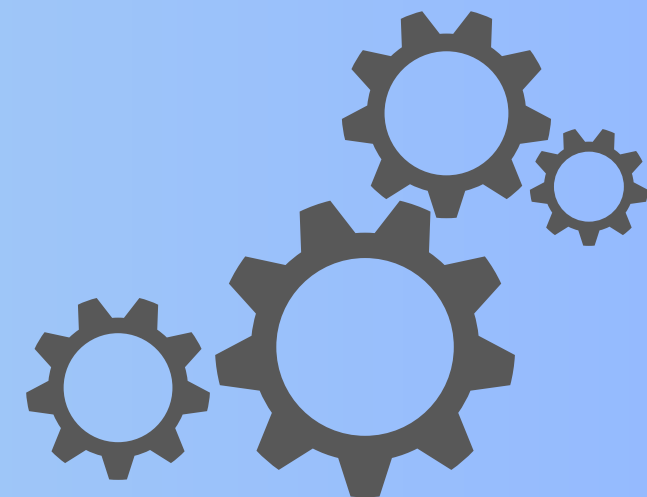
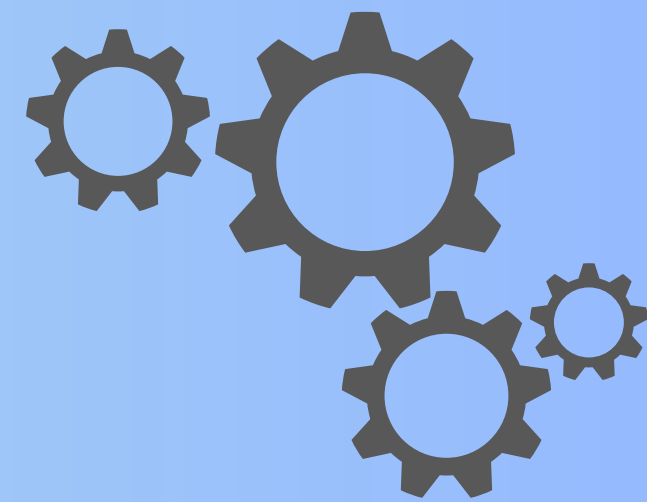


PUBPOL 457
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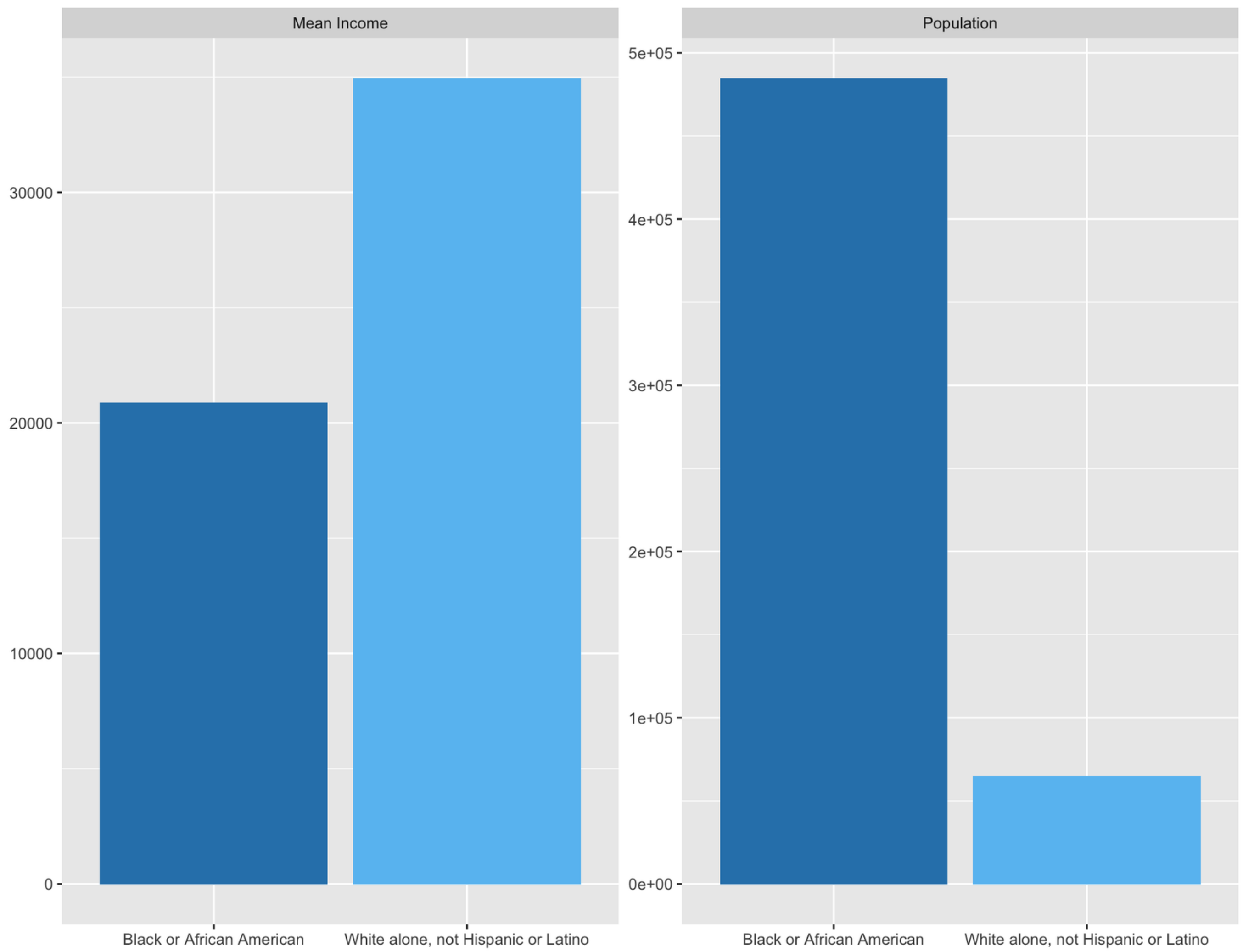
TRANSPORTATION IN THE MOTOR CITY

