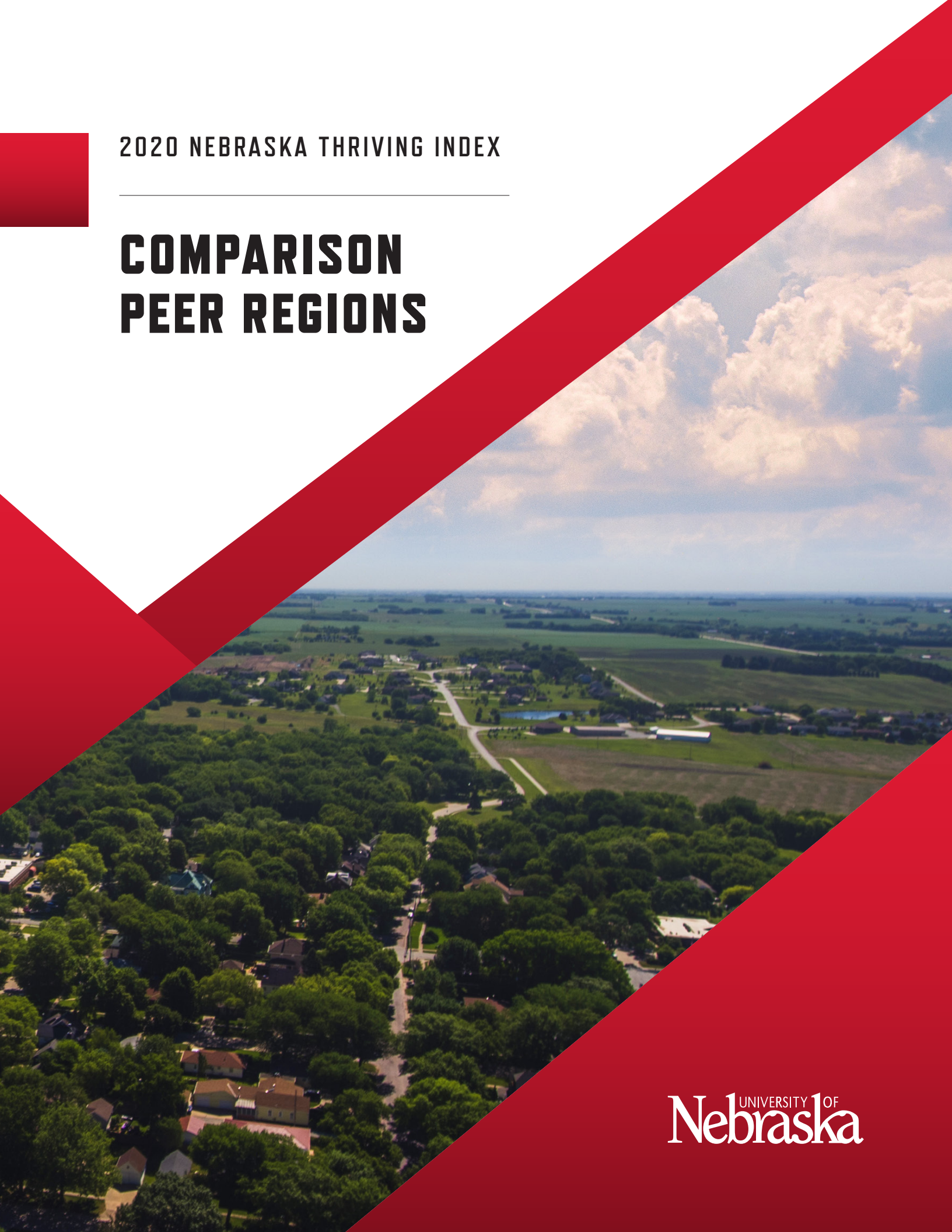


2020 NEBRASKA THRIVING INDEX

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.

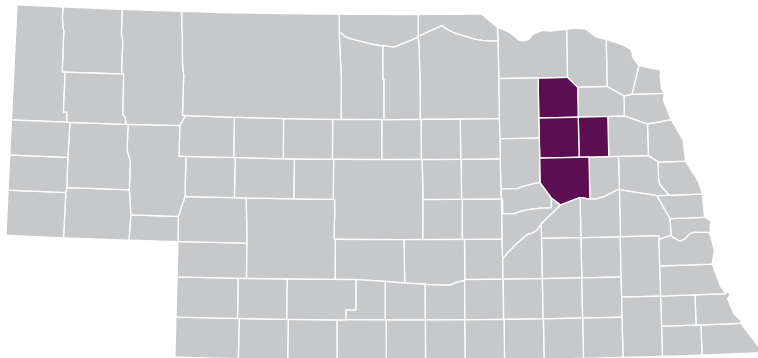
To start off our matching, each region and their calculated variables were used to develop a 7x7 covariance matrix, which shows how each variable varies with one another. This sets up a baseline on how each variable interacts and impacts other studied variables. Using R Statistical programming, researchers 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



