Transportation Planning to Support Economic Development in Minnesota

Mapping the Midwest’s Future Conference
Lee Munnich, Senior Fellow
September 29, 2014
Applications of US Cluster Mapping Tool in Minnesota

- Regional Council of Mayors and DEED
  - CEO to CEO Conversations
- MSP Regional Cluster Study – UMN Metro Consortium
- DEED and GREATER MSP
  - Water Technology Cluster Initiative
- Transportation and Clusters
  - Freight Rail Economy – BNSF Foundations
  - Manufacturing Clusters in MnDOT Districts 8 and 4
  - Transportation Planning to Support Economic Development - MnDOT
Competitiveness and Composition of MSP Metro Area
Linkages Across Traded Clusters, Location Quotients, 2010

Location Quotient = MSP Industry Job Share / US Industry Job Share

Note: Clusters with overlapping borders or identical shading have at least 20% overlap (by number of industries) in both directions.

MSP Regional Cluster Competitiveness Study

Industry Clusters in the MSP Region: A Dynamic Ecosystem

Current strengths, emergence and change, and key selected traded clusters (1998-2010)

- Selected clusters
- Other clusters


Location Quotient: MSP industry employment share over 1 (US share) Indicates regional specialization.

Four Emerging Clusters in Greater MSP

- Water Technology
- Robotics
- 3D Printing
- Biorenewables
Selected Clusters
Regional Cluster Interviews

Glass (Owatanna)
- Interviews with Viracon, Sage Electrochromics, & LiteSentry

Granite (St. Cloud)
- Interviews with Coldspring Granite and Sunburst Memorials

Processed Food (Worthington)
- Interviews with JBS Co, Merck Animal Health, and New Vision Co-op

Publishing and Printing (Mankato)
- Interviews with Taylor Corp, Coughlan (Capstone), and The Creative Company
Recreational Vehicles (Automotive)

Kittson, Marshall, Pennington, and Roseau Counties (NW Minnesota)

Notable companies from within the cluster include Polaris, Arctic Cat, and Mattracks.

Transportation themes include ___

2011

Number of Employees
2,215
Northwest Minnesota had the second highest Automotive employment in Minnesota.

Location Quotient
17.22
Automotive employment was more than seventeen times as concentrated in Rochester than in the USA.

Average Wages
N/A
Wage data for the Automotive cluster in Northwest Minnesota is unavailable.

Share of Regional Employment
12.47%
Nearly one in eight jobs in Northwest Minnesota are within the Automotive cluster.

Recreational Vehicles

• Hard to find skilled employees
• 3-D printers have changed product delivery
• Revamping their distribution strategy
• Highway 59 and Highway 2
• Transportation is over 10% of total budget
Recreational Vehicles

- Diversified holdings
- Worker shortage
- Transportation is their largest budgetary item
- Weather related hardships
- Driver regulations make transportation very difficult
Mayo Clinic Medical Services Network

Mayo Clinic Care Network

- Billings Clinic
- Aitru Health
- St. Alexius Medical Center
- Centra Care Coborn Cancer Center
- NorthShore University HealthSystem
- Dartmouth-Hitchcock
- Sparrow Health System
- Heartland Health
- St. Elizabeth Healthcare
- NCH Healthcare
- Arizona State University Health Services
- Yuma Regional Medical Center
- Kingman Regional Medical Center

Legend:
- Mayo Clinic Care Network
- Mayo Clinic Health System
- Mayo Clinic

State and Local Policy Program

Humphrey School of Public Affairs
University of Minnesota
Driven to Discover™
Mayo Clinic Services

- **Medical Care**
  - Tertiary Care Center
    - Highly specialized services (oncology, neurosurgery, cardiac surgery)

- **Research**
  - Clinical research, experimental medicine, lab testing

- **Education**
  - Many doctors on staff at Mayo are also instructors
Mayo Competitiveness

- Global patient base
  - 500 K unique visitors, 1.5 M visits
  - 50 states, 150 countries
  - Roughly 50% from 150-200 mile radius
- Unique challenges
  - Major competitors: Cleveland Clinic (OH), Johns Hopkins (Baltimore), MD Anderson Cancer Center (Houston)
  - All major competitors are located in large metros
    - Better air services, local transport, local amenities, etc.
    - DMC initiative
  - Mayo is more dependent than others on regional passenger, freight links
Mayo Medical Laboratories

Founded in 1971, Mayo Medical Laboratories is the reference laboratory for Mayo Clinic.