A Portfolio of Visualizations Exploring the Realities of
Transportation for Residents of Detroit

By Ishan Biswas

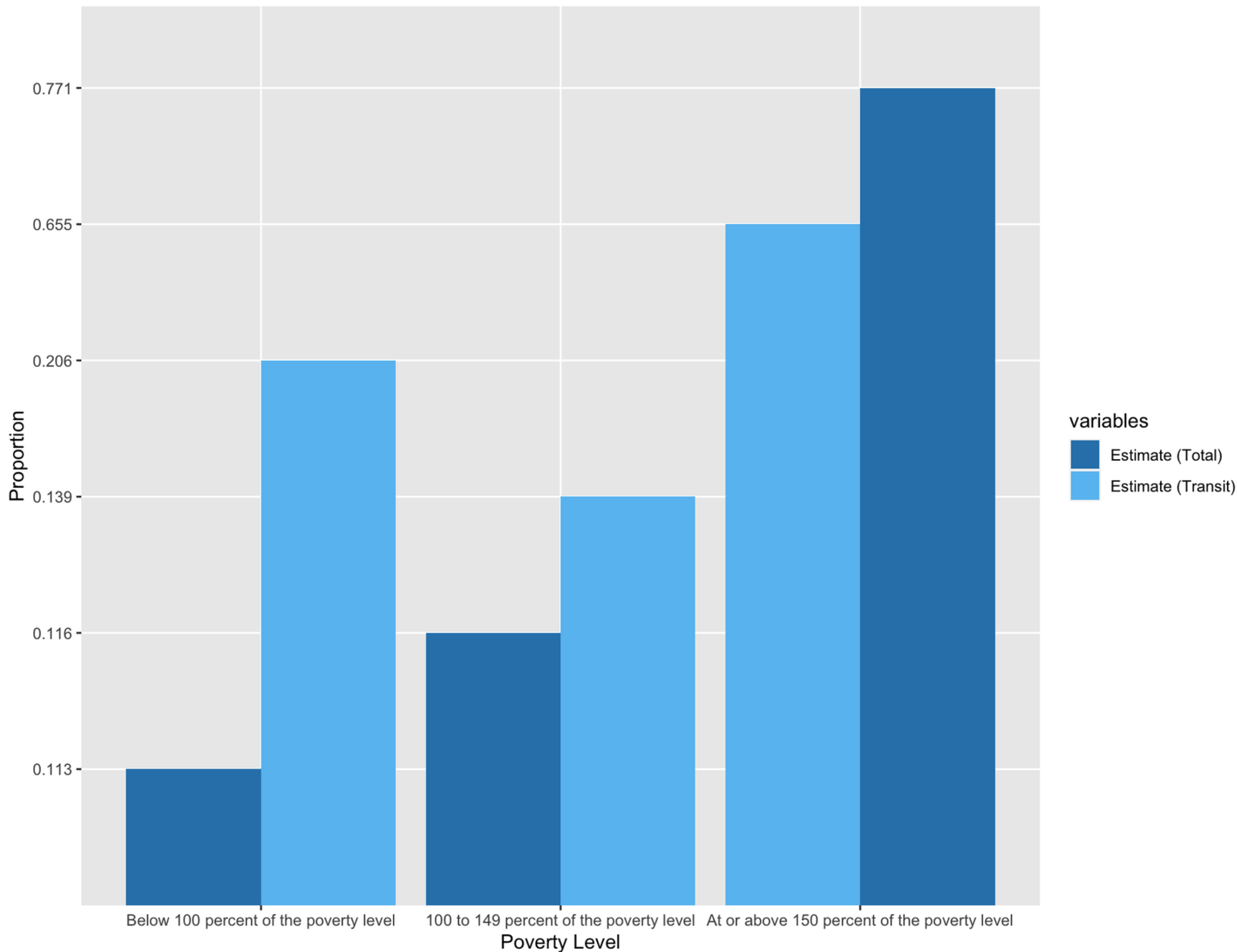


Comparative Mean Income and Population Values by Race in Detroit



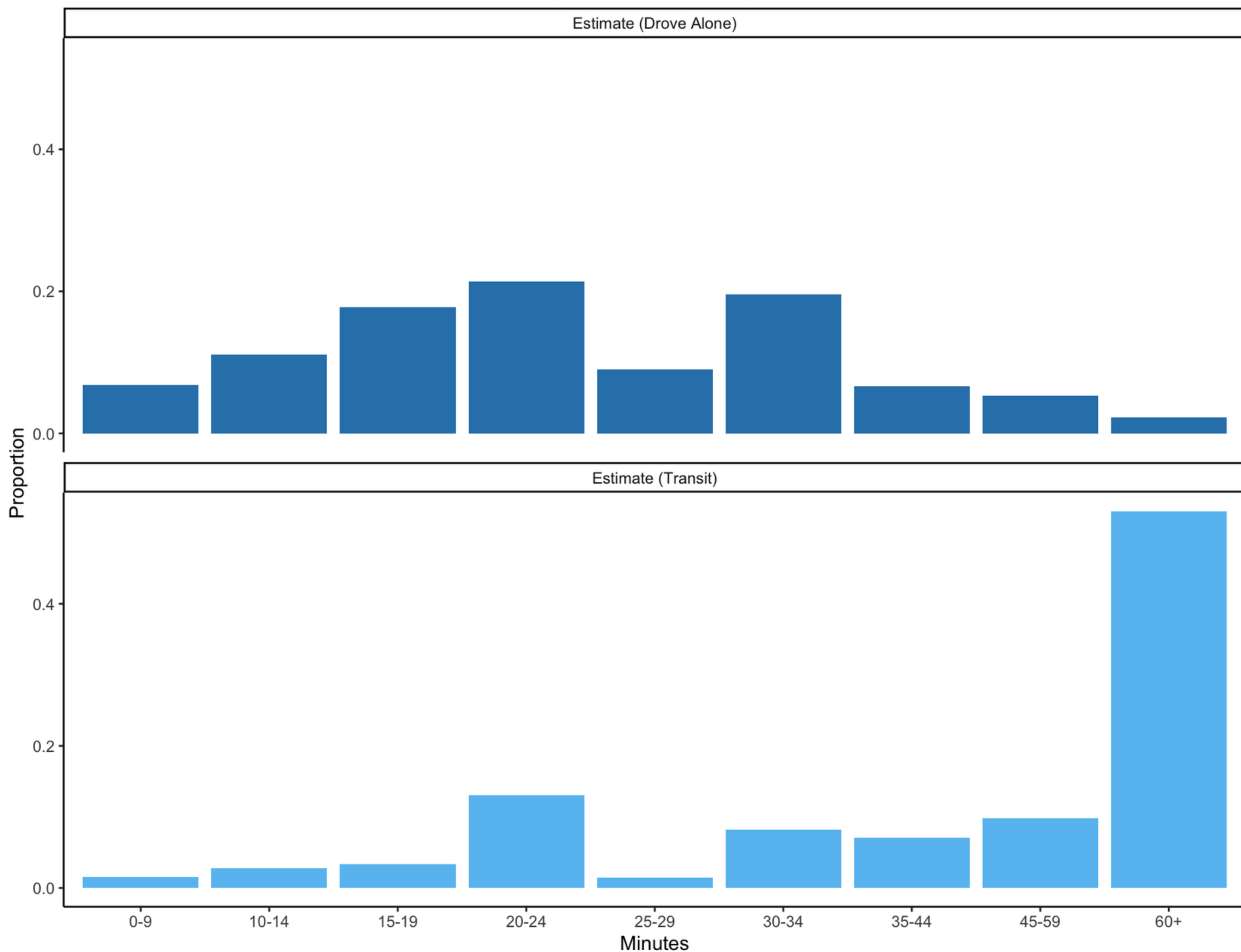
- Transit in Detroit is a racialized issue. This is inherently true due to the fact that about 77% of residents are Black, and the 1/3 residents in poverty skew towards the Black population
- What does this mean? It is important to contextualize how the data presented in the following visualizations may be a more prevalent issue based on racial and economic lines

