NORTH DAKOTA: RECENT TRENDS AND CURRENT CONDITIONS

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NDSU

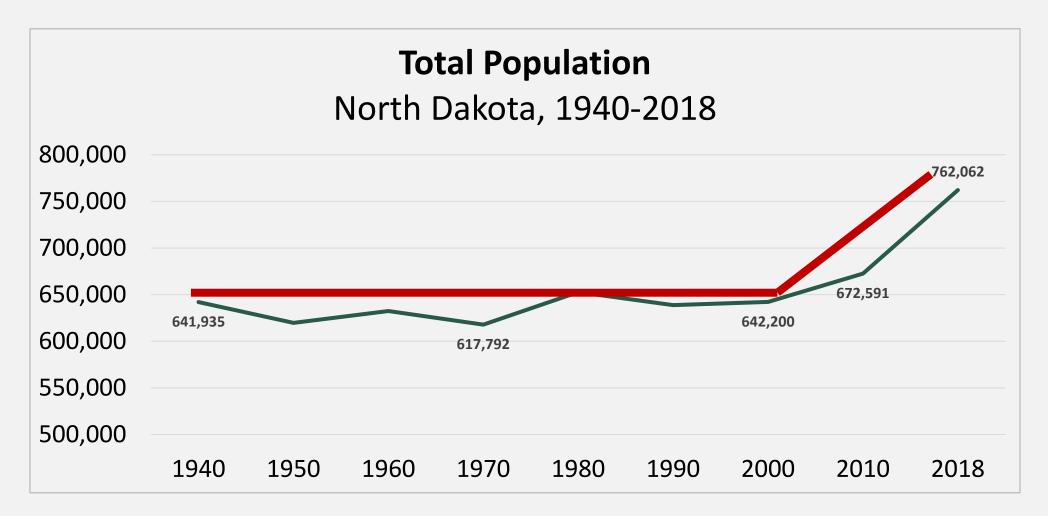
CENTER FOR SOCIAL RESEARCH



OVERVIEW

- Population and Demographics
- Economy
- Oil and Gas –Part of larger energy industry (coal mining and conversion, wind and ethanol)
- Agriculture
- Key Considerations

POPULATION CHANGE



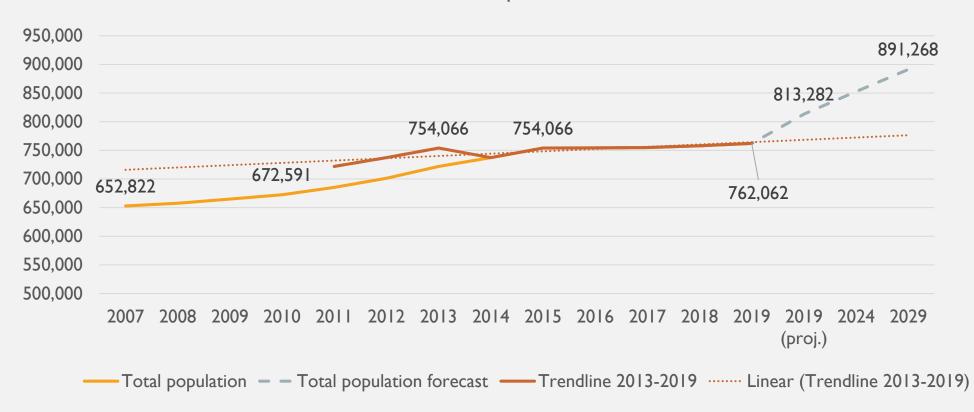
Source: ND Compass/Demographics/Population





