

Location Intelligence Final Report

RETAIL DISPLACEMENT WITH REZONING IN NYC

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OVERVIEW

How does the rezoning affect the retail displacement in New York City?

This research investigates the impact of spatial zoning on retail displacement in New York City. With longitudinal datasets of retail establishments and land use, the research explores

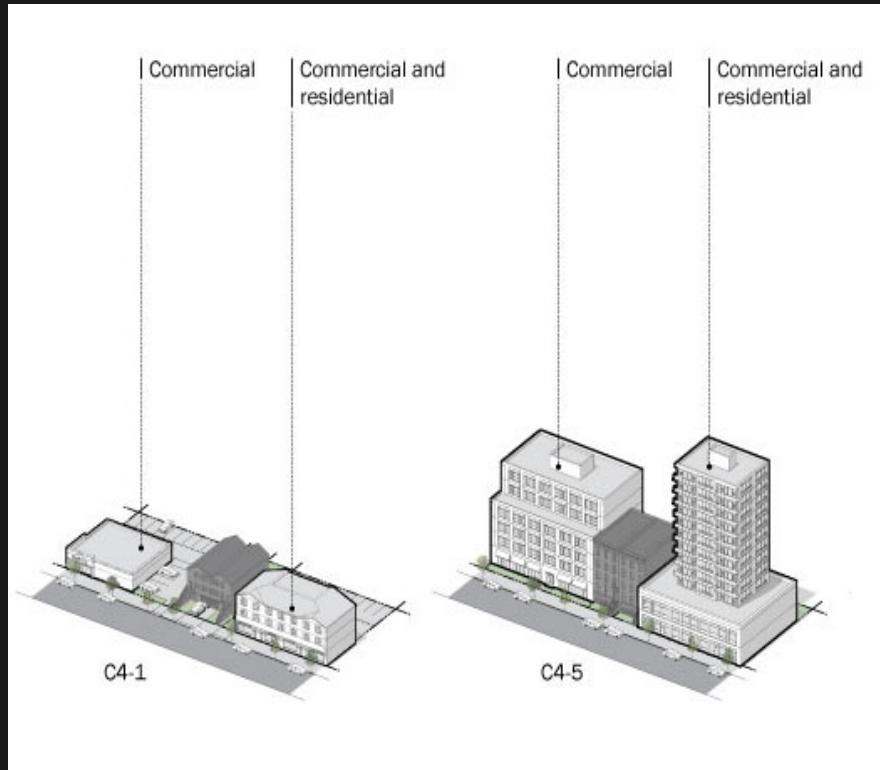
the zoning and retail in the following aspects: First, the overall change in number and density of retail stores in NYC. Second, whether the presence of zoning affects the change of retail. Finally, study how zoning's effect performs differently on retail with different types.

RETAIL AS SOCIAL INFRASTRUCTURE



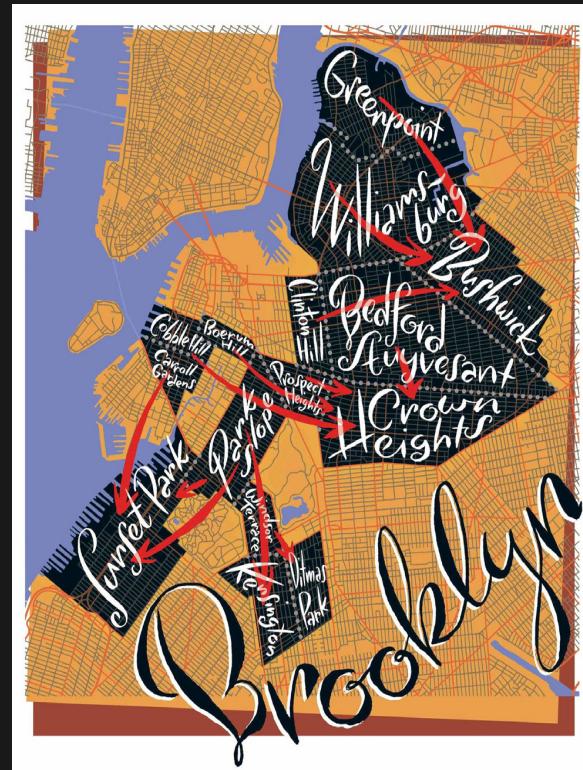
"Local small businesses are not only good for services and access to jobs, but are critical to the vitality of community life. " - Jane Jacobs

