

Nebraska Legislative Planning Committee 2015 Report *Policy Briefs*

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Nebraska Legislative Planning Committee 2015 Report

Policy Briefs

Nebraska's Energy Future: Considerations and Challenges

Jonathan Benjamin-Alvarado, Ph.D., Assistant Vice Chancellor for Student Affairs, University of Nebraska at Omaha

Nebraska's Rural Population: Growth and Decline by Age

Randy Cantrell, Ph.D., Rural Futures Institute at the University of Nebraska, University of Nebraska – Lincoln

Small Business and Entrepreneurship in Nebraska

Robert E. Bernier, Ph.D., Assistant Dean, College of Business Administration, and Director, Nebraska Business Development Center, University of Nebraska at Omaha

Considerations for K-12 Finance Reform in Nebraska

Craig S. Maher, Ph.D., Director, Nebraska State and Local Finance Lab, School of Public Administration University of Nebraska at Omaha

Nebraska Legislative Planning Committee 2015 Report

Policy Briefs

Overview

The Nebraska Legislature's Planning Committee was created in 2009 with the passage of LB 653 in order to help establish a process of long-term state planning with the Nebraska Legislature. The committee was created to assist state government in identifying emerging trends, assets and challenges of the state and the long-term implications of the decisions made by the Nebraska Legislature.

Efforts during the first two years of the committee focused on the development of a database. The goals and benchmarks included in the database were developed and approved by the Legislature's Planning Committee to present a common-sense and data-driven assessment of key areas important to Nebraskans' quality of life. This database was a joint initiative with the Nebraska Legislature's Planning Committee and the University of Nebraska at Omaha's College of Public Affairs and Community Service. The database was presented in a report that consisted of the data and summaries of the data for each of the nine categories of benchmarks established by the Planning Committee. Each year, the Planning Committee is in charge of updating the data for all benchmarks in each category. It is hoped that this will be of instrumental assistance to Legislators and staff as they craft and debate legislation each Session.

Beginning in 2012 the Planning Committee's report included Policy Briefs. These Policy Briefs address some of the issues that were identified when reviewing the indicators presented in the database. The purpose of the Policy Briefs is to identify and explore in greater depth issues identified by the evidence presented. The Policy Briefs do not recommend specific policies but rather describe options and considerations that relate to the issues.

The four Policy Briefs contained in this report focus on a variety of areas: the first one focuses on Nebraska's energy future; another brief looks at changes in Nebraska's rural population; a third considers small business and entrepreneurship in Nebraska; and the final brief addresses K-12 finance reform.

Nebraska's Energy Future: Considerations and Challenges

In this brief Jonathon Benjamin-Alvarado points out that in the next five years, Nebraska's elected officials and utility directors will be compelled to address controversial issues such as global warming, environmental sustainability or America's dependence on imported oil as they relate to the evolving pollution standards and the composition of Nebraska's energy portfolio. His brief contributes to a broader understanding of these issues by presenting policymakers and elected officials with knowledge and degrees of latitude that they can use in their decision-making.

He indicates that, at present, the state of Nebraska relies on coal-generation for almost half of its electricity generation capacity due largely to energy generation technology that is both cost-efficient and readily accessible. In contrast, Nebraska lags last in the region with only 6% of its energy coming from wind power but has considerable wind energy potential. After discussing some of the environmental advantages of wind power, he explores the implications of the new EPA standards on CO² emissions for coal-generated electricity facilities in Nebraska promulgated in 2015 by the Obama Administration.

The brief explores two plausible future energy scenarios for the state of Nebraska. These scenarios highlight the limit that electricity produced through coal generation has given the new EPA standards. Dr. Benjamin-Alvarado concludes by saying "this is a colossal challenge that could be viewed also as an opportunity, as it opens the range of energy alternatives that could be both economically beneficial and environmentally sustainable."

Nebraska's Rural Population: Growth and Decline by Age

This policy brief by Randy Cantrell notes that declining rural populations have concerned Nebraska policymakers for decades and that despite an array of state and local efforts that decline has continued for most non-metropolitan portions of the state. He reports that the smaller and more rural a community was, the more likely it was to see population declines.

He points out that population losses in rural areas were fueled originally by technological changes in agriculture that both increased the size of Nebraska farms and reduced the need for labor on the farm. He suggests that understanding population loss is more complex than simply assuming that a lack of economic opportunity is emptying out the rural population. The movement of rural people is, in fact, not one-directional. People also move in to even very rural

places. Even though young rural Nebraskans will indeed continue to move away from their childhood homes, not all young people leave rural places. Therefore, he implies investments in continuing education and skills training might prove valuable in matching those individuals with local labor force requirement.

He concludes by suggesting that policymakers concerned about population changes in rural areas should pay attention to the details in the data and not just to the aggregate results. According to Dr. Cantrell, individual communities, even very small ones, have demonstrated the ability to attract new residents.

Small Business and Entrepreneurship in Nebraska

Robert Bernier examines small business and entrepreneurship in Nebraska in this policy brief. He writes that small businesses are a more important source for private non-farm employment in less densely populated states like Nebraska than in more densely populated states or the United States as a whole. Even though about three-fourths of Nebraska's small businesses have no employees, more than one-third of Nebraska's working age population (34.3%) are employed by small businesses.

This brief also presents results from a recent study of 16 Nebraska communities that provides a perspective on small businesses in Nebraska. The study included interviews with small business owners and community economic development leaders. According to Bernier, Nebraska communities that are successful in encouraging small business development appear to devote attention to small business development rather than business recruitment, tend to depend less on absentee ownership of commercial real estate, and tend to have at least one locally owned bank. Additionally, successful communities do not need to be located next to the Interstate.

Dr. Bernier concludes with several recommendations: encourage local real estate opportunism, encourage school districts and community colleges to include small business owners in teaching and mentoring roles, encourage all forms of small business ownership, and encourage capacity development of small businesses in primary industries—especially manufacturing.

Considerations for K-12 Finance Reform in Nebraska

The final brief in this report is by Craig Maher. As he states in his introduction, this policy brief focuses on K-12 education finance in Nebraska from three perspectives: constitutional requirements, funding, and changing demographics.

He notes that states are largely responsible for K-12 education, and the funding of schools is typically guided by state constitutional requirements. In comparing Nebraska's constitutional requirements to other states, he finds that Nebraska's State Legislature has much more discretion in the manner that it chooses to fund K-12 education, and that it is unlikely that a change in the school finance system would fail in the courts.

Looking at revenue, he indicates that Nebraska relies more heavily on local aids, primarily property taxes, to fund K-12 education than neighboring states and the U.S. average. In 2011, K-12 education funding in Nebraska consisted of: 53.5% local sources (national average was 43.4%); 30.3% state sources (national average was 44.1%); and 16.2% federal sources (national average was 12.5%). He suggests from a financial management perspective, the benefits of Nebraska's school finance revenue structure are local control and stability.

Finally, Dr. Maher reviews Nebraska's changing demographics. He concludes that the future of the K-12 student population is slow and steady growth, but the racial and ethnic composition will be changing. Moreover the "taxpaying" population will be outpaced by those needing services.

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A Report to Nebraska Legislature

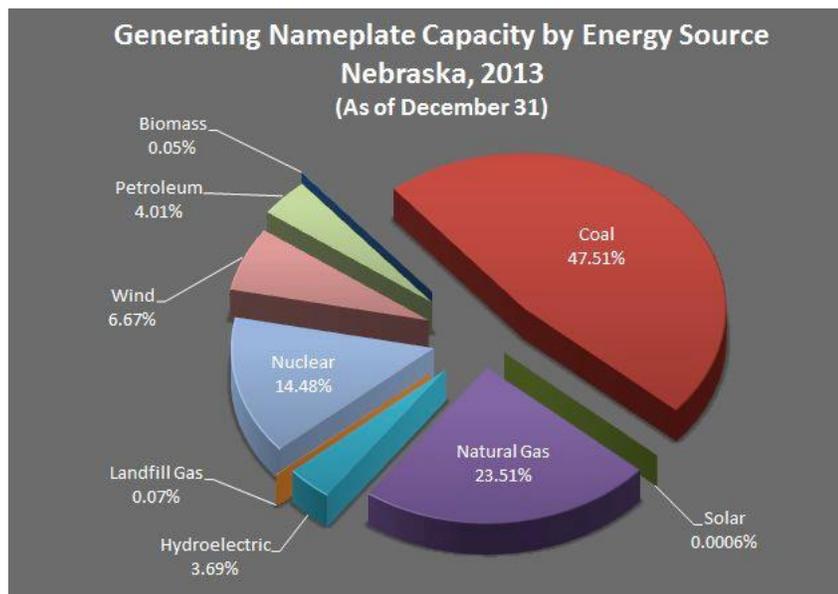
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December 2015

1.0 Introduction

Regardless of one's perspective on issues as controversial as global warming, environmental sustainability, or America's dependence on imported oil, over the course of the next five years Nebraska's elected officials and utility directors will be compelled to address elements of these issues as they relate to the evolving pollution standards and the composition of Nebraska's energy portfolio. The purpose of this report is to offer a contribution to a broader understanding of the issues at play in a manner that will present policymakers and elected officials with knowledge and degrees of latitude sufficient enough to craft meaningful responses to new federal pollution standards and their impact on Nebraska's energy generation portfolio.

This report consists of three sections. The first section provides an overview of the State of Nebraska's energy portfolio with extensive attention paid to the wind energy sector in comparison with the wind energy portfolios of other states in the region including Iowa, Kansas, South Dakota, and Minnesota. The areas of specific comparison are current wind generation totals, installed wind capacity in these states, the wind generation potential, wind generation capacity currently under construction, and the amounts of capital investment in wind generation. The next section explores the implications of the new EPA standards on CO² emissions for coal-generated electricity facilities in Nebraska promulgated in 2015 by the Obama Administration. The report concludes with the exploration of two plausible future energy scenarios for the State of Nebraska. In this way, it is hoped that policymakers and elected officials can equally consider alternative modes of electricity generation into the 21st century that is both responsive and compliant with the federal pollution standards, environmental considerations, and economic stewardship of the state's energy portfolio.

Chart 1.0. Generating Nameplate Capacity by Energy Source, Nebraska, 2013



Source: Nebraska Energy Office, *Generating Units and Capacity in Nebraska by Energy Source*, June 18, 2015, <http://www.neo.ne.gov/statshtml/54.html>.

2.0 Nebraska's Energy Portfolio and the Consideration of Wind Energy as a Generation Alternative

At present the state of Nebraska relies on coal-generation for almost half of its electricity generation capacity. This owes largely to energy generation technology that is both cost-efficient and readily accessible. This is also bolstered by relatively stable prices for coal and low transportation costs owing to Nebraska's close proximity to major coal fields. It allows for Nebraska's utilities to deliver electricity to its clients in both rural and urban settings that is both reliable and relatively inexpensive. But because of recent federal policy changes the *status quo ante* has been called directly into question. Without passing any new legislation. President Barack Obama could leave office with the most aggressive, far-reaching environmental legacy of any occupant of the White House. "Yet it is very possible that not a single major environmental law will have passed during his two terms in Washington. Instead, Mr. Obama has turned to the vast reach of the Clean Air Act of 1970, which some legal experts call the most powerful environmental law in the world."¹ Moreover, elements of the new regulations have direct implications for Nebraska lawmakers that will mandate a response in the short-term and

¹ Coral Davenport, "Obama Builds Environmental Legacy with 1970 Law." *New York Times*, (November 26, 2104). Accessed via the internet: <http://www.nytimes.com/Obama Builds Environmental Legacy with 1970 Law - The New York Times.html>.

could end up costing utility customers billions of dollars. “Mr. Obama is using the authority of the act passed at the birth of the environmental movement to issue a series of landmark regulations on air pollution, from soot to smog, to mercury and planet-warming carbon dioxide.”² Because of Nebraska’s heavy reliance on coal-generated electricity and the demand that the state must reduce carbon emissions from coal by 40% by 2030 there is an unavoidable and daunting energy challenge facing Nebraska today.

A partial response to the challenge is to explore the possibility of shifting resources within the state to the development of wind generation capacity. Wind energy production, while initially costly, is considered a much more environmentally sustainable form of energy generation. This is not to negate the raft of other energy generation technologies presently being exploited or those whose development might produce even lower cost and environmentally friendly production capabilities. This report will focus only on wind energy largely because Nebraska has been called the “Saudi Arabia of wind” and because of the growing development of wind energy resources in the state.

2.1 A Regional Wind Energy Comparison

This section offers brief comparisons with other states in the region as they relate to wind energy including the following: installed wind generation capacity; total potential wind capacity; current wind generation capacity; wind generation capacity under construction; and total capital investment in the wind energy sector. As a quick drive across central and northern Iowa reveals, Nebraska’s installed wind generation capacity is dwarfed by that of Iowa’s. At present, Iowa’s installed capacity is over 5,500 megawatts (MW), Nebraska’s by comparison is barely over 500 MW. Even if Nebraska were to embark on an aggressive wind energy expansion, Iowa’s campaign over time to expand wind generation capacity will stand as the national leader for the foreseeable future. In terms of the percentage of wind energy of the total energy output from across the Midwest, South Dakota and Kansas are the regional leaders with 24% and 20% respectively. Nebraska lags last in the region with only 6% of its energy coming from wind power. When we consider the wind energy potential, there is a different story to tell. Nebraska is only surpassed by Kansas in total wind energy potential where it is estimated that Nebraska could conceivably produce up to 900 (k/mw) from wind energy sources. And yet, the less than 100 MW of potential wind energy clearly demonstrates that wind continues to be a grossly

² Ibid.

underutilized source of potential for the state. Nowhere is this more dramatic than when we consider the potential for capital investment in the sector. In Iowa alone there has been in excess of \$18 billion in capital investment in wind energy, with the lion's share coming from sources outside of the state. By comparison, the amounts of capital investment going to Kansas and Minnesota (\$8 billion each) are four times the amount of capital investment in wind energy in Nebraska (\$2 billion in 2014).

From the purely economic assessment of the potential of wind energy generation it is abundantly clear that Nebraska has plenty of room for growth in terms of energy production but with significant inputs of capital investment into the state as well. The next section considers the potential environmental benefits that would be immediately available with shifts in energy generation capacity to that of wind energy.

2.1.1 Environmental Benefits

Generating wind power creates no emissions and uses virtually no water. When compared to other energy generation sources, the process of generating wind power uses very little if any water and *de facto* produces no carbon emissions. This is a paramount consideration given the new EPA standards when compared to all other sources of energy generation, but especially when compared to coal energy generation.

Furthermore, in a water-constrained state such as Nebraska, the annual state water consumption savings are significant. With just the limited exploitation of wind energy in the state's portfolio the environmental benefits in 2014 were significant:

- State water consumption savings: 392 million gallons.
- Equivalent number of water bottles saved: 4,181,000,000.
- State carbon dioxide emissions avoided: 1.1 million metric tons.
- Equivalent number of cars taken off the road: 188,713. There are presently 2.2 million vehicles registered in the state.

3.0 Exploring an Energy Future Scenarios Matrix

Given the significance of the potential of wind energy generation and the daunting challenges of new federal energy emissions standards, it is worthwhile to consider what the future of energy might be given this mix of influences. The policy and intelligence communities make wide use of *future scenario mapping* as a means of assessing the plausible outcomes of critical questions as they might play out under certain conditions. Because we already know the potential of wind energy in Nebraska and the limitations placed on it because of new federal standards, it is a worthwhile exercise in our attempts to ascertain what the impact these changes might produce in the near term. What we do not know is the impact of many of the factors outside of our control if we are to have a clearer picture on which to base our scenarios. To do so, we must first identify the critical factors and driving forces that will influence and inform our analysis and assist us in determining which scenarios are the most beneficial to pursue or to avoid given our priorities.

3.1 Critical Factors and Driving Forces in Energy

In creating a future scenarios matrix or map we must be keenly aware of the critical factors and driving forces that contextualize and shape the environment in which we are operating and allow us to accelerate or slow the processes of policy change and response as needed. Below is an initial listing of the factors and forces that inform our assessment of the future of wind energy and the response to new regulatory standards in carbon emissions. The listing below is by no means comprehensive but it is illustrative of the most important factors and forces we can account for at this time.

