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Jandel Crutchfield
University of Texas at Arlington

Courtney Cronley
University of Texas at Arlington

Kate Hyun
University of Texas at Arlington

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When Growth Outpaces Infrastructure: Access to Opportunities in Suburban Boomtowns

Jandel Crutchfield, Ph.D., Courtney Cronley, Ph.D., Kate Hyun, Ph.D.

In the last twenty years, the population increased over 100% in Collin County, Texas. The county is projected to have over 2.4 million residents by 2050 -- more than three times its population in 2010. When enough people flock to an area to call it a boomtown, the population tends to grow much faster than the infrastructure to support it. Where does that leave mobility options for residents?

Researchers from the University of Texas at Arlington's (UTA) School of Social Work and College of Engineering partnered with the Collin County Homeless Coalition (CCHC) to investigate gaps in transportation services and infrastructure for lower-income individuals, particularly those experiencing houselessness or housing insecurity. They wanted to understand the impacts of those gaps on **access to opportunities** for environmental justice populations within North Central Texas.

INTERDISCIPLINARY APPROACH

Through funding from the National Institute for Transportation and Communities (NITC), researchers at UTA have already carved out a niche for themselves by forging new collaborations between transportation professionals and social workers, and this project builds on those efforts.

In this interdisciplinary study, led by Jandel Crutchfield of UTA, social workers engaged with the community to collect information about their experiences, and civil engineers worked to create statistical models based on that information. Together, they mapped census data onto transit use and transportation access.

The results offer an infrastructure profile for the region, in which increased infrastructure from tollways have improved job and population density, but with **major challenges for usage of public transit**. The results can in-

form public policies that support targeted investment and development of transit-supportive infrastructure, along with additional multimodal options.

QUALITATIVE FINDINGS

Four focus groups were conducted with residents of Collin County, TX: two with environmental justice (EJ) and two with non-environmental justice (non-EJ) populations. Participants were asked about their experiences and perspectives of economic growth and transportation infrastructure in their county. Three themes emerged from those focus groups:

- Issues with existing public transit systems;
- Missing transportation infrastructure within communities;
- Problems faced by individual residents as a result of the current public transit system.

The final report includes detailed discussion of these focus group results through the lens of the study's three primary research questions:

1. **To what extent has transportation-infrastructure maintained pace with corresponding economic growth?**

Overwhelmingly, both EJ and non-EJ participants felt that transportation infrastructure was severely lacking with respect to keeping pace with the economic boom.

1. **How has this pace influenced residents' access to housing, employment, healthcare, education, and social activities?**

The pace of economic growth has resulted in extreme challenges with access to basic needs like healthcare, housing, employment, and education. The quantitative

findings suggest that the majority of respondents use their own personal vehicles and believe the inconvenience of public transit and ride share options are too high to consider the transportation infrastructure effective. Those who are new to the county would be interested in using public transit and ride share options if they were more available.

1. How do perspectives differ between EJ and non-EJ residents?

Both EJ and non-EJ participants agreed that inconvenience is a deterrent from using public transit in the county, although those **EJ populations without access to their own car were more negatively affected** in access to healthcare, housing, employment, and education. EJ participants had a preference for using public transportation if it were available, and low usage numbers are more a reflection of the lack of availability than preference.

QUANTITATIVE FINDINGS

In the quantitative portion of this study, the research team surveyed 205 residents (105 EJ population members and 100 non-EJ population members) to collect information about transportation behaviors, perceptions and barriers in Collin County.

- The age of the survey respondents ranged from 17 to 98, and the majority (23.41%) of the respondents were aged 35-44 years old.
- The majority of people self-identified as Caucasian (36.36%) followed by African American (24.75%), Hispanic (7.58%), and Asian (2.53%).
- Education level varied; the majority (26.83%) had a college degree, followed by 20.49% high school degree or equivalent and 17.07% with some college degree.

An overwhelming proportion of the respondents answered that they **never took public transportation**, used ride- or car-sharing systems, or biked. **Walking was the only option** that the respondents considered for daily use, **other than a personal vehicle**.

The majority of participants believed non-car transportation options (shared-ride service, public transit, and walking or biking) to be inconvenient. Many would like to use public transit if these barriers were not present.

MAPPING

Lastly, the study mapped transit patterns to analyze how transportation usage overlaps with socioeconomic status. Results indicated that as transportation infrastructure in the form of tollway roads increased, so did population density, job density, and percentage of minority population. These came with a corresponding decrease in poverty level.

To learn more about this study and its results, see below for instruction on how to download the final report. A webinar recorded on March 17, 2020, presented by Jandel Crutchfield and Kate Hyun of the University of Texas at Arlington, can be found on the project page as well.

ABOUT THE AUTHORS

The research team consisted of Jandel Crutchfield and Courtney Cronley of the University of Texas at Arlington School of Social Work and Kate Hyun of the University of Texas at Arlington Department of Civil Engineering.


ABOUT THE FUNDERS

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THE FULL REPORT and ONLINE RESOURCES

For more details about the study, download the full report **Promoting Environmental Justice Populations' Access to Opportunities within Suburban Boomtowns: An Interdisciplinary, Mixed-Methods Approach to Addressing Infrastructure Needs** or watch the related webinar at nitc.trec.pdx.edu/research/project/1263

Image: Google Streetview (US-380 in McKinney, Texas; Dec 2018)

 The National Institute for Transportation and Communities (NITC) is one of seven U.S. Department of Transportation national university transportation centers. NITC is a program of the Transportation Research and Education Center (TREC) at Portland State University. This PSU-led research partnership also includes the Oregon Institute of Technology, University of Arizona, University of Oregon, University of Texas at Arlington and University of Utah.