

**A quarter century of change: Land values in
Kansas and Nebraska from 1997 to 2022**

by

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ABSTRACT

Developing a comprehensive understanding of the factors influencing agricultural economics, land values, and farm incomes is crucial for informed decision-making and strategic planning in the agricultural sector. This study uses historical data from the USDA-NASS Census of Agriculture to analyze trends over the past 25 years, focusing on Kansas and Nebraska.

Since 1997, these states have experienced significant increases in land values, with the most dramatic rise occurring in 2012. Kansas land values increased by an average of 79% compared to 2007, while Nebraska saw an even more pronounced rise of 109%. This surge correlated closely with the steady increase in commodity prices from 2008 to 2014.

However, the 2017 Census showed a slowing in this upward trend, recording the smallest increase in land values since 1997. This was attributed to declining commodity prices beginning in 2015, leading to decreased profitability for farmers and a slower rise in land values. This trend highlights the critical interdependence between commodity prices and land values.

Further examination of the relationship between land values and farm incomes reveals that land values generally track income trends, with 2017 being an exception with low farm income levels, despite a slight increase in land values. This resilience in land value appreciation, likely driven by cash reserves, underscores the complex dynamics of agricultural economics.

By 2022, commodity prices rose again, and land values followed suit, demonstrating the cyclical nature of agricultural economics. This study also calculated

county level land values for intervening years between each agricultural census, which occurs every five years. This was done beginning in 1969 to provide land values for each year and is particularly useful for people needing to determine tax basis.

This study underscores the importance of monitoring commodity prices and understanding their impact on land values and farm income, providing valuable insights for agricultural business professionals navigating the complexities of the agricultural sector.

TABLE OF CONTENTS

List of Figures.....	vi
List of Tables	vii
Acknowledgments	ix
Chapter I: Introduction	1
1.1 Land Value	1
1.2 Geography	4
1.3 Financial Decisions	5
1.4 Objectives	7
Chapter II: Literature Review	9
2.1 Net Farm Income	9
2.2 Productivity	10
2.3 Water	11
2.4 Ethanol	13
2.5 Wind Turbines	13
2.6 Social Economics	15
Chapter III: Method and Data.....	16
Chapter IV: Analysis and Results	22
4.1 1997 Data Discrepancy	22
4.2 Comparison of USDA-NASS Survey and Census Land Values	23
4.3 Land Value Trends Over the Last 25 Years	25
4.4 Kansas Land Values	27
4.4.1 Kansas Reporting Districts	36
4.5 Nebraska Land Values	38
4.5.1 Nebraska Reporting Districts.....	45
4.5 Analysis of Calculated Land Values and Census Land Values	49
4.5.1 Kansas.....	49
4.5.2 Nebraska	50
Chapter V: Summary and Conclusion.....	52

Works Cited.....	58
Appendices.....	62
Appendix A USDA-NASS Land Values.....	62
Appendix B Federal Commodity Insurance	63
Appendix C Kansas County Level Land Values.....	64
Appendix D Two Sample Means for Kansas	76
Appendix E Nebraska County Level Land Values	78
Appendix F Two Sample Means for Nebraska	90

LIST OF FIGURES

Figure 2.1 Map of Great Plains Aquifer	12
Figure 2.2 Map of Ethanol Plants and Wind Farms in the United States.....	14
Figure 3.1 Agriculture Statistic Districts for Kansas	19
Figure 3.2 Agriculture Statistic Districts for Nebraska	19
Figure 4.1 Kansas and Nebraska’s Land Value and Income 2002-2022	26
Figure 4.2 U.S. Agriculture Census Land Values (Incl. Buildings) for Kansas by Statistical District.....	28
Figure 4.3 U.S. Agriculture Census Land Values (Incl. Building) for Kansas by Statistical District 1997-2022	28
Figure 4.4 Kansas Farmland Values, Corn and Wheat Prices, and Cattle Inventory Values, 1969-2022	34
Figure 4.5 Kansas Corn and Wheat Yields	34
Figure 4.6 Mean Annual Precipitation for Kansas.....	37
Figure 4.7 Kansas Average Corn Yields 1997-2019	38
Figure 4.8 U.S. Agriculture Census Land Values (Incl. Buildings) for Nebraska by Statistical District.....	39
Figure 4.9 U.S. Agriculture Census Land Values (Incl. Building) for Nebraska by Statistical District 2002-2022	39
Figure 4.10 Nebraska Farm Land Values, Corn and Soybean Prices, and Cattle Inventory Values, 1969-2022	44
Figure 4.11 Nebraska Corn and Soybean Yields	44
Figure 4.12 Mean Annual Precipitation for Nebraska	47
Figure 4.13 Nebraska Average Corn Yields 1997-2019	48

LIST OF TABLES

Table 4.1 1997 Comparison of USDA-NASS County Report and Quick Stats of Kansas Land Values	22
Table 4.2 Comparison of USDA-NASS Survey and Census Land Values (\$/acre).....	24
Table 4.3 Comparison of USDA-NASS Survey and Census Values of Kansas Land..	24
Table 4.4 Comparison of USDA-NASS Survey and Census Values of Nebraska Land	25
Table 4.5 U.S. Agriculture Census Land Values (Incl. Buildings) for Kansas by Statistical District (\$/acre)	33
Table 4.6 Kansas' Land Value % Change from Previous Census of Agriculture	33
Table 4.7 Kansas Land Values Income, and Prices Summary	35
Table 4.8 Correlation between Kansas Land Value and Other Factors	35
Table 4.9 U.S. Agriculture Census Land Values (Incl. Buildings) for Nebraska by Statistical District (\$/acre)	43
Table 4.10 Nebraska's Land Value % Change from Previous Census of Agriculture	43
Table 4.11 Nebraska Land Values Income, and Prices Summary	49
Table 4.12 Correlation between Nebraska Land Value and Other Factors	49
Table 4.13 Kansas t-Test: Paired Samples for Means for Calculated and Census Land Values	50
Table 4.14 Nebraska t-Test: Paired Samples for Means for Calculated and Census Land Values.....	51
Table A.1 1997 USDA-NASS Land Values (\$/ac) for Kansas Value Discrepancy	62
Table B.1 Federal Commodity Insurance Indemnities (\$1,000).....	63
Table C.1 Kansas 1969-1978 Allen to Lincoln Counties (\$/ac)	64
Table C.2 Kansas 1978-1987 Allen to Lincoln Counties (\$/ac)	65
Table C.3 Kansas 1987-1997 Allen to Lincoln Counties (\$/ac)	66
Table C.4 Kansas 1997-2007 Allen to Lincoln Counties (\$/ac)	67
Table C.5 Kansas 2007-2017 Allen to Lincoln Counties (\$/ac)	68
Table C.6 Kansas 2017-2022 Allen to Lincoln Counties (\$/ac)	69

Table C.7 Kansas 1969-1978 Linn to Wyandotte Counties (\$/ac)	70
Table C.8 Kansas 1978-1987 Linn to Wyandotte Counties (\$/ac)	71
Table C.9 Kansas 1987-1997 Linn to Wyandotte Counties (\$/ac)	72
Table C.10 Kansas 1997-2007 Linn to Wyandotte Counties (\$/ac)	73
Table C.11 Kansas 2007-2017 Linn to Wyandotte Counties (\$/ac)	74
Table C.12 Kansas 2017-2022 Linn to Wyandotte Counties (\$/ac)	75
Table D.1 t-Test: Paired Two Sample for Means of Kansas Calculated and Census Values	76
Table D.2 t-Test: Paired Two Sample for Means of Kansas Calculated and Census Values	77
Table E.1 Nebraska 1969-1978 Adams to Kimball Counties (\$/ac)	78
Table E.2 Nebraska 1978-1987 Adams to Kimball Counties (\$/ac)	79
Table E.3 Nebraska 1987-1997 Adams to Kimball Counties (\$/ac)	80
Table E.4 Nebraska 1997-2007 Adams to Kimball Counties (\$/ac)	81
Table E.5 Nebraska 2007-2017 Adams to Kimball Counties (\$/ac)	82
Table E.6 Nebraska 2017-2022 Adams to Kimball Counties (\$/ac)	83
Table E.7 Nebraska 1969-1978 Knox to York Counties (\$/ac)	84
Table E.8 Nebraska 1978-1987 Knox to York Counties (\$/ac)	85
Table E.9 Nebraska 1987-1997 Knox to York Counties (\$/ac)	86
Table E.10 Nebraska 1997-2007 Knox to York Counties (\$/ac)	87
Table E.11 Nebraska 2007-2017 Knox to York Counties (\$/ac)	88
Table E.12 Nebraska 2017-2022 Knox to York Counties (\$/ac)	89
Table F.1 t-Test: Paired Two Sample for Means of Nebraska Calculated and Census Values	90
Table F.2 t-Test: Paired Two Sample for Means of Nebraska Calculated and Census Values	91

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CHAPTER I: INTRODUCTION

1.1 Land Value

There are many farms that have been passed down from family member to family member. Some farms have been in one family for more than 150 years. In many cases, there is an emotional attachment to the land itself and the lifestyle that it represents. Farming today looks much different than it did 150 years ago. Farms are larger in operation, the average age of farmers has increased, technology implementation has led to changes in practices, and yields have increased dramatically. Land has also seen an increase in value higher than the rate of inflation. In 1870, the average price of agricultural land was \$13 per acre in Kansas and was last reported as \$2,579 per acre in 2022. In comparison, Nebraska's agricultural land prices were \$10 per acre in 1880 and had increased to \$4,409 per acre by 2022 (USDA-NASS, Census of Agriculture, Various Years). Note that the Census of Agriculture data may differ from state survey data and from market data. The land values published by United States Department of Agriculture National Agriculture Statistic Service (USDA-NASS) include buildings that may be on the property or other improvements and are not adjusted for inflation. The values given are the current market values at the time of the Census. All farms were enumerated until 1950; since then, values have been estimated from samples of farms (Pine, 1977).

Kansas and Nebraska's cropland and pastureland is increasing the most in the nation (AgAmerica, 2023). According to the Land Values 2023 Summary by USDA National Agricultural Statistic Service (NASS), Kansas farm real estate increased the most in the nation between 2022 and 2023, with a 16.3% increase. This is an increase of at least 3.1% higher than the other Northern Plains states consisting of Nebraska, North Dakota,

and South Dakota. When compared regionally, the Northern Plains increased 13.7%, while the other regions increased less than 8.2% (USDA, 2023).

Tsoodle, Golden, and Featherstone (2003) found that land values are established based on the discounted value of future income while tax values are representative of the income productivity of land. This indicates that buyers are willing to pay more in the Northern Great Plains because their land is better able to produce crops with higher yields than in the past.

In Kansas and Nebraska, the productivity of agricultural land is typically categorized into three classifications: irrigated cropland, dryland cropland, and pasture. Irrigated cropland is valued higher than dryland cropland because it offers increased and consistent yield potential. Cropland, in general, is more versatile and has higher income potential. Pastureland, on the other hand, is the least valued because it is less profitable. When reporting census data, the USDA-NASS combines all types of agricultural land together. Annual survey data for each state provide values for irrigated, non-irrigated, and pasture. However, there is no county-level data provided annually by USDA-NASS, leaving the census data as the only source of disaggregated data at the county level.

The primary factors that influence land values are productivity and farmability of the land as well as profitability in the agricultural sector. The productivity of the land reflects the land's yield potential or stocking rate. This is directly related to the type of soil present and how much rainfall the area receives per year. Heavier, silty loam soil is more productive than lighter sandy soil due to the increased ability to hold water, organic matter, and nutrients. A producer can improve soil quality and potentially irrigate the land, both of which require more inputs. There is nothing a producer can do to change the soil type of

land. Farmability of land can be defined as how suitable the land is to farm. Factors include, but are not limited to, where the farm is in proximity to other parcels that a producer farms, how large the piece of land is, and access to roads.

As equipment has increased in size, larger tracts of land that can utilize technology like auto-steer are preferred as they are more efficient with time and inputs. Profitability in the agricultural sector directly relates to the commodity and livestock markets. There are concerns of corporations, foreign and domestic, purchasing land in the Great Plains. As of 2023, 3.1% of U.S. agriculture land was fully or partially owned by foreign entities that are willing to pay a 13% premium compared to domestic purchasers (Venesky, 2023). Both Kansas and Nebraska have restrictions regarding foreign land ownership (Foreign Ownership of Agricultural Land, 2024).

According to *Trends in U.S. Farmland Values and Ownership*, the proportion of land that is owned by non-operators (landowners who do not themselves farm) has decreased from 1992 to only 29 percent of farmland in 2007 (Nickerson, et al., 2012). More recently, a 2023 report from AgAmerica found that over 75% U.S. farmland is owned by either active operators or retired farmers (AgAmerica, 2023). As the average age of the operator increases, there is going to be a large transfer of farmland and other assets in the future whether by gifting, selling, or passing the farm to the next generation through inheritance.

Nearly 98% of farms are family-owned with most landowners wanting to transition their land to a family member by gifting, inheriting, or selling rather than to sell to a non-relative (AgAmerica, 2023). These sales of land between family members allow the value of land to be sold often at a discount. Other factors that may increase land value include

urban sprawl and recreational purposes such as hunting. More people are wanting to live in a small town that is closely located to a metropolitan area. This is evident when looking at population growth of counties near cities in both Kansas and Nebraska (USAFacts, 1997-2022). A study in North Carolina found that properties near public hunting land result in an increase of \$1,053 in value for the average-price home (Gosalvez, 2020).

1.2 Geography

Kansas and Nebraska are similar in many ways as they are neighboring states located in the Great Plains Region, characterized by vast stretches of flat or gently rolling landscape. The eastern side of both states has highly fertile soil and receives more than 30 inches of rainfall each year (PRISM Climate Group, 2024), making the region suitable for growing crops and other agricultural activities. The central regions are characterized by moderately fertile soils and the western regions have less fertile soil and receive less than 20 inches of rainfall annually (PRISM Climate Group, 2024). The western regions have more limited agriculture potential due to lack of rainfall if irrigation is unavailable. While both states are generally flat, Nebraska has more varied topography in the western region, including the unique geological formations of the Nebraska Sandhills and the higher elevations of the Panhandle regions. Kansas, on the other hand, is mostly characterized by gently rolling plains including the Flint Hills in the eastern part of Kansas. The Flint Hills are a unique tallgrass prairie that have a very shallow soil above limestone and flint rock. This environment is a substantial portion of the 4% of original tall grass prairie ecosystem that remains undisturbed.

Agriculture is the largest industry, economic driver, and employer for both Kansas and Nebraska. According to the latest census of agriculture, both states are ranked in the top 10 agriculture producing states in cash receipts in 2022, with Nebraska third, and

Kansas seventh. Kansas has more total acres in production than Nebraska, 48,000,000 versus 44,000,000 respectively. However, Nebraska's average farm size is larger by 184 acres and more productive than Kansas average yields (Census of Agriculture, 2022). The higher yields are likely due to Nebraska's ability to irrigate. Without irrigation, Nebraska's agricultural economy would be significantly smaller and would shift to crops that require less water like grain sorghum or wheat rather than corn.

1.3 Financial Decisions

Knowing the value of land is essential in making financial decisions. Producers improve economic viability and longevity by implementing effective risk management practices. Land values are indicators of farm performance and producer well-being as they account for a substantial portion of a producer's balance sheet. Farm real estate accounts for nearly 75% of all farm assets. Of the 75%, farm buildings account for one-fifth of the farm real estate value (Tsoodle, Golden, & Featherstone, 2003). The main source of collateral for farm loans is generally land, whether it is to finance current operating notes, including living expenses, or it allows farmers to expand their operations by purchasing more equipment, land, or other assets. By knowing the value of land and how it has increased over the years, producers can improve their financial viability and legacy by implementing effective risk management practices to ensure their operations can be passed down successfully to the next generation.

While Kansas and Nebraska do not have an estate or gift tax, Nebraska is one of the six states that does have an inheritance tax. When Nebraskans inherit land or other property including cash, they must pay inheritance taxes to the county where the property is located. The exception to inheritance tax is if the property is transferred to a surviving spouse or anyone under the age of 22.

Currently Kansas and Nebraska have similar farmland property taxes although Kansas taxes are 4% higher than Nebraska when compared from 1950-2017. Both states' farmland property taxes were roughly 18% of net farm incomes from 1950-2017. (Aiken, 2019). In 2019, Nebraska had the tenth highest property tax rate while Kansas was ranked 30th. Tax law is constantly changing on the federal, state, and local level. In 2022, Nebraska remained as the tenth highest property tax rate while Kansas moved to 29 indicating that Kansas property was being taxed at a higher relative rate in 2022 than in 2019 (State Business Tax Climate Index, Various Years), though still lower than Nebraska.

In addition to inheritance and estate taxes, landowners must also consider the implications of capital gains tax when selling their property, as it applies similarly to any other asset. The tax basis of land is determined by the amount originally paid for it, or its value at the time it was inherited, plus any improvements made to the property, minus any depreciation on improvements. Often, when land is inherited, no appraisal is conducted, making it challenging to determine its historical value. In such cases, county-level census values can be used to estimate the land's past worth. Capital gains tax is calculated based on the difference between the current selling price of the land and its original purchase price, or basis. The rate at which the realized capital gain is taxed depends on several factors, including the duration of ownership and the taxpayer's income level.

If the land has been held for one year or less, the gain is classified as a short-term capital gain and is taxed at the individual's ordinary income tax rate. Conversely, if the land has been held for more than one year, the gain is considered a long-term capital gain and benefits from lower tax rates, which are typically 0%, 15%, or 20%, depending on the taxpayer's income bracket.

Additionally, the tax rate can be influenced by various other elements such as legislative changes, inflation adjustments, and specific taxpayer circumstances. It's important to note that tax laws and rates are subject to change, often reflecting new governmental policies and economic conditions. As such, staying informed about current tax regulations and consulting with a tax professional is crucial for landowners to accurately calculate potential tax liabilities and make well-informed decisions regarding the sale of their property.

The stepped-up basis is a tax provision that allows the value of an inherited asset to be adjusted to its fair market value at the time of the original owner's death. This adjustment increases the asset's basis, which is the value used to determine capital gains or losses when the asset is eventually sold by the heir. By stepping up the basis to the asset's current market value, any appreciation that occurred during the original owner's lifetime is not subject to capital gains tax, potentially reducing the tax liability significantly for the heir upon the sale of the asset. This provision is particularly relevant for assets such as real estate and other investments that may have appreciated significantly over time. If the taxpayer cannot prove the basis, the Internal Revenue Service (IRS) has the right to say it was zero.

1.4 Objectives

The Census of Agriculture has provided farmland values at a state level since 1860 and at a county level since 1870 as most counties were established during the 1860's and 1870's. Kansas started reporting on county data during the 1870 census although only 50 county land values are available of the current 105 counties, predominantly on the eastern side. Nebraska did not report county land values until the 1880 census. The USDA-NASS

conducts a Census of Agriculture every five years, sending questionnaires to all known and potential agricultural operations in the United States that qualify.

With the data from the USDA-NASS Agriculture Census, one can further analyze the movement in land values at a county, regional, or statewide view over the last 150 years for both Kansas and Nebraska as well as provide annual county level land values to provide basis levels for capital gains tax calculations for sale of inherited land.

USDA-NASS also conducts a yearly state agriculture survey. Rather than every producer receiving a questionnaire, NASS gathers information from a sample representing the population. Although not every producer is included in NASS surveys, the results are statistically accurate (USDA). Because the yearly survey is done only at the state level and not at the county level, the yearly survey of state land values is used to create an index for county land values in between the census years. However, the USDA-NASS survey reported district level yields until 2019, which can be used to look at productivity of the land between the two states.

The specific objectives are: 1.) Evaluate change in land values over the last 25 years, since the 1997 Agricultural Census for Kansas and Nebraska. 2.) Estimate county-level land values for years between each census since 1969 for both states. 3.) Update the extension publication *125 Years of Farmland Values in Kansas* by Tsoodle and Wilson and create similar information for Nebraska (Tsoodle & Wilson, 2001).

CHAPTER II: LITERATURE REVIEW

2.1 Net Farm Income

Net farm income is dependent on many factors such as crop yields, input prices, interest rates, and commodity prices, all of which have impacts on land valuation.

Farmland in the U.S. saw a large decline in value throughout the 1980s when farmers saw reduced net farm incomes due to low commodity prices and high interest rates (Featherstone & Baker, 1988). During the ethanol boom from 2008 to 2014, commodity prices steadily increased, which led to a steady increase in land values in Kansas. However, when commodity prices and net farm income declined in 2015, land values also decreased.

Commodity prices have a direct correlation with net farm income. For instance, the U.S. net farm income decreased from \$123.8 billion in 2013 to \$71.5 billion in 2016. Featherstone, Taylor, and Gibson (2017) found that Kansas land values adjust to Kansas net farm income slowly, with one-year elasticity of 6.7%. Farmland value along with commodity prices increased considerably in 2021 and 2022, however land values softened as interest rates on farm loans jumped to decade high rates towards the end of 2022 (Cowley & Kreitman, 2023).

Featherstone and Baker also found that land prices are affected by farm policy. Government subsidies and income support programs provided income stability for farmers which increased the demand for agricultural land. Price support programs, crop insurance, and conservation programs also have a positive impact on land values by reducing volatility (Featherstone & Baker, 1988). These programs help mitigate the risks associated with farming, thereby making farmland a more attractive and stable investment.

2.2 Productivity

One of the best determinants of land value is the productivity of the land, yet productivity data is not always readily available. A study by Taylor, Sudbeck, Wilson, and Yu found that high-quality land appreciates at twice the rate of low-quality land, demonstrating the impact of land quality on prices. This suggests that there is a greater demand among buyers. However, in years of declining land values, there is no statistical difference between the rate of decline of high-quality and low-quality land (Taylor, Sudbeck, Wilson, & Yu, 2020).

Producers are willing to pay more for the ability to irrigate rather than better soil quality (Tsoodle, Golden, & Featherstone, 2003). This preference is evident when comparing irrigated cropland with sandy soils like Merrick County with dryland crop ground with heavier soils, like Nemaha County in Nebraska. Cash rental rates in Merrick County were \$247 in 2022 whereas Nemaha County rental rates were \$121 per acre (USDA-NASS).

Another indication of the productivity of the land is whether it is being used for crops or livestock. It is expected that more productive land is utilized for crops rather than livestock. Boisvert, Schmit, and Regmi (1997) found that environmental vulnerability has a minor impact on land values. However, if the vulnerability is extreme and persistent, the reduction in value becomes more significant. For example, if the land has a high run-off potential, then there is a 40% reduction in value and if there is leaching and runoff potential, the value is reduced by half (Boisvert, Schmit, & Regmi, 1997). Highlighting the importance of environmental factors in determining land values and the potential financial risks associated with environmentally vulnerable land.

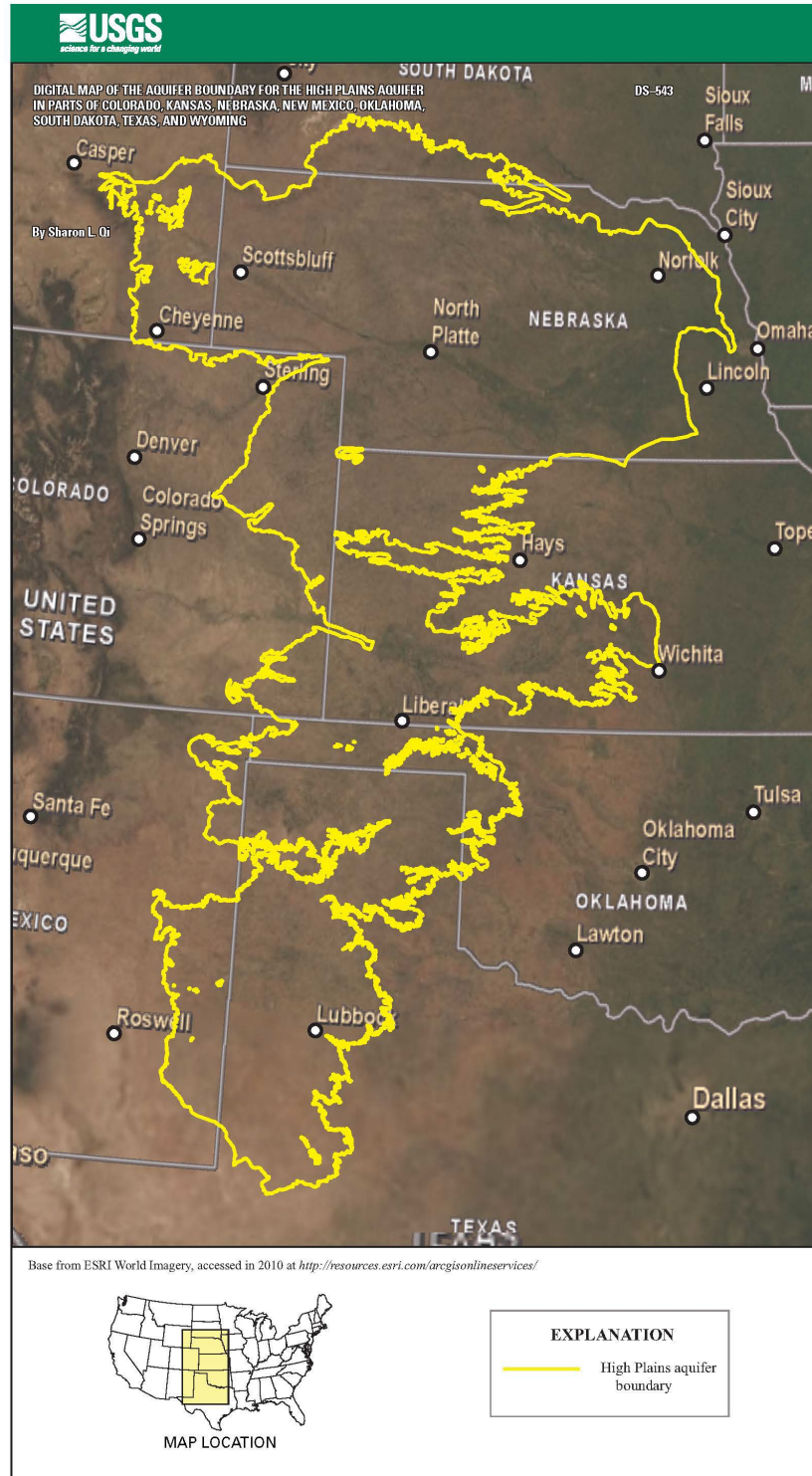
2.3 Water

Although the amount of rainfall may differ from the eastern side to the western side of both Kansas and Nebraska, there may be groundwater available for producers in both states. The Great Plains Aquifer stretches across eight states; however, two-thirds of the aquifer is located beneath Nebraska. The Great Plains aquifer, commonly known as the Ogallala aquifer, covers nearly the entire state of Nebraska and the western edge of Kansas (Figure 2.1).

Water availability can greatly affect land values in Kansas, especially western Kansas. The western-most counties in Kansas rely on the Ogallala aquifer as the primary source of irrigation for crop production. As depletion occurs, water availability is more limited, leading to a decline in land values. Producers prefer the option to irrigate, even if highly restricted, rather than switching to dryland farming. As the number of irrigated acres in a parcel increases, the price per acre increases at a rate of 12 to 15% per every percentage the parcel is irrigated (Thompson, 2022).

Water resources located at greater depths are more challenging to reach, leading to increased costs that are factored into the decreased valuation of land parcels. For every hundred feet increase in depth to water, the price per acre of land is discounted by approximately \$104. With the ongoing depletion of water from the Ogallala Aquifer, irrigated land is gaining higher value among producers (Thompson, 2022). This trend underscores the critical importance of water availability in determining land values in regions that rely on irrigation for agriculture.

Figure 2.1 Map of Great Plains Aquifer



Source: (Qi, 2023)

2.4 Ethanol

Nebraska is the second largest ethanol producing state with 24 ethanol plants that produce nearly 2.3 billion gallons of ethanol (Nebraska Ag Facts, 2023). The surge in ethanol production has resulted in higher corn prices in proximity to ethanol plants, which likely translates into higher land values the closer the land is located to the ethanol plant. However, there are conflicting studies on whether agriculture land value is affected by proximity of ethanol production facilities (Turnquist, Fortenbery, & Foltz, 2008).

A survey of agriculture bankers in the Kansas City Federal Reserve district saw farmland values were higher in locations that were close in proximity to ethanol plants (Henderson & Gloy, 2008). Further research findings indicate that non-irrigated farmland situated more than 50 miles away from an ethanol plant is valued at \$107 less per acre compared to similar land within a 50-mile radius. The study suggests that the effect of ethanol plants on farmland values is either comparable or less significant than their impact on local basis prices, as documented in prior literature (Blomendahl, Perrin, & Johnson, 2011), suggesting that the effect of ethanol plants on farmland values is either comparable to or less significant than their impact on local basis prices, as documented in prior literature.

