



Evaluating Transit Accessibility to Food, Education, Recreation, and Other Essential Services in Tennessee

Problem Description

Disadvantaged populations, particularly low-income populations, often rely on public transit for their transportation needs. Numerous prior studies have evaluated transit accessibility to job opportunities, particularly for low-wage workers. Although providing access to jobs is an important function of public transit, other travelers use transit to get to grocery stores, healthcare facilities, schools, or outdoor recreational areas, which are not typically considered in transit accessibility analyses. These critical destinations are essential for independence, health, and quality of life. Research is needed to evaluate the transit accessibility to food, healthcare, education, recreation, and other essential services for low-income populations in Tennessee in helping to better determine the value of transit for riders.

Research Objectives

To better understand how current transit services meet the needs of disadvantaged groups, it is necessary to analyze spatiotemporal transit accessibility to different essential services like food stores, health services, schools, and parks. To analyze this, the research team has set forth the following objectives:

- Review new literature on transit accessibility with a focus on access to essential services, service changes due to COVID-19, and transit equity;
- Compile data from various sources, such as transit service data; demographics, and the locations of food stores, healthcare facilities, schools, parks, and/or other essential services in Tennessee;
- Analyze spatial and temporal transit access to the locations of essential services for low-income populations in larger urban/suburban areas with fixed route transit (FRT) services in Tennessee;
- Analyze transit access in rural areas of Tennessee with demand-response transportation (DRT) services; and
- Identify low-income neighborhoods that have inequitable transit access to essential services and evaluate improvements to transit service that could increase access.

Potential Implementation and Expected Benefits

This research is needed to evaluate if equitable access is provided to essential services for disadvantaged populations. It is anticipated that the results will provide two key deliverables that can be used to guide the implementation of the research results. First, a list of areas with limited amenities (e.g., food deserts) and/or limited transit access will be compiled; this list can then be used by local stakeholders (e.g., city planning departments, transit agencies, developers) as well as TDOT to identify areas with the greatest need for improvements. Second, a list of specific recommendations of transit service improvements that can increase access to essential services will be compiled; this list can be provided to local transit service operators to consider for future implementation and to TDOT for project evaluation and planning.

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PRINCIPAL INVESTIGATOR:

Dr. Candace Brakewood
University of TN Knoxville

TDOT LEAD STAFF:

Emily Duchac
Multimodal

PROJECT SCHEDULE:

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