MORE RECENT POPULATION TRENDS AND FORECAST

North Dakota Population and Forecast

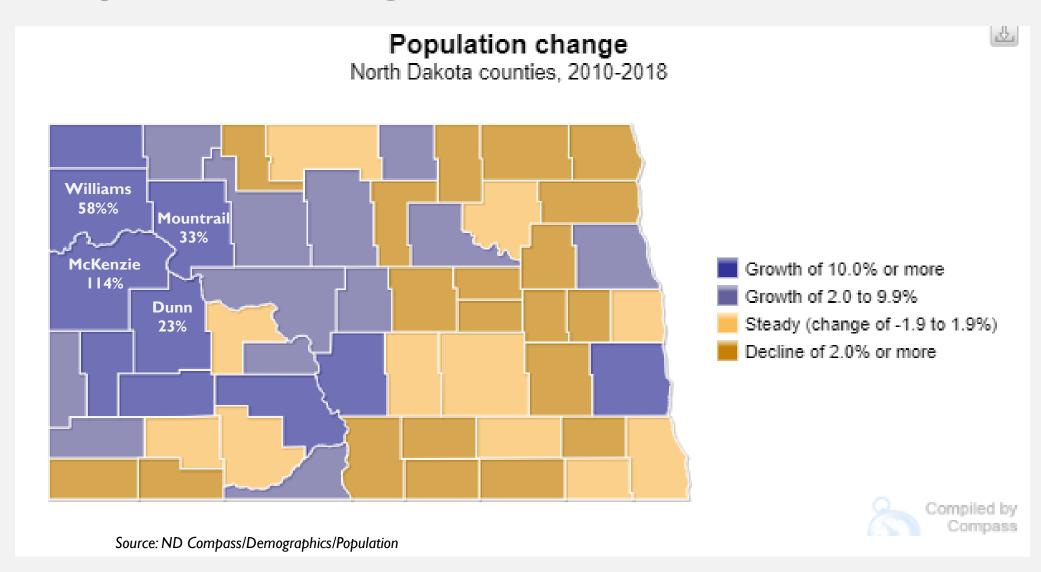




ndcompass.org



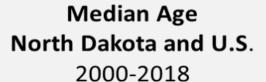
Population Change is Not Consistent Statewide