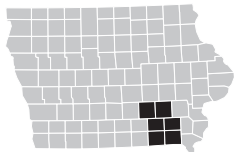
COUNTIES

Madison, Pierce, Platte and Stanton

Comparison Peer Regions

IOWA

Area 15 Regional Planning Commission
www.area15rpc.com



ILLINOIS

Blackhawk Hills Resource Conservation and Development
www.blackhawkhills.com



MISSOURI

Pioneer Trails Regional Planning Commission
www.trailsrpc.org



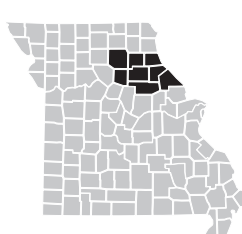
MINNESOTA

Mid-Minnesota Development Commission
www.mmrdc.org

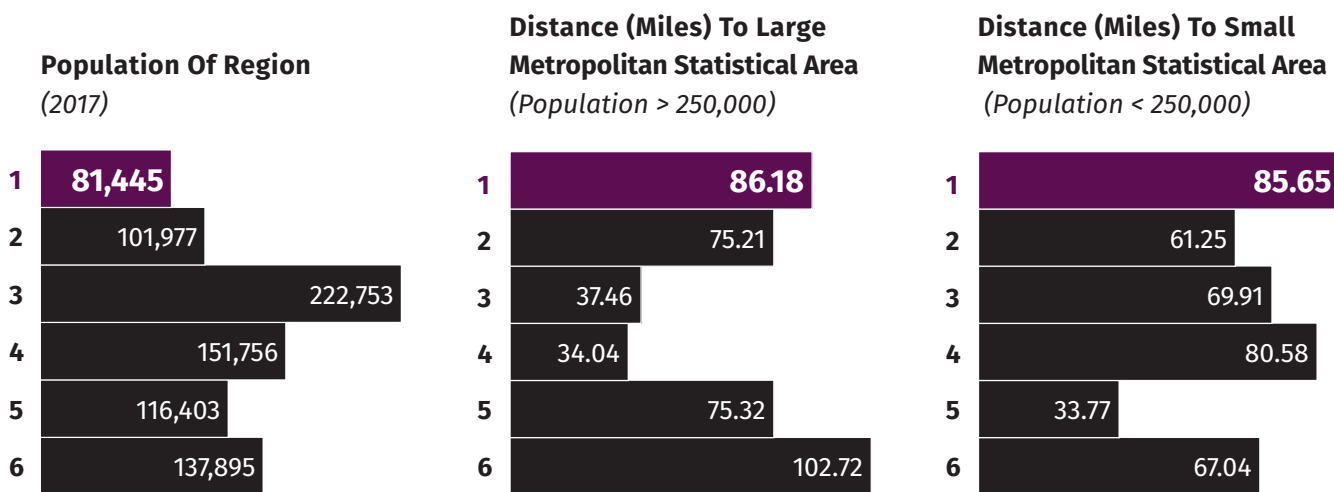


MISSOURI

Mark Twain Regional Council of Governments
www.marktwaincog.com



Comparison Region Economic Characteristics

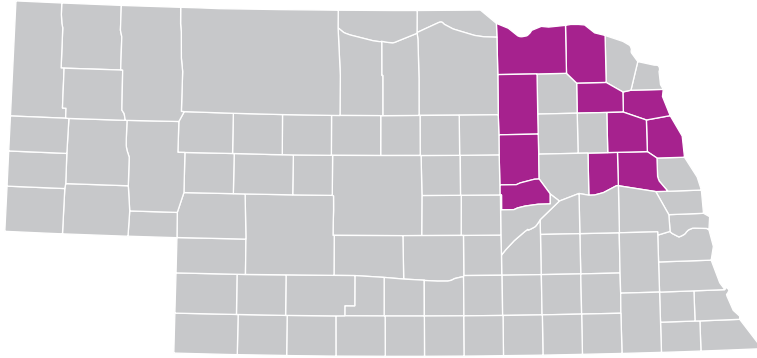


	1	2	3	4	5	6
Percent Of Population In A Micropolitan Area	100%	83.03%	83.79%	78.49%	67.55%	64.86%
Farm Income Percent Of Total Personal Income	15.77%	11.72%	11.92%	7.82%	16.53%	10.08%
Ranch Income Percent Of Total Personal Income	22.9%	10.65%	4.87%	5.57%	10.36%	5.67%
Percent Of Employment In The Manufacturing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



