IMPACT OF LIGHT-RAIL IMPLEMENTATION ON LABOR MARKET ACCESSIBILITY:

A Transportation Equity Perspective

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Driven to Discover
Does spatial mismatch exist in the Twin Cities?

Locations of low-wage workers/jobs in 2002 relative to LRT and bus connections

Source: Census LEHD.
Before-after changes in low-wage job accessibility across different areas (%)

- **5-6 am**: Station Area: 16.1k, Connection Area: 0.6k, Regular Area: 4.5k
- **7-8 am**: Station Area: 14.2k, Connection Area: 0.2k, Regular Area: 3.8k
- **12-1 pm**: Station Area: 16.1k, Connection Area: 0.7k, Regular Area: 3.6k
- **5-6 pm**: Station Area: 11.4k, Connection Area: 0.8k, Regular Area: 0.6k
- **8-9 pm**: Station Area: 10.0k, Connection Area: 0.1k, Regular Area: 1.6k

**Station Area**: Black
**Connection Area**: Blue
**Regular Area**: Orange
Accessibility Changes: Morning Peak—7am-8am
Related Research: Neighborhood & Social Influences

- Probabilities of each perception value.
- Manipulate one statistically significant variable.
- Hold others at median.
- Highly-educated respondents are *more likely* to have positive perceptions.
• Significantly lower prob. of positives for Asian respondents—
  • High prob. of negatives
  • Much lower of strong positives.
• 1st & 2nd generation immigrants—higher prob. of positive.
Before-and-After Commuter Flow Analysis
Increased Accessibility $$\iff$$ Actual Gains?

- Not Necessarily

- Job accessibility of a neighborhood:
  - Amount of job opportunities reachable to workers living in the neighborhood

- For increased Accessibility = Actual Gains
  - Workers living in the station & connection areas
  - Those workers commute to jobs in the station & connection areas
## Total & Average Impact
For Low-Wage Workers & Jobs

<table>
<thead>
<tr>
<th>Area Categories</th>
<th>WORKERS Moving In</th>
<th>JOBS Moving In</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Total workers</td>
<td>Average (Per BG Pair)</td>
</tr>
<tr>
<td>Downtown Hiawatha</td>
<td>103</td>
<td>0.123</td>
</tr>
<tr>
<td>North Hiawatha</td>
<td>593</td>
<td>0.202</td>
</tr>
<tr>
<td>South Hiawatha</td>
<td>124</td>
<td>0.047</td>
</tr>
<tr>
<td>Suburban Hiawatha</td>
<td>4</td>
<td>0.019</td>
</tr>
<tr>
<td>Connected Areas (blue areas)</td>
<td>14134</td>
<td>0.108</td>
</tr>
</tbody>
</table>
When developers mention affordable housing, they also mention…

- Regulatory issues
- Financing
- Incentives
- High Demand
- Market Niches
- Redevelopment
- NIMBY
- City-led
- Density
- Political will
- Senior housing
- TOD
Policy Implications

Positive evidence on the role of LRT in promoting social equity

1. The Hiawatha impact is regional in scale.

2. To transit planners:
   • Transit system integration/coordination is essential to the improvement of accessibility.

3. Low-wage workers and employers are able to take advantage of LRT, at least in the context of the Hiawatha line.

4. To land use planners:
   • Balancing jobs and housing: NOT necessarily on the same site (i.e., balance at the corridor level NOT the station level)
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