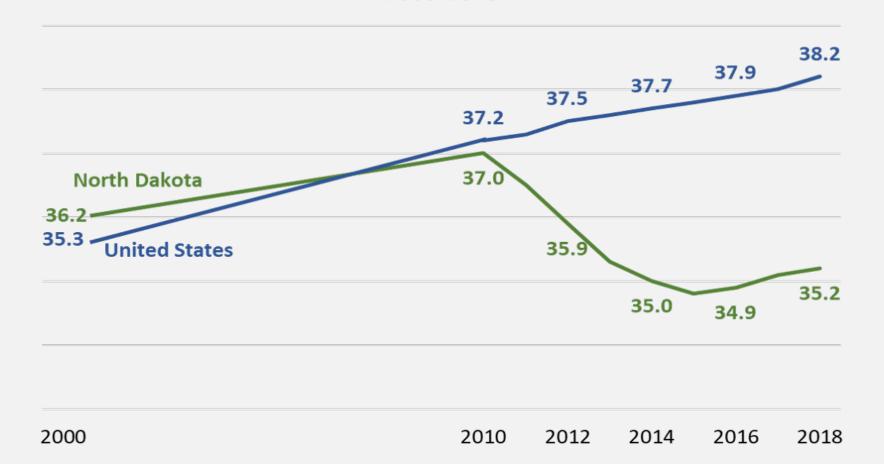




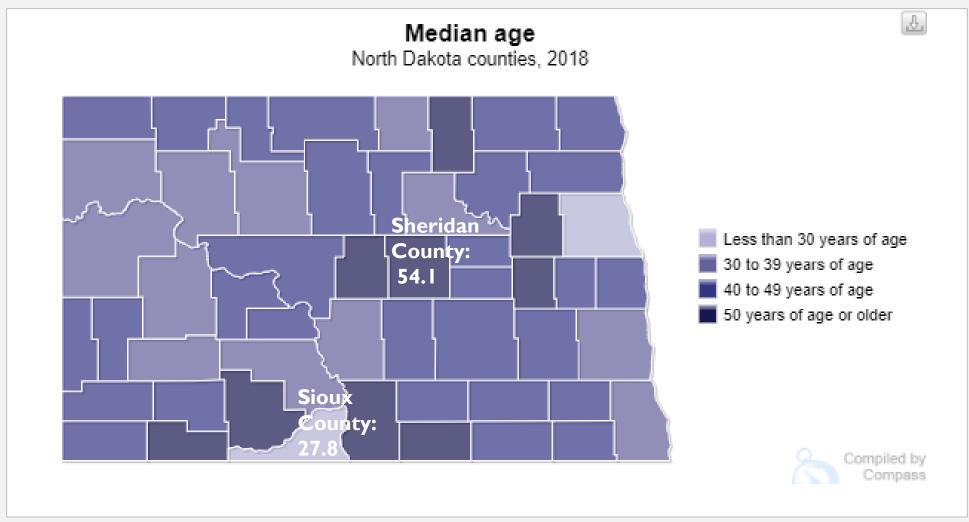


GETTING YOUNGER





MEDIAN AGE

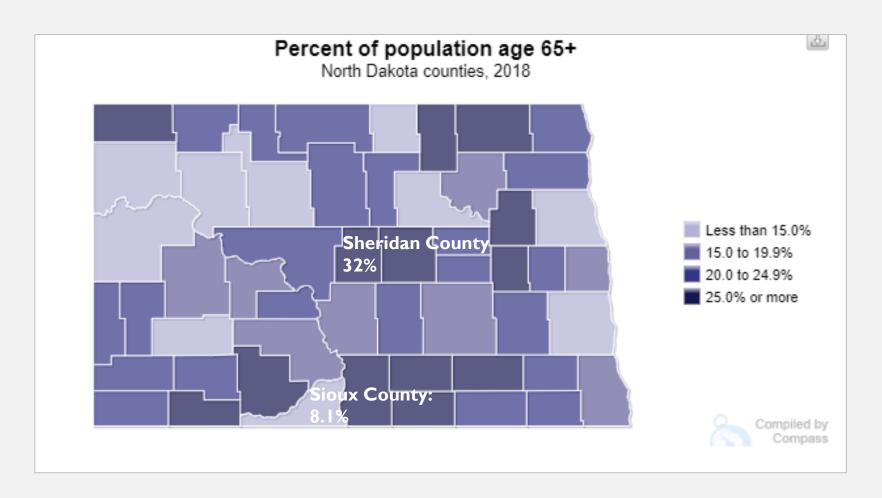


Source: ND Compass/Demographics/Age





OLDER ADULTS (age 65+)

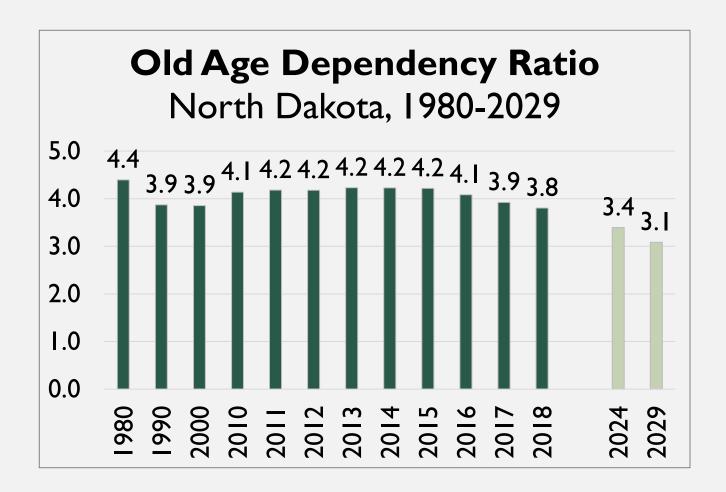


Source: ND Compass/Demographics/Age





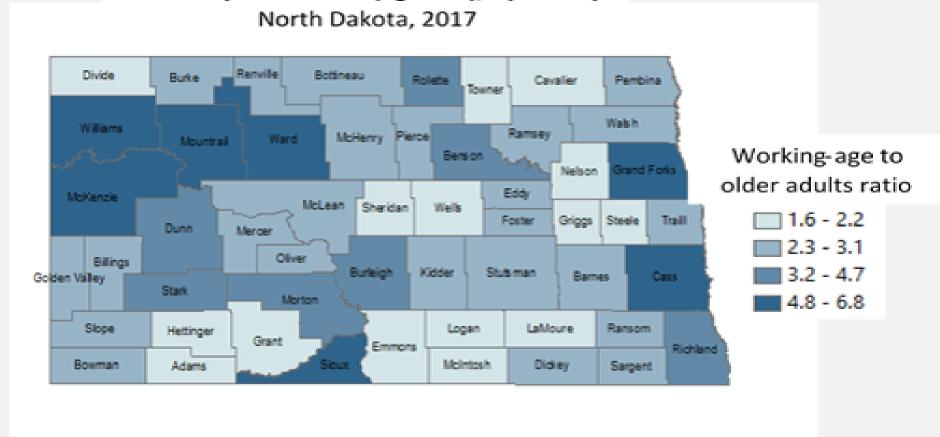
OLD AGE DEPENDENCY





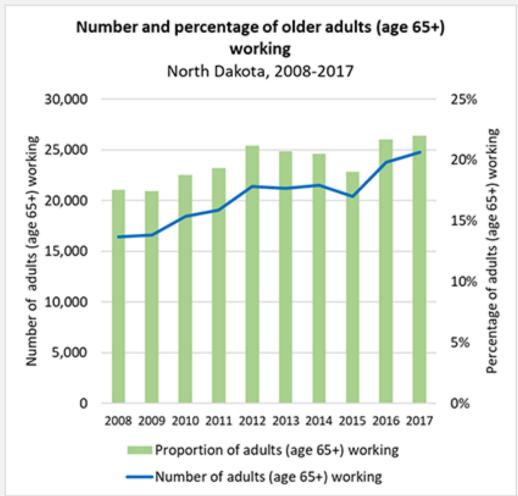
OLD AGE DEPENDENCY

Number of working-age adults (age 20-64) for every older adult (age 65+), by county