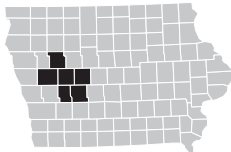
COUNTIES

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

Comparison Peer Regions

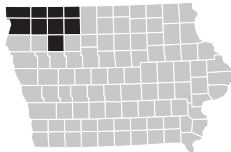
IOWA

Region XII Council of
Governments
www.region12cog.org



IOWA

Northwest Iowa Planning &
Development Commission
www.nwipdc.org



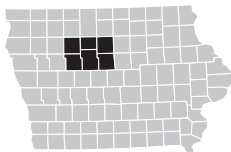
NEBRASKA

Panhandle Region



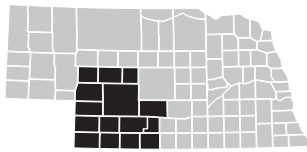
IOWA

Mid-Iowa Development
Association Council of
Governments
www.midascog.net

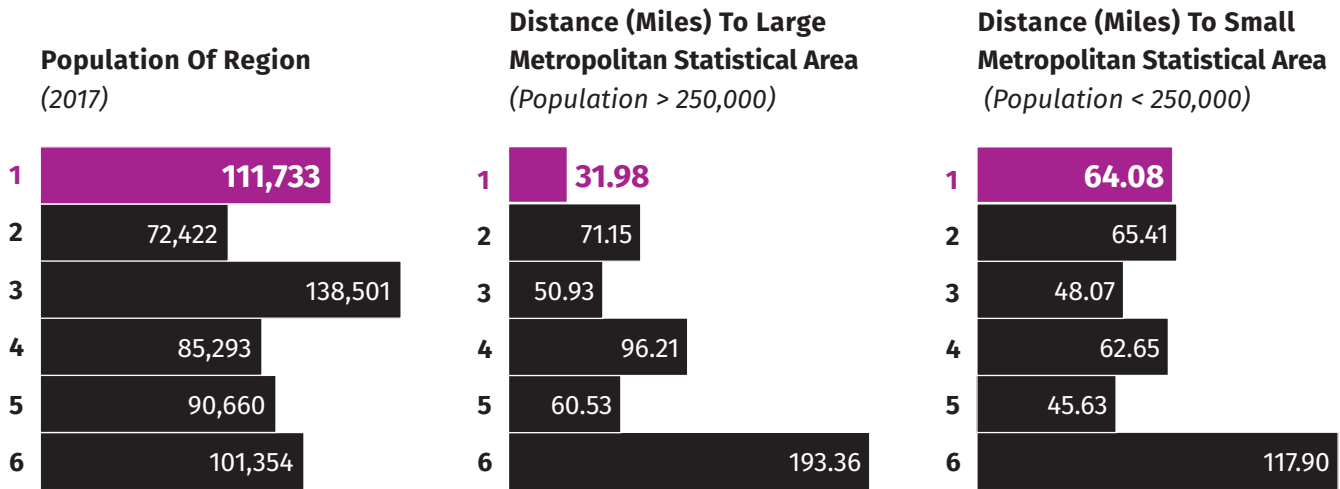


NEBRASKA

Southwest Region



Comparison Region Economic Characteristics

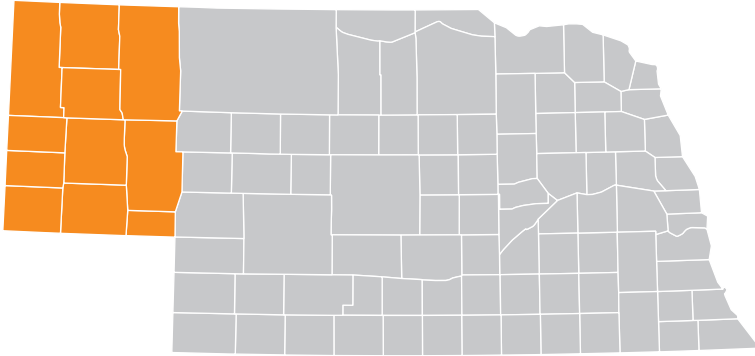


	1	2	3	4	5	6
Percent Of Population In A Micropolitan Area	32.85%	28.06%	38.61%	44.91%	40.38%	61.45%
Farm Income Percent Of Total Personal Income	30.31%	29.01%	22.61%	14.32%	24.03%	22.84%
Ranch Income Percent Of Total Personal Income	53.18%	33.01%	47.22%	35.22%	23.17%	48.62%
Percent Of Employment In The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



