

2020 NEBRASKA THRIVING INDEX

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# COMPARISON PEER REGIONS

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The Nebraska Thriving Index provides economic developers, local elected officials and community leaders with economic and quality of life indicators to identify thriving and lagging regions so strategic, future-focused investments can be made.

# Introduction

Recent projects from the University of Nebraska-Lincoln Bureau of Business Research have benchmarked economic growth and resources in the state's two largest metropolitan areas — Lincoln, Neb., and Omaha, Neb. Research into the sources of growth has examined how growth is influenced by amenities enjoyed by both business and households and linkages between industries located throughout the state.

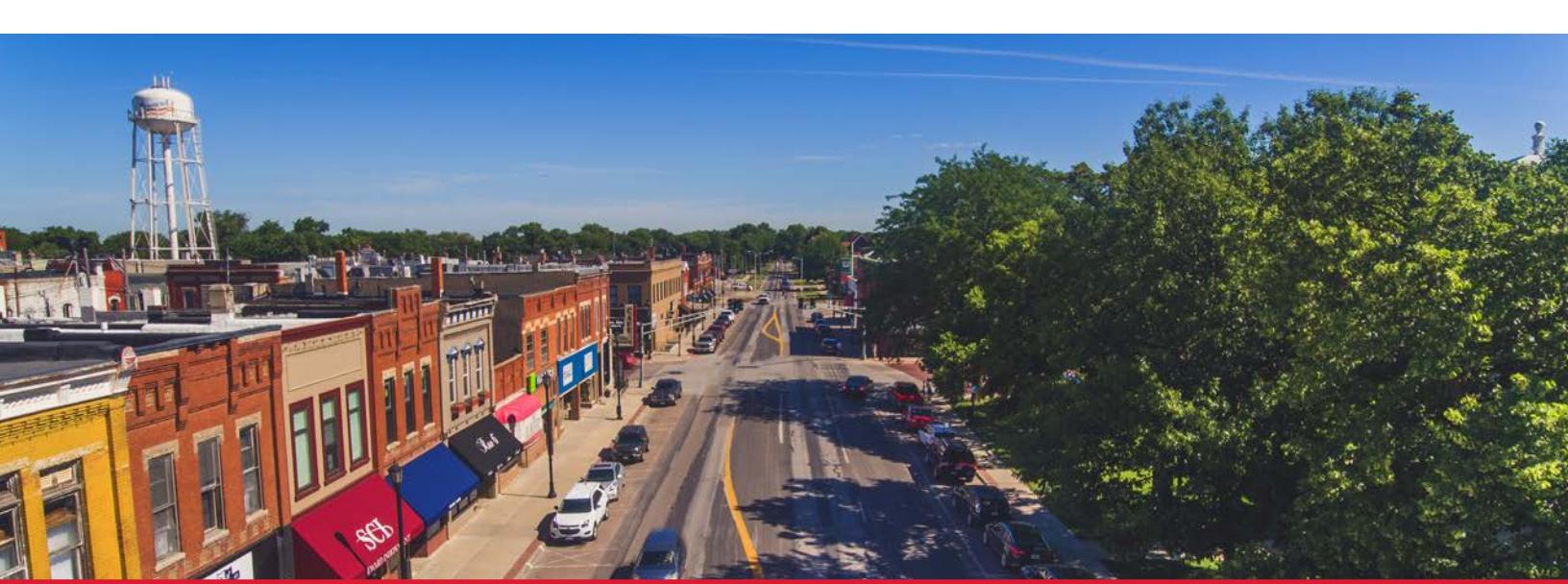
Now, the Rural Futures Institute (RFI) at the University of Nebraska (NU) has convened and funded an expanded research team from the University of Nebraska-Lincoln, the University of Nebraska at Kearney and Nebraska Extension Community Vitality Initiative to bring this analysis to all regions of Nebraska.

The first initial report was delivered online and in print in 2019. Now the second edition of this report was released in August 2020. Funding to sustain this work is a top priority.

**Ultimately, the goal is to provide community and state leaders with the ability to compare Nebraska regions with like peers located primarily in other states to better understand where a particular region excels or lags and to create action where needed.**



# Methodology



The research team identified relevant comparison regions against which Nebraska regions could benchmark. The regions selected were the most similar to each of the eight Nebraska regions identified; comparison regions might be in Nebraska or in another state in the region.

Rather than take an ad-hoc approach to finding the most comparable region, the team used Mahalanobis distance matching, a technique often used in statistical analysis to find comparable samples in observational studies. In observational studies, unlike randomized studies, there is often a difference between the studied groups and the control groups. Without a random selection

process, there is often a bias in measuring effects against a control group (Feng, Jun, & Xu, 2006). To counteract this bias, Mahalanobis distance matching was created. The Mahalanobis distance itself is similar to the Euclidean distance, but it controls for covariances among variables, too. The Euclidean distance is the ordinary straight-line distance between two points in space (think distance formula or the Pythagorean Theorem).

In total, the team considered 85 regions located in Colorado, Illinois, Iowa, Kansas, Minnesota, Missouri, Montana, Nebraska, South Dakota and Wyoming. Outside of Nebraska, USDA Economic Development Administration regions were utilized.

Six variables were used to compare each Nebraska region to the 85 other regions:

**Population in Region** – Regions with larger populations have some advantage for capturing more retail and service activity and have sufficient labor force to capture larger manufacturing firms.

