

How To Help Restaurants Survive COVID-19

By Pablo Cruz, Troy Lawrence, Alejandro Mancillas, and

Daniela Esparza

Team 86



Introduction

Issue

In 2020, Congress passed a \$25 billion COVID-19 bailout for the airline industry but not one tailored to the restaurant industry, which is **four times bigger** in terms of sales and **18 times bigger** in number of jobs.

Need

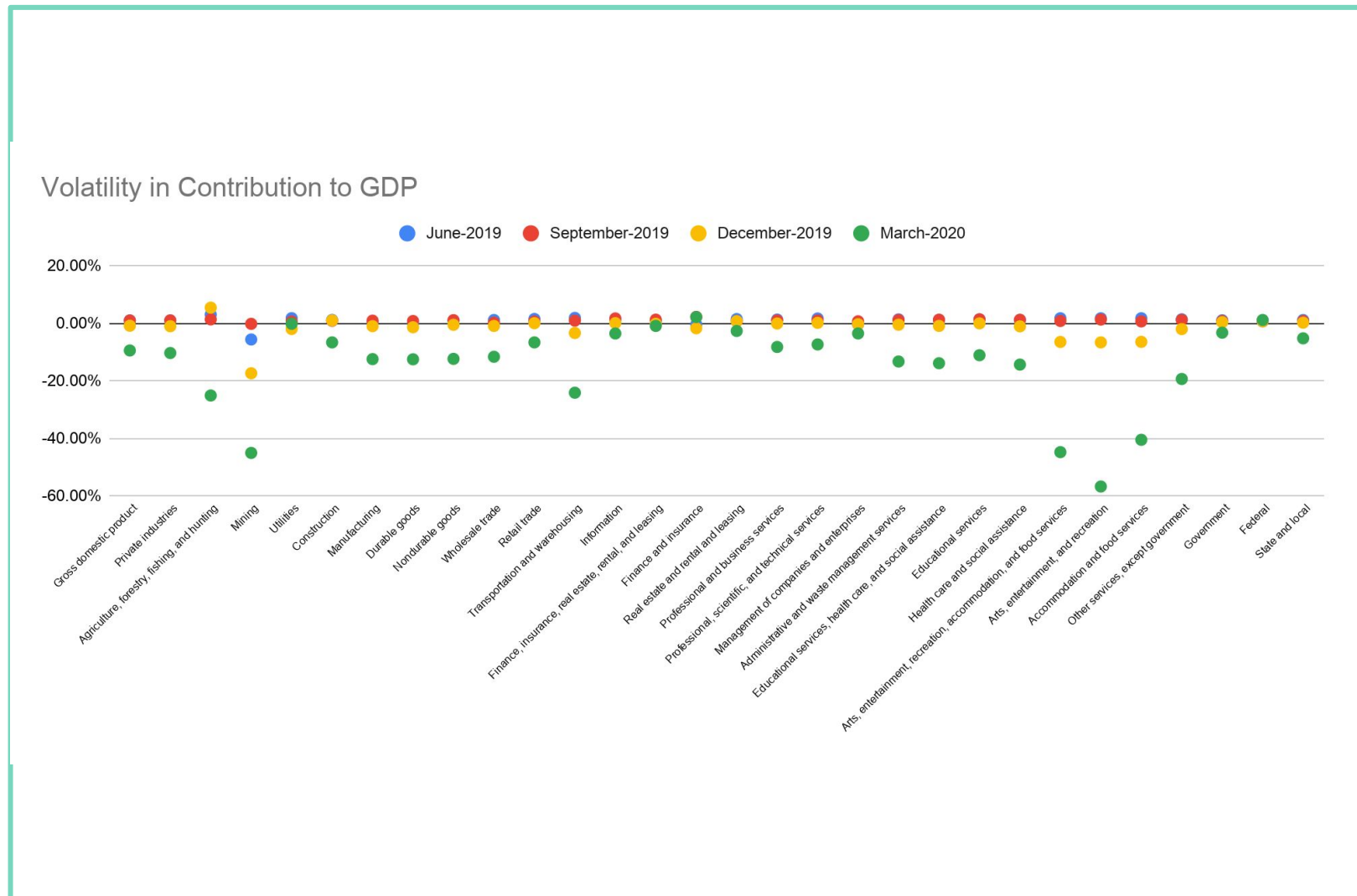
Restaurants need to know what investments are likely to help them survive.