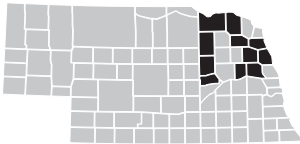
COUNTIES

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

Comparison Peer Regions

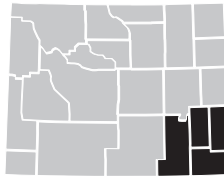
NEBRASKA

Northeast Region



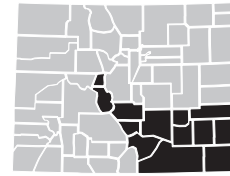
WYOMING

Southeast Wyoming Economic Development District
www.southeastwyomingedd.org



COLORADO

Southern Colorado Economic Development District
www.scedd.com



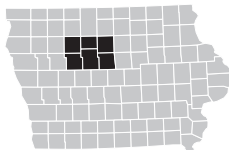
NEBRASKA

Southwest Region



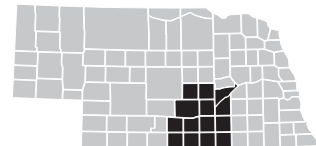
IOWA

Mid-Iowa Development Association Council of Governments
www.midascog.net

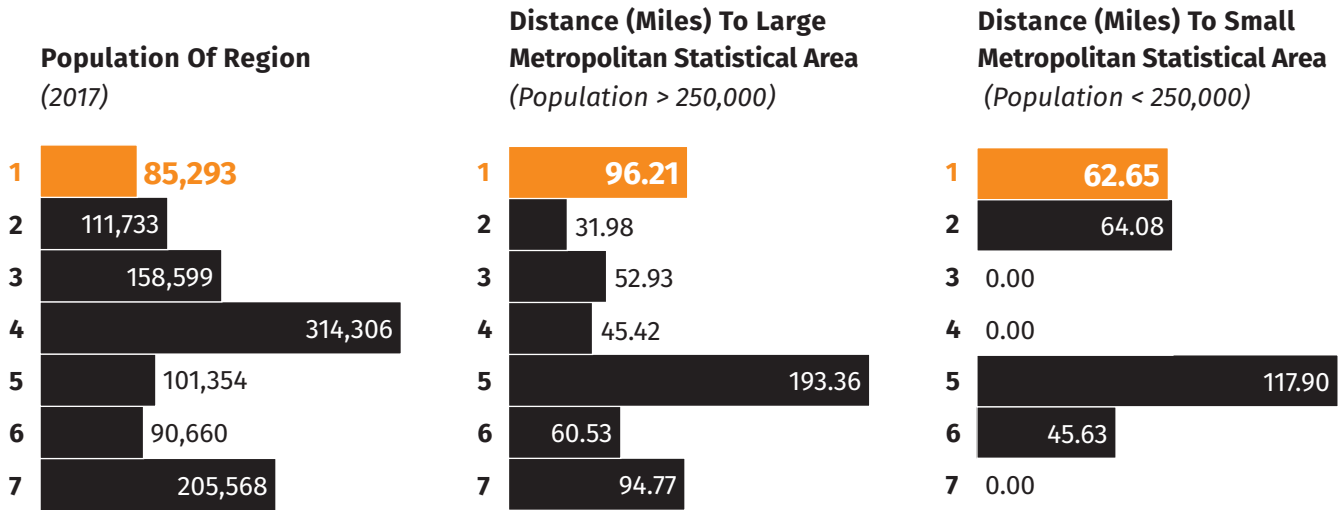


NEBRASKA

Tri-Cities Region



Comparison Region Economic Characteristics

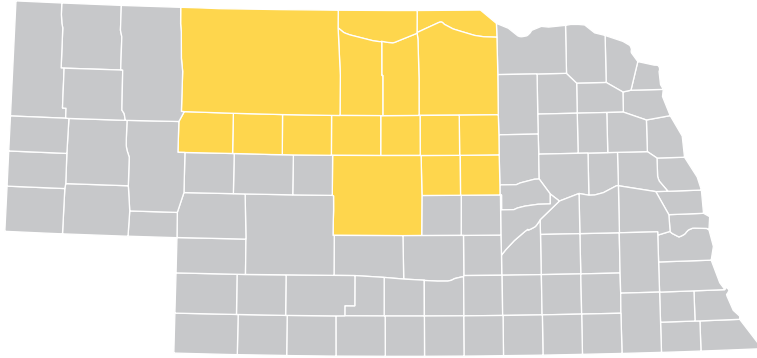


	1	2	3	4	5	6	7
Percent Of Population In A Micropolitan Area	44.91%	32.85%	24.17%	15.13%	61.45%	40.38%	42.78%
Farm Income Percent Of Total Personal Income	14.32%	30.31%	1.27%	1.63%	22.84%	24.03%	17.31%
Ranch Income Percent Of Total Personal Income	35.22%	53.18%	5.95%	6.23%	48.62%	23.17%	22.44%
Percent 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