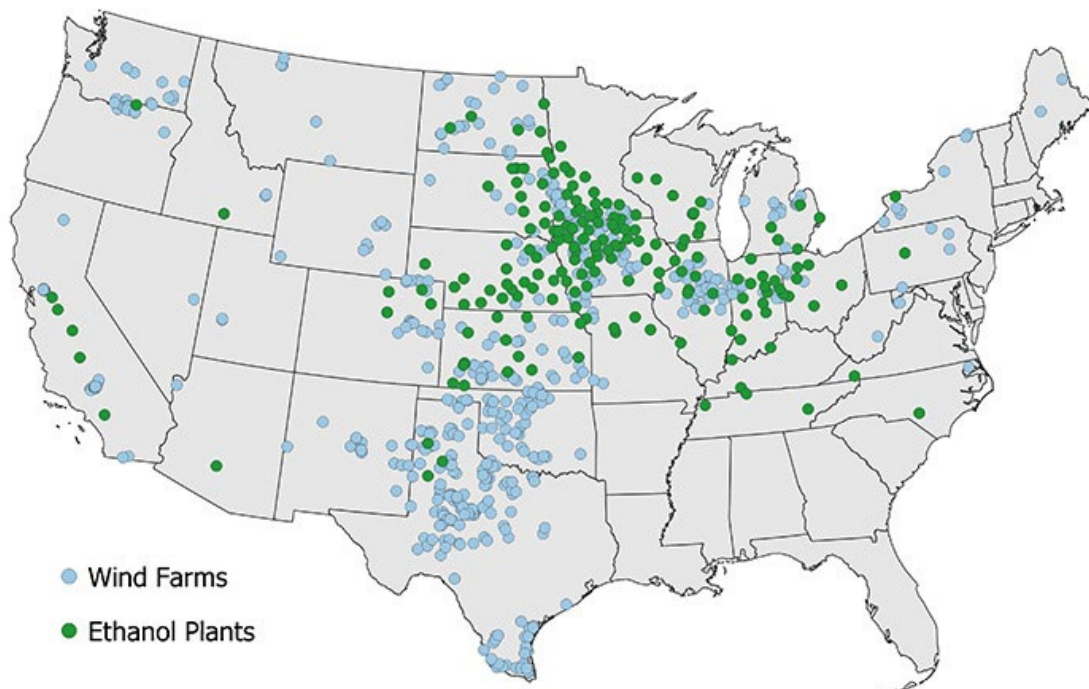
2.5 Wind Turbines

Kansas has the fourth highest potential of wind power in the nation. Currently, Kansas has 44 operational wind farms and wind is one of the largest sources of electricity in the state (Llopis-Jepsen, 2023). As wind farms continue to spread throughout Kansas, the visibility of their blinking lights at night has led to efforts to reduce light pollution. Despite changes to the landscape due to wind turbines, land values have remained unaffected.

A 2013 study looked at 50,000 home sales across nine states. All these homes were within 10 miles of wind farms and 1,198 sales were within 1 mile of a turbine. This extensive study found no statistical evidence that home values near wind turbines were affected after wind farms were built (Hoen, et al., 2013). A study specific to Kansas found that wind turbines do not affect agricultural property values, whether the turbines are on-farm or nearby (Sampson, Perry, & Taylor, 2020).

These findings suggest that while renewable energy developments, such as ethanol plants and wind turbines, have altered aspects of the rural landscape and energy production, their impact on land values is complex and influenced by various factors.

Figure 2.2 Map of Ethanol Plants and Wind Farms in the United States



Source: (Kearns, 2023)

2.6 Social Economics

Social economics focuses on the relationships between social behavior and economics. Proximity to urban areas often results in higher land values due to increased demand for non-agricultural purposes, such as recreational activities like hunting. Research indicates a positive correlation between land values and whether an operator has a college education (Boisvert, Schmit, & Regmi, 1997). Many young aspiring farmers pursue college degrees and secure off-farm jobs to save money for purchasing the necessary assets or relevant gain experience.

Personal relationships also significantly impact on the sale price of land. Transactions between sellers and buyers with established relationships resulted in a 43% discount on the per-acre sale price (Tsoodle, Golden, & Featherstone, 2006). According to a report from AgAmerica, two-thirds of non-operator landowners have family ties to their owned ground, with 54% of landowners receiving land as a gift or inheritance, indicating that it is more of an emotional investment than financial investment (AgAmerica, 2023).

During a farm transition, producers who own their land have the flexibility to set their prices, including gifting, to determine whether they want to collect passive or active income from their land during a farm or ranch transition. This dynamic allows landowners to make decisions based on personal values and family considerations, emphasizing the significance of social and emotional factors in land management and ownership.

CHAPTER III: METHOD AND DATA

This thesis will be a descriptive analysis of trends in Kansas and Nebraska focusing on the last 25 years as well as serve as an update to Pine's (1997) and Tsoodle and Wilson's (2001) work on Kansas Land Values over the last 150 years.

Data was taken from Wilfred Pine's *100 Years of Farmland Values in Kansas*, Leah Tsoodle's and Christine Wilson's *125 Years of Farmland Values in Kansas*, Charles Barnard and John Jones' *Farm real estate values in the United States by counties 1850-1982*, and the USDA-NASS Quick Stats. All the sources of land value data are compiled from the USDA-NASS Census and Survey of Agriculture over various years.

Due to the corresponding sets of data in this thesis, paired t-tests are used to compare the means of two related groups that are paired or matched, by evaluating the two-tailed p-value. The two-tailed p-value is used to determine the significance level, indicating no significance (>0.10), significance at the 10% level (<0.10), 5% level (<0.05), and 1% level (<0.01).

There was a discrepancy between the *125 Years of Farmland Values in Kansas* and NASS Quick Stats for Kansas farmland values in 1997. *125 Years of Farmland Values in Kansas* prices matched the NASS 1997 Census of Agriculture – Kansas County Data report. The 1997 NASS Quick Stats values were used because it is where someone now would go to access the information due to the customization features. A paired sample t-test was used to compare the two different land values for 1997 to determine whether there is statistical evidence that the mean difference between the observations are significantly different from zero. Both the county report data and Quick Stats data correspond to the census years, with the hypothesis that the means are equal.

USDA-NASS asks producers “What is your estimate of the total market value of all land, dwellings, barns and other buildings on the total acres operated?” This question is prefaced with “the value is under current market conditions and can be based off recent sales or appraisals in the producer’s area.” The USDA-NASS uses the results to release yearly land values for each state from surveys and provides census land values every five years by county. In addition to utilizing yearly land values from the agricultural survey, data on yields, commodity prices, and cattle inventory prices were compiled from the yearly survey for each state.

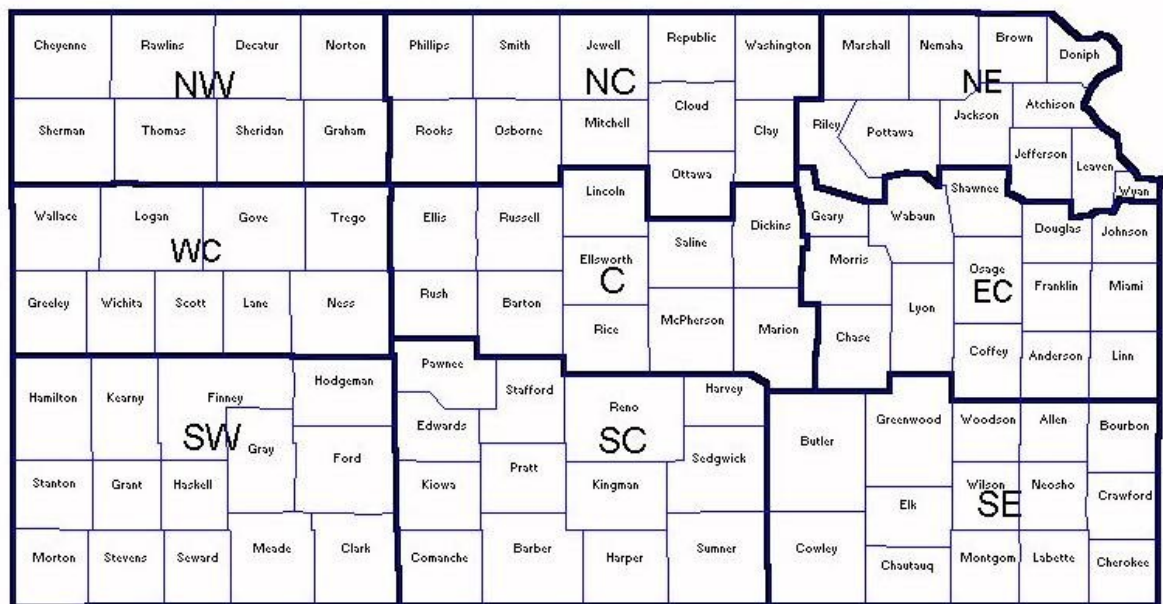
Since 2002, USDA-NASS has reported the Net Cash Income per operation each census year. This figure excludes living expenses and equipment depreciation. Net cash income, which is the total cash income minus the total cash expenses of an operation, is more consistent among producers, thus USDA prefers using it over net farm income. By calculating the correlation coefficients between land value and each price (corn, wheat or soybeans, and cattle), and between income and each price, we can identify which factor has the strongest relationship.

Additionally, the USDA Economic Research Service (ERS) has been tracking federal commodity insurance indemnity payments since 2008 (Table B.1). Indemnity payments provide a safety net for farmers by compensating them for losses due to droughts, floods, pests, and other disasters. The tracking of federal commodity insurance indemnity payments by the USDA-ERS provides valuable information that supports risk management, economic stability, policy development, investment decisions, budget planning, market insights, and the promotion of sustainable and resilient agricultural practices, all of which affects land values.

The Kansas Farm Management Association (KFMA) offers financial analysis and benchmarking to Kansas farmers. Through these services, KFMA compiles reports of farms of various sizes and types of farms in an area rather than compiling all farms together across the state to benchmark against. This thesis uses the average net farm income for Kansas during the census years derived from the KFMA farms. While Nebraska does not have a farm management association similar to KFMA, net farm incomes were gathered from FINBIN. Nebraska Farm Business, Inc. uses FINPACK to enter farm data which then is fed into FINBIN, which provides benchmark financial information for the state.

Each state is divided into Agriculture Statistic Districts. The counties are grouped together by geography, climate, and cropping practices. Kansas has nine statistical districts (Figure 3.1) while Nebraska has eight (Figure 3.2). Districts are named by their location in the state including North (N), Northwest (NW), North Central (NC), Northeast (NE), West Central (WC), Central (C), East Central (EC), South(S), Southwest (SW), South Central (SC), and Southeast (SE). By grouping the land values in districts, a person can analyze the change in land values over the last 150 years easier, focusing particularly on the last 25 years for both Kansas and Nebraska. The states' districts will be compared starting at the northwest corner of the state and moving toward the southeast corner.

Figure 3.1 Agriculture Statistic Districts for Kansas



Source: (USDA-NASS)

Figure 3.2 Agriculture Statistic Districts for Nebraska



Source: (USDA-NASS)

Agriculture Census Land Values (Incl. Buildings) for Kansas by Statistical District (Table 4.5) are the average land values for the counties in each district in Kansas. The percent change of each district for the last 25 years is represented in Kansas' Land Value Change from Previous Census of Agriculture (Table 4.6).

Agriculture Census Land Values (Incl. Buildings) for Nebraska by Statistical District (Table 4.9) are the average land values for the counties in each district in Nebraska. The percent change of each district for the last 25 years is represented in Nebraska's Land Value Change from Previous Census of Agriculture (Table 4.10).

To further analyze trends of land value in Kansas and Nebraska, the yearly survey of state land values were used to create an index for county land values. For the years between each census, rather than assuming land values increase or decrease in a straight-line progression, USDA-NASS annual survey data was used to create an index to calculate county land values during those intervening years.

By creating index values for the years in between each census of agriculture, the values will be more accurate than simple interpolations and useful to people who are looking to sell land that was inherited, but never had an appraisal conducted when inherited, to calculate taxes after a stepped-up basis. Values were created by using the equation below:

$$CLV_{(t+i)} = CCV_{(t)} * SSV_{(t+i)} / SCV_{(t)}$$

t = Census Year (1997, 2002, 2007, 2012, 2017, 2022)

i = 1,2,3,4 representing the four years between each census

CLV =County Land Value (annual, calculated)

CCV =County Census Value (every 5 years)

SSV =State Survey Value (annual)

SCV =State Census Value (every 5 years)

The calculated values were then compared to the corresponding census values using a paired t-test to determine if there was a statistical significance between the values.

CHAPTER IV: ANALYSIS AND RESULTS

4.1 1997 Data Discrepancy

When comparing the 1997 USDA-NASS County Report and Quick Stats land values (Table A.1), the paired t-test revealed a statistically significant difference between the county report data and Quick Stats at the 1% level, as indicated by the p-value of 0.000212 (Table 4.1). Although this difference is statistically significant, it is important to note that the actual disparity in land values between the two data sources was relatively small, amounting to less than \$10 per acre across the 105 counties analyzed. Quick Stats consistently reported higher land values, with an average of \$642 per acre. This minor discrepancy highlights the importance of using accurate and consistent data sources when assessing land values for economic and planning purposes. Even small differences in data can be statistically significant, emphasizing the need for precise data management in agricultural economic research.

Table 4.1 1997 Comparison of USDA-NASS County Report and Quick Stats of Kansas Land Values

<i>t-Test: Paired Two Sample for Means</i>	<i>County Report</i>	<i>Quick Stats</i>
Mean	632.78	642.07
Variance	106726.980	112722.26
Observations	105	105
Pearson Correlation	0.99	
Hypothesized Mean Difference	0	
df	104	
t Stat	-3.839	
P(T<=t) one-tail	0.000106	
t Critical one-tail	1.659	
P(T<=t) two-tail	0.000212	
t Critical two-tail	1.98	

4.2 Comparison of USDA-NASS Survey and Census Land Values

When compiling values for both Kansas and Nebraska, it was found that there was a difference between USDA-NASS surveys and census land values beginning in 1945. The differences in values are shown in USDA-NASS Survey and Census Land Values (Table 4.2). Both Kansas and Nebraska's average census land values were higher than the survey. The average land value in Kansas from 1945 to 2022 was \$637 per acre and in Nebraska was \$833 per acre according to census data. A paired t-test was done for both states comparing the survey and census data. Kansas has a difference in mean of \$5.18 and a p-value of 0.683 while Nebraska has a difference in mean of \$8.47 and a p-value of 0.394. These p-values indicate that there is no statistical difference between USDA-NASS survey and census values for Kansas (Table 4.3) or Nebraska (Table 4.4). The variations do not substantially impact the overall assessment of land values in Kansas and Nebraska and reinforces the reliability of both data sources for evaluating historical land value trends in these states.

Table 4.2 Comparison of USDA-NASS Survey and Census Land Values (\$/acre)

Census Year	Kansas		Nebraska	
	Survey (\$)	Census (\$)	Survey (\$)	Census (\$)
1945	45	41	37	36
1950	66	66	58	58
1954	79	80	70	72
1959	98	100	86	89
1964	115	122	105	109
1969	162	159	150	154
1974	253	301	242	282
1978	418	501	412	525
1982	628	601	730	701
1987	373	413	400	457
1992	460	463	517	514
1997	585	586	620	658
2002	665	687	760	776
2007	980	911	1140	1159
2012	1510	1632	2420	2380
2017	1890	1848	2820	2754
2022	2420	2324	3450	3437

Table 4.3 Comparison of USDA-NASS Survey and Census Values of Kansas Land

<i>t-Test: Paired Two Sample for Means</i>		
	<i>Survey</i>	<i>Census</i>
Mean	632.176	637.353
Variance	481562	460588
Observations	17	17
Pearson Correlation	0.99744	
Hypothesized Mean Difference	0	
df	16	
t Stat	-0.4153	
P(T<=t) one-tail	0.34173	
t Critical one-tail	1.74588	
P(T<=t) two-tail	0.68346	
t Critical two-tail	2.11991	

Table 4.4 Comparison of USDA-NASS Survey and Census Values of Nebraska Land

<i>t-Test: Paired Two Sample for Means</i>	<i>Survey</i>	<i>Census</i>
Mean	824.529	833
Variance	1103408	1063572
Observations	17	17
Pearson Correlation	0.99943	
Hypothesized Mean Difference	0	
df	16	
t Stat	-0.8752	
P(T<=t) one-tail	0.19721	
t Critical one-tail	1.74588	
P(T<=t) two-tail	0.39443	
t Critical two-tail	2.11991	

4.3 Land Value Trends Over the Last 25 Years

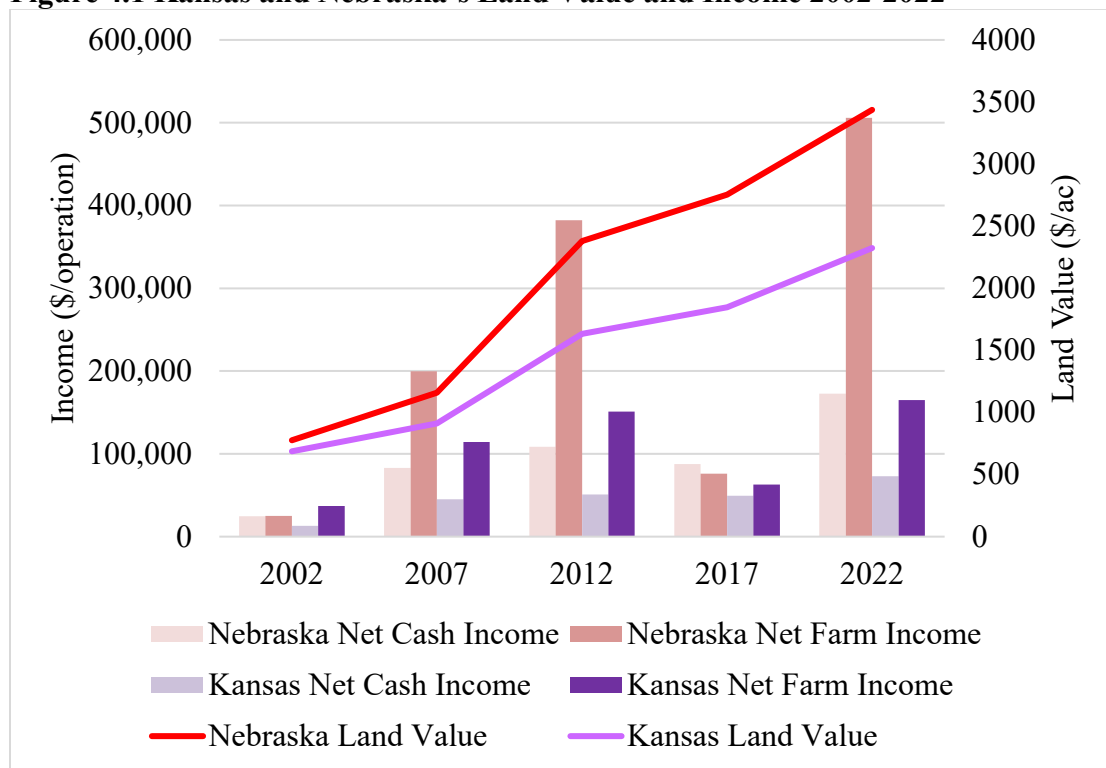
Focusing on the last 25 years of USDA-NASS Census of Agriculture land values, Kansas and Nebraska began to show significant increases starting in 1997, as illustrated in Figure 4.1. The most substantial increase occurred in 2012, with Kansas land values rising by an average of 79% (Table 4.6) compared to 2007, while Nebraska's land values more than doubled, increasing by 105% (Table 4.10). Commodity prices steadily rose from 2008 to 2014, as reflected in the 2007 and 2012 Census data. However, the 2017 Census saw the smallest increase in land values compared to previous years, coinciding with a decline in commodity prices beginning in 2015. As commodity prices rose again, land values also increased, as shown in the 2022 Census for both states.

Despite USDA-NASS net cash incomes and the net farm incomes for Kansas and Nebraska being derived from different sources, KFMA and FINBIN respectively, a trend can be observed. As farm income rises, land values also tend to increase; however, there is usually a lag in the adjustment of land values compared to changes in commodity prices and income. Analyzing the graph of Kansas and Nebraska's land values and income

(Figure 4.1), land values generally follow income trends except in 2017 when income was low for both states. Despite depleted savings, there was still a slight increase in land values from 2012, with cash being the driving force behind land values in 2017.

In addition to cash reserves, strong cattle markets (Figures 4.4 and 4.10) may have increased pasture values, holding up overall land values at a time when commodity prices declined, causing crop land values to weaken. The cattle markets have provided a financial cushion for landowners, helping to sustain the value of their land despite fluctuations in the prices of other agricultural commodities.

Figure 4.1 Kansas and Nebraska's Land Value and Income 2002-2022



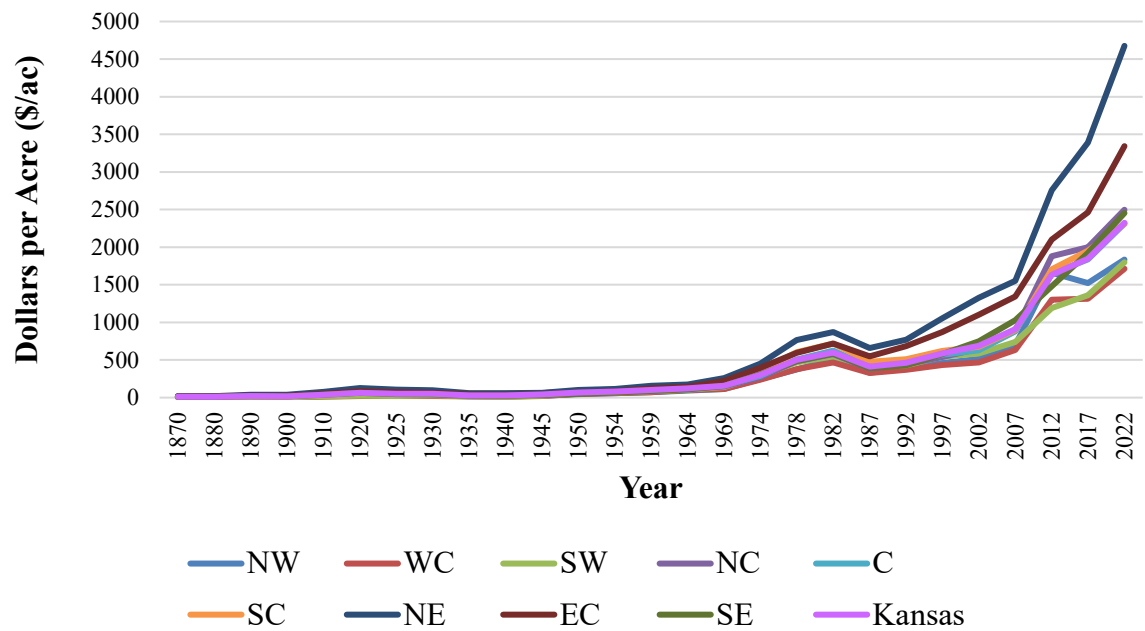
Sources: (USDA-NASS, Census of Agriculture) (FINBIN) (KFMA)

4.4 Kansas Land Values

Kansas land values remained consistent across the state until 1969, when prices experienced a notable increase. The northeast and east-central districts began to diverge from other regions, although they still followed similar trends. This divergence marked the beginning of a significant shift in land values within the state. By 1987, these districts distinctly stood out by experiencing much higher rates of increase (Figure 4.2).

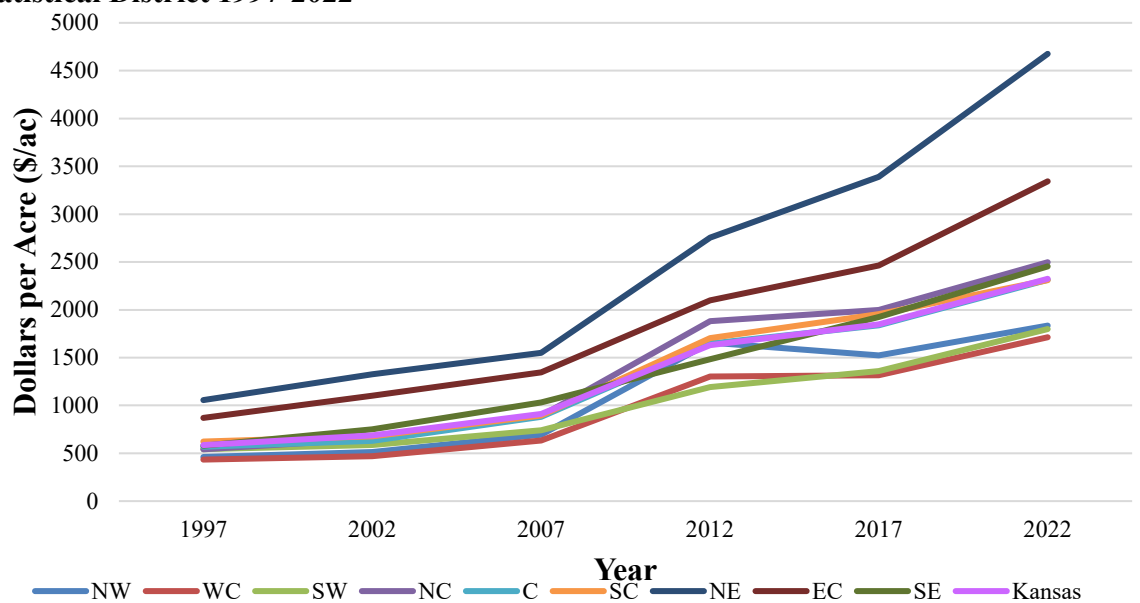
Over the past 25 years, the northeast and east-central regions have continued to differentiate themselves from the rest of the state, with the gap between them and other regions becoming even more pronounced (Figure 4.3).

Figure 4.2 U.S. Agriculture Census Land Values (Incl. Buildings) for Kansas by Statistical District



Source: (USDA-NASS)

Figure 4.3 U.S. Agriculture Census Land Values (Incl. Building) for Kansas by Statistical District 1997-2022



Source: (USDA-NASS)

In 2002, Kansas land value rose \$101 from the previous census to \$687 an acre (Table 4.5). Between the census years of 1997 and 2002, Kansas corn and wheat prices declined until reaching a low in 1999 of \$1.81 per bushel and \$2.25 bushel, respectively. By 2002, the yearly Kansas corn price was \$0.01 higher than the previous census at \$2.48 per bushel and wheat increased \$0.25 to \$3.41 per bushel (Figure 4.4). During this time, yields remained consistent in Kansas when compared to the average yield from 1997-2022 (Figure 4.5). The average yield for corn is 132 bushels per acre and trended downwards over the period while wheat is 41 bushels per acre and trended upwards. This could be explained by more corn being grown in western Kansas and significant droughts in 2012. Corn and wheat yields were slightly below the average in 2000 and 2001 (Figure 4.5). Between the census years, cattle inventory price per head trended upwards and increased \$140 from 1997 to \$640 in 2002 (Figure 4.4). The USDA Agricultural Census began tracking net cash income by state in 2002. Kansas net cash income was \$13,070 while KFMA reported a net farm income of \$37,168 per operation (Figure 4.1).

Kansas saw a slight increase in land values in 2007 up to \$911 an acre (Table 4.5). Between the census years of 2002 and 2007, yearly wheat price decreased to \$3.15 in 2003 while the corn price decreased to \$2.07 per bushel in 2005. After these decreases in prices, corn increased to \$4.13 per bushel and wheat increased to \$5.93 per bushel in 2007 (Figure 4.4). Corn yields varied more between the census years and were below the average in 2002, 2003, and 2006 while the average wheat yields in Kansas were lower than the average in 2002 and 2006 (Figure 4.5). Although there were years that saw below average yields, it was not enough to trigger federal commodity insurance indemnity payments (Table B.1). Cattle prices continued to increase during this period reaching \$920 per head

in 2006 before falling to \$840 per head in 2007 (Figure 4.4). The Kansas net cash income in 2007 increased to \$45,195 per operation and KFMA reported \$114,423 as the average net farm income (Figure 4.1).

