

Race, Class, and Transit Oriented Development

Examining high-income demographic change after light rail transit

Thelonious Goerz

Dept. of Sociology
Johns Hopkins University

Outline

- ▶ Background and prior research
- ▶ Seattle case study
- ▶ Methods and data
- ▶ Descriptive and statistical results
- ▶ Conclusion

Motivation

- ▶ How and where people move have been a core questions in urban sociology and poverty research for years.
 - ▶ These moves have consequences for various aspects of life: wellbeing, economic status.

Therefore, it makes sense to study the most vulnerable populations, right?

Well, sort of.

- ▶ I argue an asymmetric focus on studying the movement patterns of low-income residents in changing neighborhoods has left open theoretical and empirical gaps for researchers.

Background: Theory

- ▶ Social scientists are interested in the effects of gentrification on urban demographic patterns.
 - ▶ In recent years, it has been linked to major urban re-investment projects, such as Light Rail Transit.
 - ▶ So, transit is a good proxy for gentrification, neighborhood change, and associated ideas.

Why does studying transit matter?

Seattle and many other cities are increasingly turning to Light Rail Transit (LRT) as a way to manage growth, promote green travel initiatives, and reduce congestion.

- ▶ Manage the tech boom in WA.
- ▶ Significant in-migration.
- ▶ Population growth.

The Present Study

In Seattle:

- ▶ The Link Light Rail has been in development since 1996 when it was approved.
 - ▶ Construction began in 2003 and a majority of stations opened in 2009.
 - ▶ As of 2021 there are 14 stations.
 - ▶ There are currently north and south expansions in development to 2036.

As a consequence:

- ▶ There are puzzling trends going on.
 - ▶ Hess (2020) finds dramatic increases in non-Hispanic White residents after LRT in Seattle.
 - ▶ Declines in Asian and Hispanic residents after LRT.

How is this happening?

Background: Income and mobility

Conventional wisdom suggests that neighborhoods change through low-income displacement.

- ▶ But, low-income residents are often much less mobile than middle-income and higher-income residents (Freeman 2005).
- ▶ However, there is evidence to suggest that middle and upper income residents are far more mobile:
 - ▶ Ding et al. (2016): Increases in high credit score individuals' mobility in gentrified neighborhoods.
 - ▶ Bartholemew and Ewing (2017): Disamenity effect in neighborhoods with urban development, homeowners moving out.
 - ▶ Martin and Beck (2011): Higher status non-homeowners may be moving out of gentrified neighborhoods.

The Present Study

- ▶ The demographic trends in Seattle are not consistent with patterns of socioeconomic mobility in changing neighborhoods.
 - ▶ Often low-income groups are declining.
 - ▶ But, statistically these groups are not as mobile.

Where is this demographic change happening on average?

Hypothesis

- ▶ **This study argues that middle and high income groups are the primary forces shifting neighborhood racial composition in LRT neighborhoods because of their capacity to move.**

Methods

- ▶ Time series data for 135 census tracts (Seattle, $N = 540$) and 24 LRT treated tracts [1990-2015]:
 - ▶ Income (by race), demographic variables, and controls.
 - ▶ American Community Survey, Decennial Census Long Form, Hess (2020).
- ▶ Difference in difference (comparative counterfactual design)
 - ▶ Quasi-experiment where:
 - ▶ We can estimate causality.
 - ▶ Gain insights about what would have happened if (+ LRT) or (-LRT).