- The collapse of the “fracking” boom – In large part, because of the drop in worldwide oil prices, the cost of fracking relative to the price of oil has rendered this process of petroleum extraction untenable. It costs more to produce than the market will pay.
- Global scope of petro-fuel prices – Oil and its derivative petro-fuels are global commodities meaning that the scale and price are set to global considerations and not to local ones. This is why fracking operations in the Bakken Fields of North Dakota and across segments of North America have ceased to operate. Fracking and similar technologies are price sensitive to the cost of extraction when subjected to global oil prices. While oil was being traded at \$80 and \$90 per barrel the boom was in full swing. With the price consistently under \$50 per barrel in 2015, it made little sense to producers

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to continue drilling and subsequently thousands of jobs have evaporated, and as quickly as it started, it has stopped.

- The specter of Fukushima – Nebraska's nuclear power generation stations have been the source of significant speculation as to their integrity and safety given flooding, low operating capacity, and poor inspection regimes. As a stable source of energy the results of the recent past has been spotty and less than reliable. Given the public's already wary attitude toward nuclear power and then the catastrophic impact of the tsunami at the Fukushima Nuclear Station in Japan, the timing for expansion of nuclear power generation is poor. It should be noted that there has been little public discussion of what Nebraska utilities will do when the life-cycles of their nuclear energy reactors reach their end of life.
- Cost tolerance – There has been some suggestion that many of the coal-generation facilities can be retro-fitted with scrubbers to reduce the amount of carbon emissions they produce. Studies suggest that the cost of such retro-fitting would be borne almost exclusively by utility customers and the result would only minimally reduce emissions at levels still far too high to satisfy the federal standards. There would be questions legitimately challenging whether there could ever be a responsible return on investment for the multi-million dollar costs of retro-fitting.
- Economic sustainability – An oft-heard complaint by utility customers is that of consumer price variability especially in less-energy-efficient older homes, for customers with little or no extra cash on hand when fuel prices spike, or during extreme weather seasons. These are constants, and it is highly questionable that customers alone could support dramatic price fluctuations or increased costs owing to investment costs in the form of bonds borne by the utility alone.
- Government regulations – The requirement of Nebraska to reduce its carbon emissions from coal energy generation by 40% by 2030 seems almost impossible unless it begins taking these facilities off-line today. It raises the questions of what will Nebraska turn to and who will pay for the change.
- Environmental considerations – The 40% carbon emissions reduction standard is a necessary step in the reduction of greenhouse gases and may help to stave off the worst implications of climate change.

- Investment opportunities – The shift to wind energy will draw investors from both inside and outside of Nebraska. Production, construction, and transportation companies will be drawn to being part of an industry that has the potential of growing twenty times over its current value and will significantly increase the diversity of Nebraska's energy portfolio while decreasing its carbon emissions. It would also draw in the latest innovations in wind energy technology, including but not limited to the newer oscillating turbine technology that addresses the concern of the harm to birds from the present and widely-used blade generation technology.

From these important elements two issues emerge as critical factors and driving forces in state energy policy moving forward:

- **Cost tolerance** – How much in operational costs will energy producers be willing to tolerate?
- **Economic sustainability** – At which point does the cost of operation become untenable and/or unsustainable?

3.1.1 Focal Question

As we develop our scenarios matrix, we have identified the two factors that will serve as the axes of our two-by-two matrix. Moreover, we are compelled to distill our concern into a simple yet essential question that will drive our inquiry. As such, our focal question is stated below.

- **How will the new EPA regulations impact coal-generated electricity in Nebraska over the next 15 years?**

The question is limited to a 15-year timeline because 2030 is the deadline for compliance with the new EPA standards. It should also be noted that new EPA standards for natural gas generation will be released within the next six months and we should anticipate that they will be no less onerous than those for coal generation are proving to be.

3.1.2 The impact of new EPA standards

To clarify the discussion, we articulate the direct impact of the new standards, Nebraska will be required to reduce its total output of CO² emissions by 40% by the year 2030, with a plan

submitted to the EPA by 2018. Nebraska relies on coal-generated electricity for nearly half (47.5%) of its total energy supply.

- This means we must cut carbon emissions from 49.9 million metric tons to approximately 30.0 million tons in a 12-year period.
- It will require a radical reconfiguration of Nebraska's energy portfolio whereby the total emissions generated by coal-generation facilities will have to be cut by more than half. How does Nebraska accomplish this in a manner that conforms to the new EPA standards while simultaneously transitioning to alternative energy sources or aggressively retro-fitting the facilities with scrubbers to reduce the emissions?
- There is no guarantee as to whether retro-fitting the coal-generation facilities are sufficient to meet the standards; or, more importantly to the utilities themselves, where the significant investment capital will come from.

3.1.3 Some basic assumptions

- By 2018, the Supreme Court will uphold the EPA regulations. It is commonly acknowledged that the Clean Air Act of 1970 is among the strictest and most enduring pieces of environmental legislation in the world. Up to this point, it has survived numerous legal challenges. In spite of the raft of current suits against the new EPA standards by a number of states, Nebraska included, this is little precedent to suggest that anything will come of the challenge. In recent court rulings, the Supreme Court has sided with the EPA on other environmental standards promulgated by executive action while tied to pre-existing law, as the EPA standards for carbon emissions are tied to the Clean Air Act of 1970.
- This will compel states to immediately respond to the requirements for instituting a plan that includes implementing a **Renewable Portfolio Standard (RPS)** which is a regulation that requires the increased production of energy from renewable energy sources, such as wind, solar, biomass, and geothermal. Another common name for this requirement is **Renewable Electricity Standard (RES)** at the federal level.
- **Presently Nebraska has neither an RPS nor a goal in place.**

- **Economic studies supports coal plant phase-outs over retrofits** - In March 2010 Natural Capitalism Solutions, an environmental advocacy group based in Longmont, Colorado, released a report that favored phasing out existing coal plants over retrofitting them with scrubber technology. The report titled, "Coal Plants in Transition: An Economic Case Study," provided a proof of concept for utilities to consider as they evaluate investments in new generation capacity and upgrades to existing facilities. "We are quickly entering a water- and carbon-constrained world, and we wanted to look at what options might be available to utility managers and other energy providers," said Paul Sheldon, a senior consultant at Natural Capitalism Solutions and the report's main author. "We believe that these findings represent a business approach for energy managers to consider as they are faced with difficult decisions regarding the future of their facilities. We've shown that this approach allows them to maintain reliability and still profit in their transition to 21st century energy technologies."³ Using the 35-year old, 2,250-megawatt Navajo Generating Station near Page, Arizona, as a case study, the group's analysis examined the costs and benefits of the plant's future. As with many aging power plants nationwide, Navajo is due for upgrades necessary for it to comply with the EPA's pollution and air quality regulations. The report notes that retrofits can entail substantial costs, running into the hundreds of millions of dollars. The report states that such facilities, in order to protect jobs and move in a more environmentally safe direction, will be more profitable by abandoning retrofit plans and instead embracing a full range of clean energy resources, including wind, photovoltaic and concentrated solar, geothermal, and biomass, combined with large-scale supply and demand-side efficiency measures.⁴

3.2 Scenarios Matrix

As can be seen in Figure 1, the two critical factors **Cost Tolerance** and **Economic Sustainability** for our focal question have been placed on the x and y axes of the matrix, respectively. I then assign characteristics of each of the quadrants of the matrix as they relate to not only the two critical factors, but also incorporate the other critical factors and driving forces from the original list. In Figure 2, I have assigned scenario titles that describe the policy environment in which policymakers and elected officials are operating. For instance, I give

³ "Transition from Coal to Clean Energy Makes Good Business Sense" Natural Capitalism Solutions Press Release, March 4, 2010.

⁴ "Coal Plants in Transition: An Economic Case Study" Natural Capitalism Solutions, March 2010.

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Scenario 3: Hard Left Rudder attributes akin to what one might hear in a trailer at the local theater. In a deep booming voice the narrator begins:

"This is a world where:

- *Nebraska has decided to not abide by the EPA regulations until compelled to do so.*
- *The cost of conversion and retro-fitting its coal-powered electricity generation facilities is an unfunded mandate.*
- *Costs will be devastating regardless of the path chosen.*
- *Consumer cost per kilowatt/hour will skyrocket.*
- *What will the Nebraskans do?"*

In this case, policymakers have selected an environment that allows for high cost tolerance and promotes environmental sustainability weakly. This is not to say this is the course that policymakers will select. What this descriptor does is to allow policymakers the ability to explore the implications of actions taken in that particular quadrant undertaken within that particular environment. Under this scenario, few if any of the choices are optimal and they would almost universally require reactive responses to the decisions undertaken in the scenario.

We can repeat the process with Scenario 1: Steady As She Goes:

"This is a world where:

- *Nebraska has laid out a renewable portfolio standard for all utilities.*
- *The state has promoted the development of renewable energy industries.*
- *Wind power is emerging as a realistic energy generation alternative for all utilities.*
- *Investment in alternative energy development has increased dramatically.*
- *Cost per kilowatt/hour drops as Nebraska cuts its coal consumption and subsequently its carbon emissions."*

In both cases, we have the ability to explore the implications of a particular path chosen to pursue. It is not definitive by any means but it allows us to explore the universe of possible and plausible courses of action that might be taken and to seriously consider the implication of those courses.

Figure 1. Scenarios Matrix

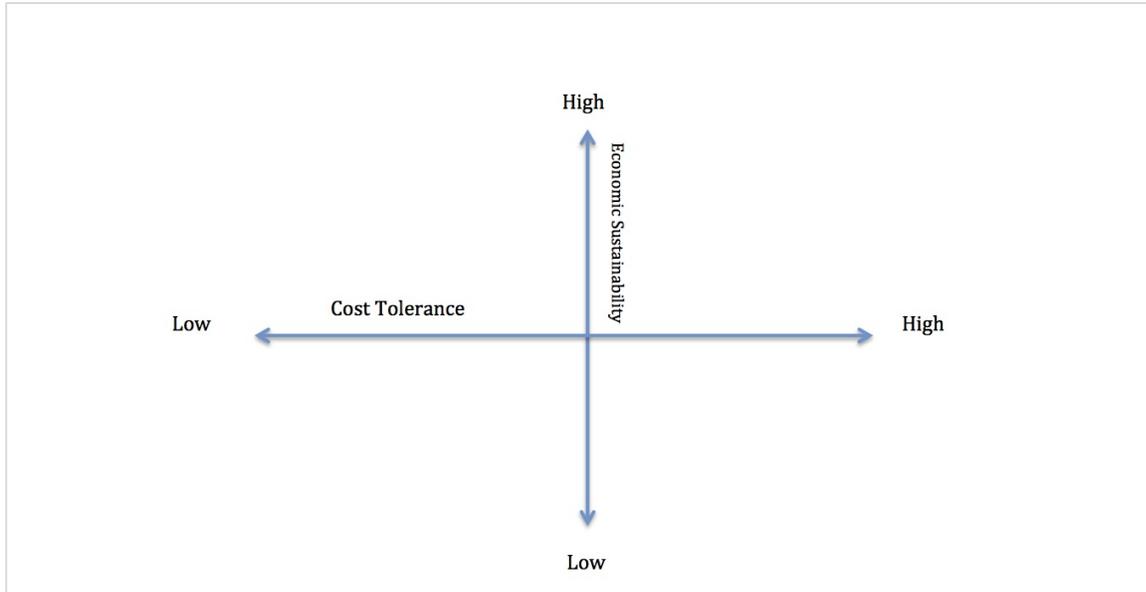
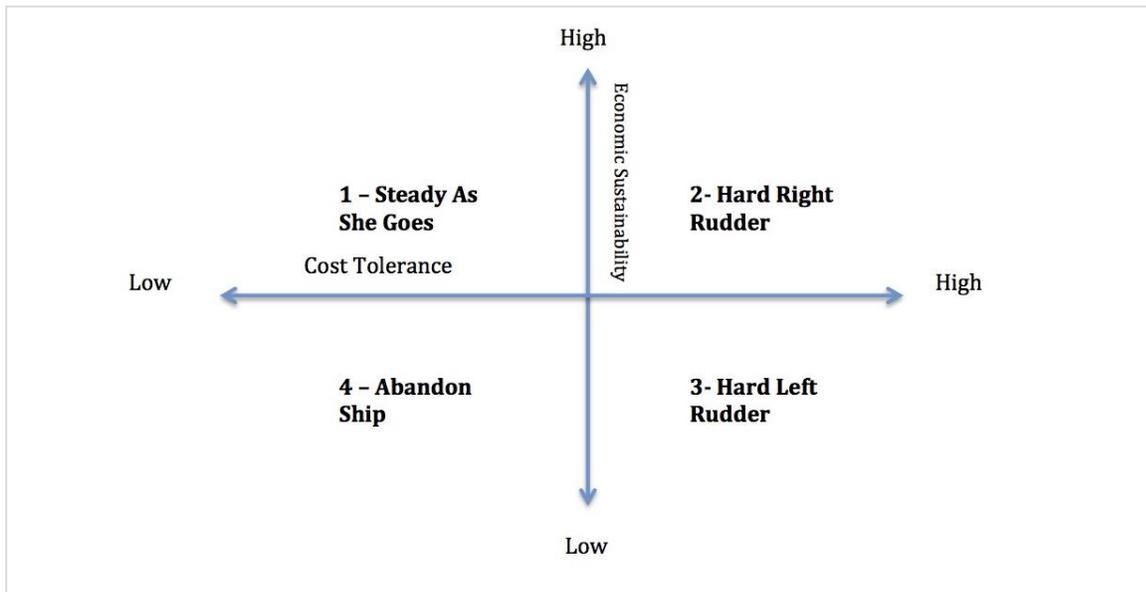


Figure 2. Scenarios Come To Life

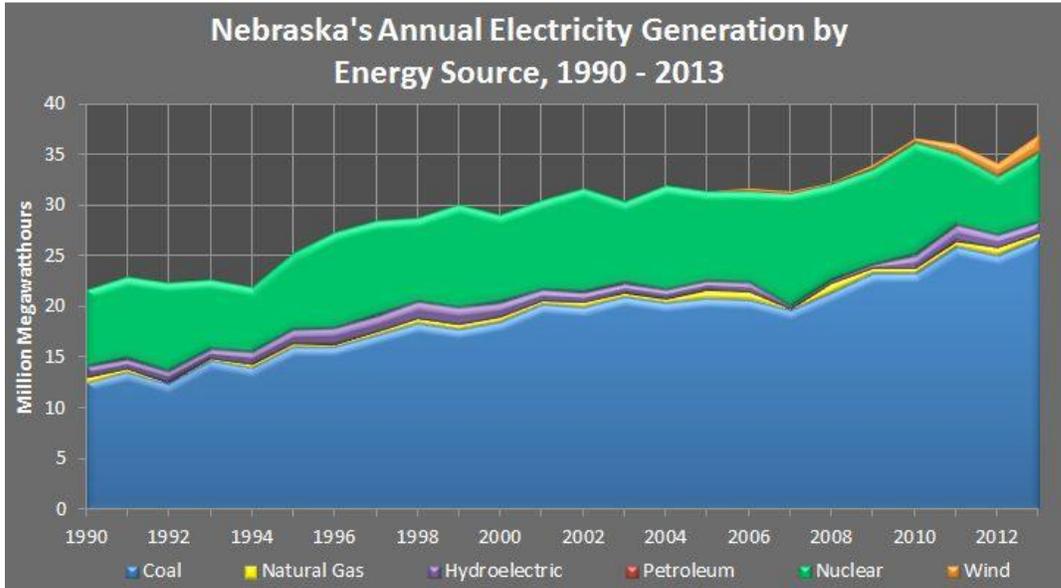


4.0 Conclusions

Nebraska's public utility policymakers, elected officials, and investment capitalists will be challenged by the requirements of the new EPA standards for carbon emissions produced by coal-generated electricity facilities across the state in the near term. In fact, it will be required to formulate a plan by 2018 and meet those standards by 2030. This report has been structured to allow elected officials to explore the range of alternatives to coal generation with a specific focus on wind energy. This in no way represents the entire universe of options available to policymakers, but it realistically highlights the limit that electricity produced through coal generation has given the new EPA standards. It suffices to say that this is a colossal challenge that could be viewed also as an opportunity, as it opens the range of energy alternatives that could be both economically beneficial and environmentally sustainable. It is by no means a comprehensive or exhaustive report but it does represent a serious commitment to providing a basis of understanding of issues that are complex and deeply embedded in Nebraska's well-being, and may require a radical response in terms of the degrees of change that it will incorporate.

