North Dakota’s Changing Demographics: Implications for Transportation

Spring 2010 Transportation Seminar Series
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Presentation Objective:

1. To present an overview of historical shifts in population dynamics in North Dakota.
2. To examine main drivers of population dynamics within North Dakota.
3. To discuss the interface between population dynamics and transportation issues.
Population

North Dakota’s population peaked in 1930 at 680,845.

The July 1, 2008 population estimate for North Dakota totaled 641,481, an increase of 3,577 persons from 2007.

North Dakota

Cass County

McIntosh County

4 similar counties

40 similar counties
Percent Population Change by State, 2000 to 2009

Source: US Census Bureau

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March 2010
Nonmetro farming-dependent counties, 2000

Source: Farming-dependent counties are defined by ERS. Metro/nonmetro status is based on the Office of Management and Budget (OMB) June 2003 classification.

From USDA, ERS, 2007 Farm Bill Theme Papers, Rural Development, July 2006
Number and Average Size of N.D. Farms, 1900-2002

Source: U.S. Bureau of the Census, Census of Agriculture, various years.

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Farm Dependent Counties, 1950

From USDA, ERS, 2007 Farm Bill Theme Papers, Rural Development, July 2006

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Change in Jobs between January 2007 and June 2009

Click the green play button to see an animation of the data or use the arrows or the calendar to freeze on a particular month. Mouse over a circle on the map to see the name and data for that county. A blue dot represents job gains while red indicates losses. The bigger the dot, the bigger the gains or losses.

2,625,193 jobs gained nationwide since January 2006

How to read this map
This map displays employment data for each of the more than 3,100 counties in the United States with a net change in employment of 250 jobs or more at some point since January 2006. Dots are proportional to the number of jobs gained (blue) or lost (red) since the same month in the previous year. The data are not seasonally adjusted. Mouse over a circle to see the name and data for a county.

January 2007

February

March

April

May

June

January

February

March

April

May

June

2007

2008

2009

SOURCE: Local Area Unemployment Statistics from the Bureau of Labor Statistics

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Percent Change in Total Population Estimates for North Dakota by County: July 1, 2007 to July 1, 2008

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Key Demographic Drivers

1. Population consolidation
2. Rapidly shifting age distribution
3. Shifting household composition
Key Demographic Drivers

1. Population Consolidation
N.D. Rural-Urban Population Distribution, 1900-2020

Source: U.S. Bureau of the Census, Decennial Censuses.
North Dakota City Size: 2000

City Size Distribution in North Dakota: 2000

- 0 to 99 Persons: 35%
- 2,500+ Persons: 5%
- 250 to 2,499 Persons: 37%
- 100 to 249 Persons

Source: U.S. Census Bureau, Census 2000.
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March 2010
Chart taken from the May 2002 Issue of the Population Bulletin, published monthly by the North Dakota State Data Center (Vol. 18, No. 5).
Population Density in North Dakota by County: 2000

Source: U.S. Census Bureau, Census 2000.

Persons Per Square Mile
- Less than 6
- 6 to 16
- 17 to 45
- 46 or more
Key Demographic Drivers

2. Shifting age distribution
A Maturing Age Distribution, 2000
(National data)

Source: U.S. Census Bureau, International Data Base.
A Maturing Age Distribution, 2020

Source: U.S. Census Bureau, International Data Base.
Baby Boomers reach age 65
2.8 million beginning 2011 -- 4 million by 2020
or 5,000 a day (on average)

Source: Older Americans 2004
North Dakota
Population by Age, 2000 and 2020 (Projected)

Source: North Dakota State Data Center

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Persons Ages 65 and Older as a Percent of the Total Population in North Dakota by County: 2000
Source: U.S. Census Bureau, Census 2000

- Less than 15%
- 15% to 21.9%
- 22% to 27.9%
- 28% or more
Persons Ages 65 and Older as a Percent of the Total Population in North Dakota by County: 2020
The Elderly – 85 plus

 Persons Age 85 and Older as a Percentage of Total Persons by State: 2000
 Source: U.S. Census Bureau.
North Dakota
Projected Change in Population and High School Graduates
Based on 2000 Census

Source: North Dakota State Data Center and WICHE

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North Dakota Public K-12 Enrollment, 2004-2006 and 2008-2016 Projections

Source: ND Department of Public Instruction

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2000 Census – Rural and Urban Population Distributions
by Age and Gender for North Dakota

2000 Urban Counties

2000 Rural Counties

Traditional
Babyboom
X Generation
Y Generation

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PERCENT CHANGE IN PERSONS:
2000 to 2010 & 2000 to 2020
(Source: U.S. Census Bureau)

- Peaked in 1990
- Peaked in 2000
- Relatively stable until 2005
Key Demographic Drivers

3. Changing household composition
Households by Type

North Dakota Households by Type: 1960 to 2000

- Married with Children
- Married without children
- Other family with children
- Other family without children
- Nonfamily household

Households


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Persons Per Household

Fargo-Moorhead Area Household Size

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Interface Between Population and Transportation

1. Commuting patterns
2. Challenges in service delivery
3. Senior transportation
Percentage of Resident Workers Who Work in County of Residence: 1970 to 2000

North Dakota: 93.0%  
Less than 60%  
60% to 79.9%  
80% to 89.9%  
90% or more

North Dakota: 90.5%  
Less than 60%  
60% to 79.9%  
80% to 89.9%  
90% or more

North Dakota: 89.2%  
Less than 60%  
60% to 79.9%  
80% to 89.9%  
90% or more

North Dakota: 86.6%  
Less than 60%  
60% to 79.9%  
80% to 89.9%  
90% or more

1970 Census
1980 Census
1990 Census
2000 Census
Commuting’s Impact on Daytime Population: Census 2000

Figure 1. Percent Change in Daytime Population Due to Commuting in North Dakota Cities with at least 2,500 Workers: 2000

Note: Daytime population refers to the number of people, including workers, who are present in an area during normal business hours.

Chart taken from the December 2005 Issue of the Population Bulletin, published monthly by the North Dakota State Data Center (Vol. 21, No. 12).
Mean Travel Time to Work

Change in Mean Travel Time to Work in North Dakota by County: 1990 to 2000

- Decrease
- Increase: 0 to 3.9 minutes
- Increase: 4 to 6.9 minutes
- Increase: 7 minutes or more
Ambulance company’s service areas

Source: Division of EMS and Trauma, ND Dept. of Health
Transportation Service for Seniors

Source: http://www.publictransportation.org/systems/state.asp?state=ND
Demographic Presentation 2010

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