

North Dakota Economic Conditions and Outlook

David T. Flynn, Ph.D.

University of North Dakota
Department of Economics & Finance

October 3, 2017

Revenue Shortfalls

- Drastic budget cuts in last biennium.

Revenue Shortfalls

- Drastic budget cuts in last biennium.
- Significant problems with forecast revenues.

Revenue Shortfalls

- Drastic budget cuts in last biennium.
- Significant problems with forecast revenues.
- Sales taxes ended 40% less than initial forecast.

Revenue Shortfalls

- Drastic budget cuts in last biennium.
- Significant problems with forecast revenues.
- Sales taxes ended 40% less than initial forecast.
- Individual income taxes 12.7% less than initial forecast.

Revenue Shortfalls

- Drastic budget cuts in last biennium.
- Significant problems with forecast revenues.
- Sales taxes ended 40% less than initial forecast.
- Individual income taxes 12.7% less than initial forecast.
- Corporate income tax 55.1% less than initial forecast.

Forecasting fails

- The forecast represented a significant change in revenue composition.

Forecasting fails

- The forecast represented a significant change in revenue composition.
- Indicated almost 60% of revenues from sales tax.

Forecasting fails

- The forecast represented a significant change in revenue composition.
- Indicated almost 60% of revenues from sales tax.
 - ▶ Actual was 50%, similar to the last two biennia.

Forecasting fails

- The forecast represented a significant change in revenue composition.
- Indicated almost 60% of revenues from sales tax.
 - ▶ Actual was 50%, similar to the last two biennia.
- Instead of projected 2.8% increase in tax revenues ND experienced a 30% decline.



Labor Force Chaos

- Individuals responded to the incentives of the oil patch.

Labor Force Chaos

- Individuals responded to the incentives of the oil patch.
- Williston labor force grew better than 10% per month (on a year-over-year basis) for 27 consecutive months from January 2011 to March 2013.

Labor Force Chaos

- Individuals responded to the incentives of the oil patch.
- Williston labor force grew better than 10% per month (on a year-over-year basis) for 27 consecutive months from January 2011 to March 2013.
- During the same time the metro areas and state overall recorded percentage changes between -2% and 3.25%.

Two Themes

- There are two themes I hear in discussions regarding economic performance in North Dakota.

Two Themes

- There are two themes I hear in discussions regarding economic performance in North Dakota.
 - ① North Dakota is still commodity price driven for the present and future.

Two Themes

- There are two themes I hear in discussions regarding economic performance in North Dakota.
 - ① North Dakota is still commodity price driven for the present and future.
 - ② There are labor constraints in the economy.

Two Themes

- There are two themes I hear in discussions regarding economic performance in North Dakota.
 - ① North Dakota is still commodity price driven for the present and future.
 - ② There are labor constraints in the economy.
- In terms of the outlook for North Dakota, US policy and North Dakota population represent significant influences on these themes.

Competition

- Recent discussions about the economy ask which is the most important sector for North Dakota, mining or agriculture.

Competition

- Recent discussions about the economy ask which is the most important sector for North Dakota, mining or agriculture.
- Debate largely misses the point that while technically a diversification it is simply another part of the commodity sector.

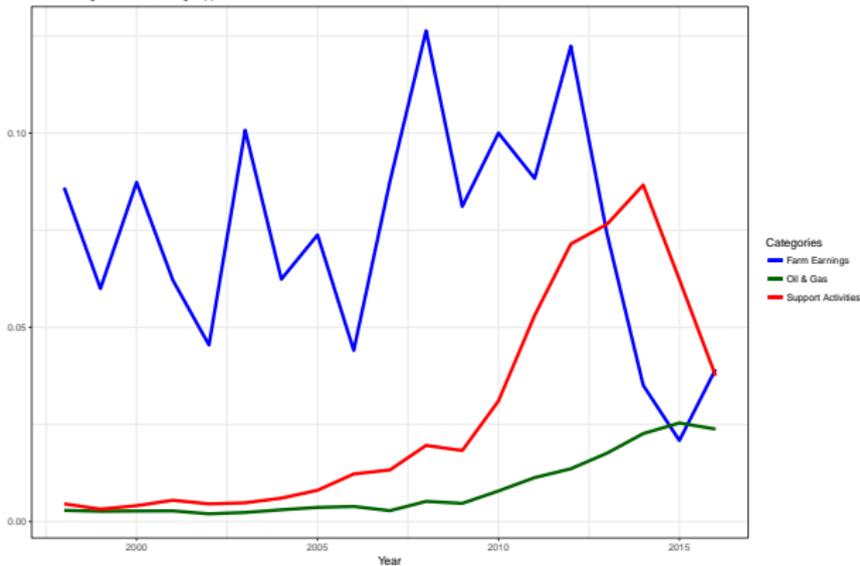
Competition

- Recent discussions about the economy ask which is the most important sector for North Dakota, mining or agriculture.
- Debate largely misses the point that while technically a diversification it is simply another part of the commodity sector.
- Both owe their importance to additional economic activities they create, such as business-to-business sales tax collections.