Total Distribution of Workers Based on Poverty Level Compared to Commutersby Transit



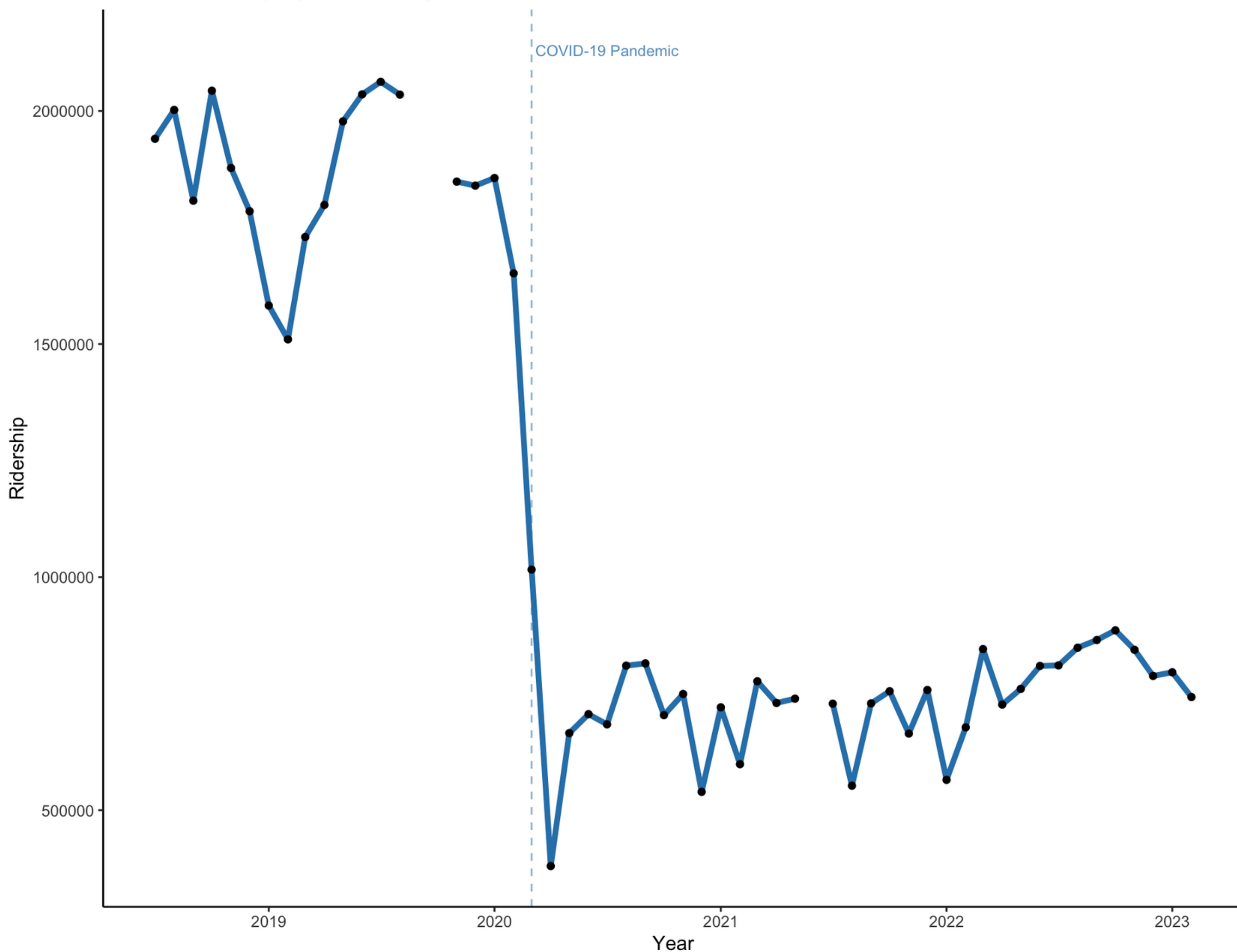
- As can be seen, poorer people are more reliant on transportation services to get to work. This graph also shows the correlation of transit usage in the city decreasing with increased wealth
- This means that people largely use the network out of necessity rather than leisure, meaning the network is a last resort for most
- How well is the network funded if it is designed as a last resort for most riders?

