimension. The regional average was 33.7 percent. The highest was manufacturing, in which 49.5 percent of its outlays were imports. Next at 42.5 percent is the communications and information sector, followed by agriculture at 38 percent.

Governments had much higher fractions of outlays going to employee compensation, followed by services and wholesale trade. The lowest was in agriculture, as it depends comparatively relatively little on hired employees. Relatively high fractions of outlays in the agricultural sector are made to proprietors' income. Sectors making substantial outlays to other property income include the other enterprises sector, because the imputed capital gains of housing are included in that sector, and the FIRE (finance, insurance, insurance, and real estate) sector because this is where land rents are allocated. Last, wholesale and retail had the highest relative proportion of outlays to indirect business taxes because that is where sales, use, and excise taxes get levied.

When we discount the effects of Council Bluffs in Figure 22, the fraction of outlays going to local industries goes down and the fraction of imported inputs rises. As employee income and proprietors' incomes constitute labor incomes, the sum of the two are similar when compared to the state but the nonmetropolitan region has much higher proprietary income allocations and lower employee compensation.



Figure 21

Composition of Industry Outlays by Major Sector

Southwest Iowa Region, 2004

Major Sector <i>(sum across to 100%)</i>	Percentage of total outlays by sector						<i>All Production Inputs</i>
	Industrial Inputs		Value Added Inputs				
	From Local Industries	Imported Inputs	Employee Comp.	Proprietary Income	Other Property Income <sup>4</sup>	Indirect Business Taxes <sup>5</sup>	
Production Agriculture.....	20.4	37.9	3.2	27.1	9.2	2.2	100.0
Other Agriculture & Mining... <sup>1</sup>	12.9	41.5	11.0	23.2	9.9	1.6	100.0
Construction.....	17.4	35.8	29.3	10.2	6.6	0.6	100.0
Manufacturing.....	27.3	49.5	15.3	0.9	6.4	0.6	100.0
Wholesale Trade..... <sup>2</sup>	12.6	19.0	33.8	3.8	15.3	15.5	100.0
Retail Trade..... <sup>2</sup>	15.4	23.0	31.9	5.5	11.0	13.2	100.0
Transportation & Utilities.....	15.6	30.2	26.1	4.3	19.0	4.8	100.0
Comm. & Information.....	25.4	42.5	17.2	2.7	10.0	2.1	100.0
F.I.R.E.....	14.4	19.4	20.0	5.6	36.0	4.5	100.0
Services.....	18.0	28.6	37.7	5.1	7.4	3.2	100.0
Other Enterprises..... <sup>3</sup>	8.9	13.8	4.7	0.0	62.3	10.3	100.0
Government.....	24.6	25.0	44.8	0.0	5.6	0.0	100.0
Average for All Sectors.....	20.4	33.7	23.6	5.9	12.9	3.5	100.0

Comparative Values for the State of Iowa, 2004

Major Sector <i>(sum across to 100%)</i>	Percentage of total outlays by sector						<i>All Production Inputs</i>
	Industrial Inputs		Value Added Inputs				
	From Local Industries	Imported Inputs	Employee Comp.	Proprietary Income	Other Property Income <sup>4</sup>	Indirect Business Taxes <sup>5</sup>	
Production Agriculture.....	27.0	36.5	3.2	22.0	9.2	2.2	100.0
Other Agriculture & Mining... <sup>1</sup>	19.9	31.7	23.4	14.3	9.1	1.7	100.0
Construction.....	23.6	28.7	29.8	10.5	6.8	0.6	100.0
Manufacturing.....	31.6	44.3	15.7	0.5	7.2	0.6	100.0
Wholesale Trade..... <sup>2</sup>	16.6	15.0	34.8	2.8	15.3	15.5	100.0
Retail Trade..... <sup>2</sup>	19.6	18.2	34.2	4.1	10.6	13.4	100.0
Transportation & Utilities.....	19.0	24.6	30.2	3.1	18.6	4.5	100.0
Comm. & Information.....	26.6	32.8	22.2	1.2	14.2	3.1	100.0
F.I.R.E.....	22.9	20.2	23.5	3.8	25.2	4.5	100.0
Services.....	22.9	22.4	38.6	5.9	7.8	2.4	100.0
Other Enterprises..... <sup>3</sup>	13.0	10.4	5.5	0.0	60.9	10.3	100.0
Government.....	28.8	20.7	44.8	0.0	5.7	0.0	100.0
Average for All Sectors.....	25.7	29.9	24.8	4.0	12.5	3.2	100.0

<sup>1</sup> Includes forestry, fishing, hunting, and agricultural support services.

<sup>2</sup> Industrial inputs for the wholesale and retail sectors exclude the trade goods that they purchase for resale.

<sup>3</sup> Other enterprises include activities by households and governments that resemble those of business entities.

<sup>4</sup> Other property income includes rents, royalties, dividends, and corporate profits.

<sup>5</sup> Indirect business taxes include excise, sales, and property taxes, but not income taxes.

Figure 22

Composition of Industry Outlays by Major Sector

Nonmetropolitan Southwest Iowa, 2004

Major Sector <i>(sum across to 100%)</i>	Percentage of total outlays by sector						<i>All Production Inputs</i>
	Industrial Inputs		Value Added Inputs				
	From Local Industries	Imported Inputs	Employee Comp.	Proprietary Income	Other Property Income <sup>4</sup>	Indirect Business Taxes <sup>5</sup>	
Production Agriculture.....	19.4	38.9	3.2	27.1	9.2	2.2	100.0
Other Agriculture & Mining... <sup>1</sup>	14.1	41.2	10.2	22.7	10.2	1.6	100.0
Construction.....	14.1	40.4	27.2	11.2	6.5	0.6	100.0
Manufacturing.....	25.3	52.1	15.4	0.8	5.8	0.6	100.0
Wholesale Trade..... <sup>2</sup>	10.6	21.0	33.6	4.0	15.3	15.5	100.0
Retail Trade..... <sup>2</sup>	12.7	25.3	27.1	8.1	14.0	12.8	100.0
Transportation & Utilities.....	18.3	33.1	24.9	6.1	14.4	3.2	100.0
Comm. & Information.....	22.3	46.2	18.4	1.5	9.6	2.0	100.0
F.I.R.E.....	12.3	20.7	19.8	6.1	37.4	3.7	100.0
Services.....	16.7	33.1	35.6	6.4	5.7	2.5	100.0
Other Enterprises..... <sup>3</sup>	7.7	15.5	5.5	0.0	61.3	10.0	100.0
Government.....	21.0	29.8	43.7	0.0	5.6	0.0	100.0
Average for All Sectors.....	18.8	36.7	21.1	7.7	12.6	3.0	100.0

Comparative Values for the State of Iowa, 2004

Major Sector <i>(sum across to 100%)</i>	Percentage of total outlays by sector						<i>All Production Inputs</i>
	Industrial Inputs		Value Added Inputs				
	From Local Industries	Imported Inputs	Employee Comp.	Proprietary Income	Other Property Income <sup>4</sup>	Indirect Business Taxes <sup>5</sup>	
Production Agriculture.....	27.0	36.5	3.2	22.0	9.2	2.2	100.0
Other Agriculture & Mining... <sup>1</sup>	19.9	31.7	23.4	14.3	9.1	1.7	100.0
Construction.....	23.6	28.7	29.8	10.5	6.8	0.6	100.0
Manufacturing.....	31.6	44.3	15.7	0.5	7.2	0.6	100.0
Wholesale Trade..... <sup>2</sup>	16.6	15.0	34.8	2.8	15.3	15.5	100.0
Retail Trade..... <sup>2</sup>	19.6	18.2	34.2	4.1	10.6	13.4	100.0
Transportation & Utilities.....	19.0	24.6	30.2	3.1	18.6	4.5	100.0
Comm. & Information.....	26.6	32.8	22.2	1.2	14.2	3.1	100.0
F.I.R.E.....	22.9	20.2	23.5	3.8	25.2	4.5	100.0
Services.....	22.9	22.4	38.6	5.9	7.8	2.4	100.0
Other Enterprises..... <sup>3</sup>	13.0	10.4	5.5	0.0	60.9	10.3	100.0
Government.....	28.8	20.7	44.8	0.0	5.7	0.0	100.0
Average for All Sectors.....	25.7	29.9	24.8	4.0	12.5	3.2	100.0

<sup>1</sup> Includes forestry, fishing, hunting, and agricultural support services.

