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**Literature Review**

As of July 2022, New York City had a population of 8.335 million. Before the start of Covid-19, the population had been steadily increasing reaching a high of 8.8 million people in April of 2020. New York City and its surrounding metropolitan area is the largest metro U.S. economy with approximately 1 million people, 20% of the workforce, commuting into the city from New Jersey, the lower and mid-Hudson Valley, southwest Connecticut, and Long Island (NYC Planning).

In 2017 6.8% of the working resident population of NYC worked outside of the city whereas 53.9% lived and worked within the same borough and the remaining 39.3% lived and worked in different boroughs within the city limits. Those living in the city and working in Manhattan, Brooklyn, the Bronx, and Queens were most likely to travel by subway. Using commuter rails and buses is popular amongst residents of Long Island, the Lower Hudson Valley, and Inner NJ. For those commuting into Manhattan, it is more common then not to utilize the subway in their travels.

A map of the united states

Description automatically generatedManhattan has the largest business district and multiple transportation hubs including Grand Central Station, Penn Station, Moynihan Station, and the World Trade Center Oculus. The Bronx has the least number of subway stations and the 2nd lowest population. Kernel density estimation uses a color scale to indicate high crime levels in yellow and low crime levels in dark blue (Immanuel Ryadi). Viewing the image to the left we see higher crime levels across all of Manhattan and the Bronx. Conversely, Staten Island, the borough with the lowest population and the only one not accessible by subway has the lowest level of crime.

On March 16, 2020, New York City implemented stay-at-home (SAH) restrictions in an effort to control the transmission of Covid-19. Due to these restrictions, children attended school from home and many companies transitioned workers to a work-from-home status. All non-essential public gatherings were barred, restaurants and theaters were closed, and home delivery services saw a dramatic uptick. Both ridership in the NYC subway system and crime initially plummeted however their recovery rates have been different. As of January 2023, “ridership stagnated at 60% of 2019 levels.” At the same time, it was noted that “subway crime rose by 30% in 2022 from a year ago, outpacing the 22% jump in major crimes across the city during the same period” (Akinnibi, Korte, 2023).

A graph showing a line

Description automatically generated with medium confidence

Routine activity theory (RAT) explains that “predatory crimes against persons or property require three elements – (1) a motivated offender, (2) presence of a suitable target, and (3) the absence of a capable guardian” (Koppel, Capellan, Sharp, 2023). Due to the sudden change in routine brought about by the SAH restrictions, “RAT predicts changes in the distribution of crime opportunities depending on the type of crime and location” (Koppel, Capellan, Sharp, 2023). Data collected since the implementation of SAH restrictions in New York City support this. Rates of crime in public spaces in the first few months following the SAH restrictions fell for felony assault, grand larceny, rape, and robbery.

A graph of a loss of time

Description automatically generated with medium confidenceA second major event that occurred in New York City and across the United States was protests against police brutality in the wake of the killing of George Floyd. These protests began in New York City on May 28, 2020, and continued through early December. Following the onset of protests, crime rates rose at a marked level including shootings which had previously been unaffected by SAH restrictions. Why this occurred is, in many ways, still open for interpretation and in need of more study. Implementing SAH restrictions has been called the largest criminological experiment in history (Stickle and Felson, 2020) and the effects are expected to be more impactful than those of World War 2.

**Research Methods**

Given the volume and breadth of crimes committed in the 5 boroughs of New York City, I chose to focus my attention on crime in the subway system. Using data found on NYC Open Data I queried a dataset called NYPD Complaint Data Historic to include crimes committed where the subway station is not (null). Because the New York City subway does not go to Staten Island, it is not included in my study but the remaining four boroughs – the Bronx, Brooklyn, Manhattan, and Queens are. This study will run from the beginning of January 2006 to the end of December 2022.

**References**

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