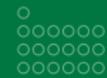
Changing Landscape

Key Categories as Share of Earnings by Place of Work
Farm Earnings, Oil & Gas, Mining Support, 1998–2016



Data: BEA.gov (SAS)
Downloaded: 1 October 2017





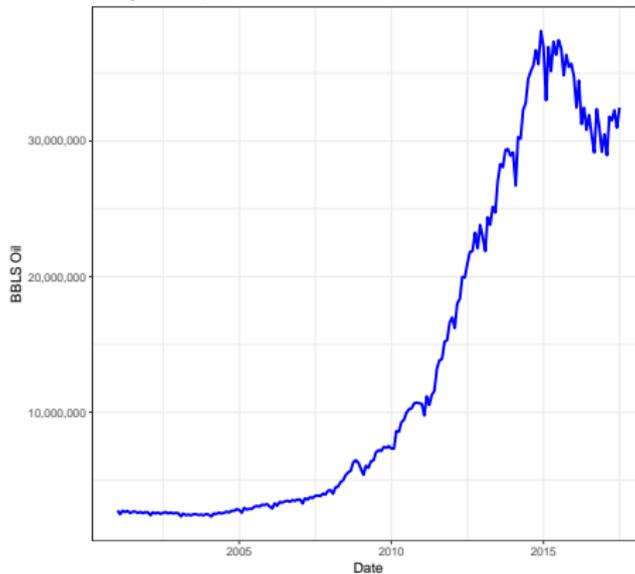
Oil Price, ND



Oil Production

Oil Production in North Dakota

Monthly Production, 2001-2017



Data: ND Oil & Gas Division
Downloaded: October 2, 2017



Key Crops

- Outlook is fairly stable for corn and wheat in terms of acres planted and price over the next ten years, with North Dakota prices exhibiting slightly higher prices than USDA national average.

Key Crops

- Outlook is fairly stable for corn and wheat in terms of acres planted and price over the next ten years, with North Dakota prices exhibiting slightly higher prices than USDA national average.
- The USDA outlook for sugar displays volatility over the next ten years which could be an issue for parts of ND.

Key Crops

- Outlook is fairly stable for corn and wheat in terms of acres planted and price over the next ten years, with North Dakota prices exhibiting slightly higher prices than USDA national average.
- The USDA outlook for sugar displays volatility over the next ten years which could be an issue for parts of ND.
- ND farm income exhibits wide variation and volatility.

Takeaways

- The commodity sector is still of enormous consequence to North Dakota.

Takeaways

- The commodity sector is still of enormous consequence to North Dakota.
- While most outlooks predict some degree of stability, it is dependent on assumptions of market or regulatory stability.

Takeaways

- The commodity sector is still of enormous consequence to North Dakota.
- While most outlooks predict some degree of stability, it is dependent on assumptions of market or regulatory stability.
- These sectors alone are not large in terms of measures like GDP, but their supply chains are vital parts of larger economy in state and, in particular, rural areas.

Increasing Workforce

- Conventionally there are only two ways to increase the workforce.

Increasing Workforce

- Conventionally there are only two ways to increase the workforce.
 - ① Fertility

Increasing Workforce

- Conventionally there are only two ways to increase the workforce.
 - ① Fertility
 - ② Migration

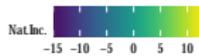
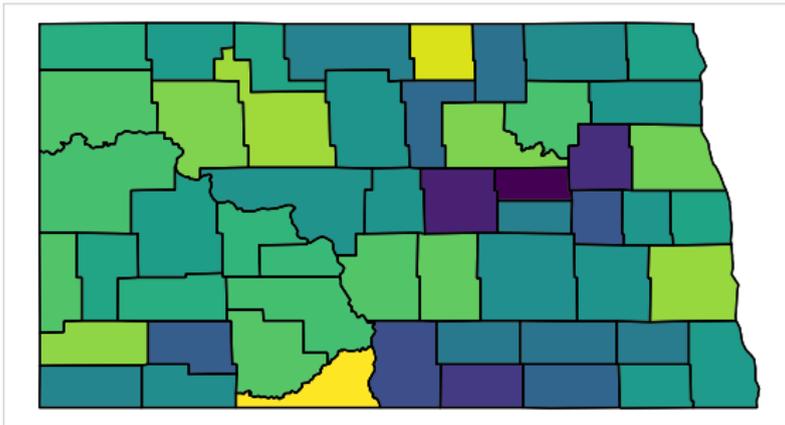
Increasing Workforce

- Conventionally there are only two ways to increase the workforce.
 - ① Fertility
 - ② Migration
- Both came into play in North Dakota over the last decade.