<sup>2</sup> Industrial inputs for the wholesale and retail sectors exclude the trade goods that they purchase for resale.

<sup>3</sup> Other enterprises include activities by households and governments that resemble those of business entities.

<sup>4</sup> Other property income includes rents, royalties, dividends, and corporate profits.

<sup>5</sup> Indirect business taxes include excise, sales, and property taxes, but not income taxes.

## **Figures 23 & 24 – Shares by Sector of All Regional Outlays for Industrial Inputs and Value Added**

This information describes which industry accounts for which portions of total outlays (or purchases) in the region. It lets us understand the magnitude of local and imported purchases and which sectors make higher or lower payments to labor income and other value added components. Like before, we also compare the region to state of Iowa averages.

Manufacturing accounts for 36 percent of all purchases from the local economy and 39 percent of all regional imports. Second in both categories is the service industry. Governments are the third greatest purchaser from the regional economy, but agriculture is the third greatest purchaser of imported commodities. Overall, agriculture's share of all purchases is significantly greater than the state averages, and manufacturing's share is less.

Services lead the labor income outlays, followed by manufacturing. Other enterprises (the capital gains on owned-homes) and FIRE lead all other value added allocations.

When we remove Council Bluffs in Figure 24, the importance of agriculture jumps sharply. Manufacturing still requires the most locally produced or imported inputs, but agriculture is now second by a strong margin. Now governments are the largest payers to labor income followed by agriculture. For all other value added, other enterprises still leads but is followed by agriculture as second most important. Again, nonmetropolitan Southwest Iowa's manufacturing allocations are substantially lower than the state amounts while agriculture's is substantially higher. In fact, for labor income, the region's share is over three times higher than the state average.

Figure 23

## Shares of Regional Industrial Outlays by Major Sector

### Southwest Iowa Region, 2004

Major Sector (sum down to 100%)	Sector's percentage share of regional industrial outlays				
	Industrial Input Purchases		Value Added Payments		All Production Inputs
	Purchases from Local Industries	Imported Inputs	Labor Income	Other <sup>3</sup>	
Production Agriculture.....	11.8	13.2	12.1	8.2	11.7
Other Agriculture & Mining...	0.3	0.6	0.5	0.3	0.5
Construction.....	3.6	4.5	5.6	1.9	4.2
Manufacturing.....	35.8	39.4	14.8	11.3	26.8
Wholesale Trade..... <sup>1</sup>	2.3	2.1	4.8	7.0	3.7
Retail Trade..... <sup>1</sup>	4.5	4.1	7.5	8.7	5.9
Transportation & Utilities.....	4.8	5.6	6.4	9.0	6.2
Comm. & Information.....	2.6	2.6	1.4	1.5	2.1
F.I.R.E.....	3.3	2.7	4.0	11.5	4.7
Services.....	15.1	14.6	24.8	11.1	17.1
Other Enterprises..... <sup>2</sup>	2.5	2.4	0.9	25.6	5.8
Government.....	13.5	8.3	17.1	3.9	11.2
<i>All Sectors in Region.....</i>	<i>100.0</i>	<i>100.0</i>	<i>100.0</i>	<i>100.0</i>	<i>100.0</i>

### Comparative Values for the State of Iowa, 2004

Major Sector (sum down to 100%)	Sector's percentage share of state industrial outlays				
	Industrial Inputs		Value Added Inputs		All Production Inputs
	Purchases from Local Industries	Imported Inputs	Labor Income	Other <sup>3</sup>	
Production Agriculture.....	7.2	8.4	6.0	5.0	6.9
Other Agriculture & Mining...	0.3	0.5	0.6	0.3	0.4
Construction.....	4.1	4.3	6.3	2.1	4.5
Manufacturing.....	40.0	48.2	18.3	16.2	32.5
Wholesale Trade.....	2.5	2.0	5.1	7.7	3.9
Retail Trade.....	3.8	3.0	6.6	7.6	4.9
Transportation & Utilities..... <sup>1</sup>	3.7	4.1	5.7	7.3	4.9
Comm. & Information..... <sup>1</sup>	3.0	3.2	2.4	3.2	2.9
F.I.R.E.....	8.5	6.5	9.1	18.1	9.6
Services.....	14.2	11.9	24.5	10.2	15.9
Other Enterprises..... <sup>2</sup>	2.1	1.5	0.8	19.0	4.2
Government.....	10.6	6.5	14.7	3.4	9.4
<i>All Sectors.....</i>	<i>100.0</i>	<i>100.0</i>	<i>100.0</i>	<i>100.0</i>	<i>100.0</i>

<sup>1</sup> Industrial inputs for the wholesale and retail sectors exclude the trade goods that they purchase for resale.

<sup>2</sup> Other enterprises include activities by households and governments that resemble those of business entities.

<sup>3</sup> Other property income + indirect business taxes

Figure 24

**Shares of Regional Industrial Outlays  
by Major Sector**

**Nonmetropolitan Southwest Iowa, 2004**

Major Sector (sum down to 100%)	Sector's percentage share of regional industrial outlays				
	Industrial Input Purchases		Value Added Payments		All Production Inputs
	Purchases from Local Industries	Imported Inputs	Labor Income	Other <sup>3</sup>	
Production Agriculture.....	19.0	19.5	19.4	13.4	18.4
Other Agriculture & Mining...	0.5	0.8	0.8	0.5	0.7
Construction.....	2.8	4.2	5.1	1.7	3.8
Manufacturing.....	33.5	35.5	14.1	10.1	25.0
Wholesale Trade..... <sup>1</sup>	1.7	1.7	3.9	5.9	3.0
Retail Trade..... <sup>1</sup>	3.4	3.5	6.2	8.6	5.0
Transportation & Utilities.....	4.3	4.0	4.8	5.0	4.4
Comm. & Information.....	3.0	3.2	1.7	1.9	2.5
F.I.R.E.....	2.9	2.5	4.0	11.6	4.4
Services.....	11.3	11.5	18.6	6.7	12.8
Other Enterprises..... <sup>2</sup>	2.7	2.8	1.3	29.7	6.5
Government.....	14.9	10.9	20.3	4.8	13.4
<i>All Sectors in Region.....</i>	<i>100.0</i>	<i>100.0</i>	<i>100.0</i>	<i>100.0</i>	<i>100.0</i>

**Comparative Values for the State of Iowa, 2004**

Major Sector (sum down to 100%)	Sector's percentage share of state industrial outlays				
	Industrial Inputs		Value Added Inputs		All Production Inputs
	Purchases from Local Industries	Imported Inputs	Labor Income	Other <sup>3</sup>	
Production Agriculture.....	7.2	8.4	6.0	5.0	6.9
Other Agriculture & Mining...	0.3	0.5	0.6	0.3	0.4
Construction.....	4.1	4.3	6.3	2.1	4.5
Manufacturing.....	40.0	48.2	18.3	16.2	32.5
Wholesale Trade.....	2.5	2.0	5.1	7.7	3.9
Retail Trade.....	3.8	3.0	6.6	7.6	4.9
Transportation & Utilities..... <sup>1</sup>	3.7	4.1	5.7	7.3	4.9
Comm. & Information..... <sup>1</sup>	3.0	3.2	2.4	3.2	2.9
F.I.R.E.....	8.5	6.5	9.1	18.1	9.6
Services.....	14.2	11.9	24.5	10.2	15.9
Other Enterprises..... <sup>2</sup>	2.1	1.5	0.8	19.0	4.2
Government.....	10.6	6.5	14.7	3.4	9.4
<i>All Sectors.....</i>	<i>100.0</i>	<i>100.0</i>	<i>100.0</i>	<i>100.0</i>	<i>100.0</i>

<sup>1</sup> Industrial inputs for the wholesale and retail sectors exclude the trade goods that they purchase for resale.

<sup>2</sup> Other enterprises include activities by households and governments that resemble those of business entities.

<sup>3</sup> Other property income + indirect business taxes

### **Figure 25 & 27 – Private Industries Ranked by Total Output**

All industrial output is composed of two portions: purchased commodity and service inputs (either locally produced or imported) and all payments to value added. These data rank the region's top 15 industries in high detail by amount of output. We can also look to see visually, the fraction of output in each industry that is finding its way into value added.

Crop production is the number one producer in the region, with value added equivalent to about half of its total output. Next is meat processing, which, comparatively, makes relatively few payments to value added, followed by livestock production. Industries that have comparatively high payments to value added relative to output are wholesale trade, power generation and supply, banking and savings, nursing and residential care, and hotels and motels (to include casino hotels).