Distribution of Proportions of Commute Time by Transportation Type



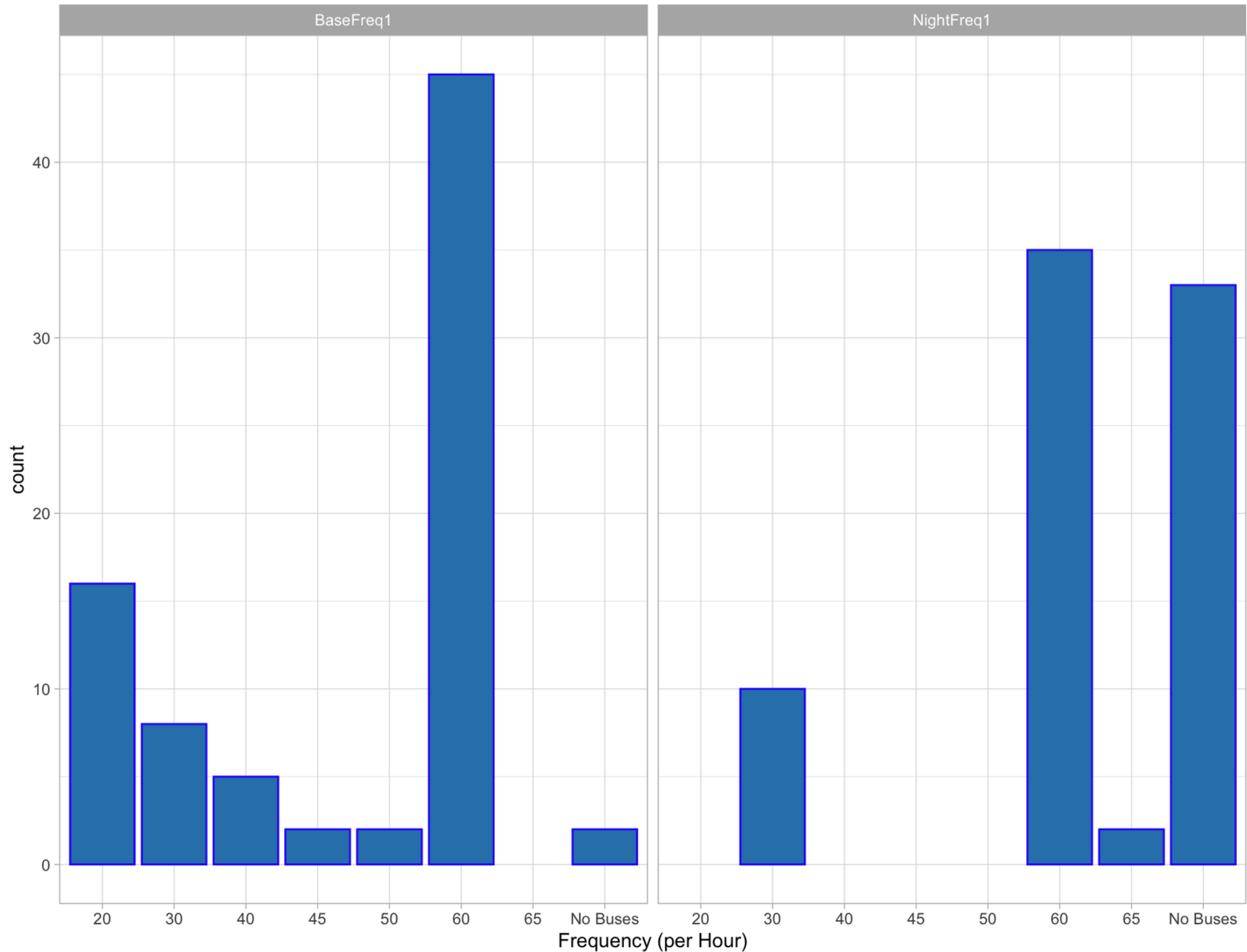
- Why is it that people with higher incomes do not tend to use the public transportation available to commute to work?
- This distribution clearly shows that driving alone is far more efficient than using transit- the majority of transit commutes are 60+ minutes!
- Thinking back to the last graph, this means that poorer people that rely on transit are dealt a blow in terms of commute efficiency as well. Is this conducive of poverty alleviation?

