

## Draft Report

# SOCIO-ECONOMIC ANALYSIS OF THE PANHANDLE REGION OF NEBRASKA

## **Determining the Future of Nebraska's Panhandle Project**

Prepared for:

**Honorable William Wickersham  
Nebraska Legislature**

Prepared by:

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June 15, 1999

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## SOCIO-ECONOMIC ANALYSIS

### PANHANDLE REGION OF NEBRASKA

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**Background & Introduction** This report -- Socio-Economic Analysis of the Panhandle Region of Nebraska has been prepared at the request of the Honorable William Wickersham of Harrison, Nebraska. This report is part of an on-going project titled **Determining the Future of Nebraska's Panhandle**. The purpose of this report is to provide a current socio-economic overview (or a brief checkup) of the economic health this important and large Nebraska region.

**Major Findings** The following major findings have been realized through this analysis:

**Large & Sparsely Populated Rural Region.** Nebraska's Panhandle is larger than the states of Maryland, Hawaii or Massachusetts but contains a population of less than 100,000 residents. Regionwide, the population density for the Panhandle is just over 6 persons per square mile enabling the region to be classified as a "frontier" region.

**Recent & Accelerating Depopulation.** Unlike much of rural Nebraska, the Panhandle has not seen chronic depopulation throughout the 1900s. During the first half of this century, the region experienced a 50% population increase growing from just under 41,000 residents to nearly 102,000 residents. Since 1950, the region has experienced depopulation dropping to just over 87,000 residents in 1996 (nearly a 15% decline). The rate of depopulation is increasing during the decade of the 1990s.

**Hidden Threat.** Regionwide depopulation is masked by short-term growth in larger communities. In part, this growth is fueled by the migration of countryside and village residents to these larger communities. Over the next 25 years the region is moving towards a population base of 75,000 residents.

**Ramifications of Depopulation.** The loss of population impacts the region in three ways. First, the loss of market size and associated capacity to support economic activities further eroding potential growth. Second, loss of labor force, particularly through diminished capacity of rural areas to provide young persons for the enterprises in trade center communities. Finally, the loss of political power and the likely loss of at least one state senator and possibly the Third Congressional District over the next 20 years.

**Less Wealth.** The Panhandle has significantly more lower income households and significantly fewer upper income households when compared to the state. However, unlike much of rural Nebraska, the region has a middle income group that is proportionate to the state.

**Compensation Competitiveness.** With the exception of production agriculture and railroads, the region's compensation rates are significantly lower than the state averages and particularly urbanized areas. This gap is large and is contributing to the outmigration of residents to areas where career choices are more diverse and compensation packages richer.

**Relatively Large Economy.** The Panhandle despite its rural nature and sparse population has a relatively larger \$4.0 billion economy that supports nearly 54,000 jobs and generates nearly \$1.8 billion in personal income. There is considerable strength and vitality within this economy providing the foundation for further growth.

**Narrow Economic Base.** The Panhandle's economy is relatively narrow and based in lower value-adding industries. Consequently, the range of career choices and the economy's capacity to generate more wealth is restricted by its narrow nature. Additionally, because the economy is less diversified, it is at more risk to bust and boom cycles.

**Significant Wealth Leakages.** Nearly all rural economies have significant wealth leakages. This reality is a function of limited market size. The Panhandle economy is particularly leaky due in part to its closeness to the Denver metropolitan area and the Rapid City trade center.

**Socio-Economic Profile of the Panhandle Region** The following information was generated by the **Nebraska Economic Impact Model** profiling the economy of Nebraska's Panhandle Region. All data is benchmarked to calendar year 1996.

### Profile in Brief

Land Area -- 14,182 square miles  
Total Personal Income -- \$1.719 billion

Population -- 87,152 residents  
Households -- 34,856 households

The Panhandle represents an area larger than the size of Maryland, Hawaii or Massachusetts with just under 100,000 permanent residents. The market size of this relatively large region is smaller than necessary for metropolitan place status.