Descriptive Analysis

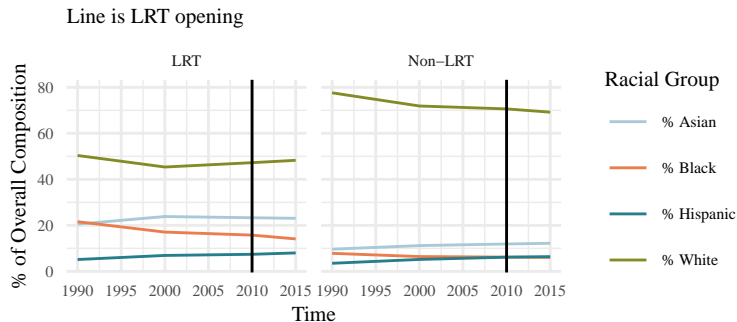


Figure 1: Comparison of Percent of Each Racial Group Over Time in Seattle

Descriptive Analysis

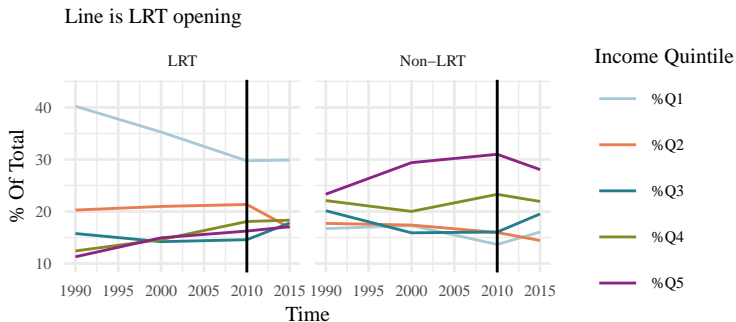


Figure 2: Comparison of Income Quintiles in Seattle Census Tracts Over Time

Statistical Analysis: DID of racial composition

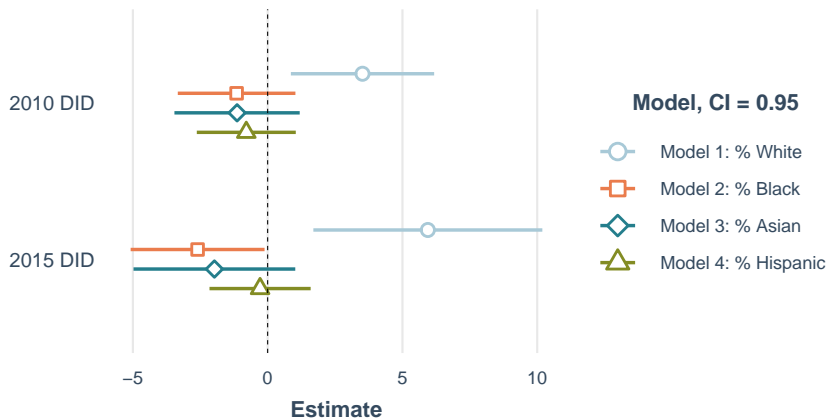


Figure 3: DID estimates of LRT effect on racial group percent

Statistical Analysis: DID for income composition

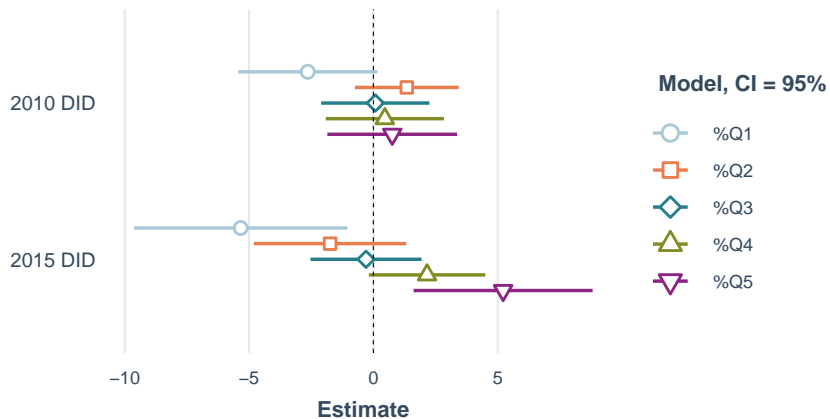


Figure 4: DID estimates of LRT effect on income quintile percent

Conclusions

- ▶ 5 years after LRT, neighborhoods experience dramatic increases in white residents, and declining or stagnant non-white groups.
- ▶ 5 years after LRT, there is shift in the income distribution tending toward the highest quintile earners.
- ▶ This suggests that income is an important factor in how demographics in Seattle are changing.
- ▶ Income patterns are consistent with my hypothesis that dramatic shifts in income could be moving the composition.
- ▶ But it is not clear how this change may vary by racial group.

Limitations

- ▶ The ACS and census report compositional estimates so understanding how distribution changes translate to in and out migration flows is tricky.
- ▶ Prediction of Black racial and economic trends can be subject to a lot of uncertainty.¹
 - ▶ Small counts in ACS sample.
 - ▶ Low levels of Black population overall in Seattle.
- ▶ DID modeling assumptions may not be met in this case.²

¹Data and full analysis provided on request. Email: tgoerz99@uw.edu

²Parallel trends and endogeneity are issues, but beyond the scope of the presentation.

References

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