RETAIL DISPLACEMENT WITH ZONING



Zoning Regulations

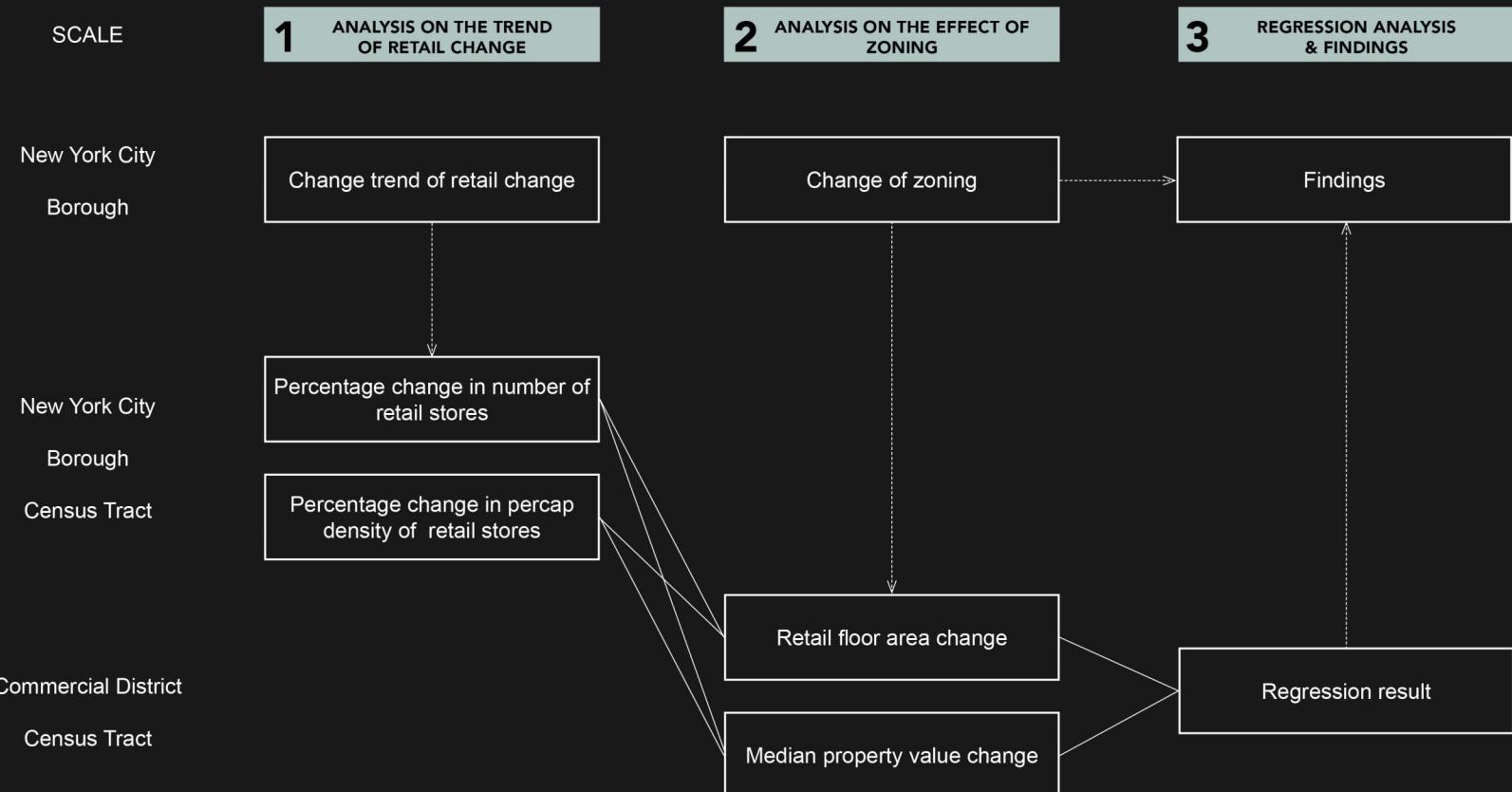
Influence building typology and urban fabric