### Demographic Trends

From 1900 to 1950, the region's population increased by over 50 percent -- a rate twice as high as the state average. Between 1950 and 1990 (the last census), the region's population decreased by 11 percent compared with a 19 percent increase statewide and a 78 percent increase in Lancaster County. During the decade of the 1990s (1990 to 1996 \* estimates), the region's population has decreased by an additional four percent or a greater rate of decline than during the period of 1950 to 1990. This compares with relatively strong statewide growth and very high growth rates in metropolitan areas such as Lancaster County and particularly Sarpy County.

**Table 1. Populations Trends.**

County	1900	1950	1990	1996	C00-50	C50-90	C90-96
Banner	1,114	1,325	852	859	0.19	-0.36	0.01
Box Butte	5,572	12,279	13,130	12,984	1.20	0.07	-0.01
Cheyenne	5,570	12,081	9,494	9,690	1.17	-0.21	0.02
Dawes	6,215	9,708	9,021	9,096	0.56	-0.07	0.01
Deuel	2,630	3,330	2,237	2,068	0.27	-0.33	-0.08
Garden*	3,538	4,114	2,460	2,242	0.16	-0.40	-0.09
Kimball	758	4,283	4,108	4,056	4.65	-0.04	-1.00
Morrill*	4,584	8,263	5,423	5,376	0.80	-0.34	-0.01
Scotts Bluff	2,552	33,939	36,025	36,679	12.30	0.06	0.02
Sheridan	6,033	9,539	6,750	6,645	0.58	-0.29	-0.02
Sioux	2,055	3,124	1,549	1,509	0.52	-0.50	-0.03
<b>Panhandle</b>	<b>40,621</b>	<b>101,985</b>	<b>91,049</b>	<b>87,152</b>	<b>1.51</b>	<b>-0.11</b>	<b>-0.04</b>
State	1,066,300	1,325,510	1,578,385	1,652,093	0.24	0.19	0.05
Sarpy	9,080	15,693	102,583	115,831	0.73	5.54	0.13
Lancaster	64,835	119,742	213,641	231,190	0.85	0.78	0.08

Source: U.S. Census Bureau & UNL Bureau of Business Research.

The Hidden Threat of Rural Depopulation One of the characteristics of rural depopulation is its long-term impacts are often hidden to trade center communities. As rural Nebraska once again is experiencing significant rural countryside depopulation (due to another round of farm and ranch consolidations), trade center communities may actually be benefitting from this tragic event. During periods of rural depopulation, countryside residents migrate to towns and particularly trade center communities in search of employment. This happening may actually contribute short-term to the growth of area and trade center communities. However, long-term, depopulation of the countryside and the villages that support farmers and ranchers, will restrict and often undermine the ability of trade center communities to sustain population growth.

Ramifications of Depopulation Like any chronic condition, we often become desensitized to the impacts of depopulation. It is hard on a day to day or even year to year basis to grasp the long-term ramification of depopulation. This is particularly true when, at least over the short-term, population losses are occurring in the countryside and in smaller communities -- but there is a degree of population growth and prosperity in larger trade center communities. However, over time, the impact of depopulation adversely affects even the largest trade center communities within a region. The like impacts of chronic long-term depopulation are as follows.

**Market Decline.** As the population based shrinks, the capacity of the region to support certain markets diminishes adversely affecting the region's ability to support diverse and thriving economic functions. For example, the market necessary to support a full-service health care facility might require a population base of 75,000 residents. The ability of the region to support this type of institution and all the activities associated with it becomes compromised as the market falls below the threshold.

**Labor Force Decline.** Traditionally, well educated, highly skilled and motivated workers for industry, government, and support enterprises have come from not only trade center communities, but the rural areas. As the population based of rural areas has declined, its capacity to generate workers for larger communities declines as well. One reason Nebraska's largest cities are experiencing worker shortages now versus 20 years ago, is because rural Nebraska's capacity to provide such workers is greatly diminished due to historic and chronic depopulation.

**Political Representation Loss.** Today, in order to have a state senator a substate region must have a population base of roughly 33,000 residents. This means that the Panhandle, as a region, can now support 2.6 state senators. Currently, the region is served by four state senators (two of these senators serve areas in addition to the region). Continued population loss, and even failure to experience population growth at the state average, will result in the loss of at least one state senator after 2000, and possibly another state senator after 2010 further eroding the region's political representation in state government. The same is true for the possible loss of the Third Congressional District over the next 20 years.