For the nonmetropolitan area in Figure 27, crop production is still number one with exactly the same amounts, followed by livestock, and then meat processed from carcasses. Banking and savings, nursing and residential care, and wholesale trade indicated greater value added payments than payments to other inputs.

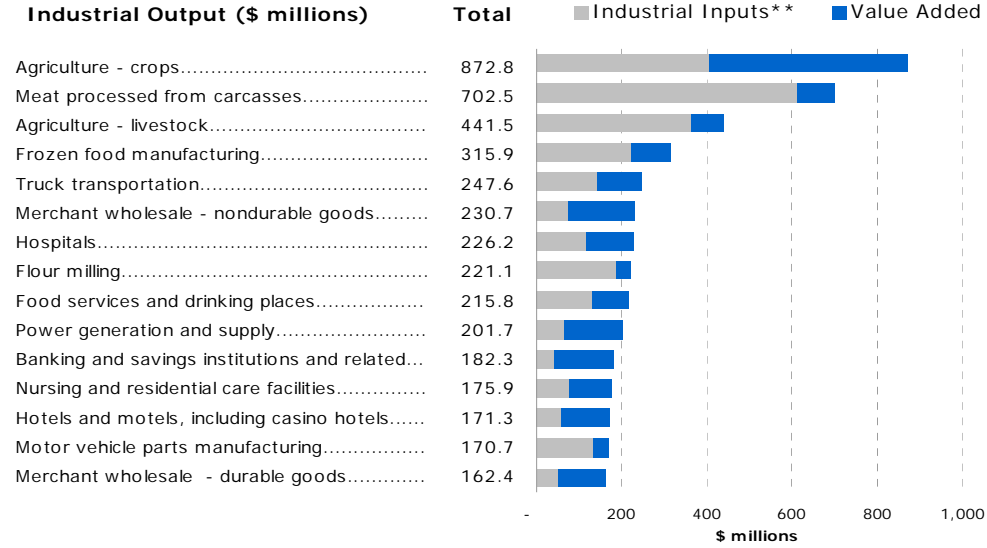
### **Figures 26 & 28 – Industries Ranked by Total Value Added**

This information gives us a sense of the distribution of value added in the region's top 15 industries ranked by total value added amounts. Crop production is still number one, and a very large fraction of value added finds its way into labor income. Government sectors are second and third because such a high fraction of the cost of government is for people. Several industries show that very high fractions of value added are labor income: wholesale trade, hotels and motels, health practitioners, the trucking industry, nursing and residential care, and meat processed from carcasses. Food services and drinking establishments and the automotive repair industry also show up in the top 15.

For the nonmetropolitan portion in 28, the same industries rank in the top 3. Livestock production shows up on this chart as 6<sup>th</sup> and auto repair, gasoline stations, food services and drinking, and nonstore retailers find their way into the top 15 payers of value added in the nonmetropolitan region.

Figure 25

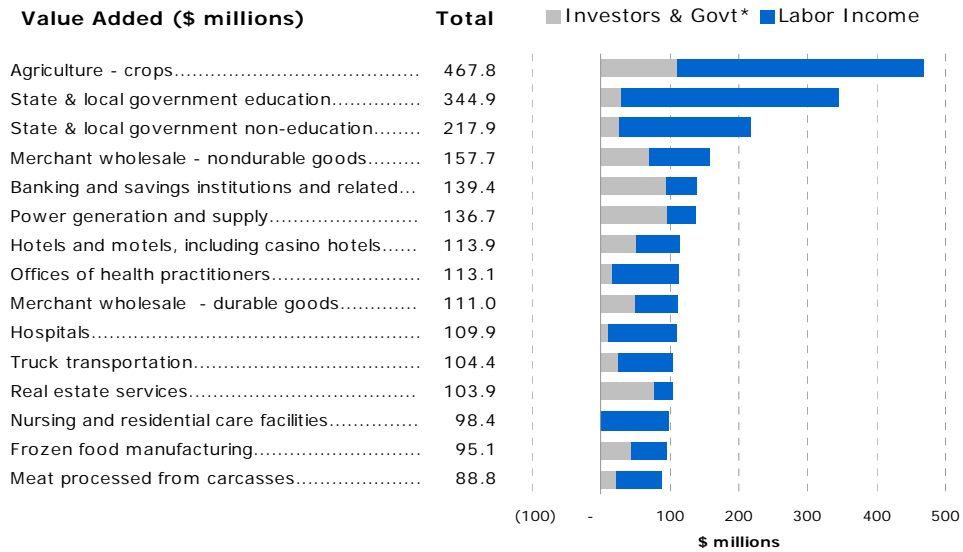
**Top 15 Private\* Industries Ranked by Total Output  
Southwest Iowa Region, 2004**



\* Excludes the government sector  
 \*\* Industrial input values for wholesale and retail trade industries do not include the value of trade goods purchased for resale; therefore, total industrial output for these industries reflects their margins on the traded goods.

Figure 26

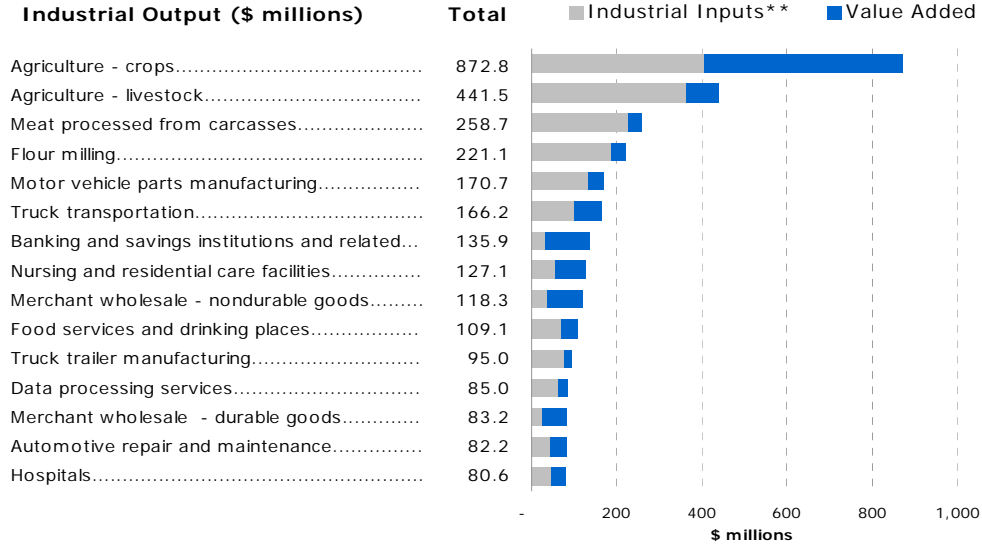
**Top 15 Industries Ranked by Total Value Added  
Southwest Iowa Region, 2004**



\* Other Property Income + Indirect Business Taxes

Figure 27

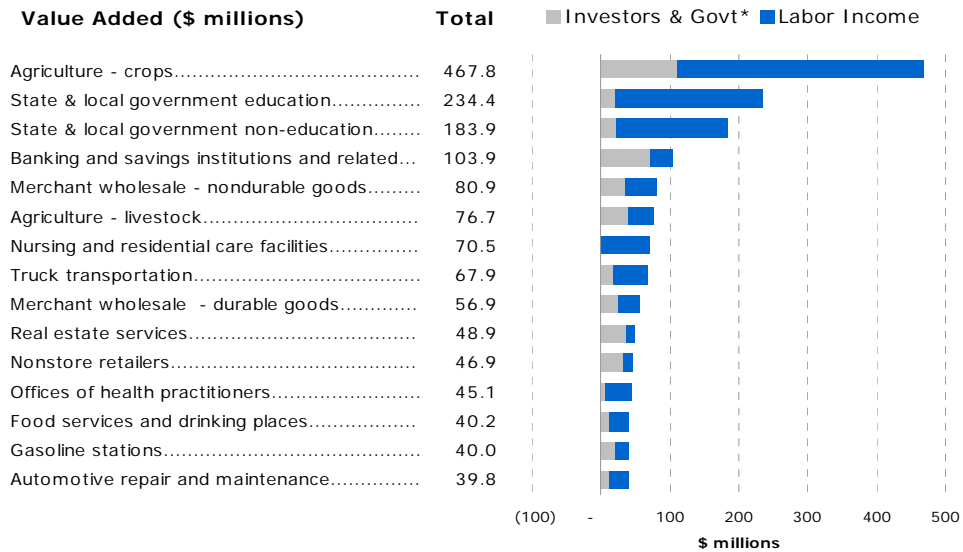
**Top 15 Private\* Industries Ranked by Total Output  
Nonmetropolitan Southwest Iowa, 2004**



\* Excludes the government sector  
 \*\* Industrial input values for wholesale and retail trade industries do not include the value of trade goods purchased for resale; therefore, total industrial output for these industries reflects their margins on the traded goods.

