Transit and Livability: Results from the National Community Livability Survey

CUTR Transportation Webcast
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Jeremy Mattson
Upper Great Plains Transportation Institute
North Dakota State University

Three-Phased Collaboration

EXPLORING TRANSIT’S CONTRIBUTION TO LIVABILITY IN RURAL COMMUNITIES

Phase 1

Literature Review
Pilot Case Study
• Identify urban/rural
• Transit markets

Phase 2

Community Case Studies
• In-depth, rural snapshot
• Smell-check community typologies

Phase 3

National Survey
• Random HH survey
• Refined transit markets

SPONSORS
USDOT, University Transportation Centers Program
National Center for Transit Research, University of South Florida
Texas A&M University System
North Dakota State University
Project Team

Ranjit Godavarthy  
Jeremy Mattson  
Jill Hough  
Del Peterson  
Jonathan Brooks  
Chris Simek  
Ipek Sener  
Linda Cherrington  
Luca Quadrifoglio  
Jitendra Jain

Six Case Studies

- Dickinson, ND  
- Valley City, ND  
- Woodburn, OR  
- Hannibal, MO  
- West Columbia, TX  
- Bath, ME
General Public Findings

- Factors of Livability
  - General to any community
  - Specific to residents
- Satisfaction with Quality-of-life
- Transit Importance
- Support for Funding Sources
- Hypothetical Scenarios
- Personal Use of Transit

Comparison of Livability Factors: Bath, ME
Comparison of Livability Factors:
Hannibal, MO

Comparison of Livability Factors:
West Columbia, TX
Comparison of Livability Factors: Woodburn, OR

Desired Improvements
Percentage of Respondents Answering that Factor is Important to Livability but Not a Top Contributor in their Community: Dickinson and Valley City

- Affordable housing: 56%
- Cost of living: 45%
- Quality healthcare: 40%
- Public parks, amenities: 37%
- Available jobs: 35%
- Low crime: 33%
- Quality public schools: 23%
- Daily commute: 23%
- Walkability: 22%
- Cultural institutions: 21%
- Public transit: 19%
- Climate: 15%
Satisfaction with Quality-of-life

Results showed that people who desired better *public transportation*, better *climate*, better *public schools*, or better *cost of living* than what was currently available in their community were less satisfied with local quality of life.
Observations from Case Studies

The method identified...
- Factors residents in small cities believe contribute to livability
- Potential improvements to improve individual community livability

Residents...
- Believed it was important for transit service to be available (seniors, individuals with disabilities, and people who cannot drive)
- Supported funding from a variety of sources
- Would be likely to use transit if they could no longer drive

Transit Riders...
- Agreed transit service is important for their quality of life
- Many have limited or no other travel options
- Generally satisfied with the services being provided

National Community Livability Survey

Random sampling conducted Summer/Fall 2017
Rural and Urban Populations
994 Usable Responses
Survey Instrument Topics

- General community livability
- Local community livability
- Community characteristics
- Transportation
- Public transit awareness, availability, and interest
- Walkability
- Funding support
- Demographic characteristics
- Questions for transit riders

Stratified Sample by Geography
Survey Administration

- Postcard with web address
- Email invitations
- Physical mailer
- Multiple languages

Factors Affecting Community Livability and their Level of Importance

<table>
<thead>
<tr>
<th>Factor</th>
<th>Non-Metro Residents</th>
<th>Metro Residents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quality healthcare</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Available jobs</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Quality public schools</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Low crime</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Affordable housing</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Overall cost of living</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Clean environment</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Traffic safety</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sense of community</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Affordable transportation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Parks and recreation facilities</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Shopping and entertainment</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Weather</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cultural institutions</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Level of Importance
Importance of Transportation to Livability

<table>
<thead>
<tr>
<th>Factor</th>
<th>Metro Residents</th>
<th>Non-Metro Residents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Roads in good condition</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Low traffic congestion</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Walkability / accessibility</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Public transit services</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Bikeability</td>
<td>2</td>
<td>3</td>
</tr>
</tbody>
</table>

