WELCOME

September 21, 2018

Presented by:

UNK
COLLEGE OF BUSINESS & TECHNOLOGY

Bree Dority, PhD.
Daniel Chaffin, PhD.

Supported by:

Grand Island Area Economic Development Corporation

BUFFALO COUNTY Economic Development KEARNEY NEBRASKA

Baldwin Speaker Series

SCEDD South Central Economic Development District

HEDC

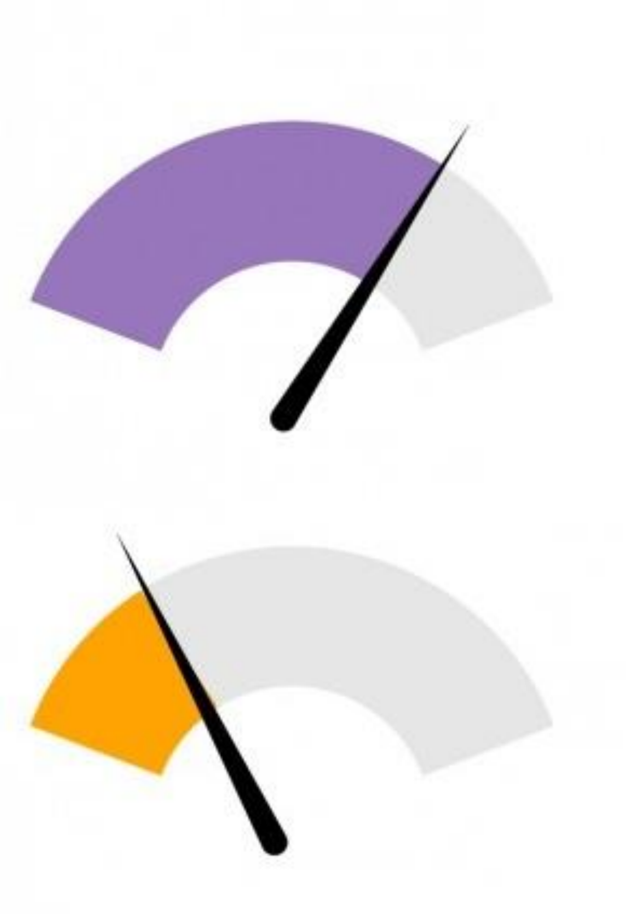
UNK COLLEGE OF BUSINESS & TECHNOLOGY

TRI-CITY AREA ECONOMIC FORUM

Schedule

- 8:00 – 8:30 Registration
- 8:30 – 8:40 Welcome
- 8:40 – 9:35 Keynote Address: Josh Beck
- 9:35 – 9:45 Break
- 9:45 – 9:55 SCEDD & CEDS: Sharon Hueftle
- 9:55 – 10:50 SCEDD Analysis: Daniel Chaffin and Bree Dority
- 10:50 – 11:00 Break
- 11:00 – Noon Roundtable Work Session: Lisa Tschauner
- Noon – 12:15 Closing

Competitive Advantage



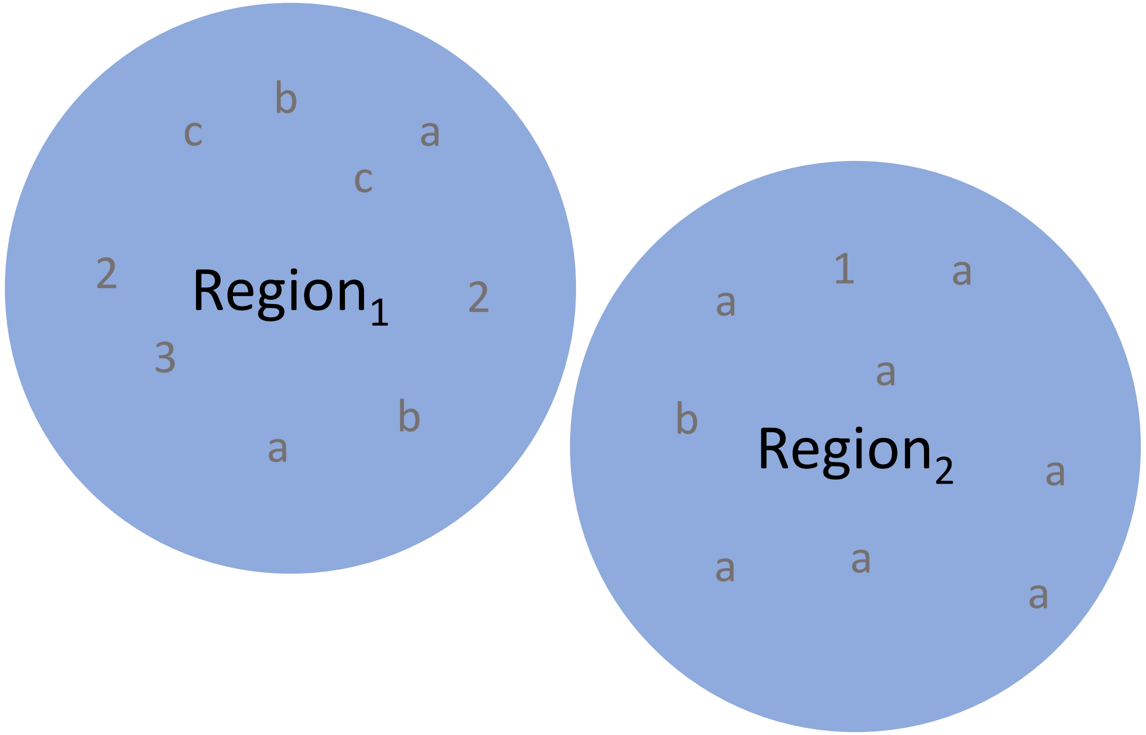
- Regions differ in their outcomes
- Why do some regions consistently outperform rivals?
- What are the unique strengths that enable regions to consistently create value for stakeholders?