Moving deeper into brooklyn for lower prices - James Laish

Increase the rent prices

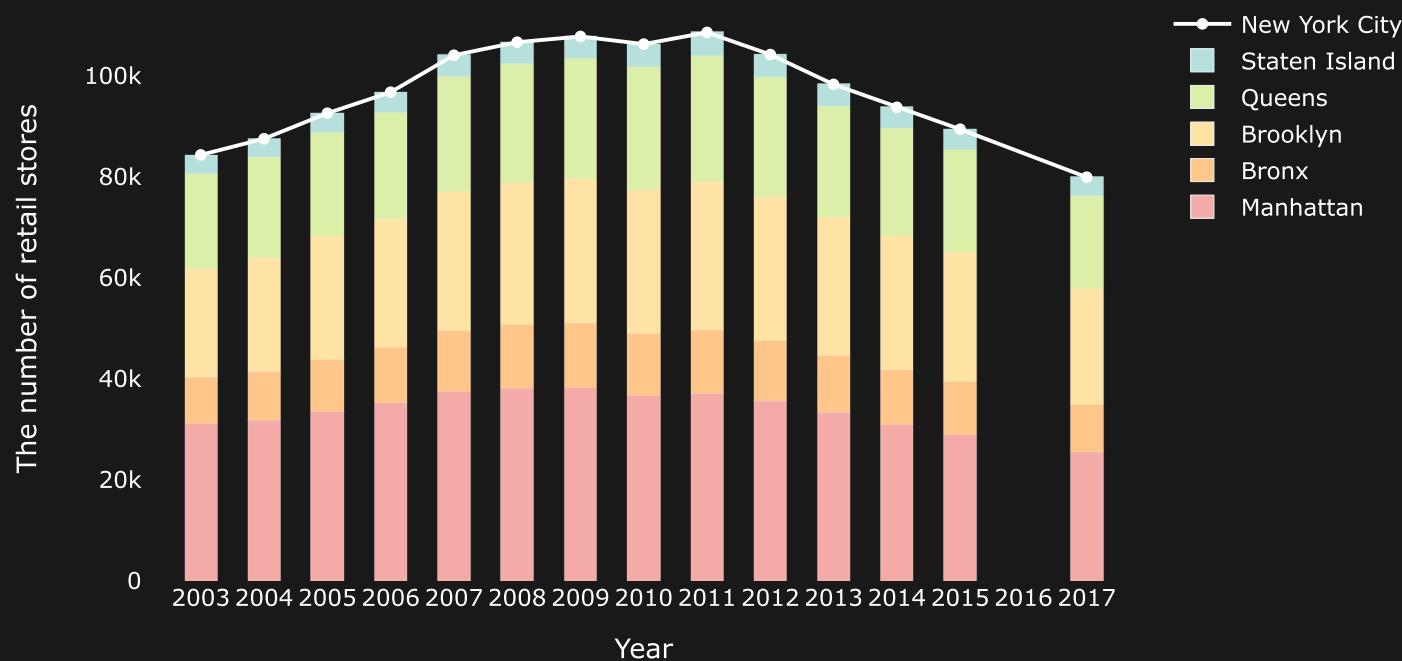
METHODOLOGY



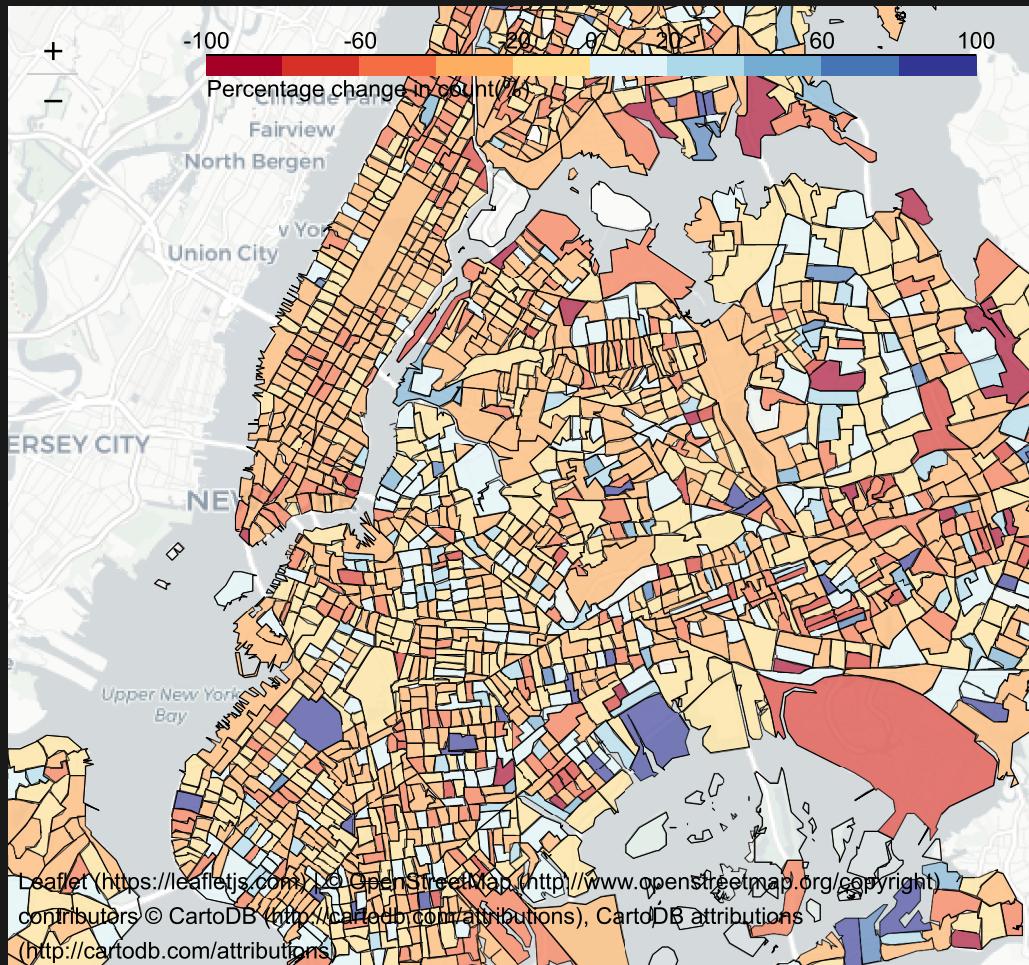
RETAIL DECLINE IN NEW YORK CITY

THE DECREASING NUMBER OF RETAIL STORES

The Number of Selected Types of Retail Stores in NYC, 2003-2015 and 2017



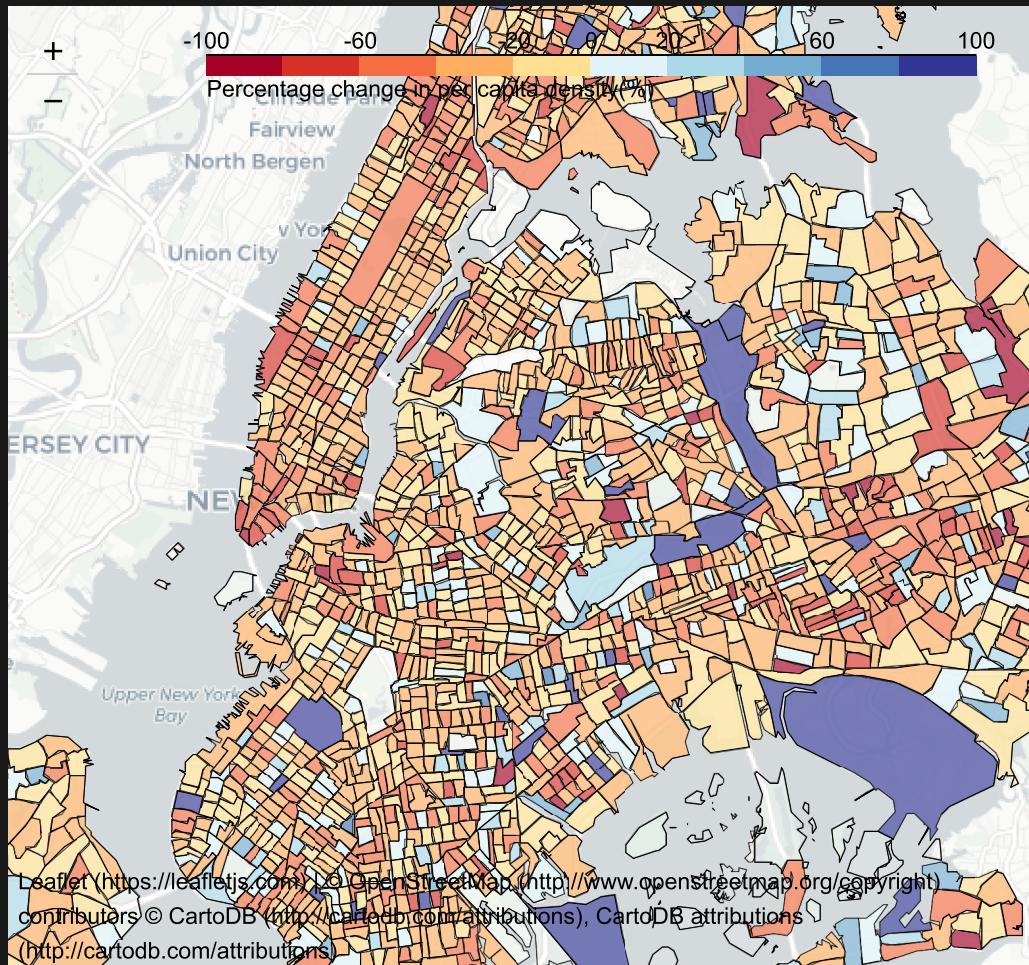
PERCENTAGE CHANGE IN NUMBER OF RETAIL STORES



