Access to Opportunity through Equitable Transportation

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Access to Opportunity through Equitable Transportation

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Community and Economic Development Hub Webinar Series
High-quality, reliable, and safe transportation is not equally accessible to all

- Wealth differences by race and ethnicity make it easier for white residents to purchase a car, allowing for increased access to jobs.

- Public transit that is inaccessible for elderly people and people with disabilities can leave transit-dependent residents stranded.

- A lack of transit options, particularly at off-peak hours, means that people who work irregular schedules often have no safe or affordable way to get to work.
Policymakers can reduce disparities in access to opportunity through investments in transportation

- But many decisionmakers lack clear definitions and measures of equity needed to make these choices
- Metropolitan planning organizations often focus more on the local environment (and congestion reduction) than on social equity

“To some communities, particularly those who have been historically victimized by the transportation planning and decisionmaking process, the transportation system can be viewed as a weapon pointed directly at them.”—Anthony Foxx, former US secretary of transportation
What is transportation equity?

- Transportation equity means different things to different people.
- We created a definition of transportation equity in collaboration with community and city representatives from four case study regions:

  Transportation equity means that transportation decisions are made with deep and meaningful community input that leads to transportation networks and land use structures that support health and well-being, environmental sustainability, and equitable access to resources and opportunities.
# Case Study Metropolitan Regions

<table>
<thead>
<tr>
<th>MSA</th>
<th>Population</th>
<th>Unemployment rate</th>
<th>Sprawl</th>
<th>Racial segregation</th>
<th>Census region</th>
</tr>
</thead>
<tbody>
<tr>
<td>Seattle-Tacoma-Bellevue, WA</td>
<td>Large</td>
<td>Low</td>
<td>Fairly dense</td>
<td>Low</td>
<td>West</td>
</tr>
<tr>
<td>Baltimore-Columbia-Towson, MD</td>
<td>Large</td>
<td>High</td>
<td>Fairly dense</td>
<td>High</td>
<td>Northeast</td>
</tr>
<tr>
<td>Lansing-East Lansing, MI</td>
<td>Small</td>
<td>High</td>
<td>Average</td>
<td>High</td>
<td>Midwest</td>
</tr>
<tr>
<td>Nashville-Davidson-Murfreesboro-Franklin, TN</td>
<td>Large</td>
<td>Low</td>
<td>Sprawling</td>
<td>Low</td>
<td>South</td>
</tr>
</tbody>
</table>
We found that although these regions face very different barriers to providing equitable transportation, they share common challenges: lack of a shared definition of transportation equity, fragmented systems and overlapping jurisdictions, a lack of coordination with local land use, zoning, and housing agencies, and insufficient funding and a lack of dedicated funding.
Metrics to help center equity in transportation decisionmaking

**Job accessibility for low wage workers**

- Gravity model that adds up the jobs accessible within a 30-minute commute of each block group, divided by the number of other low-wage job seekers competing for those jobs
- Uses a weighted combination of the traffic-adjusted drive time (for the share of people in the block group who commute via car) and the public transit time (for the share of people in the block group who commute via public transit)

**Spatial mismatch between low-wage workers and jobs**

- This tells us which neighborhoods have the most low-wage workers in need of better access to jobs
- Standardize the job accessibility measure, subtract it from 1 so a higher value signifies worse access, and multiply it by a standardized measure of the low-wage labor force
Data Sources

- OpenTripPlanner, which requires two main inputs: General Transit Feed Specification (GTFS) format and road grid data from OpenStreetMap.
  - Apply a traffic adjustment for car trips taken at peak times using INRIX’s 2019 Global Traffic Scorecard

- Demographic data from the 2014-2018 American Community Survey at the census block group level

- Jobs data from 2017 LEHD Origin-Destination Employment Statistics (LODES) resident area characteristics and workplace area characteristics

For more detail on the methods, see our technical appendix here: https://www.urban.org/file/accessstoopportunitythroughequitabletransportationtechnicalappendixpdf/download?token=4dxcarpx
Access to Jobs
Job Accessibility in Nashville

Source: Authors’ analysis of LEHD data, decennial census data, American Community Survey data, and GTFS data.

Note: Darker colors denote neighborhoods with a better access to jobs than other neighborhoods in our analysis.
“Our housing market in the past eight or so years has shot up. In the city, transit actually reaches a lot of people, but with gentrification and displacement a lot of people in the rest of the county don’t have nearly as good transit service.
—Katie Wilson, campaign coordinator at Transit Riders Union in Seattle”

Job Accessibility in Seattle

Source: Authors’ analysis of LEHD data, decennial census data, American Community Survey data, and GTFS data.
Note: Darker colors denote neighborhoods with a better access to jobs than other neighborhoods in our analysis.
“Different cities have different issues, and Lansing may be different than other cities. Lansing is proud to be the most affordable city in the nation. As such, we focus on growth, and this is boosting all parts of our city while not creating displacement or gentrification.”
—Andy Schor, mayor of Lansing

Job Accessibility in Lansing and East Lansing

Source: Authors’ analysis of LEHD data, decennial census data, American Community Survey data, and GTFS data.
Note: Darker colors denote neighborhoods with a better access to jobs than other neighborhoods in our analysis.
Job Accessibility in Baltimore

Source: Authors’ analysis of LEHD data, decennial census data, American Community Survey data, and GTFS data.
Note: Darker colors denote neighborhoods with a better access to jobs than other neighborhoods in our analysis.
Spatial Mismatch for Low-Wage Workers
Spatial Mismatch between Low-Wage Workers and Jobs in the Seattle-Tacoma-Bellevue Metropolitan Statistical Area