Resource based theory – Source of unique strengths

- Resources – (in)tangible assets

Assumptions of the Resource Based View

- Resources are heterogeneously distributed

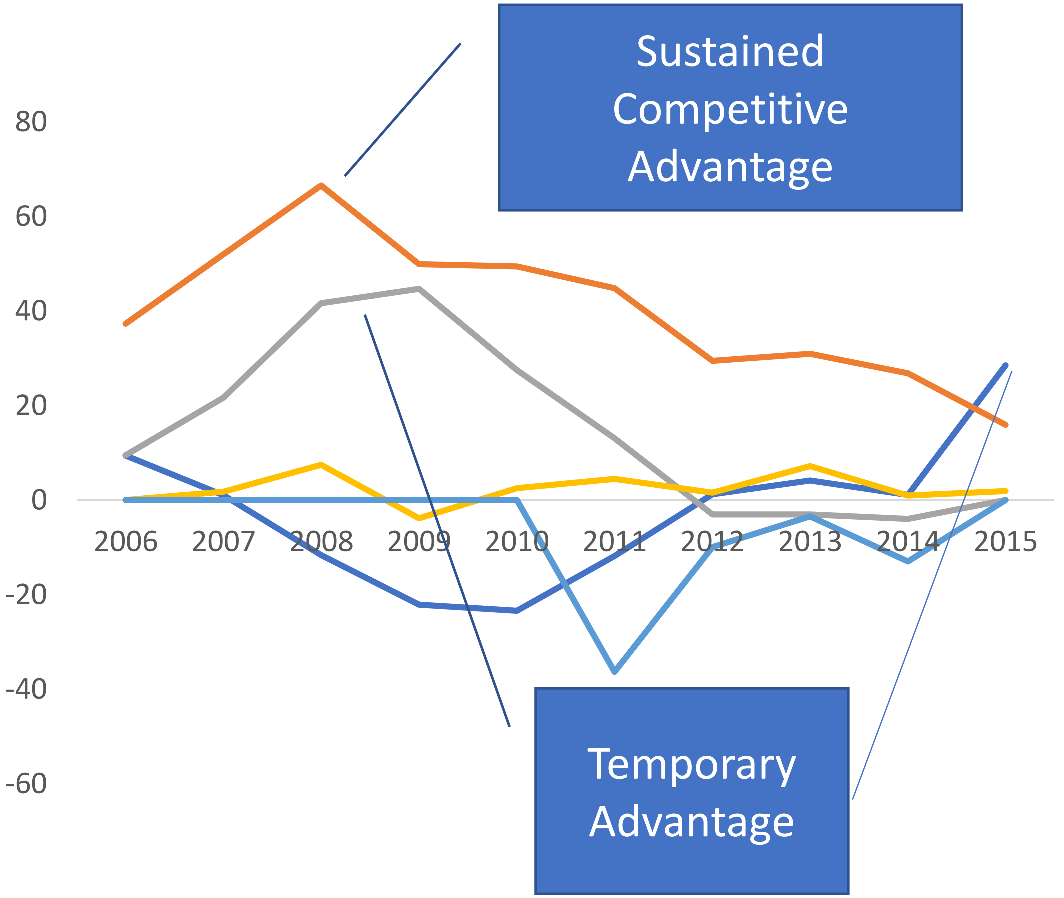


- Resources are imperfectly mobile

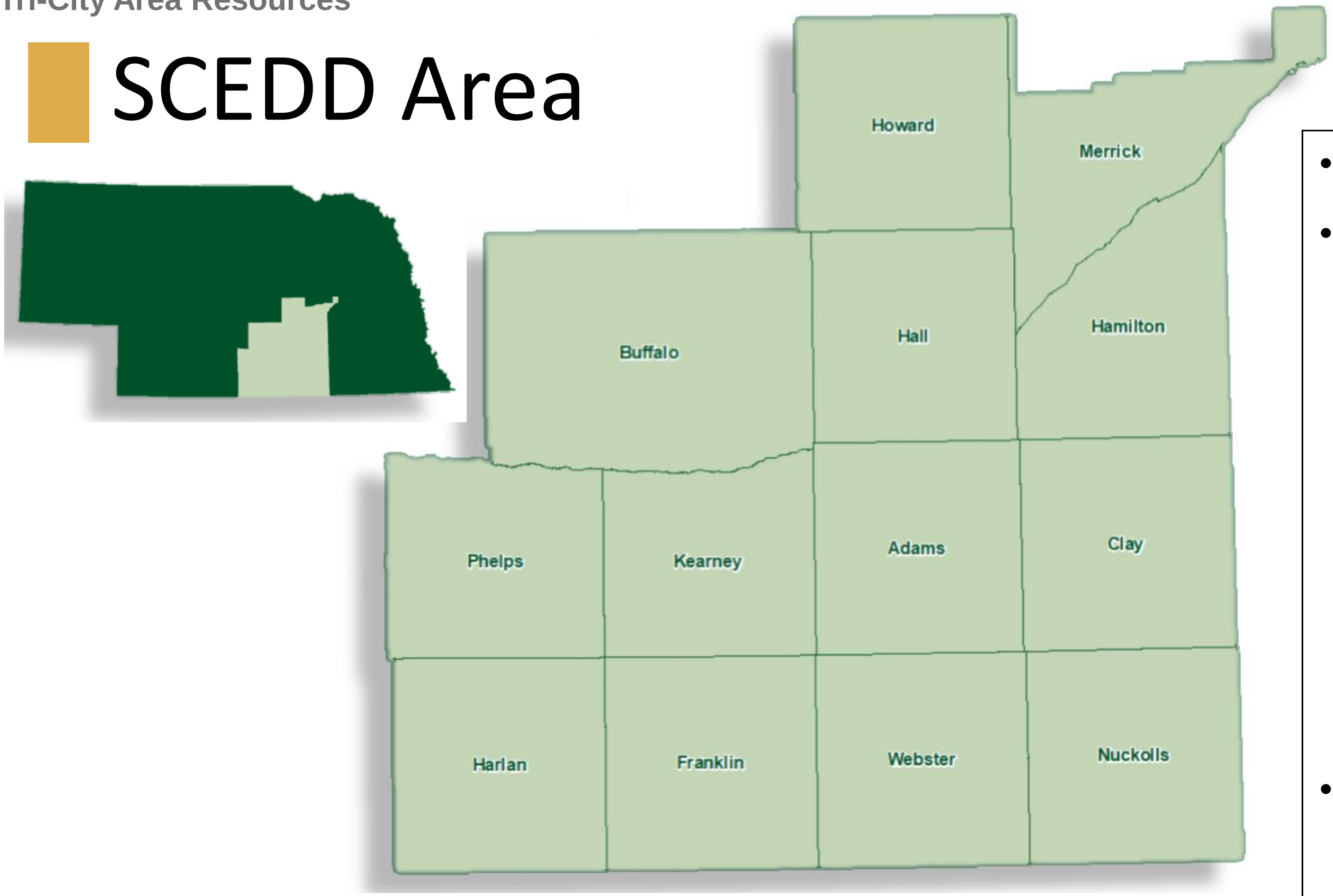
Organize to Exploit Strategic Resources

Region$_1$ → Organizes to exploit available resources that are valuable, rare and costly to imitate.

Region$_2$ → Chases opportunities unlinked to strategic resources.



SCEDD Area



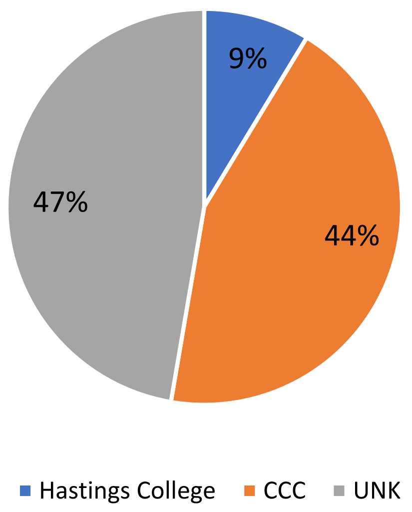
- 10.5% of Nebraskans live in SCEDD
- Largest cities:
  - Grand Island (>50,000)
  - Kearney (>33,000)
  - Hastings (25,000)
  - Holdrege (5,500)
  - Aurora (4,500)
  - Minden (2,900)
  - Central City (2,900)
- Remaining towns have populations of < 2,400

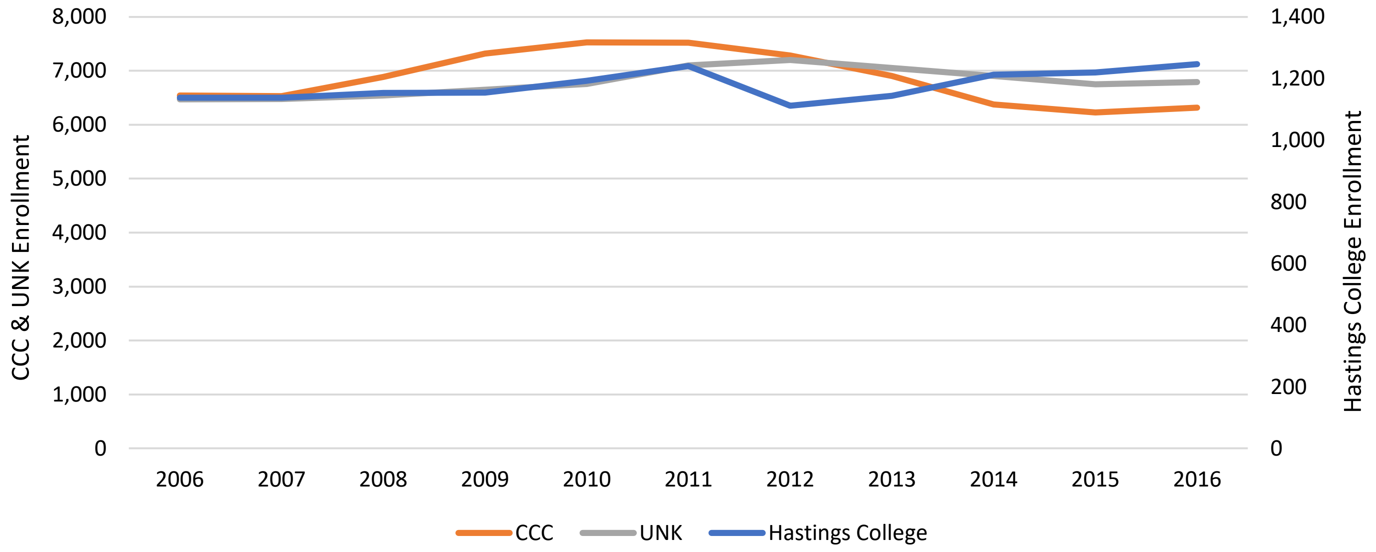
Key Assets – Natural Resources

- **Groundwater**: drinking water and irrigation
- **Surface Water**: habitat, recreation, and irrigation
- **Soil & Farmland**: ~5 million acres of land, 60% of acres classified as prime farmland or farmland of statewide importance

Key Assets – Infrastructure

- **Transportation**: Extensive highway and rail infrastructure
- **Broadband**: 91% has ≥1 broadband provider, but varies across the counties (22% to 99%)
- **Higher Education System**: 11% of all students enrolled in Nebraska's institutions are enrolled at UNK, CCC, and Hastings College





Nebraska's Coordinating Commission for Postsecondary Education, available at: https://ccpe.nebraska.gov/enrollment-dashboard

Capabilities

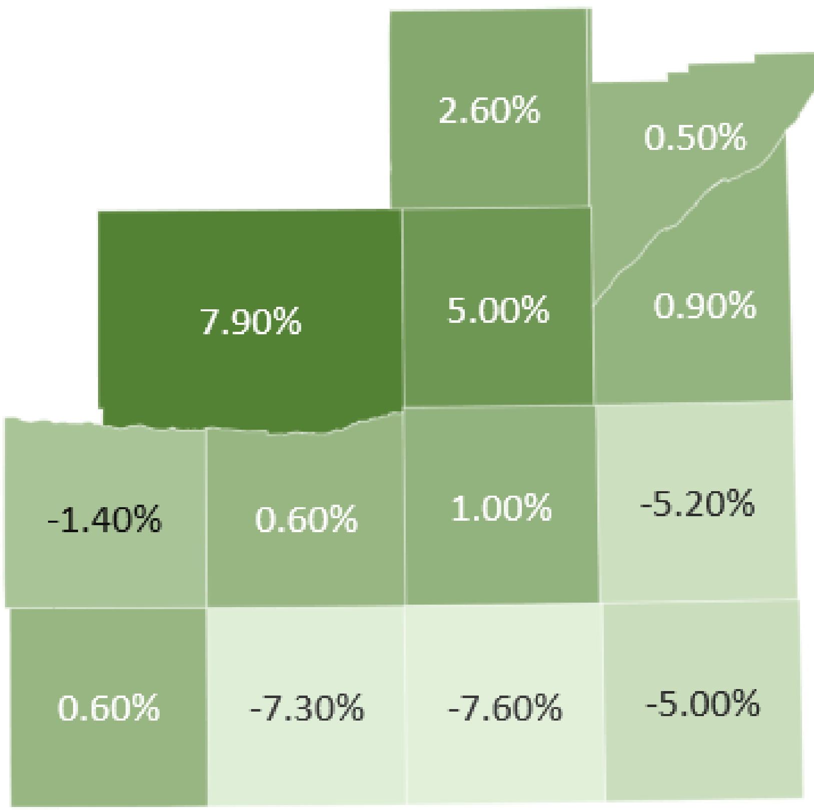
- Capabilities – ability to utilize resources in valuable ways

Key Assets – Population & Human Capital

- Population: >200,000 people and 71% live in the counties in which the Tri-Cities are located
- Key Trends:
    1. Positive Population Growth,