### Economic Profile of the Panhandle Region

The Panhandle Region when compared to the State, has the following household wealth profile:

- o Significantly more lower income households (34% to 27%).
- o Similar middle income share of households (46% to 47%).
- o Significantly fewer higher income households (20% to 27%).

See Tables 2 and 3 for details.

The Panhandle when compared to Nebraska has less wealth on average with more of its households falling into lower income brackets and fewer higher income households. The size of the region's middle class is very comparable to the state average.

**Table 2. Wealth Profile for the Panhandle Region, Nebraska.**

Income Range	# of Households	Household Share	Average Income	Total Income	Wealth Share
Less than \$5,000	2,530	0.07	\$3,896	\$9,856,880.00	0.01
\$5,000 - \$15,000	4,718	0.14	14,082	66,438,876.00	0.04
\$15,000 - \$25,000	4,613	0.13	22,941	105,826,833.00	0.06
\$25,000 - \$35,000	4,429	0.13	31,990	141,683,710.00	0.08
\$35,000 - \$45,000	6,651	0.19	45,703	303,970,653.00	0.18
\$45,000 - \$60,000	4,877	0.14	63,914	311,708,578.00	0.18
\$60,000 - \$80,000	2,922	0.08	82,238	240,299,436.00	0.14
\$80,000 - \$110,000	3,025	0.09	107,906	326,415,650.00	0.19
\$110,000 or more	1,089	0.03	193,883	211,138,587.00	0.12
<b>Average or Total</b>	<b>34,854</b>	<b>1.00</b>	<b>\$49,272</b>	<b>\$1,717,339,203</b>	<b>1.00</b>

Source: Nebraska Economic Impact Model, Nebraska Rural Development Commission. June 1999.  
 Note: TCPU = Transportation, Communications & Public Utilities. FIRE = Finance, Insurance & Real Estate.

**Table 3. Wealth Profile for Nebraska.**

Income Range	# of Households	Household Share	Average Income	Total Income (millions)	Wealth Share
Less than \$5,000	35,305	0.06	\$4,094	\$144.54	0.00
\$5,000 - \$15,000	64,832	0.10	14,687	952.19	0.03
\$15,000 - \$25,000	67,728	0.11	24,012	1,626.28	0.04
\$25,000 - \$35,000	68,546	0.11	33,403	2,289.64	0.06
\$35,000 - \$45,000	124,938	0.20	47,382	5,919.81	0.16
\$45,000 - \$60,000	99,810	0.16	66,638	6,651.14	0.18
\$60,000 - \$80,000	67,153	0.11	86,050	5,778.52	0.15
\$80,000 - \$110,000	71,727	0.11	112,983	8,103.93	0.21
\$110,000 or more	31,414	0.05	204,134	6,412.69	0.17
<b>Average or Total</b>	<b>631,453.00</b>	<b>1.00</b>	<b>\$60,000</b>	<b>\$37,878.74</b>	<b>1.00</b>

Source: Nebraska Economic Impact Model, Nebraska Rural Development Commission. June 1999.  
 Note: TCPU = Transportation, Communications & Public Utilities. FIRE = Finance, Insurance & Real Estate.

The Output Ratio (See Column 4 in Table 4) measures the level of value-adding activity by economic sector. The level of economic output per employee is an indication of the wealth of enterprises within these broad sectors of the region's or state's economy. Both agriculture (reflecting the region's diversity and production mix) and TCPU (reflecting the role of railroads within the region) have higher output ratios for the Panhandle than the state. However, for all other sectors, the output ratios are lower, and in some cases, significantly lower than for the state.

The Income Ratio (See Column 7 in Table 4) measures the average compensation per employee by broad economic sector. Again the Panhandle generates more income, on average, in production agriculture and TCPU (due to railroads) than does the state. Conversely, the income ratios for all other sectors are lower than the state values. This indicator measures the likely "pull" factor for job attraction from the region to areas with higher income rates. One reason for the increased outmigration from the region to the front range of Colorado and eastern Nebraska cities is the wage differential between comparable jobs within the region and these places.