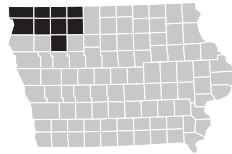
NEBRASKA

Northeast Region



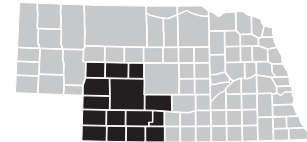
IOWA

Northwest Iowa Planning & Development Commission
www.nwipdc.org



NEBRASKA

Southwest Region



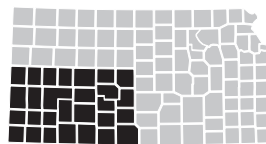
NEBRASKA

Panhandle Region

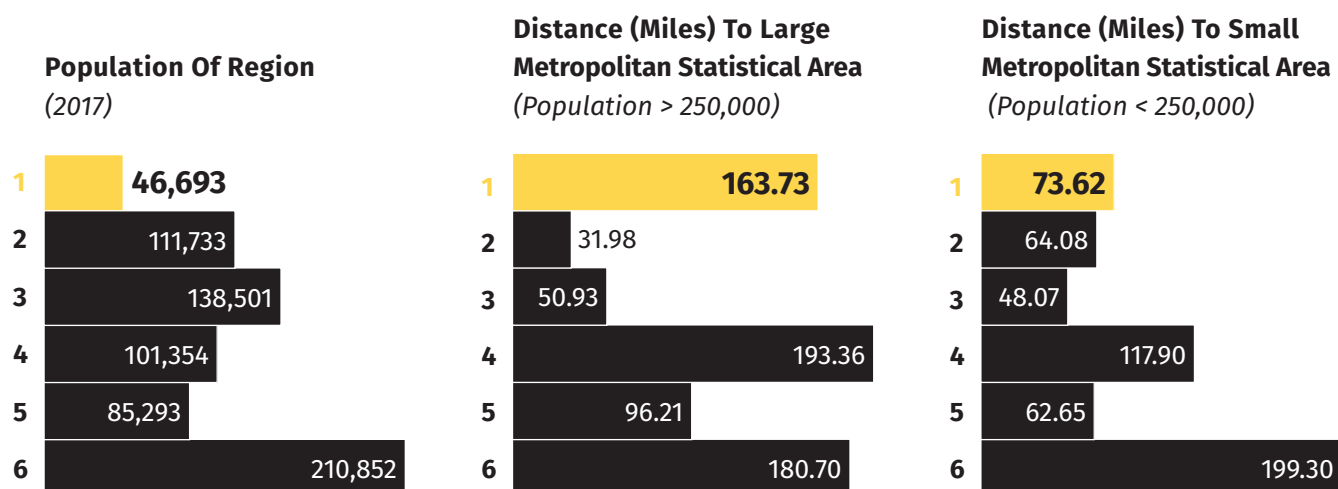


KANSAS

Great Plains Development Inc.
www.gpdionline.com



Comparison Region Economic Characteristics

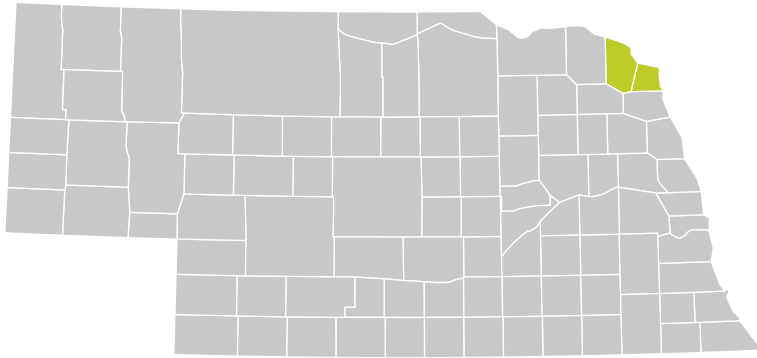


	1	2	3	4	5	6
Percent Of Population In A Micropolitan Area	0.00%	32.85%	38.61%	61.45%	44.91%	58.84%
Farm Income Percent Of Total Personal Income	31.01%	30.31%	22.61%	22.84%	14.32%	18.57%
Ranch Income Percent Of Total Personal Income	89.49%	53.18%	47.22%	48.62%	35.22%	81.50%
Percent Of Employment In The Manufacturing Industry	5.48%	12.08%	18.28%	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