**Percent of Population in Micropolitan Statistical Area** – Micropolitan counties (tied to a population center of at least 10,000) can differ systematically in terms of economic structure than smaller non-metropolitan counties.

**Percent Farm Income (of Total Income in Region) and % Ranch Income (of Total Income in Region)** – These two measures capture the degree to which the regional economy and its population trends are tied to trends in the agricultural sector. A focus on agricultural production also influences the diversity and entrepreneurial nature of the economy.

**Percent Manufacturing Employment (of Total Employment in Region)** – Regional specialization in manufacturing influences economic growth and the demographic characteristics of the population.

**Distance to Small MSA** – Interaction with a nearby metropolitan area influences the growth patterns, demographic make-up, wealth, education attainment and age structure of a region.

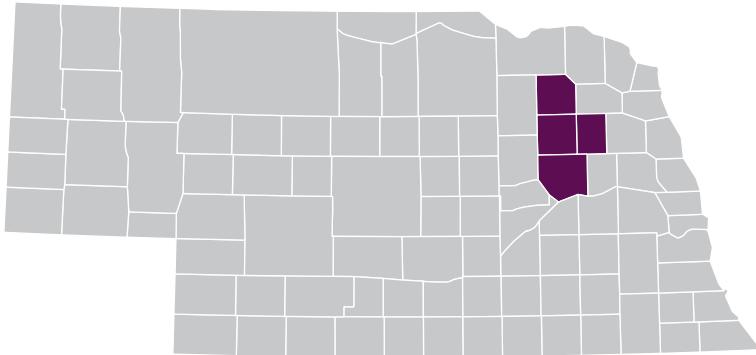
**Distance to Large MSA** – The above discussed patterns can be especially pronounced for rural areas in proximity to a Large MSA.

To start off our matching, each region and their calculated variables were used to develop a 7x7 covariance matrix, which shows how each variable varies with one another. This sets up a baseline on how each variable interacts and impacts other studied variables. Using R Statistical programming, researchers took each Nebraska region separately and processed each of the other 84 regions through the Mahalanobis distance formula. The output is a list of the 94 other regions and each region's corresponding Mahalanobis distance value, which indicates how similar each region is to the Nebraska region we seek to study. Investigators retained the top 5-7 smallest Mahalanobis distances (most similar regions) as matches to the Nebraska region studied. The same process and calculations were repeated for each of the Nebraska regions.

#### **Reference:**

Feng, Wuwei Wayne, Yu Jun, and Rong Xu. 2006. "A Method/Macro Based on Propensity Score and Mahalanobis Distance to Reduce Bias in Treatment Comparison in Observational Study." <https://pdfs.semanticscholar.org/4851/27f2a7a73aed4cdba4c2e8db33dfa00a78a6.pdf>

# NORTH 81 REGION



## COUNTIES

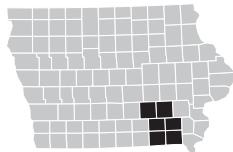
Madison, Pierce, Platte and  
Stanton

## Comparison Peer Regions

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### IOWA

Area 15 Regional Planning  
Commission  
[www.area15rpc.com](http://www.area15rpc.com)



### ILLINOIS

Blackhawk Hills Resource  
Conservation and Development  
[www.blackhawkhills.com](http://www.blackhawkhills.com)



### MISSOURI

Pioneer Trails Regional Planning  
Commission  
[www.trailsrpc.org](http://www.trailsrpc.org)



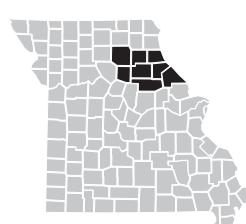
### MINNESOTA

Mid-Minnesota Development  
Commission  
[www.mmrdc.org](http://www.mmrdc.org)

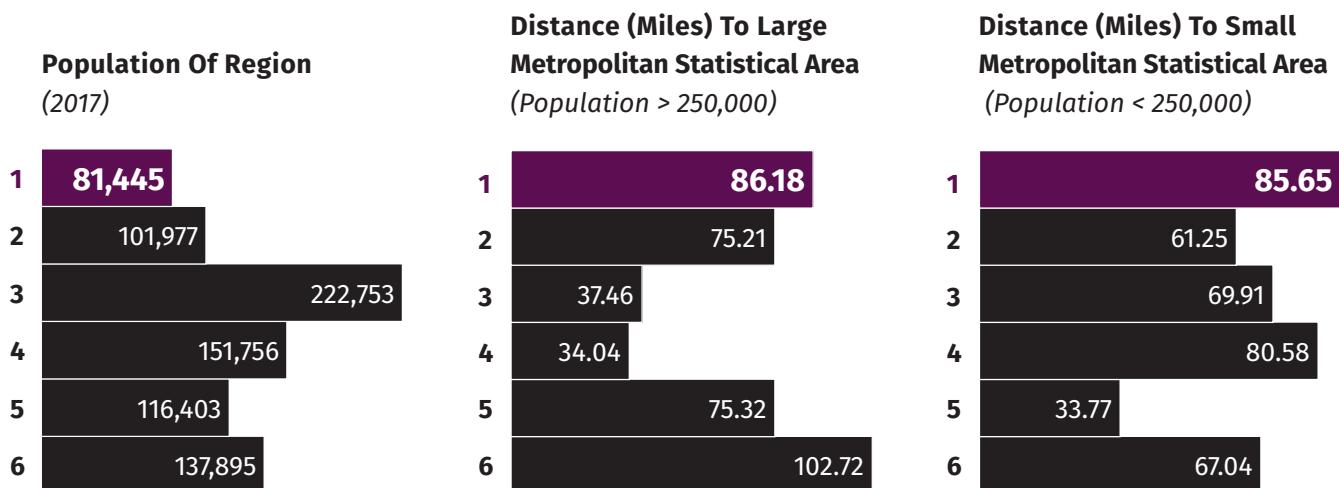


### MISSOURI

Mark Twain Regional Council of  
Governments  
[www.marktwaincog.com](http://www.marktwaincog.com)