In 2012, Kansas land value rose \$721 from the previous census to \$1,632 an acre (Table 4.5). Between the census years of 2007 and 2012, Kansas corn and wheat prices declined in 2009 to \$3.49 per bushel and \$4.79 per bushel, respectively. By 2012, the yearly Kansas corn price was \$2.91 higher than the previous census at \$7.04 per bushel and wheat increased \$1.55 to \$7.48 per bushel (Figure 4.4). During this time, corn yields reached 155 bushels per acre in 2009 (Figure 4.5) but drought occurred in 2011 and 2012 which resulted in \$943,211,000 and \$1,359,972,000 in federal commodity indemnity payments respectively (Table B.1). Kansas had an average corn yield in 2011 of 107 bushels per acre and in 2012 it was 95 bushels per acre. Between the census years, cattle inventory price per head continued to increase by \$280 from 2007 to \$1,120 in 2012 (Figure 4.4). Although Kansas saw an increase in commodity prices, net cash income only increased to \$50,903 per operation while KFMA reported net farm income as \$151,127 (Figure 4.1). The large increase in commodity prices happened at the same time as the low yields and insurance payments which is why net cash income was not greatly affected.

Kansas saw another increase in land values in 2017 up to \$1,848 an acre (Table 4.5). Between the census years of 2012 and 2017, yearly corn price dropped to \$4.49 in 2013 and continued to decline in price to \$3.20 in 2016. By 2017, Kansas had a yearly average corn price of \$3.28 per acre, a decrease of \$3.76 from the previous census year. The average wheat price started to decline in 2013 but didn't see a large decrease in price until 2015 and 2016 when the average wheat price reached \$4.74 and \$3.02 respectively.

In 2017, the wheat price increased to \$4.07 per bushel which was a decrease of \$3.41 from the previous census year. Corn yields returned to average or above average yields in 2013 while wheat yields suffered in 2014 (Figure 4.5). Kansas received \$1,036,305,000 in insurance payments in 2013 and \$663,338,000 in 2014. While 2016 saw the lowest price for corn, only \$91,917,000 in federal commodity indemnity payments were made (Table B.1). Cattle prices continued to increase until 2015 reaching \$1,490 per head before falling to \$1,050 per head in 2017 (Figure 4.4). The Kansas net cash farm income declined in 2017 to \$49,291. Despite the corn price being cut in half and wheat price substantially lower as well, net cash income was only \$1,612 lower due to the large indemnity payments. KFMA reported a decline in net farm income to \$62,944 per operation, a decrease of \$88,183 between 2012 and 2017 (Figure 4.1). This large difference is likely due to farmers upgrading equipment that is depreciating faster and family living expenses increasing when commodity prices were high. Those family living expenses likely do not decline accordingly when the commodity prices decline.

In 2022, Kansas land value rose \$476 from the previous census to \$2,324 an acre (Table 4.5). Between the census years of 2017 and 2022, the wheat price in Kansas increased to \$4.93 per bushel in 2018 before falling back down to \$4.08 the next year. By 2022 wheat price increased up to \$8.71 per bushel which is an increase of \$4.64 from the previous census year. Corn prices began rising slightly in 2018 and 2019 before jumping to \$4.35 and \$6.02 in 2020 and 2021, respectively. By 2022, corn prices in Kansas were \$7.04 per bushel which was an increase of \$3.76 from the prior census year (Figure 4.4). During this time, corn remained consistent between the census years while wheat yields remained high and only fell below average in 2018. In 2022, yields for both corn and wheat

decreased (Figure 4.5) and resulted in \$1,859,747,000 in federal commodity insurance payments in Kansas (Table B.1). Cattle inventory price per head remained consistent from 2017 and 2022 seeing an increase in \$110 to \$1,160 per head. Kansas saw an increase in commodity prices with low yields in 2022 resulting in a net cash income increased to \$73,058 per operation while KFMA reported net farm income as \$164,914 (Figure 4.1).

Table 4.5 U.S. Agriculture Census Land Values (Incl. Buildings) for Kansas by Statistical District (\$/acre)

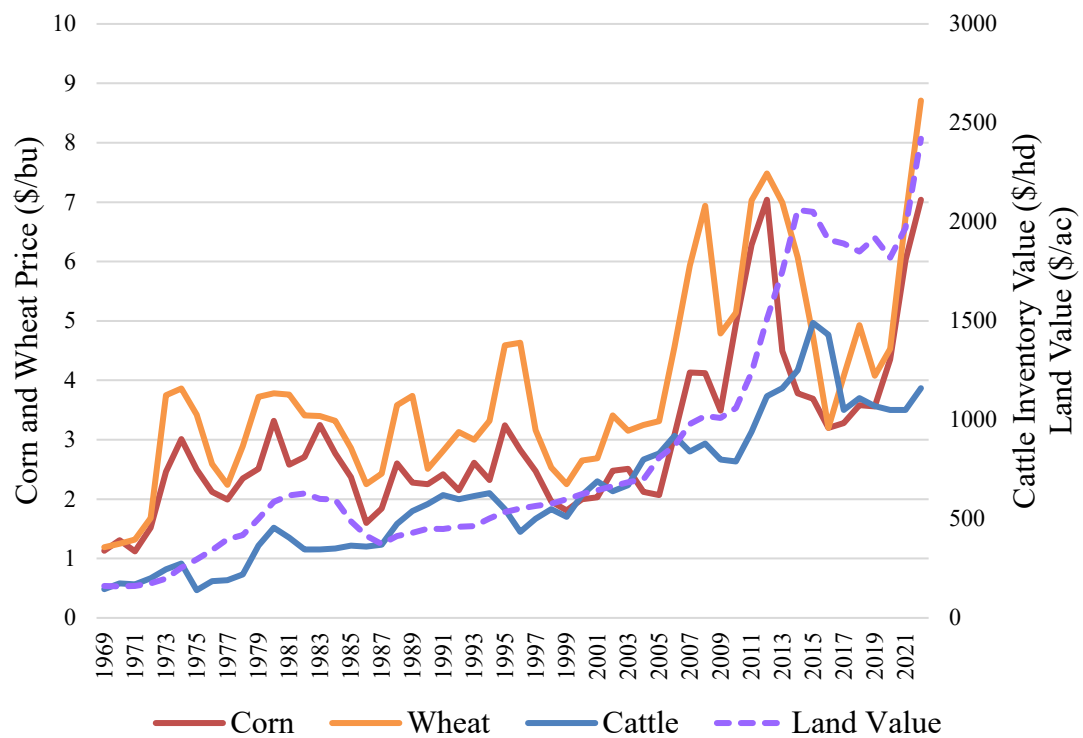
	NW	WC	SW	NC	C	SC	NE	EC	SE	Kansas
1870				5	7	7	21	19	11	13
1880	2	3	3	8	10	6	20	17	11	11
1890	7	6	7	16	17	15	36	25	19	19
1900	5	4	3	16	17	11	39	24	18	15
1910	19	15	15	48	49	46	78	49	37	40
1920	33	21	25	70	78	70	128	85	62	62
1925	30	22	23	56	63	54	105	70	47	50
1930	28	22	30	51	64	58	96	63	40	49
1935	19	15	19	33	41	38	58	41	25	31
1940	15	11	15	30	42	43	59	36	26	30
1945	25	22	27	40	58	58	66	46	33	41
1950	45	52	60	59	84	86	101	70	52	66
1954	60	61	66	72	99	110	114	86	68	80
1959	74	72	86	88	117	128	156	122	90	100
1964	94	102	105	113	134	145	174	145	110	122
1969	113	116	138	149	161	183	260	220	156	159
1974	248	237	288	272	291	358	452	393	312	301
1978	373	378	468	485	505	605	767	595	484	501
1982	510	468	551	577	626	717	870	717	587	601
1987	330	327	418	385	407	476	659	547	392	413
1992	387	371	430	442	473	510	768	683	429	463
1997	461	434	543	542	568	623	1056	870	580	586
2002	513	468	585	651	631	678	1325	1101	750	687
2007	695	635	740	891	880	896	1551	1345	1031	911
2012	1657	1303	1192	1881	1647	1706	2756	2100	1482	1632
2017	1524	1314	1360	1998	1838	1953	3391	2464	1923	1848
2022	1835	1713	1799	2497	2314	2310	4676	3343	2454	2324

Source: (USDA-NASS)

Table 4.6 Kansas' Land Value % Change from Previous Census of Agriculture

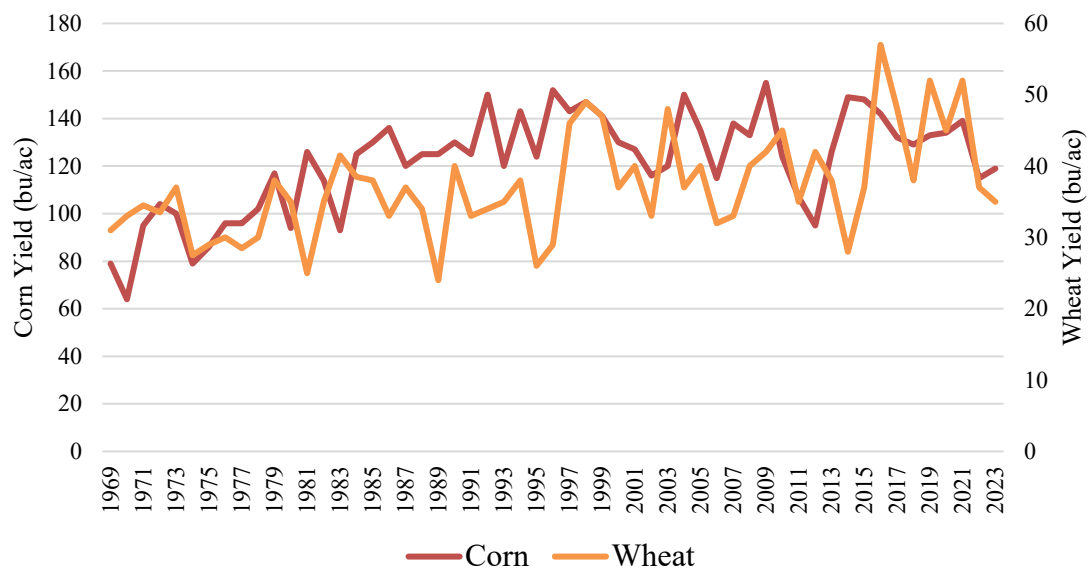
	NW	WC	SW	NC	C	SC	NE	EC	SE	Kansas
2002	11	8	8	20	11	9	25	27	29	17
2007	35	35	26	37	39	32	17	22	38	33
2012	138	105	61	111	87	90	78	56	44	79
2017	-8	01	14	06	12	15	23	17	30	13
2022	20	30	32	25	26	18	38	36	28	26

Figure 4.4 Kansas Farmland Values, Corn and Wheat Prices, and Cattle Inventory Values, 1969-2022



Source: (USDA-NASS)

Figure 4.5 Kansas Corn and Wheat Yields



Source: (USDA-NASS)

Kansas land values typically follow the income levels of Kansas producers, indicating that as income levels rise, land values also tend to increase, with the exception of 2017 (Table 4.7). The USDA prefers net cash income as it is more consistent. The net cash income also has a higher correlation, 0.884, with land values than net farm income, 0.608 (Table 4.8). Corn, wheat, and cattle prices all directly influence net cash and net farm income levels, playing crucial roles in determining the financial well-being of producers. Net cash income closely follows cattle prices correlation of 0.912 (Table 4.8), suggesting that fluctuations in the cattle market have a direct and immediate effect on the liquidity and financial stability of farmers. On the other hand, net farm income is highly correlated to wheat and corn prices, 0.989 and 0.962, respectively.

Table 4.7 Kansas Land Values Income, and Prices Summary

Year	Land Value (\$/ac)	Net Cash Income (\$/operation)	Net Farm Income (\$/operation)	Corn Price (\$/bu)	Wheat Price (\$/bu)	Cattle Price (\$/hd)
2002	687	13,070	37,168	2.48	3.41	640
2007	911	45,195	114,423	4.13	5.93	840
2012	1,632	50,903	151,127	7.04	7.48	1,120
2017	1,848	49,291	62,944	3.28	4.07	1,050
2022	2,324	73,058	164,914	7.04	8.71	1,160

Source ((USDA-NASS) (KFMA)

Table 4.8 Correlation between Kansas Land Value and Other Factors

Kansas	Land Value	Net Cash Income	Net Farm Income	Corn Price	Wheat Price	Cattle Price
Land Value	1.000	0.884	0.608	0.676	0.646	0.930
Net Cash Income		1.000	0.829	0.782	0.831	0.912
Net Farm Income			1.000	0.962	0.989	0.751
Corn Price				1.000	0.965	0.802
Wheat Price					1.000	0.740
Cattle Price						1.000

4.4.1 Kansas Reporting Districts

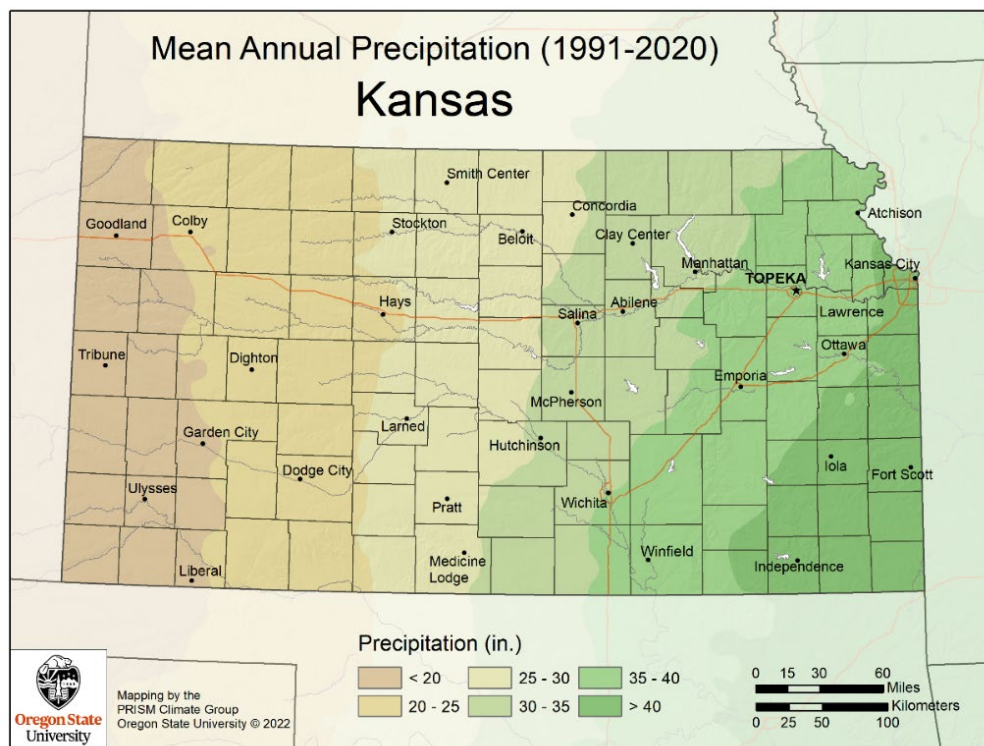
Kansas land values are lower on the western side and increase as the amount of rain increases to the eastern side (Figure 4.6). Western Kansas receives less than 25 inches of rainfall each year which is reflected in the lowest land values in the state. The northwest area is valued higher than the southwest district, yet the southwest reporting district has much higher average corn yields (Figure 4.7), indicating higher productivity in the southwest well as more ethanol plants (Figure 2.2). The northwest district saw the greatest increase in 2012, increasing at 138% percent, then decreased 8% the following census year, 2017. The large increase in value in 2012 may be attributed to a 58% increase in pastureland in the northwest as cattle prices remained high at the time (Taylor & Dhuyvetter, 2012). However, this increase in land values in the northwest district was not sustainable and thus land values declined the next census year. West central also saw a large increase of land values in 2012 of 105%. However, in 2017, prices remained constant, only increasing 1% (Table 4.6).

North-central, central, and south-central districts receive more rain, averaging 25-30 inches, which corresponds to higher land values than those on the western side (Figure 4.6). All three central districts closely follow the Kansas average land value. Although south-central has higher yields, likely due to irrigation, the north-central district is valued much higher than south central. Despite central and north-central having similar yields (Figure 4.7), north-central land value increased 24% more than the central reporting district did in 2012. Land values in the north-central district increased 111% in 2012 and remained constant in 2017, only increasing 6% (Table 4.6).

Most of the districts are near the state average land value except for the east-central district and the northeast district. The northeast district land values skyrocketed from 2007-

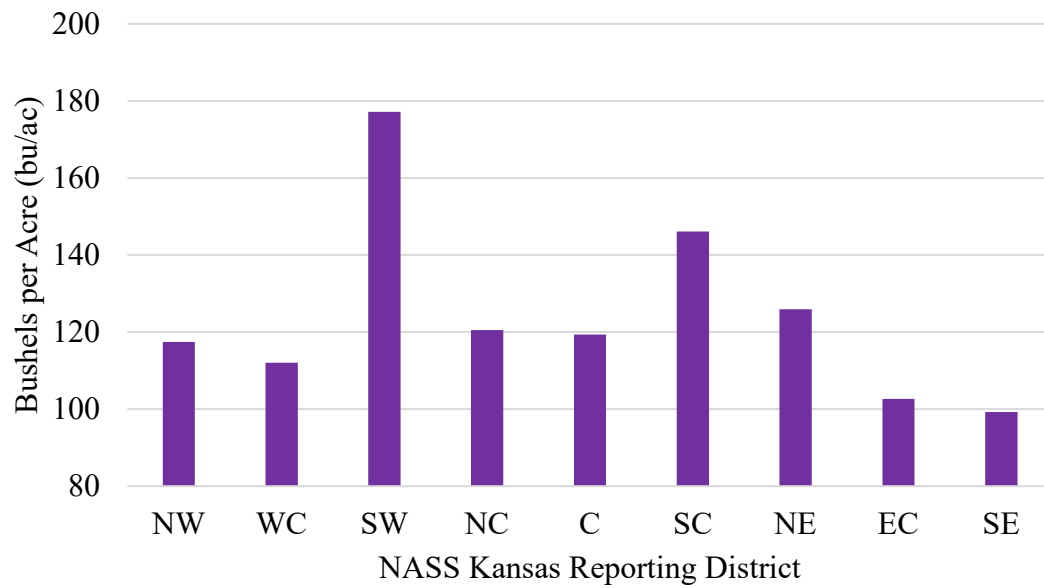
2022. The east-central district is also noticeably higher than the other district land values and state land values (Figure 4.3). This area of the state has better soil quality, receives more rain, and is more populated than other parts of the state. Both the northeast and the east-central district has seen a large population increase from 1997 to 2022 indicating that urban sprawl may be impacting land values (USAFacts). Eastern Kansas receives 30-40 inches of rain annually (Figure 4.6). Although the southeast district receives the most rainfall, it has one of the lowest corn yield averages, and the most consistent land value trend line. Soil productivity in the southeast region is generally poorer, leading to lower yield, despite higher rainfall.

Figure 4.6 Mean Annual Precipitation for Kansas



Source: (PRISM Climate Group, 2024)

Figure 4.7 Kansas Average Corn Yields 1997-2019

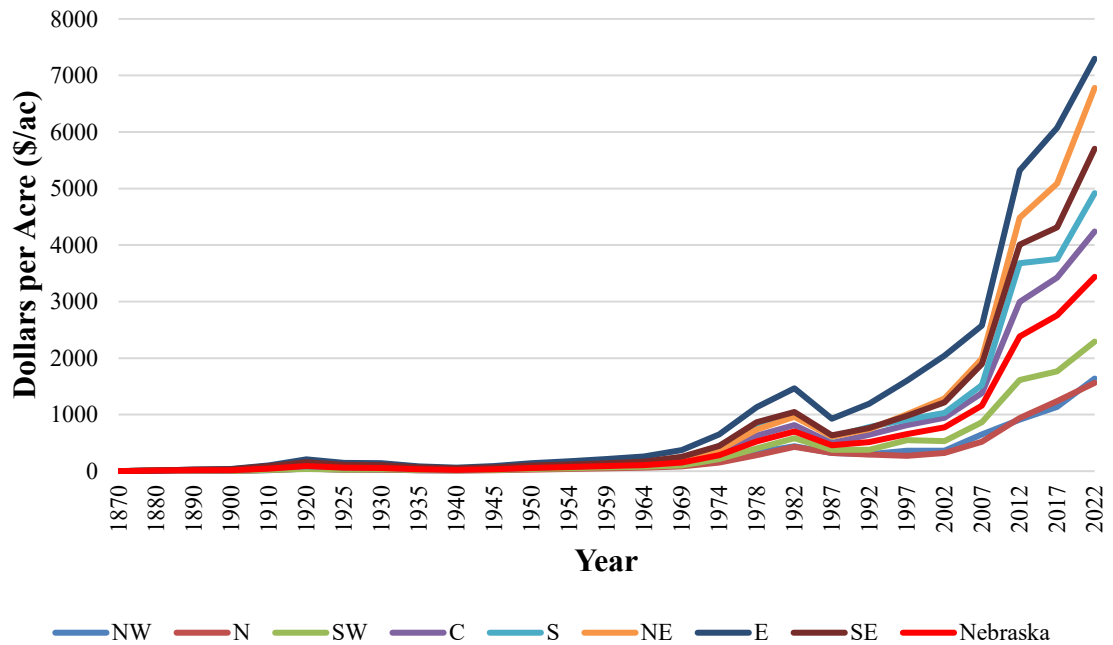


Source: (USDA-NASS)

4.5 Nebraska Land Values

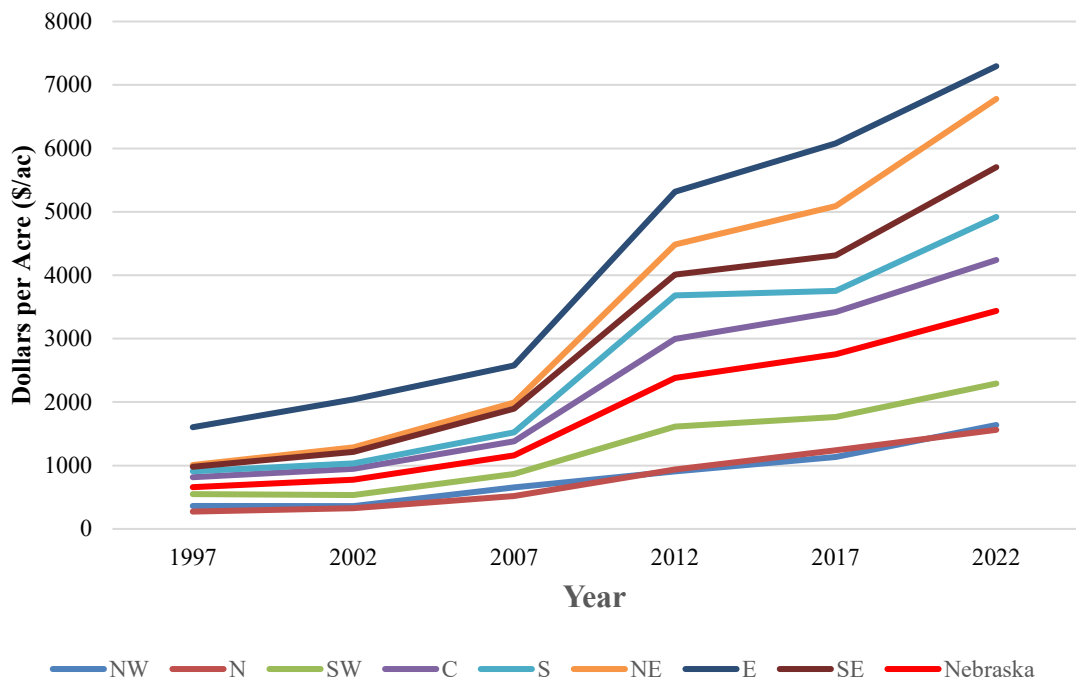
Nebraska land values remained closely aligned until 1964, similar to Kansas. The east district began to diverge from the other regions, which were also starting to show differences in land values. By 1982, most regions could be clearly distinguished from one another (Figure 4.8). Over the past 25 years, this separation has become more pronounced. By the 2012 Census, there was a clear distinction between each statistical district (Figure 4.9).

Figure 4.8 U.S. Agriculture Census Land Values (Incl. Buildings) for Nebraska by Statistical District



Source: (USDA-NASS)

Figure 4.9 U.S. Agriculture Census Land Values (Incl. Building) for Nebraska by Statistical District 2002-2022



Source: (USDA-NASS)

In 2002, Nebraska land value rose \$118 from the previous census to \$776 an acre (Table 4.9). Between the census years of 1997 and 2002, Nebraska corn declined until reaching a low in 1999 of \$1.75 per bushel and soybeans reached a low of \$4.44 per bushel in 2000 (Table 4.10). By 2002, the yearly Nebraska corn price was the same as the previous census at \$2.32 per bushel and soybeans decreased \$0.85 to \$5.43 per bushel. Between 1997-2002, yields were lower in Nebraska when compared to the average yield from 1997-2022 (Figure 4.11). The average yield for corn is 162 bushels per acre while soybeans are 50 bushels per acre, both trended upwards. Yields may have been low when compared to the 25-year average, but they were consistent during that period when looking at the average yield between census years. The average corn yield increased at least 10 bushels and soybeans increased about 4 bushels between each census. Corn and soybean yields were slightly below the average in 2000 due to drought (Figure 4.11). Between the census years, cattle inventory prices per head also trended upwards, rising from \$130 in 1997 to \$690 in 2002 (Figure 4.10). The USDA Agricultural Census began tracking net cash income by state in 2002, with Nebraska's net cash income reported at \$24,820, while FINBIN reported a net farm income of \$25,158 per operation (Figure 4.1).

Nebraska saw another increase in land values in 2007 up to \$776 an acre (Table 4.9). Between the census years of 2002 and 2007, yearly soybean price remained above the 2002 price while the corn price decreased to \$1.92 per bushel in 2005. After this decrease in price, corn increased to \$4.14 per bushel and soybeans increased to \$9.92 per bushel in 2007 (Figure 4.10). Corn and soybean yields continued to climb between census years but was slightly below the average for that period in 2003 (Figure 4.11). Cattle prices

continued to increase during this period reaching \$980 per head in 2006 before falling to \$890 per head in 2007. The Nebraska net cash income in 2007 increased to \$108,593 per operation and net farm income of \$199,899 (Figure 4.1).

In 2012, Nebraska land value rose \$1,221 from the previous census to \$2,380 an acre (Table 4.9). Between the census years of 2007 and 2012, Nebraska corn and soybean prices declined slightly in 2009 to \$3.58 per bushel and \$9.48 per bushel, respectively. By 2012, the yearly Nebraska corn price was \$2.71 higher than the previous census at \$6.85 per bushel and soybeans increased \$4.18 to \$14.10 per bushel (Figure 4.10). During this time, corn yields reached 179 bushels per acre in 2009 but drought occurred in 2012 which resulted in lower yields of 142 bushels per acre for corn and 41.5 bushels per acre in soybeans as well as \$1,232,611,000 in federal commodity indemnity payments (Table B.1). Between the census years, cattle inventory price per head continued to increase by \$350 from 2007 to \$1,240 in 2012 (Figure 4.10). Nebraska saw an increase in commodity prices resulting in net cash farm income increasing to \$108,593 per operation and reported net farm income as \$382,314 (Figure 4.1)

Nebraska saw another increase in land values in 2017 up to \$2,754 an acre (Table 4.9). Between the census years of 2012 and 2017, yearly corn price dropped to \$4.47 in 2013 and continued to decline in price to \$3.32 in 2016. By 2017, Nebraska had a yearly average corn price of \$3.35 per acre, a decrease of \$3.50 from the previous census year. The average soybean price declined in 2013 but did not hit the lowest price between census years until 2015 when the average soybean price was \$8.66. In 2017, the soybean price increased to \$9.08 per bushel which was a decrease of \$5.02 from the previous census year. Corn and soybean yields returned to average or above average yields in 2013 (Figure 4.10).

Even though yields recovered, Nebraska received \$809,824,000 in insurance payments in 2013 due to low commodity prices. Despite Nebraska's low corn and soybean price in 2015, the federal commodity indemnity payments totaled only \$393,894,000 because the average corn yield reached 185 while soybeans reached 58 bushels per acre (Figure 4.11). Cattle prices continued to increase until 2015 reaching \$1,600 per head before falling to \$1,190 per head in 2017. The Nebraska net cash income declined in 2017 to \$87,824 as well as net farm income to \$76,077 per operation, a decrease of \$306,237 between 2012 and 2017 (Figure 4.1).