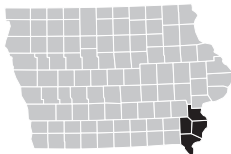
COUNTIES

Dakota and Dixon

Comparison Peer Regions

IOWA

Southeast Iowa Regional Planning Commission
www.seirpc.com



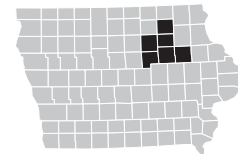
MINNESOTA

Northwest Minnesota Regional Development Commission
www.nwrdc.org



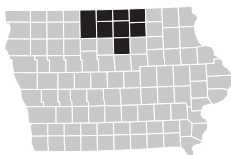
IOWA

Iowa Northland Regional Council of Governments
www.inrcog.org



IOWA

North Iowa Area Council of Governments
www.niacog.org

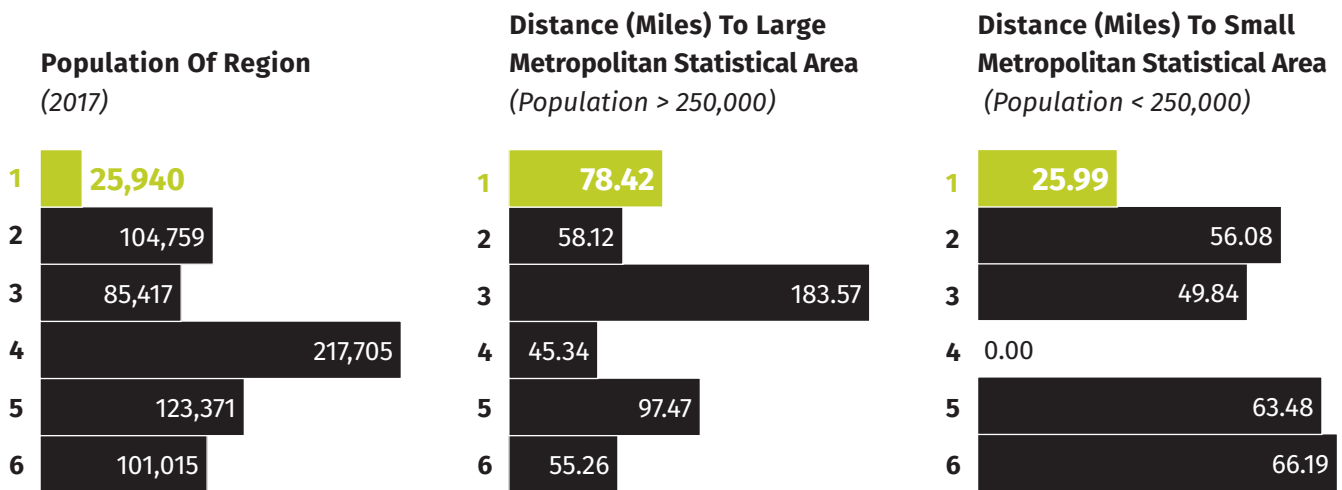


ILLINOIS

Southwestern Illinois Metropolitan & Regional Planning Commission
www.simapc.org



Comparison Region Economic Characteristics

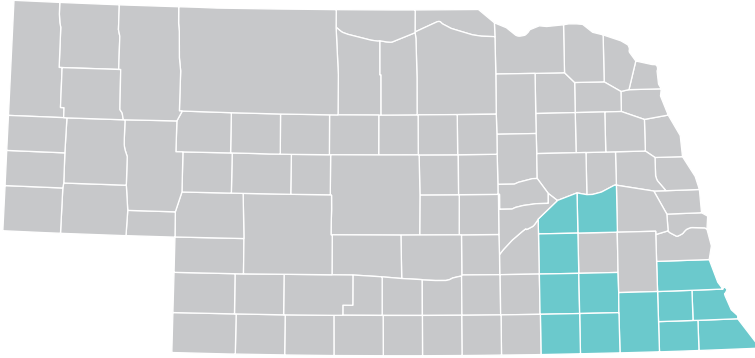


	1	2	3	4	5	6
Percent Of Population In A Micropolitan Area	0.00%	70.36%	0.00%	0.00%	40.91%	0.00%
Farm Income Percent Of Total Personal Income	18.86%	7.07%	33.10%	11.02%	21.86%	11.97%
Ranch Income Percent Of Total Personal Income	9.90%	4.02%	2.75%	8.24%	19.56%	4.34%
Percent Of Employment In The Manufacturing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