Solution

Actionable insights given **demographic characteristics, shopping behaviors, foot traffic** into different venues, and **mobility patterns, locations** and **businesses features** of restaurants.

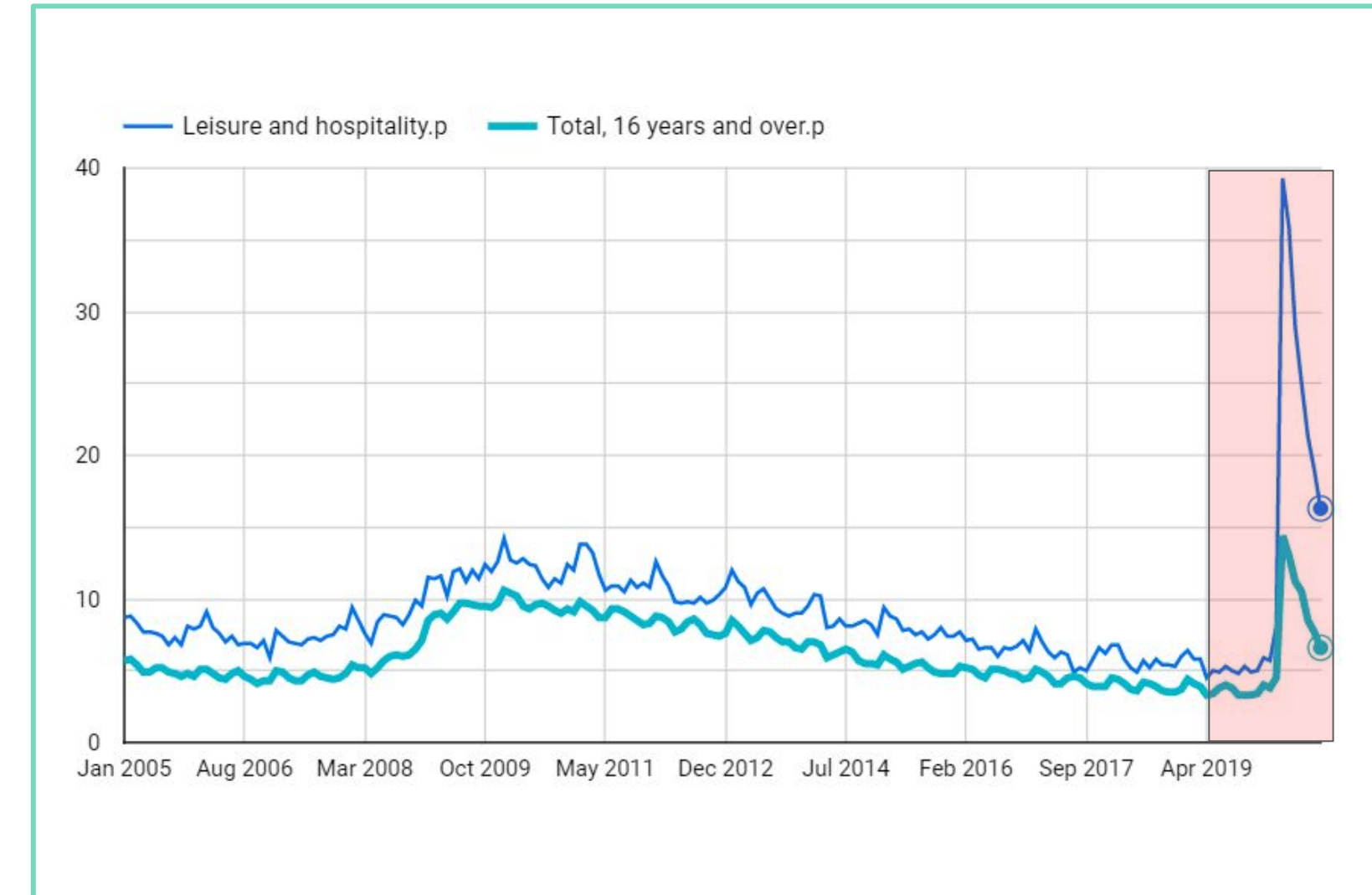
Macro-Economic Impact

= COVID Impact



Personal Consumption Expenditures (PCE)