In 2022, Nebraska land value rose \$683 from the previous census to \$3,437 an acre (Table 4.9). Between the census years of 2017 and 2022, the soybean price in Nebraska decreased to \$8.20 per bushel in 2018. By 2022 soybean prices increased up to \$14.20 per bushel which is an increase of \$5.12 from the previous census year. Corn prices began rising slightly in 2018 and 2019 before increasing to \$4.47 and \$5.96 in 2020 and 2021 respectively. By 2022, corn prices in Nebraska were \$6.77 per bushel which was an increase of \$3.42 from the prior census year (Figure 4.10). Between 2017 and 2022, corn and soybean yields remained high, above 180 bushels for corn and 58 bushels for soybeans. However, yields fell slightly in 2018 to 165 bushels per acre for corn and 49 bushels per acre for soybeans (Figure 4.11) resulting in \$1,074,599,000 in federal commodity insurance payments in Nebraska (Table B.1). Cattle inventory price per head remained consistent from 2017 and 2022 seeing an increase in \$110 to \$1,300 per head (Figure 4.10). Nebraska saw an increase in commodity prices with lower yields in 2022 resulting in a net cash income increased to \$172,677 per operation, an increase of \$84,853, and a reported net farm income of \$505,771, an increase of \$429,694 (Figure 4.1).

Table 4.9 U.S. Agriculture Census Land Values (Incl. Buildings) for Nebraska by Statistical District (\$/acre)

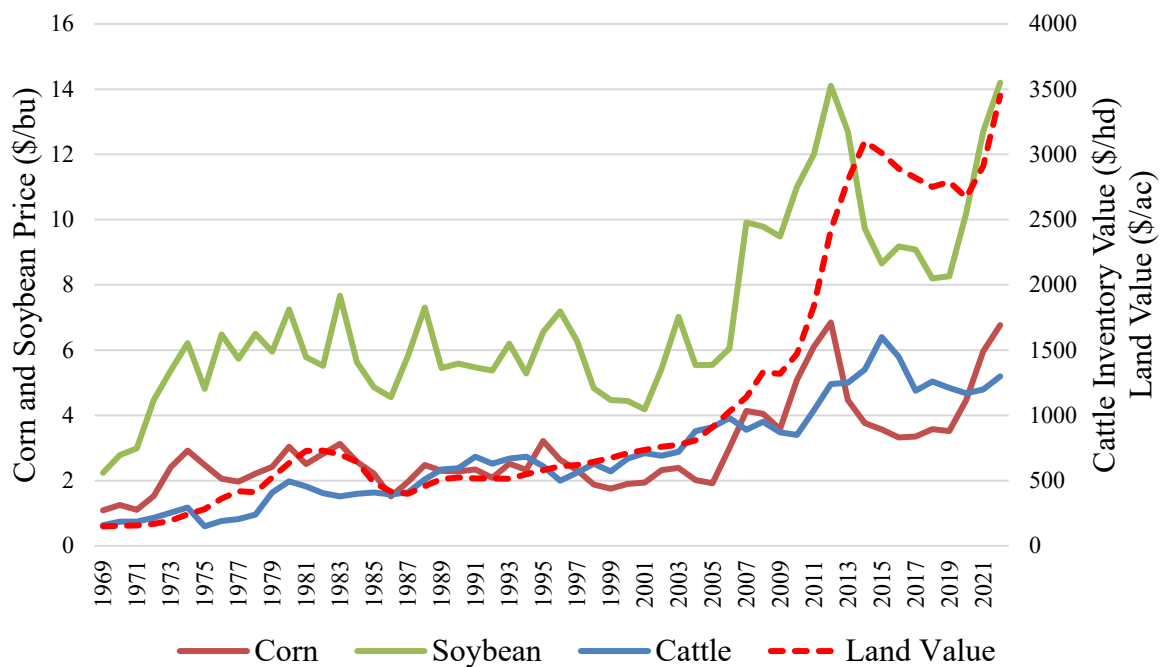
	NW	N	SW	C	S	NE	E	SE	Nebraska
1870	-	-	-	-	-	-	-	-	-
1880	16	5	15	6	6	8	13	13	11
1890	6	9	8	15	16	16	30	27	19
1900	4	8	5	14	18	24	37	33	19
1910	17	20	19	51	59	71	100	88	47
1920	46	44	40	97	85	172	211	158	88
1925	26	30	30	67	69	110	147	113	60
1930	27	26	31	64	64	100	138	105	56
1935	17	15	23	37	41	59	84	65	34
1940	16	10	15	25	26	41	61	49	24
1945	24	17	22	36	40	64	91	70	36
1950	43	29	40	61	63	100	143	99	58
1954	51	38	51	81	84	123	176	117	72
1959	67	50	65	102	105	140	217	141	89
1964	79	64	77	132	131	155	262	171	109
1969	95	86	103	194	202	222	375	253	154
1974	186	154	216	345	449	372	648	445	282
1978	333	285	402	630	794	733	1132	867	525
1982	441	431	582	817	1013	960	1467	1045	701
1987	320	321	379	497	606	609	927	635	457
1992	301	294	377	644	781	740	1191	763	514
1997	361	273	547	815	908	1007	1603	980	658
2002	359	325	534	945	1032	1286	2044	1214	776
2007	653	519	864	1381	1525	1994	2575	1895	1159
2012	908	938	1615	2996	3682	4485	5318	4007	2380
2017	1134	1240	1763	3422	3753	5090	6076	4312	2754
2022	1638	1562	2292	4240	4918	6779	7295	5703	3437

Source: (USDA-NASS)

Table 4.10 Nebraska's Land Value % Change from Previous Census of Agriculture

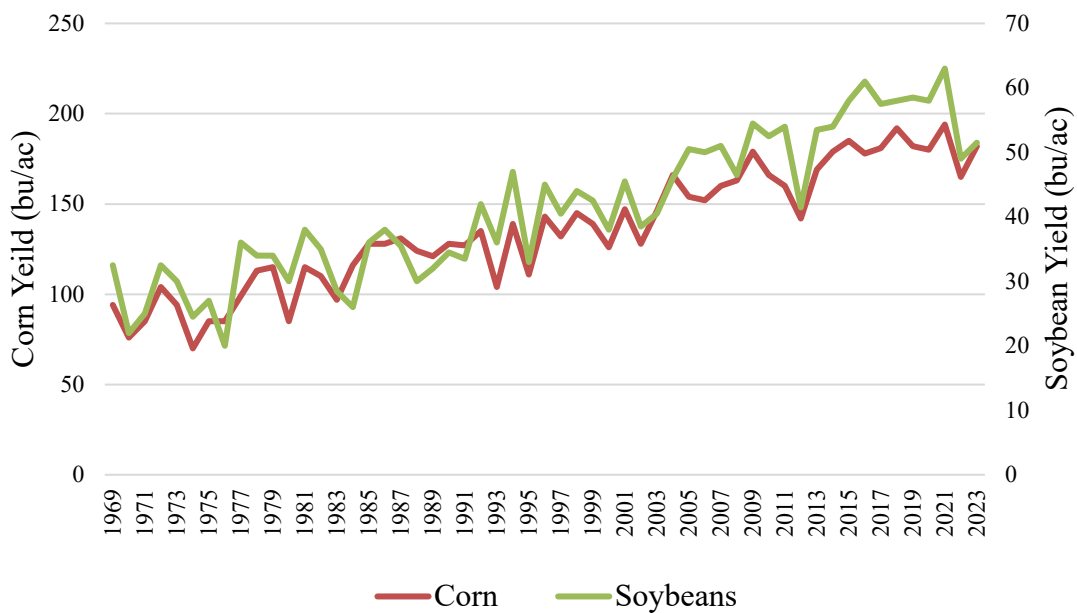
	NW	N	SW	C	S	NE	E	SE	Nebraska
2002	0	19	98	16	14	28	28	24	18
2007	82	60	62	46	48	55	26	56	49
2012	39	81	87	17	41	25	106	112	105
2017	25	32	09	14	2	13	14	08	16
2022	44	26	30	24	31	33	20	32	25

Figure 4.10 Nebraska Farmland Values, Corn and Soybean Prices, and Cattle Inventory Values, 1969-2022



Source: (USDA-NASS)

Figure 4.11 Nebraska Corn and Soybean Yields



Source: (USDA-NASS)

4.5.1 Nebraska Reporting Districts

Nebraska's crop reporting districts are less uniform than those of Kansas and the land values are more varied among them. However, corn yields are much more consistent than those of Kansas due to irrigation ability (Figure 4.13). Nebraska receives the least amount of rain in the northwest crop reporting district also known as Nebraska's panhandle, with less than 20 inches of rain annually (Figure 4.12), which is reflected in lower corn yields and lower value of farmland. In 2012, when Nebraska was seeing an increase in land values averaging 105%, the northwest district only increased 39%, but also had the largest increase in 2022 of 44% (Table 4.10).

The north district is a very large district that spans nearly half of the length of Nebraska on the northern edge and receives between 20 and 28 inches of rain annually (Figure 4.12). The north district has very similar land values as the northwest district but receives much more rain and can produce over 25 bushels more corn on average (Figure 4.13). The north crop reporting district is the third highest productive, in terms of corn yield, yet the land is consistently valued as some of the lowest in the state. This can be attributed to the north district being predominantly Sandhills pasture with very little cropland.

The southwest district is the remaining district that is valued below Nebraska's average land value. This reporting district receives between 18 and 24 inches of rain and has a lower corn yield potential (Figure 4.12). In 2002, the southwest district was the only district to see a decrease in land value, although it was a small decrease of 2% (Table 4.10). This area of the state is often impacted by drought it receives less rain and has seen a decline in groundwater available (Young, Burbach, Olafsen, Joeckel, & Westrop, 2022).

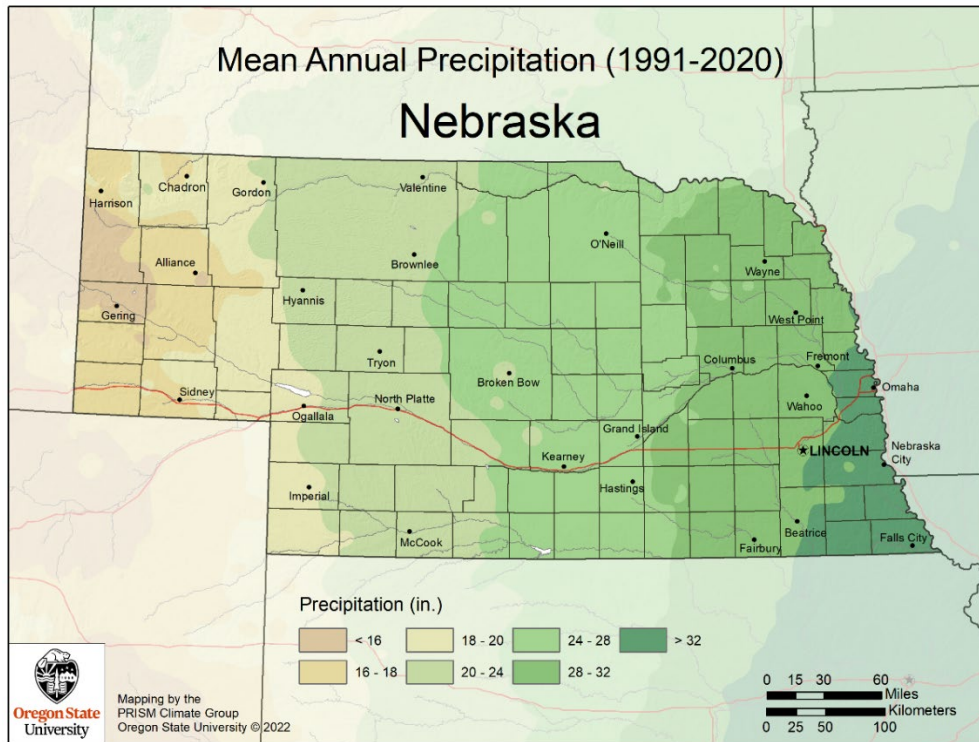
The remaining districts are valued above Nebraska's average land value. The central and south crop reporting districts have similar corn yields (Figure 4.13) and receive between 24 and 28 inches of rain annually (Figure 4.12). Both districts are valued above the state's average yet have the highest corn yield potential in the state. The south reporting district saw an increase in land value of 141% in 2012. This was the largest increase in a district's land value in Nebraska. The following census year, the south district saw only a 2% increase in land value (Table 4.10).

There is not as much irrigation on the eastern side of Nebraska, due to the lack of Great Plain aquifer presence when compared to central and western Nebraska. However, the eastern side of Nebraska has heavier and better-quality soil as well as an average rainfall between 28 and 32 inches annually (Figure 4.12). When compared to the north reporting district, the yield potential is slightly less but the land value difference is significantly higher for the northeast district. The east reporting district has the highest valued farmland. While it may not be the most productive regarding corn yield, this part of the state is the most populated. From 1997-2022, the eastern district substantially increased in population while the rest of the state declined in population (USAFacts). In addition to a higher population, this area of the state has more access to grain ports, ethanol plants, and feedlots. Seed corn is commonly grown in this district as well.

In 2007, at the peak of the ethanol boom when the rest of the state was increasing in land values of at least 46%, the east district only increased 26% (Table 4.10). This is likely due to the already high land values. While the southeast area receives the most rainfall in Nebraska, with some parts averaging more than 32 inches annually (Figure 4.12), it has one

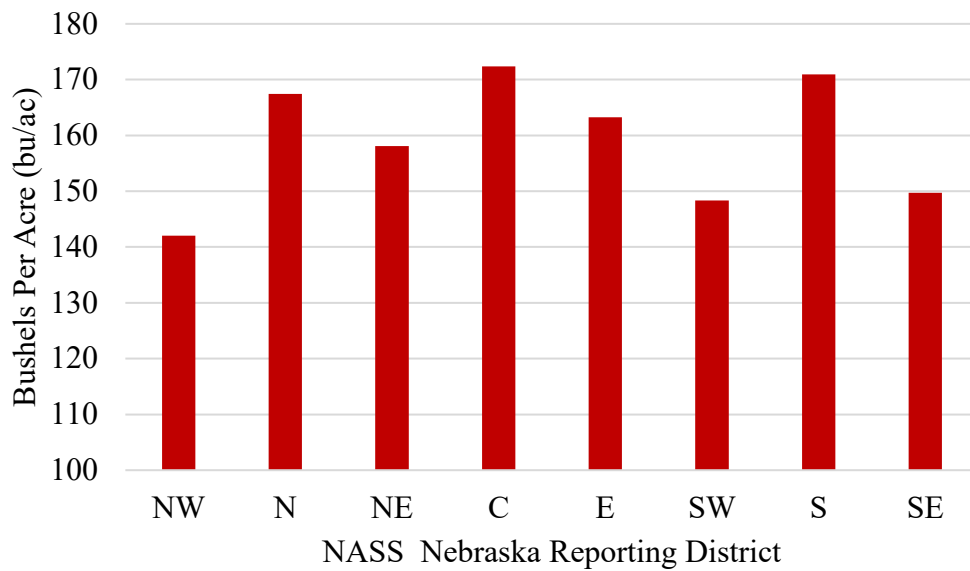
of the lowest corn yield potentials (Figure 4.13) and is valued less than the northeast and east districts.

Figure 4.12 Mean Annual Precipitation for Nebraska



Source: (PRISM Climate Group, 2024)

Figure 4.13 Nebraska Average Corn Yields 1997-2019



Source: (USDA-NASS)

Similar to Kansas, Nebraska land values increase with rising farm income, except in 2017 (Figure 4.11). Nebraska's net cash income has a higher correlation with land values (0.876) compared to net farm income (0.675) (Table 4.12). Corn, soybeans, and cattle prices directly influence both net cash and net farm income. Net cash income is highly correlated with corn, soybean, and cattle prices, at 0.858, 0.901, and 0.866 respectively (Table 4.12). In contrast, net farm income shows strong correlations with corn and soybean prices, at 0.969 and 0.944 respectively (Table 4.12).

Table 4.11 Nebraska Land Values Income, and Prices Summary

Year	Land Value (\$/ac)	Net Cash Income (\$/operation)	Net Farm Income (\$/operation)	Corn Price (\$/bu)	Soybean Price (\$/bu)	Cattle Price (\$/hd)
2002	776	24,820	25,158	2.32	5.43	690
2007	1,159	83,142	199,899	4.14	9.92	890
2012	2,380	108,593	382,314	6.85	14.10	1,240
2017	2,754	87,824	76,077	3.35	9.08	1,190
2022	3,437	172,677	505,771	6.77	14.20	1,300

Source: (USDA-NASS) (FINBIN)

Table 4.12 Correlation between Nebraska Land Value and Other Factors

Nebraska	Land Value	Net Cash Income	Net Farm Income	Corn Price	Soybean Price	Cattle Price
Land Value	1.000					
Net Cash Income	0.876	1.000				
Net Farm Income	0.675	0.908	1.000			
Corn Price	0.679	0.858	0.969	1.000		
Soybean Price	0.748	0.901	0.944	0.983	1.000	
Cattle Price	0.954	0.866	0.727	0.789	0.861	1.000

4.5 Analysis of Calculated Land Values and Census Land Values

Each year, the USDA-NASS reports land values at the state level, while the Census of Agriculture is conducted every five years. Using both survey and census data, annual land values were generated for Kansas and Nebraska for the intervening years and census years. A paired t-test was then conducted to compare the calculated values with the census values for the corresponding census years, to determine if there is statistical evidence that the mean difference between the observations is significantly different from zero.

4.5.1 Kansas

The Kansas county census land values and the calculated index values for the intervening years are provided in Appendix C. A summary of the paired t-test results from the calculated and census land values can be found in Table 4.13, which was compiled from Appendix D.

The least difference between the calculated value and the census land value was in 1992 with a \$10.73 difference, resulting in no statistical difference between the values. The other years with no statistical significance in Kansas were 2017 and 2022 with differences of \$25.57 and \$32.11, respectively.

Even though 1982 varied \$27.19 it was significant at 1% and 1997 varied \$24.13 and was significant at 5%.

Table 4.13 Kansas t-Test: Paired Samples for Means for Calculated and Census Land Values

Years	Mean (\$)		Difference	P(T<=t) two-tail	Significant	Level
	Calculated	Census				
1974	269.56	322.05	52.49	3.41E-23	Yes	1%
1978	477.23	525.97	48.74	1.08E-22	Yes	1%
1982	659.30	632.11	27.19	0.000474	Yes	1%
1987	392.31	444.99	52.68	1.8E-09	Yes	1%
1992	495.63	506.36	10.73	0.1398	No	-
1997	617.95	642.08	24.13	0.0254	Yes	5%
2002	728.64	761.14	32.50	0.0851	Yes	10%
2007	1085.76	981.74	104.02	0.0025	Yes	1%
2012	1627.26	1743.99	116.73	0.0003	Yes	1%
2017	2019.69	1994.12	25.57	0.4542	No	-
2022	2611.35	2579.24	32.11	0.3048	No	-

4.5.2 Nebraska

The Nebraska county census land values and the calculated index values for the intervening years are provided in Appendix E. A summary of the paired t-test results from the calculated and census land values can be found in Table 4.14, which was compiled from Appendix F.

In Nebraska there was no statistical significance during the ethanol boom for 2007 and 2012 when the differences between the calculated land value and census land value was \$14.02 and \$13.51, respectively. While 2022 was significant at the 10% level with a

difference of \$95.46, 1992 had a difference of only \$32.65 and was significant at the 1% level.

Table 4.14 Nebraska t-Test: Paired Samples for Means for Calculated and Census Land Values

Years	Mean		Difference	P(T<=t) two-tail	Significant	Level
	Calculated	Census				
1974	308.47	354.82	46.35	5.96E-18	Yes	1%
1978	518.39	651.46	133.07	9.85E-22	Yes	1%
1982	905.84	852.70	53.14	0.000157	Yes	1%
1987	486.56	544.08	57.52	1.75E-15	Yes	1%
1992	615.51	648.16	32.65	0.00372	Yes	1%
1997	781.83	832.14	50.31	0.00606	Yes	1%
2002	961.13	1005.94	44.81	0.0363	Yes	5%
2007	1477.79	1463.77	14.02	0.690	No	-
2012	3056.37	3042.86	13.51	0.778	No	-
2017	3605.41	3443.20	162.21	0.001	Yes	1%
2022	4313.38	4408.84	95.46	0.086	Yes	10%

CHAPTER V: SUMMARY AND CONCLUSION

It is crucial to develop a comprehensive understanding of the factors influencing land values. Analyzing historical data from the USDA-NASS Census of Agriculture provides valuable insights into these trends, offering a basis for informed decision-making and strategic planning in the agricultural sector.

This thesis evaluated the change in land values over the last 25 years, since the 1997 Agricultural Census, for Kansas and Nebraska, as well as provided an update on the extension publication, *125 Years of Farmland Values in Kansas*, by Tsoodle and Wilson. After studying the land values for Nebraska, a similar publication can be produced. Using USDA-NASS survey and census data, county-level index land values were calculated for intervening years between each census. These calculated index values can be used for landowners calculating their tax liabilities.

Over the past 25 years, notable changes have been observed in the land values of Kansas and Nebraska. Beginning in 1997, both states experienced significant increases in land values, with the most dramatic rise occurring in 2012. During this period, Kansas land values increased by an average of 79% compared to 2007, while Nebraska saw an even more pronounced increase of 105%. This surge in land values is closely linked to the steady rise in commodity prices from 2008 to 2014, as reflected in the 2007 and 2012 Census data.

In addition to rising commodity prices, rainfall and irrigation capabilities significantly impact land profitability and, consequently, land values, as indicated by the 2012 Census data. Both Kansas and Nebraska experienced drought in 2012. Additionally, Kansas faced a severe drought in 2011 that significantly reduced yields and income. In

contrast, Nebraska was less affected by the 2011 drought, likely due to adequate rainfall or extensive irrigation systems. This led to a substantial difference in net cash income and notable disparities in net farm incomes between the two states. In 2012, Nebraska's net farm income was more than double that of Kansas.

However, the following census year, 2017, presented a different scenario. Despite previous upward trends, the 2017 Census recorded the smallest increase in land values since 1997. This can be attributed to declining commodity prices starting in 2015, which led to decreased profitability for farmers and consequently, a slower rise in land values. The trend underscores the interdependence between commodity prices and land values, a critical concept for agricultural business professionals to grasp.

Factors contributing to regional differentiation in land values for Kansas and Nebraska include a combination of economic, agricultural, and demographic changes. The districts that are increasing the greatest are the northeast and east-central districts in Kansas and eastern and northeast districts in Nebraska. These districts are benefiting from more favorable agricultural conditions, proximity to major markets, and better infrastructure, attracted more investment and development compared to other areas. Additionally, the rise in commodity prices and advancements in farming technology further fueled the demand for land in these regions.

Examining the relationship between land values and income provides further insights. An analysis of Kansas and Nebraska's land values and income reveals that land values generally track income trends. However, 2017 was an exception, with both states experiencing low-income levels. Despite this, land values still showed a slight increase

from 2012, driven primarily by cash reserves, illustrating the resilience of land value appreciation even in less favorable economic conditions.

The USDA Agricultural Census started tracking net cash income by state in 2002, providing a clearer picture of the financial health of farming operations. In 2002, Nebraska had reported a net cash income of \$24,820 from USDA-NASS, while FINBIN recorded a net farm income of \$25,158 per operation. USDA-NASS reported a net cash income of \$13,070 for Kansas, while KFMA reported a net farm income of \$37,168 per operation in 2002. These figures highlight the importance of understanding different income measures in agricultural economics. Net cash income, being more consistent among producers, is preferred by the USDA over net farm income as it represents the total cash income minus the total cash expenses of an operation, excluding living expenses and equipment depreciation. Additionally, net cash income is highly correlated to land values in Kansas and Nebraska when compared to net farm income and land values.

The net cash income level is highly correlated to corn, soybeans, and cattle prices in Nebraska while Kansas net cash income is highly correlated to cattle prices indicating that in Nebraska, the net cash income of farms is influenced more by the combined prices of corn, soybeans, and cattle, suggesting a more diversified agricultural economy. In contrast, Kansas's net cash income is more closely tied to cattle prices, implying that cattle farming plays a more dominant role in the state's agricultural income. This difference highlights how regional agricultural economies can be shaped by the specific crops and livestock they produce.

The net farm income is highly correlated with wheat and corn in Kansas and corn and soybeans in Nebraska and thus reflects the importance of these staple crops in the broader agricultural income structure.

Commodity prices play a pivotal role in determining land values and farm income. From 2008 to 2014, increasing commodity prices contributed significantly to the rise in land values. This period of growth was captured in the 2007 and 2012 Census data. However, the subsequent decline in commodity prices beginning in 2015 had a dampening effect on land value appreciation, as seen in the 2017 Census.

By 2022, as commodity prices began to rise again, land values followed suit, demonstrating the cyclical nature of agricultural economics. This pattern underscores the importance of monitoring commodity prices and understanding their impact on land values and farm income.

Another important aspect to consider is the trend in cattle inventory prices. Cattle prices per head showed a notable upward trend from 1997 to 2022, increasing \$740 in Nebraska and \$660 in Kansas. This significant rise reflects broader economic trends and market conditions that impact livestock farming profitability.

The resilience of land values in the face of fluctuating commodity prices highlights the importance of cash reserves and diversified agricultural income sources, such as livestock, in maintaining land value stability. This complex interplay between commodity prices, farm income, and land values underscores the necessity for producers to consider multiple factors in their land investment and management decisions.

There may be hidden factors affecting land values that were not addressed in this thesis including differences in farm size, types of agricultural land, urban sprawl and

recreational use of land, as well as the purchases made as reinvestments into agricultural land after the housing market crash in 2008 through a 1031 exchange. The 1031 exchange is a tax benefit that allows individuals to sell one property, such as a rental house, and reinvest the proceeds into a replacement property, such as agricultural land, to defer capital gains taxes, provided they adhere to IRS rules and timelines.

While the index values may be statistically significant, they provide important relative values that can be particularly useful when compared to survey and census data. This information is invaluable for individuals who have inherited land in the past but did not have an appraisal conducted at the time of inheritance. In such cases, the index values offer a reliable reference point that can be employed in the calculation of capital gains tax and the determination of the stepped-up basis.

For these landowners, accurately determining the historical value of the inherited land is essential for tax purposes. The lack of an initial appraisal often presents challenges in establishing a precise basis value, which is necessary for calculating the appropriate capital gains tax when the land is eventually sold. By using the index value based on historical survey and census data, these individuals can estimate the fair value of the land at the time of inheritance, ensuring compliance with tax regulations and potentially reducing their tax liability.

The index values are especially useful for Kansas as it does not have an inheritance tax while Nebraska is one of the six states that impose an inheritance tax. When Nebraskans inherit land or other property, they are required to pay inheritance taxes to the county where the property is located. The value of the assets should match the amount

reported on the inheritance tax return. If documentation from the inheritance tax is not available, the data from this thesis could assist in determining the value.

This thesis produced more research opportunities including studying the buyer and seller relationship related to discounted land prices, the correlation between the indexed vales compared to county or regional land values reported by university extension systems, and the correlation between land values, yields, and net cash income for NASS crop reporting districts.

Lastly, there is always future research to be done on the cylindrical trends of weather and commodity prices and their effects on land value. The years 2012 and 2022 were very similar for Kansas with similar increases in land values from 2007 and 2017 respectively. Kansas and Nebraska also saw similar corn and cattle prices in 2012 and 2022 in addition to soybean price.