**Table 4. Compensation Analysis.**

Economic Sector	Panhandle Output/ Employee	Nebraska Output/ Employee	Output Ratio	Panhandle Income/ Employee	Nebraska Income/ Employee	Income Ratio
Agriculture	\$137,071	\$124,748	1.10	\$57,889	\$50,253	1.15
Mining	60,963	91,881	0.66	37,807	56,815	0.67
Construction	78,164	83,219	0.94	28,494	33,923	0.84
Manufacturing	180,515	201,740	0.89	37,119	52,582	0.71
TCPU	164,983	148,583	1.11	84,839	71,605	1.18
Trade	35,424	42,267	0.84	20,225	23,417	0.86
FIRE	105,302	128,120	0.82	45,245	75,588	0.60
Services	41,287	46,948	0.88	21,611	25,613	0.84
Government	36,071	51,438	0.70	31,913	43,071	0.74
Other	18,445	39,363	0.47	20,149	44,572	0.45
<b>Total/Average</b>	<b>\$73,499</b>	<b>\$80,746</b>	<b>0.91</b>	<b>\$35,580</b>	<b>\$38,483</b>	<b>0.92</b>

Source: Nebraska Economic Impact Model, Nebraska Rural Development Commission. June 1999.  
 Note: TCPU = Transportation, Communications & Public Utilities. FIRE = Finance, Insurance & Real Estate.

Characteristics of the Panhandle's Economic as Compared to the State's Overall Economy:

==> The region has nearly a \$4.0 billion economy supporting nearly 54,000 jobs. This economy is larger than the economies of many third world counties.

==> While relative wealth levels are lower when compared to national, state and particularly metropolitan areas -- the region has considerable wealth and a high standard of living by both national and international standards.

==> Over twice the dependence upon production agriculture.

==> Significantly less diversified economy.

==> Nearly half the level of manufacturing activity.

==> Less finance, insurance & real estate activity.

==> Greater presence of transportation activity -- primarily railroads.

See Tables 5 and 6 for details.

**Table 5. Economic Sector Profile for the Panhandle Region, Nebraska.**

Sector	Output (millions)	Output Share	Employment	Employment Share
Agriculture	\$927.151	0.23	6,764	0.13
Mining	13.290	0.00	218	0.00
Construction	229.410	0.06	2,935	0.05
Manufacturing	596.963	0.15	3,307	0.06
TCPU	643.270	0.16	3,899	0.07
Trade	478.368	0.12	13,504	0.25
FIRE	286.421	0.07	2,720	0.05
Service	482.106	0.12	11,677	0.22
Government	295.6001	0.07	8,195	0.15
Other	13.723	0.00	744	0.01
<b>Total</b>	<b>\$3,966.30</b>	<b>1.00</b>	<b>53,964</b>	<b>1.00</b>

Source: Nebraska Economic Impact Model, Nebraska Rural Development Commission. June 1999.  
 Note: TCPU = Transportation, Communications & Public Utilities. FIRE = Finance, Insurance & Real Estate.

The Panhandle has nearly a \$4.0 billion economy which is larger than the economies of many third world countries.

**Table 6. Economic Sector Profile for Nebraska.**

Sector	Output (millions)	Output Share	Employment	Employment Share
Agriculture	\$9,964.75	0.11	78,879	0.07
Mining	152.89	0.00	1,664	0.00
Construction	5,888.19	0.06	70,754	0.06
Manufacturing	23,505.82	0.26	116,516	0.10
TCPU	8,192.84	0.09	54,141	0.05
Trade	10,498.21	0.12	248,378	0.22
FIRE	9,596.97	0.11	74,906	0.07
Service	14,454.87	0.16	307,893	0.27
Government	8,494.15	0.09	165,133	0.15

Other	276.80	0.00	7,032	0.01
<b>Total</b>	<b>\$91,025.49</b>	<b>1.00</b>	<b>1,127,296</b>	<b>1.00</b>

Source: Nebraska Economic Impact Model, Nebraska Rural Development Commission. June 1999.  
Note: TCPU = Transportation, Communications & Public Utilities. FIRE = Finance, Insurance & Real Estate.