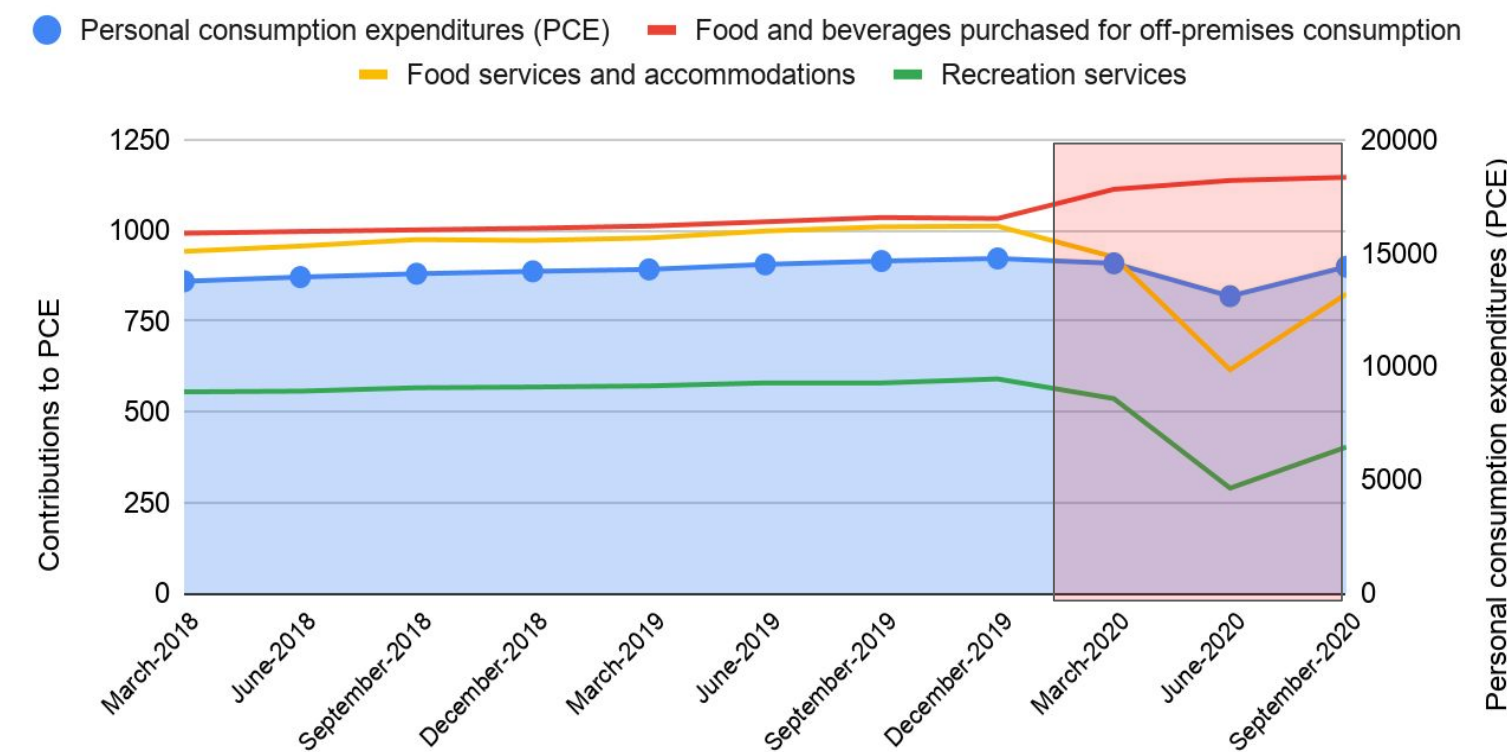
Consumers transferred their expenditures from restaurants and recreation to groceries and take-outs