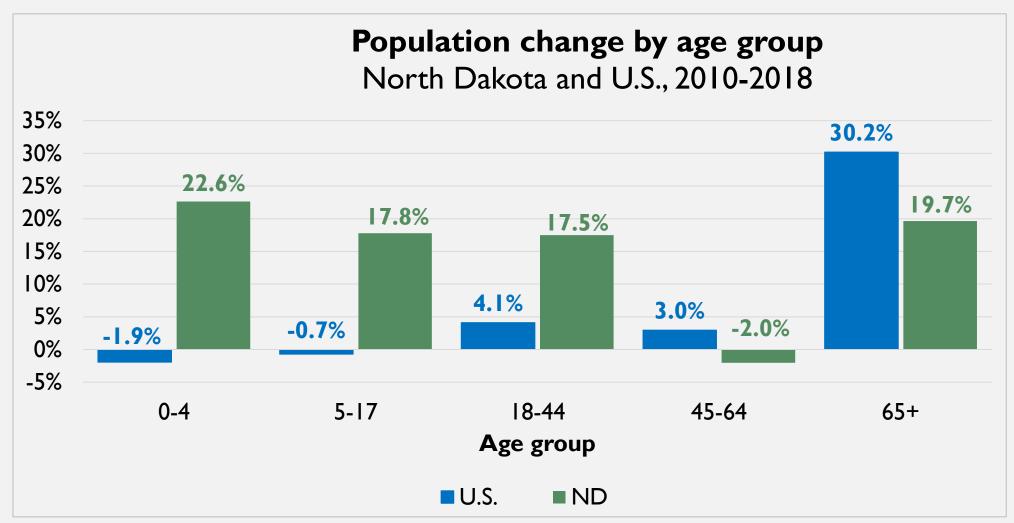


OLDER ADULTS WORKING

(age 65+)



AGE GROUPS



Source: ND Compass/Demographics/Age

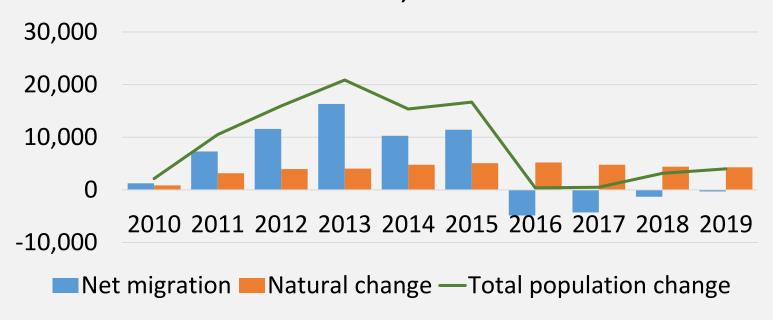




COMPONENTS OF CHANGE

Population change by components of change

North Dakota, 2010-2019



2019 Vintage Population Estimates

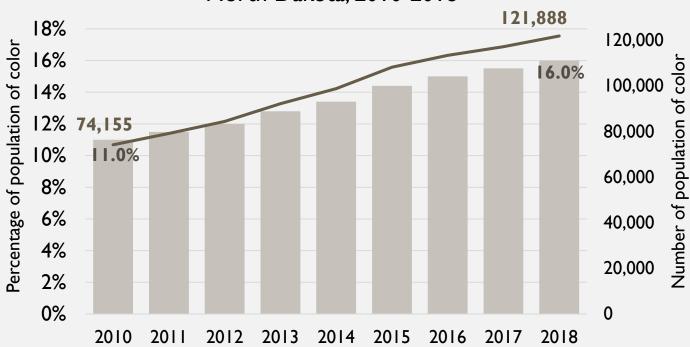




RACIAL AND ETHNIC DIVERSITY

Population of color

(number and percentage in total population)
North Dakota, 2010-2018

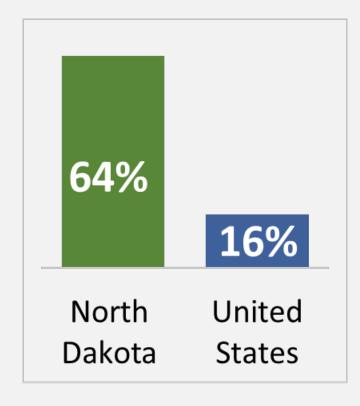


Source: ND Compass/Demographics/Race

ndcompass.org

NORTH DAKOTA COMPASS

Percentage increase in population of color (2010-2018)