### Wealth Retention Analysis

The following analysis provides a general review of how well the region is retaining the wealth it is generating through retail sales (clothing for example), the provision of services (such as health care or entertainment), and government activities. Pull-factors have been calculated for the trade, FIRE (finance, insurance & real estate), services, and government sectors. For reference purposes, pull factors are provided for Box Butte County as a reference.

<b>Economic Sector</b>	<b>Panhandle</b>	<b>Box Butte County</b>
Trade	86%	87%
FIRE	57%	54%
Services      63%	63%	78%
Government	66%	83%
Simple Average	68%	76%

The region has relatively strong retention of trade activities, but poorer performance in the areas of FIRE, services, and government activities. Box Butte County reflecting the influence of Alliance as a major trade center community within the region has a significantly higher retention rate characteristic of its role within the region.

A pull factor at 100% indicates that the region is retaining its share of activity relative to its population size. A value below 100% indicates leakages and a value above 100% indicates that there is outside attraction of activity.

**For Additional Information** Persons seeking additional information about this report or other work of the Nebraska Rural Development Commission should contact:

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\*\*\* END OF REPORT \*\*\*

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**Attachments** The following attachments supplement this report:

- A Information about the Nebraska Rural Development Commission
- B Information about the Nebraska Economic Impact Model
- C Request for Assistance.

## Attachment A About the Nebraska Rural Development Commission

The Nebraska Rural Development Commission was created by Executive Order of the Governor in January 1991. The RDC was placed in state statute in May 1993 establishing it as an independent non-code state agency. In 1998, the RDC was made administratively independent of the Department of Economic Development. The mission of the RDC is as follows....*The purpose of the Commission is to foster sustainable community and economic development initiatives. These initiatives should enable Nebraska communities to realize their own goals, thereby contributing to the growth and well-being of the entire state.* The RDC has 17 citizens members and two ex officio legislative members. The RDC is served by a professional staff of six employees. The membership of the RDC is as follows:

Craig Schroeder (Chairperson) \* Holbrook  
Howard McNiff \* Cook  
Mary Piper \* Lyons  
Rev. Mark Schutt \* Alliance  
Glenn Price \* Chadron  
John Quirk \* Hastings  
Jim Eriksen \* Grand Island  
Al Wenstrand \* Lincoln  
Tanner Graham \* Hyannis  
Senator Bob Wickersham \* Harrison

JoAnn Mueller (Vice Chair) \* Kimball  
Gerry Osborn \* Ainsworth  
Terrance Wilhelms \* Columbus  
Monica Harvey \* Stapleton  
Carmen Shaffer \* Randolph  
Steve Cady \* Hickman  
Cyd Janssen \* Gordon  
Sam Cordes \* Lincoln  
Senator Floyd Vrtiska \* Table Rock

## Attachment B About the Nebraska Economic Impact Model

**RELEVANT EXPERIENCE.** The Nebraska Rural Development Commission has been involved in socio-economic impact analysis since the Commission's founding in 1991. The RDC has completed over two dozen major sets of impact analysis ranging from assessments of the College of Technical Agriculture (Curtis) and Peru State College to the impacts of various telecommunications policies.

**ABOUT THE AUTHOR.** Don Macke serves as the Executive Director of the Nebraska Rural Development Commission. Mr. Macke is a professional economist by training with over 20 years of experience conducting impact analysis in Nebraska and throughout North America.

**ABOUT THE NEBRASKA SOCIO-ECONOMIC MODEL.** In 1999, the RDC accepted management through the Government Assistance Program operation of Nebraska's IMPLAN socio-economic impact model. Since taking over operation of the Nebraska Model, the RDC through GAP has upgraded the model. Additional information about the model can be obtain by contacting the RDC. The model is based on the national IMPLAN Model. IMPLAN is one of the most widely used economic impact models in use in the United States today.

## Attachment C Request for Assistance

This work is being done at the request of Senator Bob Wickersham of Harrison, Nebraska. This is a work in progress begun during the summer of 1998. The purpose of this work is to assist the region in (1) understanding its economy and (2) develop a regional economic development strategy capable of ensuring the region's long-term success.

Earlier products generated by this project are available from the Commission by request.