Natural Increase

2011 County Rate of Natural Increase

Births less Deaths per 1,000 people

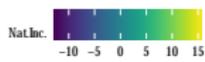
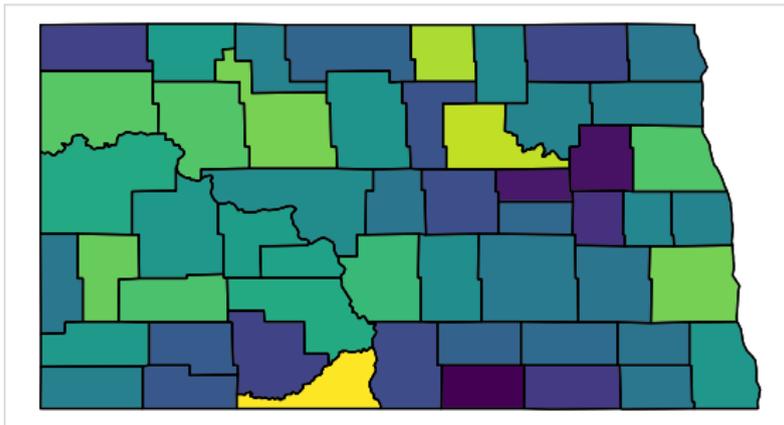


David T. Flynn
Data: Census.gov
Downloaded: March 25, 2017

Natural Increase

2012 County Rate of Natural Increase

Births less Deaths per 1,000 people



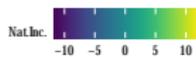
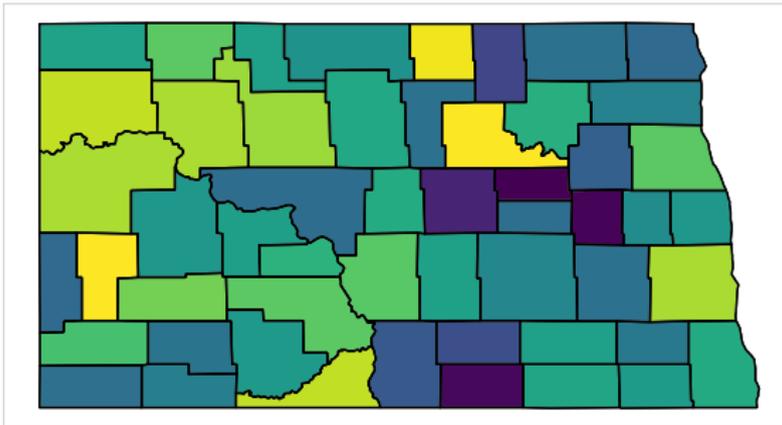
David T. Flynn
Data: Census.gov
Downloaded: March 25, 2017



Natural Increase

2013 County Rate of Natural Increase

Births Less Deaths per 1,000 people

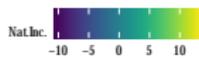
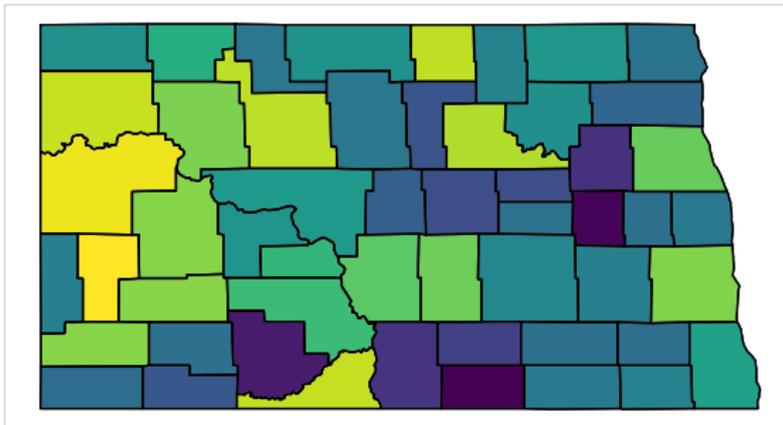