Quality of Livability Factors in Your Community Currently

<table>
<thead>
<tr>
<th>Factor</th>
<th>Metro Residents</th>
<th>Non-Metro Residents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clean environment</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Traffic Safety</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Low crime</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Sense of community</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Weather</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Quality public schools</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Parks and recreation facilities</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Overall cost of living</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Quality healthcare</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Affordable housing</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Cultural institutions</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Available jobs</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Shopping and entertainment</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Affordable transportation</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>
Quality of Transportation

Gaps for Livability Factors, Non-Metro
Gaps for Livability Factors, Metro

Available jobs
Affordable housing
Low crime
Affordable transportation
Overall cost of living
Quality public schools
Quality healthcare
Clean environment
Traffic Safety
Cultural institutions
Sense of community
Shopping and entertainment
Parks and recreation
Weather

Importance to Livability
Quality in Community

Gaps for Transportation Factors, Non-Metro

Roads in good condition
Public transit services
Low traffic congestion
Walkability / accessibility
Bikeability

Importance to Livability
Quality in Community
Gaps for Transportation Factors, Metro

- Roads in good condition
- Public transit services
- Low traffic congestion
- Walkability / accessibility
- Bikeability

Ease of Travel

I can easily travel to places I need to go in my community using my current travel options.

- Strongly agree
- Agree
- Neutral
- Disagree
- Strongly disagree

0% 10% 20% 30% 40% 50%

Importance to Livability
Quality in Community

Non-Metro Residents
Metro Residents
Community Quality of Life

How satisfied are you with the quality of life in your community?

- Very satisfied
- Satisfied
- Neutral
- Dissatisfied
- Very dissatisfied

Life Satisfaction

All things considered, how satisfied are you with your life as a whole these day?
Other Data Collected in Survey

- Support for transit
- Travel behavior and use of transit
- Access to amenities by transit or walking
- Neighborhood/street characteristics
- Technology and transportation

It is important for public transit to be available to my community’s residents

<table>
<thead>
<tr>
<th></th>
<th>Metro Residents</th>
<th>Non-Metro Residents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongly disagree</td>
<td>4%</td>
<td>7%</td>
</tr>
<tr>
<td>Disagree</td>
<td>5%</td>
<td>7%</td>
</tr>
<tr>
<td>Neutral</td>
<td>21%</td>
<td>25%</td>
</tr>
<tr>
<td>Agree</td>
<td>30%</td>
<td>32%</td>
</tr>
<tr>
<td>Strongly agree</td>
<td>36%</td>
<td>25%</td>
</tr>
</tbody>
</table>
Support for Transit

<table>
<thead>
<tr>
<th></th>
<th>Metro Residents</th>
<th>Non-Metro Residents</th>
<th>Overall</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less public transit</td>
<td>5%</td>
<td>7%</td>
<td>6%</td>
</tr>
<tr>
<td>Same amount of public transit</td>
<td>43%</td>
<td>44%</td>
<td>45%</td>
</tr>
<tr>
<td>More public transit</td>
<td>49%</td>
<td>46%</td>
<td>46%</td>
</tr>
</tbody>
</table>

Technology and Transportation

Which of the following statements most likely describes your future vehicle ownership?