## Comparison Region Economic Characteristics

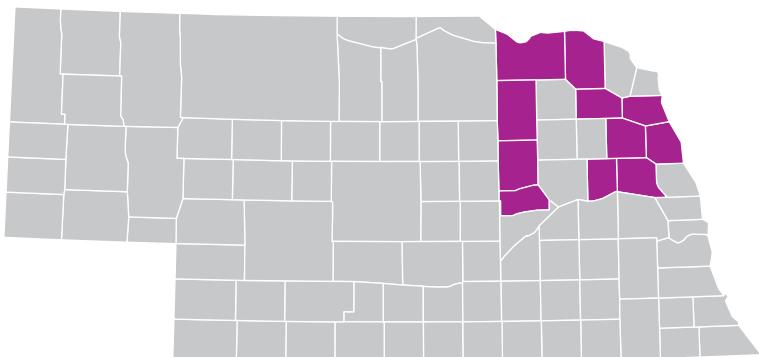


	1	2	3	4	5	6
<b>Percent Of Population In A Micropolitan Area</b>	<b>100%</b>	83.03%	83.79%	78.49%	67.55%	64.86%
<b>Farm Income Percent Of Total Personal Income</b>	<b>15.77%</b>	11.72%	11.92%	7.82%	16.53%	10.08%
<b>Ranch Income Percent Of Total Personal Income</b>	<b>22.9%</b>	10.65%	4.87%	5.57%	10.36%	5.67%
<b>Percent Of Employment In The Manufacturing Industry</b>	<b>18.16%</b>	16.40%	16.89%	16.08%	18.99%	13.88%

## Comparison Peer Region Key

1. NEBRASKA: North 81 Region
2. IOWA: Area 15 Regional Planning Commission
3. ILLINOIS: Blackhawk Hills Resource Conservation and Development
4. MISSOURI: Pioneer Trails Regional Planning Commission
5. MINNESOTA: Mid-Minnesota Development Commission
6. MISSOURI: Mark Twain Regional Council of Governments

# NORTHEAST REGION



## COUNTIES

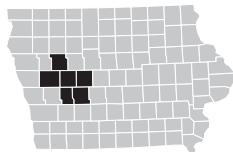
Antelope, Boone, Burt, Cedar,  
Colfax, Cuming, Dodge, Knox,  
Nance, Thurston and Wayne

## Comparison Peer Regions

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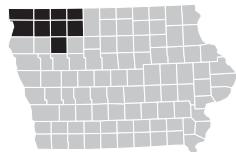
### IOWA

Region XII Council of  
Governments  
[www.region12cog.org](http://www.region12cog.org)



### IOWA

Northwest Iowa Planning &  
Development Commission  
[www.nwipdc.org](http://www.nwipdc.org)



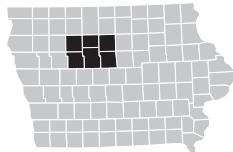
### NEBRASKA

Panhandle Region



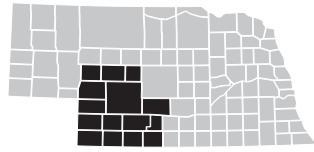
### IOWA

Mid-Iowa Development  
Association Council of  
Governments  
[www.midas cog.net](http://www.midas cog.net)