David T. Flynn
Data: Census.gov
Downloaded: March 25, 2017

Natural Increase

2014 County Rate of Natural Increase

Births less Deaths per 1,000 people

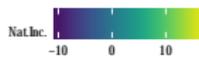
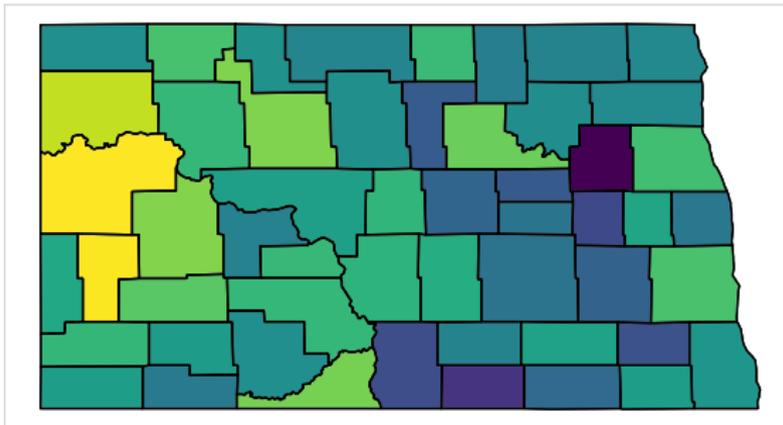


David T. Flynn
Data: Census.gov
Downloaded: March 25, 2017

Natural Increase

2015 County Rate of Natural Increase

Births less Deaths per 1,000 people

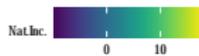
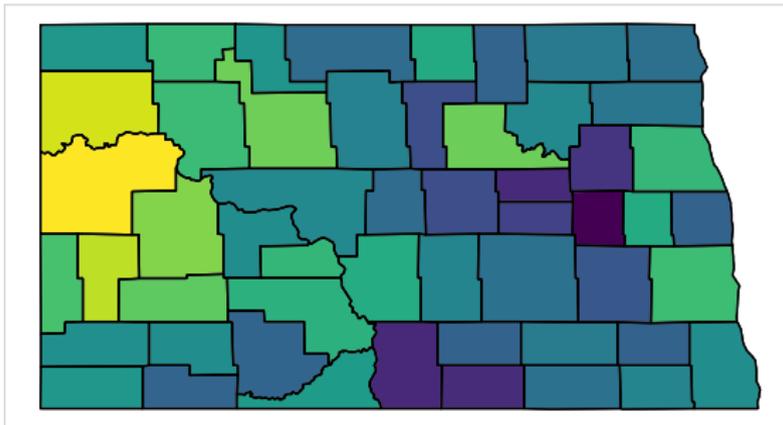


David T. Flynn
Data: Census.gov
Downloaded: March 25, 2017

Natural Increase

2016 County Rate of Natural Increase

Births less Deaths per 1,000 people

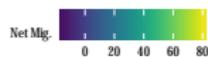
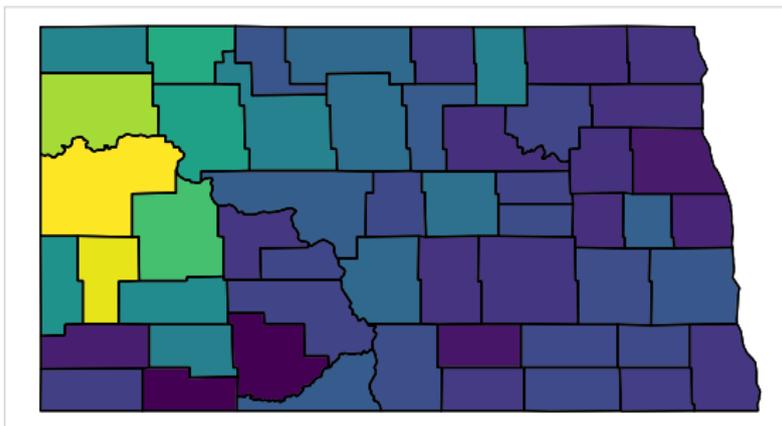