**Source:** Authors’ analysis of LEHD data, decennial census data, American Community Survey data, and GTFS data.

**Note:** Darker colors denote neighborhoods with a larger number of low-wage workers and worse access to jobs than other neighborhoods in our analysis.
“Our region is growing so fast... It's a car culture so there's a reluctance to pay more in taxes even though we are one of the lowest taxed areas, for our population, in the country.”
Transportation Advocate, Nashville

Spatial Mismatch between Low-Wage Workers and Jobs in the Nashville-Davidson-Murfreesboro-Franklin Metropolitan Statistical Area

Source: Authors’ analysis of LEHD data, decennial census data, American Community Survey data, and GTFS data.
Note: Darker colors denote neighborhoods with a larger number of low-wage workers and worse access to jobs than other neighborhoods in our analysis.
Spatial Mismatch between Low-Wage Workers and Jobs in the Baltimore-Columbia-Towson Metropolitan Statistical Area

“One of the things that affects access in Baltimore is safety—safety is a big issue.”
—Public employee, MTA Maryland

Source: Authors’ analysis of LEHD data, decennial census data, American Community Survey data, and GTFS data.
Note: Darker colors denote neighborhoods with a larger number of low-wage workers and worse access to jobs than other neighborhoods in our analysis.
Spatial Mismatch between Low-Wage Workers and Jobs in the Lansing-East Lansing Metropolitan Statistical Area

Source: Authors’ analysis of LEHD data, decennial census data, American Community Survey data, and GTFS data.

Note: Darker colors denote neighborhoods with a larger number of low-wage workers and worse access to jobs than other neighborhoods in our analysis.
Access to jobs via public transit for day and night shift workers
Access to Jobs via Public Transit at Peak and Late-Shift Hours in Lansing and East Lansing

Source: Authors’ analysis of LEHD data, decennial census data, American Community Survey data, and GTFS data.

Note: Darker colors denote neighborhoods with greater access to jobs via public transit than other neighborhoods in our analysis.
Access to Jobs via Public Transit at Peak and Late-Shift Hours in Nashville

Source: Authors’ analysis of LEHD data, decennial census data, American Community Survey data, and GTFS data.

Note: Darker colors denote neighborhoods with greater access to jobs via public transit than other neighborhoods in our analysis.
Access to Jobs via Public Transit at Peak and Late-Shift Hours in Seattle

Source: Authors’ analysis of LEHD data, decennial census data, American Community Survey data, and GTFS data.
Note: Darker colors denote neighborhoods with greater access to jobs via public transit than other neighborhoods in our analysis.
Access to Jobs via Public Transit at Peak and Late-Shift Hours in Baltimore

Source: Authors’ analysis of LEHD data, decennial census data, American Community Survey data, and GTFS data.

Note: Darker colors denote neighborhoods with greater access to jobs via public transit than other neighborhoods in our analysis.
Public transit access for people in wheelchairs

- Adults with disabilities twice as likely to have inadequate transportation as adults without disabilities, and transportation challenges cause over half a million people with disabilities to never leave their homes.

- Across our four metro regions, only one transit agency reported information on wheelchair accessibility

- Paratransit users feel restricted by the prescheduled pickups and wait times and that they would prefer fixed route options

More data are needed on the accessibility of transit systems
Racial Disparities in Spatial Mismatch
People of color are overrepresented in Neighborhoods with High Rates of Spatial Mismatch In Seattle and Baltimore

Mismatched Access to Opportunity by Race and Ethnicity
Difference between share of residents in areas with the worst spatial mismatch and the urbanized area as a whole

Notes: For each metro region, we compare the racial and ethnic composition of the 10 percent of block groups with the highest spatial mismatch scores in the urbanized area with the racial and ethnic composition of the urbanized area as a whole. For example, 41.3 percent of people in the block groups with the worst spatial mismatch in the Baltimore urbanized area are Black, while the urbanized-area population is 35.3 percent Black. We take the difference to show that the Black population is 6 percent overrepresented in neighborhoods with worse spatial mismatch. As communities of color are concentrated in the urbanized areas of each of our metro regions, we restrict our focus to the urbanized area for a more comparable measure of access by race and ethnicity group.
How do we move toward a more inclusive transportation network?
Opportunities to further transportation equity

- Define transportation equity in partnership with historically excluded residents
- Dedicate funding sources to transportation
- Undertake meaningful community engagement
- Coordinate with local land use, zoning, and housing agencies
- Center equity in land use planning
- Collect better data to track transportation equity
Using the data tool:

- [https://www.urban.org/features/unequal-commute](https://www.urban.org/features/unequal-commute)
Next Steps

- **Build out the tool** to include:
  - The entire nation
  - Data during and post COVID
  - More opportunity points such as grocery stores, open access higher education, k-12 schools, hospitals, libraries, parks, etc
  - New mobility and micromobility like scooters and bike share
  - Measures of quality, safety, and reliability
  - Housing data

- **Undertake community engaged research** to identify and evaluate solutions for spatial mismatch, including investments in:
  - Transit
  - Affordable housing
  - Community and Economic Development
  - Workforce training
  - Small businesses and entrepreneurship
For help using this tool or measuring transportation equity in your region, please contact me at cstacy@urban.org

To use the tool: https://www.urban.org/features/unequal-commute

To read the report: https://www.urban.org/research/publication/access-opportunity-through-equitable-transportation