Figure 28

**Top 15 Industries Ranked by Total Value Added  
Nonmetropolitan Southwest Iowa, 2004**



\*Other Property Income + Indirect Business Taxes



## **Figures 29 & 30 – Inputs to Regional Industrial Production**

This next section gives us a sense of the region's major inputs into production and the fraction of those inputs that are estimated to be imported. The values show the total amounts of these inputs demanded by all industries in the region. This information lets us understand a couple of things. First, it shows which sectors are most important in satisfying intermediate industrial commodity demand. This information also can help us to begin to identify areas of industrial inputs that are very highly composed of imports.

The highest level of activity occurs in the very broad wholesale trade sector. Next we have real estate services, which are composed, primarily, of rent payments for land. We also see that there is strong demand for agricultural products as inputs, to include both crops and livestock. The regional supplies of these ranked goods are very high for wholesale, livestock production, trucking, meat processing, and banking services.

Excluding Council Bluffs elevates crop production to the highest input category, followed by wholesale and real estate. Again, the industries with the highest regional supply fractions are crop production, wholesale, livestock production, trucking, banking, power generation, pharmaceutical and medicine manufacturing, and miscellaneous professional and technical services.

Figure 29

### Top 20 Inputs to Regional Industrial Production Southwest Iowa Region, 2004

■ Assumed Imports ■ Regionally Supplied

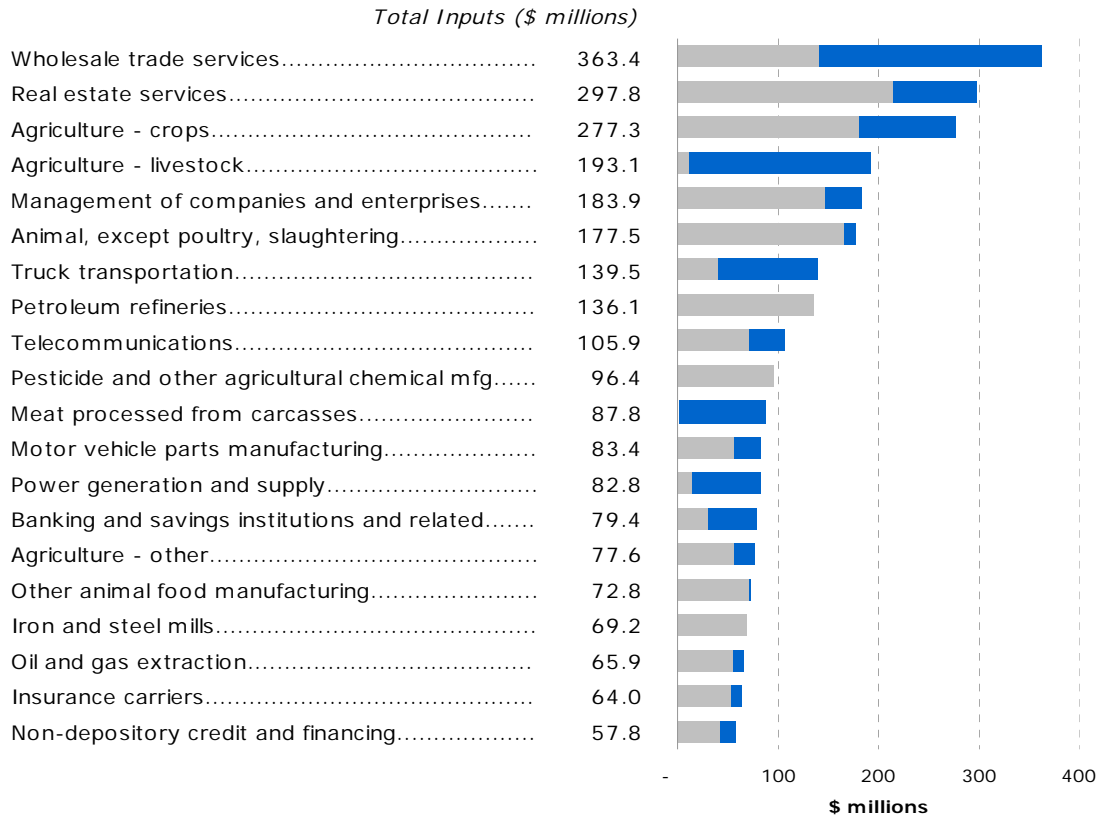
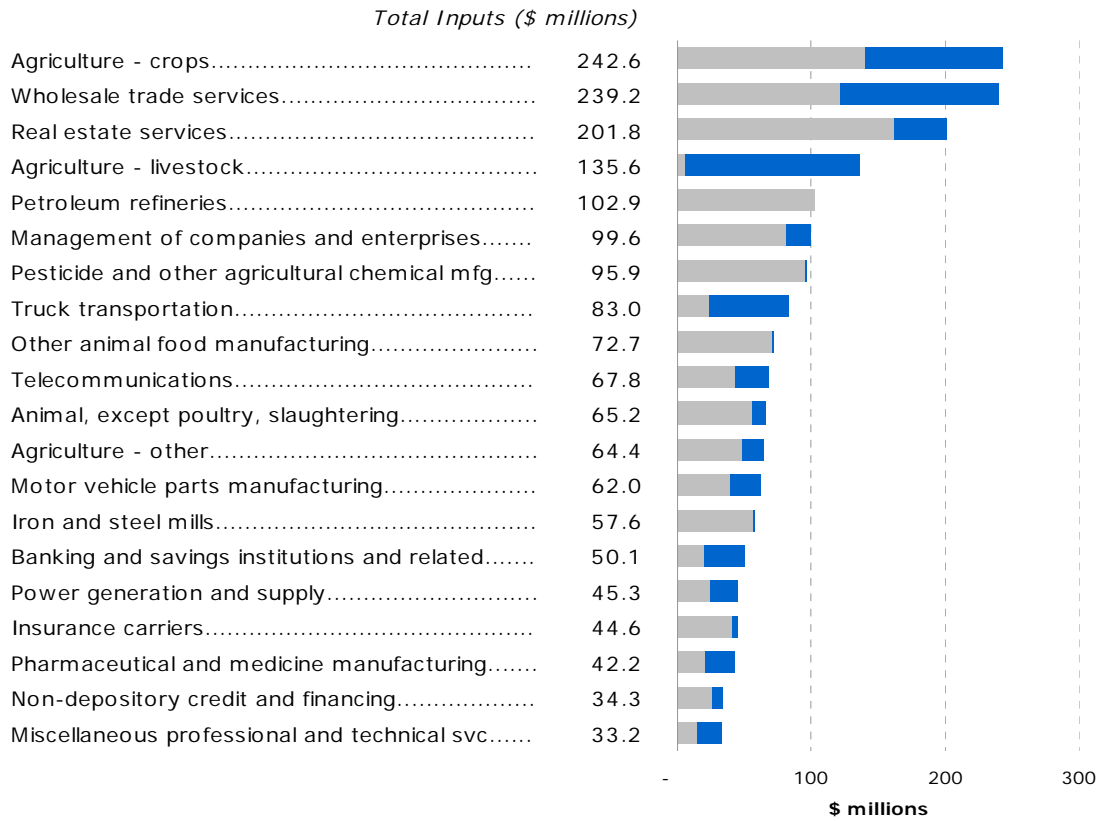


Figure 30

**Top 20 Inputs to Regional Industrial Production  
Nonmetropolitan Southwest Iowa, 2004**

■ Assumed Imports ■ Regionally Supplied



### **Figures 31 & 32 – Commodities or Services Imported**

This table ranks the estimated top 20 import categories. It helps us understand which areas of regional production are heavily dependent on external commodity and service sources. This list also helps us to begin to think about import-substitution candidates.

The region is estimated to make \$214.5 million in payments to real estate, a very large fraction of which are agricultural land rent payments. The industry also imports animal slaughter products, firm management, and large amounts of wholesale goods. There are several categories in this list that are not good candidates for import substitutes. The region is not going to attract, for example, petroleum refineries, ag chemical manufacturers, iron and steel mills, or oil and gas extracting firms. The region may be a candidate for an animal slaughtering enterprise or an animal feed manufacturer.