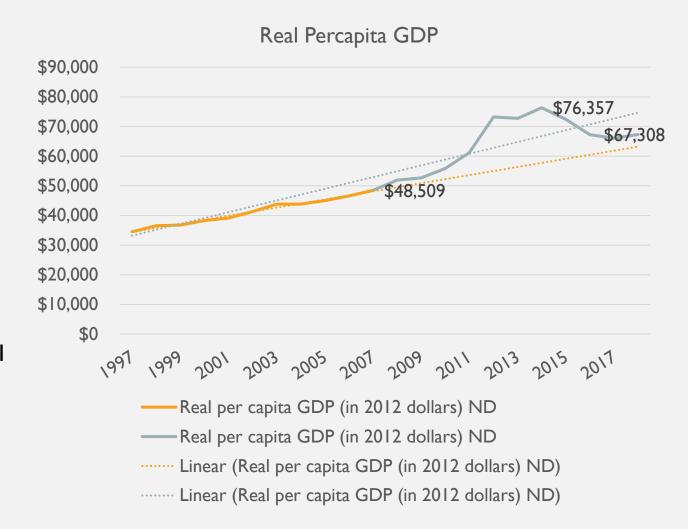


DEMOGRAPHICS AND

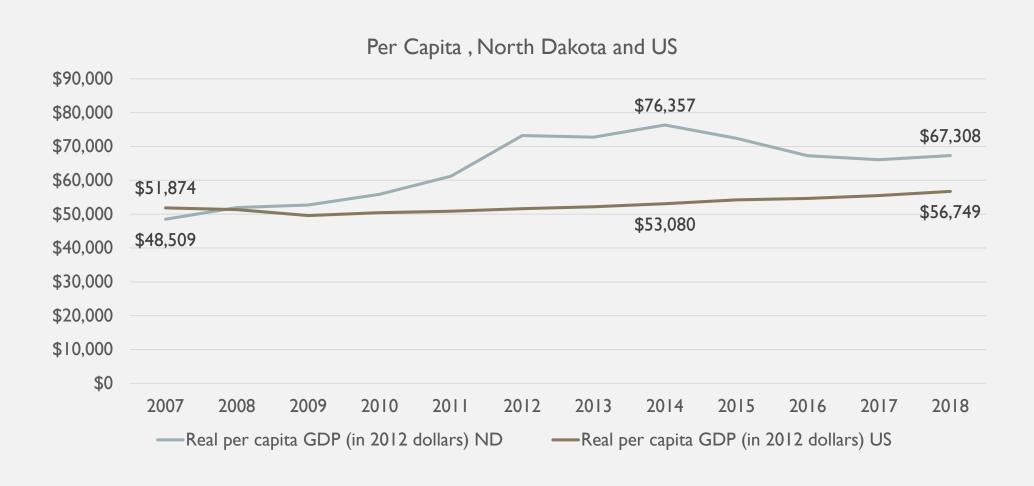
- Dramatic population growth fueled by booming economy
- Future growth will be a result of births more so then the in-migration like the last decade
- Characteristics population have changed, much younger and more diverse
- Changes in population are not uniform

ECONOMY: GROSS STATE PRODUCT

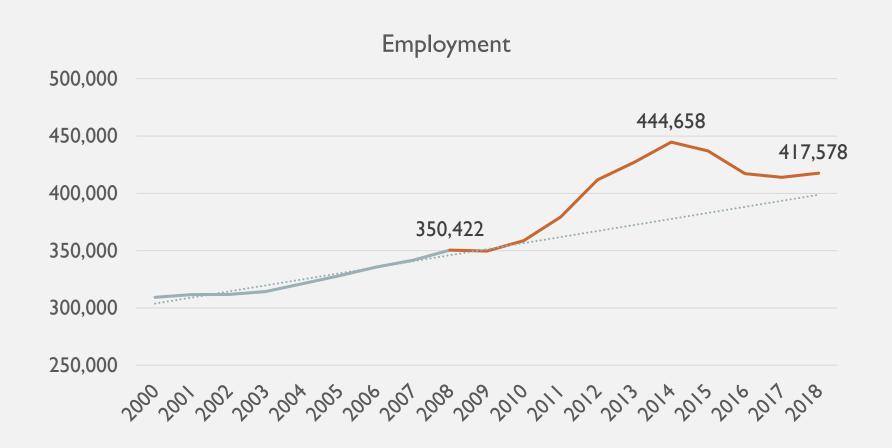
- GSP growth rate that far exceeded historical trends
 - Increased by 29 percent since 2008
 - 75 percent increase since 2000
 - ND has had the fastest growing state economy in the county in the last decade
- Took a pretty good hit when oil and gas prices crashed, GSP decline of 6 percent in 2015
- Agriculture commodity markets crashed at roughly the same time as oil and gas
- Total GDP grew from \$38 billion in 2010 to \$51 billion in 2018
- ND economy still driven by commodities...oil and gas and agriculture