       but Rural Counties are Shrinking

Population Change 2010-2017

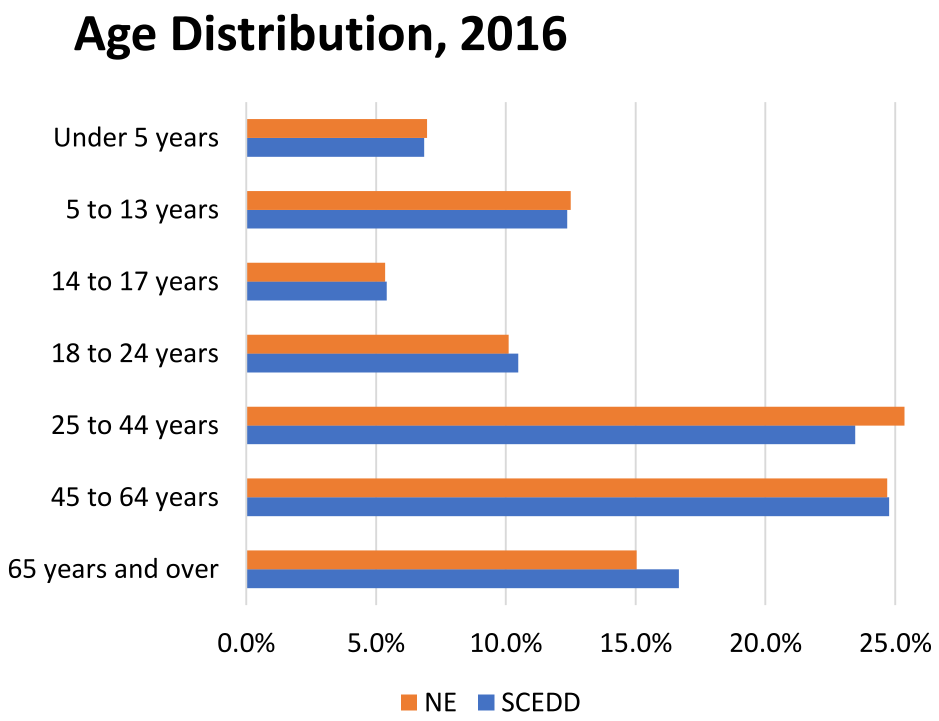


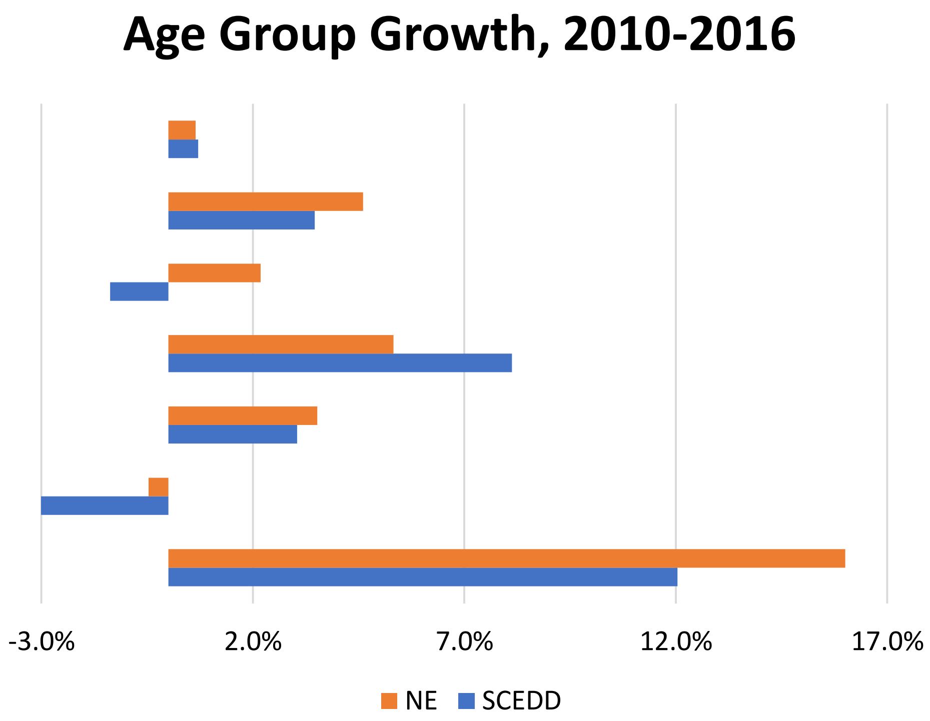
U.S. Census Bureau, American Community Survey

Key Assets – Population & Human Capital

- Key Trends:

2. Aging Population & a Loss of Working-Age Population

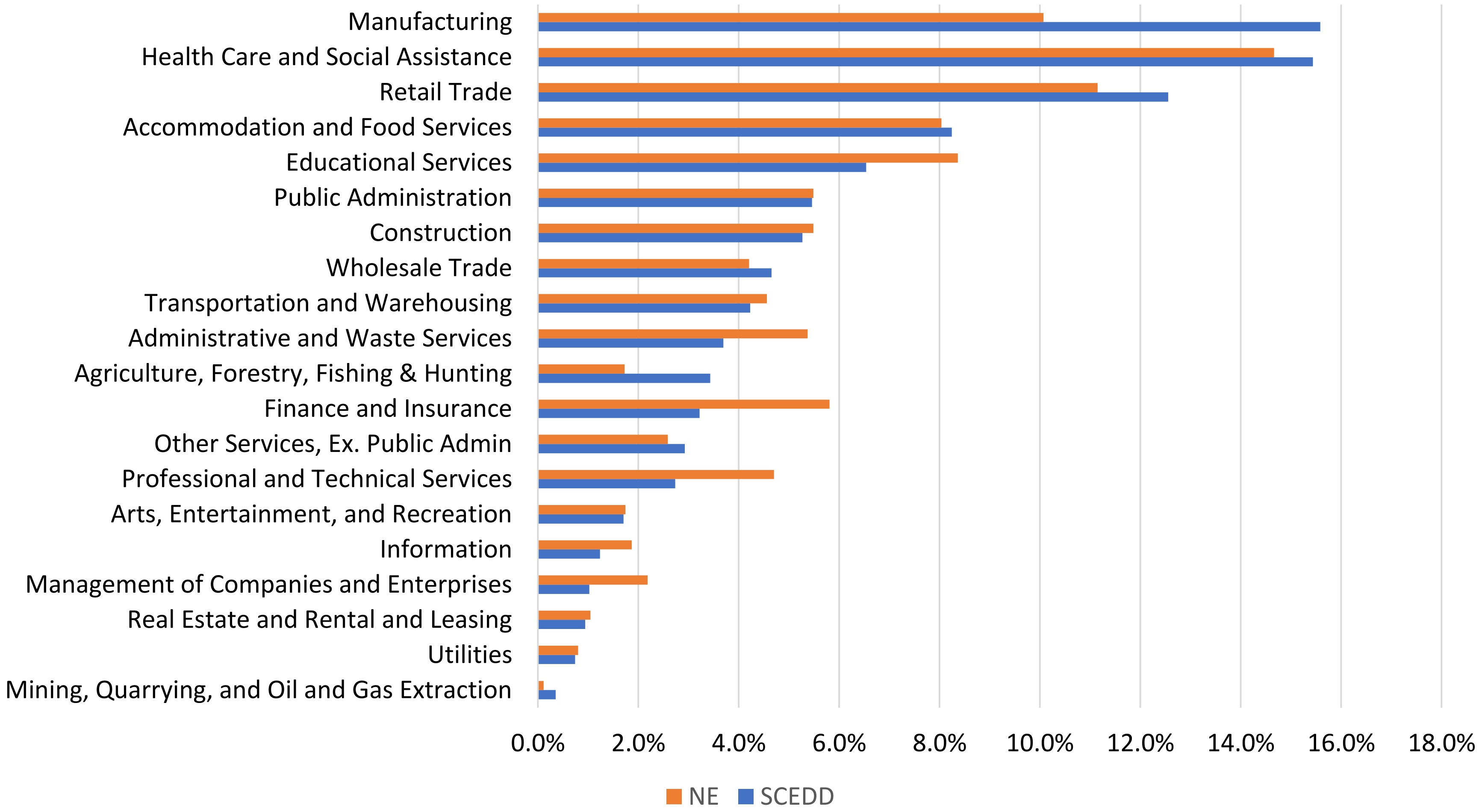




U.S. Census Bureau, American Community Survey

Labor Force Characteristics

Percentage of Workers Employed by Industry, 2017



Nebraska Department of Labor

Labor Force Characteristics

- Other important labor market trends:
    1. Weak farm economy
    2. Slower employment growth than Nebraska

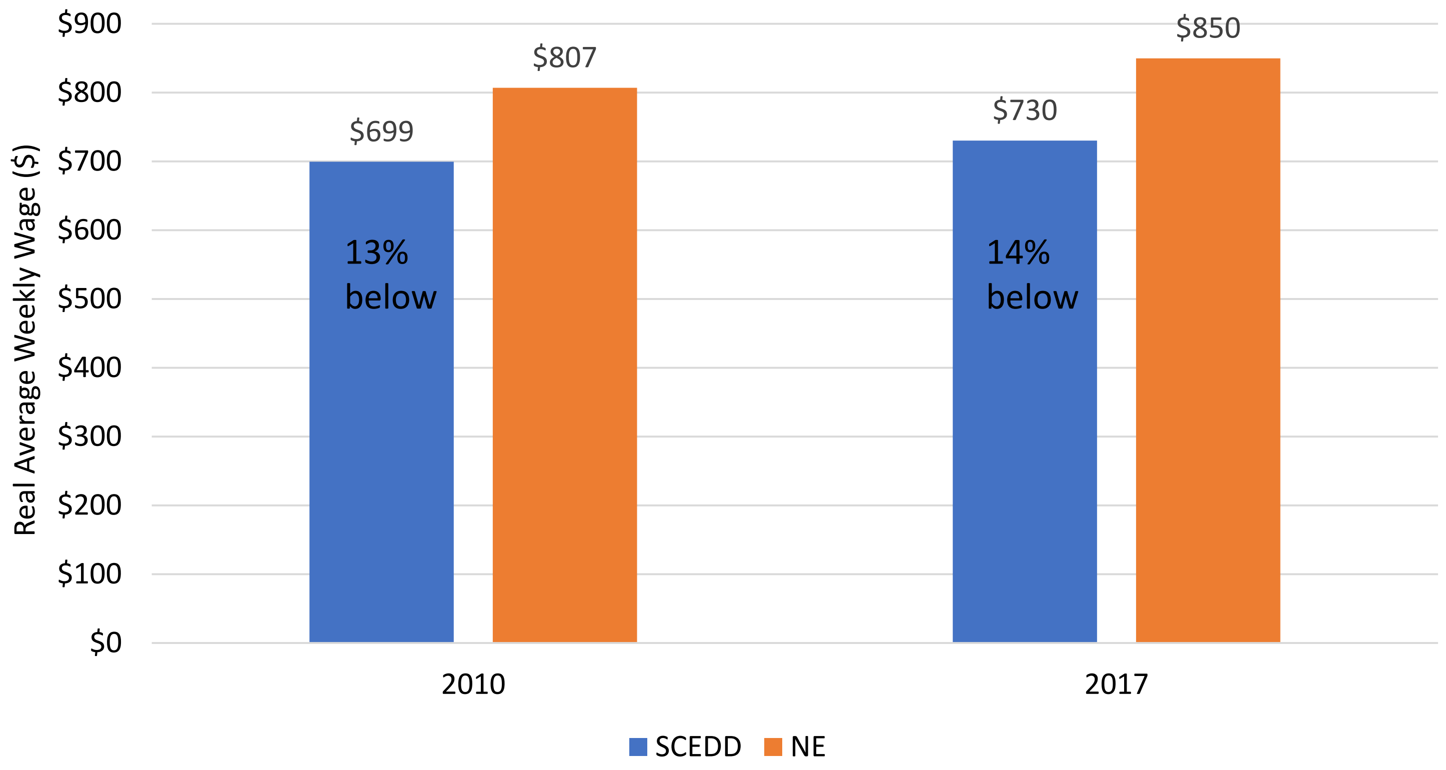
	Employment Growth, 10-17	
Top 3 Industries	**NE**	**SCEDD**
Health Care and Social Assistance	13%	6%
Retail Trade	4%	0%
Manufacturing	7%	8%
Total, All Industries	**9%**	**7%**