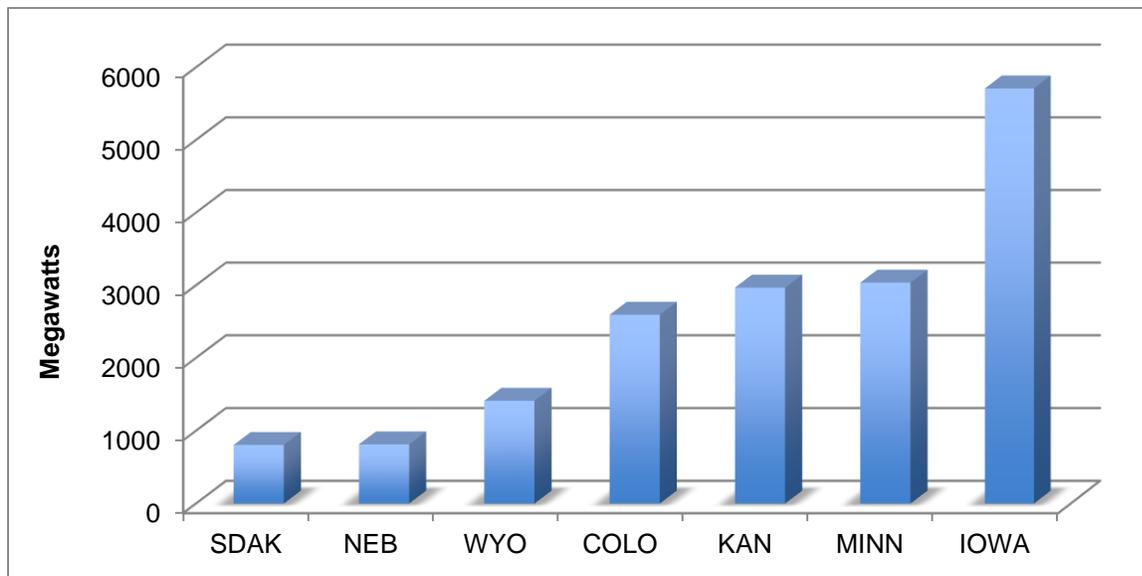
Appendix 1: Additional Charts

Chart 1: Nebraska's Energy Portfolio



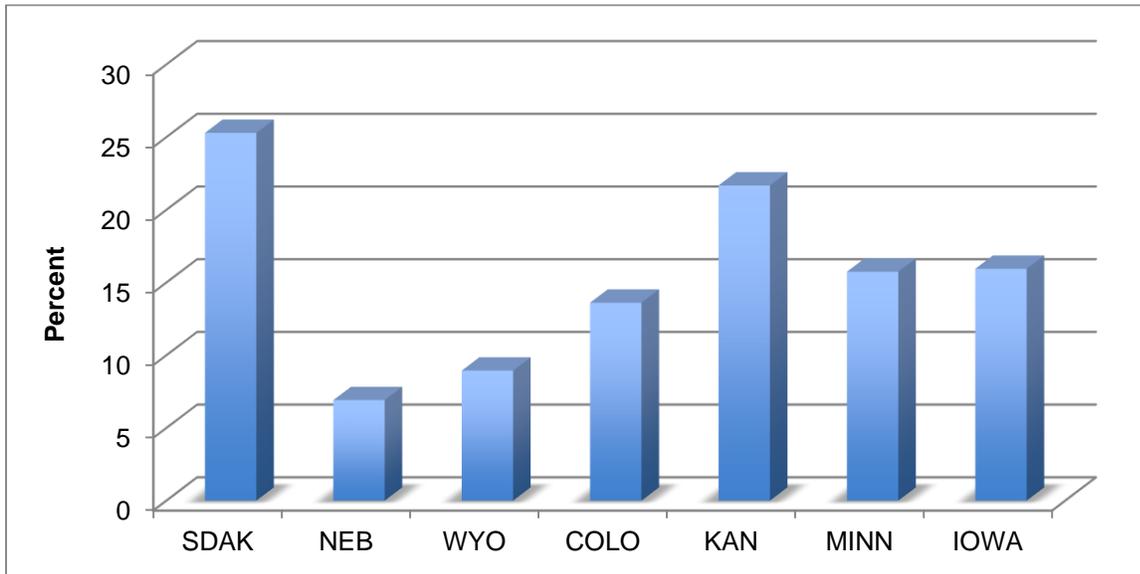
Source: Nebraska Energy Office, *Generating Units and Capacity in Nebraska by Energy Source*, June 18, 2015, <http://www.neo.ne.gov/statsthtml/54.html>.

Chart 2: Installed Wind Capacity



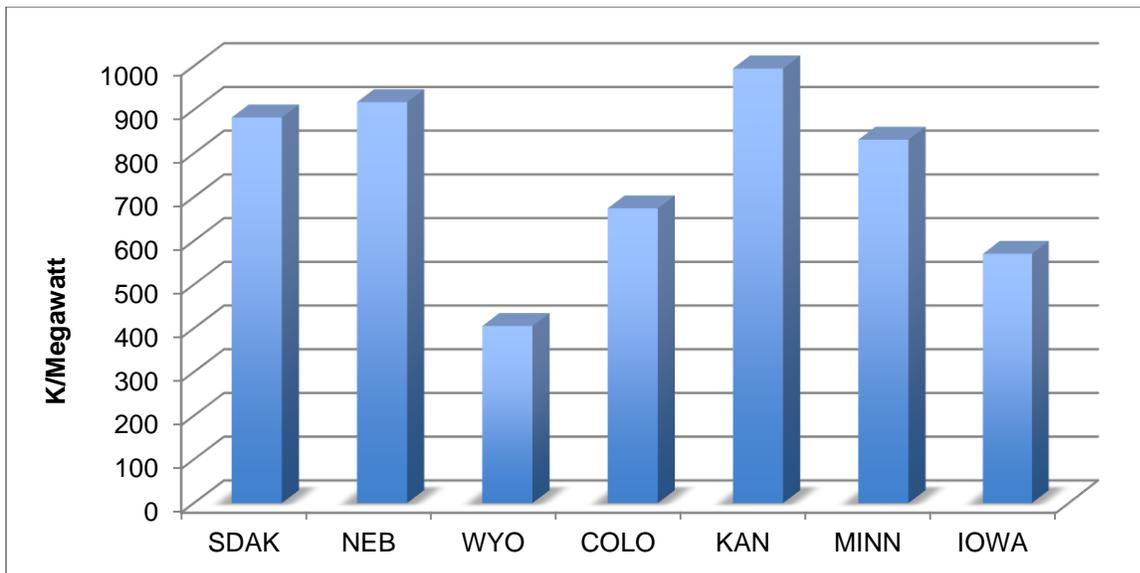
Source: American Wind Energy Association, *State Wind Energy Facts*, 2015. <http://www.awea.org/resources/statefactsheets.aspx?itemnumber=890>

Chart 3: Current Wind Generation



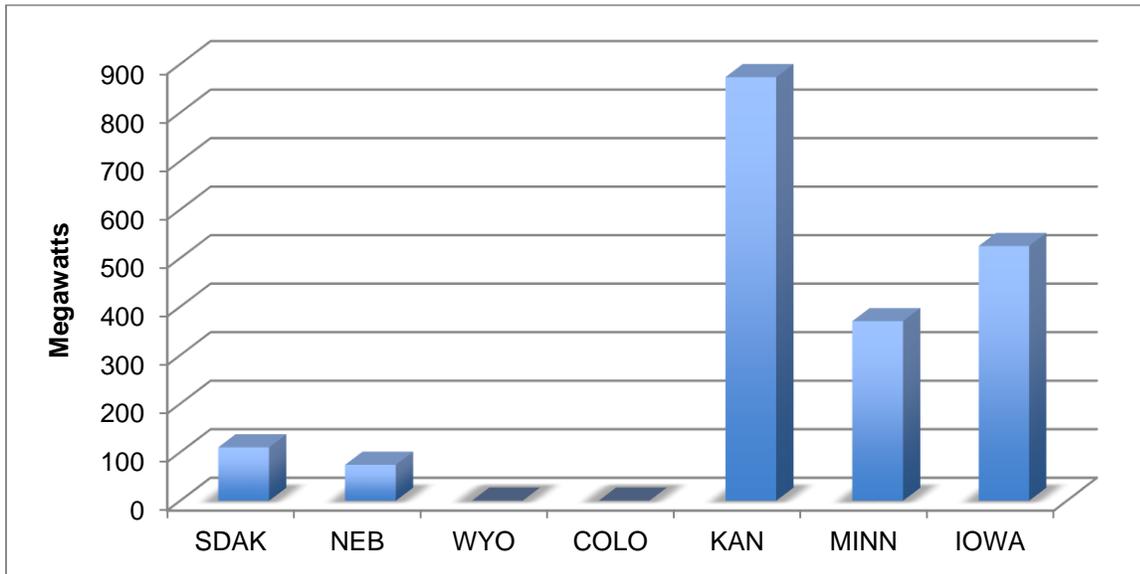
Source: American Wind Energy Association, State Wind Energy Facts, 2015.
<http://www.awea.org/resources/statefactsheets.aspx?itemnumber=890>

Chart 4: Wind Generation Potential



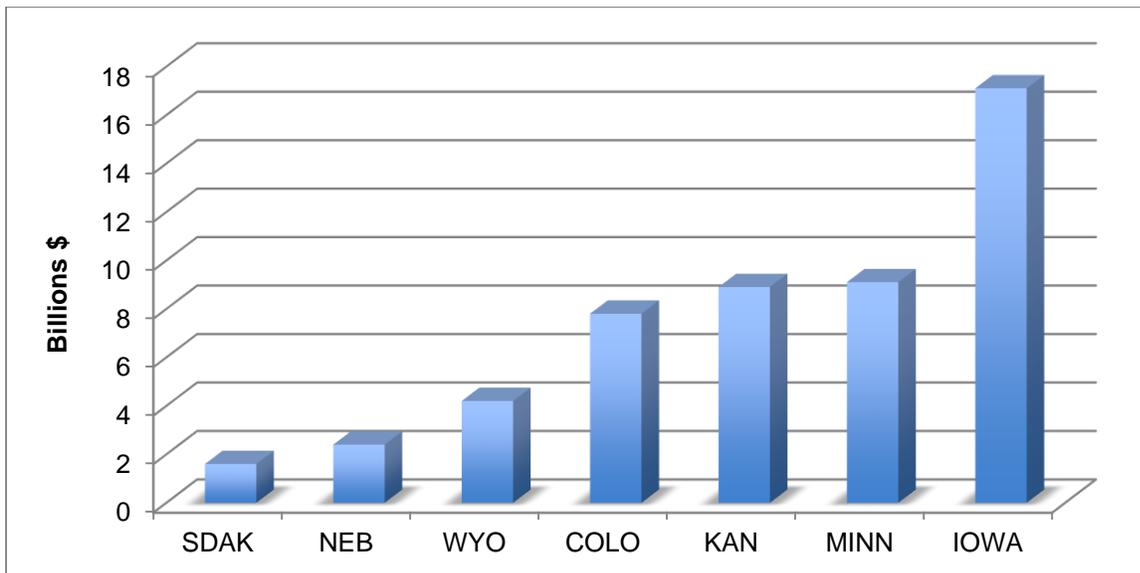
Source: American Wind Energy Association, State Wind Energy Facts, 2015.
<http://www.awea.org/resources/statefactsheets.aspx?itemnumber=890>

Chart 5: Wind Generation Capacity Under Construction



Source: American Wind Energy Association, State Wind Energy Facts, 2015.
<http://www.awea.org/resources/statefactsheets.aspx?itemnumber=890>

Chart 6: Capital Investment in Wind Generation



Source: American Wind Energy Association, State Wind Energy Facts, 2015.
<http://www.awea.org/resources/statefactsheets.aspx?itemnumber=890>

Nebraska's Rural Population: Growth and Decline by Age

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September 2015

Overview

Declining rural populations have concerned Nebraska policymakers for decades. Despite an array of state and local efforts to encourage economic development and demographic renewal in rural communities that decline has continued for most non-metropolitan portions of the state, with 69 of 93 counties recording a population loss between the last two census years (2000 and 2010). However, migration flows both ways in even very rural places, and newcomers can effect local places and economies as much as those who leave.

Population Change and Size of Place

Population decline clearly tends to be associated with the most rural parts of Nebraska. In order to better understand how rurality might affect migration outcomes, we have aggregated county level data from the decennial censuses of 200 and 2010 into five groups.

- Metropolitan counties as defined by the U.S. Office of Management and Budget (OMB) at the time of the 2010 Census.
- Micropolitan core counties, having a population center of 10,000 residents or larger.
- Small Trade Center counties, having a population center of 2,500 to 9,999 residents.
- Small Town counties, having no population center as large as 2,500 residents.
- Frontier counties, having no population center as large as 2,500 residents and a population density of less than 6 residents per square mile.

Figure 1 demonstrates the relationship between current population size and population change for Nebraska counties, with the majority of Metropolitan and Micropolitan core counties experiencing population growth between 2000 and 2010, while only 8 of the remaining 84 counties saw their populations increase during the same period. Note that these data were collected prior to Hall County and its labor-shed being classified as Metropolitan.

The same relationship is true for Nebraska's communities, as demonstrated in map form in Figure 2. Of the 32 communities with 5,000 or more residents in 2010, the majority (25)

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experienced population increases during the period 2000 to 2010. By comparison, of the 504 Nebraska communities with populations smaller than 1,000, only 118 (23%) saw their populations grow during the decade.

In general, the smaller and more rural a community was, the more likely it was to see population declines.

These changes have been occurring for decades, fueled originally by technological changes in agriculture that both increased the size of Nebraska farms and reduced the need for labor on the farm. As employment opportunities in rural places declined, rural residents, and especially young residents, looked to larger places for education, employment, and an array of consumer amenities that were either unavailable or in decline in their rural homes.

This long-term trend supports the view that rural Nebraska is analogous to a great hour-glass, from which the population slowly trickles out. One routinely hears the opinion that at the core of rural decline is the outmigration of youth who tend to be seen as fleeing to larger cities, never to return. The reality of rural population change is, however, somewhat more nuanced than that caricature would suggest.