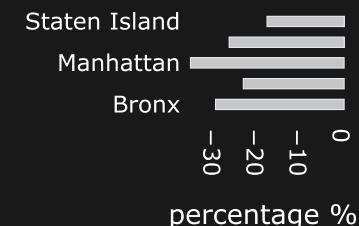
Percentage Change in Number of Retail Stores by Census Tract and Borough, 2009-2017



PERCENTAGE CHANGE IN DENSITY OF RETAIL STORES



Percentage Change in Per Capita Density of Retail Stores by Census Tract and Borough, 2009-2017



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THE EFFECT OF ZONING

Rezoning of Commercial Districts in New York City, 2009-2017

(Commercial Districts: Tax Plots With "Zoning District 1" C1-C6)

New C-Districts
2009-2017

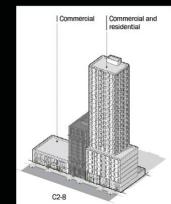
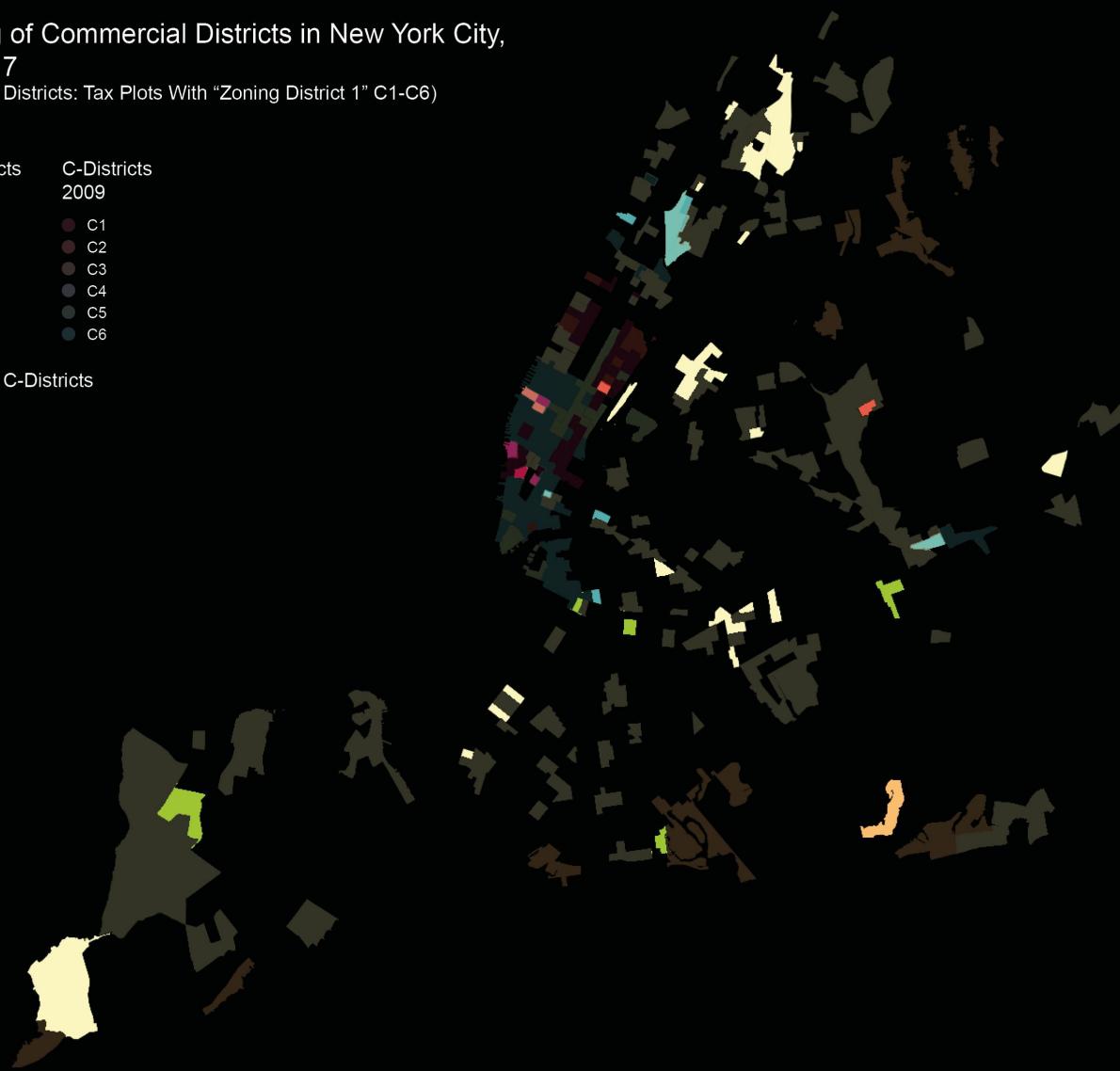
- C1
- C2
- C3
- C4
- C5
- C6