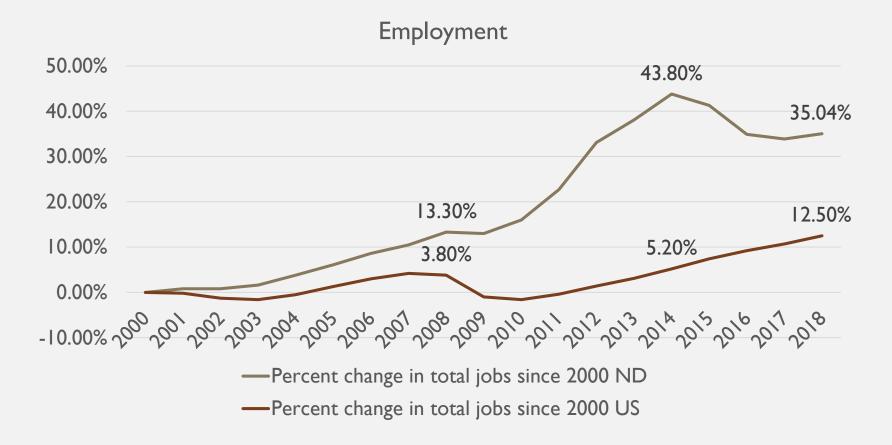
PER CAPITA GROWTH: 37.8 PERCENT GROWTH SINCE 2007, COMPARED TO 16 PERCENT NATIONALLY



EMPLOYMENT



EMPLOYMENT



FILLING JOBS IS A CHALLENGE

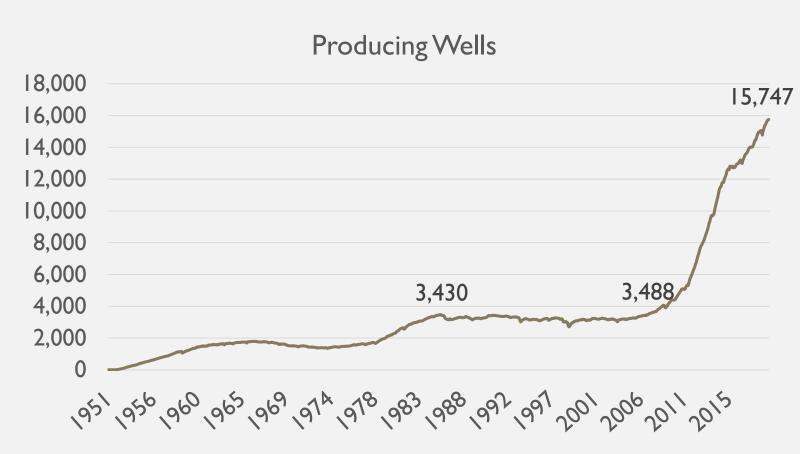
Job Openings Statewide	14,749
Unemployment rate	2.9 percent
Active Resumes	4,326
Active Resumes per Job Opening Statewide	0.29
Core Oil and Gas Counties	.39
Non-Oil and Gas Counties	.24
Labor Force Participation Rates	69 percent

KEY POINTS ECONOMY

- Rapid growth statewide
- GDP has grown considerably, but economy is still highly dependent on commodities which are susceptible to price shocks which can present substantial fiscal challenges
- Urban centers are growing and have much more diversified economies
- Workforce is a constraint, have more jobs than applicants