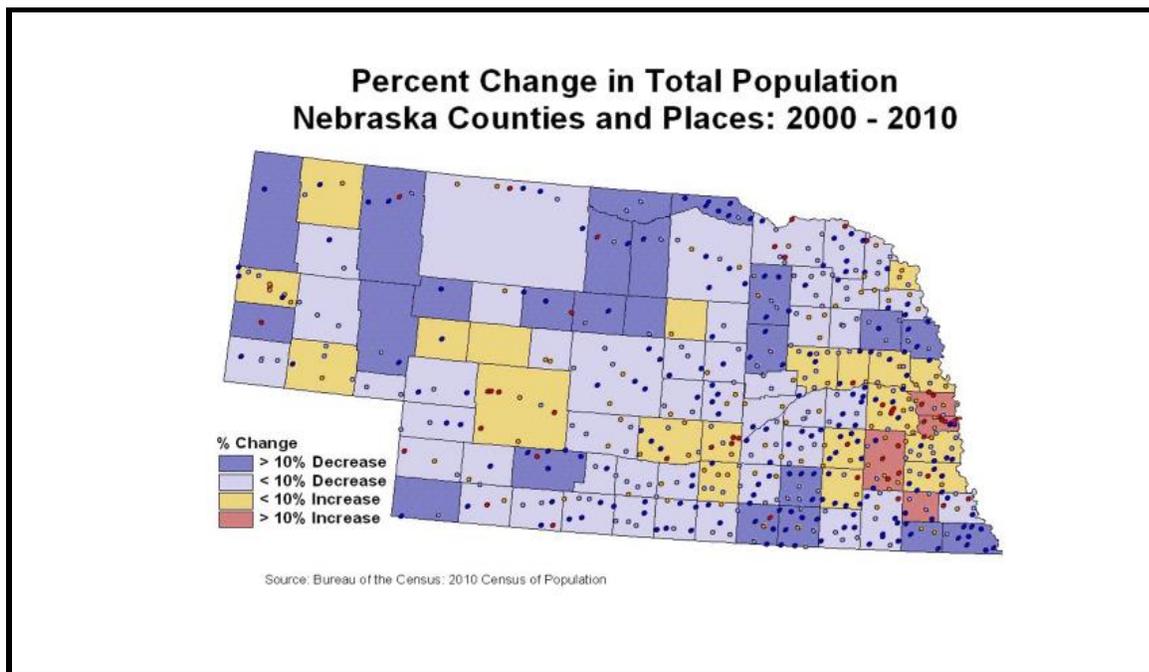
Figure 1: Population Change by County Type, Nebraska, 2000-2010

County Type	Total Counties	Growing Counties	Declining Counties
Nebraska	93	24	69
Metropolitan	9	8	1
Micropolitan Core	10	7	3
Small Trade	24	5	19
Small Town	22	1	21
Frontier	28	3	25

Source: Bureau of the Census

Source: U.S. Census Bureau

Figure 2: Percent Change in Total Population Nebraska Counties and Places, 2000-2010



Source: U.S. Census Bureau, 2010 Census of Population

While it is commonly true that the majority of rural youth leave their communities in the years immediately following High School graduation, it is also true that the exodus of rural youth is far from complete. More importantly, at least from a labor force perspective, rural Nebraska has also been characterized by in-migration among people age 30 to 45 years. That trend has been found in rural regions throughout the Great Plains.

Migration for Age Cohorts

One way to understand migration to rural areas is to examine the difference between “expected” and “observed” populations by age over the decade 2000 to 2010.

Imagine that you live in a community where nothing changes over a decade. The birth rate doesn't change, nobody moves in, nobody moves out, and nobody dies. If in that imaginary place there were 100 20-year old residents in the first year, there would be 100 30-year old residents in the tenth year.

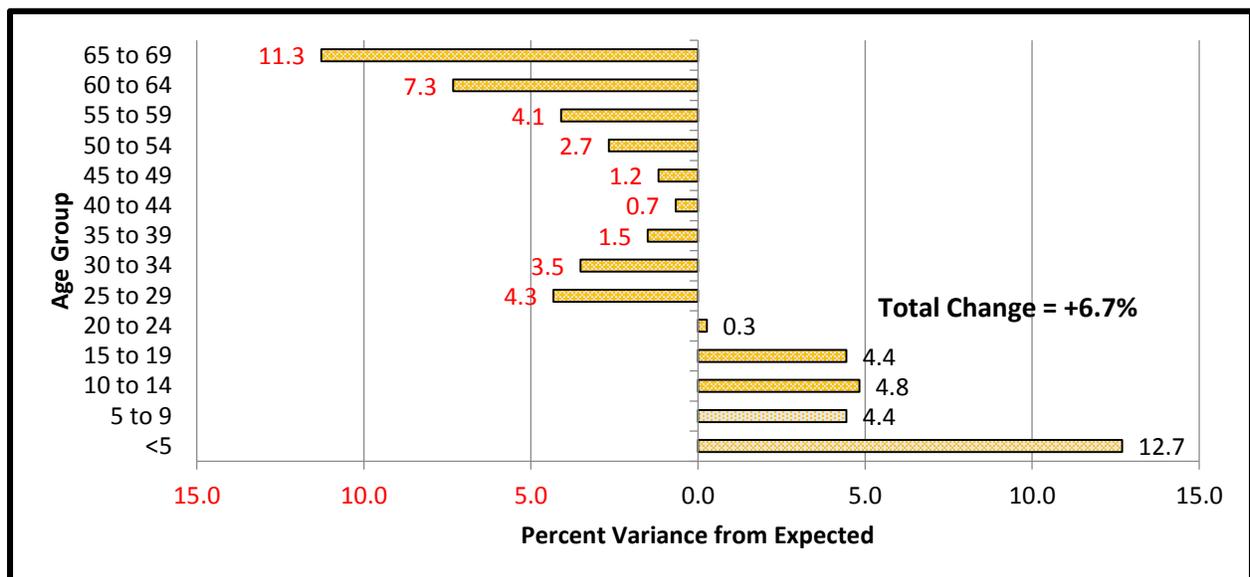
If that cohort numbers less than 100 in the tenth year, the difference can only be explained by out-migration (or to a lesser extent, death).

Nebraska's Rural Population: Growth and Decline by Age

If the cohort numbers more than 100, the difference can only be explained by in-migration. Differences found in the number of residents under 10 years of age will indicate changes in the birth rate. This is depicted for the State of Nebraska in figure 3.

In Figure 3, all of the bars to the right of the center line represent populations that are smaller than would have been expected if there had been no change. Bars to the right of the line represent populations that are larger than expected if nothing had changed. These bars can be interpreted as representing out- and in-migration. Numbers at the end of each bar represent the percentage variation from the expected population. The graph ends at age 69, which represents a likely end point for labor force participation and the point at which death becomes a more important contributor to population change.

Figure 3: Percent Variance from Expected Population, Nebraska, 2010

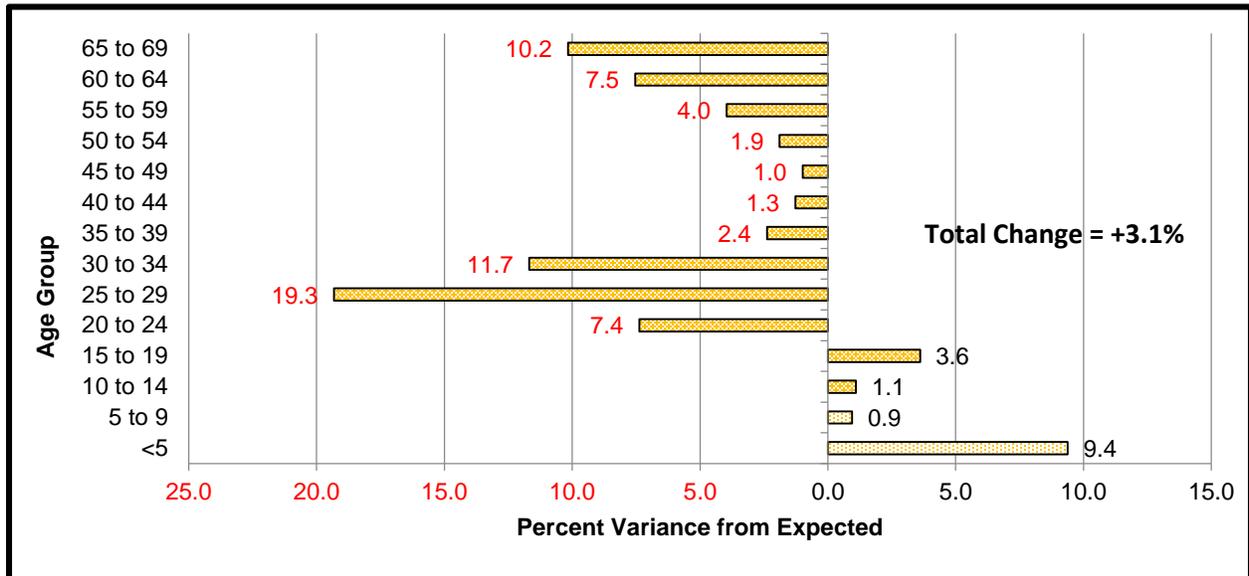


Source: U.S. Census Bureau, 2000 and 2010 Decennial Census, SF1

As seen in Figure 3, Nebraska's population growth during the first decade of this century resulted largely from growth among our youngest age groups and an increase in births. From about age 25 years on, the state was a net population loser for all age groups. The birth rate was, however, significant enough to result in a net population gain of 6.7% for the state.

The pattern is quite different in urban and rural places. Figures 4 and 5 demonstrate this, depicting the same observed versus expected population data but for relatively urban Micropolitan core counties (Figure 4) and Small Town counties (Figure 5).

Figure 4: Percent Variance from Expected Population, Micropolitan Core Counties, Nebraska, 2010



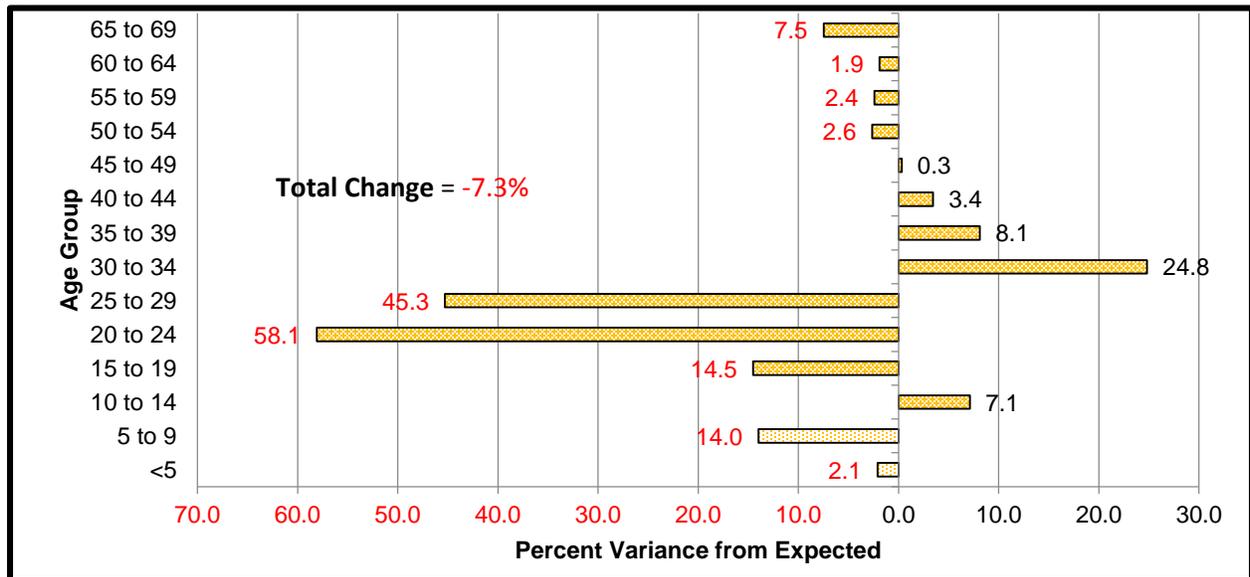
Source: U.S. Census Bureau, 2000 and 2010 Decennial Census, SF1

Like Nebraska as a whole, Micropolitan core counties recorded an increase in births along with a small in-migration of people age 15 to 19 years, likely as a result of movement to those locations by recent high school graduates for educational or employment purposes and also by international migration. However, those counties also experienced out-migration for all age groups over the age of 20 years. In the end, those counties saw a net population increase of 3.1%.

Small Town counties demonstrate a very different migration pattern. In these counties, out-migration is significant among younger residents following high school and through age 29 years. However, for the age groups 30 to 39 years significant in-migration occurred. Nebraska's Small Town counties, in fact, netted nearly 25% more residents in that age group than would have been expected had nothing changed.

The in-migration of persons age 30 to 44 years in rural Nebraska has also been documented in other rural parts of the country and is at the heart of a "brain gain" theory posited by some rural development studies.

Figure 5. Percent Variance from Expected Population, Small Town Counties, Nebraska, 2010



Source: U.S. Census Bureau, 2000 and 2010 Decennial Census, SF1

What drives these changes?

Migration both to and from rural Nebraska is a response to a variety of both economic and social characteristics of rural places and is much more nuanced than is generally assumed.

The traditional narrative for rural population decline or growth holds that lack of economic opportunity is forcing people out of rural areas and that the trend could be altered simply through successful economic development efforts. Indeed, economic opportunity drives movement, but in both directions.

Young people leaving rural places note the absence of certain career paths and the lure of higher wages in their decisions. Young and mid-career workers find opportunity in the positions vacated by retirees among the aging rural population and also with successful rural businesses seeking new employees with training and skills that are not typically generated locally. Leaving a rural community for higher education does not necessarily preclude rural youth from eventual rural employment in a way that it once might have.

Lifestyle choices are also a significant driver of migration in both directions. According to survey and focus group research conducted at the University of Nebraska and elsewhere, in-migration among people age 30 to 45 years appears to be a response not only to employment opportunities, but also to lifestyle preferences and family connections. In fact, among persons

relocating to rural areas from urban centers, a job is often reported to have essentially been an opportunity factor which supported the possibility of relocating to a desirable rural location. Among the rural amenities reported to have influenced relocation are shorter commutes, more available time to spend with family members, better schools, access to outdoor activities, lower housing costs, and enhanced personal safety.

On the other hand, the relative absence of some lifestyle amenities, especially consumer amenities such as retail shopping and restaurant dining, has been found by the Nebraska Rural Poll to be a significant and growing source of dissatisfaction among rural residents. A desire to obtain access to such amenities can be argued to be a motivation for out-migration, especially among the young.

Conclusions and Implications

Population losses in rural areas are certainly continuing. Understanding those losses is, however, more complex than simply assuming that a lack of economic opportunity is emptying out the rural population. The movement of rural people is, in fact, not one-directional. People also move in to even very rural places.

Economics and jobs are, of course, critical factors in household residential and migration decisions. But, so are lifestyle choices and amenity preferences. Would more jobs and higher wages support population growth (or at least mitigate population losses) in rural areas? Of course they would. However, so would improvements to the quality of life in rural communities. Development professionals today tend to recognize this and, as a result, the distinction between economic development and community development activities is becoming less distinct than it once was.

Young rural Nebraskans will indeed continue to move away from their childhood homes. Note, however, that contrary to the common narrative, not all young people leave rural places. A community from which 60% of high school graduates migrate out still retains 40% of that cohort. Investments in continuing education and skills training might prove valuable in matching those individuals with local labor force requirement.

It is also important to remember that reported changes in rural populations have a great deal to do with the definition of rural. Rural communities that successfully support population growth may simply grow out of a given definition of rural. A current Nebraska example is Howard

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County, with no town as large as 2,500 residents and a total population of just over 6,000. As a result of Grand Island's growth and classification as a Metropolitan place and current commuting patterns, Howard County will now be included in a Metropolitan region.

In the end, policy makers concerned about population changes in rural areas should pay attention to the details in the data and not just to the aggregate results. Counter to the long-term trend, individual communities, even very small ones, have demonstrated the ability to attract new residents.

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Small Business and Entrepreneurship in Nebraska

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Introduction

Small business and entrepreneurship in Nebraska is roughly comparable to the small business sector in other upper plains states. The less densely populated states depend more on small businesses for private non-farm employment than do the more densely populated states or the United States as a whole.

There are 167,878 small business establishments in Nebraska. Of these, 40,581 have employees. That is, 75.8% of small businesses in Nebraska have no employees. Since many non-employer small businesses are hobby or sideline businesses, much of the perceived volatility in small business survival is due to entry and exit by non-employer entrepreneurs. Nebraska small businesses employ 391,150 workers, or 47% of all private sector non-farm employment.ⁱ

Nebraska communities vary in their success in encouraging small business development. Those that are successful appear to devote attention to small business development rather than business recruitment, tend to depend less on absentee ownership of commercial real estate, and tend to have at least one locally owned bank.

The terms “small business” and “entrepreneur” are often used interchangeably. There is no single definition of the term “small business” in federal law. Most small business owners in Nebraska consider themselves to be entrepreneurs. Although persons who are described as “corporate entrepreneurs” or “social entrepreneurs” or “government entrepreneurs” may make significant contributions to their communities, this study considers only those entrepreneurs who own a business.

Nebraska and its Neighbors

Nebraska is comparable to the United States as a whole in the rate of small business ownership among its population. Its 167,878 small business establishments are 8.97% of its 1,868,969 population (2013). Small business establishments in the United States are 8.99% of the U.S.