David T. Flynn
Data: Census.gov
Downloaded: March 25, 2017

Net Migration

2011 County Net Migration Rate

Net Migration per 1,000 people

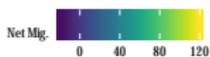
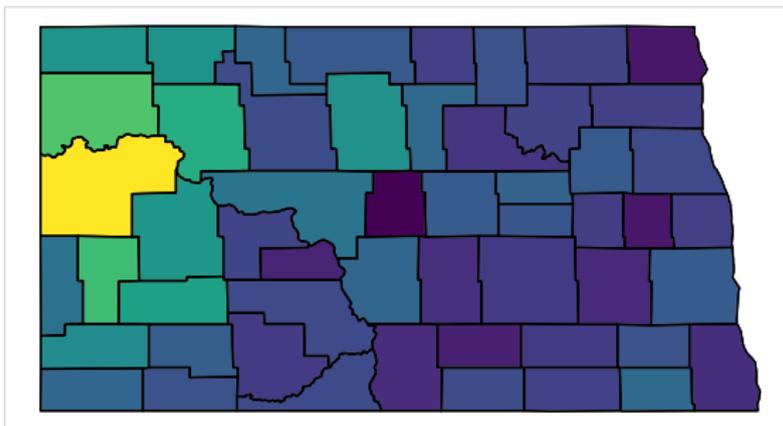


David T. Flynn
Data: Census.gov
Downloaded: March 25, 2017

Net Migration

2012 County Net Migration Rate

Net Migration per 1,000 people



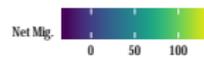
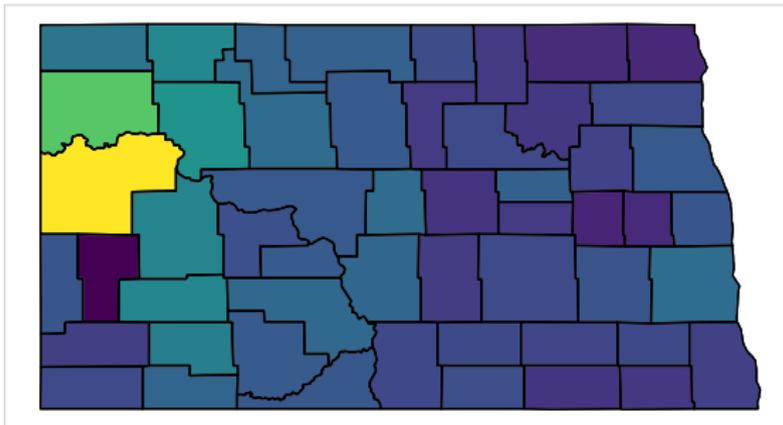
David T. Flynn
Data: Census.gov
Downloaded: March 25, 2017



Net Migration

2013 County Net Migration Rate

Net Migration per 1,000 people

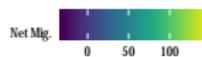
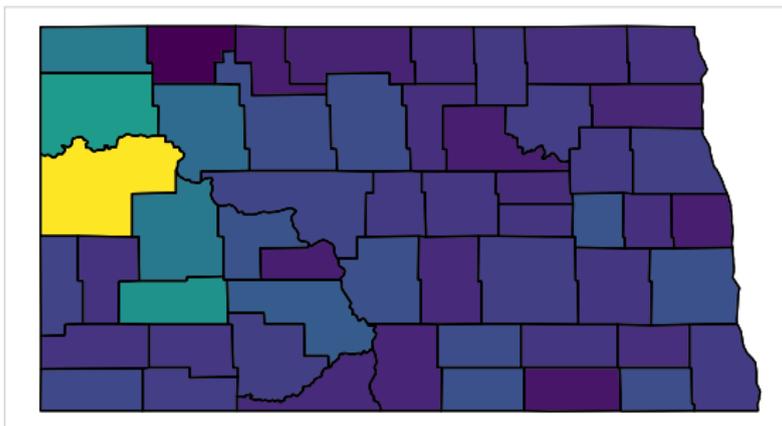


David T. Flynn
Data: Census.gov
Downloaded: March 25, 2017

Net Migration

2014 County Net Migration Rate

Net Migration per 1,000 people

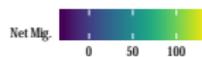
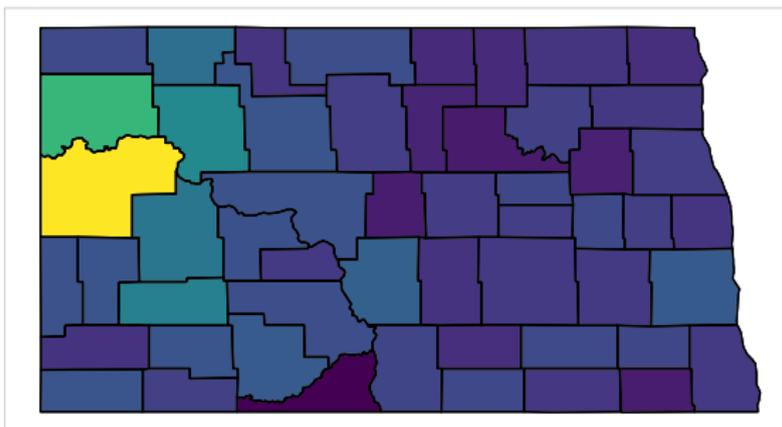


