

# A Spatio-Temporal Analysis of Carjackings & Neighborhood Disadvantage

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- Highlights
- Community violence and crime negatively impact health and are important drivers of inequities
  - Violent crime has increased in urban areas since 2020 with **carjackings** of interest to the media
  - We examine the spatio-temporal patterns of carjackings in Minneapolis 2017-2022 in comparison to the well-established patterns for homicides
  - Carjackings remain concentrated in disadvantaged neighborhoods. However, they dispersed to advantaged neighborhoods, which may influence media attention**

- What we know on recent violent crime trends comes from gun violence
- Gun violence has increased since 2020 though it continues to cluster in disadvantaged neighborhoods, just at higher rates

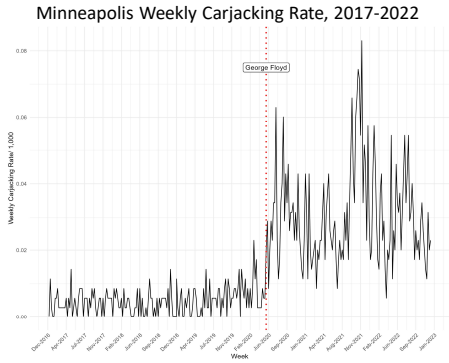
- Are carjackings, like gun violence, clustering in socially disadvantaged neighborhoods? Or are they occurring in neighborhoods with higher levels of collective efficacy and political connectedness?

- Data and Analysis
- City of Minneapolis Police Department Data** on carjackings and homicides, 2017-2022
  - IPUMS USA** for 2020 census tract-level characteristics & population estimates

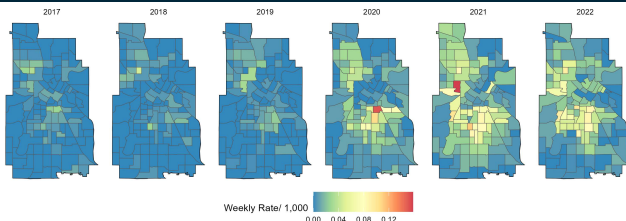
- Analysis:
- Describe **carjacking spatio-temporal patterns**
  - Random effects models to **examine neighborhood-level predictors of carjackings** (carjacking as continuous outcome & then what predicts a tract going from 0 to any carjackings)

## Carjackings dramatically increased in Minneapolis after the police killing of George Floyd

- Prior to the murder of George Floyd, the average weekly rate was 0.0048 carjackings per 1,000 residents
- Afterwards, the average weekly rate **increased 528%** to 0.030
- Homicides** did not see as large or as sustained of an increase as carjackings

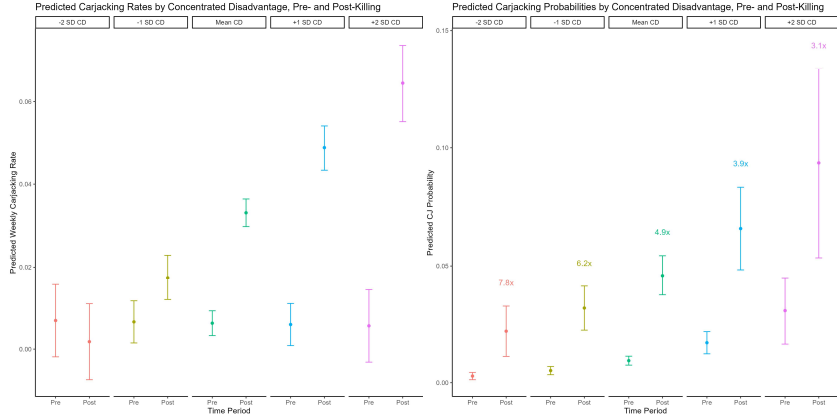


## Carjackings dispersed to much of the city in 2020



- Prior to 2020:** Carjackings occurred in Minneapolis but at lower rates and clustered in disadvantaged neighborhoods
  - 2020 and 2021:** Dispersed to much of the city with hotspots in disadvantaged neighborhoods
  - 2022:** Contracting, but rates remain high
- This dispersion was **not** observed with **homicides**

## Disadvantaged Neighborhoods saw a larger increase in carjackings BUT Advantaged Neighborhoods saw a greater relative change



- Post-killing, the carjacking rate was higher in more disadvantaged neighborhoods
- A larger **relative** increase in advantaged neighborhoods may help explain media attention

## Implications and Future Research Directions