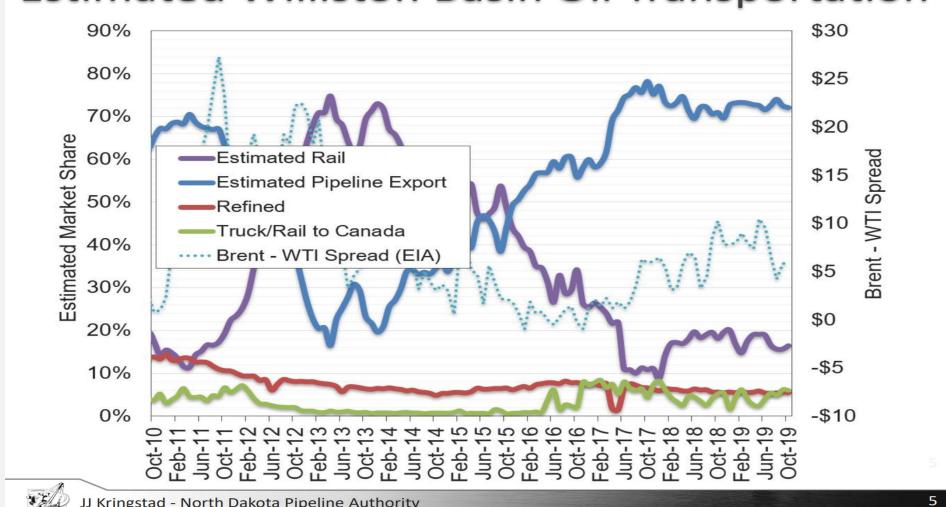
OIL AND GAS INDUSTRY

- New production record in October 2019:
 15,747 wells produced 1.5 million barrels per day
- Production concentrated in four core counties
 8 in 10 wells are located in those four counties
- Efficiencies have improved tremendously, efficiencies driven by multiple factors
 - Technology, infrastructure, multiple wells per pad
 - In 2014, there were over 200 drilling rigs, in December there were 56
 - 16 to 18 days, from spud to spud, approximately half as much time as it took in the early stages of development, where drilling times were 30 to 45 days

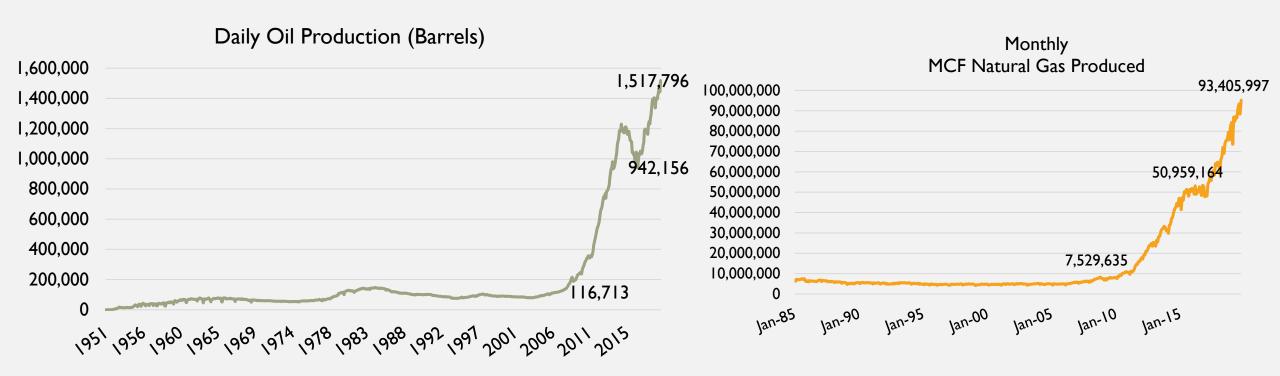


CLEAR EXAMPLE OF ONE ASPECT OF IMPROVED INFRASTRUCTURE

Estimated Williston Basin Oil Transportation



OIL AND NATURAL GAS PRODUCTION (AS OF OCTOBER 2019)



OIL PRICES

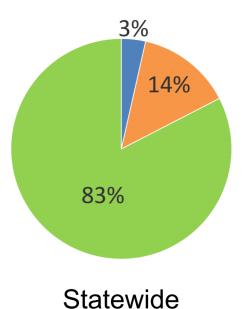




- Prices fueled race to secure leases
- Fiscal boom and subsequent bust
- Oil and gas price collapse coincided with collapse in ag commodity prices
- Industry saw a 1.5% tax reduction in 2014
- NDSU has seen ____ cuts since 2014
- Legacy Fund has \$6.5 billion

FLARING STILL A CHALLENGE

Solving the Flaring Challenge



GREEN - % of gas captured and sold Blue - % flared from zero sales wells Orange – % flared from wells with at least one mcf sold.