Disappeared C-Districts
2009-2017



C-Districts
2009

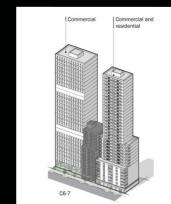
- C1
- C2
- C3
- C4
- C5
- C6



C2-8



C4-7

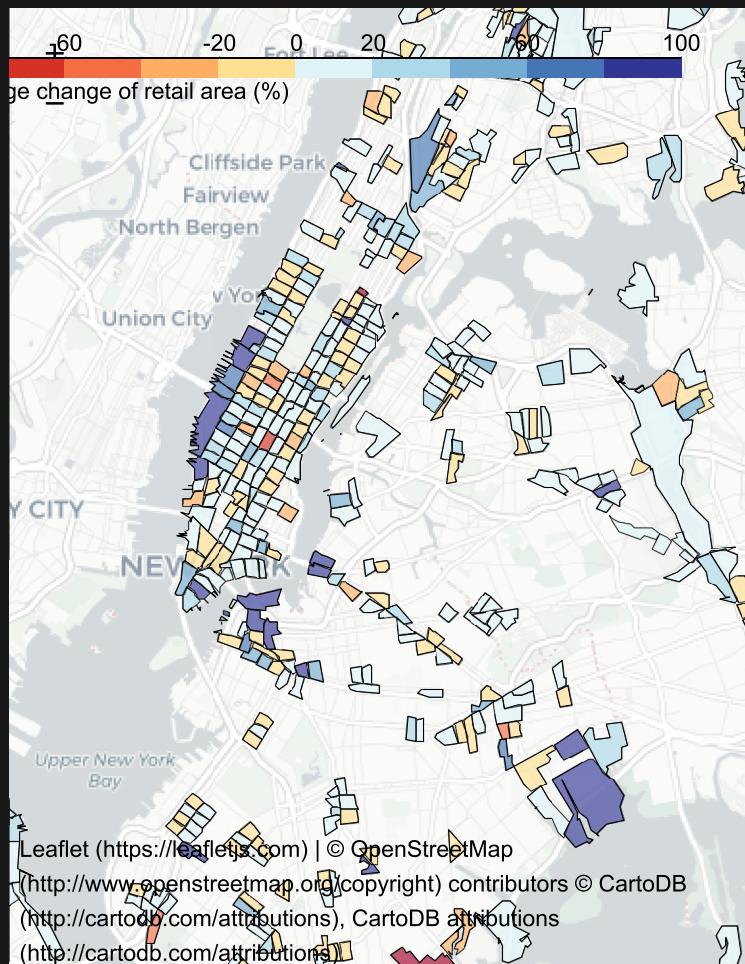


C6-7

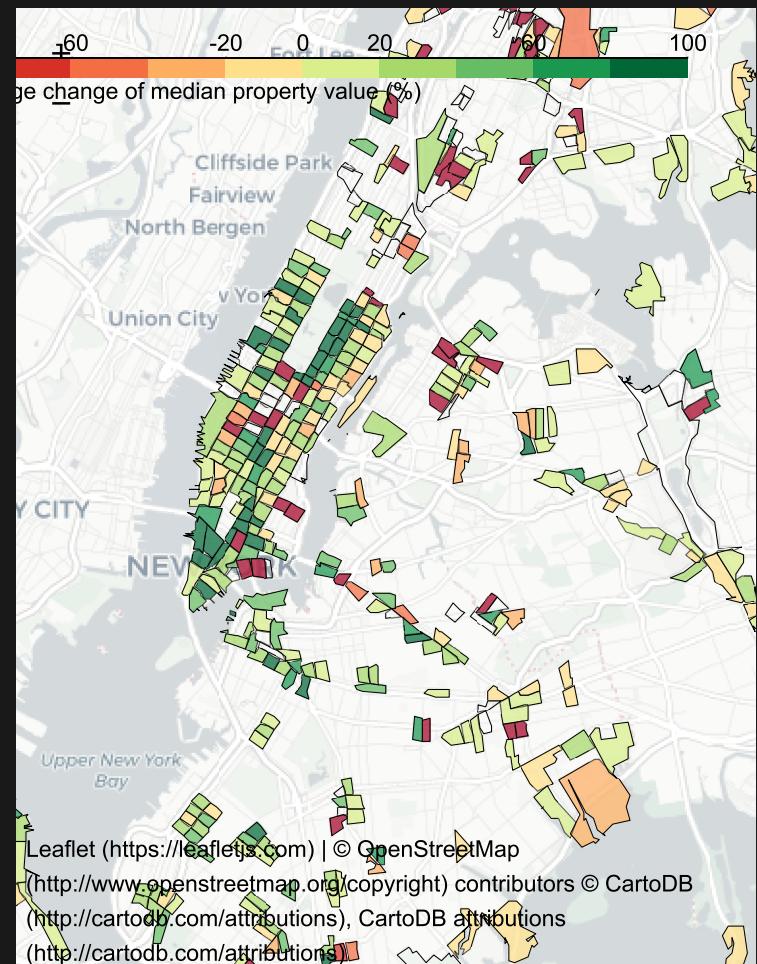
Zoning Code Examples

FOCUS ON COMMERCIAL DISTRICTS (C1-C6)