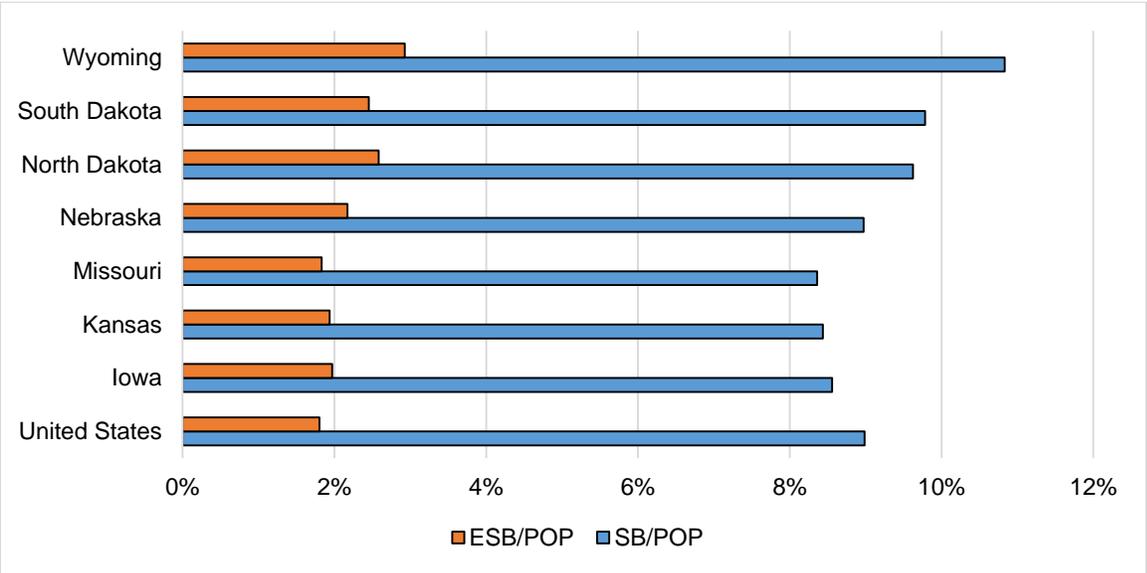
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population. Among Nebraska’s neighbors; Iowa (8.56%), Kansas (8.44%) and Missouri (8.36%) have somewhat fewer small businesses in proportion to their populations. However, North Dakota (9.62%), South Dakota (9.78%), and Wyoming (10.83%) have significantly higher rates of small businesses.

In Nebraska, as with its neighbors, a higher proportion of its small business establishments have employees than does the United States as a whole. Only 20.07% of small business establishments in the United States have employees. In Nebraska 24.20% of small businesses have employees. Among Nebraska neighbors, North Dakota (26.86%) and Wyoming (27.03%) have significantly higher proportions of their small business establishments with employees. South Dakota is near the Nebraska rate at 25.07%, while Iowa, Kansas and Missouri are below the Nebraska rate but still above the U.S. rate.

The low population density of states in the upper plains may be a reason for higher rates of small business formation and the higher rates of employer small businesses among all small business establishments. Major corporations in retail, wholesale, professional services, and other economic sectors tend to crowd out small businesses in larger cities. While some of this happens in small and micropolitan cities in Nebraska, the scale of such crowding is significantly less. Independent pharmacies, groceries, and hardware stores, for instance, are far more likely in micropolitan Nebraska towns than in Omaha or Lincoln.

Figure 1. Small Businesses and Employer Small Businesses to Population, Regional Comparison



Generally, the seven upper plains states have a higher portion of their potential workforce employed than did the United States as a whole and a higher proportion employed by small businesses. The potential workforce was estimated by using the population within the working ages of 18 to 65 years. The United States has 62.6% of its population within working age. Nebraska has 61.0% of its population within working age. The other upper plains states have working age populations below the national average except Wyoming, which was near the national average at 62.9%, and North Dakota, which was significantly above the national average at 63.3%.

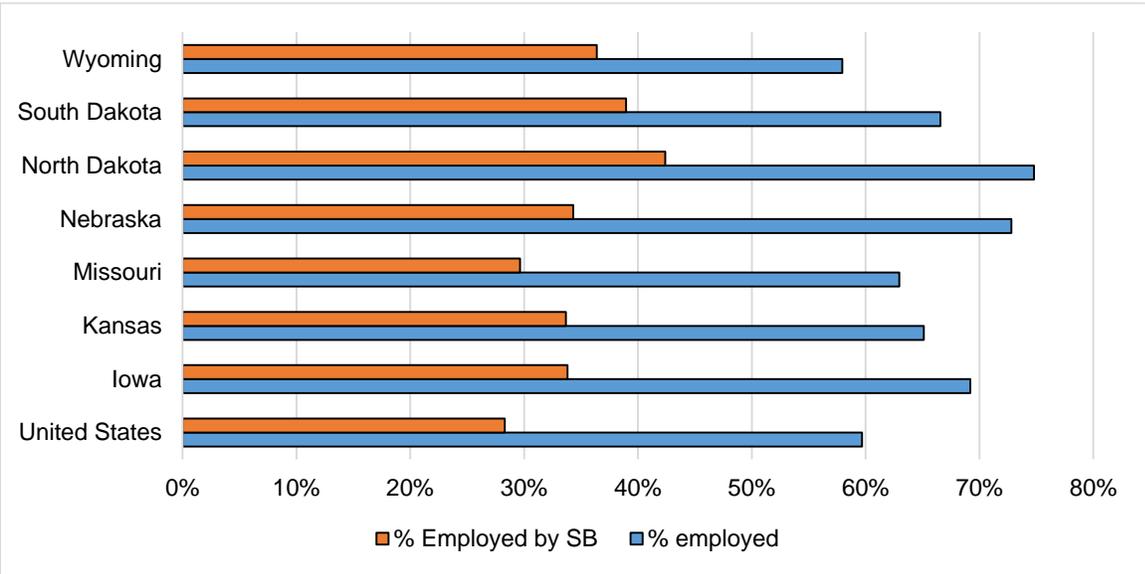
Table 1. Working Aged Population and Employment Status, Regional Comparison

	Working aged population	Employed	Employed by small businesses
	Percent of total population	Percent of working aged population	Percent of working aged population
United States	62.6%	59.7%	28.3%
Iowa	61.0%	69.2%	33.8%
Kansas	61.0%	65.1%	33.7%
Missouri	61.9%	62.9%	29.7%
Nebraska	61.0%	72.8%	34.3%
North Dakota	63.3%	74.8%	42.4%
South Dakota	60.5%	66.6%	39.0%
Wyoming	62.9%	58.0%	36.4%

North Dakota also has the highest rate of employment when its number of persons employed is compared to its working age population. Nebraska is second with 72.8% of its working age population employed. Nearly all other states in the mid-continent region also have a higher rate of employment as compared to their working age population than does the United States as a whole. The exception is Wyoming, which has only 58% of its working aged employed as compared to 59.7% for the United States as a whole.

When compared to the working age population, 28.3% are employed by small businesses in the United States. In Nebraska it is 34.3%. All of the other upper plains states are above the national average with Missouri being closest to the national average at 29.7% and North Dakota being highest at 42.4%.

Figure 2. Percentage of Working Aged Person Employed, Regional Comparison



Characteristics of Small Businesses

The distinction between small business establishments and employer small businesses is important. Every person who files a Schedule C is included among small business establishments. Non-employer businesses include professional service firms, investors, and inventors; but they also include hobbyists, multi-level marketing sales people, and non-employee contract workers. That is why about 80% of small business establishments have no employees and why the small business turnover rate (often termed the “failure rate”) is so high.

The dominance of non-employer businesses among small businesses is somewhat in concert with and somewhat opposed to the usual conceptualization of small businesses as “mom and pop” businesses primarily engaged in retail or in local service industries. Small retail and service businesses usually have employees but the number of employees is limited. This conceptualization of small businesses is truer in Nebraska than in the United States as a whole.

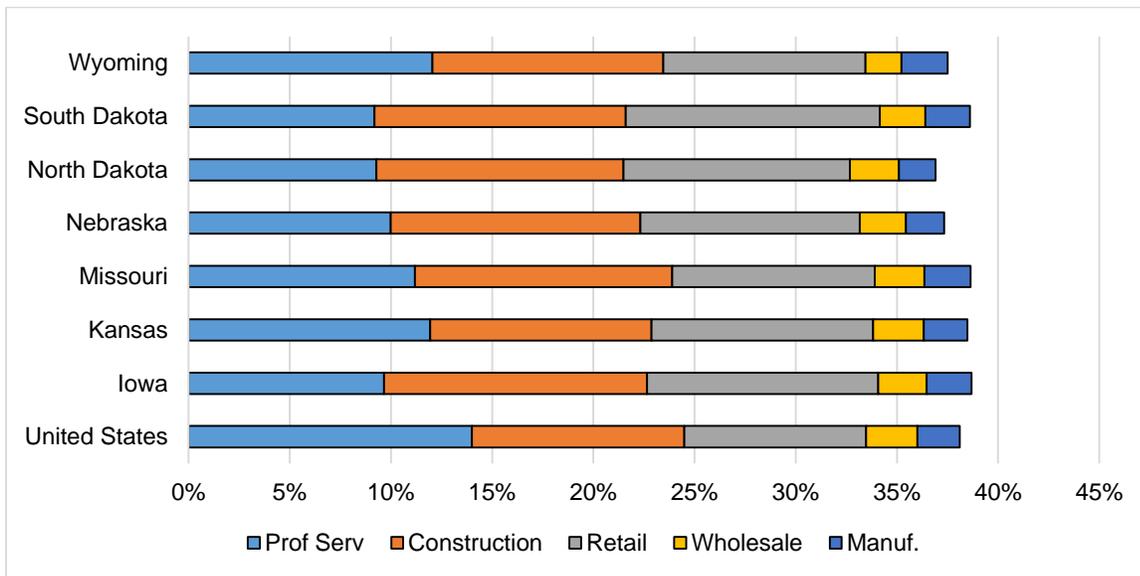
Only 8.98% of small businesses in the United States are in retail. In Nebraska 10.84% of small businesses are in retail. All of the upper plains states have a higher proportion of their small businesses in retail than is true of the United States.

The most dominant industry for small businesses in the United States is professional services, which accounts for 14% of all small businesses. In Nebraska, professional services account for

only 9.98% of small businesses. All of the upper plains states have smaller portions of their small business population in professional services than does the United States as a whole. The closest upper plains states come to the U.S. average is in Kansas and Wyoming, which each have about 12% of their small businesses in professional services.

The dominant small business industry in the upper plains is construction. Nebraska has 12.34% of its small businesses engaged in construction. The other upper plains states have similar levels with Iowa having the largest portion of small businesses in construction at 13% and Kansas having the smallest portion at 10.93%.

Figure 3. Small Business Trade Proportions, Regional Comparison



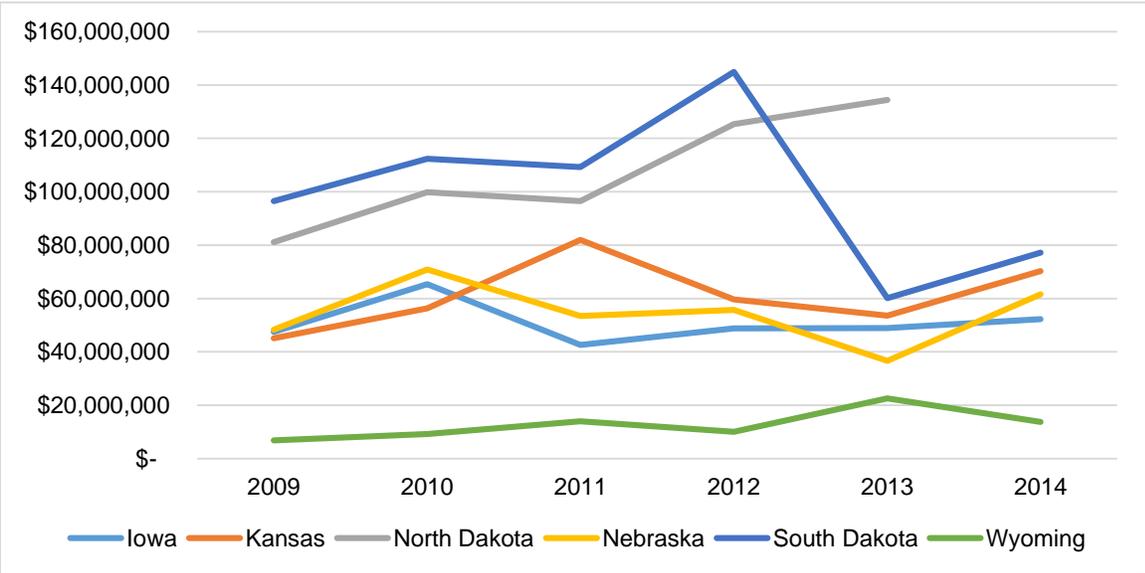
Wholesale and manufacturing firms are considered primary businesses because they sell their products outside of their community, bringing money into the community. Only 2.53% of small businesses in the United States are in wholesale and only 2.1% are in manufacturing. In Nebraska, the level is 2.28% in wholesale and only 1.88% in manufacturing. All of Nebraska's upper plains neighbors have a higher percentage of wholesalers among their small businesses than does Nebraska, except for Wyoming. All of Nebraska's upper plains neighbors have a higher percentage of manufacturers among their small businesses than does Nebraska, except for North Dakota.

Investment by small businesses was somewhat consistent during the half-decade between 2009 and 2013 except for 2010. The sharp increase in 2010 was due to an aggressive program

by the U.S. Small Business Administration to encourage small businesses to re-finance using SBA guarantees. SBA offered banks 90% guarantees instead of 75% guarantees and eliminated the guarantee fee. Many small businesses that had been affected by the 2008 recession took advantage of the opportunity to restructure.

In the upper plains states investment by small businesses swelled in 2010 and 2011 then declined to previous levels in 2012. The exceptions were South Dakota and North Dakota, which had significant increases in 2012. North Dakota continued large small business investment in 2013, probably because of contract activity by small businesses in the oil industry.ⁱⁱ

Figure 4. Small Business Capital Investment, Regional Comparison, 2009-2014



Activity in Nebraska followed this pattern but there was a considerable decline in small business investment in 2013 with a robust recovery in 2014.

Small Businesses in Rural Nebraska

The higher rates of small business formation in the upper plains are an indicator of the importance of small businesses to the economy of the low population density portions of these states. A recent studyⁱⁱⁱ of 16 Nebraska communities that included interviews with small business owners and community economic development leaders provides a perspective on small businesses in Nebraska.

Six micropolitan communities (populations of 10,000 to 50,000) were studied. They were Beatrice, Columbus, Kearney, Norfolk, North Platte, and Scottsbluff-Gering. Ten smaller communities were studied. They were Alliance, Chadron, Hartington, Hebron, Holdrege, Imperial, McCook, Minden, Nebraska City, and O'Neil. Structured interviews were conducted with 71 business owners and 51 community economic development leaders.

One-third of small business owners in rural Nebraska see themselves as entrepreneurs. Another 21% see themselves as both small business owners and as entrepreneurs. For more than half of rural Nebraska small business owners, then, the term "entrepreneur" includes them. That is true whether they own a pharmacy, a restaurant, or a machine shop.

More than a third became business owners by starting their own enterprise. However, this was truer in micropolitan communities, which had 48% start-ups, than in smaller communities, which had 29% start-ups. Businesses in smaller communities were more likely to be the result of succession (37%). About a third of the current owners of small businesses in rural Nebraska acquired the business from a previous owner.

Significantly, 43% of small business owners in rural Nebraska credit their parents with developing their interest in business ownership. Another 34% say that they became entrepreneurs because of a personal desire for independence or greater control of their lives. Only 23% credit a mentor for sparking their interest in entrepreneurship. A majority (61%) would be pleased if their own children chose entrepreneurship as a career and 56% say that they have mentored other entrepreneurs. However, only 23% are aware of an entrepreneurship program in their local high school or community college.