Gross Domestic Product (GDP)

Over 40% declines in GDP contribution during the year 2020

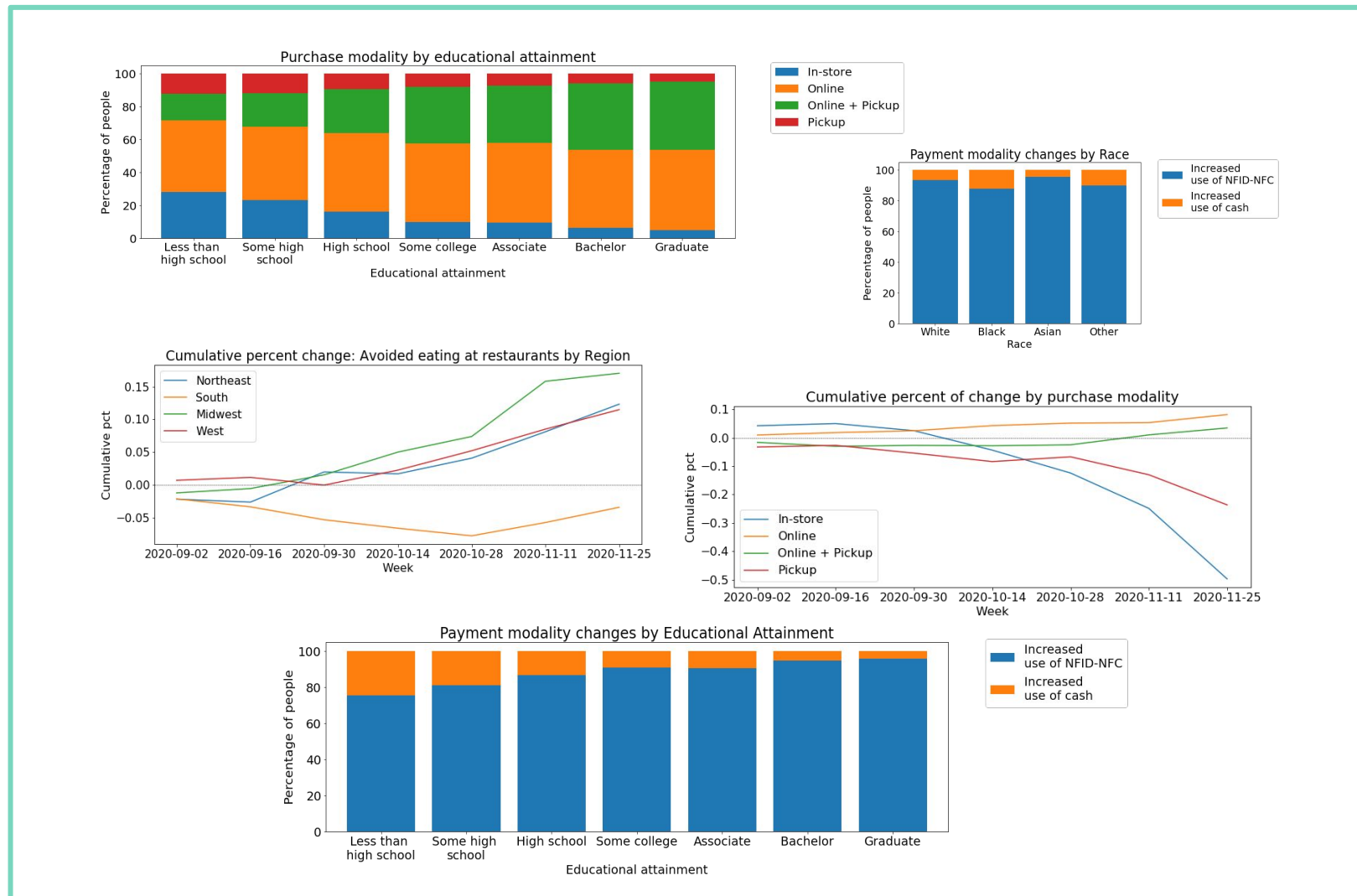
Personal consumption expenditures (PCE) vs. Food Related Areas