Percentage Change of Retail Floor Area, 2009 & 2017



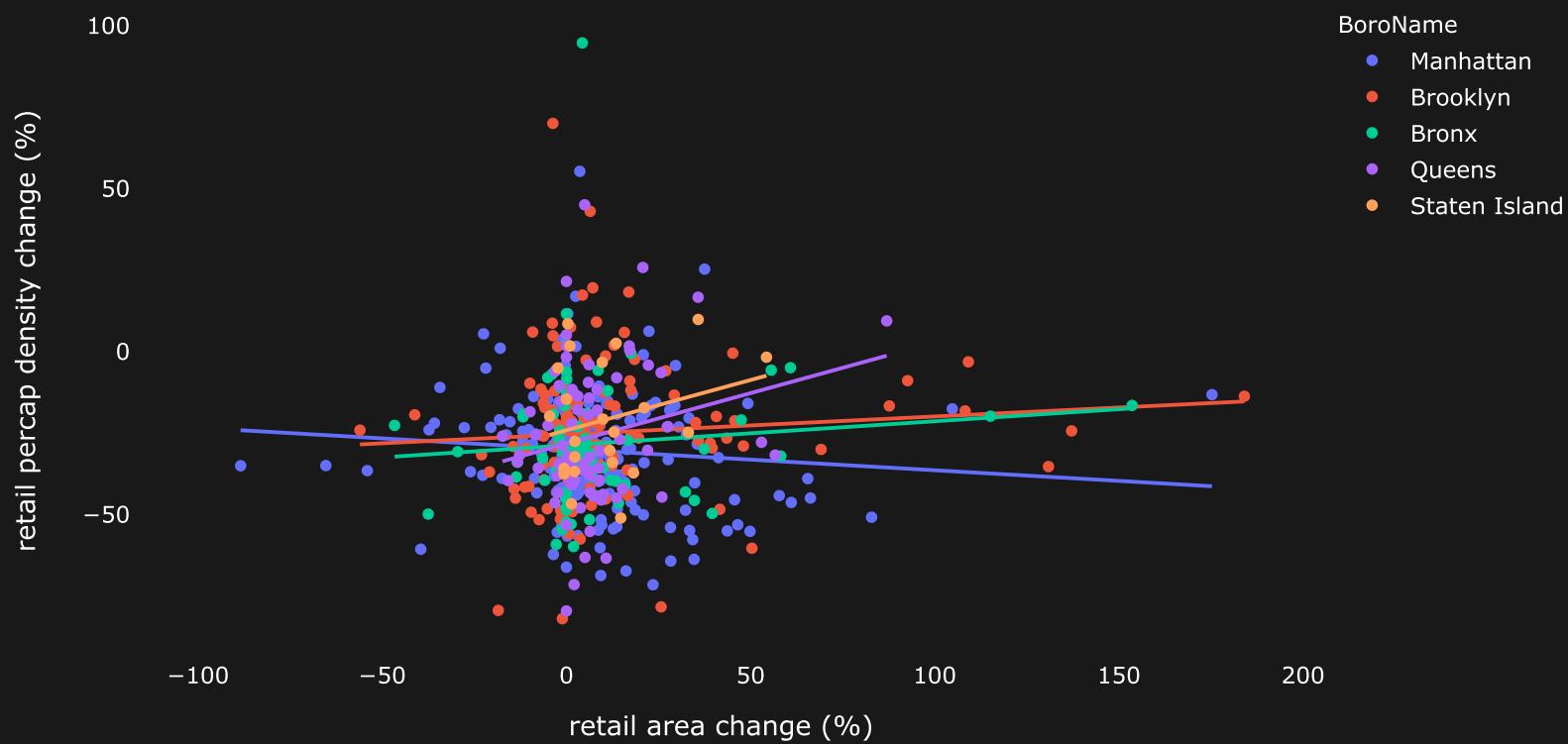
Percentage Change of Median Property Value, 2009 & 2017



REGRESSION ANALYSIS IN THE COMMERCIAL DISTRICTS BY CENSUS TRACT

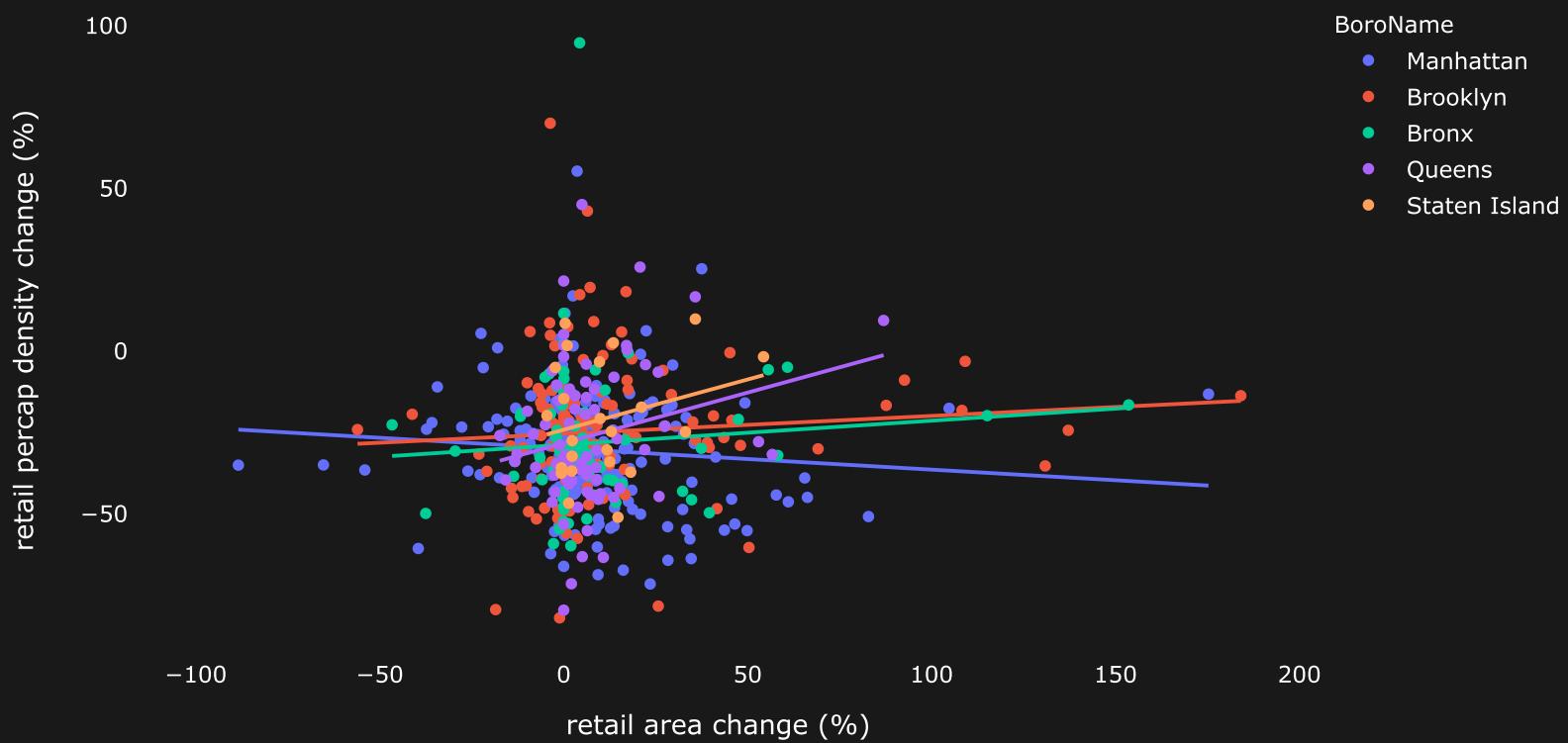
RETAIL AREA CHANGE & RETAIL NUMBER CHANGE