The region without Council Bluffs is displayed Figure 32. According to the modeling system, the region imports a large amount of real estate services and wholesale goods, like the region at large, but it also imports quite a bit of grain farming products. This might be a mere statistical artifact of the modeling system or it might indicate a production need. Again, some industries are not candidates for import-substitution economic development, but some are, like animal feeds production, animal slaughtering, and architectural and engineering services.

Figure 31

**Top 20 Commodities or Services Imported Into  
the Southwest Iowa Region, 2004**

*(listed by industries in which they are produced)*

<i>Commodity or Service</i>	Imports in \$ millions
Real estate services.....	214.5
Animal, except poultry, slaughtering.....	167.0
Management of companies and enterprises.....	147.7
Wholesale trade services.....	141.8
Petroleum refineries.....	136.1
Grain farming.....	116.3
Pesticide and other agricultural chemical manufacturing.....	95.6
Telecommunications.....	71.7
Other animal food manufacturing.....	71.4
Iron and steel mills.....	67.9
Motor vehicle parts manufacturing.....	56.7
Oil and gas extraction.....	56.2
Insurance carriers.....	54.0
Plastics material and resin manufacturing.....	47.4
Paperboard container manufacturing.....	45.6
Non-depository credit and financing.....	42.4
Agriculture and forestry support activities.....	41.3
Truck transportation.....	40.3
Management consulting services.....	39.1
Advertising and related services.....	38.1

**Figure 32**

**Top 20 Commodities or Services Imported Into  
Nonmetropolitan Southwest Iowa, 2004**

*(listed by industries in which they are produced)*

<i>Commodity or Service</i>	Imports in \$ millions
Real estate services.....	161.9
Wholesale trade services.....	121.9
Grain farming.....	109.7
Petroleum refineries.....	102.9
Pesticide and other agricultural chemical manufacturing.....	95.1
Management of companies and enterprises.....	81.5
Other animal food manufacturing.....	71.3
Iron and steel mills.....	56.8
Animal, except poultry, slaughtering.....	56.3
Agriculture and forestry support activities.....	43.4
Telecommunications.....	42.9
Insurance carriers.....	40.2
Motor vehicle parts manufacturing.....	39.3
Architectural and engineering services.....	27.7
Non-depository credit and financing.....	26.7
Advertising and related services.....	26.3
Truck transportation.....	23.9
Power generation and supply.....	23.6
Soybean processing.....	22.4
Oil and gas extraction.....	22.0

## Part C: Nonmetropolitan Southwest Iowa Regional Specialization Measures

*This portion of the study has two sections: the first looks at measures of industrial specialization in southwest Iowa, and the second identifies the import substitution and export sales potential for the region. Each part begins with a description of the table and the data followed by a multi-paged table.*

When we study an economic region, we pay particular attention to industries that demonstrate a competitive advantage – usually areas in which the regional economy indicates marked specialization. For this section we have done all calculations excluding the economy contained in Council Bluffs community in order to ascertain the industrial prospects of the overall non-metropolitan component of the region.

Regional specialization is measured by calculating a location quotient. The location quotient is the ratio of the regional percentage of total employment in an industry compared to the national percentage of employment in that same industry. Values greater than one ( $>1.0$ ) indicate a higher concentration of employment in the industry locally compared to the nation. Values less than one ( $<1.0$ ) mean that the region is not self-sufficient in that industry and probably must import those commodities. High location quotients indicate that the region is attractive to a particular industry, suggesting, in turn, a regional competitive advantage.

A cutoff location quotient value of 1.5 was applied to screen the industries that had demonstrable competitive advantages, and the non-metropolitan portion of the Southwest Iowa region demonstrates specialization in 37 industries. In Table 15, the specialization industries are grouped into three broad categories: agriculture and food processing, other manufacturing, and all other industries. Within the three groupings, the industries are sorted in descending order by their total value added contribution to the regional economy. These values appear in Column 2, expressed in millions of dollars. The values in Column 3 of the following table indicate the industry's location quotient.

The remaining columns in the table help evaluate the industry's contribution to the regional economy and contain several useful evaluative indicators. Keys to these indicators are summarized in Figure 33.

- The **regional dispersion** index tells whether the industry is isolated and concentrated within just a few counties, or if it is relatively dispersed among many counties in the region. A ranking of “low” on the dispersion index means the industry is found in just one county. A ranking of “medium” indicates that the industry may be present in more than one county, but employment is relatively concentrated within just a few counties. A ranking of “high” means that employment in the industry is widely and relatively evenly dispersed among several counties in the region.
- The **local linkages** measure tells us how well the industry links to other industries within the region. We gauge this linkage using the industrial job multiplier from an input-output model of the region. The multiplier tells us the job value of all linked input purchases relative to the number of jobs in that industry. So, an inputs job multiplier of 1.25 means that for every job in my industry, a quarter of a job is sustained in all of the industries that supply inputs to my firm. As would be expected, the higher the multiplier the better it is for the regional economy.
- The **projected job growth rate** indicates the outlook for job growth in the industry. The rating is based on the industry’s projected average, annual employment growth rate from 2004-2014 for the United States and is based on national estimates of expected growth, not local estimates. Industries with projected employment declines are coded as “low.” Industries that are projected to grow more slowly than the national average for all nonfarm industries (1.33 percent per year) are coded as “medium.” Industries that are projected to add jobs more rapidly than the average are coded as “high.”
- The **average earnings index** compares the regional average earnings per job to the statewide average for that industry. For all industries, the Southwest Iowa region averages 87 percent of the statewide average. “Low” indicates industries with average earnings per job below 87 percent of the statewide value (the region’s average). “Medium” indicates industries that are below the statewide average rate, but above the 87 percent mark. “High” indicates industries that pay higher than average earnings compared to the state.
- The **export jobs** value tells us the estimated number of jobs in the industry that are producing for export. The number of jobs expected to be producing for export sales are a function of the location quotient. That statistic first calculates how many jobs would be necessary to meet regional demand for a commodity, and the remaining jobs would then be producing for export sales.



**Figure 33. Criteria for Evaluating Industries**

Measure	Low ■	Medium ■	High ■
Regional Dispersion Index	1	0.50 - 0.99	< 0.50
Local Linkages (jobs multiplier)	< 1.25	1.25 - 1.50	> 1.50
Projected Job Growth Rate	< 0	< 1.33%	> 1.33%
Average Earnings Index	< 87%	85-100%	> 100%
Export Jobs	< 100	100-500	> 500

Figure 34 is an abbreviated sample of the overall table. It shows, from a production basis, that grain and oilseeds farming produce the most value added in the regional economy and that those industries have very high location quotients. A location quotient of 18.8 for grain farming means that it produces nearly 19 as much grain as would be needed to satisfy local industrial demand for grains – that there is significant production beyond local needs. The dispersion index for farming would obviously be blue or high while the flour milling advantage is highly localized, in contrast. As flour milling and meat processing require agricultural inputs, they have high job linkages back into the agricultural sector. Only meat processing has so-so projected growth prospects, with all others, on a jobs basis, expected to decline. Average earnings per job are lower than the regional average in all of the displayed sectors except for meat processing (*note: earnings in the agricultural sectors refer to hired labor, not farm proprietors and managers*). Last, the export job production in 4 of the 5 displayed firms is greater than 500.