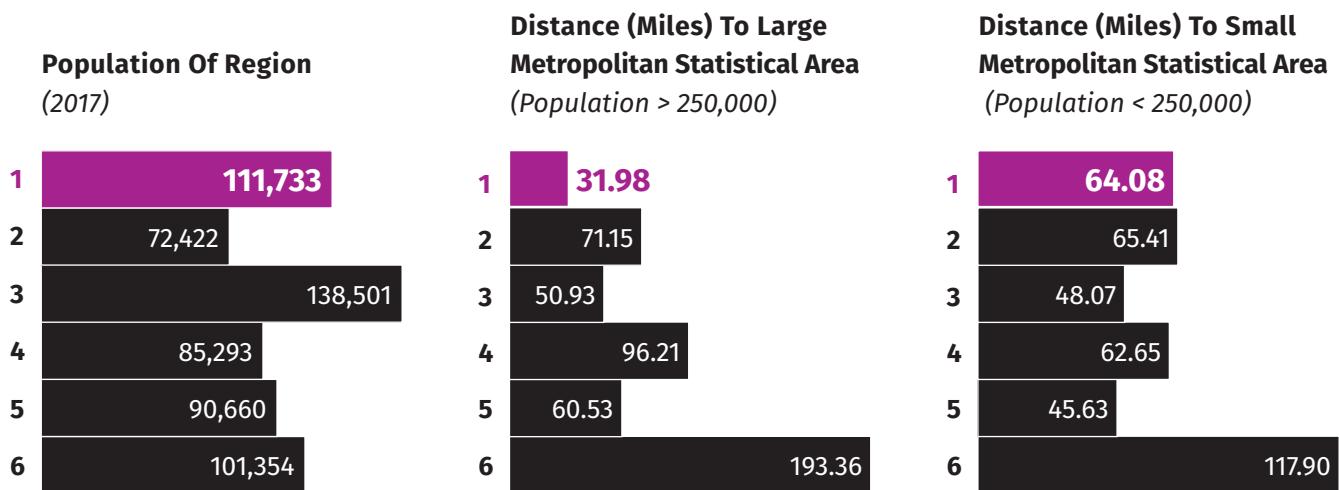


### NEBRASKA

Southwest Region



## Comparison Region Economic Characteristics

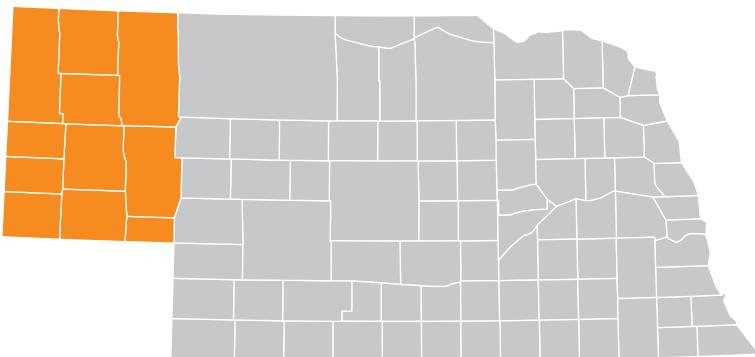


	1	2	3	4	5	6
<b>Percent Of Population In A Micropolitan Area</b>	<b>32.85%</b>	28.06%	38.61%	44.91%	40.38%	61.45%
<b>Farm Income Percent Of Total Personal Income</b>	<b>30.31%</b>	29.01%	22.61%	14.32%	24.03%	22.84%
<b>Ranch Income Percent Of Total Personal Income</b>	<b>53.18%</b>	33.01%	47.22%	35.22%	23.17%	48.62%
<b>Percent Of Employment In The Manufacturing Industry</b>	<b>12.08%</b>	14.26%	18.28%	5.08%	13.71%	10.27%

## Comparison Peer Region Key

1. NEBRASKA: Northeast Region
2. IOWA: Region XII Council of Governments
3. IOWA: Northwest Iowa Planning & Development Commission
4. NEBRASKA: Panhandle Region
5. IOWA: Mid-Iowa Development Association Council of Governments
6. NEBRASKA: Southwest Region

# PANHANDLE REGION



## COUNTIES

**Banner, Box Butte, Cheyenne,  
Dawes, Deuel, Garden, Kimball,  
Morrill, Scottsbluff, Sheridan  
and Sioux**

## Comparison Peer Regions

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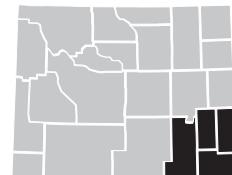
### NEBRASKA

Northeast Region



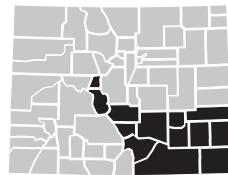
### WYOMING

Southeast Wyoming Economic  
Development District  
[www.southeastwyomingedd.org](http://www.southeastwyomingedd.org)



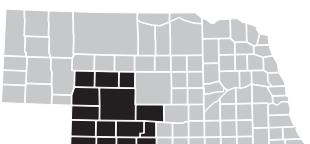
### COLORADO

Southern Colorado Economic  
Development District  
[www.scedd.com](http://www.scedd.com)



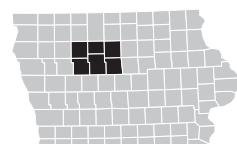
### NEBRASKA

Southwest Region



### IOWA

Mid-Iowa Development  
Association Council of  
Governments  
[www.midas cog.net](http://www.midas cog.net)



### NEBRASKA

Tri-Cities Region



## Comparison Region Economic Characteristics

Population Of Region (2017)	Distance (Miles) To Large Metropolitan Statistical Area (Population > 250,000)	Distance (Miles) To Small Metropolitan Statistical Area (Population < 250,000)
1 85,293	1 96.21	1 62.65
2 111,733	2 31.98	2 64.08
3 158,599	3 52.93	3 0.00
4 314,306	4 45.42	4 0.00
5 101,354	5 193.36	5 117.90
6 90,660	6 60.53	6 45.63
7 205,568	7 94.77	7 0.00

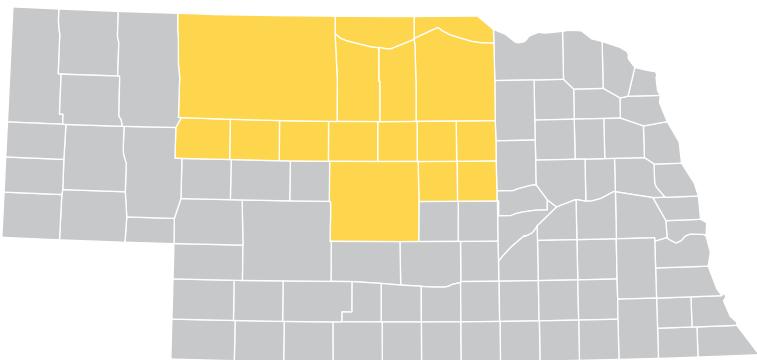
  

	1	2	3	4	5	6	7
Percent Of Population In A Micropolitan Area	44.91%	32.85%	24.17%	15.13%	61.45%	40.38%	42.78%
Farm Income Percent Of Total Personal Income	14.32%	30.31%	1.27%	1.63%	22.84%	24.03%	17.31%
Ranch Income Percent Of Total Personal Income	35.22%	53.18%	5.95%	6.23%	48.62%	23.17%	22.44%
Percent Of Employment In The Manufacturing Industry	5.08%	12.08%	3.38%	5.77%	10.27%	13.71%	13.07%