Nebraska Department of Labor

Labor Force Characteristics

- Other important labor market trends:

3. Slower real wage growth than Nebraska



	Wage Growth, 10-17	
	NE	SCEDD
Total, All Industries	5%	4%
Manufacturing (top employer in SCEDD)	3%	1%

Nebraska Department of Labor

Issue #1: Workforce Shortage

Top Difficulty-to-Fill Occupations:

Occupation	High Wage Occupation[a]	% of Businesses Reporting Difficulty in Hiring
Registered Nurses (SOC CODE 29-1141)	Yes	90.40%
Automotive Service Technicians and Mechanics (SOC CODE 49-3023)	Yes	89.50%
Heavy and Tractor-Trailer Truck Drivers (SOC CODE 53-3032)	Yes	80.60%
Machinists (SOC CODE 51-4041)	No	100.00%
Welders, Cutters, Solderers and Brazers (SOC CODE 51-4121)	No	85.60%
Multiple Machine Tool Setters, Operators and Tenders, Metal and Plastic (SOC 51-4081)	No	83.30%
Computer Controlled Machine Tool Operators, Metal and Plastic (SOC 51-4011)	No	75.50%
Maintenance and Repair Workers, General (SOC CODE 49-9071)	No	71.70%

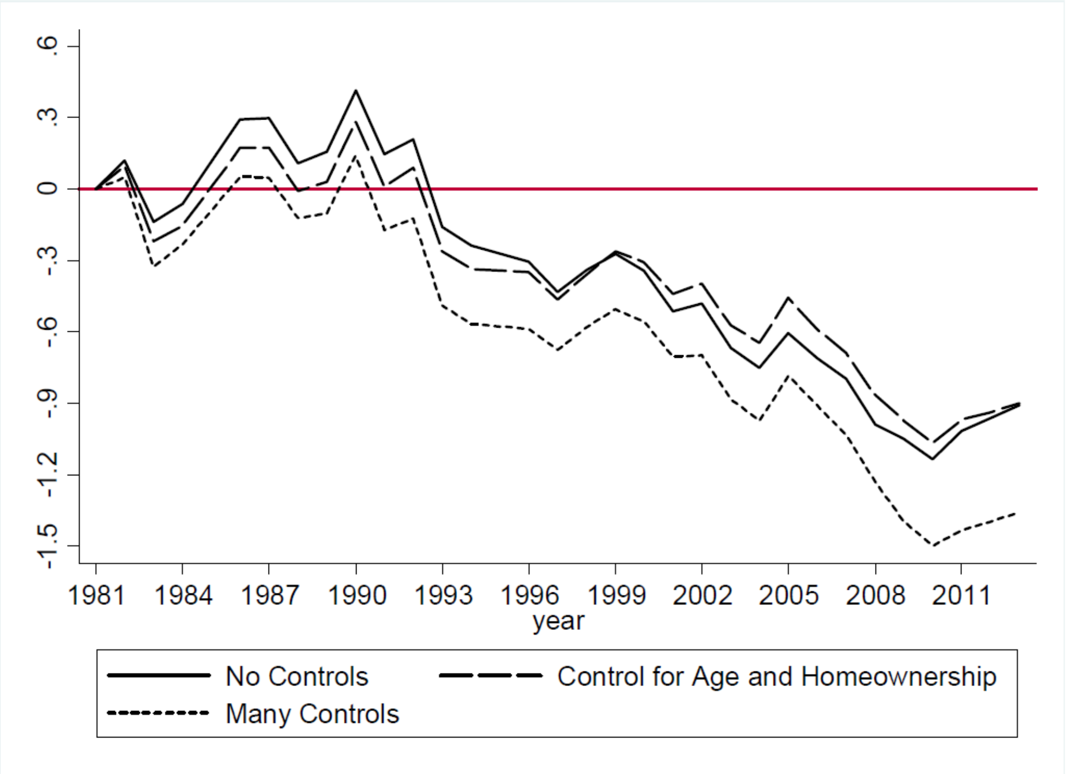
[a]Identified as a H3 (High Wage, High Skill, and High Demand) occupation by the Nebraska Department of Labor.

UNL Bureau of Business Research, 2017, Kearney Area, Hastings Area, and Grand Island Area Skills Gap Report, available at: https://neworks.nebraska.gov/gsipub/index.asp?docid=802

National Worker Trends

- Migration for jobs is down partly because of a reduction of the upside (Molloy et al., 2014)

Interstate Migration

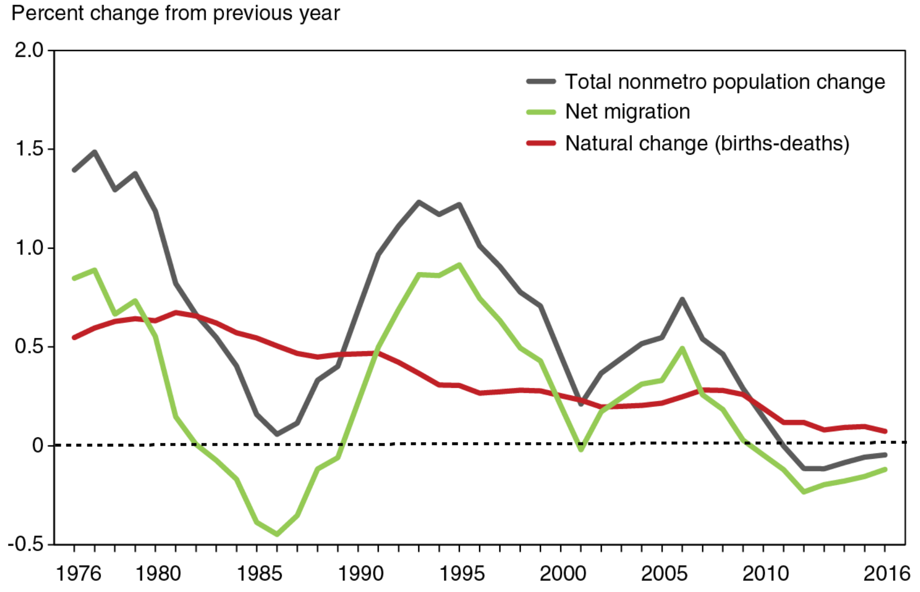


Molloy, Raven, Christopher L Smith, and Abigail K Wozniak. “Declining Migration within the U.S.: The Role of the Labor Market.” Working Paper. National Bureau of Economic Research, April 2014. https://doi.org/10.3386/w20065.

National Worker Trends

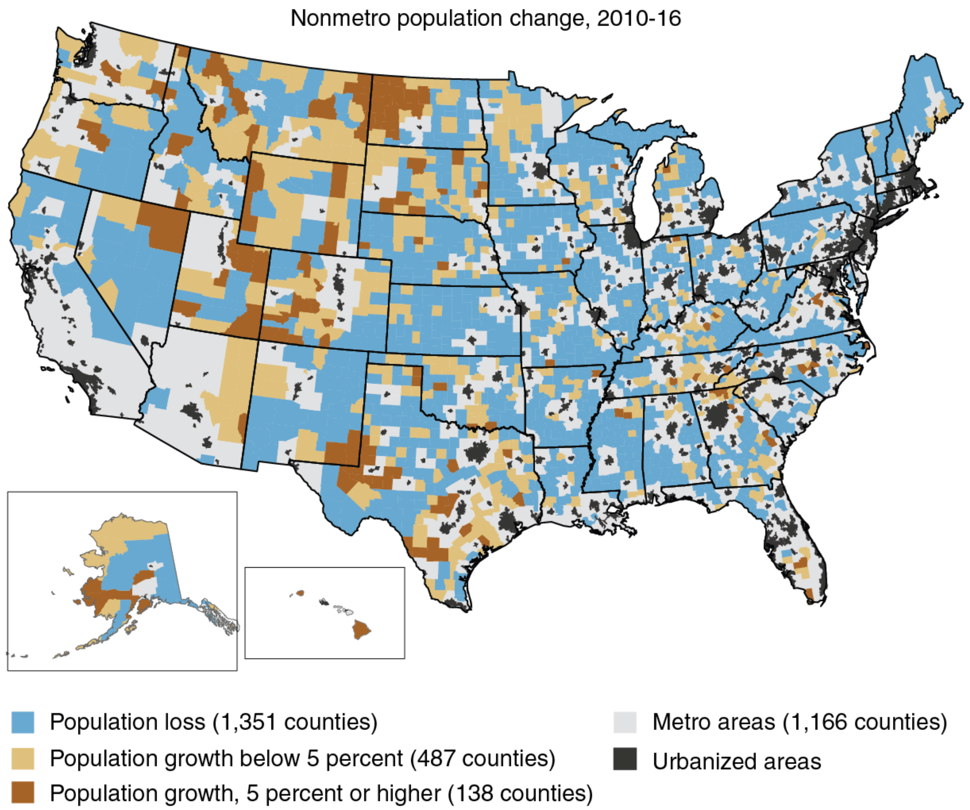
- Nonmetro population declines
  - Demographic factors
  - Economic factors

Natural change shows gradual decline; net migration more prone to short-term fluctuations



Note: Metro status changed for some counties in 1980, 1990, 2000, and 2010.
Source: USDA, Economic Research Service using data from the U.S. Census Bureau.

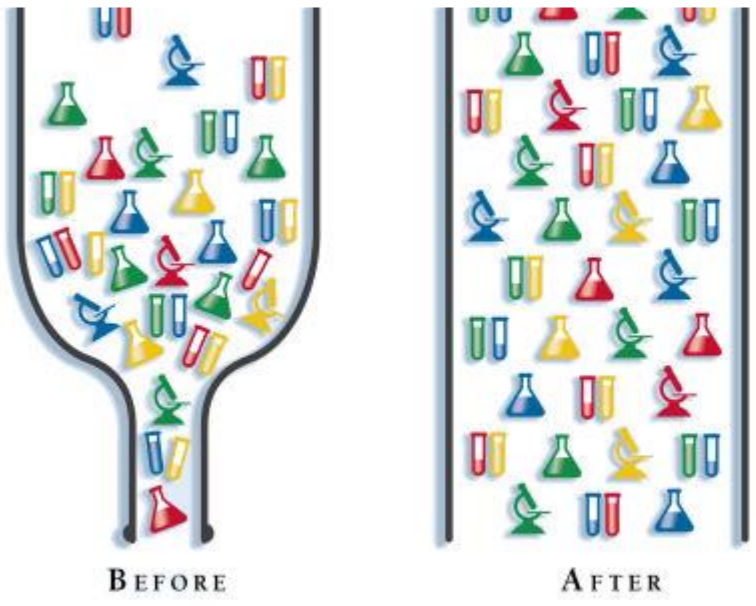
Population loss now widespread in the Eastern United States



Source: USDA, Economic Research Service using data from the U.S. Census Bureau.