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APPENDICES

Table A.1 1997 USDA-NASS Land Values (\$/ac) for Kansas Value Discrepancy

County	County Report	Quick Stats	County	County Report	Quick Stats	County	County Report	Quick Stats
Allen	698	709	Greeley	444	441	Osborne	372	377
Anderson	558	562	Greenwood	475	475	Ottawa	514	530
Atchison	932	946	Hamilton	353	345	Pawnee	533	539
Barber	353	365	Harper	494	507	Phillips	422	434
Barton	573	570	Harvey	1001	1002	Pottawatomie	686	713
Bourbon	493	502	Haskell	828	823	Pratt	541	537
Brown	961	977	Hodgeman	423	453	Rawlins	383	385
Butler	715	733	Jackson	660	675	Reno	728	713
Chase	490	489	Jefferson	844	859	Republic	669	682
Chautauqua	414	428	Jewell	541	541	Rice	566	564
Cherokee	752	763	Johnson	2349	2336	Riley	673	688
Cheyenne	473	483	Kearny	468	452	Rooks	338	342
Clark	499	497	Kingman	532	554	Rush	421	425
Clay	608	616	Kiowa	446	447	Russell	359	362
Cloud	570	574	Labette	628	646	Saline	730	727
Coffey	610	613	Lane	410	414	Scott	510	512
Comanche	390	424	Leavenworth	1724	1806	Sedgwick	1329	1,371
Cowley	540	557	Lincoln	514	534	Seward	596	598
Crawford	638	649	Linn	669	680	Shawnee	1084	1,105
Decatur	434	440	Logan	341	344	Sheridan	510	510
Dickinson	638	641	Lyon	573	575	Sherman	493	503
Doniphan	1161	1164	McPherson	847	719	Smith	575	587
Douglas	1135	1179	Marion	717	743	Stafford	545	544
Edwards	495	492	Marshall	718	860	Stanton	624	621
Elk	428	450	Meade	470	489	Stevens	525	528
Ellis	403	415	Miami	1440	1498	Sumner	603	601
Ellsworth	432	435	Mitchell	598	590	Thomas	595	597
Finney	588	593	Montgomery	627	646	Trego	450	455
Ford	508	502	Morris	516	518	Wabaunsee	497	502
Franklin	975	982	Morton	374	375	Wallace	376	385
Geary	517	517	Nemaha	738	745	Washington	683	685
Gove	477	485	Neosho	536	542	Wichita	525	534
Graham	333	333	Ness	334	337	Wilson	534	551
Grant	660	662	Norton	432	440	Woodson	460	464
Gray	663	663	Osage	615	624	Wyandotte	2200	2,302

Source: (USDA-NASS)

Table B.1 Federal Commodity Insurance Indemnities (\$1,000)

Year	Kansas (\$)	Nebraska (\$)
2008	322,957	229,840
2009	364,443	310,870
2010	158,241	190,505
2011	943,211	193,689
2012	1,359,972	1,232,611
2013	1,036,305	809,824
2014	663,338	447,576
2015	380,715	393,894
2016	91,917	117,935
2017	256,889	137,390
2018	325,607	171,110
2019	316,185	251,156
2020	222,340	188,807
2021	258,204	193,678
2022	1,859,747	1,074,599

(USDA Economic Research Service, 2024)

Table C.1 Kansas 1969-1978 Allen to Lincoln Counties (\$/ac)

KANSAS	Census Data 1969	1970	1971	1972	1973	1974	Census Data 1974	1975	1976	1977	1978	Census Data 1978
State Survey Data		159	162	174	199	253		296	342	398	418	
State Census Data	159	-	-	-	-	-	301	-	-	-	-	501
Allen	179	179	182	196	224	285	315	310	358	417	437	541
Anderson	188	188	192	206	235	299	337	331	383	446	468	475
Atchison	219	219	223	240	274	348	366	360	416	484	508	724
Barber	120	120	122	131	150	191	257	253	292	340	357	399
Barton	179	179	182	196	224	285	298	293	339	394	414	557
Bourbon	155	155	158	170	194	247	310	305	352	410	430	444
Brown	265	265	270	290	332	422	460	452	523	608	639	785
Butler	178	178	181	195	223	283	346	340	393	458	480	545
Chase	118	118	120	129	148	188	225	221	256	298	312	398
Chautauqua	111	111	113	121	139	177	270	266	307	357	375	355
Cherokee	181	181	184	198	227	288	359	353	408	475	499	588
Cheyenne	108	108	110	118	135	172	217	213	247	287	301	333
Clark	94	94	96	103	118	150	138	136	157	182	192	303
Clay	170	170	173	186	213	271	287	282	326	379	399	556
Cloud	167	167	170	183	209	266	280	275	318	370	389	536
Coffey	155	155	158	170	194	247	288	283	327	381	400	468
Comanche	121	121	123	132	151	193	171	168	194	226	237	276
Cowley	192	192	196	210	240	306	345	339	392	456	479	484
Crawford	165	165	168	181	207	263	334	328	379	442	464	577
Decatur	104	104	106	114	130	165	227	223	258	300	315	362
Dickinson	177	177	180	194	222	282	284	279	323	376	394	521
Doniphan	244	244	249	267	305	388	439	432	499	580	610	788
Douglas	295	295	301	323	369	469	499	491	567	660	693	707
Edwards	150	150	153	164	188	239	315	310	358	417	437	646
Elk	126	126	128	138	158	200	233	229	265	308	324	345
Ellis	116	116	118	127	145	185	218	214	248	288	303	366
Ellsworth	128	128	130	140	160	204	232	228	264	307	322	393
Finney	173	173	176	189	217	275	324	319	368	428	450	625
Ford	154	154	157	169	193	245	261	257	297	345	362	481
Franklin	214	214	218	234	268	341	405	398	460	536	562	706
Geary	167	167	170	183	209	266	266	262	302	352	369	456
Gove	96	96	98	105	120	153	214	210	243	283	297	357
Graham	95	95	97	104	119	151	207	204	235	274	287	345
Grant	165	165	168	181	207	263	361	355	410	477	501	580
Gray	161	161	164	176	202	256	370	364	420	489	514	624
Greeley	110	110	112	120	138	175	238	234	270	315	331	370
Greenwood	121	121	123	132	151	193	235	231	267	311	326	373
Hamilton	98	98	100	107	123	156	175	172	199	231	243	277
Harper	219	219	223	240	274	348	436	429	495	577	605	601
Harvey	290	290	295	317	363	461	515	506	585	681	715	831
Haskell	203	203	207	222	254	323	471	463	535	623	654	753
Hodgeman	122	122	124	134	153	194	211	207	240	279	293	370
Jackson	170	170	173	186	213	271	293	288	333	387	407	583
Jefferson	242	242	247	265	303	385	420	413	477	555	583	740
Jewell	141	141	144	154	176	224	257	253	292	340	357	451
Johnson	590	590	601	646	738	939	1081	1063	1228	1429	1501	1299
Kearny	98	98	100	107	123	156	250	246	284	331	347	347
Kingman	185	185	188	202	232	294	358	352	407	473	497	609
Kiowa	110	110	112	120	138	175	210	207	239	278	292	432
Labette	89	89	91	97	111	142	359	353	408	475	499	600
Lane	133	133	136	146	166	212	208	205	236	275	289	377
Leavenworth	288	288	293	315	360	458	538	529	611	711	747	880
Lincoln	130	130	132	142	163	207	244	240	277	323	339	422

Table C.2 Kansas 1978-1987 Allen to Lincoln Counties (\$/ac)

KANSAS	Census Data 1978	1979	1980	1981	1982	Census Data 1982	1983	1984	1985	1986	1987	Census Data 1987
State Survey Data		501	587	619	628		601	597	488	415	373	
State Census Data	501	-	-	-	-	601	-	-	-	-	-	413
Allen	541	541	634	668	678	613	613	609	498	423	380	445
Anderson	475	475	557	587	595	593	593	589	482	409	368	352
Atchison	724	724	848	895	908	768	768	763	624	530	477	564
Barber	399	399	467	493	500	522	522	519	424	360	324	298
Barton	557	557	653	688	698	729	729	724	592	503	452	451
Bourbon	444	444	520	549	557	541	541	537	439	374	336	393
Brown	785	785	920	970	984	1065	1065	1058	865	735	661	654
Butler	545	545	639	673	683	629	629	625	511	434	390	497
Chase	398	398	466	492	499	404	404	401	328	279	251	288
Chautauqua	355	355	416	439	445	458	458	455	372	316	284	239
Cherokee	588	588	689	726	737	666	666	662	541	460	413	541
Cheyenne	333	333	390	411	417	442	442	439	359	305	274	311
Clark	303	303	355	374	380	360	360	358	292	249	223	242
Clay	556	556	651	687	697	568	568	564	461	392	353	426
Cloud	536	536	628	662	672	635	635	631	516	438	394	407
Coffey	468	468	548	578	587	548	548	544	445	378	340	357
Comanche	276	276	323	341	346	362	362	360	294	250	225	266
Cowley	484	484	567	598	607	551	551	547	447	380	342	385
Crawford	577	577	676	713	723	748	748	743	607	517	464	436
Decatur	362	362	424	447	454	500	500	497	406	345	310	292
Dickinson	521	521	610	644	653	645	645	641	524	445	400	446
Doniphan	788	788	923	974	988	1007	1007	1000	818	695	625	741
Douglas	707	707	828	874	886	944	944	938	767	652	586	827
Edwards	646	646	757	798	810	609	609	605	494	421	378	423
Elk	345	345	404	426	432	429	429	426	348	296	266	277
Ellis	366	366	429	452	459	610	610	606	495	421	379	381
Ellsworth	393	393	460	486	493	492	492	489	399	340	305	338
Finney	625	625	732	772	783	690	690	685	560	476	428	499
Ford	481	481	564	594	603	528	528	524	429	365	328	429
Franklin	706	706	827	872	885	727	727	722	590	502	451	565
Geary	456	456	534	563	572	518	518	515	421	358	321	429
Gove	357	357	418	441	447	462	462	459	375	319	287	297
Graham	345	345	404	426	432	397	397	394	322	274	246	317
Grant	580	580	680	717	727	777	777	772	631	537	482	513
Gray	624	624	731	771	782	682	682	677	554	471	423	518
Greeley	370	370	434	457	464	482	482	479	391	333	299	419
Greenwood	373	373	437	461	468	423	423	420	343	292	263	320
Hamilton	277	277	325	342	347	394	394	391	320	272	245	306
Harper	601	601	704	743	753	789	789	784	641	545	490	425
Harvey	831	831	974	1027	1042	1005	1005	998	816	694	624	658
Haskell	753	753	882	930	944	872	872	866	708	602	541	654
Hodgeman	370	370	434	457	464	474	474	471	385	327	294	312
Jackson	583	583	683	720	731	599	599	595	486	414	372	427
Jefferson	740	740	867	914	928	863	863	857	701	596	536	619
Jewell	451	451	528	557	565	534	534	530	434	369	331	389
Johnson	1299	1299	1522	1605	1628	1761	1761	1749	1430	1216	1093	1334
Kearny	347	347	407	429	435	419	419	416	340	289	260	378
Kingman	609	609	714	752	763	690	690	685	560	476	428	434
Kiowa	432	432	506	534	542	441	441	438	358	305	274	340
Labette	600	600	703	741	752	613	613	609	498	423	380	430
Lane	377	377	442	466	473	489	489	486	397	338	303	371
Leavenworth	880	880	1031	1087	1103	1063	1063	1056	863	734	660	939
Lincoln	422	422	494	521	529	467	467	464	379	322	290	326

Table C.3 Kansas 1987-1997 Allen to Lincoln Counties (\$/ac)

KANSAS	Census Data					Census Data					Census Data		
	1987	1988	1989	1990	1991	1992	1992	1993	1994	1995	1996	1997	1997
State Survey Data		413	429	450	449	460		463	503	535	553	565	
State Census Data	413	-	-	-	-	-	463	-	-	-	-	-	586
Allen	445	445	462	485	484	496	414	414	450	478	494	505	709
Anderson	352	352	366	384	383	392	460	460	500	532	549	561	562
Atchison	564	564	586	615	613	628	611	611	664	706	730	746	946
Barber	298	298	310	325	324	332	330	330	359	381	394	403	365
Barton	451	451	468	491	490	502	514	514	558	594	614	627	570
Bourbon	393	393	408	428	427	438	368	368	400	425	440	449	502
Brown	654	654	679	713	711	728	693	693	753	801	828	846	977
Butler	497	497	516	542	540	554	533	533	579	616	637	650	733
Chase	288	288	299	314	313	321	406	406	441	469	485	495	489
Chautauqua	239	239	248	260	260	266	289	289	314	334	345	353	428
Cherokee	541	541	562	589	588	603	528	528	574	610	631	644	763
Cheyenne	311	311	323	339	338	346	370	370	402	428	442	452	483
Clark	242	242	251	264	263	270	248	248	269	287	296	303	497
Clay	426	426	443	464	463	474	479	479	520	553	572	585	616
Cloud	407	407	423	443	442	453	516	516	561	596	616	630	574
Coffey	357	357	371	389	388	398	440	440	478	508	526	537	613
Comanche	266	266	276	290	289	296	258	258	280	298	308	315	424
Cowley	385	385	400	419	419	429	493	493	536	570	589	602	557
Crawford	436	436	453	475	474	486	507	507	551	586	606	619	649
Decatur	292	292	303	318	317	325	370	370	402	428	442	452	440
Dickinson	446	446	463	486	485	497	474	474	515	548	566	578	641
Doniphan	741	741	770	807	806	825	748	748	813	864	893	913	1164
Douglas	827	827	859	901	899	921	907	907	985	1048	1083	1107	1179
Edwards	423	423	439	461	460	471	503	503	546	581	601	614	492
Elk	277	277	288	302	301	309	319	319	347	369	381	389	450
Ellis	381	381	396	415	414	424	380	380	413	439	454	464	415
Ellsworth	338	338	351	368	367	376	367	367	399	424	438	448	435
Finney	499	499	518	544	542	556	538	538	584	622	643	657	593
Ford	429	429	446	467	466	478	426	426	463	492	509	520	502
Franklin	565	565	587	616	614	629	726	726	789	839	867	886	982
Geary	429	429	446	467	466	478	555	555	603	641	663	677	517
Gove	297	297	309	324	323	331	359	359	390	415	429	438	485
Graham	317	317	329	345	345	353	318	318	345	367	380	388	333
Grant	513	513	533	559	558	571	504	504	548	582	602	615	662
Gray	518	518	538	564	563	577	502	502	545	580	600	613	663
Greeley	419	419	435	457	456	467	419	419	455	484	500	511	441
Greenwood	320	320	332	349	348	356	338	338	367	391	404	412	475
Hamilton	306	306	318	333	333	341	292	292	317	337	349	356	345
Harper	425	425	441	463	462	473	501	501	544	579	598	611	507
Harvey	658	658	683	717	715	733	695	695	755	803	830	848	1002
Haskell	654	654	679	713	711	728	694	694	754	802	829	847	823
Hodgeman	312	312	324	340	339	348	304	304	330	351	363	371	453
Jackson	427	427	444	465	464	476	518	518	563	599	619	632	675
Jefferson	619	619	643	674	673	689	773	773	840	893	923	943	859
Jewell	389	389	404	424	423	433	425	425	462	491	508	519	541
Johnson	1334	1334	1386	1454	1450	1486	1976	1976	2147	2283	2360	2411	2336
Kearny	378	378	393	412	411	421	408	408	443	471	487	498	452
Kingman	434	434	451	473	472	483	481	481	523	556	574	587	554
Kiowa	340	340	353	370	370	379	375	375	407	433	448	458	447
Labette	430	430	447	469	467	479	443	443	481	512	529	541	646
Lane	371	371	385	404	403	413	352	352	382	407	420	430	414
Leavenworth	939	939	975	1023	1021	1046	945	945	1027	1092	1129	1153	1806
Lincoln	326	326	339	355	354	363	411	411	447	475	491	502	534

Table C.4 Kansas 1997-2007 Allen to Lincoln Counties (\$/ac)

KANSAS	Census Data					Census Data					Census Data		
	1997	1998	1999	2000	2001	2002	2002	2003	2004	2005	2006	2007	2007
State Survey Data		577	600	625	645	665		685	700	810	870	980	
State Census Data	586	-	-	-	-	-	687	-	-	-	-	-	911
Allen	709	698	726	756	780	805	821	819	837	968	1040	1171	1008
Anderson	562	553	575	599	619	638	899	896	916	1060	1138	1282	1022
Atchison	946	931	969	1009	1041	1074	1057	1054	1077	1246	1339	1508	1366
Barber	365	359	374	389	402	414	441	440	449	520	558	629	649
Barton	570	561	584	608	627	647	591	589	602	697	748	843	844
Bourbon	502	494	514	535	553	570	720	718	734	849	912	1027	1121
Brown	977	962	1000	1042	1075	1109	1164	1161	1186	1372	1474	1660	1705
Butler	733	722	751	782	807	832	1002	999	1021	1181	1269	1429	1091
Chase	489	481	501	522	538	555	618	616	630	729	783	882	969
Chautauqua	428	421	438	456	471	486	535	533	545	631	678	763	882
Cherokee	763	751	781	814	840	866	968	965	986	1141	1226	1381	1242
Cheyenne	483	476	495	515	532	548	480	479	489	566	608	685	616
Clark	497	489	509	530	547	564	395	394	402	466	500	563	632
Clay	616	607	631	657	678	699	907	904	924	1069	1149	1294	1167
Cloud	574	565	588	612	632	651	604	602	615	712	765	862	1015
Coffey	613	604	628	654	675	696	755	753	769	890	956	1077	977
Comanche	424	417	434	452	467	481	408	407	416	481	517	582	532
Cowley	557	548	570	594	613	632	775	773	790	914	981	1106	957
Crawford	649	639	665	692	714	736	875	872	892	1032	1108	1248	1079
Decatur	440	433	451	469	484	499	485	484	494	572	614	692	657
Dickinson	641	631	656	684	706	727	666	664	679	785	843	950	1061
Doniphan	1164	1146	1192	1241	1281	1321	1281	1277	1305	1510	1622	1827	1713
Douglas	1179	1161	1207	1257	1298	1338	2010	2004	2048	2370	2545	2867	1924
Edwards	492	484	504	525	542	558	579	577	590	683	733	826	877
Elk	450	443	461	480	495	511	496	495	505	585	628	708	982
Ellis	415	409	425	443	457	471	528	526	538	623	669	753	774
Ellsworth	435	428	445	464	479	494	518	516	528	611	656	739	755
Finney	593	584	607	632	653	673	616	614	628	726	780	879	783
Ford	502	494	514	535	553	570	578	576	589	681	732	825	712
Franklin	982	967	1005	1047	1081	1114	1240	1236	1263	1462	1570	1769	1653
Geary	517	509	529	551	569	587	859	856	875	1013	1088	1225	1255
Gove	485	478	497	517	534	550	449	448	457	529	569	640	602
Graham	333	328	341	355	367	378	453	452	462	534	574	646	618
Grant	662	652	678	706	729	751	664	662	677	783	841	947	800
Gray	663	653	679	707	730	752	791	789	806	933	1002	1128	852
Greeley	441	434	452	470	485	500	504	503	514	594	638	719	707
Greenwood	475	468	486	507	523	539	552	550	562	651	699	787	958
Hamilton	345	340	353	368	380	392	465	464	474	548	589	663	671
Harper	507	499	519	541	558	575	623	621	635	735	789	889	738
Harvey	1002	987	1026	1069	1103	1137	928	925	946	1094	1175	1324	1365
Haskell	823	810	843	878	906	934	744	742	758	877	942	1061	1062
Hodgeman	453	446	464	483	499	514	512	511	522	604	648	730	594
Jackson	675	665	691	720	743	766	832	830	848	981	1054	1187	1181
Jefferson	859	846	880	916	945	975	1067	1064	1087	1258	1351	1522	1607
Jewell	541	533	554	577	595	614	656	654	668	773	831	936	827
Johnson	2336	2300	2392	2491	2571	2651	1978	1972	2015	2332	2505	2822	2004
Kearny	452	445	463	482	498	513	479	478	488	565	607	683	689
Kingman	554	545	567	591	610	629	683	681	696	805	865	974	839
Kiowa	447	440	458	477	492	507	441	440	449	520	558	629	630
Labette	646	636	661	689	711	733	746	744	760	880	945	1064	1026
Lane	414	408	424	442	456	470	468	467	477	552	593	668	598
Leavenworth	1806	1778	1849	1926	1988	2049	1589	1584	1619	1873	2012	2267	1951
Lincoln	534	526	547	570	588	606	439	438	447	518	556	626	786

Table C.5 Kansas 2007-2017 Allen to Lincoln Counties (\$/ac)

KANSAS	Census Data						Census Data						Census Data
	2007	2008	2009	2010	2011	2012	2012	2013	2014	2015	2016	2017	2017
State Survey Data		1020	1010	1060	1240	1510		1750	2060	2050	1910	1890	
State Census Data	911	-	-	-	-	-	1632	-	-	-	-	-	1848
Allen	1008	1129	1118	1173	1372	1671	1396	1497	1762	1754	1634	1617	2029
Anderson	1022	1144	1133	1189	1391	1694	1557	1670	1965	1956	1822	1803	2038
Atchison	1366	1529	1514	1589	1859	2264	2154	2310	2719	2706	2521	2495	3040
Barber	649	727	720	755	883	1076	1215	1303	1534	1526	1422	1407	1436
Barton	844	945	936	982	1149	1399	1567	1680	1978	1968	1834	1815	1570
Bourbon	1121	1255	1243	1304	1526	1858	1448	1553	1828	1819	1695	1677	2008
Brown	1705	1909	1890	1984	2321	2826	3271	3508	4129	4109	3828	3788	3507
Butler	1091	1222	1210	1269	1485	1808	1760	1887	2222	2211	2060	2038	2268
Chase	969	1085	1074	1127	1319	1606	1356	1454	1712	1703	1587	1570	1911
Chautauqua	882	988	978	1026	1201	1462	1155	1239	1458	1451	1352	1338	1631
Cherokee	1242	1391	1377	1445	1691	2059	1862	1997	2350	2339	2179	2156	2211
Cheyenne	616	690	683	717	838	1021	1584	1699	1999	1990	1854	1834	1477
Clark	632	708	701	735	860	1048	910	976	1149	1143	1065	1054	1187
Clay	1167	1307	1294	1358	1588	1934	2111	2264	2665	2652	2471	2445	2712
Cloud	1015	1136	1125	1181	1382	1682	1991	2135	2513	2501	2330	2306	2302
Coffey	977	1094	1083	1137	1330	1619	1526	1636	1926	1917	1786	1767	1825
Comanche	532	596	590	619	724	882	921	988	1163	1157	1078	1067	1159
Cowley	957	1072	1061	1114	1303	1586	1433	1537	1809	1800	1677	1660	1849
Crawford	1079	1208	1196	1255	1469	1788	1675	1796	2114	2104	1960	1940	2014
Decatur	657	736	728	764	894	1089	1525	1635	1925	1916	1785	1766	1458
Dickinson	1061	1188	1176	1235	1444	1759	2017	2163	2546	2534	2361	2336	2140
Doniphan	1713	1918	1899	1993	2332	2839	3599	3859	4543	4521	4212	4168	3431
Douglas	1924	2154	2133	2239	2619	3189	2854	3060	3602	3585	3340	3305	4072
Edwards	877	982	972	1020	1194	1454	2134	2288	2694	2681	2498	2471	1843
Elk	982	1099	1089	1143	1337	1628	1269	1361	1602	1594	1485	1470	1545
Ellis	774	867	858	901	1054	1283	1332	1428	1681	1673	1559	1543	1349
Ellsworth	755	845	837	878	1028	1251	1326	1422	1674	1666	1552	1536	1608
Finney	783	877	868	911	1066	1298	1439	1543	1816	1808	1684	1666	1565
Ford	712	797	789	828	969	1180	1218	1306	1537	1530	1425	1411	1547
Franklin	1653	1851	1833	1923	2250	2740	2321	2489	2930	2915	2716	2688	2403
Geary	1255	1405	1391	1460	1708	2080	1939	2079	2448	2436	2269	2246	2301
Gove	602	674	667	700	819	998	1286	1379	1623	1615	1505	1489	1301
Graham	618	692	685	719	841	1024	1319	1414	1665	1657	1544	1528	1285
Grant	800	896	887	931	1089	1326	1332	1428	1681	1673	1559	1543	1576
Gray	852	954	945	991	1160	1412	1335	1432	1685	1677	1562	1546	1596
Greeley	707	792	784	823	962	1172	1487	1595	1877	1868	1740	1722	1416
Greenwood	958	1073	1062	1115	1304	1588	1409	1511	1779	1770	1649	1632	1667
Hamilton	671	751	744	781	913	1112	1011	1084	1276	1270	1183	1171	1066
Harper	738	826	818	859	1005	1223	1517	1627	1915	1906	1775	1757	1642
Harvey	1365	1528	1513	1588	1858	2263	2570	2756	3244	3228	3008	2976	3167
Haskell	1062	1189	1177	1236	1446	1760	1377	1477	1738	1730	1612	1595	1527
Hodgeman	594	665	659	691	809	985	1075	1153	1357	1350	1258	1245	1176
Jackson	1181	1322	1309	1374	1608	1958	1760	1887	2222	2211	2060	2038	2677
Jefferson	1607	1799	1782	1870	2187	2664	2238	2400	2825	2811	2619	2592	2904
Jewell	827	926	917	962	1126	1371	1930	2070	2436	2424	2259	2235	2060
Johnson	2004	2244	2222	2332	2728	3322	4340	4654	5478	5452	5079	5026	3773
Kearny	689	771	764	802	938	1142	1297	1391	1637	1629	1518	1502	1442
Kingman	839	939	930	976	1142	1391	1429	1532	1804	1795	1672	1655	1619
Kiowa	630	705	698	733	858	1044	1232	1321	1555	1548	1442	1427	1571
Labette	1026	1149	1137	1194	1397	1701	1486	1593	1876	1867	1739	1721	2121
Lane	598	670	663	696	814	991	1286	1379	1623	1615	1505	1489	1274
Leavenworth	1951	2184	2163	2270	2656	3234	3235	3469	4083	4064	3786	3746	3421
Lincoln	786	880	871	915	1070	1303	1494	1602	1886	1877	1748	1730	1727

Table C.6 Kansas 2017-2022 Allen to Lincoln Counties (\$/ac)

KANSAS	Census Data						Census Data
	2017	2018	2019	2020	2021	2022	2022
State Survey Data		1850	1920	1820	1970	2420	
State Census Data	1848	-	-	-	-	-	2324
Allen	2029	2031	2108	1998	2163	2657	2466
Anderson	2038	2040	2117	2007	2173	2669	2736
Atchison	3040	3043	3158	2994	3241	3981	4435
Barber	1436	1438	1492	1414	1531	1880	1941
Barton	1570	1572	1631	1546	1674	2056	1821
Bourbon	2008	2010	2086	1978	2141	2630	2844
Brown	3507	3511	3644	3454	3739	4593	5136
Butler	2268	2270	2356	2234	2418	2970	2796
Chase	1911	1913	1985	1882	2037	2503	2385
Chautauqua	1631	1633	1695	1606	1739	2136	2007
Cherokee	2211	2213	2297	2178	2357	2895	2676
Cheyenne	1477	1479	1535	1455	1575	1934	1630
Clark	1187	1188	1233	1169	1265	1554	1288
Clay	2712	2715	2818	2671	2891	3551	3165
Cloud	2302	2304	2392	2267	2454	3015	3142
Coffey	1825	1827	1896	1797	1945	2390	2681
Comanche	1159	1160	1204	1141	1236	1518	1550
Cowley	1849	1851	1921	1821	1971	2421	2281
Crawford	2014	2016	2092	1983	2147	2637	3097
Decatur	1458	1460	1515	1436	1554	1909	1805
Dickinson	2140	2142	2223	2108	2281	2802	2714
Doniphan	3431	3435	3565	3379	3658	4493	4754
Douglas	4072	4076	4231	4010	4341	5332	4700
Edwards	1843	1845	1915	1815	1965	2413	1957
Elk	1545	1547	1605	1522	1647	2023	2064
Ellis	1349	1350	1402	1329	1438	1767	1713
Ellsworth	1608	1610	1671	1584	1714	2106	2106
Finney	1565	1567	1626	1541	1668	2049	2333
Ford	1547	1549	1607	1524	1649	2026	1718
Franklin	2403	2406	2497	2367	2562	3147	3444
Geary	2301	2303	2391	2266	2453	3013	2862
Gove	1301	1302	1352	1281	1387	1704	1729
Graham	1285	1286	1335	1266	1370	1683	1393
Grant	1576	1578	1637	1552	1680	2064	1711
Gray	1596	1598	1658	1572	1701	2090	1985
Greeley	1416	1418	1471	1395	1509	1854	1795
Greenwood	1667	1669	1732	1642	1777	2183	2180
Hamilton	1066	1067	1108	1050	1136	1396	1478
Harper	1642	1644	1706	1617	1750	2150	1751
Harvey	3167	3170	3290	3119	3376	4147	3859
Haskell	1527	1529	1586	1504	1628	2000	2527
Hodgeman	1176	1177	1222	1158	1254	1540	1488
Jackson	2677	2680	2781	2636	2854	3506	3276
Jefferson	2904	2907	3017	2860	3096	3803	3906
Jewell	2060	2062	2140	2029	2196	2698	2492
Johnson	3773	3777	3920	3716	4022	4941	6558
Kearny	1442	1444	1498	1420	1537	1888	1740
Kingman	1619	1621	1682	1594	1726	2120	2172
Kiowa	1571	1573	1632	1547	1675	2057	1601
Labette	2121	2123	2204	2089	2261	2778	2412
Lane	1274	1275	1324	1255	1358	1668	1677
Leavenworth	3421	3425	3554	3369	3647	4480	5077
Lincoln	1727	1729	1794	1701	1841	2262	2023