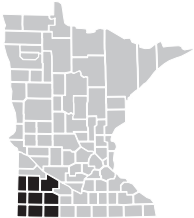
COUNTIES

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

Comparison Peer Regions

MINNESOTA

Southwest Regional Development Commission
www.swrdc.org



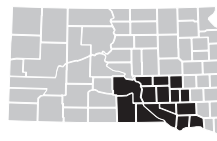
MINNESOTA

Upper Minnesota Valley Regional Development Commission
www.umvrdc.org



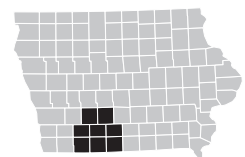
SOUTH DAKOTA

Planning & Development District III
www.districtiii.org



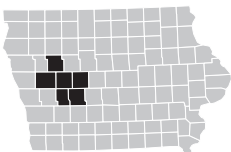
IOWA

Southern Iowa Council of Governments
www.sicog.com



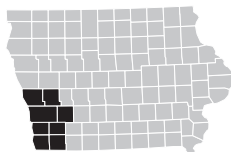
IOWA

Region XII Council of Governments
www.region12cog.org



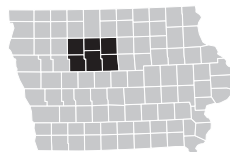
IOWA

Southwest Iowa Planning Council
www.swipco.org



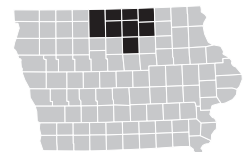
IOWA

Mid-Iowa Development Association Council of Governments
www.midascog.net

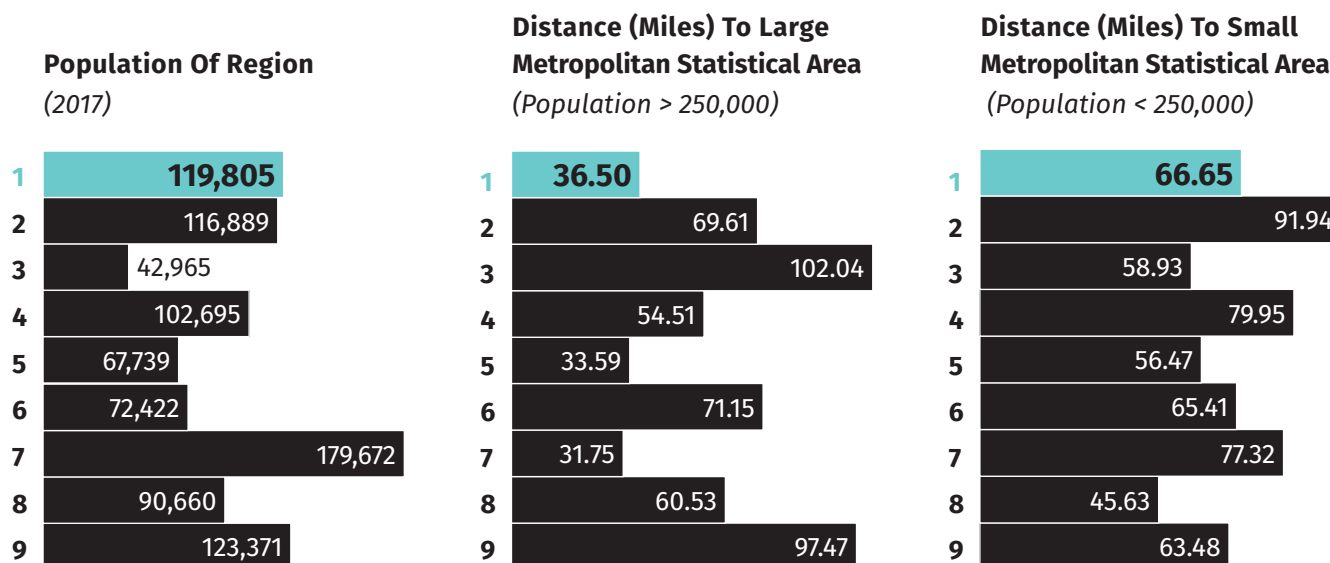


IOWA

North Iowa Area Council of Governments
www.niacog.org



Comparison Region Economic Characteristics

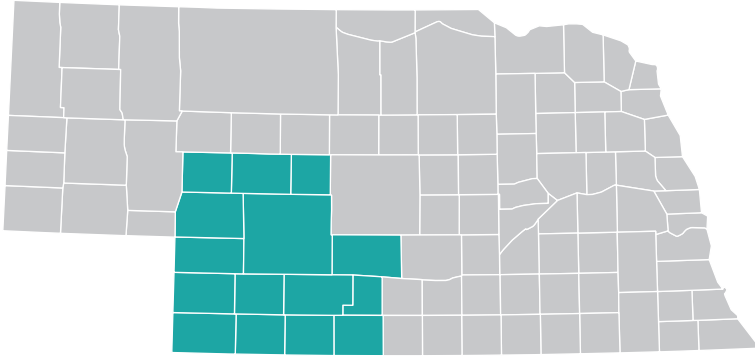


	1	2	3	4	5	6	7	8	9
Percent Of Population In A Micropolitan Area	18.03%	40.87%	0.00%	44.59%	0.00%	28.06%	0.00%	40.38%	40.91%
Farm Income Percent Of Total Personal Income	30.95%	29.70%	41.30%	29.19%	18.64%	29.01%	17.26%	24.03%	21.86%
Ranch Income Percent Of Total Personal Income	15.02%	27.59%	15.97%	21.61%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