<table>
<thead>
<tr>
<th>Statement</th>
<th>Metro Residents</th>
<th>Non-Metro Residents</th>
<th>Overall</th>
</tr>
</thead>
<tbody>
<tr>
<td>I do not own a vehicle now and I do not plan to get one in the future</td>
<td>4.3%</td>
<td>4.0%</td>
<td>4.1%</td>
</tr>
<tr>
<td>I will no longer choose to own a vehicle in less than 1 year</td>
<td>0.5%</td>
<td>0.2%</td>
<td>0.3%</td>
</tr>
<tr>
<td>I will no longer choose to own a vehicle in 1 to 10 years</td>
<td>5.8%</td>
<td>6.6%</td>
<td>6.2%</td>
</tr>
<tr>
<td>I will no longer choose to own a vehicle in 11 to 20 years</td>
<td>12.7%</td>
<td>11.1%</td>
<td>11.8%</td>
</tr>
<tr>
<td>I will no longer choose to own a vehicle at some point beyond 20 years</td>
<td>14.6%</td>
<td>12.5%</td>
<td>13.4%</td>
</tr>
<tr>
<td>I will always choose to own my own vehicle</td>
<td>61.2%</td>
<td>64.5%</td>
<td>63.1%</td>
</tr>
</tbody>
</table>

How comfortable are you with the idea of an autonomous vehicle picking up and dropping you off?

<table>
<thead>
<tr>
<th>Comfort Level</th>
<th>Metro Residents</th>
<th>Non-Metro Residents</th>
<th>Overall</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very uncomfortable</td>
<td>25.2%</td>
<td>30.2%</td>
<td>28.1%</td>
</tr>
<tr>
<td>Uncomfortable</td>
<td>17.7%</td>
<td>20.1%</td>
<td>19.1%</td>
</tr>
<tr>
<td>Neutral</td>
<td>28.1%</td>
<td>24.8%</td>
<td>26.2%</td>
</tr>
<tr>
<td>Comfortable</td>
<td>19.2%</td>
<td>16.8%</td>
<td>17.8%</td>
</tr>
<tr>
<td>Very comfortable</td>
<td>8.6%</td>
<td>6.8%</td>
<td>7.5%</td>
</tr>
</tbody>
</table>
Linking Transportation to Quality of Life

This study develops three models to estimate the following:

1. Impacts of transportation factors on ease of travel within a community;
2. Impacts of livability dimensions, including ease of travel, on community quality of life; and
3. Impacts of community quality of life on overall life satisfaction.

<table>
<thead>
<tr>
<th>Livability indicator</th>
<th>Social</th>
<th>Physical/Climate</th>
<th>Functional</th>
<th>Safety</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Sense of community</td>
<td>Parks and recreation facilities</td>
<td>Ease of travel</td>
<td>Crime</td>
</tr>
<tr>
<td></td>
<td>Clean environment</td>
<td>Available jobs</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Street characteristics</td>
<td>Quality healthcare</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Walkability</td>
<td>Quality public schools</td>
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<td></td>
<td></td>
<td>Shopping and entertainment options</td>
<td></td>
<td></td>
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</tbody>
</table>
Results

**Ease of travel** is affected by:
- Transit quality
- Quality of roads
- Congestion (not significant for non-metro areas)
- Traffic safety
- Driver’s license
- Number of vehicles

Results

**Community quality of life** is affected by:
- Sense of community
- Street type
- Walkability
- **Ease of travel**
- Quality healthcare
- Quality public schools
- Cultural institutions

Significant for metro but not non-metro areas
- Clean environment
- Weather
- Available jobs
- Shopping and entertainment options
- Crime
Results

**Overall life satisfaction** is affected by:
- Community Quality of Life
- Health
- Employment status
- Age
- Living arrangement

Conclusions

- Respondents who gave higher ratings for transit quality, quality of roads, low congestion, and traffic safety perceived travel to be easier.
- Ease of travel has a positive relationship with community quality of life, as does walkability and many other livability indicators.
- Respondents who rated their community quality of life as higher were significantly more likely to rate their overall life satisfaction as higher, controlling for other variables.
- Results ultimately show the positive relationship between transportation and quality of life.
Reports

Exploring Transit’s Contribution to Livability in Rural Communities: Case Study of Valley City, ND and Dickinson, ND, November 2016

Transit and Livability: Results from the National Transit Livability Survey, December 2018

www.surtc.org/research

Thank you!

Questions?

Jeremy Mattson:
jeremy.w.mattson@ndsu.edu

www.surtc.org