**Figure 34**

Industry	Value Added	Location Quotient	Dispersion	Local Linkages	Projected Growth	Average Earnings	Export Jobs
Grain farming	230.0	18.8	■	■	■	■	■
Oilseed farming	208.2	26.7	■	■	■	■	■
Cattle ranching and farming	43.1	4.0	■	■	■	■	■
Flour milling	33.2	50.5	■	■	■	■	■
Meat processed from carcasses	32.5	13.2	■	■	■	■	■

**Table 15. Non-metropolitan Southwest Iowa Region Specialization Industries**

Industry	Value Added	Location Quotient	Dispersion	Local Linkages	Projected Growth	Average Earnings	Export Jobs
Agriculture & Food Processing	Grain farming.....	230.0	18.8	■	■	■	■
	Oilseed farming.....	208.2	26.7	■	■	■	■
	Cattle ranching and farming.....	43.1	4.0	■	■	■	■
	Flour milling.....	33.2	50.5	■	■	■	■
	Meat processed from carcasses.....	32.5	13.2	■	■	■	■
	All other crop farming.....	28.2	2.3	■	■	■	■
	Poultry and egg production.....	20.7	2.0	■	■	■	■
	Animal production, except cattle and poultry and eggs.....	12.9	11.5	■	■	■	■
	All other food manufacturing.....	12.0	11.0	■	■	■	■
	Agriculture and forestry support activities.....	8.6	1.5	■	■	■	■
	Poultry processing.....	7.6	2.4	■	■	■	■
Other animal food manufacturing.....	5.0	6.1	■	■	■	■	
Other Manufacturing	Motor vehicle parts manufacturing.....	38.3	2.0	■	■	■	■
	Glass and glass products, except glass containers.....	31.6	10.7	■	■	■	■
	Ball and roller bearing manufacturing.....	26.6	26.1	■	■	■	■
	Fabricated structural metal manufacturing.....	26.2	7.8	■	■	■	■
	Metal window and door manufacturing.....	20.6	10.9	■	■	■	■
	Truck trailer manufacturing.....	19.7	32.5	■	■	■	■
	Hand and edge tool manufacturing.....	17.8	17.3	■	■	■	■
	Rubber and plastics hose and belting manufacturing.....	17.5	15.3	■	■	■	■
	Scales, balances, and miscellaneous general purpose machinery.....	11.3	10.0	■	■	■	■
	Farm machinery and equipment manufacturing.....	9.4	4.4	■	■	■	■
	Other commercial and service industry machinery manufacturing.....	8.3	7.4	■	■	■	■
	Cut and sew apparel manufacturing.....	7.3	1.9	■	■	■	■
	Electromedical apparatus manufacturing.....	5.6	5.5	■	■	■	■
	AC, refrigeration, and forced air heating.....	5.5	2.6	■	■	■	■
	Prefabricated wood building manufacturing.....	5.0	6.1	■	■	■	■
	Buttons, pins, and all other miscellaneous manufacturing.....	4.2	3.3	■	■	■	■
	Air purification equipment manufacturing.....	3.0	10.0	■	■	■	■
	Ornamental and architectural metal work manufacturing.....	3.0	3.5	■	■	■	■
Miscellaneous electrical equipment manufacturing.....	2.3	6.2	■	■	■	■	
Other	Truck transportation.....	67.8	2.1	■	■	■	■
	Nonstore retailers.....	46.9	2.3	■	■	■	■
	Data processing services.....	22.5	5.5	■	■	■	■
	Rail transportation.....	20.4	1.9	■	■	■	■
	Stone mining and quarrying.....	12.1	6.1	■	■	■	■
Photographic services.....	3.8	1.5	■	■	■	■	

### **Part C (*continued*): Regional Import Substitution and Export Potential to Nearby Metropolitan Markets**

One of the advantages of using input output models of a regional economy is the ability to identify the flow of commodities into the region and determine whether there is sufficient flow of commodities to support new firm development. We call that import substitution, and import substitution has a discernible economic impact for a region.

Another economic impact opportunity is to identify the flow of commodities into neighboring metropolitan areas to see if that demand is sufficient to stimulate new production locally. We call that export potential. These findings are displayed in the following long, multi-page Table 16. The keys to interpreting the values in the table are described in Figure 35; a snapshot of the longer table is displayed below in Figure 36.

First, commodities are listed in descending order by the dollar value of imports into the Southwest Iowa region (exclusive of Council Bluffs). The import values appear in Column 2 of the table in millions of dollars. Column 3 shows the combined value of commodities imported into the Omaha-Council Bluffs and Des Moines economies, also referred to as the “export markets.” A cut-off value of \$2 million in imports was applied for regional imports or \$10 million for imports by the Omaha-Council Bluffs and Des Moines markets when choosing the industries to list.

The rest of the columns in the table help evaluate the region’s potential to develop new firms or expand existing firms that supply these commodities. The import substitution firm potential indicates the number of firms that might be supported if all imports were replaced by local suppliers. The firm threshold sizes are based on national averages values for sales per firm. Similarly, the export market firm potential indicates the number of firms that might be supported by the value of imports by the Omaha-Council Bluffs and Des Moines markets. For both the import substitution and export potential categories a red value means that there is not enough activity to support a firm, grey is 1 to 5 firms, and blue indicates greater than a 5 firm potential.

The sixth column in the table indicates whether the commodity is produced in an industry in Iowa’s targeted industrial development program.

This statistic is presented to give a sense of alignment with state economic development program and goals.

The last column indicates whether the industry that produces the commodity is present within the region, and whether the region demonstrates specialization in that industry. This statistic is based on the same location quotient value used in the previous section. It helps us to gauge whether the area is already a key producer of the commodity and demonstrates a competitive advantage in production.

**Figure 35. Criteria for Evaluating Industries**

<b>Measure</b>	<b>Low</b> ■	<b>Medium</b> ■	<b>High</b> ■
Import Substitute Firm Potential	<1	1-5 firms	>5 firms
Export Market Firm Potential	<1	1-5 firms	>5 firms
Iowa Targeted Industry		No	Yes
Regional Specialization	0 (not present)	<= 1.5	> 1.5

A snapshot of the larger table is displayed below in Figure 36. The industries are sorted in descending order in terms of estimated imports. At the outset it is important to scrutinize the potential feasibility of some of the categories. Ranked number one is real estate. That is because there are absentee agricultural land and other land and property owners from whom area farmers, businesses, and households must rent. Another industry that must be assessed carefully is the insurance carrier industry. For insurance companies to sell their products, they establish contractual sales relationships with wholesale and retail insurance agencies. These firms must import agency services to sell their product. The region does have a dearth of insurance carriers, but in the external economies of Omaha and Des Moines, the carriers themselves buy specialized insurance and reinsurance services from firms outside of the region, and businesses and households import insurance services from outside of the region. Every person that has State Farm auto or home insurance is importing that insurance from Bloomington, Illinois, for example.

Next this example shows us that there may be opportunities for strong firm growth in and not enough demand locally in others. As the export

statistics are going to be so much greater than the regions, the potential for firm growth is also greater. Half of these top ten industries are among Iowa's targeted firms, but only two of the top ten align with the regions productive specializations.

**Figure 36. The Top 10 Commodities Imported by Regional Industries**

<b>Industry</b>	Regional Imports (\$mil)	External Market (\$mil)	Import Sub. Firm Potential	Export Firm Potential	Iowa Targeted Industry	Regional Specialization
Real estate	161.9	852.3	■	■	■	■
Wholesale trade	121.9	146.7	■	■	■	■
Pesticide and other agricultural chemical manufacturing	95.1	50.8	■	■	■	■
Management of companies and enterprises	81.5	475.6	■	■	■	■
Other animal food manufacturing	71.3	63.3	■	■	■	■
Iron and steel mills	56.8	251.8	■	■	■	■
Animal, except poultry, slaughtering	56.3	53.7	■	■	■	■
Telecommunications	42.9	669.1	■	■	■	■
Insurance carriers	40.2	474.2	■	■	■	■
Motor vehicle parts manufacturing	39.3	383.0	■	■	■	■