Table C.7 Kansas 1969-1978 Linn to Wyandotte Counties (\$/ac)

KANSAS	Census Data					Census Data					Census Data	
	1969	1970	1971	1972	1973	1974	1974	1975	1976	1977	1978	1978
State Survey Data		159	162	174	199	253		296	342	398	418	
State Census Data	159	-	-	-	-	-	301	-	-	-	-	501
Linn	184	184	187	201	230	293	302	297	343	399	419	524
Logan	85	85	87	93	106	135	175	172	199	231	243	324
Lyon	166	166	169	182	208	264	286	281	325	378	397	456
McPherson	245	245	250	268	307	390	472	464	536	624	655	737
Marion	192	192	196	210	240	306	334	328	379	442	464	572
Marshall	178	178	181	195	223	283	325	320	369	430	451	604
Meade	125	125	127	137	156	199	232	228	264	307	322	433
Miami	268	268	273	293	335	426	540	531	614	714	750	800
Mitchell	166	166	169	182	208	264	301	296	342	398	418	605
Montgomery	180	180	183	197	225	286	353	347	401	467	490	550
Morris	147	147	150	161	184	234	260	256	295	344	361	358
Morton	101	101	103	111	126	161	201	198	228	266	279	290
Nemaha	209	209	213	229	262	333	324	319	368	428	450	634
Neosho	191	191	195	209	239	304	337	331	383	446	468	505
Ness	106	106	108	116	133	169	256	252	291	338	356	363
Norton	97	97	99	106	121	154	203	200	231	268	282	321
Osage	167	167	170	183	209	266	319	314	362	422	443	460
Osborne	124	124	126	136	155	197	214	210	243	283	297	406
Ottawa	162	162	165	177	203	258	283	278	322	374	393	505
Pawnee	174	174	177	190	218	277	305	300	347	403	424	563
Phillips	117	117	119	128	146	186	200	197	227	264	278	330
Pottawatomie	150	150	153	164	188	239	276	271	314	365	383	489
Pratt	157	157	160	172	196	250	313	308	356	414	435	561
Rawlins	100	100	102	109	125	159	206	203	234	272	286	369
Reno	94	94	96	103	118	150	395	388	449	522	549	677
Republic	199	199	203	218	249	317	331	326	376	438	460	640
Rice	184	184	187	201	230	293	351	345	399	464	487	588
Riley	184	184	187	201	230	293	323	318	367	427	449	550
Rooks	105	105	107	115	131	167	203	200	231	268	282	308
Rush	135	135	138	148	169	215	262	258	298	346	364	443
Russell	117	117	119	128	146	186	211	207	240	279	293	360
Saline	181	181	184	198	227	288	304	299	345	402	422	569
Scott	161	161	164	176	202	256	308	303	350	407	428	466
Sedgwick	330	330	336	361	413	525	569	560	647	752	790	969
Seward	148	148	151	162	185	235	385	379	437	509	535	507
Shawnee	277	277	282	303	347	441	442	435	502	584	614	794
Sheridan	126	126	128	138	158	200	265	261	301	350	368	411
Sherman	144	144	147	158	180	229	339	333	385	448	471	377
Smith	124	124	126	136	155	197	290	285	330	383	403	423
Stafford	182	182	185	199	228	290	318	313	361	420	442	566
Stanton	132	132	134	144	165	210	305	300	347	403	424	486
Stevens	164	164	167	179	205	261	341	335	387	451	474	470
Sumner	242	242	247	265	303	385	489	481	556	647	679	740
Thomas	129	129	131	141	161	205	316	311	359	418	439	465
Trego	98	98	100	107	123	156	216	212	245	286	300	339
Wabaunsee	138	138	141	151	173	220	257	253	292	340	357	428
Wallace	94	94	96	103	118	150	190	187	216	251	264	315
Washington	162	162	165	177	203	258	346	340	393	458	480	575
Wichita	162	162	165	177	203	258	326	321	370	431	453	487
Wilson	160	160	163	175	200	255	304	299	345	402	422	460
Woodson	154	154	157	169	193	245	261	257	297	345	362	404
Wyandotte	702	702	715	768	879	1117	1194	1174	1357	1579	1658	1690

Table C.8 Kansas 1978-1987 Linn to Wyandotte Counties (\$/ac)

KANSAS	Census Data	Census Data										Census Data
	1978	1979	1980	1981	1982	1982	1983	1984	1985	1986	1987	1987
State Survey Data		501	587	619	628		601	597	488	415	373	
State Census Data	501	-	-	-	-	601	-	-	-	-	-	413
Linn	524	524	614	647	657	561	561	557	456	387	348	407
Logan	324	324	380	400	406	438	438	435	356	302	272	243
Lyon	456	456	534	563	572	554	554	550	450	383	344	320
McPherson	737	737	864	911	924	834	834	828	677	576	518	562
Marion	572	572	670	707	717	628	628	624	510	434	390	436
Marshall	604	604	708	746	757	683	683	678	555	472	424	451
Meade	433	433	507	535	543	509	509	506	413	351	316	412
Miami	800	800	937	988	1003	916	916	910	744	633	568	854
Mitchell	605	605	709	747	758	650	650	646	528	449	403	445
Montgomery	550	550	644	680	689	741	741	736	602	512	460	470
Morris	358	358	419	442	449	467	467	464	379	322	290	336
Morton	290	290	340	358	364	312	312	310	253	215	194	280
Nemaha	634	634	743	783	795	731	731	726	594	505	454	442
Neosho	505	505	592	624	633	702	702	697	570	485	436	380
Ness	363	363	425	448	455	419	419	416	340	289	260	257
Norton	321	321	376	397	402	467	467	464	379	322	290	322
Osage	460	460	539	568	577	610	610	606	495	421	379	399
Osborne	406	406	476	502	509	480	480	477	390	331	298	309
Ottawa	505	505	592	624	633	608	608	604	494	420	377	392
Pawnee	563	563	660	696	706	661	661	657	537	456	410	423
Phillips	330	330	387	408	414	502	502	499	408	347	312	321
Pottawatomie	489	489	573	604	613	573	573	569	465	396	356	374
Pratt	561	561	657	693	703	582	582	578	473	402	361	466
Rawlins	369	369	432	456	463	488	488	485	396	337	303	272
Reno	677	677	793	836	849	868	868	862	705	599	539	565
Republic	640	640	750	791	802	778	778	773	632	537	483	482
Rice	588	588	689	726	737	663	663	659	538	458	411	448
Riley	550	550	644	680	689	622	622	618	505	430	386	448
Rooks	308	308	361	381	386	460	460	457	374	318	285	310
Rush	443	443	519	547	555	558	558	554	453	385	346	322
Russell	360	360	422	445	451	518	518	515	421	358	321	280
Saline	569	569	667	703	713	683	683	678	555	472	424	471
Scott	466	466	546	576	584	524	524	521	425	362	325	373
Sedgwick	969	969	1135	1197	1215	1244	1244	1236	1010	859	772	861
Seward	507	507	594	626	636	615	615	611	499	425	382	461
Shawnee	794	794	930	981	995	957	957	951	777	661	594	804
Sheridan	411	411	482	508	515	579	579	575	470	400	359	370
Sherman	377	377	442	466	473	574	574	570	466	396	356	360
Smith	423	423	496	523	530	497	497	494	404	343	308	347
Stafford	566	566	663	699	709	666	666	662	541	460	413	492
Stanton	486	486	569	600	609	500	500	497	406	345	310	409
Stevens	470	470	551	581	589	576	576	572	468	398	357	438
Sumner	740	740	867	914	928	881	881	875	715	608	547	535
Thomas	465	465	545	575	583	635	635	631	516	438	394	396
Trego	339	339	397	419	425	408	408	405	331	282	253	256
Wabaunsee	428	428	501	529	536	473	473	470	384	327	294	385
Wallace	315	315	369	389	395	462	462	459	375	319	287	351
Washington	575	575	674	710	721	635	635	631	516	438	394	406
Wichita	487	487	571	602	610	527	527	523	428	364	327	373
Wilson	460	460	539	568	577	587	587	583	477	405	364	365
Woodson	404	404	473	499	506	517	517	514	420	357	321	309
Wyandotte	1690	1690	1980	2088	2118	1652	1652	1641	1341	1141	1025	1609

Table C.9 Kansas 1987-1997 Linn to Wyandotte Counties (\$/ac)

KANSAS	Census Data					Census Data					Census Data		
	1987	1988	1989	1990	1991	1992	1992	1993	1994	1995	1996	1997	1997
State Survey Data		413	429	450	449	460		463	503	535	553	565	
State Census Data	413	-	-	-	-	-	463	-	-	-	-	-	586
Linn	407	407	423	443	442	453	493	493	536	570	589	602	680
Logan	243	243	252	265	264	271	311	311	338	359	371	380	344
Lyon	320	320	332	349	348	356	427	427	464	493	510	521	575
McPherson	562	562	584	612	611	626	722	722	784	834	862	881	719
Marion	436	436	453	475	474	486	484	484	526	559	578	591	743
Marshall	451	451	468	491	490	502	591	591	642	683	706	721	860
Meade	412	412	428	449	448	459	390	390	424	451	466	476	489
Miami	854	854	887	931	928	951	952	952	1034	1100	1137	1162	1498
Mitchell	445	445	462	485	484	496	498	498	541	575	595	608	590
Montgomery	470	470	488	512	511	523	487	487	529	563	582	594	646
Morris	336	336	349	366	365	374	443	443	481	512	529	541	518
Morton	280	280	291	305	304	312	331	331	360	382	395	404	375
Nemaha	442	442	459	482	481	492	612	612	665	707	731	747	745
Neosho	380	380	395	414	413	423	453	453	492	523	541	553	542
Ness	257	257	267	280	279	286	300	300	326	347	358	366	337
Norton	322	322	334	351	350	359	365	365	397	422	436	445	440
Osage	399	399	414	435	434	444	518	518	563	599	619	632	624
Osborne	309	309	321	337	336	344	317	317	344	366	379	387	377
Ottawa	392	392	407	427	426	437	476	476	517	550	569	581	530
Pawnee	423	423	439	461	460	471	434	434	471	501	518	530	539
Phillips	321	321	333	350	349	358	339	339	368	392	405	414	434
Pottawatomie	374	374	388	408	407	417	439	439	477	507	524	536	713
Pratt	466	466	484	508	507	519	490	490	532	566	585	598	537
Rawlins	272	272	283	296	296	303	305	305	331	352	364	372	385
Reno	565	565	587	616	614	629	664	664	721	767	793	810	713
Republic	482	482	501	525	524	537	565	565	614	653	675	689	682
Rice	448	448	465	488	487	499	505	505	549	584	603	616	564
Riley	448	448	465	488	487	499	508	508	552	587	607	620	688
Rooks	310	310	322	338	337	345	315	315	342	364	376	384	342
Rush	322	322	334	351	350	359	363	363	394	419	434	443	425
Russell	280	280	291	305	304	312	324	324	352	374	387	395	362
Saline	471	471	489	513	512	525	556	556	604	642	664	678	727
Scott	373	373	387	406	406	415	412	412	448	476	492	503	512
Sedgwick	861	861	894	938	936	959	882	882	958	1019	1053	1076	1371
Seward	461	461	479	502	501	513	503	503	546	581	601	614	598
Shawnee	804	804	835	876	874	895	878	878	954	1015	1049	1071	1105
Sheridan	370	370	384	403	402	412	451	451	490	521	539	550	510
Sherman	360	360	374	392	391	401	441	441	479	510	527	538	503
Smith	347	347	360	378	377	386	399	399	433	461	477	487	587
Stafford	492	492	511	536	535	548	472	472	513	545	564	576	544
Stanton	409	409	425	446	445	456	464	464	504	536	554	566	621
Stevens	438	438	455	477	476	488	419	419	455	484	500	511	528
Sumner	535	535	556	583	582	596	540	540	587	624	645	659	601
Thomas	396	396	411	431	431	441	474	474	515	548	566	578	597
Trego	256	256	266	279	278	285	357	357	388	413	426	436	455
Wabaunsee	385	385	400	419	419	429	380	380	413	439	454	464	502
Wallace	351	351	365	382	382	391	369	369	401	426	441	450	385
Washington	406	406	422	442	441	452	533	533	579	616	637	650	685
Wichita	373	373	387	406	406	415	461	461	501	533	551	563	534
Wilson	365	365	379	398	397	407	456	456	495	527	545	556	551
Woodson	309	309	321	337	336	344	382	382	415	441	456	466	464
Wyandotte	1609	1609	1671	1753	1749	1792	2115	2115	2298	2444	2526	2581	2302

Table C.10 Kansas 1997-2007 Linn to Wyandotte Counties (\$/ac)

KANSAS	Census Data					Census Data					Census Data		
	1997	1998	1990	2000	2001	2002	2002	2003	2004	2005	2006	2007	2007
State Survey Data		577	600	625	645	665		685	700	810	870	980	
State Census Data	586	-	-	-	-	-	687	-	-	-	-	-	911
Linn	680	670	696	725	748	772	1003	1000	1022	1183	1270	1431	1342
Logan	344	339	352	367	379	390	417	416	425	492	528	595	610
Lyon	575	566	589	613	633	653	778	776	793	917	985	1110	977
McPherson	719	708	736	767	791	816	731	729	745	862	926	1043	999
Marion	743	732	761	792	818	843	917	914	934	1081	1161	1308	1266
Marshall	860	847	881	917	947	976	1151	1148	1173	1357	1458	1642	1126
Meade	489	481	501	522	538	555	584	582	595	689	740	833	708
Miami	1498	1475	1534	1598	1649	1700	1755	1750	1788	2069	2222	2503	2054
Mitchell	590	581	604	629	649	670	724	722	738	854	917	1033	922
Montgomery	646	636	661	689	711	733	884	881	901	1042	1119	1261	1142
Morris	518	510	530	552	570	588	632	630	644	745	800	902	878
Morton	375	369	384	400	413	426	466	465	475	549	590	665	576
Nemaha	745	734	763	795	820	845	998	995	1017	1177	1264	1424	1409
Neosho	542	534	555	578	597	615	763	761	777	900	966	1088	1061
Ness	337	332	345	359	371	382	413	412	421	487	523	589	540
Norton	440	433	451	469	484	499	447	446	455	527	566	638	686
Osage	624	614	639	666	687	708	899	896	916	1060	1138	1282	1204
Osborne	377	371	386	402	415	428	497	496	506	586	629	709	759
Ottawa	530	522	543	565	583	601	577	575	588	680	731	823	827
Pawnee	539	531	552	575	593	612	563	561	574	664	713	803	856
Phillips	434	427	444	463	478	493	461	460	470	544	584	658	698
Pottawatomie	713	702	730	760	785	809	722	720	736	851	914	1030	1193
Pratt	537	529	550	573	591	609	633	631	645	746	802	903	895
Rawlins	385	379	394	411	424	437	416	415	424	490	527	593	638
Reno	713	702	730	760	785	809	875	872	892	1032	1108	1248	1013
Republic	682	672	698	727	751	774	819	817	834	966	1037	1168	1109
Rice	564	555	577	602	621	640	667	665	680	786	845	951	896
Riley	688	677	704	734	757	781	1035	1032	1055	1220	1311	1476	1245
Rooks	342	337	350	365	376	388	448	447	456	528	567	639	657
Rush	425	418	435	453	468	482	472	471	481	557	598	673	700
Russell	362	356	371	386	398	411	430	429	438	507	545	613	659
Saline	727	716	744	775	800	825	748	746	762	882	947	1067	1075
Scott	512	504	524	546	564	581	555	553	566	654	703	792	744
Sedgwick	1371	1350	1404	1462	1509	1556	1197	1194	1220	1411	1516	1708	1444
Seward	598	589	612	638	658	679	647	645	659	763	819	923	727
Shawnee	1105	1088	1131	1179	1216	1254	1265	1261	1289	1491	1602	1805	1598
Sheridan	510	502	522	544	561	579	596	594	607	703	755	850	775
Sherman	503	495	515	536	554	571	622	620	634	733	788	887	756
Smith	587	578	601	626	646	666	663	661	676	782	840	946	783
Stafford	544	536	557	580	599	617	764	762	778	901	968	1090	867
Stanton	621	611	636	662	684	705	573	571	584	676	726	817	765
Stevens	528	520	541	563	581	599	677	675	690	798	857	966	790
Sumner	601	592	615	641	662	682	682	680	695	804	864	973	938
Thomas	597	588	611	637	657	677	607	605	618	716	769	866	817
Trego	455	448	466	485	501	516	462	461	471	545	585	659	618
Wabaunsee	502	494	514	535	553	570	726	724	740	856	919	1036	975
Wallace	385	379	394	411	424	437	444	443	452	523	562	633	623
Washington	685	674	701	731	754	777	804	802	819	948	1018	1147	1034
Wichita	534	526	547	570	588	606	503	502	513	593	637	718	669
Wilson	551	543	564	588	606	625	770	768	785	908	975	1098	961
Woodson	464	457	475	495	511	527	589	587	600	694	746	840	929
Wyandotte	2302	2267	2357	2455	2534	2612	3915	3904	3989	4616	4958	5585	2431

Table C.11 Kansas 2007-2017 Linn to Wyandotte Counties (\$/ac)

KANSAS	Census Data						Census Data						Census Data
	2007	2008	2009	2010	2011	2012	2012	2013	2014	2015	2016	2017	2017
State Survey Data		1020	1010	1060	1240	1510		1750	2060	2050	1910	1890	
State Census Data	911	-	-	-	-	-	1632	-	-	-	-	-	1848
Linn	1342	1503	1488	1561	1827	2224	1760	1887	2222	2211	2060	2038	2554
Logan	610	683	676	710	830	1011	1180	1265	1489	1482	1381	1367	1346
Lyon	977	1094	1083	1137	1330	1619	1560	1673	1969	1960	1826	1807	1988
McPherson	999	1119	1108	1162	1360	1656	2109	2261	2662	2649	2468	2442	2042
Marion	1260	1411	1397	1466	1715	2088	2693	2888	3399	3383	3152	3119	3094
Marshall	1126	1261	1248	1310	1533	1866	2257	2420	2849	2835	2641	2614	2739
Meade	708	793	785	824	964	1174	1220	1308	1540	1532	1428	1413	1476
Miami	2054	2300	2277	2390	2796	3405	3131	3357	3952	3933	3664	3626	3095
Mitchell	922	1032	1022	1073	1255	1528	2240	2402	2827	2814	2622	2594	1868
Montgomery	1142	1279	1266	1329	1554	1893	1547	1659	1953	1943	1811	1792	2010
Morris	878	983	973	1022	1195	1455	1469	1575	1854	1845	1719	1701	1622
Morton	576	645	639	670	784	955	846	907	1068	1063	990	980	1024
Nemaha	1409	1578	1562	1639	1918	2335	2822	3026	3562	3545	3303	3268	3006
Neosho	1061	1188	1176	1235	1444	1759	1497	1605	1890	1880	1752	1734	1963
Ness	540	605	599	628	735	895	1041	1116	1314	1308	1218	1206	1084
Norton	686	768	761	798	934	1137	1325	1421	1672	1664	1551	1534	1361
Osage	1204	1348	1335	1401	1639	1996	1626	1744	2052	2042	1903	1883	1992
Osborne	759	850	841	883	1033	1258	1370	1469	1729	1721	1603	1587	1410
Ottawa	827	926	917	962	1126	1371	1883	2019	2377	2365	2204	2181	2011
Pawnee	856	958	949	996	1165	1419	1823	1955	2301	2290	2134	2111	1658
Phillips	698	782	774	812	950	1157	1251	1341	1579	1571	1464	1449	1442
Pottawatomie	1193	1336	1323	1388	1624	1977	1908	2046	2408	2397	2233	2210	2461
Pratt	895	1002	992	1041	1218	1483	1600	1716	2020	2010	1873	1853	2055
Rawlins	638	714	707	742	868	1057	1744	1870	2201	2191	2041	2020	1542
Reno	1013	1134	1123	1179	1379	1679	1796	1926	2267	2256	2102	2080	2139
Republic	1109	1242	1230	1290	1510	1838	2651	2843	3346	3330	3103	3070	2586
Rice	896	1003	993	1043	1220	1485	1597	1712	2016	2006	1869	1849	2036
Riley	1245	1394	1380	1449	1695	2064	1829	1961	2309	2297	2141	2118	3022
Rooks	657	736	728	764	894	1089	1312	1407	1656	1648	1535	1519	1251
Rush	700	784	776	814	953	1160	1297	1391	1637	1629	1518	1502	1299
Russell	659	738	731	767	897	1092	1142	1225	1441	1434	1337	1323	1339
Saline	1075	1204	1192	1251	1463	1782	1976	2119	2494	2482	2313	2288	2371
Scott	744	833	825	866	1013	1233	1517	1627	1915	1906	1775	1757	1515
Sedgwick	1444	1617	1601	1680	1965	2393	2376	2548	2999	2985	2781	2752	3464
Seward	727	814	806	846	990	1205	1151	1234	1453	1446	1347	1333	1410
Shawnee	1598	1789	1772	1859	2175	2649	2489	2669	3142	3127	2913	2882	2993
Sheridan	775	868	859	902	1055	1285	1919	2058	2422	2411	2246	2222	1564
Sherman	756	846	838	880	1029	1253	1707	1830	2155	2144	1998	1977	1761
Smith	783	877	868	911	1066	1298	1622	1739	2047	2037	1898	1878	1909
Stafford	867	971	961	1009	1180	1437	1767	1895	2230	2220	2068	2046	1803
Stanton	765	857	848	890	1041	1268	1107	1187	1397	1391	1296	1282	1064
Stevens	790	885	876	919	1075	1309	1371	1470	1731	1722	1605	1588	1387
Sumner	938	1050	1040	1091	1277	1555	1793	1923	2263	2252	2098	2076	1838
Thomas	817	915	906	951	1112	1354	2132	2286	2691	2678	2495	2469	1747
Trego	618	692	685	719	841	1024	1312	1407	1656	1648	1535	1519	1141
Wabaunsee	975	1092	1081	1134	1327	1616	1470	1576	1856	1847	1720	1702	1927
Wallace	623	698	691	725	848	1033	1261	1352	1592	1584	1476	1460	1352
Washington	1034	1158	1146	1203	1407	1714	2334	2503	2946	2932	2732	2703	2426
Wichita	669	749	742	778	911	1109	1357	1455	1713	1705	1588	1572	1401
Wilson	961	1076	1065	1118	1308	1593	1437	1541	1814	1805	1682	1664	1947
Woodson	929	1040	1030	1081	1265	1540	1376	1475	1737	1728	1610	1594	1662
Wyandotte	2431	2722	2695	2829	3309	4029	4809	5157	6070	6041	5628	5569	6742

Table C.12 Kansas 2017-2022 Linn to Wyandotte Counties (\$/ac)

KANSAS	Census Data					Census Data	
	2017	2018	2019	2020	2021	2022	2022
State Survey Data		1850	1920	1820	1970	2420	
State Census Data	1848	-	-	-	-	-	2324
Linn	2554	2557	2654	2515	2723	3345	3041
Logan	1346	1347	1398	1326	1435	1763	1851
Lyon	1988	1990	2065	1958	2119	2603	2515
McPherson	2042	2044	2122	2011	2177	2674	2804
Marion	3094	3097	3215	3047	3298	4052	3880
Marshall	2739	2742	2846	2698	2920	3587	3653
Meade	1476	1478	1534	1454	1573	1933	2227
Miami	3095	3098	3216	3048	3299	4053	4190
Mitchell	1868	1870	1941	1840	1991	2446	2694
Montgomery	2010	2012	2088	1980	2143	2632	2685
Morris	1622	1624	1685	1597	1729	2124	2161
Morton	1024	1025	1064	1008	1092	1341	1234
Nemaha	3006	3009	3123	2960	3204	3936	4538
Neosho	1963	1965	2039	1933	2093	2571	2282
Ness	1084	1085	1126	1068	1156	1420	1424
Norton	1361	1362	1414	1340	1451	1782	1785
Osage	1992	1994	2070	1962	2124	2609	2832
Osborne	1410	1412	1465	1389	1503	1846	1710
Ottawa	2011	2013	2089	1981	2144	2633	2577
Pawnee	1658	1660	1723	1633	1767	2171	1931
Phillips	1442	1444	1498	1420	1537	1888	1912
Pottawatomie	2461	2464	2557	2424	2623	3223	3188
Pratt	2055	2057	2135	2024	2191	2691	2390
Rawlins	1542	1544	1602	1519	1644	2019	1810
Reno	2139	2141	2222	2107	2280	2801	2641
Republic	2586	2589	2687	2547	2757	3386	3259
Rice	2036	2038	2115	2005	2170	2666	2366
Riley	3022	3025	3140	2976	3222	3957	3371
Rooks	1251	1252	1300	1232	1334	1638	1521
Rush	1299	1300	1350	1279	1385	1701	1697
Russell	1339	1340	1391	1319	1427	1753	1856
Saline	2371	2374	2463	2335	2528	3105	2699
Scott	1515	1517	1574	1492	1615	1984	2012
Sedgwick	3464	3468	3599	3412	3693	4536	3923
Seward	1410	1412	1465	1389	1503	1846	2215
Shawnee	2993	2996	3110	2948	3191	3919	4003
Sheridan	1564	1566	1625	1540	1667	2048	1767
Sherman	1761	1763	1830	1734	1877	2306	1965
Smith	1909	1911	1983	1880	2035	2500	2263
Stafford	1803	1805	1873	1776	1922	2361	2086
Stanton	1064	1065	1105	1048	1134	1393	1446
Stevens	1387	1389	1441	1366	1479	1816	1792
Sumner	1838	1840	1910	1810	1959	2407	2223
Thomas	1747	1749	1815	1721	1862	2288	2525
Trego	1141	1142	1185	1124	1216	1494	1600
Wabaunsee	1927	1929	2002	1898	2054	2523	2694
Wallace	1352	1353	1405	1332	1441	1770	1656
Washington	2426	2429	2521	2389	2586	3177	2737
Wichita	1401	1403	1456	1380	1493	1835	1673
Wilson	1947	1949	2023	1918	2076	2550	2558
Woodson	1662	1664	1727	1637	1772	2176	2005
Wyandotte	6742	6749	7005	6640	7187	8829	9876

Table D.1 t-Test: Paired Two Sample for Means of Kansas Calculated and Census Values

<i>Kansas 1974</i>	<i>Calculated</i>	<i>Census</i>
Mean	269.56358	322.04762
Variance	18019.528	20836.546
Observations	105	105
Pearson Correlation	0.9574116	
Hypothesized Mean Difference	0	
df	104	
t Stat	-12.845957	
P(T<=t) one-tail	1.706E-23	
t Critical one-tail	1.6596374	
P(T<=t) two-tail	3.412E-23	
t Critical two-tail	1.9830375	

<i>Kansas 1982</i>	<i>Calculated</i>	<i>Census</i>
Mean	659.30151	632.11429
Variance	63992.944	52010.391
Observations	105	105
Pearson Correlation	0.9537412	
Hypothesized Mean Difference	0	
df	104	
t Stat	3.6091881	
P(T<=t) one-tail	0.0002371	
t Critical one-tail	1.6596374	
P(T<=t) two-tail	0.0004742	
t Critical two-tail	1.9830375	

<i>Kansas 1992</i>	<i>Calculated</i>	<i>Census</i>
Mean	495.63104	506.3619
Variance	49534.652	68030.695
Observations	105	105
Pearson Correlation	0.9655823	
Hypothesized Mean Difference	0	
df	104	
t Stat	-1.4881031	
P(T<=t) one-tail	0.0698748	
t Critical one-tail	1.6596374	
P(T<=t) two-tail	0.1397497	
t Critical two-tail	1.9830375	

<i>Kansas 1978</i>	<i>Calculated</i>	<i>Census</i>
Mean	447.22892	525.9714
Variance	40183.272	40727.55
Observations	105	105
Pearson Correlation	0.9494675	
Hypothesized Mean Difference	0	
df	104	
t Stat	-12.616037	
P(T<=t) one-tail	5.393E-23	
t Critical one-tail	1.6596374	
P(T<=t) two-tail	1.079E-22	
t Critical two-tail	1.9830375	

<i>Kansas 1987</i>	<i>Calculated</i>	<i>Census</i>
Mean	392.31053	444.9905
Variance	20033.592	39929.47
Observations	105	105
Pearson Correlation	0.9416678	
Hypothesized Mean Difference	0	
df	104	
t Stat	-6.5964919	
P(T<=t) one-tail	8.987E-10	
t Critical one-tail	1.6596374	
P(T<=t) two-tail	1.797E-09	
t Critical two-tail	1.9830375	