## Comparison Peer Region Key

1. NEBRASKA: Panhandle Region
2. NEBRASKA: Northeast Region
3. WYOMING: Southeast Wyoming Economic Development District
4. COLORADO: Southern Colorado Economic Development District
5. NEBRASKA: Southwest Region
6. IOWA: Mid-Iowa Development Association Council of Governments
7. NEBRASKA: Tri-Cities Region

# SANDHILLS REGION



## COUNTIES

Blaine, Boyd, Brown, Cherry,  
Custer, Garfield, Grant, Greeley,  
Holt, Hooker, Keya Paha, Loup,  
Rock, Thomas, Valley and  
Wheeler

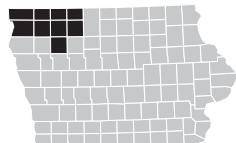
## Comparison Peer Regions

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### NEBRASKA Northeast Region



### IOWA Northwest Iowa Planning & Development Commission [www.nwipdc.org](http://www.nwipdc.org)



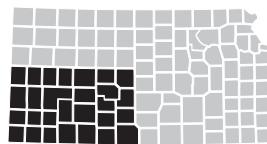
### NEBRASKA Southwest Region



### NEBRASKA Panhandle Region



### KANSAS Great Plains Development Inc. [www.gpdionline.com](http://www.gpdionline.com)



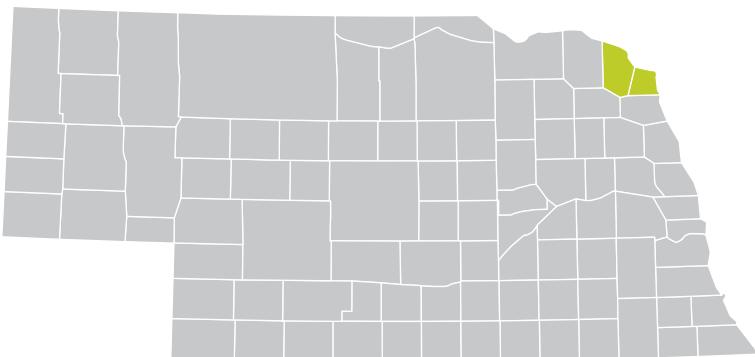
## Comparison Region Economic Characteristics

Population Of Region (2017)	Distance (Miles) To Large Metropolitan Statistical Area (Population > 250,000)	Distance (Miles) To Small Metropolitan Statistical Area (Population < 250,000)
1 46,693	1 163.73	1 73.62
2 111,733	2 31.98	2 64.08
3 138,501	3 50.93	3 48.07
4 101,354	4 193.36	4 117.90
5 85,293	5 96.21	5 62.65
6 210,852	6 180.70	6 199.30
	1 0.00% 32.85% 38.61% 61.45% 44.91% 58.84%	2 30.31% 22.61% 22.84% 14.32% 18.57%
Percent Of Population In A Micropolitan Area	31.01%	3 53.18% 47.22% 48.62% 35.22% 81.50%
Farm Income Percent Of Total Personal Income	89.49%	4 12.08% 18.28% 10.27% 5.08% 11.74%
Ranch Income Percent Of Total Personal Income	5.48%	5 10.27% 18.28% 12.08% 5.08% 11.74%
Percent Of Employment In The Manufacturing Industry	10.27%	6 18.28% 12.08% 10.27% 5.08% 11.74%

## Comparison Peer Region Key

1. NEBRASKA: Sandhills Region
2. NEBRASKA: Northeast Region
3. IOWA: Northwest Iowa Planning & Development Commission
4. NEBRASKA: Southwest Region
5. NEBRASKA: Panhandle Region
6. KANSAS: Great Plains Development Inc.

# SIOUXLAND REGION



## COUNTIES

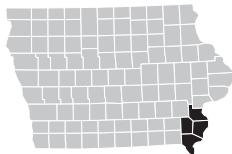
Dakota and Dixon

## Comparison Peer Regions

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### IOWA

Southeast Iowa Regional  
Planning Commission  
[www.seirpc.com](http://www.seirpc.com)



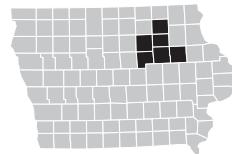
### MINNESOTA

Northwest Minnesota Regional  
Development Commission  
[www.nwrdc.org](http://www.nwrdc.org)



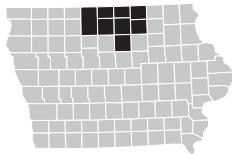
### IOWA

Iowa Northland Regional  
Council of Governments  
[www.inrcog.org](http://www.inrcog.org)



### IOWA

North Iowa Area Council of  
Governments  
[www.niacog.org](http://www.niacog.org)



### ILLINOIS

Southwestern Illinois Metropolitan  
& Regional Planning Commission  
[www.simapc.org](http://www.simapc.org)



