

Study points to inefficiencies in Dallas mass transit

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Shima Hamidi -- director of UTA's Institute of Urban Studies and assistant professor in the College of Architecture, Planning and Public Affairs -- has produced a study investigating Dallas' transit system. Credit: UT Arlington

Lack of access to good-paying jobs is one of the primary products of a largely inefficient Dallas transit system, according to a city of Dallas-commissioned study conducted by Shima Hamidi, director of The University of Texas at Arlington's Institute of Urban Studies, and her research team.

The study, which was presented to Dallas officials Monday, investigated how economic disparity and transportation are intertwined in Dallas.

This study found that more than 65 percent of residents living in the transit-dependent core of Dallas have access to less than 4 percent of regional jobs within a 45-minute transit and walking commute time. The study also showed more than 65 percent of residents in the transit-dependent core have to spend at least 1.5 hours commuting per day by transit to gain access to less than 4 percent of jobs if they want to or have to take transit.

The study showed that Dallas Area Rapid Transit ranks 23rd of 39 large- and medium-sized transit agencies in the nation in terms of the bus passenger miles per capita and passenger trips per capita. The [city](#) and the DFW region are facing transportation equity challenges when it comes into the transportation, according to the study. Hamidi says this has contributed to the increased poverty rate in Dallas, which has increased by 22 percent since 2000, while the total population increased by about 9.7 percent.

"The city of Dallas could experience an even higher concentration of

poverty if transportation practices remain the same," said Hamidi, who also is a UTA urban planning assistant professor in the College of Architecture, Planning and Public Affairs. "From the planning perspective, these trends would cause the city to be more spatially segregated, especially in economic terms, and consequently the city could experience even more isolation of areas with poverty concentration."

Theresa O'Donnell, chief resilience officer for the city of Dallas, said the study will help Dallas build a better transportation system that helps more transit-dependent residents.

"Transportation Equity is one of the four discovery areas of the 100 Resilient Cities initiated by Rockefeller Foundation in Dallas," O'Donnell said. "Learning from Dr. Hamidi's study and incorporating its recommendations can improve quality of life for Dallas' residents in low- and moderate-income neighborhoods, allowing them access to more jobs, economic opportunities as well as cultural events, parks, retail hubs and health-care facilities."

Hamidi said that identifying transit-dependent populations is the first step in addressing these transportation challenges.

"Quantifying and identifying Dallas' transit-dependent core, and where the majority of transit-dependent population lives compared with where employment centers are critical to better understanding potential spatial mismatches for disadvantaged groups of population," Hamidi said.

Hamidi's study identified a hot spot core, largely in the southern part of the city, that is transit dependent. The results of hot spot analysis can be used to understand transit demand catchment areas within cities and regions. Transit demand catchment areas can be defined as the core location of transit riders with a high density of transit-dependent

population.

The study also quantified and measured various performance components of transit system. Here is a summary of the findings:

- A typical Dallas household spends more than 19 percent of its income on transportation which is much greater than the 15 percent transportation affordability threshold, as outlined by the federal Location Affordability Index.
- About 30 percent of Dallas' overall population and 41 percent of the city's transit-dependent population in the transit-dependent core has access to less than 1 percent of regional jobs in a 45-minute commute via transit.
- Except for a few block groups in downtown Dallas, almost the entire study area is shown to be unaffordable in terms of transportation costs.
- The majority of households, living in southwest and southeast neighborhoods in Dallas, spend between 20 and 26 percent of their income on transportation which makes it almost at the same level as housing costs for these households.
- Compared to other transit agencies, DART fare options are relatively affordable. A low-income household with a household size of 2.5 and one employee in the household would spend on average about 10 percent of income on transit fare if they use the daily pass for the entire year.
- Areas with a higher percentage of population below poverty level, particularly in south Dallas, receive better coverage and more frequent transit availability, but lower accessibility to jobs via transit when considering their entire commute trip.
- Even though the transit-dependent core has slightly better transit coverage than the rest of the city, more than a third of the population cannot access transit by walking. No physical access to a [transit station](#) means no [transit](#) use by a third of the

population in Dallas, which could contribute to the low rate of ridership.

Provided by University of Texas at Arlington

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