Economic Development and Small Businesses

Nebraska communities vary in their success at encouraging employer small businesses. This variance appears to be related to the approach the community takes toward economic development. Those communities that focus economic development efforts on small business development tend to do better at encouraging entrepreneurship than do those communities that focus economic development efforts on business recruitment. LB 840 money, for instance, is used to support visible main street improvements in communities with long-term growth in employer small businesses but is used to support infrastructure tied to business recruitment in communities without significant long-term growth in employer small businesses. There appear to be other factors as well. Communities with long-term growth of employer small businesses

tend to have at least one locally owned bank and tend to have less absentee ownership of commercial facilities. Interestingly, it did not appear to matter if the community was or was not located on Interstate 80.

To determine the long-term success of communities in encouraging the growth of employer small businesses, the study looked at Census data for businesses with 5 to 49 employees. Only the 16 communities in the study were analyzed.

Statistically Significant Growth: Kearney (Buffalo County), North Platte (Lincoln County), Columbus (Platte County), O'Neill (Holt County), Hartington (Cedar County), Holdrege (Phelps County), and Imperial (Chase County) were found to have a statistically significant growth in employer businesses with 5 to 49 employees.

Growth not Statistically Significant: Nebraska City (Otoe County), McCook (Red Willow County), Norfolk (Madison County), and Chadron (Dawes County) were found to have a positive trend coefficient. However, the growth displayed was not statistically significant.

Statistically Significant Decline: Alliance (Box Butte County), Beatrice (Gage County), and Scottsbluff-Gering (Scotts Bluff County) were found to have a statistically significant negative trend coefficients at the level of significance $\alpha=0.05$ suggesting a declining trend in number of establishments with 5 to 49 employees.

Decline not Statistically Significant: Minden (Kearney County) and Hebron (Thayer County) were found to have negative trend coefficients. However, the decline displayed was not statistically significant.

Banks appear to play a role in the success of small business development in a community. Of the seven communities with statistically significant increases in employer small businesses, four had at least one locally owned bank and two were within the market area of a bank owned in a nearby town. Only one had no locally owned bank. Of the three with a statistically significant decline in employer small businesses, two had no locally owned bank. In a corollary, the business owners in the two communities without a locally owned bank also complained that the commercial properties they leased had absentee owners.

While bank loans, whether or not guaranteed by the SBA, are an important source of capital for small businesses, other sources of financing are equally important. In this study of rural small businesses, 42% of business owners said that their business was financed by themselves, family and friends. Another 12% said that it was financed by angel investors or other sources.^{iv}

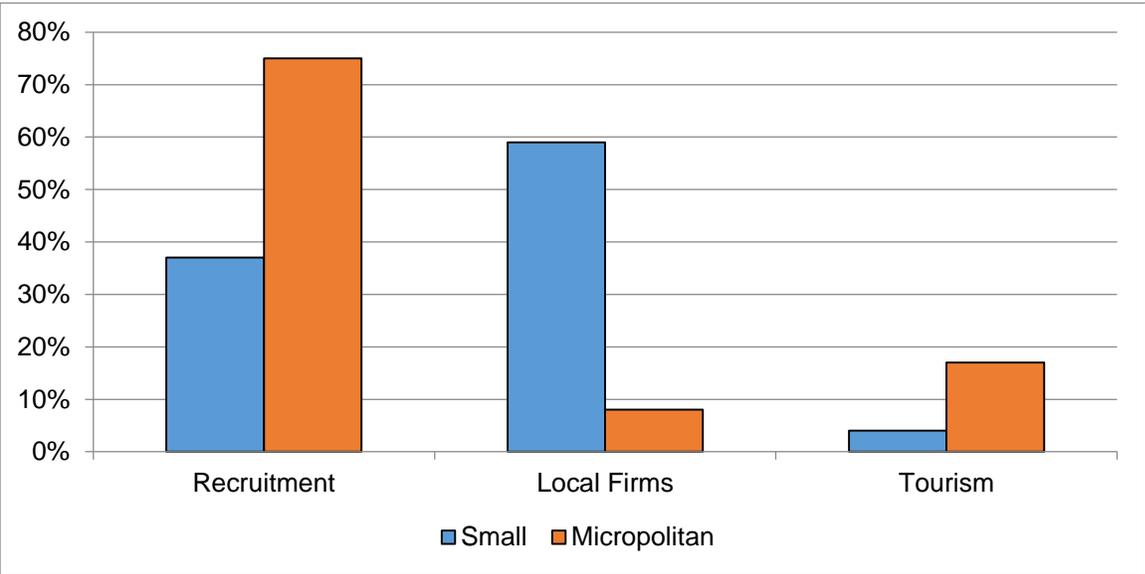
The Local Option Municipal Economic Development Act, popularly known as LB 840, allows communities to impose a tax (property or sales) or fee to fund economic development activities. The act has been amended nine times. Smaller communities have more freedom to use the funds to promote small businesses. The communities studied that have LB 840 programs were Alliance, Beatrice, Chadron, Columbus, Gering, Hartington, Holdrege, Imperial, McCook, Nebraska City, Norfolk, North Platte, O'Neill, and Scottsbluff-Gering. Hebron, Kearney, and Minden do not have an LB 840 program.

Most economic development leaders focus on business recruitment. That is truer in micropolitan communities, where 75% said that recruitment was their priority, than in smaller communities, where 37% said that recruitment was their priority. Among economic development leaders interviewed were executive directors of economic development corporations, chamber executives, city officials, and bankers.

Their orientation to a recruitment priority is in keeping with economic development theory from the 1950s that divided employers into primary and secondary businesses. A primary business is one that sells its goods and services outside of the community and employs persons in the community. A secondary business is one that sells its goods and services inside of the community and employs persons inside the community but that sends a portion of its sales outside of the community to pay for inventory and operation support. It is presumed that secondary businesses will occur naturally in response to increased primary income.

In the 21st Century, however, there have been significant changes to the dynamics of local economies that make the automatic impact of primary income less reliable. First, improved roads and automobiles make it easier for residents of a community to travel to larger communities to do their trading. While this affects the smaller towns of under 10,000 population more than the micropolitan communities, trade loss is a problem for every rural community in Nebraska. Second, the Internet has provided a new trade channel that affects every Nebraska community, no matter its size.

Figure 4. Economic Development Focus of Small Towns and Micropolitans



The perceived high failure rate for small businesses, the unpredictability of small business operations, and the influence of national media on consumer desires propels many economic developers to favor chain stores (including franchises) over local stores in combating trade loss.

Less than one-third of economic development leaders (29%) indicated that their community invests in facilities and street improvements to support local retail. Investment tends to go to infrastructure to support recruitment (49%) or healthcare (22%).

An indication that focus is elsewhere is the lack of recognition of small business owners. Only 39% of communities have a recognition program for small business owners. These are usually run by the chamber and limited to chamber members. The recognition is for leadership within the chamber or for leadership in customer service. There was no instance of a program that recognized small businesses for their contribution to community economic development. A correlation to this finding is that no business owner interviewed had ever been asked to make a presentation in the local high school or community college to a business or entrepreneurship class.

Yet, 59% of economic development leaders said that they would be happy if one of their children chose small business ownership as a career and 75% said that the best business leader in their community was an entrepreneur rather than the manager of a branch plant or healthcare facility.

Other Findings and Recommendations

Many economic developers have long assumed that small communities in Nebraska must be located near I-80 to experience growth. While transportation is always central to economic development, this study found that communities remote from I-80 enjoyed success in developing employer small businesses.

An often expressed concern of business owners was the absentee ownership of commercial properties. While this was most prevalent among owners of retail businesses, absentee ownership is a problem for warehouse and production facilities as well. It has also become a problem in some communities related to key employers. Most often, the descendants of the original owners become absentee owners or sell the enterprise to absentee owners. Attention to business ownership transition may be an important component of community development.

A corollary to absentee ownership of local businesses is a decrease in local ownership of banks. Communities that did better in development of employer small businesses tended to have at least one locally owned bank. New bank regulations and dynamics of the industry have caused bank consolidations. Commercial loan decisions are no longer made locally.

The use of LB 840 funds was also found to be directly correlated to success in development of employer small businesses. Where these funds were used exclusively for business recruitment, growth of employer small businesses was not sustained. While primary businesses continue to remain essential for general economic growth, the presumption of an automatic stimulus of secondary businesses no longer holds. Internet purchases, better cars, and better roads allow primary dollars to enter a community and then leave before they have taken a single turn.

All of these factors have contributed to the disappearance of growth coalitions in Nebraska towns. A growth coalition, first described by the sociologist Harvey Molotch, is a form of collusion by businesses in a town that depend on the growth of the town for the growth of their businesses. It often centers around the use of and profits from real estate speculation. Businesses normally seen as natural to growth coalitions—banks, utilities, media, and retail—are no longer independent locally owned businesses in most Nebraska towns.

For some communities struggling to sustain employer small business growth, a strategy that replaces an attempt to preserve legacy commercial spaces may be in order. Encouraging the

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development of new commercial real estate may increase interest on the part of local entrepreneurs in economic growth and may limit the dampening effect of absentee ownership.

It may also be beneficial to encourage high schools and community colleges to include owners of employer small businesses in their entrepreneurship curriculum. This will give these owners an opportunity to serve as role models and mentors to young people who may develop an interest in business ownership as a career. It would also serve as a way to recognize these business owners as important contributors to the community.

Economic development officials may also want to explore ways of providing technical or management assistance to employer small businesses, especially those with customers outside of the community (primary employers). Concerns that some local business owners get incentives that others do not is legitimate. However, assistance focused on technical capacity is much less envied than financial assistance.

ⁱ *The Small Business State and Territory Profiles* (2014). Office of Advocacy, U.S. Small Business Administration, Washington, DC.

ⁱⁱ Data is from Small Business Development Centers in each state and includes debt and equity. It does not include direct equity investment not tied to bank loans (venture capital). North Dakota data for 2014 was not available.

ⁱⁱⁱ Bernier, R. E., et al. (2014). *Entrepreneurship Based Economic Development*, Rural Futures Institute, University of Nebraska, Lincoln, NE.

^{iv} The term “angel investor” is used here to indicate a person who takes an equity interest in the business. Angel investors in rural Nebraska are unlike those in centers of venture capital as popularized on “Shark Tank” and similar television shows. They are usually local entrepreneurs or farmers who make their investment as much to support the town as to earn a return from their ownership.

Considerations for K-12 Finance Reform in Nebraska

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Introduction

The Nebraska Legislature has recently held meetings and solicited input from a host of individuals and organizations who are advocating for: 1) property tax relief and 2) school finance reform. Given the state's heavy reliance on property taxes to fund K-12 education, the two policies are often interconnected. This policy brief focuses on K-12 education finance in Nebraska from three perspectives:

1. Constitutional requirements.
2. Funding.
3. Changing demographics.

Constitutional Requirements

States are largely responsible for K-12 education and the funding of schools is typically guided by state constitutional requirements. According to the Nebraska Constitution:

“Legislature shall provide for the free instruction in the common schools in this State for all persons between the ages of five and twenty-one years” (Nebraska Constitution. Article 7, Section 1).

Compare Nebraska's constitutional language to two other states:

- Article 6, Section 6 of the Kansas constitution: “The legislature shall make suitable provision for finance of the educational interests of the state.”
- The Wisconsin Constitution provides in Article 10, Section 3 that "The legislature shall provide by law for the establishment of district schools, which shall be as nearly uniform as practicable...."

The more prescriptive language in the Kansas and Wisconsin constitutions are examples of how vague concepts, or phrases, have often resulted in litigation based on different interpretations of

the state constitutions and enacted laws. Currently Kansas is embroiled in a challenge to changes in K-12 finance that were adopted in 2014 based on Article 6, Section 6. A three-judge district court struck down key provisions in June 2015 and the State's Supreme Court should render an opinion in early 2016.

Wisconsin's "uniformity clause" has been at the heart of both school finance design and litigation. Most recently, Wisconsin's 1995-96 budget bill, Act 27, included language that was designed to provide statewide property tax relief by infusing approximately \$1 billion in the state's school aid formula while simultaneously imposing a strict spending cap. This combination resulted in a 16.4% statewide reduction in school levies in fiscal year 1996-97. In *Vincent v. Voight*, litigants challenged the changes to the state's school aid formula on the basis that it did not meet the constitution's uniformity clause. In 2000, The Wisconsin Supreme Court determined that the school finance system was not in violation of the uniformity clause and, in fact, more effectively equalizes the tax base among districts than the system in place at the time *Kukor* was decided¹.

Interestingly, while the state's effort was designed to reduce the state's property tax burden, comparatively speaking, Wisconsin property taxes in 2012 are \$43 per \$1,000 of personal income—nearly the same as 1990—and the per capita changed little between 1995 and 2012 (two positions—from 11th to 13th) between 1995 and 2012 (see table 1).

What does the constitutional language mean for Nebraska policy makers? The lack of subjective words such as "suitable provision" or "nearly uniform" as found in Kansas and Wisconsin, respectively, makes it very difficult to challenge changes to school funding in Nebraska. Since the early 1990s, the Nebraska Supreme Court has dismissed three school finance cases—*Gould v. Orr*, *Douglas County School Dist. v. Heineman* and *NCEEA v. Heineman*—on the basis that the claims were not in violation of the State's constitution.

In summary

- Nebraska's State Legislature has much more discretion in the manner that it chooses to fund K-12 education in Nebraska.
- It is unlikely that a change in the school finance system would fail in the courts.

¹ <http://caselaw.findlaw.com/wi-supreme-court/1053829.html>

Table 1. Wisconsin State and Local Property Taxes per \$1,000 of Personal Income and Per Capita Compared to Other States*, 1970-2012

Year	Property Taxes					
	Per \$1000 of Personal Income			Per Capita		
	Amount	Rank	Percent of Average	Amount	Rank	Percent of Average
1970	\$63.35	4	138.5%	\$220.50	6	131.6%
1975	\$52.13	13	116.6%	\$271.09	14	112.2%
1980	\$35.43	19	119.7%	\$360.45	16	119.2%
1985	\$43.46	10	137.2%	\$571.81	12	131.1%
1990	\$43.24	13	126.2%	\$736.13	16	118.1%
1995	\$47.73	8	137.6%	\$1,018.49	11	133.3%
2000	\$38.58	10	122.4%	\$1,058.69	12	119.9%
2005	\$43.24	11	127.9%	\$1,405.66	12	123.7%
2010	\$46.15	9	123.9%	\$1,694.34	13	118.7%
2012	\$43.17	11	127.7%	\$1,755.77	13	123.5%

*includes the District of Columbia.

Source: U.S. Census Bureau and Bureau of Economic Analysis

Revenue Composition

Nebraska relies more heavily on local aids to fund K-12 education than neighboring states and the U.S. average. Given the limited revenue options available, this means greater dependence on property taxes. According to the U.S. Census Bureau, in 2011, K-12 education funding in Nebraska consisted of:

- 53.5% local sources (national average was 43.4%).
- 30.3% state sources (national average was 44.1%).
- 16.2% federal sources (national average was 12.5%).