## Comparison Region Economic Characteristics

<b>Population Of Region (2017)</b>	<b>Distance (Miles) To Large Metropolitan Statistical Area (Population &gt; 250,000)</b>	<b>Distance (Miles) To Small Metropolitan Statistical Area (Population &lt; 250,000)</b>
1 25,940	1 78.42	1 25.99
2 104,759	2 58.12	2 56.08
3 85,417	3 183.57	3 49.84
4 217,705	4 45.34	4 0.00
5 123,371	5 97.47	5 63.48
6 101,015	6 55.26	6 66.19

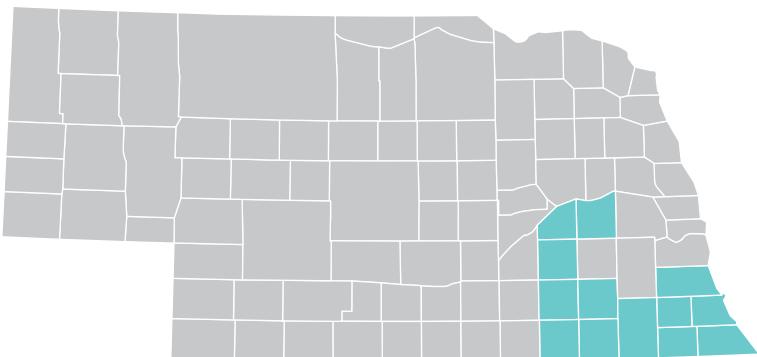
  

	1	2	3	4	5	6
<b>Percent Of Population In A Micropolitan Area</b>	<b>0.00%</b>	70.36%	0.00%	0.00%	40.91%	0.00%
<b>Farm Income Percent Of Total Personal Income</b>	<b>18.86%</b>	7.07%	33.10%	11.02%	21.86%	11.97%
<b>Ranch Income Percent Of Total Personal Income</b>	<b>9.90%</b>	4.02%	2.75%	8.24%	19.56%	4.34%
<b>Percent Of Employment In The Manufacturing Industry</b>	<b>33.82%</b>	22.77%	17.49%	17.23%	18.26%	15.92%

## Comparison Peer Region Key

1. NEBRASKA: Siouxland Region
2. IOWA: Southeast Iowa Regional Planning Commission
3. MINNESOTA: Northwest Minnesota Regional Development Commission
4. IOWA: Iowa Northland Regional Council of Governments
5. IOWA: North Iowa Area Council of Governments
6. ILLINOIS: Southwestern Illinois Metropolitan & Regional Planning Commission

