SA9.00.01 Questions of Equity in Mobility

Mobility Matters: Investigating the Link between Public Transportation and Income Equality in Major U.S. Cities

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In light of increasing income inequality and wealth disparity in the U.S., what can be done to improve the financial stability of low- and moderate-income households, who currently spend 60% of their income on housing and transportation? Transit advocates purport that greater access to public transit improves access to employment opportunities and services, and therefore improves economic mobility and reduces income inequality. However, few studies have demonstrated this effect empirically. This paper leverages emerging data on transit levels of service in major metropolitan areas in the U.S. to examine the link between robust public transportation (in terms of investment and accessibility) and decreased income inequality at the metropolitan and neighborhood levels. It seeks to answer several policy-relevant questions, including:

- Do metro areas that invest more in mass transit, improving mobility and accessibility to economic opportunities and reducing transportation costs, have higher household incomes?
- Is area income inequality reduced by transit investment?

Benefits associated with public transit access include ability to travel to one's workplace and engage in other daily activities and necessities such as shopping, recreation, child care, and health services (Sanchez, 2002). Such studies often focus on a single metropolitan region, or conduct a comparison of several areas, complicating broader generalizations.

Our initial analysis of the 37 largest metropolitan areas with rail service shows a statistically significant correlation between transportation costs generated by the Center for Neighborhood Technology and higher levels of inequality using both the Gini coefficient of income inequality and the 90/10 income inequality ratio (the ratio between the lower limit of the highest quintile and the upper limit of the lowest quintile of income). This paper will extend these findings at various scales and in a statistical model of income inequality outcomes.

Bike Share Equity: A Survey of Residents in Low-Income and Minority Neighborhoods with Bike Share in Brooklyn, Chicago, and Philadelphia

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Bike share programs have expanded to well over 100 cities throughout the U.S. over the past 10 years and range in size from just a couple dozen bikes to thousands of bikes. As these systems grow over time and reach new potential customers, the question remains of whether they can adequately serve a diverse set of populations. Some programs have aimed to better serve populations who otherwise would be unlikely to be able to afford to participate in bike share programs by providing discounted or free memberships. Some programs have set up specialized outreach programs to better integrate their

programs with low-income and minority populations. Our study evaluates whether these outreach and discount programs worked for their target populations and what gaps may still exist.
Our study looked at such outreach and discount programs in Brooklyn, Chicago, and Philadelphia in majority low-income and minority neighborhoods. Each of those cities have set up equity programs and targeted particular neighborhoods for outreach. We surveyed residents in those neighborhoods along with control neighborhoods who did not receive such outreach. Our survey asked residents a variety of questions related to bike share in their neighborhood, potential outreach they may have encountered, and their experiences with transportation and changes in their neighborhood. Through the use of a mail survey with an online option, we received over 1800 responses and analyzed questions based on city, target or control, and various demographic variables such as age, gender, race, and income.

Gentrification and Displacement in Los Angeles' Rail Transit Neighborhoods
Presenter: David Roachford, University of Southern California (roachfor@usc.edu)
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Cities across the United States are spending billions of dollars upgrading and installing rail transit systems to improve mobility in their communities. With promises such as faster commute times, healthier air quality, walkable streets, and economic growth, these lines can influence development in surrounding neighborhoods. The opportunity to create Transit Oriented Developments (TODs) has driven the push for more public transit infrastructure and development in station areas. However, as trains and rapid buses continue to be constructed, it is important to analyze the effects generated by the new lines. Most importantly, can transit be a tool to increase the quality of life for disadvantaged residents, or does transit lead to gentrification and displacement of longtime residents? This research analyzed census block groups that are in half mile buffers around 80 Los Angeles Metro stations for variables such as housing price, rental price, income, education, diversity, and the percentage of families on public assistance. Data were analyzed for roughly 500 block groups within half a mile of stations and approximately 5500 block groups in the boundary of Los Angeles County for the 1990 and 2000 decennial census and 2009-20114 ACS Five year averages. These census block groups were then compared to the rest of the Los Angeles County to see how the communities changed over time. The findings show that some variables, such as the percentage of white residents, declined more in the County than within the station buffer zones. Other variables, such as the percentage of households on public assistance, did in fact decrease at a faster rate inside the buffer areas compared to the county. This seems to indicate that while some transit oriented areas are gentrifying, there may be less change in station-area characteristics relative to non-transit areas in Los Angeles County than many in the public expected.

Equity, Urban Transport, and the Future of City-Making
Presenter: Lily Song, Harvard University (lilysong@gmail.com)
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This paper proposes an alternative framework for evaluating the equity implications of innovations in urban transportation drawn from comparative case study research of 8 locales: Los Angeles, Mexico City, New York City, Paris, San Francisco, Seoul, Stockholm, and Vienna. The case study sites are all central cities of major urban regions around the world, each of which has adopted new transportation policies ranging from congestion charging, bus system reform and ridesourcing to amplification of non-motorized

mobility through bike lanes, pedestrianization, and the recapture of street space. Dominant approaches to evaluating equity implications of such transport changes tend to focus on whether and how a given transportation policy will redistribute individual user costs vs. benefits or offset private sector-driven inequalities such as uneven access to individual motorized transport. In contrast, we situate considerations of equity in a city's changing land use patterns and their implications for rising property values as well as displacement of the poor as much as in pure mobility metrics. We do so by assessing the extent to which urban transportation changes may increase (or reduce) patterns of accessibility for certain demographics, asking whether these changes are direct – that is, a consequence of transport mode shifts per se – or indirect, that is, a consequence of the growing tendency to privilege and remake cities as sites for living, working, and leisure for the purpose of increased global economic competitiveness – priorities which themselves may help explain transport policy shifts in the first place. The paper concludes with a reflection on the extent to which the introduction of innovative transportation policies is changing the ways in which cities are built, managed, and governed. In so doing, it draws attention to the ways that changing transportation conditions may pose new dilemmas or opportunities for proponents of metropolitan equity and justice.