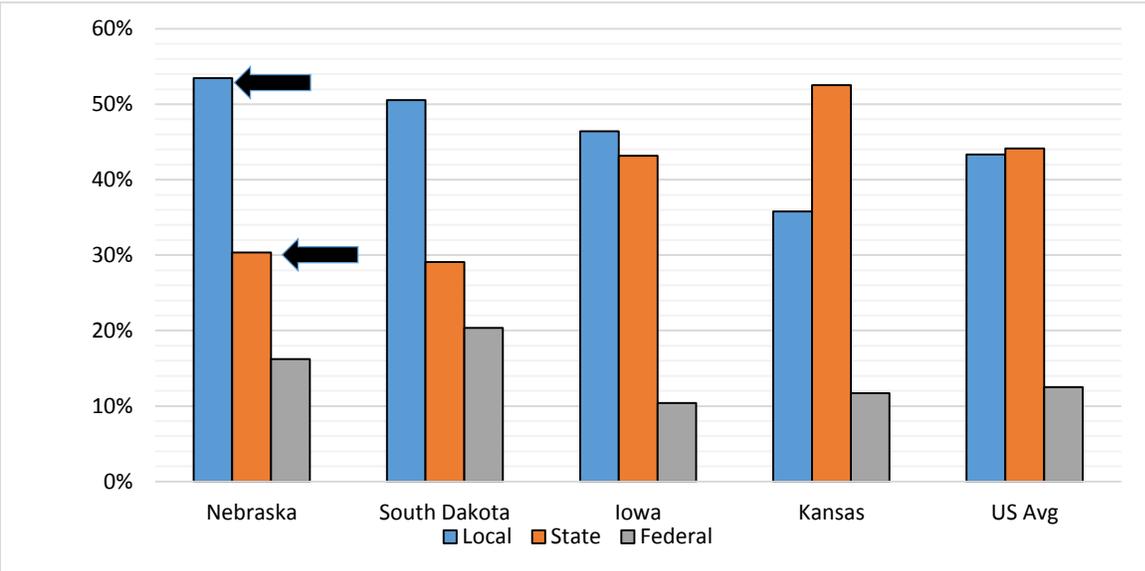
From a financial management perspective, the benefits of Nebraska’s school finance revenue structure are:

Local control – Since the 1970s much has been written on local government fiscal condition, or fiscal health, and one of the most consistent measures is the degree to which an entity relies on own-source revenues. According to one of the most frequently

cited authors, Ken Brown (1989)², the greater an entity’s reliance on own-source revenues to fund operations, the more positive the entity’s fiscal condition.

Stability – The state’s reliance on property taxes to fund K-12 education means that school districts have a more stable revenue system. Property taxes, while affected by economic fluctuations, have historically been much more stable than other local tax revenue sources—sales and income³. As shown in the preceding citation from the Rockefeller Institute, property taxes are not immune to economic variation and can be sensitive to changes in property valuation. For most states in the United States during the 2008-09 recession, this meant a decline in both property valuation and levies.

Figure 1. K-12 Total Revenues, Regional Comparison, Fiscal Year 2011



Source: U.S. Census Bureau

Regional Patterns in Property Taxes as a Percentage of Local Revenues

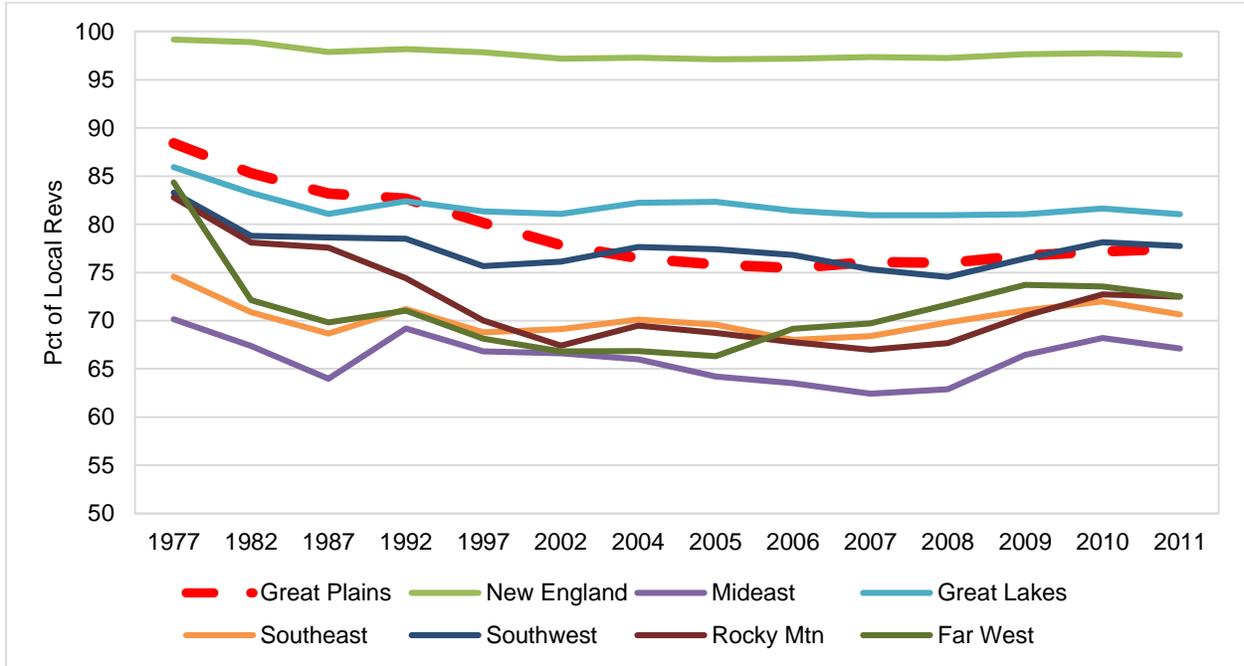
While the general pattern of property taxes as a source of local revenues in the Great Plains follows the national trend, there exists differences in regional patterns. For instance, local governments in the New England states (CT, ME, MA, NH, RI, and VT) are, essentially, completely dependent on the property tax.

² See Maher and Nollenberger (2009), http://www.gfoa.org/sites/default/files/GFR_OCT_09_61.pdf

³ See Figure 2, page 6, http://www.rockinst.org/pdf/government_finance/2012-07-16-Recession_Local_%20Property_Tax.pdf

For the Great Plains states (IA, KS, MN, MO, NE, ND, and SD), property taxes as a percentage of local revenues has dropped from 1977 to 2011. In 1977, these local governments relied on the property tax for nearly 90% of their revenues; in 2011, that portion was down to about 78%. The downward shift over the years is largely the result of the expansion of local sales taxes and fees/charges for services.

Figure 2. Property Taxes as a Percentage of Local Revenues, U.S. Regions, 1977-2011

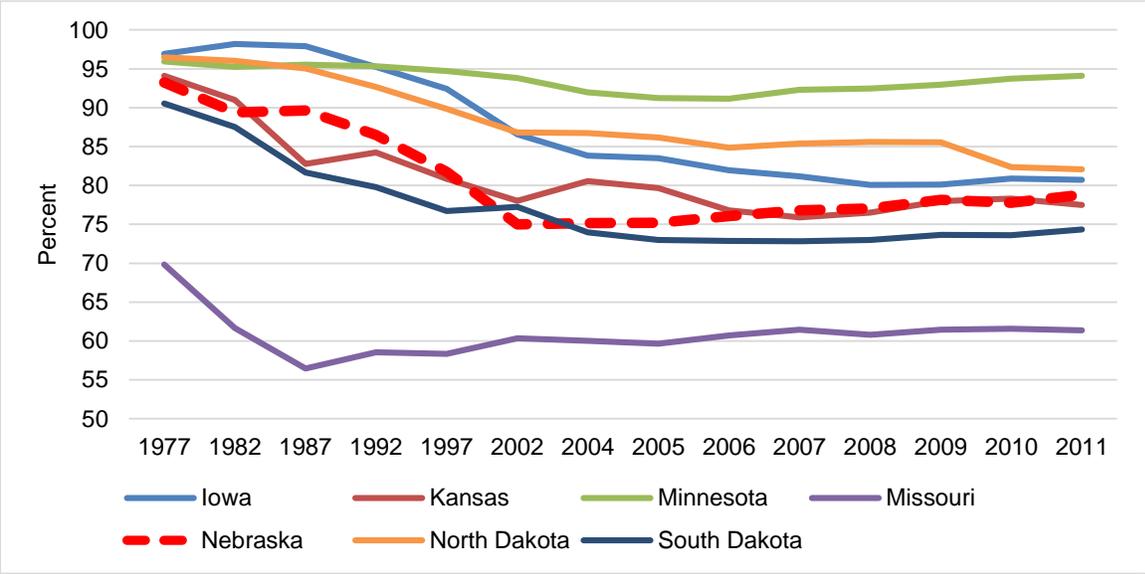


Source: U.S. Census Bureau

Patterns in Property Taxes as a Percentage of Local Revenues in the Great Plains States

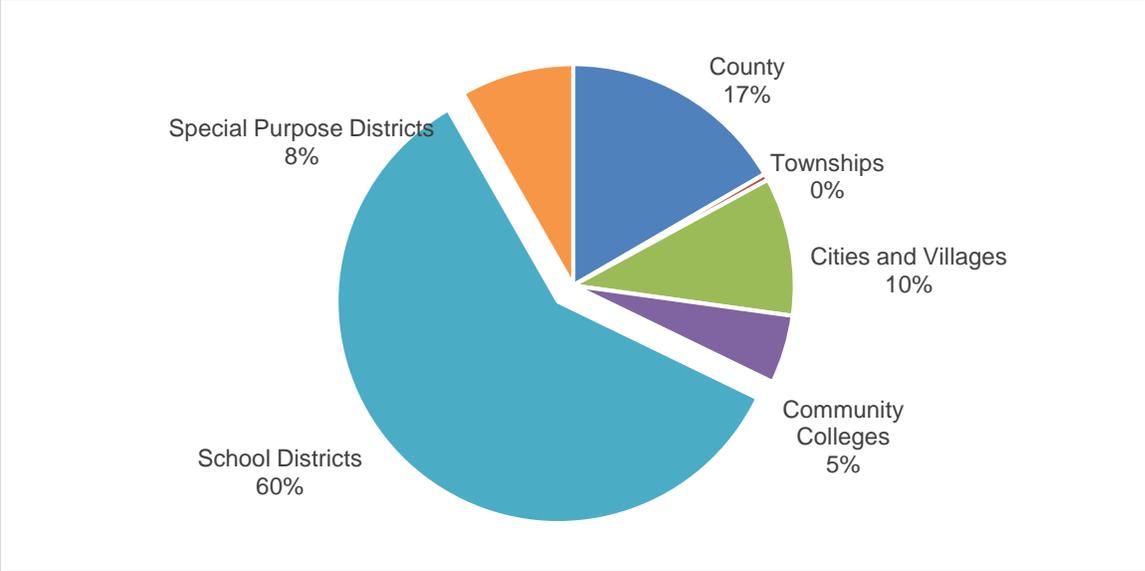
Even within the Great Plains states there is significant variation. Local governments in Missouri rely on property taxes less than other states. Notice the drop in Kansas from nearly 95% in 1977 to about 78% in 2011. Those same patterns occurred in Nebraska and Iowa, whereas Minnesota has remained relatively stable.

Figure 3. Property Taxes as a Percentage of Local Revenues in Great Plains States, 1977-2011



Source: U.S. Census Bureau

Figure 4. Levies by Type of Local Government, Nebraska, 2013



Source: U.S. Census Bureau

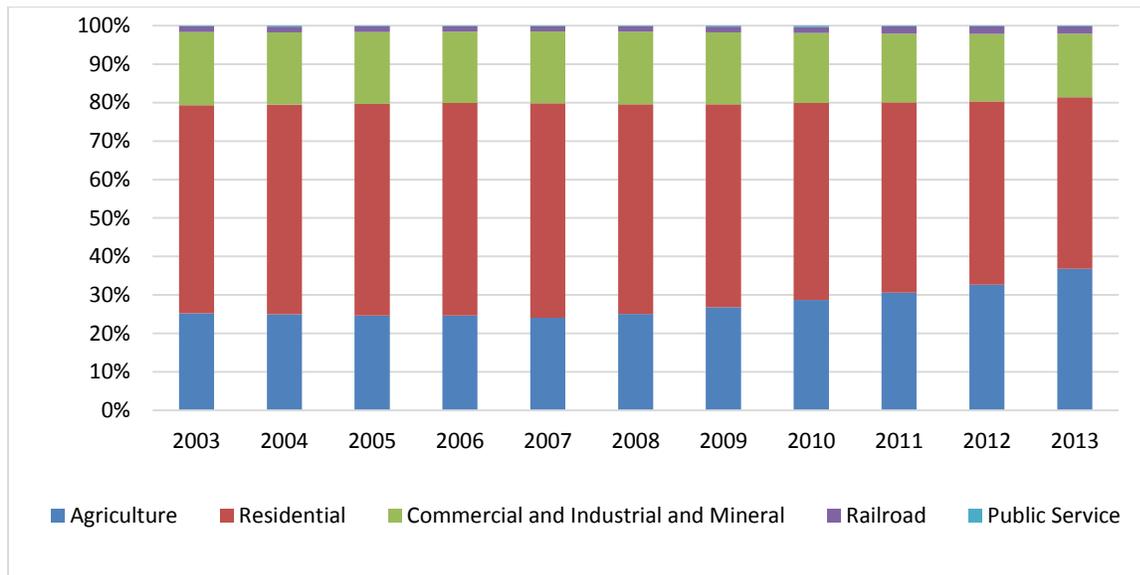
Distribution of Nebraska Property Taxes by Source

Figures 2 and 3 focus on total local governments. Figure 4 reflects the proportion of property taxes collected by type of entity. Not surprisingly, school districts account for the lion’s share of property tax collections in Nebraska. This is a pattern consistent with other states and why efforts to provide property tax relief tend to focus on school districts.

Real Property Value by Class in Nebraska

Figure 5 reflects the distribution of property value by class. Notice how Nebraska bucked the national trend in recent years as the value of agricultural land is growing disproportionately to other classes, including residential. Agricultural land has grown from 25% of all valuation in 2003 to 37% in 2013. Residential property in Nebraska is down from 54% to 45% during the same period.

Figure 5. Nebraska Property Value by Class, 2003-2013



Source: U.S. Census Bureau

Per Capita State General Revenues and Per Capita Local Revenues

To help put in context Nebraska’s revenue picture, the following tables provide comparisons of state and local revenues for fiscal year 2010-11. In relative terms, state general revenues rank below average (32nd); approximately \$150 per capita below the national average. Conversely, local per capita general revenues rank above the national average. In fiscal year 2010-11, local

Considerations for K-12 Finance Reform in Nebraska

revenues were just over \$3,000, ranking 10th nationally; \$160 per capita above the national average.

Table 2. State General Revenues Per Capita, Regional Comparison: 2010-2011

	State General Revenues Per Capita	National Rank
United States	\$3,406.15	
North Dakota	\$7,223.19	2
Wyoming	\$6,443.78	3
Minnesota	\$4,419.46	10
Iowa	\$3,607.38	20
Kansas	\$3,500.34	25
Nebraska	\$3,250.17	32
Colorado	\$2,903.73	41
South Dakota	\$2,726.31	44
Missouri	\$2,507.54	46

Source: U.S. Census Bureau, Government Finance Statistics and July 11, 2011 population estimates, prepared by UNO Center for Public Affairs Research, November 2013

Table 3. Local General Revenues Per Capita, Regional Comparison: 2010-2011

	State General Revenues Per Capita	National Rank
United States	\$2,906.08	
Wyoming	\$4,530.16	3
Colorado	\$3,753.13	5
Nebraska	\$3,071.03	10
Iowa	\$2,933.55	12
Kansas	\$2,902.89	14
Minnesota	\$2,727.25	19
Missouri	\$2,449.27	30
South Dakota	\$2,309.72	34
North Dakota	\$2,193.02	39

Source: U.S. Census Bureau, Government Finance Statistics and July 11, 2011 population estimates, prepared by UNO Center for Public Affairs Research, November 2013

In Summary

- Nebraska ranks above average in local-source revenue and below average in state-source revenues.
- Nebraska is heavily reliant on property taxes to fund K-12 education.
- Agricultural property values have outpaced other forms of valuation through the past decade.

Pros

1. School districts in Nebraska predominantly rely on one of the most stable revenue sources—property taxes.
2. Local school district reliance on local-source revenues means that they have more control over their fiscal decision making than many school districts in the United States.

Cons

1. Given general opposition to property tax growth, political reaction to property taxes can be strong.
2. Local control of revenues and reliance on property taxes to fund K-12 education means greater variation in funding across districts.

Demographic Forecasts from UNO Center for Public Affairs Research

CPAR's projections predict slowing population growth for Nebraska through 2050. While the state's population grew 6.7 percent in 2000 to 2009, the growth is projected to dip to 6.2 percent from 2010 to 2019 and drop each decade through 2050 (see figure 6).

While the overall growth in the state population is projected to be slow, the aged population (age 65 years or older) is projected to nearly double between 2010 and 2050 (see figure 7). This shift in the state's population not only has implications for tax revenues but also service demands.

While the state's population will be "graying" over the next few decades, there is limited growth projected in the "tax-paying" population (see figure 8).