Two Paths for Managing the Workforce Bottleneck

- Resist the trend
  - Invest in housing
  - Improve recruiting and retention
  - Invest in amenities



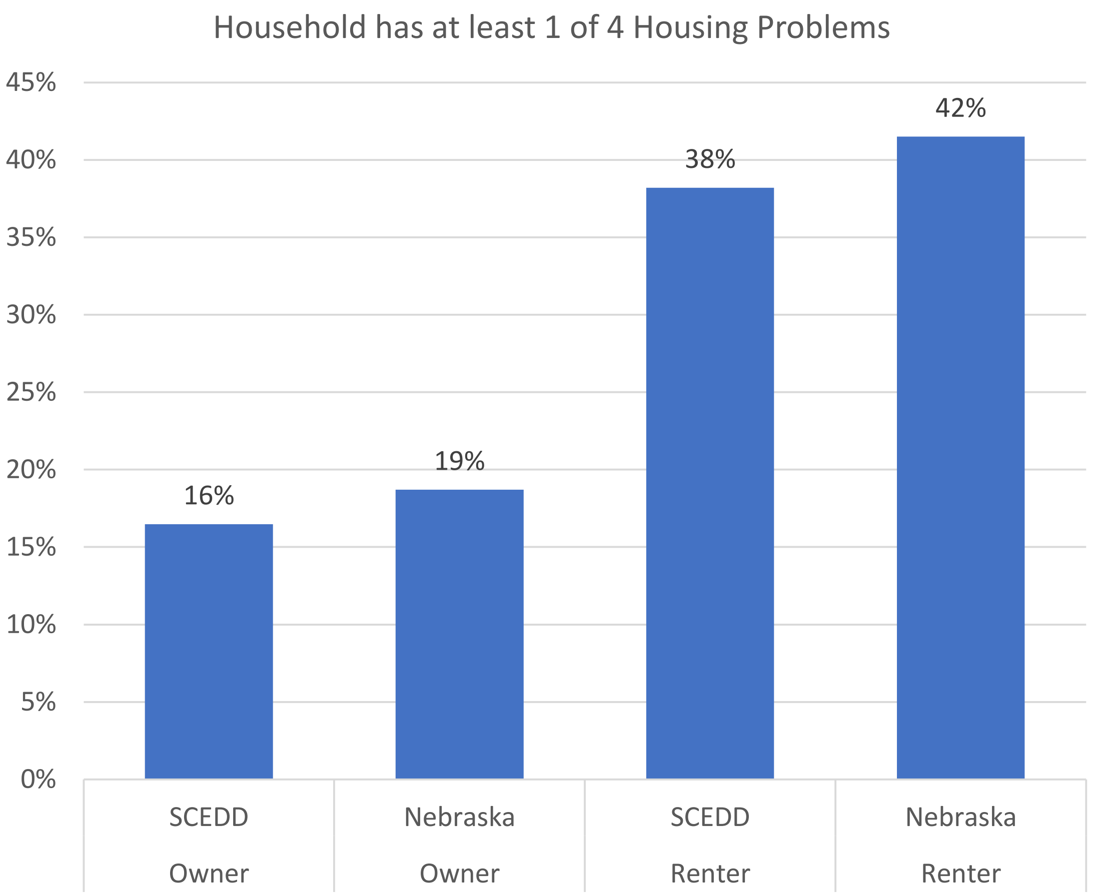
- Embrace the trend
  - Invest in automation
  - Scale and retool existing workforce

Resisting the Trend Through Investment

- Creative class, outdoor amenities, entrepreneurial context
  - Creative class in rural areas include individuals with jobs that include thinking creatively in their tasks – Developing, designing, creating, ideas, systems products or artistic contributions
  - These occupations include high-end sales positions, scientists, engineers, college professors, artists and designers.
- Outdoor amenities
  - Landscape, recreational appeal
- Entrepreneurial context
  - Self-employment, startups

McGranahan, David A., Timothy R. Wojan, and Dayton M. Lambert. "The Rural Growth Trifecta: Outdoor Amenities, Creative Class and Entrepreneurial Context." *Journal of Economic Geography* 11, no. 3 (May 1, 2011): 529–57. https://doi.org/10.1093/jeg/lbq007.

Resisting the Trend Through Housing

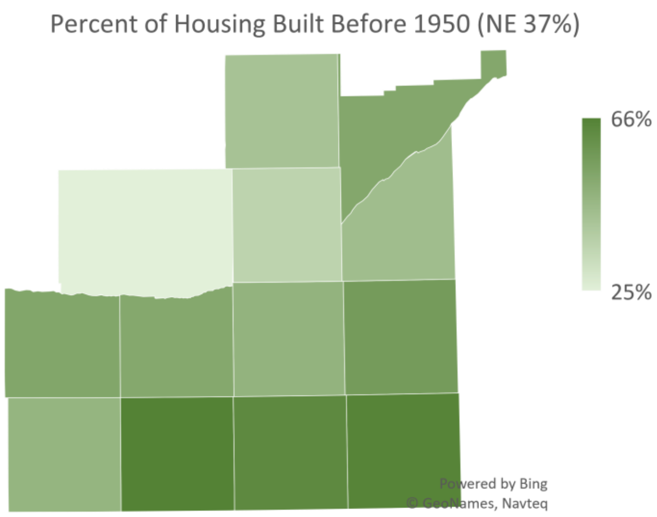


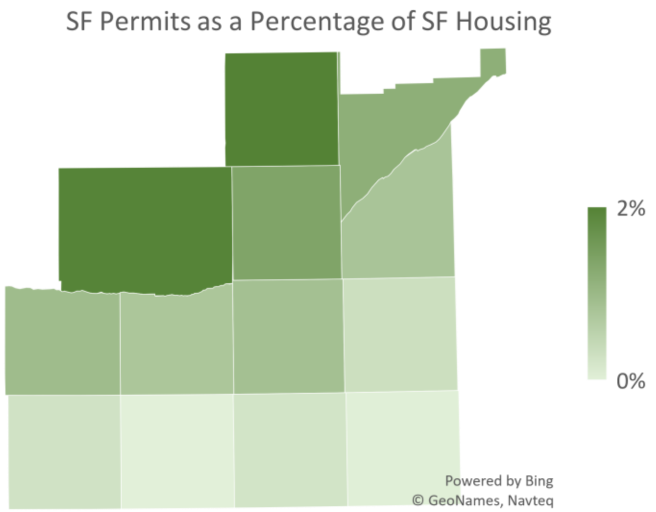
Housing Problems

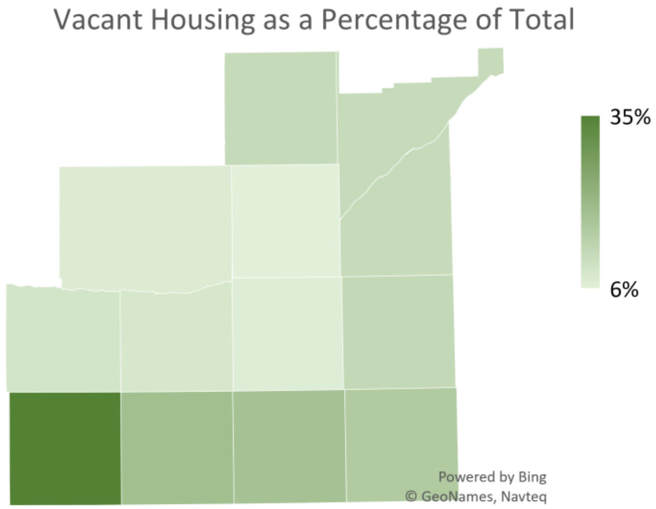
- Housing unit lacks complete kitchen facilities
- Housing unit lacks complete plumbing facilities
- Household is overcrowded
  - Overcrowding – More than 1 person per room
- Household is cost burdened.
  - Monthly housing costs (including utilities) exceeding 30% of monthly income

Each year, the U.S. Department of Housing and Urban Development (HUD) receives custom tabulations of American Community Survey (ACS) data from the U.S. Census Bureau. These data, known as the "CHAS" data (Comprehensive Housing Affordability Strategy), demonstrate the extent of housing problems and housing needs, particularly for low income households. https://www.huduser.gov/portal/datasets/cp.html#2006-2015_data

Issue #2: Housing



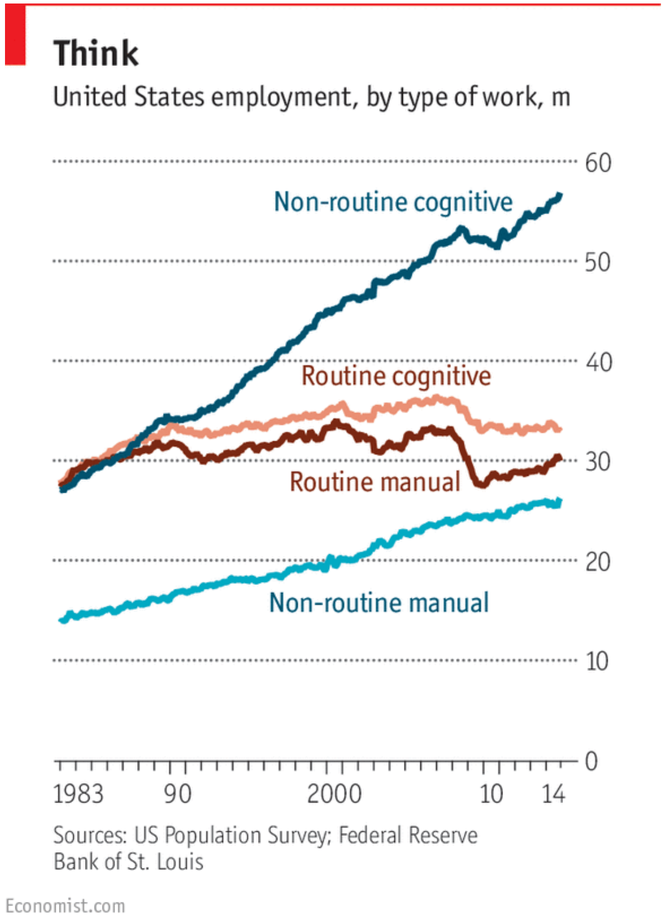




UNL Bureau of Business Research, 2017, Kearney Area, Hastings Area, and Grand Island Area Skills Gap Report, available at: https://neworks.nebraska.gov/gsipub/index.asp?docid=802