**Table 16. Non-metropolitan Southwest Iowa Import Substitution and Export Market Potential**

<b>Industry</b>	<b>Regional Imports (\$mil)</b>	<b>External Market (\$mil)</b>	<b>Import Sub. Firm Potential</b>	<b>Export Firm Potential</b>	<b>Iowa Targeted Industry</b>	<b>Regional Specialization</b>
Real estate.....	161.9	852.3	■	■	■	■
Wholesale trade.....	121.9	146.7	■	■	■	■
Pesticide and other agricultural chemical manufacturing.....	95.1	50.8	■	■	■	■
Management of companies and enterprises.....	81.5	475.6	■	■	■	■
Other animal food manufacturing.....	71.3	63.3	■	■	■	■
Iron and steel mills.....	56.8	251.8	■	■	■	■
Animal, except poultry, slaughtering.....	56.3	53.7	■	■	■	■
Telecommunications.....	42.9	669.1	■	■	■	■
Insurance carriers.....	40.2	474.2	■	■	■	■
Motor vehicle parts manufacturing.....	39.3	383.0	■	■	■	■
Architectural and engineering services.....	27.7	230.5	■	■	■	■
Nondepository credit intermediation and related activities.....	26.7	219.0	■	■	■	■
Advertising and related services.....	26.3	492.2	■	■	■	■
Truck transportation.....	23.9	130.5	■	■	■	■
Power generation and supply.....	23.6	99.8	■	■	■	■
Soybean processing.....	22.4	177.3	■	■	■	■
Oil and gas extraction.....	22.0	986.1	■	■	■	■
Management consulting services.....	21.6	271.5	■	■	■	■
Legal services.....	21.6	231.7	■	■	■	■
Pharmaceutical and medicine manufacturing.....	21.3	195.0	■	■	■	■
Securities, commodity contracts, investments.....	20.4	409.5	■	■	■	■
Monetary authorities and depository credit intermediation.....	19.6	321.5	■	■	■	■
Nitrogenous fertilizer manufacturing.....	19.5	26.9	■	■	■	■
Employment services.....	17.5	217.6	■	■	■	■
Paperboard container manufacturing.....	16.8	227.3	■	■	■	■
Semiconductors and related device manufacturing.....	16.5	405.6	■	■	■	■
Plastics plumbing fixtures and all other plastics products.....	14.4	178.5	■	■	■	■
Warehousing and storage.....	14.1	37.8	■	■	■	■
All other miscellaneous professional and technical services.....	13.7	186.2	■	■	■	■
Automotive equipment rental and leasing.....	13.3	39.3	■	■	■	■
Data processing services.....	13.1	233.6	■	■	■	■
All other electronic component manufacturing.....	13.1	190.3	■	■	■	■
AC, refrigeration, and forced air heating.....	12.6	98.8	■	■	■	■
Accounting and bookkeeping services.....	12.3	180.2	■	■	■	■
Tire manufacturing.....	11.9	95.0	■	■	■	■
Food services and drinking places.....	11.8	41.8	■	■	■	■
Couriers and messengers.....	11.6	145.0	■	■	■	■

**Table 16. Non-metropolitan Southwest Iowa Import Substitution and Export Market Potential**

<b>Industry</b>	<b>Regional Imports (\$mil)</b>	<b>External Market (\$mil)</b>	<b>Import Sub. Firm Potential</b>	<b>Export Firm Potential</b>	<b>Iowa Targeted Industry</b>	<b>Regional Specialization</b>
Air transportation.....	11.3	189.2	■	■	■	■
Information services.....	10.9	156.9	■	■	■	■
Other basic inorganic chemical manufacturing.....	10.4	58.7	■	■	■	■
Lessors of nonfinancial intangible assets.....	10.0	71.3	■	■	■	■
Plastics packaging materials, film and sheet.....	10.0	58.4	■	■	■	■
Sawmills.....	9.8	89.1	■	■	■	■
Commercial machinery repair and maintenance.....	9.3	114.8	■	■	■	■
Fabricated structural metal manufacturing.....	9.1	76.7	■	■	■	■
Ferrous metal foundaries.....	8.9	62.2	■	■	■	■
Services to buildings and dwellings.....	8.7	162.0	■	■	■	■
Plastics material and resin manufacturing.....	8.6	147.9	■	■	■	■
Scientific research and development services.....	8.6	53.8	■	■	■	■
Paint and coating manufacturing.....	8.3	97.7	■	■	■	■
Other computer peripheral equipment manufacturing.....	8.1	107.4	■	■	■	■
Flavoring syrup and concentrate manufacturing.....	8.1	161.4	■	■	■	■
Paper and paperboard mills.....	7.5	278.0	■	■	■	■
Metal valve manufacturing.....	7.4	97.5	■	■	■	■
Ball and roller bearing manufacturing.....	7.4	25.8	■	■	■	■
Other computer related services, including facilities management.....	7.3	84.6	■	■	■	■
Ready-mix concrete manufacturing.....	7.2	159.3	■	■	■	■
Spice and extract manufacturing.....	7.2	20.2	■	■	■	■
Machine shops.....	6.9	55.4	■	■	■	■
Sheet metal work manufacturing.....	6.9	73.2	■	■	■	■
Flour milling.....	6.7	58.1	■	■	■	■
Other oilseed processing.....	6.6	25.0	■	■	■	■
Hotels and motels, including casino hotels.....	6.5	44.9	■	■	■	■
Motion picture and video industries.....	6.5	144.0	■	■	■	■
Machinery and equipment rental and leasing.....	6.5	113.3	■	■	■	■
Sightseeing transportation and transportation support.....	6.2	157.7	■	■	■	■
Office administrative services.....	6.1	122.1	■	■	■	■
Motor and generator manufacturing.....	6.0	33.5	■	■	■	■
Soft drink and ice manufacturing.....	5.9	68.6	■	■	■	■
Commercial printing.....	5.8	97.9	■	■	■	■
Other basic organic chemical manufacturing.....	5.8	110.1	■	■	■	■
Turned product and screw, nut, and bolt manufacturing.....	5.6	22.8	■	■	■	■
Other rubber product manufacturing.....	5.6	42.7	■	■	■	■
Aluminum foundries.....	5.6	19.4	■	■	■	■

**Table 16. Non-metropolitan Southwest Iowa Import Substitution and Export Market Potential**

<b>Industry</b>	<b>Regional Imports (\$mil)</b>	<b>External Market (\$mil)</b>	<b>Import Sub. Firm Potential</b>	<b>Export Firm Potential</b>	<b>Iowa Targeted Industry</b>	<b>Regional Specialization</b>
Steel wire drawing.....	5.6	48.7	■	■	■	■
General merchandise stores.....	5.4	7.7	■	■	■	■
Business support services.....	5.2	121.8	■	■	■	■
Pipeline transportation.....	5.1	206.8	■	■	■	■
Synthetic rubber manufacturing.....	5.1	88.7	■	■	■	■
Iron and steel forging.....	5.0	11.6	■	■	■	■
Other miscellaneous chemical product manufacturing.....	4.9	30.1	■	■	■	■
Other support services.....	4.7	114.0	■	■	■	■
Water, sewage and other systems.....	4.6	37.6	■	■	■	■
Other millwork, including flooring.....	4.5	37.0	■	■	■	■
Plate work manufacturing.....	4.5	21.1	■	■	■	■
Broadwoven fabric mills.....	4.4	17.9	■	■	■	■
Other engine equipment manufacturing.....	4.4	72.4	■	■	■	■
Household goods repair and maintenance.....	4.4	25.5	■	■	■	■
Coated and uncoated paper bag manufacturing.....	4.4	30.6	■	■	■	■
Computer systems design services.....	4.3	87.1	■	■	■	■
Coal mining.....	4.3	183.8	■	■	■	■
Relay and industrial control manufacturing.....	4.2	36.9	■	■	■	■
Waste management and remediation services.....	4.1	52.2	■	■	■	■
Clothing and clothing accessories stores.....	4.1	7.3	■	■	■	■
Wood windows and door manufacturing.....	4.0	32.6	■	■	■	■
Plastics pipe, fittings, and profile shapes.....	4.0	26.6	■	■	■	■
All other forging and stamping.....	3.9	42.0	■	■	■	■
Investigation and security services.....	3.9	48.0	■	■	■	■
Computer storage device manufacturing.....	3.8	58.0	■	■	■	■
Fruit and vegetable canning and drying.....	3.8	70.9	■	■	■	■
Hardware manufacturing.....	3.8	32.9	■	■	■	■
Stone mining and quarrying.....	3.8	45.2	■	■	■	■
Veterinary services.....	3.7	1.1	■	■	■	■
Coated and laminated paper and packaging materials.....	3.7	69.8	■	■	■	■
Miscellaneous fabricated metal product manufacturing.....	3.7	25.4	■	■	■	■
Insurance agencies, brokerages, and related.....	3.5	2,104.7	■	■	■	■
Metal can, box, and other container manufacturing.....	3.4	76.2	■	■	■	■
Specialized design services.....	3.3	39.7	■	■	■	■
Other concrete product manufacturing.....	3.2	61.2	■	■	■	■
Wiring device manufacturing.....	3.2	58.7	■	■	■	■
Wood kitchen cabinet and countertop manufacturing.....	3.1	44.4	■	■	■	■



