Economic Benefits and Public Transportation Expansion in Major Nevada Urban Areas

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Abstract:

Access to public transit is an important public good. Enabling people to travel within an urban area without using a private vehicle provides benefits in terms of reduced congestion, improved air quality, access to employment for households without a car, and lower commuting costs for households that do have a car. Estimating which benefits and at what levels mass transit helps the local community will allow for a more nuanced picture of the local benefits of expanding public transportation in the study area.

This research will focus on the Reno-Sparks and Las Vegas urban areas, and will identify places therein that do not currently have access to this mode of transportation. It will also estimate the potential benefits of extending transit routes to include these areas. The population and income distributions for this analysis will come from Census 2014 Origin-Destination Employment Statistics (LODES) data that are part of the Longitudinal Employer-Household Dynamics survey (LEHD). The route data will be obtained from the General Transit Feed Specification (GTFS) Data Exchange. Information about the benefits of expanded public transportation access will come from a literature review. Finally, parameters for modeling expected transit ridership will come from a discussion with RTC officials.

Multivariate and logit regression analysis will be used to identify relationships between access and demographic variables. Possibly (depending on graduate assistant’s skills), GIS software will be used in identifying areas currently covered by public transit, as well as aggregation by who has access for their place of residence, place of employment, or both. Census socio-economic data will also be used.