4.5 Million Patients touched around the world each year by our testing

6,629 Clients around the world that send testing to Mayo Clinic

30,000 Specimens that arrive at Mayo Clinic every day, on average
Mayo Medical Laboratories
Client Base

MML has approximately 5,000 clients around the U.S. resulting in over 12 million tests annually.
Australia, Bahrain, Brazil, Canada, Chile, China, Colombia, Cyprus, Denmark, Dominica, Ecuador, Germany, Greece, Guatemala, Honduras, Hong Kong, Iceland, India, Iraq, Japan, Jordan, South Korea, Lebanon, Mexico, Pakistan, Peru, Puerto Rico, Qatar, Saudi Arabia, Spain, Turkey, the United Arab Emirates, Uruguay, Venezuela, Viet Nam
Airports Utilized by MML

- Anoka County Blaine: ICS
- MSP: Delta, United, American
- Rochester: FedEx, ICS
- Work driven in from MSP, Kansas City, Madison
<table>
<thead>
<tr>
<th>Industry Cluster</th>
<th>Transportation Issues</th>
<th>Primary Freight Modes Used</th>
<th>Important Service Characteristics</th>
<th>Number of MN Regions in Which Cluster is Specialized</th>
</tr>
</thead>
<tbody>
<tr>
<td>Construction Materials (Granite)</td>
<td>Varying state regulations; customs delays; fuel costs</td>
<td>Truck (flatbed), Rail, Water</td>
<td>Reliability, Safety</td>
<td>1</td>
</tr>
<tr>
<td>Forest Products</td>
<td>Rail capacity and equipment; need for intermodal facilities</td>
<td>Truck, Rail</td>
<td>Cost, Transit Time, Reliability</td>
<td>10</td>
</tr>
<tr>
<td>Glass</td>
<td>Specialized carrier availability; labor access; weather delays</td>
<td>Truck, Water, Air</td>
<td>Cost, Reliability, Transit Time</td>
<td>1</td>
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<tr>
<td>Health Services</td>
<td>Regional air access; reliability of shipments; improved air navigation</td>
<td>Air, Truck</td>
<td>Reliability, Safety</td>
<td>13</td>
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<tr>
<td>Heavy Machinery</td>
<td>Road conditions; truck availability; weather-related delays</td>
<td>Truck, Water, Rail</td>
<td>Cost, Reliability</td>
<td>19</td>
</tr>
<tr>
<td>Hospitality and Tourism</td>
<td>Regional air access; highway access from points west</td>
<td>Truck</td>
<td>Reliability, Transit Time</td>
<td>6</td>
</tr>
<tr>
<td>Medical Devices</td>
<td>Airport access; congestion delays; shipment reliability</td>
<td>Air, Truck</td>
<td>Safety, Reliability, Cost</td>
<td>5</td>
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<tr>
<td>Printing and Publishing</td>
<td>Weather-related delays; customs delays</td>
<td>Truck (LTL and small parcel), Water</td>
<td>Cost, Reliability, Transit Time</td>
<td>10</td>
</tr>
<tr>
<td>Processed Food</td>
<td>Carrier availability; shipment reliability; regulatory consistency</td>
<td>Truck (truckload), Rail, Water</td>
<td>Safety, Transit Time</td>
<td>21</td>
</tr>
<tr>
<td>Recreational Vehicles</td>
<td>Weather-related delays; infrastructure condition; carrier availability</td>
<td>Truck, Water, Rail</td>
<td>Cost, Reliability, Safety</td>
<td>1</td>
</tr>
<tr>
<td>Robotics</td>
<td>Speed of shipments</td>
<td>Truck (LTL and small parcel), Air, Water</td>
<td>Cost, Transit Time</td>
<td>1</td>
</tr>
<tr>
<td>Transportation and Logistics</td>
<td>Congestion delays; infrastructure condition; carrier availability</td>
<td>Truck, Air, Rail, Water</td>
<td>Safety, Reliability</td>
<td>4</td>
</tr>
</tbody>
</table>
IMPLICATIONS FOR TRANSPORTATION POLICY, PLANNING AND IMPLEMENTATION

- Statewide Freight Planning
- Regional Transportation Strategies
  - District 8 and District 4 Manufacturing Outreach
- Transportation Investments to Promote Economic Competitiveness
  - Transportation Economic Development (TED) program
  - Corridors of Commerce program
  - TIGER
  - Trunk Highway Funds
  - Freight Funding
- Intermodal Connections and Investments
- Public-private partnerships and collaboration
Contact Information

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