**Table 16. Non-metropolitan Southwest Iowa Import Substitution and Export Market Potential**

<b>Industry</b>	<b>Regional Imports (\$mil)</b>	<b>External Market (\$mil)</b>	<b>Import Sub. Firm Potential</b>	<b>Export Firm Potential</b>	<b>Iowa Targeted Industry</b>	<b>Regional Specialization</b>
Lighting fixture manufacturing.....	3.0	62.0	■	■	■	■
Metal window and door manufacturing.....	2.9	63.7	■	■	■	■
Automatic environmental control manufacturing.....	2.9	16.8	■	■	■	■
Water transportation.....	2.9	36.3	■	■	■	■
Glass and glass products, except glass containers.....	2.8	27.8	■	■	■	■
Polish and other sanitation good manufacturing.....	2.8	34.1	■	■	■	■
Asphalt shingle and coating materials manufacturing.....	2.6	48.3	■	■	■	■
Civic, social, professional and similar organizations.....	2.6	31.4	■	■	■	■
Motor vehicle and parts dealers.....	2.6	6.7	■	■	■	■
Industrial gas manufacturing.....	2.5	39.5	■	■	■	■
Environmental and other technical consulting services.....	2.5	32.0	■	■	■	■
Independent artists, writers, and performers.....	2.5	33.7	■	■	■	■
Bread and bakery product, except frozen, manufacturing.....	2.5	25.0	■	■	■	■
Cable networks and program distribution.....	2.5	70.5	■	■	■	■
Primary nonferrous metal, except copper and aluminum.....	2.5	12.0	■	■	■	■
Pump and pumping equipment manufacturing.....	2.5	35.9	■	■	■	■
Cement manufacturing.....	2.5	40.7	■	■	■	■
Cheese manufacturing.....	2.4	57.8	■	■	■	■
Other maintenance and repair construction.....	2.3	54.6	■	■	■	■
Sand, gravel, clay, and refractory mining.....	2.3	28.4	■	■	■	■
Spectator sports.....	2.3	17.5	■	■	■	■
Hand and edge tool manufacturing.....	2.3	18.5	■	■	■	■
Gypsum product manufacturing.....	2.3	28.6	■	■	■	■
Special tool, die, jig, and fixture manufacturing.....	2.3	1.2	■	■	■	■
Engineered wood member and truss manufacturing.....	2.2	44.4	■	■	■	■
Seafood product preparation and packaging.....	2.2	31.9	■	■	■	■
Fluid power pump and motor manufacturing.....	2.2	18.9	■	■	■	■
Asphalt paving mixture and block manufacturing.....	2.2	40.9	■	■	■	■
Veneer and plywood manufacturing.....	2.1	43.2	■	■	■	■
Other personal services.....	2.1	3.5	■	■	■	■
Wood container and pallet manufacturing.....	2.1	23.5	■	■	■	■
Gasket, packing, and sealing device manufacturing.....	2.1	16.8	■	■	■	■
Envelope manufacturing.....	2.0	24.3	■	■	■	■
Furniture and home furnishings stores.....	2.0	2.6	■	■	■	■
Electroplating, anodizing, and coloring metal.....	2.0	32.4	■	■	■	■
Funds, trusts, and other financial vehicles.....	1.1	166.3	■	■	■	■
Surgical and medical instrument manufacturing.....	1.3	58.0	■	■	■	■

**Table 16. Non-metropolitan Southwest Iowa Import Substitution and Export Market Potential**

<b>Industry</b>	<b>Regional Imports (\$mil)</b>	<b>External Market (\$mil)</b>	<b>Import Sub. Firm Potential</b>	<b>Export Firm Potential</b>	<b>Iowa Targeted Industry</b>	<b>Regional Specialization</b>
Tire cord and tire fabric mills.....	0.0	54.4	■	■	■	■
Database, directory, and other publishers.....	1.2	50.7	■	■	■	■
Other communications equipment manufacturing.....	1.9	50.5	■	■	■	■
Frozen food manufacturing.....	1.7	50.0	■	■	■	■
Broadcast and wireless communications equipment.....	0.3	47.1	■	■	■	■
Plastics bottle manufacturing.....	1.7	44.5	■	■	■	■
Periodical publishers.....	1.5	39.4	■	■	■	■
General and consumer goods rental except video tapes and discs.....	1.0	39.4	■	■	■	■
Reconstituted wood product manufacturing.....	1.6	35.3	■	■	■	■
Ornamental and architectural metal work manufacturing.....	1.6	35.0	■	■	■	■
Prefabricated metal buildings and components.....	1.9	31.4	■	■	■	■
Mineral wool manufacturing.....	1.6	30.2	■	■	■	■
Transit and ground passenger transportation.....	1.9	29.5	■	■	■	■
Book publishers.....	0.7	29.3	■	■	■	■
Travel arrangement and reservation services.....	0.6	27.0	■	■	■	■
Switchgear and switchboard apparatus manufacturing.....	1.5	26.0	■	■	■	■
Wood preservation.....	1.0	25.5	■	■	■	■
Concrete block and brick manufacturing.....	1.1	23.9	■	■	■	■
Prefabricated wood building manufacturing.....	1.0	23.3	■	■	■	■
Radio and television broadcasting.....	1.2	23.2	■	■	■	■
Other commercial and service industry machinery manufacturing.....	0.9	23.1	■	■	■	■
Promoters of performing arts and sports and agents for public figures.....	0.8	22.1	■	■	■	■
Custom compounding of purchased resins.....	0.5	21.5	■	■	■	■
Magnetic and optical recording media manufacturing.....	1.5	21.1	■	■	■	■
Surgical appliance and supplies manufacturing.....	2.0	20.3	■	■	■	■
Metal coating and nonprecious engraving.....	1.3	19.7	■	■	■	■
Rubber and plastics hose and belting manufacturing.....	1.8	19.7	■	■	■	■
Automotive repair and maintenance, except car washes.....	1.4	19.1	■	■	■	■
Custom computer programming services.....	0.2	19.0	■	■	■	■
Speed changers and mechanical power transmission equipment.....	0.2	18.5	■	■	■	■
Fabricated pipe and pipe fitting manufacturing.....	1.4	18.5	■	■	■	■
Buttons, pins, and all other miscellaneous manufacturing.....	1.6	18.0	■	■	■	■
Audio and video media reproduction.....	0.7	17.4	■	■	■	■
Prepress services.....	0.6	17.1	■	■	■	■
Cut stone and stone product manufacturing.....	1.0	16.9	■	■	■	■
Office supplies, except paper, manufacturing.....	0.6	16.3	■	■	■	■
Heating equipment, except warm air furnaces.....	1.1	16.2	■	■	■	■

**Table 16. Non-metropolitan Southwest Iowa Import Substitution and Export Market Potential**

<b>Industry</b>	<b>Regional Imports (\$mil)</b>	<b>External Market (\$mil)</b>	<b>Import Sub. Firm Potential</b>	<b>Export Firm Potential</b>	<b>Iowa Targeted Industry</b>	<b>Regional Specialization</b>
Colleges, universities, and junior colleges.....	1.6	15.9	■	■	■	■
Electromedical apparatus manufacturing.....	1.5	15.5	■	■	■	■
Miscellaneous wood product manufacturing.....	1.5	15.3	■	■	■	■
Sound recording industries.....	0.4	15.2	■	■	■	■
Electronic equipment repair and maintenance.....	0.9	15.1	■	■	■	■
Scales, balances, and miscellaneous general purpose machinery.....	0.5	14.4	■	■	■	■
Textile and fabric finishing mills.....	1.7	14.2	■	■	■	■
Manifold business forms printing.....	0.7	14.1	■	■	■	■
Concrete pipe manufacturing.....	1.3	14.0	■	■	■	■
Curtain and linen mills.....	1.0	14.0	■	■	■	■
Elevator and moving stairway manufacturing.....	0.7	13.9	■	■	■	■
Die-cut paper office supplies manufacturing.....	1.2	13.4	■	■	■	■
Laminated plastics plate, sheet, and shapes.....	1.1	13.1	■	■	■	■
Spring and wire product manufacturing.....	0.6	12.9	■	■	■	■
All other converted paper product manufacturing.....	1.0	12.7	■	■	■	■
Cutting tool and machine tool accessory manufacturing.....	1.5	12.3	■	■	■	■
Textile bag and canvas mills.....	0.8	12.1	■	■	■	■
Ceramic wall and floor tile manufacturing.....	0.7	12.0	■	■	■	■
Other miscellaneous textile product mills.....	0.7	11.6	■	■	■	■
Nonferrous metal, except copper and aluminum, shaping.....	1.6	11.3	■	■	■	■
Cut and sew apparel manufacturing.....	1.4	11.2	■	■	■	■
Brick and structural clay tile manufacturing.....	0.6	11.2	■	■	■	■
Custom roll forming.....	0.5	11.1	■	■	■	■
Wineries.....	0.8	11.1	■	■	■	■
Fluid power cylinder and actuator manufacturing.....	1.8	11.0	■	■	■	■
Dental equipment and supplies manufacturing.....	0.1	10.8	■	■	■	■