Simple Terms

Blue – Lack of pipelines Orange – Challenges on existing infrastructure

Oct. 2019 Data - Non-Confidential Wells

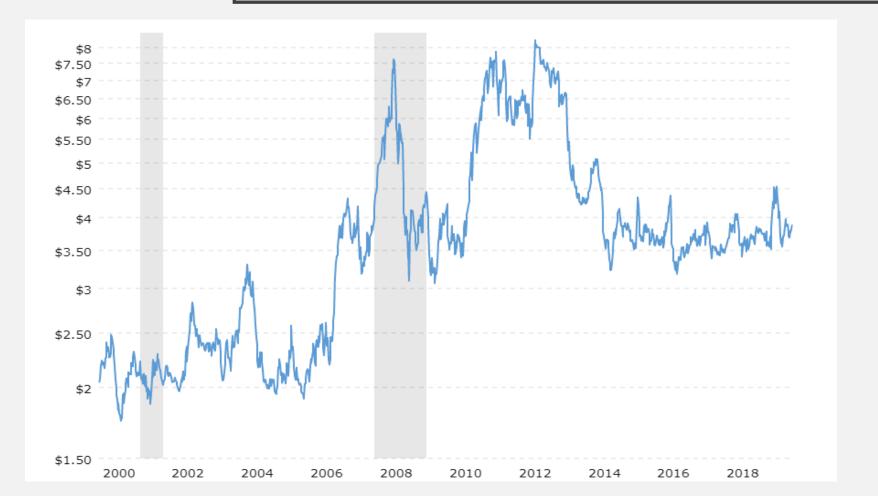
KEY POINTS OIL AND GAS

- The industry has stabilized.
- Improved technology, logistics, transportation, infrastructure have dramatically improved efficiencies
- Still a long way to go
- Activity concentrated in four counties where wells are most productive
- Break even points have improved and the industry is less susceptible to price shocks.

AGRICULTURE

- Troubles for agriculture started in 2018 with poor prices
- But with "Donald Dollars" and other cash payments producers managed to positive cash flow in 2018
- Trouble mounted in 2019
- Tariffs disproportionality impacting ND soybean growers
- Weather was horrible in 2019
- Weather conditions will carry into 2020

CORN



- Prices are down
- Growing conditions were very difficult
- Wet spring, late start
- Cool wet summer and fall
- Low test weight and wet
- Snowstorm in October
- 60 percent of ND corn is still in the field
- Planting next spring difficult

SOYBEANS



- Again poor prices
- Trade war is a significant concern
- ND especially impacted
- 70-75 percent of ND soybeans are shipped to PNW
- 95 percent of beans delivered to PNW exported to China
- 36 MMT exported to China in 2017
- 13MMT exported to China in 2018

WHEAT, SUGAR BEETS, POTATOES

- Wheat: poor prices and poor quality
- Potatoes: To wet to harvest, may be a shortage of potatoes for French fries!
- Sugar beets: Conditions worst in ND and northern MN
- "This is hands-down the worst harvest in 48 years", Mike Metzger, VP Minn-Dak Farmers Cooperative
- American Crystal Sugar producers lost about a third of their crop...producers must pay \$343 per unharvested acre
- Unharvested beets and potatoes less pose somewhat less of a challenge in the spring

KEY POINTS AGRICULTURE

- Dr. Fryne Olson: "The soybean supply chain has shifted, and we are living through another major transition in agriculture in ND."
- Supposedly Chinese have committed to increase agriculture purchase by \$32 billion over the next two years
- There will be producers that go under; however conditions are different than the 70's and 80's
- Banks are working with producers to do everything they can to keep producers afloat
- Some producers banked earning from when prices where very high and they will be in position to take advantage if/when land prices drop
- Conditions are putting downward pressure on land price which will help make US more competitive globally
- May be some opportunities for generational transfer

KEY POINTS

- Substantial increase in population and characteristics of population
- Much regional variation in economic and socio-economic conditions
- Oil and gas industry has moderated and stabilized
- High agriculture commodity prices (oil and gas and agriculture) helped to fuel rapid growth
- Price collapse in agriculture at the same time as the oil and gas and agriculture caused significant fiscal problems...NDSU budget has been cut by 20 percent in last 2 biennium's
- Low prices, trade war and bad weather has placed substantial strain and uncertainty on ND agriculture and producers

GOING FORWARD

- Population growth will in the future be driven by changes in median age and births more than in-migrations
- Changes not uniform and there are disparities associated with that variation (grocery stores)
- Areas of the state dependent on agriculture still struggling with historic issues
- Oil and gas industry and energy overall has stabilized, and I would expect it to continue to be one of the state's major economic engines
- Serious concerns in agriculture, what does that mean for our rural communities?
- Economic diversification as important as ever
- In some cases re-learning the lesson of the 1970s and 1980s

QUESTIONS AND CONTACT INFORMATION

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