David T. Flynn
Data: Census.gov
Downloaded: March 25, 2017

Net Migration

2015 County Net Migration Rate

Net Migration per 1,000 people

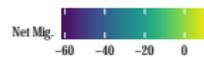
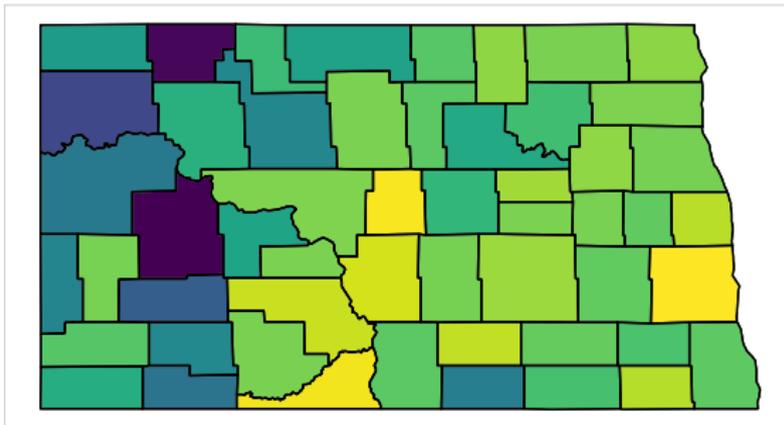


David T. Flynn
Data: Census.gov
Downloaded: March 25, 2017

Net Migration

2016 County Net Migration Rate

Net Migration per 1,000 people



David T. Flynn
Data: Census.gov
Downloaded: March 25, 2017

Economic Opportunity

- The birth and net migration rates were a response to the labor demands placed on the economy due to oil.

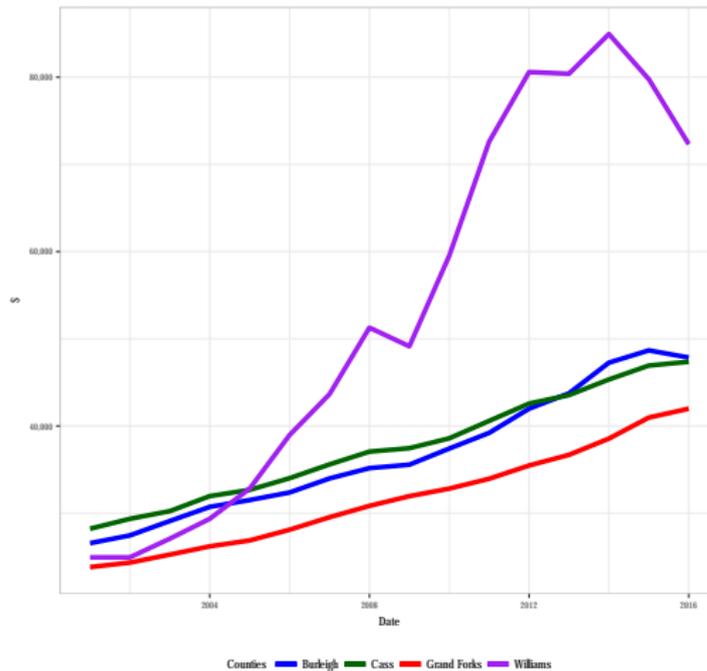
Economic Opportunity

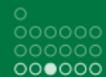
- The birth and net migration rates were a response to the labor demands placed on the economy due to oil.
- Further confirmation of this can be seen in wage and employment data.