Embracing the Trend through Automation

- Concerns over automation and full employment have a long history
  - Textile workers and steam engines (Luddites in the early 1800s)
  - March of the machine makes idle hands (NYT 1928)
  - Automation is replacing men as the major domestic challenge (John F. Kennedy 1960s)
- Past technology has always created more jobs than those destroyed
  - Automating tasks (to be done more quickly or cheaply) increases demand for human workers to do the other tasks around it that have not be automated – David Autor MIT Economist



https://www.economist.com/special-report/2016/06/25/automation-and-anxiety

Stages of Regional Economic Development

http://reactiongifs.com/?p=18478

Stages of Regional Economic Development

We are here

Factor-Driven Stage

- Advantage based exclusively on labor and natural resources
- Relatively lower wages

Investment-Driven Stage

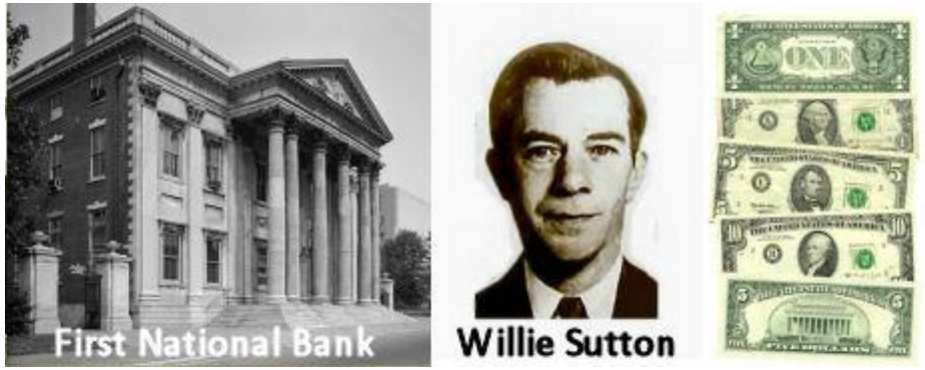
- Efficiency in producing standard products & services
- Manufacturing & outsourced service exports
- Higher wages but susceptible to cycles/shocks

Innovation-Driven Stage

- Produce innovative products and services at the technological frontier
- Deep clusters for productivity, interaction and innovation

Harvard Business School Institute for Strategy & Competitiveness at https://www.isc.hbs.edu/competitiveness-economic-development/frameworks-and-key-concepts/Pages/shapes-of-development.aspx Accessed 8/23/2018

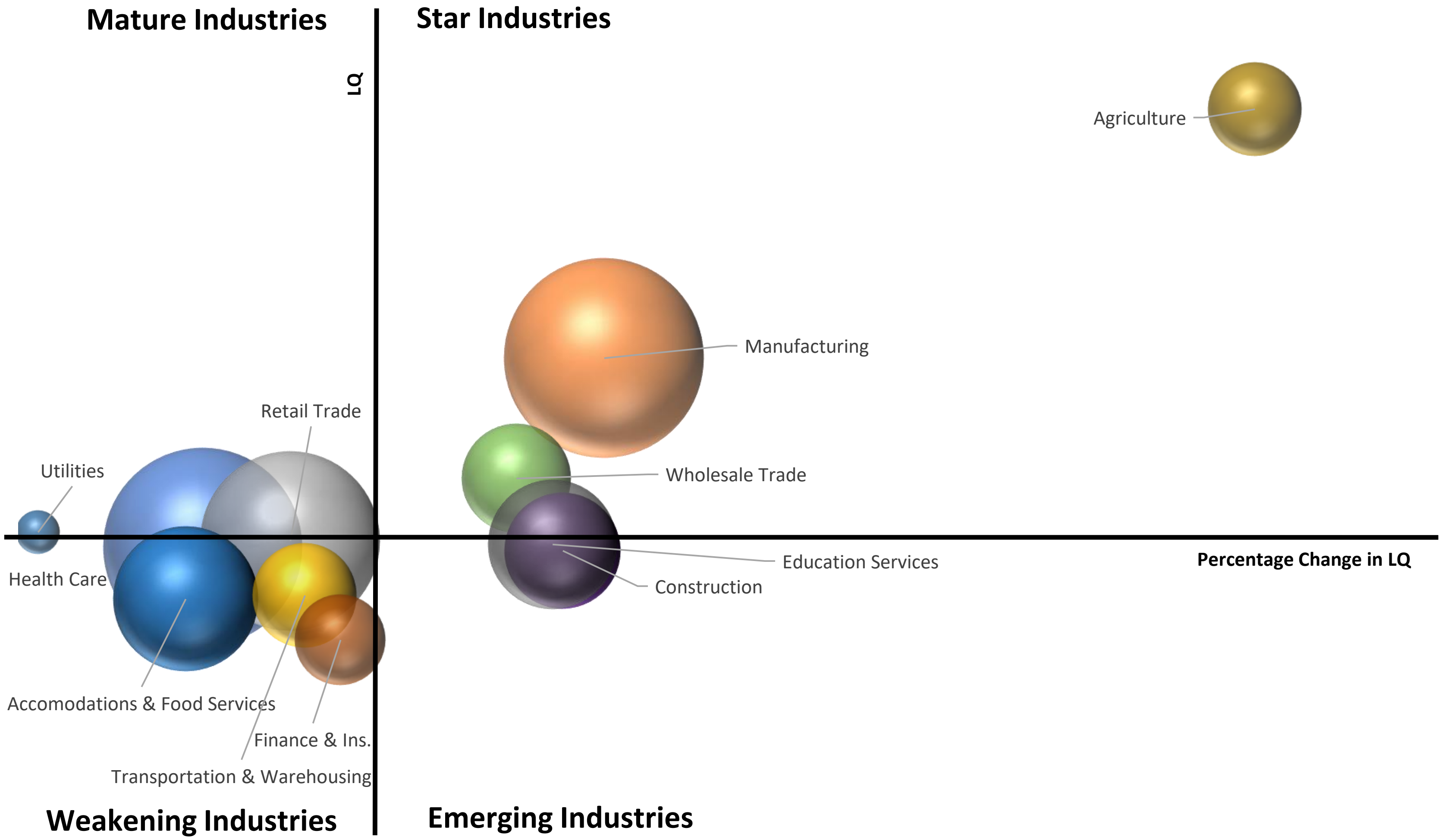
Building on Strengths



Because that’s where the money is.

- Shifting from stage 2-3
- Identifying/reinforcing cluster industries
- Enhancing institutions to support/connect and fund these industries

Industry Cluster and Emerging & Declining Industries



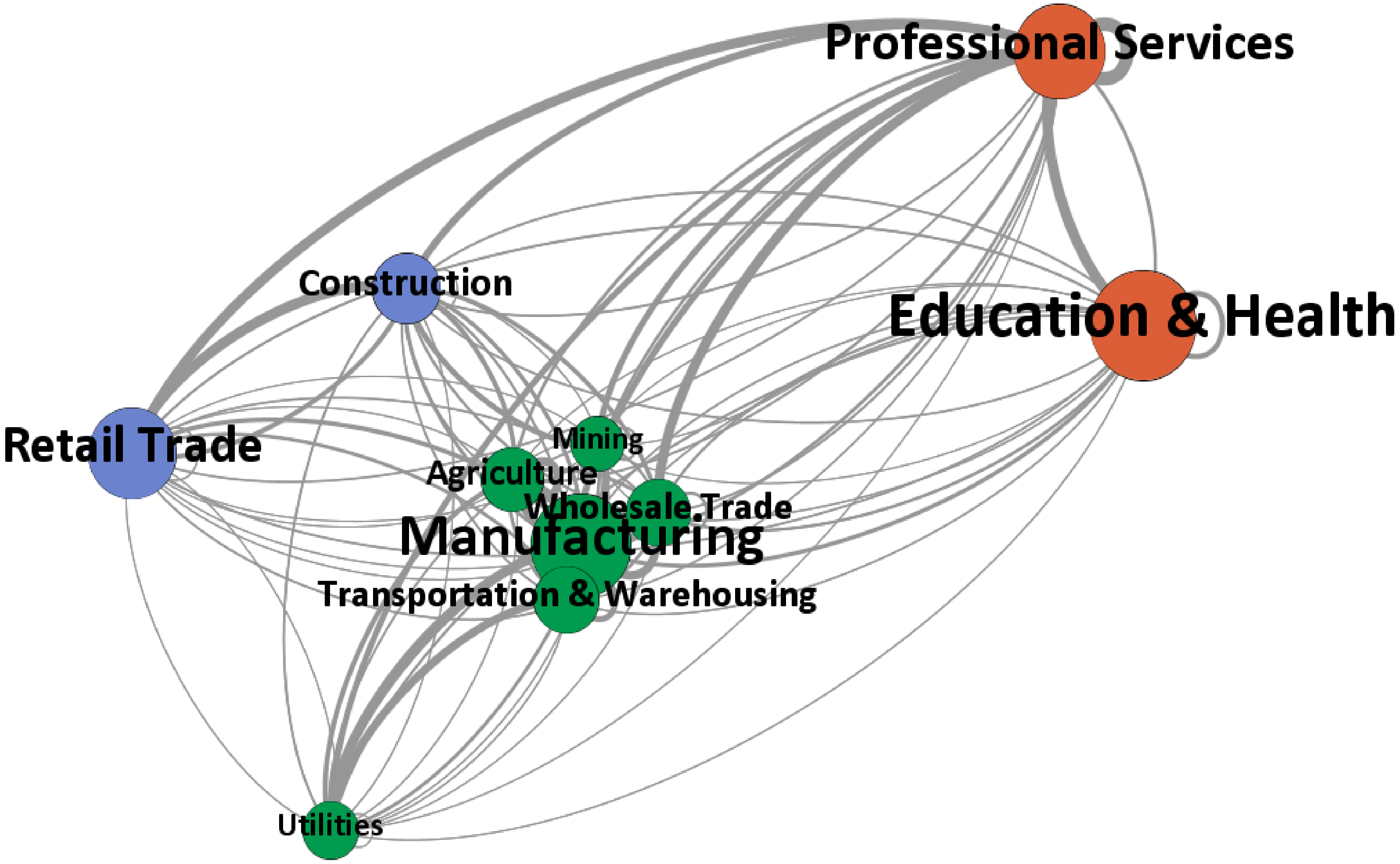
Census Bureau, Quarterly Workforce Indicators