# SOUTHEAST REGION



## COUNTIES

**Butler, Fillmore, Gage, Jefferson,  
Johnson, Nemaha, Otoe,  
Pawnee, Polk, Richardson,  
Saline, Thayer and York**

## Comparison Peer Regions

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### MINNESOTA

**Southwest Regional  
Development  
Commission**  
[www.swrdc.org](http://www.swrdc.org)



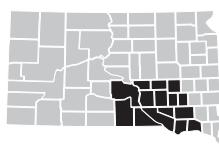
### MINNESOTA

**Upper Minnesota Valley  
Regional Development  
Commission**  
[www.umvrdc.org](http://www.umvrdc.org)



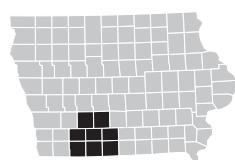
### SOUTH DAKOTA

**Planning &  
Development District III**  
[www.districtiii.org](http://www.districtiii.org)



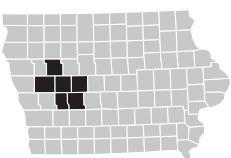
### IOWA

**Southern Iowa Council  
of Governments**  
[www.sicog.com](http://www.sicog.com)



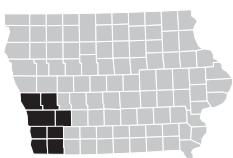
### IOWA

**Region XII Council of  
Governments**  
[www.region12cog.org](http://www.region12cog.org)



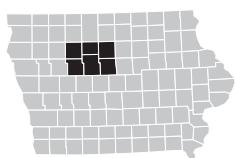
### IOWA

**Southwest Iowa  
Planning Council**  
[www.swipco.org](http://www.swipco.org)



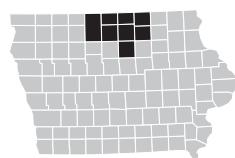
### IOWA

**Mid-Iowa Development  
Association Council of  
Governments**  
[www.midas cog.net](http://www.midas cog.net)

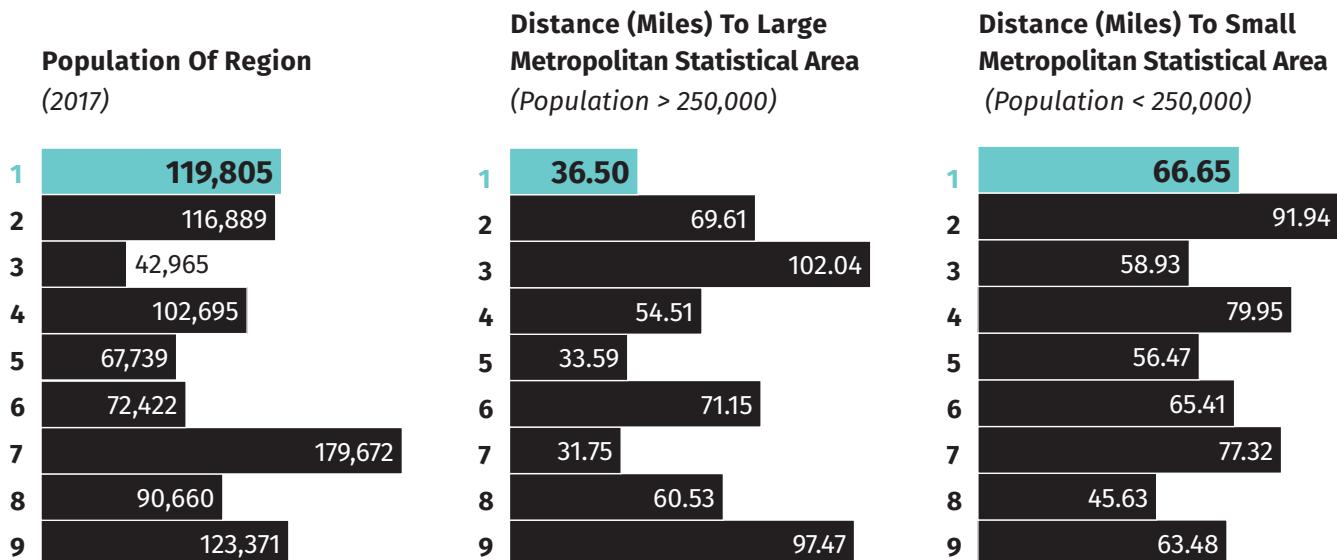


### IOWA

**North Iowa Area Council  
of Governments**  
[www.niacog.org](http://www.niacog.org)



## Comparison Region Economic Characteristics

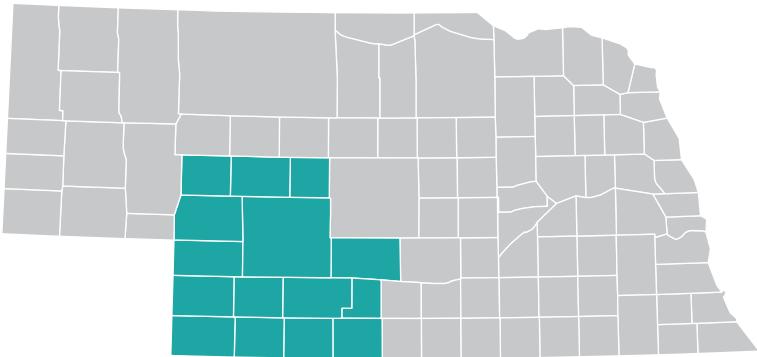


	1	2	3	4	5	6	7	8	9
Percent Of Population In A Micropolitan Area	<b>18.03%</b>	40.87%	0.00%	44.59%	0.00%	28.06%	0.00%	40.38%	40.91%
Farm Income Percent Of Total Personal Income	<b>30.95%</b>	29.70%	41.30%	29.19%	18.64%	29.01%	17.26%	24.03%	21.86%
Ranch Income Percent Of Total Personal Income	<b>15.02%</b>	27.59%	15.97%	21.61%	15.80%	33.01%	5.97%	23.17%	19.56%
Percent Of Employment In The Manufacturing Industry	<b>17.40%</b>	16.38%	12.18%	11.78%	14.21%	14.26%	11.66%	13.71%	18.26%

## Comparison Peer Region Key

1. NEBRASKA: Southeast Region
2. MINNESOTA: Southwest Regional Development Commission
3. MINNESOTA: Upper Minnesota Valley Regional Development Commission
4. SOUTH DAKOTA: Planning & Development District III
5. IOWA: Southern Iowa Council of Governments
6. IOWA: Region XII Council of Governments
7. IOWA: Southwest Iowa Planning Council
8. IOWA: Mid-Iowa Development Association Council of Governments
9. IOWA: North Iowa Area Council of Governments

# SOUTHWEST REGION



## COUNTIES

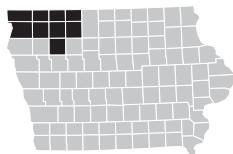
**Arthur, Chase, Dawson, Dundee,  
Frontier, Furnas, Gosper, Hayes,  
Hitchcock, Keith, Lincoln, Logan,  
McPherson, Perkins and Red  
Willow**

## Comparison Peer Regions

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### IOWA

**Northwest Iowa Planning  
& Development Commission**  
[www.nwipdc.org](http://www.nwipdc.org)



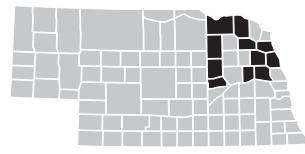
### NEBRASKA

**Panhandle Region**



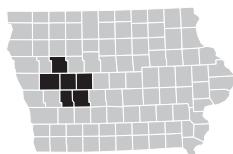
### NEBRASKA

**Northeast Region**



### IOWA

**Region XII Council of  
Governments**  
[www.region12cog.org](http://www.region12cog.org)



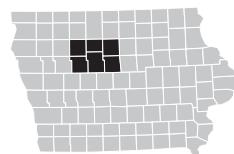
### MINNESOTA

**Southwest Regional  
Development Commission**  
[www.swrdc.org](http://www.swrdc.org)



### IOWA

**Mid-Iowa Development  
Association Council  
of Governments**  
[www.midas cog.net](http://www.midas cog.net)



## Comparison Region Economic Characteristics

Population Of Region (2017)	Distance (Miles) To Large Metropolitan Statistical Area (Population > 250,000)	Distance (Miles) To Small Metropolitan Statistical Area (Population < 250,000)
1 101,354	1 193.36	1 117.90
2 138,501	2 50.93	2 48.07
3 85,293	3 96.21	3 62.65
4 111,733	4 31.98	4 64.08
5 72,422	5 71.15	5 65.41
6 116,889	6 69.61	6 91.94
7 90,660	7 60.53	7 45.63