Compensation & Employment

Average Annual Pay

Burleigh, Cass, Grand Forks, & Williams Counties

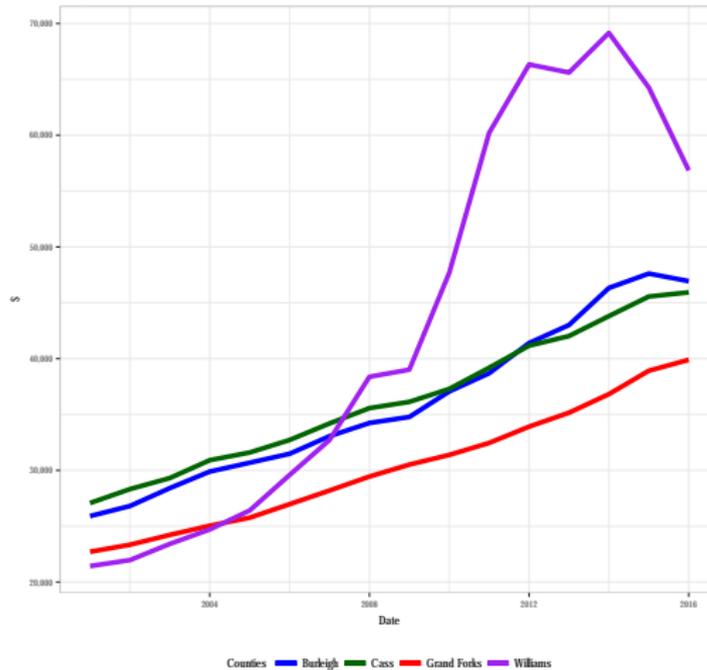




Compensation & Employment

Service Activities Annual Pay

Burleigh, Cass, Grand Forks, & Williams Counties



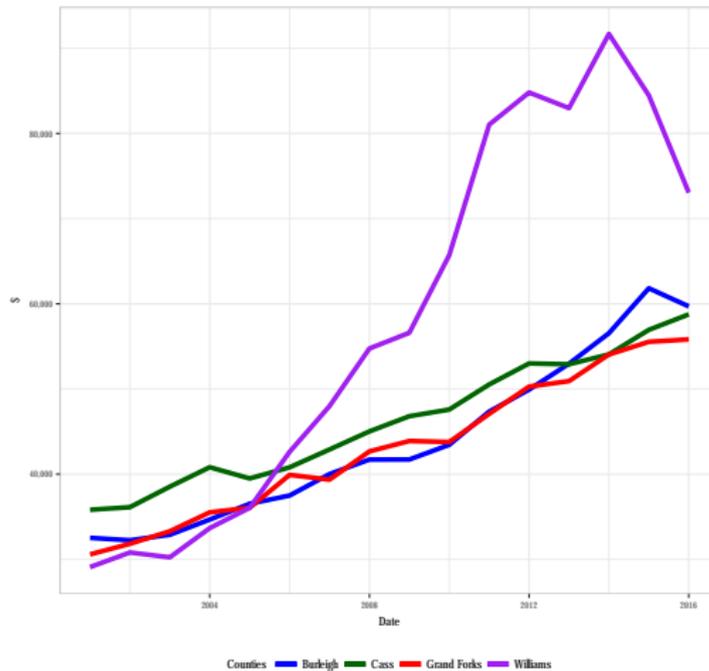
David T. Flynn, PhD
Data:BLS.gov (QCEW)
Downloaded: 27 September 2017