Key Subsectors

Key Subsectors	% of Industry's Final Demand Produced
Agriculture	
Grain farming	51.4%
Beef cattle ranching and farming, including feedlots and dual-purpose ranching and farming	27.8%
Oilseed farming	18.5%
Top 3 Agriculture Subsectors	**97.7%**
Manufacturing	
Animal, except poultry, slaughtering	31.2%
Farm machinery and equipment manufacturing	11.8%
Soybean and other oilseed processing	6.8%
Motor vehicle gasoline engine and engine parts manufacturing	6.5%
Other basic organic chemical manufacturing (e.g., ethanol)	6.2%
Top 5 Manufacturing Subsectors	**62.5%**

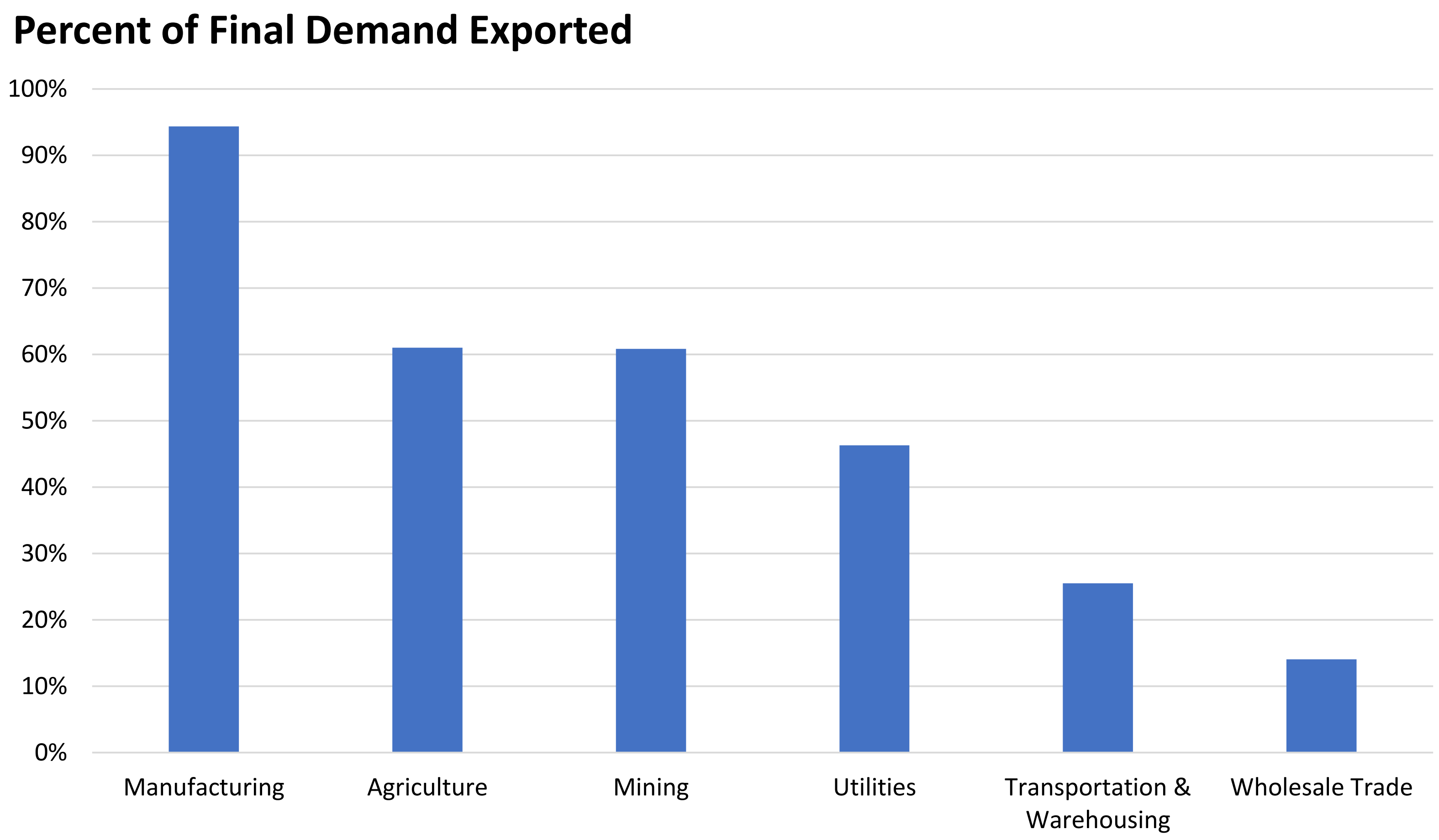
Minnesota IMPLAN Group data for 13-county SCEDD

Regional Economy



Minnesota IMPLAN Group data for 13-county SCEDD

Strong Exporters



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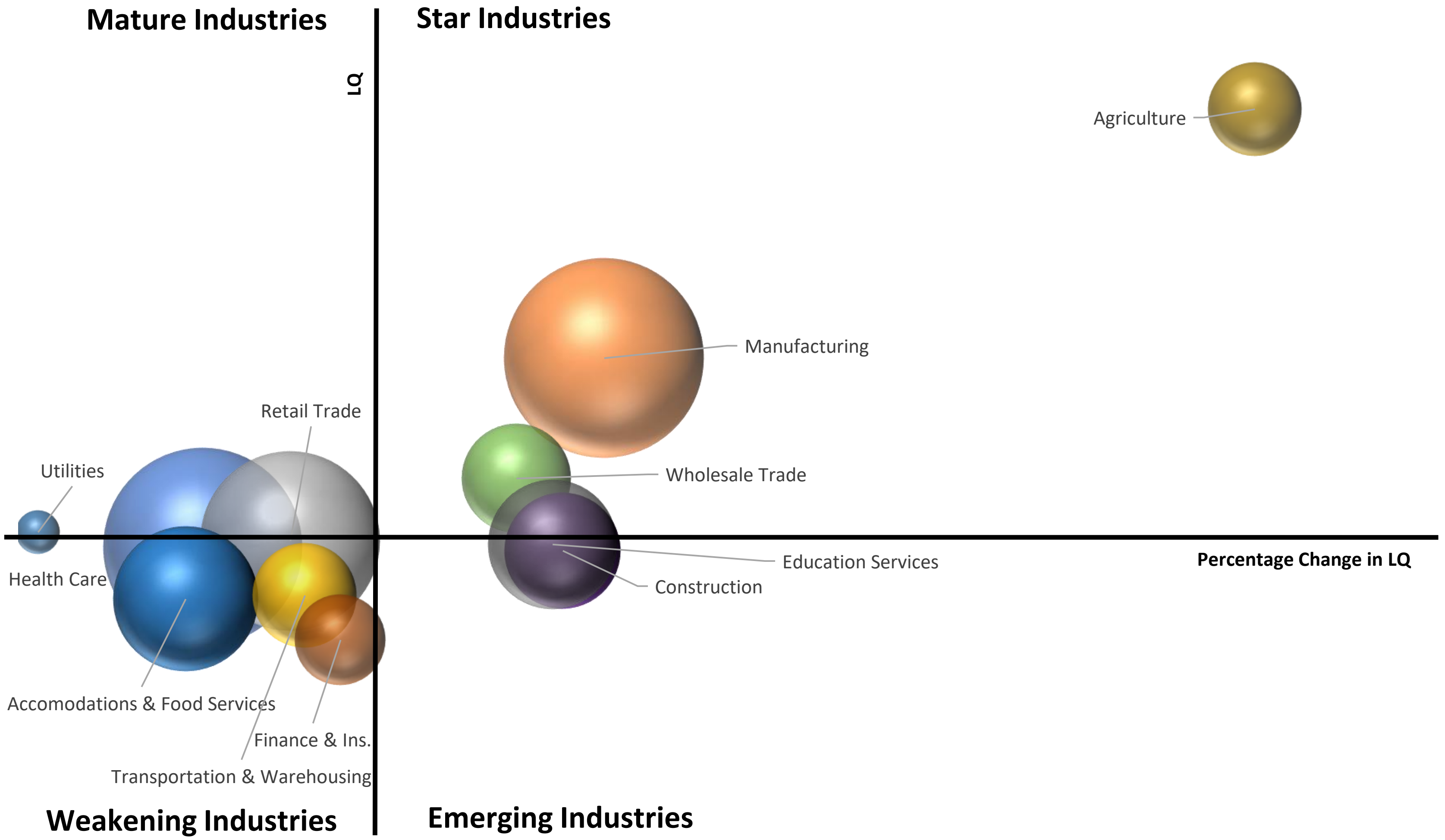
Industry Cluster and Emerging & Declining Industries



Census Bureau, Quarterly Workforce Indicators

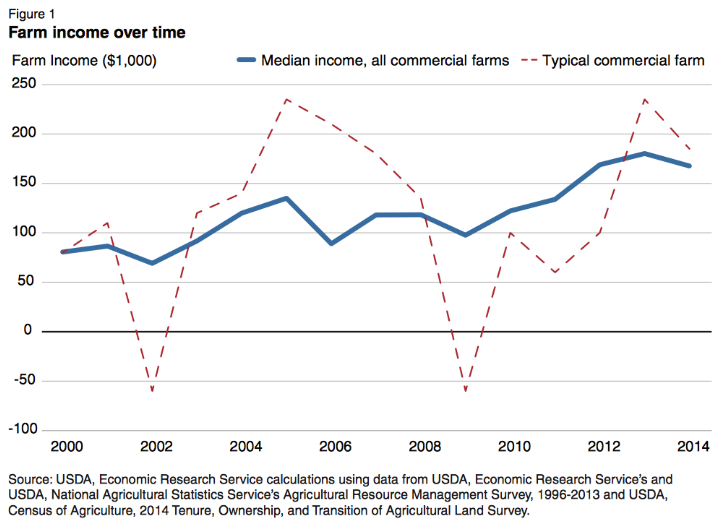
Regional Competitiveness

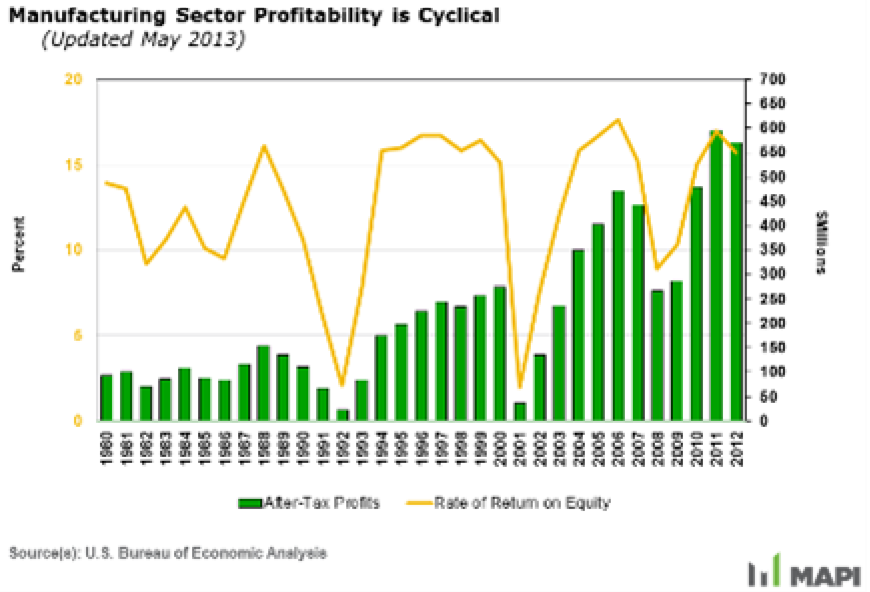
Industry	Change in Employment since 2007	National Growth Effect	Industry Mix Effect	Regional Competitive Effect
Manufacturing	-556	1,163	-2,670	951
Agriculture	775	103	50	622
Wholesale Trade	100	391	-407	116
Educational Services	844	650	-182	376
Construction	-272	386	-874	216
Retail Trade	-567	923	-254	-1,235
Health Care and Social Assistance	1,115	1,037	2,535	-2,457