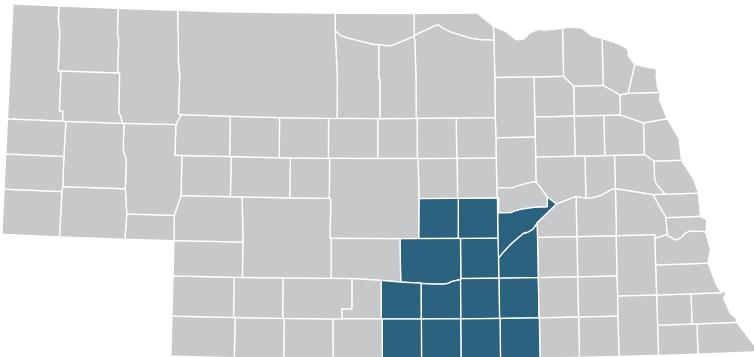
  

	1	2	3	4	5	6	7
Percent Of Population In A Micropolitan Area	61.45%	38.61%	44.91 %	32.85 %	28.06 %	40.87 %	40.38 %
Farm Income Percent Of Total Personal Income	22.84%	22.61%	14.32 %	30.31 %	29.01 %	29.70 %	24.03 %
Ranch Income Percent Of Total Personal Income	48.62%	47.22%	35.22 %	53.18 %	33.01 %	27.59 %	23.17 %
Percent Of Employment In The Manufacturing Industry	10.27%	18.28%	5.08 %	12.08 %	14.26 %	16.38 %	13.71 %

## Comparison Peer Region Key

1. NEBRASKA: Southwest Region
2. IOWA: Northwest Iowa Planning & Development Commission
3. NEBRASKA: Panhandle Region
4. NEBRASKA: Northeast Region
5. IOWA: Region XII Council of Governments
6. MINNESOTA: Southwest Regional Development Commission
7. IOWA: Mid-Iowa Development Association Council of Governments

# TRI-CITIES REGION



## COUNTIES

Adams, Buffalo, Clay, Franklin, Hall, Hamilton, Harlan, Howard, Kearney, Merrick, Nuckolls, Phelps, Sherman and Webster

## Comparison Peer Regions

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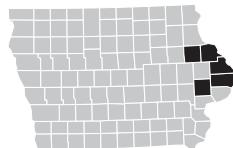
### MINNESOTA

Region Nine Development Commission  
[www.rndc.org](http://www.rndc.org)



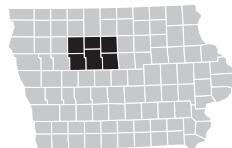
### IOWA

East Central Intergovernmental Association  
[www.ecia.org](http://www.ecia.org)



### IOWA

Mid-Iowa Development Association  
[www.midascog.net](http://www.midascog.net)



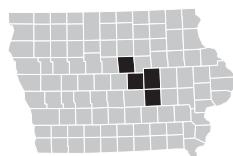
### KANSAS

North Central Regional Planning Commission  
[www.ncrpc.org](http://www.ncrpc.org)



### IOWA

Region 6 Planning Commission  
[www.region6planning.org](http://www.region6planning.org)



### MINNESOTA

Minnesota West Central Initiative  
[www.wcif.org](http://www.wcif.org)



## Comparison Region Economic Characteristics

Population Of Region (2017)	Distance (Miles) To Large Metropolitan Statistical Area (Population > 250,000)	Distance (Miles) To Small Metropolitan Statistical Area (Population < 250,000)
1 205,568	1 94.77	1 0.00
2 232,374	2 72.89	2 0.00
3 199,113	3 45.39	3 0.00
4 90,660	4 60.53	4 45.63
5 134,720	5 76.88	5 60.57
6 92,708	6 39.07	6 24.87
7 229,775	7 194.92	7 35.81
	1 2 3 4 5 6 7	
<b>Percent Of Population In A Micropolitan Area</b>	<b>42.78%</b>	19.38% 23.61% 40.38% 44.99% 43.46% 44.50%
<b>Farm Income Percent Of Total Personal Income</b>	<b>17.31%</b>	14.96% 8.76% 24.03% 15.30% 16.82% 14.87%
<b>Ranch Income Percent Of Total Personal Income</b>	<b>22.44%</b>	13.97% 10.05% 23.17% 8.63% 13.88% 6.52%
<b>Percent Of Employment In The Manufacturing Industry</b>	<b>13.07%</b>	16.63% 15.17% 13.71% 14.16% 18.44% 12.35%

## Comparison Peer Region Key

1. NEBRASKA: Tri-Cities Region
2. MINNESOTA: Region Nine Development Commission
3. IOWA: East Central Intergovernmental Association
4. IOWA: Mid-Iowa Development Association
5. KANSAS: North Central Regional Planning Commission
6. IOWA: Region 6 Planning Commission
7. MINNESOTA: Minnesota West Central Initiative