Linear Regression Between Retail Area Change & Retail Percap Density Change, by Census Tra



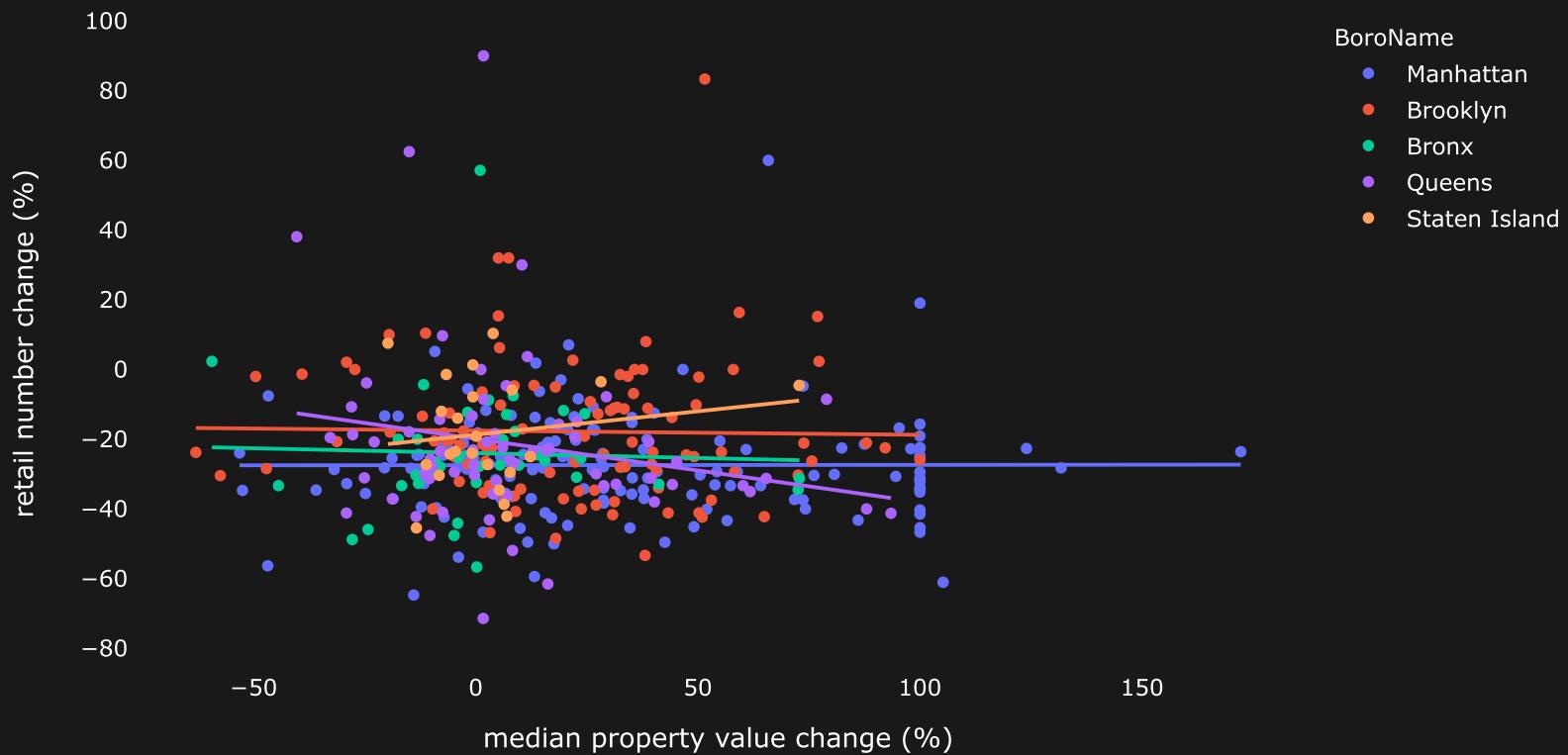
RETAIL AREA CHANGE & RETAIL DENSITY CHANGE

Linear Regression Between Retail Area Change & Retail Percap Density Change, by Census Tra