<i>Kansas 1997</i>	<i>Calculated</i>	<i>Census</i>
Mean	617.91464	642.0762
Variance	101307.09	112722.3
Observations	105	105
Pearson Correlation	0.9456567	
Hypothesized Mean Difference	0	
df	104	
t Stat	-2.2677604	
P(T<=t) one-tail	0.0127056	
t Critical one-tail	1.6596374	
P(T<=t) two-tail	0.0254111	
t Critical two-tail	1.9830375	

Table D.2 t-Test: Paired Two Sample for Means of Kansas Calculated and Census Values

<i>Kansas 2002</i>	<i>Calculated</i>	<i>Census</i>	<i>Kansas 2007</i>	<i>Calculated</i>	<i>Census</i>
Mean	728.63595	761.14286	Mean	1085.7642	981.7429
Variance	145163.61	192105.91	Variance	390912.36	133646.4
Observations	105	105	Observations	105	105
Pearson Correlation	0.8998905		Pearson Correlation	0.8888613	
Hypothesized Mean Difference	0		Hypothesized Mean Difference	0	
df	104		df	104	
t Stat	-1.7383242		t Stat	3.099998	
P(T<=t) one-tail	0.0425567		P(T<=t) one-tail	0.0012451	
t Critical one-tail	1.6596374		t Critical one-tail	1.6596374	
P(T<=t) two-tail	0.0851133		P(T<=t) two-tail	0.0024902	
t Critical two-tail	1.9830375		t Critical two-tail	1.9830375	

<i>Kansas 2012</i>	<i>Calculated</i>	<i>Census</i>	<i>Kansas 2017</i>	<i>Calculated</i>	<i>Census</i>
Mean	1627.2576	1743.9905	Mean	2019.6949	1994.124
Variance	367176.11	444442.28	Variance	596071.92	658636.5
Observations	105	105	Observations	105	105
Pearson Correlation	0.8752128		Pearson Correlation	0.9041694	
Hypothesized Mean Difference	0		Hypothesized Mean Difference	0	
df	104		df	104	
t Stat	-3.7001333		t Stat	0.7512523	
P(T<=t) one-tail	0.0001732		P(T<=t) one-tail	0.2270987	
t Critical one-tail	1.6596374		t Critical one-tail	1.6596374	
P(T<=t) two-tail	0.0003465		P(T<=t) two-tail	0.4541974	
t Critical two-tail	1.9830375		t Critical two-tail	1.9830375	

<i>Kansas 2022</i>	<i>Calculated</i>	<i>Census</i>
Mean	2611.3526	2579.2381
Variance	1129464.4	1439949.1
Observations	105	105
Pearson Correlation	0.9674591	
Hypothesized Mean Difference	0	
df	104	
t Stat	1.031253	
P(T<=t) one-tail	0.1524072	
t Critical one-tail	1.6596374	
P(T<=t) two-tail	0.3048145	
t Critical two-tail	1.9830375	

Table E.1 Nebraska 1969-1978 Adams to Kimball Counties (\$/ac)

NEBRASKA	Census Data 1969	1970	1971	1972	1973	1974	Census Data 1974	1975	1976	1977	1978	Census Data 1978
State Survey Data		154	157	170	193	242		282	363	420	412	
State Census Data	154	-	-	-	-		182	-	-	-	-	525
Adams	276	276	281	305	346	434	580	580	747	864	847	1099
Antelope	178	178	181	196	223	280	308	308	396	459	450	584
Arthur	54	54	55	60	68	85	86	86	111	128	126	114
Banner	73	73	74	81	91	115	147	147	189	219	215	267
Blaine	49	49	50	54	61	77	100	100	129	149	146	125
Boone	164	164	167	181	206	258	278	278	358	414	406	556
Box Butte	97	97	99	107	122	152	169	169	218	252	247	394
Boyd	90	90	92	99	113	141	161	161	207	240	235	273
Brown	74	74	75	82	93	116	147	147	189	219	215	322
Buffalo	213	213	217	235	267	335	381	381	490	567	557	834
Burt	365	365	372	403	457	574	632	632	814	941	923	1145
Butler	321	321	327	354	402	504	518	518	667	771	757	1054
Cass	343	343	350	379	430	539	625	625	805	931	913	954
Cedar	208	208	212	230	261	327	346	346	445	515	506	648
Chase	115	115	117	127	144	181	265	265	341	395	387	487
Cherry	49	49	50	54	61	77	89	89	115	133	130	143
Cheyenne	116	116	118	128	145	182	212	212	273	316	310	330
Clay	358	358	365	395	449	563	621	621	799	925	907	1231
Colfax	323	323	329	357	405	508	516	516	664	769	754	949
Cuming	339	339	346	374	425	533	586	586	754	873	856	1256
Custer	107	107	109	118	134	168	184	184	237	274	269	336
Dakota	260	260	265	287	326	409	449	449	578	669	656	896
Dawes	57	57	58	63	71	90	109	109	140	162	159	193
Dawson	267	267	272	295	335	420	464	464	597	691	678	758
Deuel	136	136	139	150	170	214	260	260	335	387	380	449
Dixon	222	222	226	245	278	349	350	350	451	521	511	727
Dodge	413	413	421	456	518	649	681	681	877	1014	995	1222
Douglas	645	645	658	712	808	1014	1031	1031	1327	1536	1506	1504
Dundy	75	75	76	83	94	118	162	162	209	241	237	314
Fillmore	323	323	329	357	405	508	604	604	777	900	882	1144
Franklin	159	159	162	176	199	250	391	391	503	582	571	711
Frontier	95	95	97	105	119	149	227	227	292	338	332	396
Furnas	135	135	138	149	169	212	288	288	371	429	421	509
Gage	255	255	260	281	320	401	402	402	517	599	587	896
Garden	63	63	64	70	79	99	110	110	142	164	161	201
Garfield	72	72	73	79	90	113	132	132	170	197	193	210
Gosper	167	167	170	184	209	262	362	362	466	539	529	654
Grant	41	41	42	45	51	64	77	77	99	115	112	123
Greeley	118	118	120	130	148	185	226	226	291	337	330	401
Hall	385	385	393	425	483	605	651	651	838	970	951	1165
Hamilton	432	432	440	477	541	679	810	810	1043	1206	1183	1456
Harlan	157	157	160	173	197	247	354	354	456	527	517	519
Hayes	80	80	82	88	100	126	179	179	230	267	262	309
Hitchcock	106	106	108	117	133	167	200	200	257	298	292	352
Holt	96	96	98	106	120	151	190	190	245	283	278	423
Hooker	41	41	42	45	51	64	69	69	89	103	101	96
Howard	187	187	191	206	234	294	338	338	435	503	494	612
Jefferson	228	228	232	252	286	358	387	387	498	576	565	910
Johnson	190	190	194	210	238	299	365	365	470	544	533	667
Kearney	304	304	310	336	381	478	645	645	830	961	942	1123
Keith	109	109	111	120	137	171	204	204	263	304	298	442
Keya Paha	64	64	65	71	80	101	114	114	147	170	167	231
Kimball	75	75	76	83	94	118	179	179	230	267	262	258

Table E.2 Nebraska 1978-1987 Adams to Kimball Counties (\$/ac)

NEBRASKA	Census Data 1978	1979	1980	1981	1982	Census Data 1982	1983	1984	1985	1986	1987	Census Data 1987
State Survey Data		525	635	729	730		701	645	485	416	400	
State Census Data	525	-	-	-	-	701	-	-	-	-	-	457
Adams	1099	1099	1329	1526	1528	1348	1348	1240	933	800	769	793
Antelope	584	584	706	811	812	881	881	811	610	523	503	554
Arthur	114	114	138	158	159	210	210	193	145	125	120	225
Banner	267	267	323	371	371	310	310	285	214	184	177	263
Blaine	125	125	151	174	174	244	244	225	169	145	139	197
Boone	556	556	672	772	773	892	892	821	617	529	509	647
Box Butte	394	394	477	547	548	522	522	480	361	310	298	315
Boyd	273	273	330	379	380	320	320	294	221	190	183	252
Brown	322	322	389	447	448	354	354	326	245	210	202	329
Buffalo	834	834	1009	1158	1160	960	960	883	664	570	548	605
Burt	1145	1145	1385	1590	1592	1594	1594	1467	1103	946	910	834
Butler	1054	1054	1275	1464	1466	1170	1170	1077	809	694	668	774
Cass	954	954	1154	1325	1327	1429	1429	1315	989	848	815	952
Cedar	648	648	784	900	901	828	828	762	573	491	472	620
Chase	487	487	589	676	677	710	710	653	491	421	405	455
Cherry	143	143	173	199	199	373	373	343	258	221	213	248
Cheyenne	330	330	399	458	459	468	468	431	324	278	267	366
Clay	1231	1231	1489	1709	1712	1556	1556	1432	1077	923	888	916
Colfax	949	949	1148	1318	1320	1524	1524	1402	1054	904	870	884
Cuming	1256	1256	1519	1744	1746	1538	1538	1415	1064	913	878	858
Custer	336	336	406	467	467	441	441	406	305	262	252	265
Dakota	896	896	1084	1244	1246	1107	1107	1019	766	657	632	711
Dawes	193	193	233	268	268	247	247	227	171	147	141	260
Dawson	758	758	917	1053	1054	1064	1064	979	736	631	607	588
Deuel	449	449	543	623	624	580	580	534	401	344	331	383
Dixon	727	727	879	1009	1011	863	863	794	597	512	492	580
Dodge	1222	1222	1478	1697	1699	1664	1664	1531	1151	987	950	946
Douglas	1504	1504	1819	2088	2091	2125	2125	1955	1470	1261	1213	1305
Dundy	314	314	380	436	437	569	569	524	394	338	325	378
Fillmore	1144	1144	1384	1589	1591	1400	1400	1288	969	831	799	837
Franklin	711	711	860	987	989	1015	1015	934	702	602	579	544
Frontier	396	396	479	550	551	536	536	493	371	318	306	312
Furnas	509	509	616	707	708	579	579	533	401	344	330	400
Gage	896	896	1084	1244	1246	927	927	853	641	550	529	598
Garden	201	201	243	279	279	284	284	261	196	169	162	216
Garfield	210	210	254	292	292	462	462	425	320	274	264	223
Gosper	654	654	791	908	909	750	750	690	519	445	428	435
Grant	123	123	149	171	171	274	274	252	190	163	156	171
Greeley	401	401	485	557	558	559	559	514	387	332	319	334
Hall	1165	1165	1409	1618	1620	1442	1442	1327	998	856	823	911
Hamilton	1456	1456	1761	2022	2025	1756	1756	1616	1215	1042	1002	981
Harlan	519	519	628	721	722	843	843	776	583	500	481	532
Hayes	309	309	374	429	430	422	422	388	292	250	241	322
Hitchcock	352	352	426	489	489	691	691	636	478	410	394	356
Holt	423	423	512	587	588	551	551	507	381	327	314	329
Hooker	96	96	116	133	133	291	291	268	201	173	166	273
Howard	612	612	740	850	851	807	807	743	558	479	460	442
Jefferson	910	910	1101	1264	1265	1006	1006	926	696	597	574	519
Johnson	667	667	807	926	927	708	708	651	490	420	404	519
Kearney	1123	1123	1358	1559	1562	1483	1483	1365	1026	880	846	885
Keith	442	442	535	614	615	544	544	501	376	323	310	387
Keya Paha	231	231	279	321	321	243	243	224	168	144	139	255
Kimball	258	258	312	358	359	334	334	307	231	198	191	221

Table E.3 Nebraska 1987-1997 Adams to Kimball Counties (\$/ac)

NEBRASKA	Census Data 1987	1988	1989	1990	1991	1992	Census Data 1992	1993	1994	1995	1996	1997	Census Data 1997
State Survey Data		457	511	524	517	517		514	550	580	610	620	
State Census Data	457	-	-	-	-	-	514	-	-	-	-	-	658
Adams	793	793	887	909	897	897	985	985	1054	1111	1169	1188	1275
Antelope	554	554	619	635	627	627	711	711	761	802	844	858	832
Arthur	225	225	252	258	255	255	176	176	188	199	209	212	210
Banner	263	263	294	302	298	298	289	289	309	326	343	349	306
Blaine	197	197	220	226	223	223	160	160	171	181	190	193	196
Boone	647	647	723	742	732	732	716	716	766	808	850	864	942
Box Butte	315	315	352	361	356	356	452	452	484	510	536	545	344
Boyd	252	252	282	289	285	285	293	293	314	331	348	353	313
Brown	329	329	368	377	372	372	292	292	312	329	347	352	370
Buffalo	605	605	676	694	684	684	773	773	827	872	917	932	958
Burt	834	834	933	956	943	943	1050	1050	1124	1185	1246	1267	1392
Butler	774	774	865	887	876	876	968	968	1036	1092	1149	1168	1187
Cass	952	952	1064	1092	1077	1077	1233	1233	1319	1391	1463	1487	1589
Cedar	620	620	693	711	701	701	743	743	795	838	882	896	926
Chase	455	455	509	522	515	515	515	515	551	581	611	621	757
Cherry	248	248	277	284	281	281	182	182	195	205	216	220	201
Cheyenne	366	366	409	420	414	414	343	343	367	387	407	414	434
Clay	916	916	1024	1050	1036	1036	1114	1114	1192	1257	1322	1344	1242
Colfax	884	884	988	1014	1000	1000	1026	1026	1098	1158	1218	1238	1427
Cuming	858	858	959	984	971	971	1101	1101	1178	1242	1307	1328	1569
Custer	265	265	296	304	300	300	405	405	433	457	481	489	453
Dakota	711	711	795	815	804	804	898	898	961	1013	1066	1083	1015
Dawes	260	260	291	298	294	294	183	183	196	206	217	221	265
Dawson	588	588	657	674	665	665	868	868	929	979	1030	1047	879
Deuel	383	383	428	439	433	433	401	401	429	452	476	484	492
Dixon	580	580	649	665	656	656	689	689	737	777	818	831	878
Dodge	946	946	1058	1085	1070	1070	1345	1345	1439	1518	1596	1622	1653
Douglas	1305	1305	1459	1496	1476	1476	1663	1663	1779	1877	1974	2006	2321
Dundy	378	378	423	433	428	428	363	363	388	410	431	438	482
Fillmore	837	837	936	960	947	947	1059	1059	1133	1195	1257	1277	1381
Franklin	544	544	608	624	615	615	793	793	849	895	941	957	815
Frontier	312	312	349	358	353	353	334	334	357	377	396	403	482
Furnas	400	400	447	459	453	453	467	467	500	527	554	563	545
Gage	598	598	669	686	677	677	716	716	766	808	850	864	908
Garden	216	216	242	248	244	244	187	187	200	211	222	226	258
Garfield	223	223	249	256	252	252	253	253	271	285	300	305	334
Gosper	435	435	486	499	492	492	576	576	616	650	684	695	588
Grant	171	171	191	196	193	193	203	203	217	229	241	245	201
Greeley	334	334	373	383	378	378	436	436	467	492	517	526	661
Hall	911	911	1019	1045	1031	1031	1046	1046	1119	1180	1241	1262	1512
Hamilton	981	981	1097	1125	1110	1110	1351	1351	1446	1524	1603	1630	1626
Harlan	532	532	595	610	602	602	587	587	628	662	697	708	681
Hayes	322	322	360	369	364	364	275	275	294	310	326	332	661
Hitchcock	356	356	398	408	403	403	331	331	354	374	393	399	495
Holt	329	329	368	377	372	372	370	370	396	418	439	446	549
Hooker	273	273	305	313	309	309	118	118	126	133	140	142	156
Howard	442	442	494	507	500	500	582	582	623	657	691	702	843
Jefferson	519	519	580	595	587	587	736	736	788	831	873	888	936
Johnson	519	519	580	595	587	587	670	670	717	756	795	808	831
Kearney	885	885	990	1015	1001	1001	1137	1137	1217	1283	1349	1371	1396
Keith	387	387	433	444	438	438	292	292	312	329	347	352	430
Keya Paha	255	255	285	292	288	288	224	224	240	253	266	270	274
Kimball	221	221	247	253	250	250	243	243	260	274	288	293	287

Table E.4 Nebraska 1997-2007 Adams to Kimball Counties (\$/ac)

NEBRASKA	Census Data 1997	1998	1999	2000	2001	2002	Census Data 2002	2003	2004	2005	2006	2007	Census Data 2007
State Survey Data		645	675	710	735	760		775	810	910	1030	1140	
State Census Data	658	-	-	-	-	-	776	-	-	-	-	-	1159
Adams	1275	1250	1308	1376	1424	1473	1557	1555	1625	1826	2067	2287	2231
Antelope	832	816	853	898	929	961	1086	1085	1134	1274	1441	1595	1654
Arthur	210	206	215	227	235	243	195	195	204	229	259	286	334
Banner	306	300	314	330	342	353	306	306	319	359	406	450	549
Blaine	196	192	201	211	219	226	241	241	252	283	320	354	453
Boone	942	923	966	1016	1052	1088	1152	1151	1202	1351	1529	1692	1853
Box Butte	344	337	353	371	384	397	477	476	498	559	633	701	824
Boyd	313	307	321	338	350	362	436	435	455	511	579	641	781
Brown	370	363	380	399	413	427	343	343	358	402	455	504	500
Buffalo	958	939	983	1034	1070	1107	1312	1310	1369	1539	1741	1927	1680
Burt	1392	1364	1428	1502	1555	1608	1700	1698	1774	1994	2256	2497	2494
Butler	1187	1164	1218	1281	1326	1371	1902	1900	1985	2230	2525	2794	2458
Cass	1589	1558	1630	1715	1775	1835	2075	2072	2166	2433	2754	3048	2567
Cedar	926	908	950	999	1034	1070	1200	1198	1253	1407	1593	1763	1986
Chase	757	742	777	817	846	874	667	666	696	782	885	980	1003
Cherry	201	197	206	217	225	232	225	225	235	264	299	331	406
Cheyenne	434	425	445	468	485	501	374	374	390	439	496	549	741
Clay	1242	1217	1274	1340	1387	1435	1503	1501	1569	1763	1995	2208	2290
Colfax	1427	1399	1464	1540	1594	1648	1629	1627	1700	1910	2162	2393	2453
Cuming	1569	1538	1610	1693	1753	1812	1571	1569	1640	1842	2085	2308	2493
Custer	453	444	465	489	506	523	535	534	558	627	710	786	1020
Dakota	1015	995	1041	1095	1134	1172	1348	1346	1407	1581	1789	1980	1765
Dawes	265	260	272	286	296	306	362	362	378	425	480	532	563
Dawson	879	862	902	948	982	1015	1014	1013	1058	1189	1346	1490	1337
Deuel	492	482	505	531	550	568	430	429	449	504	571	632	709
Dixon	878	861	901	947	981	1014	1246	1244	1301	1461	1654	1830	1843
Dodge	1653	1620	1696	1784	1846	1909	1955	1952	2041	2293	2595	2872	2654
Douglas	2321	2275	2381	2504	2593	2681	3900	3895	4071	4573	5177	5729	3642
Dundy	482	472	494	520	538	557	478	477	499	561	634	702	821
Fillmore	1381	1354	1417	1490	1543	1595	1685	1683	1759	1976	2237	2475	2410
Franklin	815	799	836	879	910	941	768	767	802	901	1019	1128	1293
Frontier	482	472	494	520	538	557	529	528	552	620	702	777	783
Furnas	545	534	559	588	609	629	604	603	630	708	802	887	978
Gage	908	890	931	980	1014	1049	1093	1092	1141	1282	1451	1606	1796
Garden	258	253	265	278	288	298	255	255	266	299	338	375	466
Garfield	334	327	343	360	373	386	351	351	366	412	466	516	557
Gosper	588	576	603	634	657	679	836	835	873	980	1110	1228	1227
Grant	201	197	206	217	225	232	213	213	222	250	283	313	303
Greeley	661	648	678	713	738	763	741	740	773	869	984	1089	1189
Hall	1512	1482	1551	1631	1689	1746	1661	1659	1734	1948	2205	2440	2045
Hamilton	1626	1594	1668	1754	1816	1878	1841	1839	1922	2159	2444	2705	2605
Harlan	681	668	699	735	761	787	714	713	745	837	948	1049	1146
Hayes	661	648	678	713	738	763	415	414	433	487	551	610	678
Hitchcock	495	485	508	534	553	572	487	486	508	571	646	715	768
Holt	549	538	563	592	613	634	518	517	541	607	688	761	896
Hooker	156	153	160	168	174	180	202	202	211	237	268	297	343
Howard	843	826	865	910	942	974	999	998	1043	1172	1326	1468	1559
Jefferson	936	918	960	1010	1046	1081	1181	1179	1233	1385	1568	1735	1792
Johnson	831	815	852	897	928	960	967	966	1009	1134	1284	1421	1535
Kearney	1396	1368	1432	1506	1559	1612	1447	1445	1510	1697	1921	2126	2007
Keith	430	422	441	464	480	497	509	508	531	597	676	748	857
Keya Paha	274	269	281	296	306	316	345	345	360	405	458	507	555
Kimball	287	281	294	310	321	331	309	309	323	362	410	454	700

Table E.5 Nebraska 2007-2017 Adams to Kimball Counties (\$/ac)

NEBRASKA	Census Data 2007	2008	2009	2010	2011	2012	Census Data 2012	2013	2014	2015	2016	2017	Census Data 2017
State Survey Data		1330	1320	1470	1840	2420		2800	3100	3010	2890	2820	
State Census Data	1159	-	-	-	-	-	2380	-	-	-	-	-	2754
Adams	2231	2560	2541	2830	3542	4658	5278	6209	6875	6675	6409	6254	5323
Antelope	1654	1898	1884	2098	2626	3454	4254	5005	5541	5380	5166	5040	4588
Arthur	334	383	380	424	530	697	422	496	550	534	512	500	801
Banner	549	630	625	696	872	1146	770	906	1003	974	935	912	872
Blaine	453	520	516	575	719	946	512	602	667	648	622	607	993
Boone	1853	2126	2110	2350	2942	3869	4408	5186	5742	5575	5353	5223	4449
Box Butte	824	946	938	1045	1308	1721	1068	1256	1391	1351	1297	1265	1334
Boyd	781	896	889	991	1240	1631	1375	1618	1791	1739	1670	1629	2028
Brown	500	574	569	634	794	1044	716	842	933	906	869	848	1172
Buffalo	1680	1928	1913	2131	2667	3508	3737	4396	4868	4726	4538	4428	4393
Burt	2494	2862	2840	3163	3959	5207	5216	6136	6794	6597	6334	6180	6160
Butler	2458	2821	2799	3118	3902	5132	4948	5821	6445	6258	6008	5863	5693
Cass	2567	2946	2924	3256	4075	5360	5792	6814	7544	7325	7033	6863	5607
Cedar	1986	2279	2262	2519	3153	4147	4408	5186	5742	5575	5353	5223	5182
Chase	1003	1151	1142	1272	1592	2094	1966	2313	2561	2486	2387	2329	2085
Cherry	406	466	462	515	645	848	531	625	692	672	645	629	933
Cheyenne	741	850	844	940	1176	1547	893	1051	1163	1129	1084	1058	1020
Clay	2290	2628	2608	2904	3636	4782	5133	6039	6686	6492	6233	6082	4850
Colfax	2453	2815	2794	3111	3894	5122	5291	6225	6892	6692	6425	6269	6194
Cuming	2493	2861	2839	3162	3958	5205	5364	6311	6987	6784	6513	6356	6087
Custer	1020	1170	1162	1294	1619	2130	1898	2233	2472	2400	2305	2249	2475
Dakota	1765	2025	2010	2239	2802	3685	4799	5646	6251	6069	5827	5686	5656
Dawes	563	646	641	714	894	1176	744	875	969	941	903	882	889
Dawson	1337	1534	1523	1696	2123	2792	3106	3654	4046	3928	3772	3680	3412
Deuel	709	814	807	899	1126	1480	999	1175	1301	1263	1213	1184	1305
Dixon	1843	2115	2099	2338	2926	3848	4148	4880	5403	5246	5037	4915	4676
Dodge	2654	3046	3023	3366	4213	5542	5611	6601	7308	7096	6813	6648	6412
Douglas	3642	4179	4148	4619	5782	7605	6217	7314	8098	7863	7549	7366	7644
Dundy	821	942	935	1041	1303	1714	1359	1599	1770	1719	1650	1610	1530
Fillmore	2410	2766	2745	3057	3826	5032	5513	6486	7181	6972	6694	6532	5448
Franklin	1293	1484	1473	1640	2053	2700	2969	3493	3867	3755	3605	3518	3462
Frontier	783	899	892	993	1243	1635	1468	1727	1912	1857	1783	1739	1879
Furnas	978	1122	1114	1240	1553	2042	2341	2754	3049	2961	2843	2774	2467
Gage	1796	2061	2045	2278	2851	3750	3491	4107	4547	4415	4239	4136	4427
Garden	466	535	531	591	740	973	611	719	796	773	742	724	866
Garfield	557	639	634	706	884	1163	991	1166	1291	1253	1203	1174	1483
Gosper	1227	1408	1397	1556	1948	2562	3165	3724	4122	4003	3843	3750	2812
Grant	303	348	345	384	481	633	552	649	719	698	670	654	837
Greeley	1189	1364	1354	1508	1888	2483	3229	3799	4206	4084	3921	3826	2965
Hall	2045	2347	2329	2594	3247	4270	4470	5259	5822	5653	5428	5296	5083
Hamilton	2605	2989	2967	3304	4136	5439	6446	7584	8396	8152	7827	7638	6341
Harlan	1146	1315	1305	1454	1819	2393	3082	3626	4014	3898	3742	3652	2878
Hayes	678	778	772	860	1076	1416	1294	1522	1685	1637	1571	1533	1415
Hitchcock	768	881	875	974	1219	1604	1290	1518	1680	1631	1566	1528	1574
Holt	896	1028	1020	1136	1422	1871	2093	2462	2726	2647	2542	2480	2380
Hooker	343	394	391	435	545	716	443	521	577	560	538	525	735
Howard	1559	1789	1776	1977	2475	3255	2949	3469	3841	3730	3581	3494	3491
Jefferson	1792	2056	2041	2273	2845	3742	3928	4621	5116	4968	4770	4654	4151
Johnson	1535	1761	1748	1947	2437	3205	2545	2994	3315	3219	3090	3016	3631
Kearney	2007	2303	2286	2546	3186	4191	5283	6215	6881	6681	6415	6260	5232
Keith	857	983	976	1087	1361	1789	1859	2187	2421	2351	2257	2203	1626
Keya Paha	555	637	632	704	881	1159	775	912	1009	980	941	918	1416
Kimball	700	803	797	888	1111	1462	868	1021	1131	1098	1054	1028	1075

Table E.6 Nebraska 2017-2022 Adams to Kimball Counties (\$/ac)

NEBRASKA	Census Data 2017	2018	2019	2020	2021	2022	Census Data 2022
State Survey Data		2750	2790	2670	2910	3450	
State Census Data	2754	-	-	-	-	-	3437
Adams	5323	5315	5393	5161	5625	6668	6544
Antelope	4588	4581	4648	4448	4848	5747	5999
Arthur	801	800	811	777	846	1003	1091
Banner	872	871	883	845	921	1092	1242
Blaine	993	992	1006	963	1049	1244	1317
Boone	4449	4443	4507	4313	4701	5573	6452
Box Butte	1334	1332	1351	1293	1410	1671	2034
Boyd	2028	2025	2055	1966	2143	2541	2664
Brown	1172	1170	1187	1136	1238	1468	1674
Buffalo	4393	4387	4450	4259	4642	5503	4857
Burt	6160	6151	6241	5972	6509	7717	7150
Butler	5693	5685	5767	5519	6015	7132	6462
Cass	5607	5599	5680	5436	5925	7024	6946
Cedar	5182	5174	5250	5024	5476	6492	6435
Chase	2085	2082	2112	2021	2203	2612	2558
Cherry	933	932	945	905	986	1169	1224
Cheyenne	1020	1019	1033	989	1078	1278	1455
Clay	4850	4843	4913	4702	5125	6076	6744
Colfax	6194	6185	6275	6005	6545	7759	8261
Cuming	6087	6078	6167	5901	6432	7625	7508
Custer	2475	2471	2507	2400	2615	3100	2892
Dakota	5656	5648	5730	5483	5976	7085	7081
Dawes	889	888	901	862	939	1114	1397
Dawson	3412	3407	3457	3308	3605	4274	4897
Deuel	1305	1303	1322	1265	1379	1635	2003
Dixon	4676	4669	4737	4533	4941	5858	5376
Dodge	6412	6403	6496	6216	6775	8032	7512
Douglas	7644	7633	7744	7411	8077	9576	9113
Dundy	1530	1528	1550	1483	1617	1917	1991
Fillmore	5448	5440	5519	5282	5757	6825	7359
Franklin	3462	3457	3507	3356	3658	4337	4265
Frontier	1879	1876	1904	1822	1985	2354	2370
Furnas	2467	2463	2499	2392	2607	3090	2895
Gage	4427	4421	4485	4292	4678	5546	5474
Garden	866	865	877	840	915	1085	1256
Garfield	1483	1481	1502	1438	1567	1858	1660
Gosper	2812	2808	2849	2726	2971	3523	4514
Grant	837	836	848	811	884	1049	1129
Greeley	2965	2961	3004	2875	3133	3714	4034
Hall	5083	5076	5149	4928	5371	6368	5923
Hamilton	6341	6332	6424	6148	6700	7944	8963
Harlan	2878	2874	2916	2790	3041	3605	3530
Hayes	1415	1413	1433	1372	1495	1773	2196
Hitchcock	1574	1572	1595	1526	1663	1972	2181
Holt	2380	2377	2411	2307	2515	2981	2650
Hooker	735	734	745	713	777	921	1028
Howard	3491	3486	3537	3385	3689	4373	4372
Jefferson	4151	4145	4205	4024	4386	5200	5724
Johnson	3631	3626	3678	3520	3837	4549	4389
Kearney	5232	5224	5300	5072	5528	6554	7608
Keith	1626	1624	1647	1576	1718	2037	2431
Keya Paha	1416	1414	1435	1373	1496	1774	1790
Kimball	1075	1073	1089	1042	1136	1347	1701