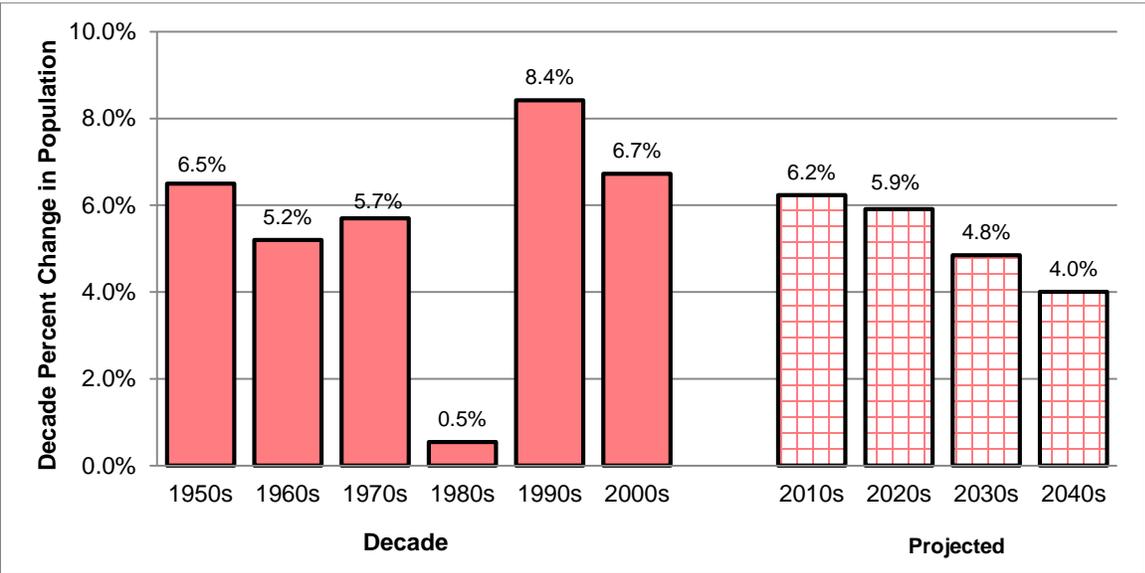
Over the next two decades, there will be little change in working age population as baby boomers age out of this group. The state's population will be shifting to a more aged population

with little growth in the “working aged” population (see figure 9). The school-aged population will experience modest growth over the next few decades.

Figure 10 puts the past and future population patterns in perspective. Where Nebraska’s aged population (80 years of age or older) tracked below the state’s youngest population (5 years of age or younger), that relationship is predicted to shift in approximately 20 years.

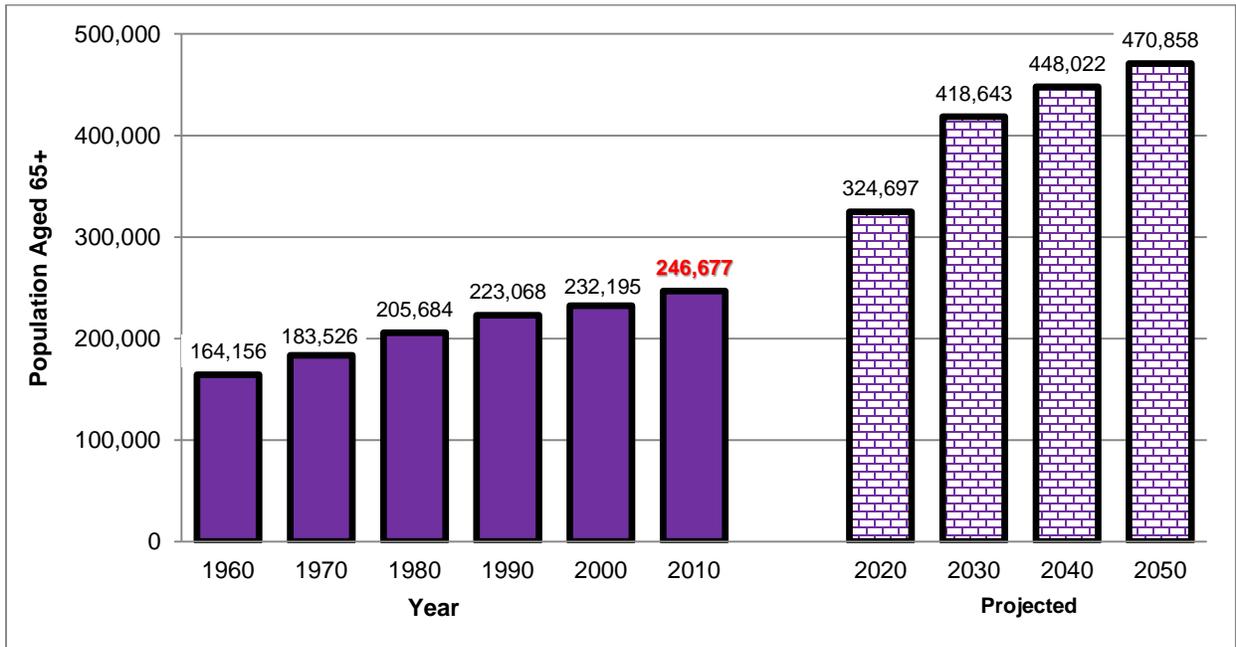
In addition to shifts in the state’s population based on age, Nebraska’s ethnic composition is also shifting (see figure 11). While the state will remain predominantly Caucasian through 2050, its Latino population, in particular, will be growing. In 2010, the proportion of Nebraska’s population that is Latino was 9.2%; in 2050, the proportion of the Latino population will be 24.1%.

Figure 6. Decade Percent Change in Nebraska Population: 1950 to 2010 with 2010 and 2050 Projection



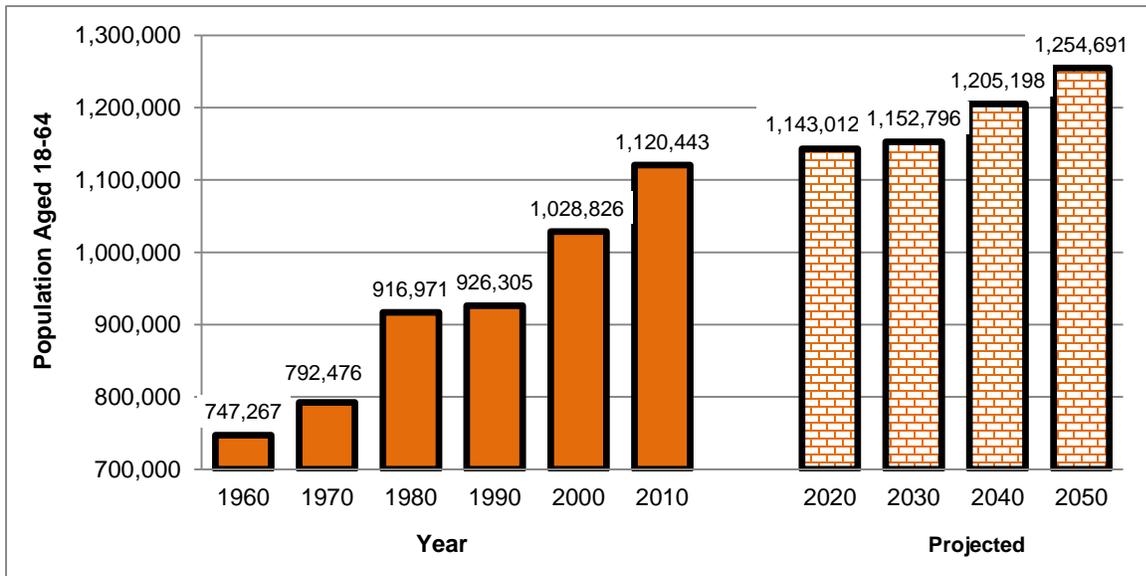
Source: Decennial Censuses; CPAR projections, June 2013

Figure 7. Nebraska Population Aged 65 Years and Older: 1960 to 2010 with 2020 to 2050 Projection



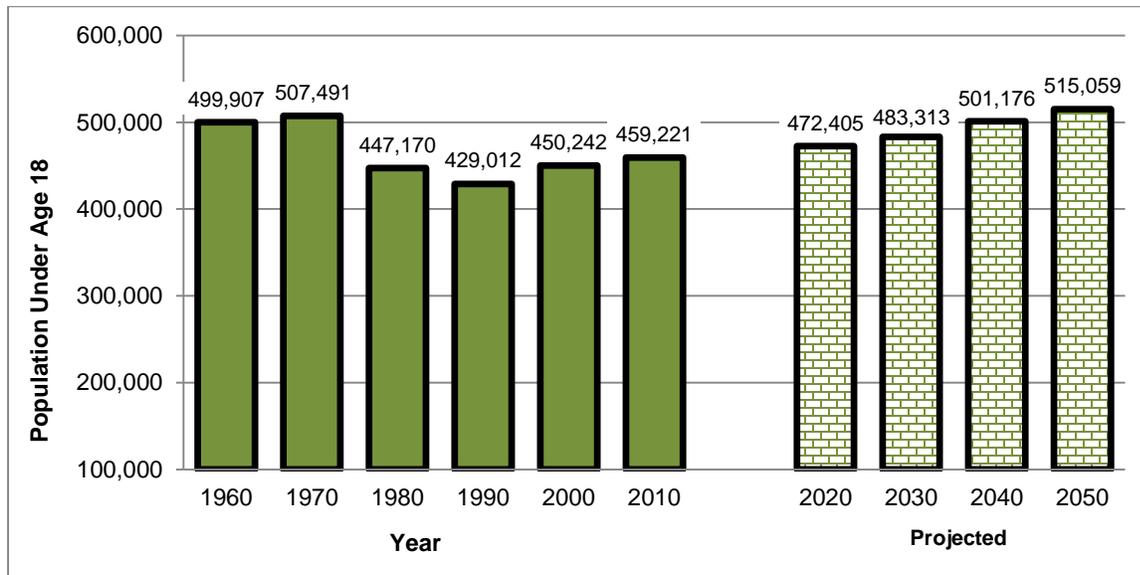
Source: Decennial Censuses; CPAR projections, June 2013

Figure 8. Nebraska Population Aged 18-64 Years: 1960 to 2010 with 2020 to 2050 Projection



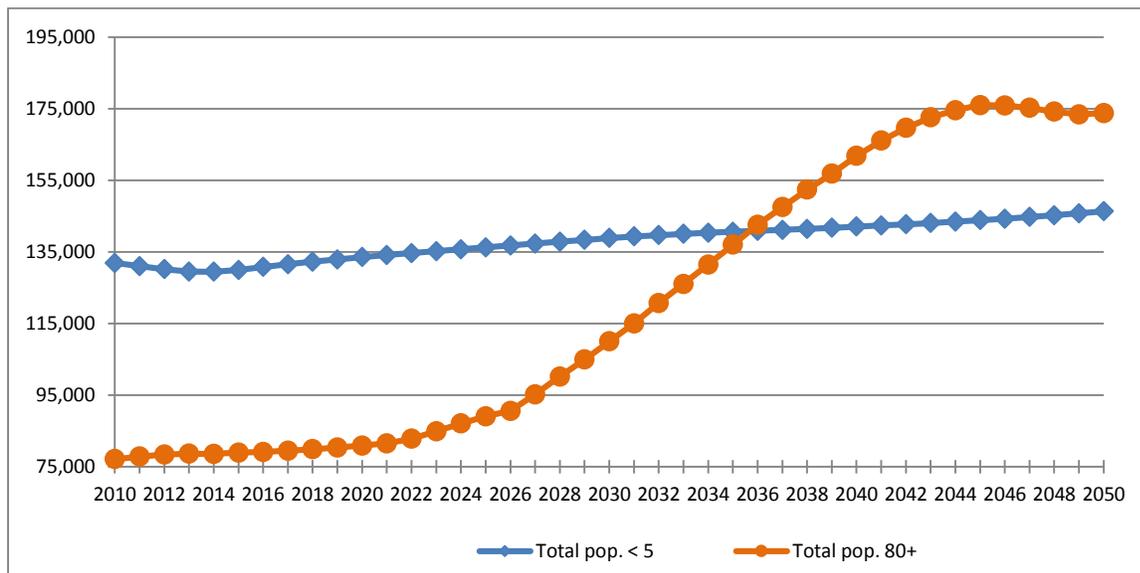
Source: Decennial Censuses; CPAR projections, June 2013

Figure 9. Nebraska Population Under Age 18 Years: 1960 to 2010 with 2020 to 2050 Projection



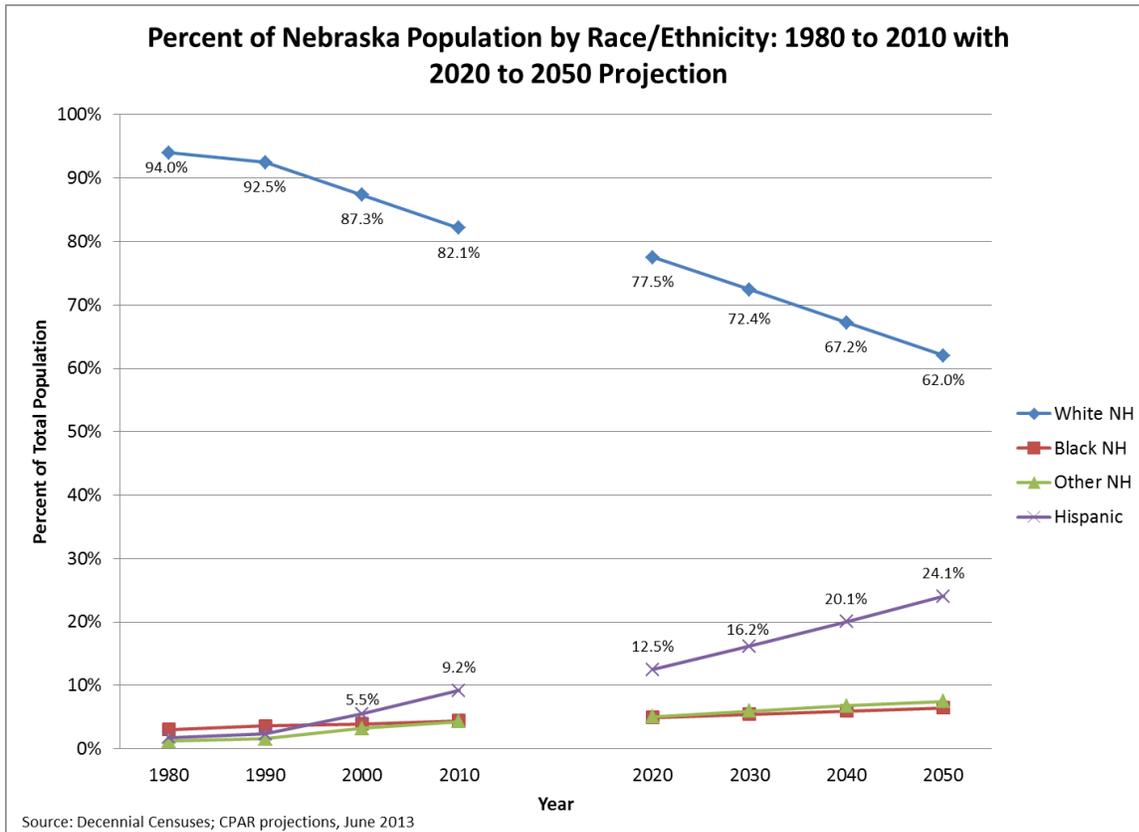
Source: Decennial Censuses; CPAR projections, June 2013

Figure 10. Projection of Nebraska Population for Select Age Groups: 2010 to 2050



Source: Decennial Censuses; CPAR projections, June 2013

Figure 11. Percent of Nebraska Population by Race/Ethnicity: 1980 to 2010 with 2020 to 2050 Projection



Source: Decennial Censuses; CPAR projections, June 2013

In Summary: What does the future hold?

- Stagnant overall population growth.
- The future of the K-12 student population is slow and steady growth.
- “Taxpaying” population being outpaced by those needing services: elderly and K-12.
The K-12 population composition will be changing—Hispanic populations with English as a second language typically require additional school resources.