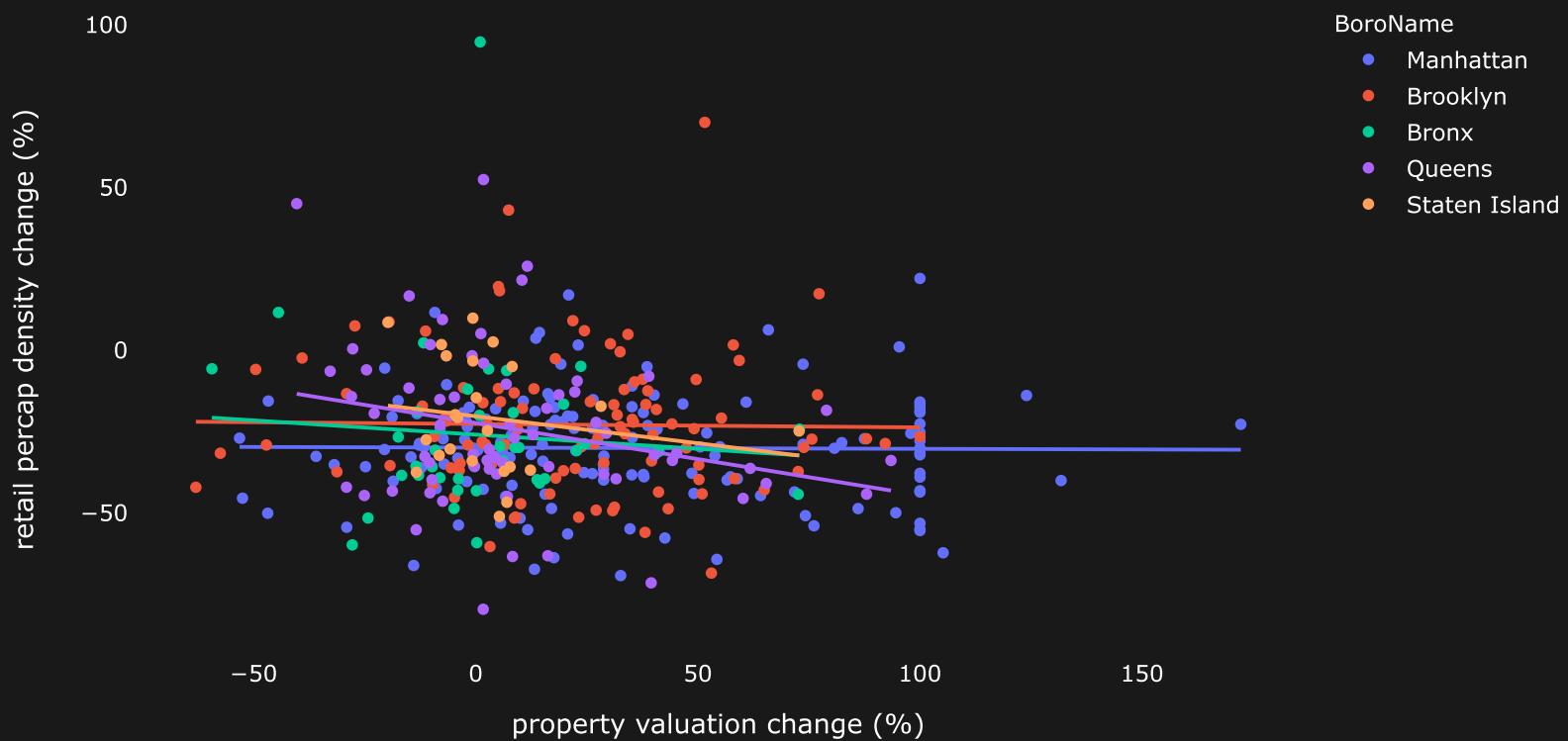
MEDIAN PROPERTY VALUE CHANGE & RETAIL NUMBER CHANGE

Linear Regression Between Median Property Value Change & Retail Number Change, by Census Tract



MEDIAN PROPERTY VALUE CHANGE & RETAIL DENSITY CHANGE

Linear Regression Between Property Valuation Change & Retail Percap Density Change, by Cer



FINDINGS

The declining trend of retail stores varies in different locations. In general, the decline in Manhattan and Bronx are more evident than in the other boroughs. According to the rezoning map, from 2009-2017, the new commercial districts are mainly C4 type. It may suggest the trend of rezoning policy in the next few years.

There is no apparent linear relationship between retail change and the retail floor area change or property value change in the regression analysis. This result is probably due to the datasets are by census tract, limiting the study to a retail store level. Future research will try to zoom in to a smaller scale and consider how the different retail types perform.

DATASET

- Retail Establishments by Census Tract, United States, 2003-2017. National Neighborhood Data Archive (NaNDA)
- Primary Land Use Tax Lot Output - Map (MapPLUTO), 2009 & 2017. NYC Department of City Planning (DCP)
- Financial Characteristics for Housing Units by Census Tract, 2010 & 2017. American Community Survey (ACS)

REFERENCE

1. Neighbourhood Differences in Retail Turnover: Evidence from New York City
2. Up-Zoning New York City's Mixed-Use Neighborhoods: Property-Led Economic Development and the Anatomy of a Planning Dilemma

SELECTED TYPES OF RETAIL & CODES

1. 442: Furniture and home furnishing stores.
2. 443: Electronics and appliance stores.
3. 444: Building material and garden supply stores, such as hardware and paint stores.
4. 448: Clothing and accessory stores
5. 451: Sporting goods, hobby, musical instrument, and book stores, including yarn shops, toy stores, and newsstands.
6. 452210: Department stores.
7. 453910: Pet and pet food stores.
8. 453310: Used merchandise stores, such as those selling secondhand clothing, furniture, and antiques.
9. 446120: Cosmetics, beauty supply, and perfume stores.
10. 446191: Food (health) supplement stores, i.e. stores selling vitamins and nutritional supplements.
11. 812111: barber shops (men's hair stylists).
12. 812112: beauty salons (unisex and women's hair stylists).
13. 812113: nail salons.
14. 812191: diet and weight loss centers.
15. 812199: other personal care services, which include spas, saunas, massage parlors, tattoo parlors, and tanning stations.
16. 812310: coin-operated laundries and dry cleaners (laundromats).
17. 7225: all restaurants and eating places.
18. 722410: drinking places (alcoholic beverages), such as bars, taverns, and cocktail lounges.