Compensation & Employment

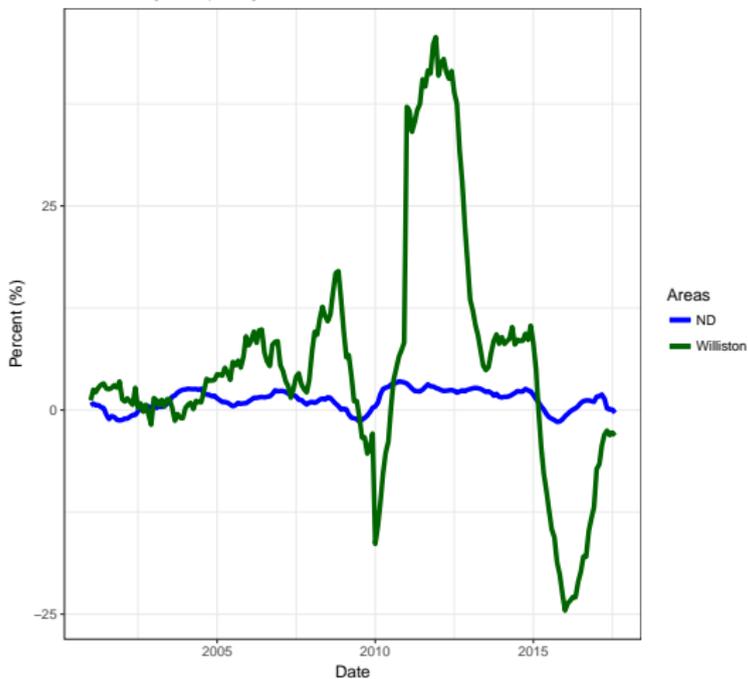
Financial Activities Annual Pay

Burleigh, Cass, Grand Forks, & Williams Counties



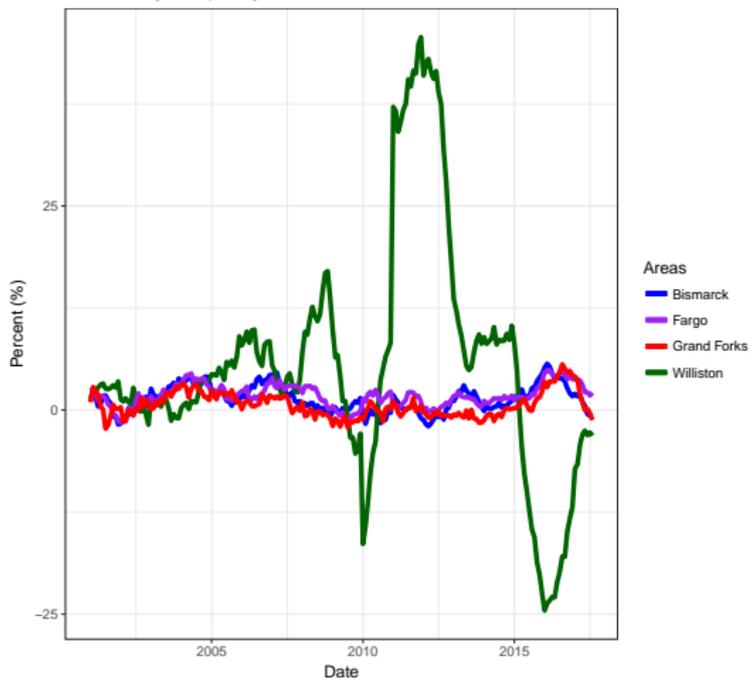
North Dakota & Williston Labor Force

Percent change from year ago, 2001–17

Data: BLS.gov (LAUS)
Downloaded: 1 October 2017

Metro Areas in North Dakota & Williston Labor Force

Percent change from year ago, 2001–17

Data: BLS.gov (LAUS)
Downloaded: 1 October 2017

Risks

- Regulations

Risks

- Regulations
- Trade

Risks

- Regulations
- Trade
- Population

Reduced Restrictions

- Reduced energy restrictions of benefit to the ND energy sector and others.

Reduced Restrictions

- Reduced energy restrictions of benefit to the ND energy sector and others.
- Clearly changing some of the cost of business.

Reduced Restrictions

- Reduced energy restrictions of benefit to the ND energy sector and others.
- Clearly changing some of the cost of business.
- Not an immediate panacea though.

Reduced Restrictions

- Reduced energy restrictions of benefit to the ND energy sector and others.
- Clearly changing some of the cost of business.
- Not an immediate panacea though.
- Fracking was a huge advance, but will it continue to push economy?

Reduced Restrictions

- Reduced energy restrictions of benefit to the ND energy sector and others.
- Clearly changing some of the cost of business.
- Not an immediate panacea though.
- Fracking was a huge advance, but will it continue to push economy?
- Sector maturity will alter labor demands.

NAFTA

- North Dakota exports significant shares of key industry outputs.

NAFTA

- North Dakota exports significant shares of key industry outputs.
- Agriculture and energy products and implements were 22 of the 25 top exported goods the last four years.

NAFTA

- North Dakota exports significant shares of key industry outputs.
- Agriculture and energy products and implements were 22 of the 25 top exported goods the last four years.
- Fully 85% of North Dakota exports go to Canada and Mexico so the consequences of NAFTA negotiations are important for both sectors.

Population

- North Dakota median age is 35 years, a 4 year drop in the last decade.

Population

- North Dakota median age is 35 years, a 4 year drop in the last decade.
- Ability to retain the younger population is key.

Population

- North Dakota median age is 35 years, a 4 year drop in the last decade.
- Ability to retain the younger population is key.
- Significant social stresses revealed by economic boom and downturn.

Population

- North Dakota median age is 35 years, a 4 year drop in the last decade.
- Ability to retain the younger population is key.
- Significant social stresses revealed by economic boom and downturn.
- Other population factors like fertility distribution, opioid use/abuse are enormous public policy issues.

My contact information

- David T. Flynn
- UND Department of Economics & Finance
- email: david.flynn@business.und.edu