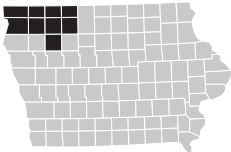
COUNTIES

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

Comparison Peer Regions

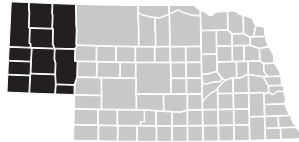
IOWA

Northwest Iowa Planning
& Development Commission
www.nwipdc.org



NEBRASKA

Panhandle Region



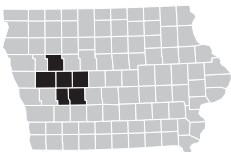
NEBRASKA

Northeast Region



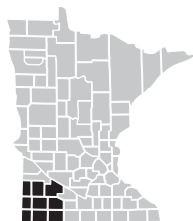
IOWA

Region XII Council of
Governments
www.region12cog.org



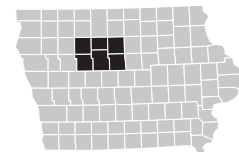
MINNESOTA

Southwest Regional
Development Commission
www.swrdc.org

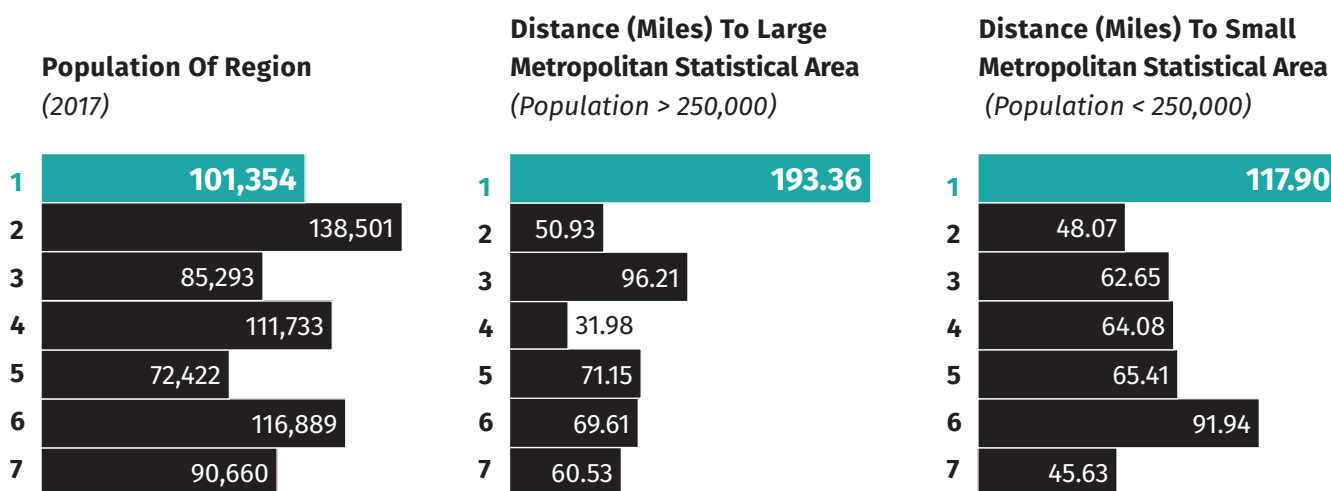


IOWA

Mid-Iowa Development
Association Council
of Governments
www.midascog.net



Comparison Region Economic Characteristics

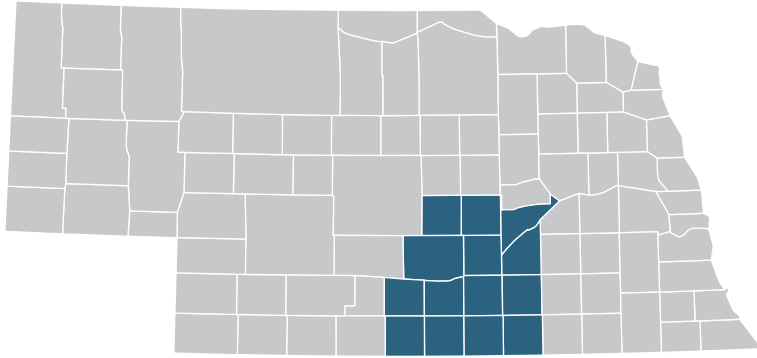


	1	2	3	4	5	6	7
Percent Of Population In A Micropolitan Area	61.45%	38.61%	44.91 %	32.85 %	28.06 %	40.87 %	40.38 %
Farm Income Percent Of Total Personal Income	22.84%	22.61%	14.32 %	30.31 %	29.01 %	29.70 %	24.03 %
Ranch Income Percent Of Total Personal Income	48.62%	47.22%	35.22 %	53.18 %	33.01 %	27.59 %	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

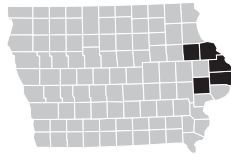
MINNESOTA

Region Nine Development
Commission
www.rndc.org



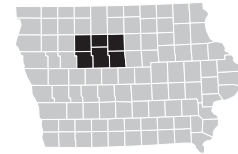
IOWA

East Central Intergovernmental
Association
www.ecia.org



IOWA

Mid-Iowa Development
Association
www.midascog.net



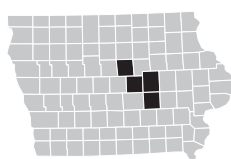
KANSAS

North Central Regional Planning
Commission
www.ncrpc.org



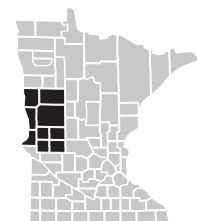
IOWA

Region 6 Planning Commission
www.region6planning.org

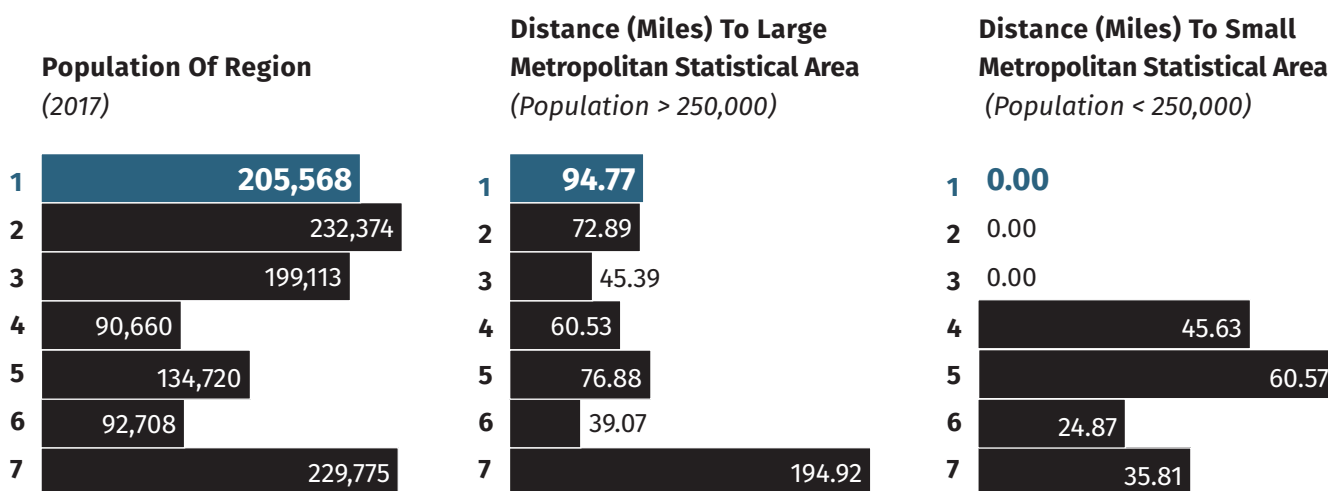


MINNESOTA

Minnesota West Central
Initiative
www.wcif.org



Comparison Region Economic Characteristics



	1	2	3	4	5	6	7
Percent Of Population In A Micropolitan Area	42.78%	19.38%	23.61%	40.38%	44.99%	43.46%	44.50%
Farm Income Percent Of Total Personal Income	17.31%	14.96%	8.76%	24.03%	15.30%	16.82%	14.87%
Ranch Income Percent Of Total Personal Income	22.44%	13.97%	10.05%	23.17%	8.63%	13.88%	6.52%
Percent Of Employment In The Manufacturing Industry	13.07%	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**

The background of the page is a large, stylized letter 'N' in a dark red color. The 'N' is composed of two main diagonal strokes and a horizontal crossbar. The top-left corner of the 'N' is cut off by the edge of the page. In the top right corner, there is a small, solid red square. The text 'UNIVERSITY OF Nebraska' is located in the bottom left corner, with 'UNIVERSITY OF' in a smaller, sans-serif font above 'Nebraska', which is in a larger, serif font.

UNIVERSITY OF
Nebraska