Table E.7 Nebraska 1969-1978 Knox to York Counties (\$/ac)

NEBRASKA	Census Data						Census Data						Census Data
	1969	1970	1971	1972	1973	1974	1974	1975	1976	1977	1978	1978	
State Survey Data		154	157	170	193	242		282	363	420	412		
State Census Data	154	-	-	-	-		182	-	-	-	-	525	
Knox	130	130	133	144	163	204	214	214	275	319	313	402	
Lancaster	323	323	329	357	405	508	568	568	731	846	830	1000	
Lincoln	99	99	101	109	124	156	177	177	228	264	259	303	
Logan	62	62	63	68	78	97	110	110	142	164	161	187	
Loup	69	69	70	76	86	108	122	122	157	182	178	192	
Madison	245	245	250	270	307	385	405	405	521	603	592	750	
Mcpherson	48	48	49	53	60	75	86	86	111	128	126	120	
Merrick	299	299	305	330	375	470	498	498	641	742	728	1032	
Morrill	84	84	86	93	105	132	166	166	214	247	243	349	
Nance	179	179	182	198	224	281	309	309	398	460	451	642	
Nemaha	275	275	280	304	345	432	491	491	632	731	717	813	
Nuckolls	188	188	192	208	236	295	347	347	447	517	507	702	
Otoe	259	259	264	286	325	407	472	472	608	703	690	809	
Pawnee	173	173	176	191	217	272	299	299	385	445	437	668	
Perkins	132	132	135	146	165	207	289	289	372	430	422	551	
Phelps	285	285	291	315	357	448	676	676	870	1007	988	1190	
Pierce	205	205	209	226	257	322	370	370	476	551	541	732	
Platte	280	280	285	309	351	440	498	498	641	742	728	926	
Polk	376	376	383	415	471	591	624	624	803	929	912	1211	
Red Willow	119	119	121	131	149	187	244	244	314	363	356	464	
Richardson	265	265	270	293	332	416	470	470	605	700	687	780	
Rock	72	72	73	79	90	113	132	132	170	197	193	262	
Saline	286	286	292	316	358	449	467	467	601	696	682	868	
Sarpy	560	560	571	618	702	880	1033	1033	1330	1539	1509	1387	
Saunders	365	365	372	403	457	574	604	604	777	900	882	1045	
Scotts Bluff	215	215	219	237	269	338	446	446	574	664	652	803	
Seward	319	319	325	352	400	501	580	580	747	864	847	1122	
Sheridan	56	56	57	62	70	88	105	105	135	156	153	185	
Sherman	134	134	137	148	168	211	252	252	324	375	368	463	
Sioux	51	51	52	56	64	80	83	83	107	124	121	228	
Stanton	233	233	238	257	292	366	395	395	508	588	577	740	
Thayer	240	240	245	265	301	377	416	416	535	620	608	920	
Thomas	42	42	43	46	53	66	84	84	108	125	123	125	
Thurston	263	263	268	290	330	413	425	425	547	633	621	841	
Valley	143	143	146	158	179	225	263	263	339	392	384	471	
Washington	418	418	426	461	524	657	761	761	980	1133	1112	1320	
Wayne	272	272	277	300	341	427	392	392	505	584	573	879	
Webster	131	131	134	145	164	206	292	292	376	435	427	545	
Wheeler	85	85	87	94	107	134	156	156	201	232	228	297	
York	407	407	415	449	510	640	716	716	922	1066	1046	1290	

Table E.8 Nebraska 1978-1987 Knox to York Counties (\$/ac)

NEBRASKA	Census Data	Census Data										Census Data
	1978	1979	1980	1981	1982	1982	1983	1984	1985	1986	1987	1987
State Survey Data		525	635	729	730		701	645	485	416	400	
State Census Data	525	-	-	-	-	701	-	-	-	-	-	457
Knox	402	402	486	558	559	533	533	490	369	316	304	432
Lancaster	1000	1000	1210	1389	1390	1246	1246	1146	862	739	711	727
Lincoln	303	303	366	421	421	526	526	484	364	312	300	385
Logan	187	187	226	260	260	273	273	251	189	162	156	280
Loup	192	192	232	267	267	263	263	242	182	156	150	187
Madison	750	750	907	1041	1043	1149	1149	1057	795	682	656	764
Mcpherson	120	120	145	167	167	210	210	193	145	125	120	117
Merrick	1032	1032	1248	1433	1435	1081	1081	995	748	642	617	697
Morrill	349	349	422	485	485	400	400	368	277	237	228	337
Nance	642	642	777	891	893	872	872	802	603	517	498	525
Nemaha	813	813	983	1129	1130	1190	1190	1095	823	706	679	705
Nuckolls	702	702	849	975	976	834	834	767	577	495	476	491
Otoe	809	809	979	1123	1125	1037	1037	954	717	615	592	684
Pawnee	668	668	808	928	929	698	698	642	483	414	398	481
Perkins	551	551	666	765	766	624	624	574	432	370	356	433
Phelps	1190	1190	1439	1652	1655	1480	1480	1362	1024	878	845	866
Pierce	732	732	885	1016	1018	1022	1022	940	707	606	583	612
Platte	926	926	1120	1286	1288	1527	1527	1405	1056	906	871	1092
Polk	1211	1211	1465	1682	1684	1692	1692	1557	1171	1004	965	910
Red Willow	464	464	561	644	645	618	618	569	428	367	353	379
Richardson	780	780	943	1083	1085	1011	1011	930	699	600	577	597
Rock	262	262	317	364	364	345	345	317	239	205	197	266
Saline	868	868	1050	1205	1207	1065	1065	980	737	632	608	614
Sarpy	1387	1387	1678	1926	1929	1644	1644	1513	1137	976	938	1156
Saunders	1045	1045	1264	1451	1453	1258	1258	1158	870	747	718	905
Scotts Bluff	803	803	971	1115	1117	950	950	874	657	564	542	592
Seward	1122	1122	1357	1558	1560	1358	1358	1250	940	806	775	906
Sheridan	185	185	224	257	257	347	347	319	240	206	198	278
Sherman	463	463	560	643	644	611	611	562	423	363	349	365
Sioux	228	228	276	317	317	360	360	331	249	214	205	226
Stanton	740	740	895	1028	1029	948	948	872	656	563	541	662
Thayer	920	920	1113	1277	1279	1112	1112	1023	769	660	635	657
Thomas	125	125	151	174	174	282	282	259	195	167	161	218
Thurston	841	841	1017	1168	1169	1038	1038	955	718	616	592	646
Valley	471	471	570	654	655	653	653	601	452	388	373	464
Washington	1320	1320	1597	1833	1835	1557	1557	1433	1077	924	888	1079
Wayne	879	879	1063	1221	1222	1022	1022	940	707	606	583	646
Webster	545	545	659	757	758	608	608	559	421	361	347	394
Wheeler	297	297	359	412	413	483	483	444	334	287	276	319
York	1290	1290	1560	1791	1794	1576	1576	1450	1090	935	899	1000

Table E.9 Nebraska 1987-1997 Knox to York Counties (\$/ac)

NEBRASKA	Census Data					Census Data							Census Data
	1987	1988	1989	1990	1991	1992	1992	1993	1994	1995	1996	1997	1997
State Survey Data		457	511	524	517	517		514	550	580	610	620	
State Census Data	457	-	-	-	-	-	514	-	-	-	-	-	658
Knox	432	432	483	495	489	489	452	452	484	510	536	545	498
Lancaster	727	727	813	834	822	822	1023	1023	1095	1154	1214	1234	1434
Lincoln	385	385	430	441	436	436	321	321	343	362	381	387	504
Logan	280	280	313	321	317	317	213	213	228	240	253	257	249
Loup	187	187	209	214	212	212	185	185	198	209	220	223	252
Madison	764	764	854	876	864	864	851	851	911	960	1010	1026	181
Mcpherson	117	117	131	134	132	132	148	148	158	167	176	179	1096
Merrick	697	697	779	799	789	789	873	873	934	985	1036	1053	1277
Morrill	337	337	377	386	381	381	271	271	290	306	322	327	381
Nance	525	525	587	602	594	594	610	610	653	688	724	736	791
Nemaha	705	705	788	808	798	798	763	763	816	861	906	920	1156
Nuckolls	491	491	549	563	555	555	553	553	592	624	656	667	768
Otoe	684	684	765	784	774	774	846	846	905	955	1004	1020	985
Pawnee	481	481	538	552	544	544	564	564	604	636	669	680	676
Perkins	433	433	484	496	490	490	495	495	530	559	587	597	525
Phelps	866	866	968	993	980	980	1157	1157	1238	1306	1373	1396	1392
Pierce	612	612	684	702	692	692	834	834	892	941	990	1006	955
Platte	1092	1092	1221	1252	1235	1235	1090	1090	1166	1230	1294	1315	1589
Polk	910	910	1018	1043	1029	1029	1144	1144	1224	1291	1358	1380	1439
Red Willow	379	379	424	435	429	429	469	469	502	529	557	566	586
Richardson	597	597	668	685	675	675	702	702	751	792	833	847	905
Rock	266	266	297	305	301	301	218	218	233	246	259	263	292
Saline	614	614	687	704	695	695	732	732	783	826	869	883	986
Sarpy	1156	1156	1293	1325	1308	1308	1711	1711	1831	1931	2031	2064	2344
Saunders	905	905	1012	1038	1024	1024	1199	1199	1283	1353	1423	1446	1554
Scotts Bluff	592	592	662	679	670	670	651	651	697	735	773	785	628
Seward	906	906	1013	1039	1025	1025	1003	1003	1073	1132	1190	1210	1526
Sheridan	278	278	311	319	314	314	204	204	218	230	242	246	237
Sherman	365	365	408	419	413	413	504	504	539	569	598	608	521
Sioux	226	226	253	259	256	256	223	223	239	252	265	269	263
Stanton	662	662	740	759	749	749	723	723	774	816	858	872	928
Thayer	657	657	735	753	743	743	702	702	751	792	833	847	980
Thomas	218	218	244	250	247	247	163	163	174	184	193	197	162
Thurston	646	646	722	741	731	731	785	785	840	886	932	947	1050
Valley	464	464	519	532	525	525	538	538	576	607	638	649	694
Washington	1079	1079	1206	1237	1221	1221	1361	1361	1456	1536	1615	1642	2114
Wayne	646	646	722	741	731	731	772	772	826	871	916	931	1014
Webster	394	394	441	452	446	446	548	548	586	618	650	661	575
Wheeler	319	319	357	366	361	361	300	300	321	339	356	362	342
York	1000	1000	1118	1147	1131	1131	1455	1455	1557	1642	1727	1755	1782

Table E.10 Nebraska 1997-2007 Knox to York Counties (\$/ac)

NEBRASKA	Census Data 1997	1998	1990	2000	2001	2002	Census Data 2002	2003	2004	2005	2006	2007	Census Data 2007
State Survey Data		645	675	710	735	760		775	810	910	1030	1140	
State Census Data	658	-	-	-	-	-	776	-	-	-	-	-	1159
Knox	498	488	511	537	556	575	726	725	758	851	964	1067	1456
Lancaster	1434	1406	1471	1547	1602	1656	1963	1960	2049	2302	2606	2884	2535
Lincoln	504	494	517	544	563	582	509	508	531	597	676	748	834
Logan	249	244	255	269	278	288	310	310	324	364	411	455	511
Loup	252	247	259	272	281	291	279	279	291	327	370	410	449
Madison	181	177	186	195	202	209	218	218	228	256	289	320	365
Mcperson	1096	1074	1124	1183	1224	1266	1333	1331	1391	1563	1769	1958	2167
Merrick	1277	1252	1310	1378	1426	1475	1339	1337	1398	1570	1777	1967	1831
Morrill	381	373	391	411	426	440	327	327	341	383	434	480	646
Nance	791	775	811	854	884	914	917	916	957	1075	1217	1347	1456
Nemaha	1156	1133	1186	1247	1291	1335	1271	1269	1327	1490	1687	1867	1956
Nuckolls	768	753	788	829	858	887	900	899	939	1055	1195	1322	1648
Otoe	985	966	1010	1063	1100	1138	1498	1496	1564	1757	1988	2201	2182
Pawnee	676	663	693	729	755	781	845	844	882	991	1122	1241	1310
Perkins	525	515	539	566	586	606	641	640	669	752	851	942	977
Phelps	1392	1364	1428	1502	1555	1608	1479	1477	1544	1734	1963	2173	2053
Pierce	955	936	980	1030	1067	1103	1246	1244	1301	1461	1654	1830	1994
Platte	1589	1558	1630	1715	1775	1835	1700	1698	1774	1994	2256	2497	2275
Polk	1439	1411	1476	1553	1607	1662	1851	1849	1932	2171	2457	2719	2467
Red Willow	586	574	601	632	655	677	569	568	594	667	755	836	1054
Richardson	905	887	928	977	1011	1045	973	972	1016	1141	1291	1429	1898
Rock	292	286	300	315	326	337	319	319	333	374	423	469	510
Saline	986	967	1011	1064	1101	1139	1317	1315	1375	1544	1748	1935	2098
Sarpy	2344	2298	2405	2529	2618	2707	3567	3562	3723	4183	4735	5240	3355
Saunders	1554	1523	1594	1677	1736	1795	2023	2020	2112	2372	2685	2972	2672
Scotts Bluff	628	616	644	678	701	725	648	647	676	760	860	952	1089
Seward	1526	1496	1565	1647	1705	1763	1786	1784	1864	2094	2371	2624	2532
Sheridan	237	232	243	256	265	274	253	253	264	297	336	372	482
Sherman	521	511	534	562	582	602	621	620	648	728	824	912	1094
Sioux	263	258	270	284	294	304	277	277	289	325	368	407	477
Stanton	928	910	952	1001	1037	1072	1317	1315	1375	1544	1748	1935	1853
Thayer	980	961	1005	1057	1095	1132	1333	1331	1391	1563	1769	1958	1821
Thomas	162	159	166	175	181	187	205	205	214	240	272	301	341
Thurston	1050	1029	1077	1133	1173	1213	1335	1333	1393	1566	1772	1961	1969
Valley	694	680	712	749	775	802	674	673	704	790	895	990	1122
Washington	2114	2072	2169	2281	2361	2442	2252	2249	2351	2641	2989	3308	3069
Wayne	1014	994	1040	1094	1133	1171	1458	1456	1522	1710	1935	2142	2392
Webster	575	564	590	620	642	664	850	849	887	997	1128	1249	1262
Wheeler	342	335	351	369	382	395	525	524	548	616	697	771	701
York	1782	1747	1828	1923	1991	2058	2009	2006	2097	2356	2667	2951	2636

Table E.11 Nebraska 2007-2017 Knox to York Counties (\$/ac)

NEBRASKA	Census Data 2007	2008	2009	2010	2011	2012	Census Data 2012	2013	2014	2015	2016	2017	Census Data 2017
State Survey Data		1330	1320	1470	1840	2420		2800	3100	3010	2890	2820	
State Census Data	1159	-	-	-	-	-	2380	-	-	-	-	-	2754
Knox	1456	1671	1658	1847	2312	3040	2774	3264	3613	3508	3368	3287	3345
Lancaster	2535	2909	2887	3215	4025	5293	4580	5388	5966	5792	5561	5427	5598
Lincoln	834	957	950	1058	1324	1741	1436	1689	1870	1816	1744	1701	1674
Logan	511	586	582	648	811	1067	1136	1336	1480	1437	1379	1346	1200
Loup	449	515	511	569	713	938	741	872	965	937	900	878	1163
Madison	365	419	416	463	579	762	448	527	584	567	544	531	819
Mcpherson	2167	2487	2468	2748	3440	4525	4817	5667	6274	6092	5849	5708	5819
Merrick	1831	2101	2085	2322	2907	3823	3838	4515	4999	4854	4660	4548	5074
Morrill	646	741	736	819	1026	1349	923	1086	1202	1167	1121	1094	1145
Nance	1456	1671	1658	1847	2312	3040	3417	4020	4451	4322	4149	4049	4227
Nemaha	1956	2245	2228	2481	3105	4084	4068	4786	5299	5145	4940	4820	4548
Nuckolls	1648	1891	1877	2090	2616	3441	3773	4439	4914	4772	4582	4471	3588
Otoe	2182	2504	2485	2768	3464	4556	4295	5053	5594	5432	5215	5089	4957
Pawnee	1310	1503	1492	1662	2080	2735	2588	3045	3371	3273	3143	3066	3244
Perkins	977	1121	1113	1239	1551	2040	2271	2672	2958	2872	2758	2691	2140
Phelps	2053	2356	2338	2604	3259	4287	4504	5299	5867	5696	5469	5337	5114
Pierce	1994	2288	2271	2529	3166	4163	4324	5087	5632	5469	5251	5123	4872
Platte	2275	2611	2591	2885	3612	4750	5088	5986	6627	6435	6178	6029	6328
Polk	2467	2831	2810	3129	3917	5151	5943	6992	7741	7516	7217	7042	5911
Red Willow	1054	1210	1200	1337	1673	2201	1594	1875	2076	2016	1936	1889	1947
Richardson	1898	2178	2162	2407	3013	3963	3812	4485	4965	4821	4629	4517	4267
Rock	510	585	581	647	810	1065	1078	1268	1404	1363	1309	1277	1138
Saline	2098	2408	2389	2661	3331	4381	4818	5668	6276	6093	5850	5709	4716
Sarpy	3355	3850	3821	4255	5326	7005	5959	7011	7762	7536	7236	7061	7439
Saunders	2672	3066	3043	3389	4242	5579	5268	6198	6862	6662	6397	6242	5641
Scotts Bluff	1089	1250	1240	1381	1729	2274	1867	2196	2432	2361	2267	2212	2038
Seward	2532	2906	2884	3211	4020	5287	5031	5919	6553	6363	6109	5961	5710
Sheridan	482	553	549	611	765	1006	693	815	903	876	842	821	970
Sherman	1094	1255	1246	1388	1737	2284	2369	2787	3086	2996	2877	2807	2676
Sioux	477	547	543	605	757	996	573	674	746	725	696	679	901
Stanton	1853	2126	2110	2350	2942	3869	4375	5147	5699	5533	5313	5184	4991
Thayer	1821	2090	2074	2310	2891	3802	4123	4851	5370	5214	5007	4885	3920
Thomas	341	391	388	433	541	712	503	592	655	636	611	596	780
Thurston	1969	2260	2243	2497	3126	4111	5049	5940	6576	6386	6131	5982	4827
Valley	1122	1288	1278	1423	1781	2343	2209	2599	2877	2794	2682	2617	2878
Washington	3069	3522	3495	3893	4872	6408	6024	7087	7846	7619	7315	7138	6519
Wayne	2392	2745	2724	3034	3797	4995	4373	5145	5696	5531	5310	5181	5512
Webster	1262	1448	1437	1601	2004	2635	2830	3329	3686	3579	3436	3353	2739
Wheeler	701	804	798	889	1113	1464	1225	1441	1596	1549	1488	1451	1528
York	2636	3025	3002	3343	4185	5504	5631	6625	7334	7122	6838	6672	6878

Table E.12 Nebraska 2017-2022 Knox to York Counties (\$/ac)

NEBRASKA	Census Data						Census Data
	2017	2018	2019	2020	2021	2022	2022
State Survey Data		2750	2790	2670	2910	3450	
State Census Data	2754	-	-	-	-	-	3437
Knox	3345	3340	3389	3243	3534	4190	5161
Lancaster	5598	5590	5671	5427	5915	7013	6481
Lincoln	1674	1672	1696	1623	1769	2097	2340
Logan	1200	1198	1216	1163	1268	1503	1355
Loup	1163	1161	1178	1128	1229	1457	1567
Madison	819	818	830	794	865	1026	1006
Mcpherson	5819	5811	5895	5642	6149	7290	7527
Merrick	5074	5067	5140	4919	5361	6356	5476
Morrill	1145	1143	1160	1110	1210	1434	1682
Nance	4227	4221	4282	4098	4466	5295	4829
Nemaha	4548	4541	4607	4409	4806	5697	6778
Nuckolls	3588	3583	3635	3479	3791	4495	5127
Otoe	4957	4950	5022	4806	5238	6210	5550
Pawnee	3244	3239	3286	3145	3428	4064	4499
Perkins	2140	2137	2168	2075	2261	2681	2196
Phelps	5114	5107	5181	4958	5404	6406	5776
Pierce	4872	4865	4936	4723	5148	6103	7080
Platte	6328	6319	6411	6135	6686	7927	7054
Polk	5911	5902	5988	5731	6246	7405	7708
Red Willow	1947	1944	1972	1888	2057	2439	2366
Richardson	4267	4261	4323	4137	4509	5345	5087
Rock	1138	1136	1153	1103	1202	1426	1482
Saline	4716	4709	4778	4572	4983	5908	5669
Sarpy	7439	7428	7536	7212	7860	9319	7646
Saunders	5641	5633	5715	5469	5961	7067	7483
Scotts Bluff	2038	2035	2065	1976	2153	2553	2573
Seward	5710	5702	5785	5536	6033	7153	7516
Sheridan	970	969	983	940	1025	1215	1394
Sherman	2676	2672	2711	2594	2828	3352	3905
Sioux	901	900	913	874	952	1129	1283
Stanton	4991	4984	5056	4839	5274	6252	7551
Thayer	3920	3914	3971	3800	4142	4911	6039
Thomas	780	779	790	756	824	977	1065
Thurston	4827	4820	4890	4680	5100	6047	7255
Valley	2878	2874	2916	2790	3041	3605	3037
Washington	6519	6510	6604	6320	6888	8167	7365
Wayne	5512	5504	5584	5344	5824	6905	7558
Webster	2739	2735	2775	2655	2894	3431	4213
Wheeler	1528	1526	1548	1481	1615	1914	2116
York	6878	6868	6968	6668	7268	8616	7906

Table F.1 t-Test: Paired Two Sample for Means of Nebraska Calculated and Census Values

<i>Nebraska 1974</i>	<i>Calculated</i>	<i>Census</i>
Mean	308.473118	354.8172
Variance	38859.4015	46470.738
Observations	93	93
Pearson Correlation	0.98368818	
Hypothesized Mean Difference	0	
df	92	
t Stat	-10.756104	
P(T<=t) one-tail	2.9789E-18	
t Critical one-tail	1.6615854	
P(T<=t) two-tail	5.9577E-18	
t Critical two-tail	1.98608632	

<i>Nebraska 1978</i>	<i>Calculated</i>	<i>Census</i>
Mean	518.385419	651.46237
Variance	99191.803	140697.21
Observations	93	93
Pearson Correlation	0.97137162	
Hypothesized Mean Difference	0	
df	92	
t Stat	-12.595189	
P(T<=t) one-tail	4.9265E-22	
t Critical one-tail	1.6615854	
P(T<=t) two-tail	9.8529E-22	
t Critical two-tail	1.98608632	

<i>Nebraska 1982</i>	<i>Calculated</i>	<i>Census</i>
Mean	905.842908	852.69892
Variance	272027.363	212563.58
Observations	93	93
Pearson Correlation	0.97246646	
Hypothesized Mean Difference	0	
df	92	
t Stat	3.94186985	
P(T<=t) one-tail	7.8739E-05	
t Critical one-tail	1.6615854	
P(T<=t) two-tail	0.00015748	
t Critical two-tail	1.98608632	

<i>Nebraska 1987</i>	<i>Calculated</i>	<i>Census</i>
Mean	486.561441	544.07527
Variance	69210.6308	72051.657
Observations	93	93
Pearson Correlation	0.97646791	
Hypothesized Mean Difference	0	
df	92	
t Stat	-9.5797793	
P(T<=t) one-tail	8.7393E-16	
t Critical one-tail	1.6615854	
P(T<=t) two-tail	1.7479E-15	
t Critical two-tail	1.98608632	

<i>Nebraska 1992</i>	<i>Calculated</i>	<i>Census</i>
Mean	615.50747	648.16129
Variance	92213.1082	144130.05
Observations	93	93
Pearson Correlation	0.97649575	
Hypothesized Mean Difference	0	
df	92	
t Stat	-2.9765918	
P(T<=t) one-tail	0.0018622	
t Critical one-tail	1.6615854	
P(T<=t) two-tail	0.00372441	
t Critical two-tail	1.98608632	

<i>Nebraska 1997</i>	<i>Calculated</i>	<i>Census</i>
Mean	781.828794	832.13978
Variance	209706.397	264779.17
Observations	93	93
Pearson Correlation	0.94353847	
Hypothesized Mean Difference	0	
df	92	
t Stat	-2.809825	
P(T<=t) one-tail	0.00302761	
t Critical one-tail	1.6615854	
P(T<=t) two-tail	0.00605523	
t Critical two-tail	1.98608632	

Table F.2 t-Test: Paired Two Sample for Means of Nebraska Calculated and Census Values

<i>Nebraska 2002</i>	<i>Calculated</i>	<i>Census</i>
Mean	961.134098	1005.9355
Variance	353231.321	490550.8
Observations	93	93
Pearson Correlation	0.96386373	
Hypothesized Mean Difference	0	
df	92	
t Stat	-2.1251118	
P(T<=t) one-tail	0.01812871	
t Critical one-tail	1.6615854	
P(T<=t) two-tail	0.03625742	
t Critical two-tail	1.98608632	

<i>Nebraska 2012</i>	<i>Calculated</i>	<i>Census</i>
Mean	3056.37062	3042.8602
Variance	2874904.73	3411090
Observations	93	93
Pearson Correlation	0.96989926	
Hypothesized Mean Difference	0	
df	92	
t Stat	0.28335007	
P(T<=t) one-tail	0.38877256	
t Critical one-tail	1.6615854	
P(T<=t) two-tail	0.77754513	
t Critical two-tail	1.98608632	

<i>Nebraska 2022</i>	<i>Calculated</i>	<i>Census</i>
Mean	4313.38229	4408.8387
Variance	6208378.03	5992207.7
Observations	93	93
Pearson Correlation	0.97703355	
Hypothesized Mean Difference	0	
df	92	
t Stat	-1.7332611	
P(T<=t) one-tail	0.04319983	
t Critical one-tail	1.6615854	
P(T<=t) two-tail	0.08639966	
t Critical two-tail	1.98608632	

<i>Nebraska 2007</i>	<i>Calculated</i>	<i>Census</i>
Mean	1477.79182	1463.7742
Variance	1058693.5	659416.18
Observations	93	93
Pearson Correlation	0.95967869	
Hypothesized Mean Difference	0	
df	92	
t Stat	0.39963912	
P(T<=t) one-tail	0.34517432	
t Critical one-tail	1.6615854	
P(T<=t) two-tail	0.69034863	
t Critical two-tail	1.98608632	

<i>Nebraska 2017</i>	<i>Calculated</i>	<i>Census</i>
Mean	3605.4058	3443.2043
Variance	4788918.87	3956105.2
Observations	93	93
Pearson Correlation	0.98015592	
Hypothesized Mean Difference	0	
df	92	
t Stat	3.39330455	
P(T<=t) one-tail	0.00051005	
t Critical one-tail	1.6615854	
P(T<=t) two-tail	0.0010201	
t Critical two-tail	1.98608632	