DDOT Ridership by Month, July 2018-Feb. 2023



- The COVID-19 Pandemic appears to be a contributor to the transit's woes today
- Pre-COVID monthly ridership on the DDOT (Detroit Bus System) showed ebbs and flows between seasons, however ridership always exceeded 1,500,000
- After COVID, the routes have never recovered- a myriad of reasons including staff shortages and work from home plans have caused ridership to never rebound. Another compounding effect for workers in poverty

Distribution of Frequencies of Bus Routes per Hour for Weekdays and Weeknights



- Buses (which are the primary source of public transportation for the city) have been lamented for their poor frequency and accessibility
- There may be a large amount of 60/hour routes still available at night, but these are usually the same routes that are at 60+ during the day. Smaller routes that have mid-range frequencies are totally lost for nighttime riders, implying strategic planning that further limits the time on people in poverty's hands

A scatter plot showing the relationship between Walk Score (X-axis) and Transit Score (Y-axis) for the 0-49 age group. The X-axis ranges from 20 to 80, and the Y-axis ranges from 20 to 80. A vertical dashed line at Walk Score = 50 is labeled "0-49: Car Dependent". A horizontal dashed line at Transit Score = 50 is labeled "0-49: Minimal to No Transit". The data points are blue circles of varying sizes, representing different locations. Most points are clustered between Walk Scores of 40 and 60 and Transit Scores of 30 and 50. There are a few outliers with high Walk Scores (above 70) and low Transit Scores (below 30).

- Large cities are often known for their walkability- dense city blocks mean that people have the option to walk, and often, it can be faster
- Detroit, due to its massive exodus over the years, is left with a massive city that is not walkable in most areas. Going off the thresholds defined by Walk Score, there is only **one** neighborhood with a barely-mediocre level of both walkability and transit availability. There is no option but to drive in the Motor City

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THANK YOU!

What Can You Do?

- Support your local public transportation systems by riding them. Think back on the graph of ridership by poverty level and how the system is currently a last resort for most. The ridership will never recover unless people who do not *need* to use it utilize it!
- In Metro Detroit, always vote yes on increasing millages for SMART buses- these are the buses that connect the city to the suburbs, where many Detroiters have to commute to through excruciating wait times
- Get involved with organizations such as the Transportation Riders United:
<https://www.detroittransit.org/>