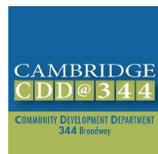




City of Cambridge Community Development Department

Cycling Safety Ordinance Economic Impact Study Information Session

Summer 2023





Agenda

- Overview of Study & Timeline
- About Volpe National Transportation Systems Center
- Introduction to Study Methodology
 - Prior Studies Review
- Potential Data Sources Overview
 - Tax Data
 - Transaction Data
 - Real Estate Data
 - Employment Data
 - Transportation Data
 - Business & Customer Surveys

Study Timeline

Cambridge Community Development Department (CDD) and Volpe National Transportation Systems Center (Volpe) entered into an intergovernmental agreement to work together on an economic impact study in March 2023





About Volpe National Transportation Systems Center



About the Volpe Center

- Founded in 1970, the Volpe National Transportation Systems Center is a research organization within the U.S. Department of Transportation
- Multi-disciplinary expertise across engineering, human factors, planning, economics, and other domains, with projects in all modes of transportation
- Our mission is to advance transportation innovation for the common good



Prior Studies Review

A review of prior studies in different municipalities



Prior Studies: Overview

- There are a limited number of published studies that address the impacts of bike infrastructure on retail sales in North America
- Generally, these compare the “treatment” area against one or more control areas and citywide trends, plus a before-vs.-after comparison
- Data sources vary by location due to data availability
- Overall, the studies generally show small changes that range from neutral to slightly positive
 - Variations by city, location, and business type (e.g., dining vs. general retail)
 - The small size of the impacts can be difficult to separate from broader economic trends



Prior Studies: Details

- NYC DOT: The Economic Benefits of Sustainable Streets
 - Based primarily on city tax filings, plus commercial lease data and city tax assessments
- City of Toronto: Bloor Street West Bike Lane Pilot Project Evaluation
 - Based on transaction data from a point-of-sale terminal provider and surveys of businesses and pedestrians
- Portland State University: Understanding Economic and Business Impacts of Street Improvements for Bicycle and Pedestrian Mobility
 - 14 corridors across 6 cities (Indianapolis, Memphis, Minneapolis, SF, Seattle & Portland)
 - Primary data sources were employment/wage databases including Census LEHD



Study Data Sources

Overview of potential data sources for Cambridge Economic Impact Study



Tax Data

- Tax data are ideal sources due to universal, standardized reporting of retail/service sales
- Unlike NYC, Cambridge has no truly local sales/retail taxes – even the local option meals tax is administered by the state
- After multiple City staff attempts, Massachusetts Department of Revenue (DOR) reaffirmed their policy does not allow the release granular data or individual data due to taxpayer privacy and other record requirements.



Point of Sale Transaction Data

- Point of sale (cash register) transaction data would provide direct insight into changes in retail sales
- This approach was used in a prior study in Toronto
- However, the US market is split across multiple providers and the study team was not able to find a willing data provider
- Even if an agreement with a POS service provider could be reached, such data would not cover all businesses or cash transactions



POI / Mobile Data

- Point of Interest (POI) data is based on location-based mobile phone services
- This allows for estimates of the number of customers at a given retail business
- SafeGraph uses a proprietary model to pair this data with transaction data to generate estimates of spending by location over time
- The study team has access to SafeGraph data for 2019-present covering Cambridge and is reviewing the dataset to assess its suitability for analysis



Real Estate Data

- The value of urban real estate reflects its location and accessibility
- Commercial real estate data such as rent levels and occupancy provide an indirect measure of neighborhood retail health and were used in a prior NYC study
- This will be analyzed using a commercial subscription database, CoStar
- CoStar data cover almost all commercial properties in the city, with quarterly updates, but not all variables are available for all properties



Employment Data

- Government products such as Longitudinal Employer-Household Dynamics (LEHD) provide information on employment and wages
- These are indirect and lagging indicators of retail activity have been used in some prior studies
- Publicly available LEHD data go to the Census block level, which is generally adequate for identifying project-specific impacts
- LEHD dataset currently ends in 2020, so this is only useful for projects/corridors that were complete by that time



Transportation Data

- City-provided data on transportation system can provide valuable context, even though they do not directly cover retail sales
 - Counts of vehicles, pedestrians, bicycles
 - Parking spaces gained/lost
 - Parking utilization studies (limited, but using for corridors when available)

Business Survey

Survey data provides one source of data on changes in business sales, along with qualitative insights and information that would be difficult to collect through other means (e.g., additional business costs incurred)

- Various response biases exist, but survey is structured to mitigate those through effective practices such as pre-notification, follow-up on nonresponse, and benchmarking of responses
- Business Survey was sent out to a little over 1600 retail, restaurant, medical, financial and other service businesses in commercial and neighborhood corridors of Cambridge the first week of July. As today 59 of businesses have responded to the survey.
- Question topics include:
 - Changes to sales/revenue since street changes have occurred, with a 2019 base year (pre-COVID)
 - Whether a bicycle facility was installed nearby and whether there were changes to on-street metered parking and loading zones
 - Perceived business impacts of these changes
 - Any business expenses incurred due to these changes
 - Option to provide additional written comments and financial data



Customer Surveys

- This Summer and Fall, CDD will conduct a short customer survey in corridors that have either had separated bike installations or will soon be receiving them, covering mode of travel, purpose of trip, and related topics
- The study team has reviewed data from CDD's Customer Intercept Surveys from 2009-2022, which include a question about mode of transportation and reason for being in the district.

Thank you