Census Bureau, Quarterly Workforce Indicators

Variability in Core Industries

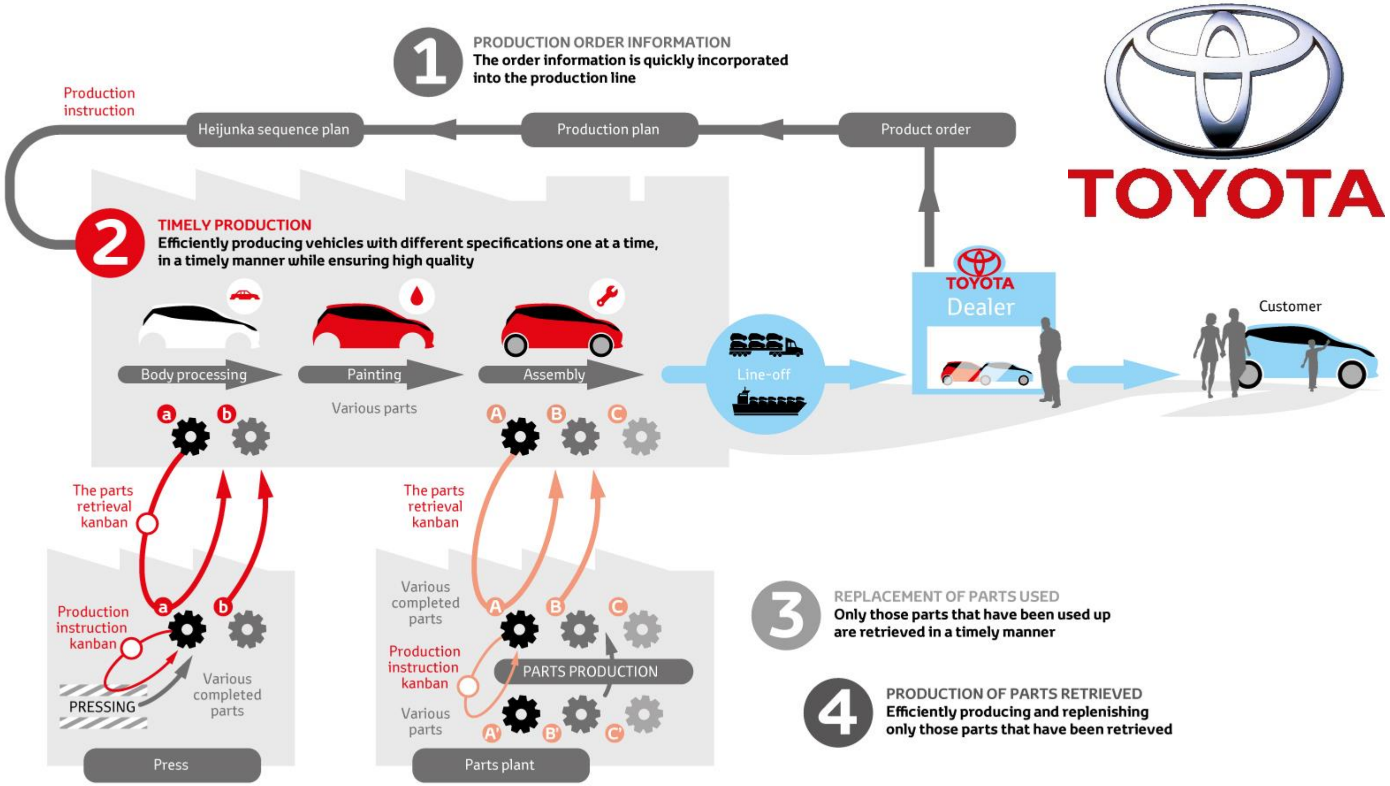
- Output price volatility is of concern to agriculture firms (FAO et al., 2011).
  - Climate, pests, inelastic supply and demand for ag products
  - Farm income is more volatile than off-farm income
- Manufacturing profits are volatile particularly as it relates to durable goods.
  - Replacement rates
  - Supply chain transparency





https://www.ers.usda.gov/amber-waves/2017/januaryfebruary/farm-households-experience-high-levels-of-income-volatility/
http://www.oecd.org/tad/agricultural-trade/48152638.pdf

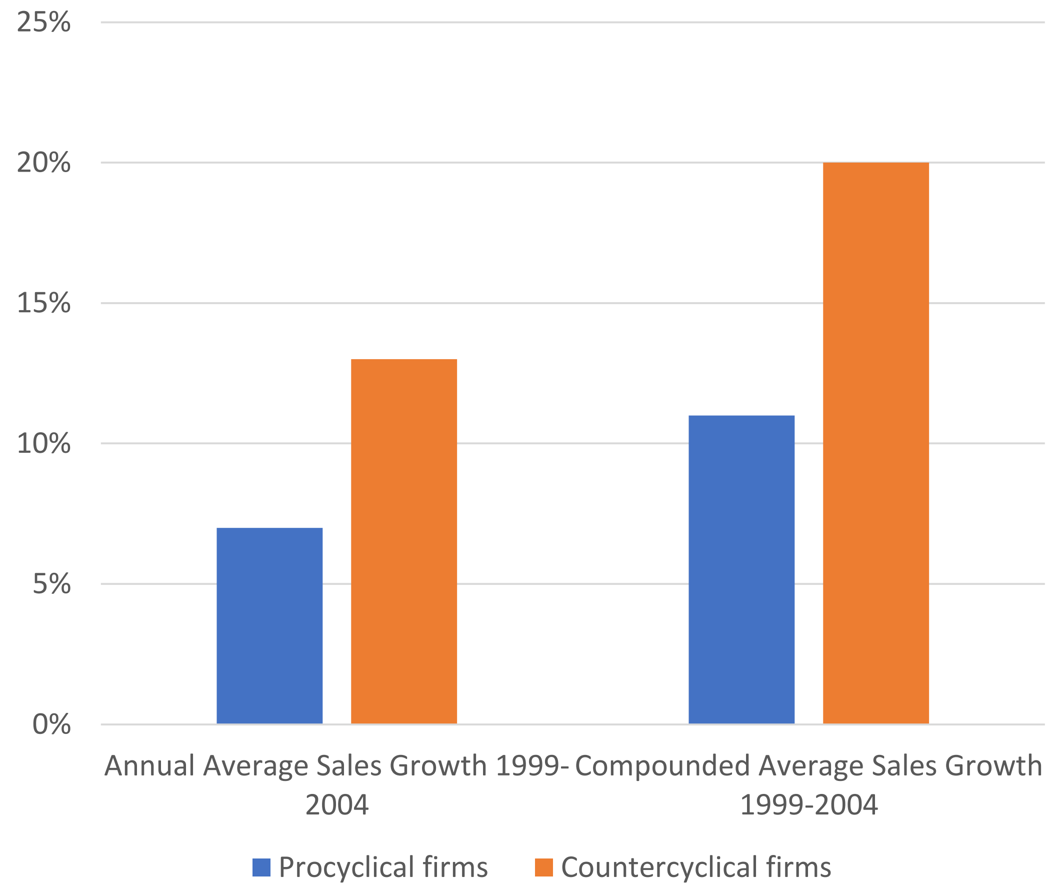
Cyclical Industry Advantage



- Building the Toyota Production System required stable production
  - Just in time inventory
  - Continual feedback
  - In process quality control
- Toyota partially accomplished this with pricing/demand management
- In agriculture – storage, irrigation, insurance, futures, diversification, access to credit

Cyclical Industries and Investment

- Industry and business cycles often weaken strategic investment (Tan, Hao & Mathews 2010)
  - Uncertainty leads to less responsiveness of R&D to the environment (Bloom 2007)
  - Firms tend to be more risk averse during contraction, more local search, less funding (Silvestri, Riccaboni & Malva 2018)
- Advantages can be generated through counter cyclical investment
  - Financially resilient/diversified firms produce more novel patents (Silvestri, Riccaboni & Malva 2018)
  - Innovation particularly when generated in downturns creates market value and impact (Silvestri, Riccaboni & Malva 2018)



Tan, Hao, and John A. Mathews. "Cyclical Industrial Dynamics: The Case of the Global Semiconductor Industry." *Technological Forecasting and Social Change* 77, no. 2 (February 1, 2010): 344–53. https://doi.org/10.1016/j.techfore.2009.08.003. Silvestri, Daniela, Massimo Riccaboni, and Antonio Della Malva. "Sailing in All Winds: Technological Search over the Business Cycle." *Research Policy*, July 31, 2018. https://doi.org/10.1016/j.respol.2018.07.002.

Opportunities & Strategic Direction

- Priority Area #1: Industry Growth & Innovation
  - Goal #1: To grow, sustain, and integrate efforts related to diversifying the regional economy, particularly in the agriculture-manufacturing-wholesale trade industry cluster
- Priority Area #2: Workforce Development
  - Goal #2: To attract, develop, and retain a skilled, competitive, and entrepreneurial workforce that meets the needs of the regional business community, particularly in the agriculture, manufacturing, and health care industries
- Priority Area #3: Housing
  - Goal #3: To increase diverse and affordable housing options

Questions?