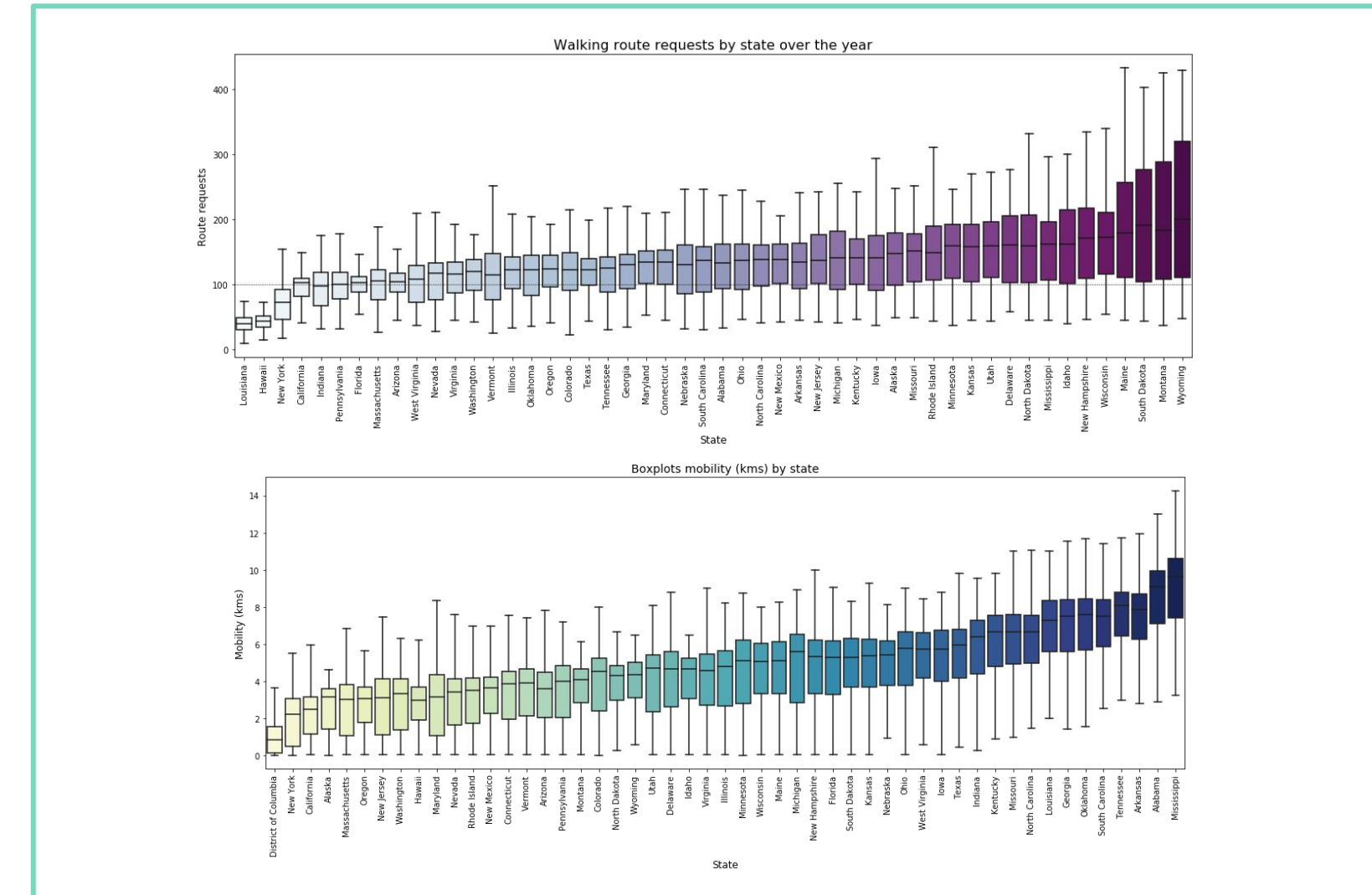
Unemployment

Historic unemployment for the industry (almost 40% compared to only 14% for the total economy)

Overall Consumer Analysis



Foot traffic into Food Venues and Transportation preferences



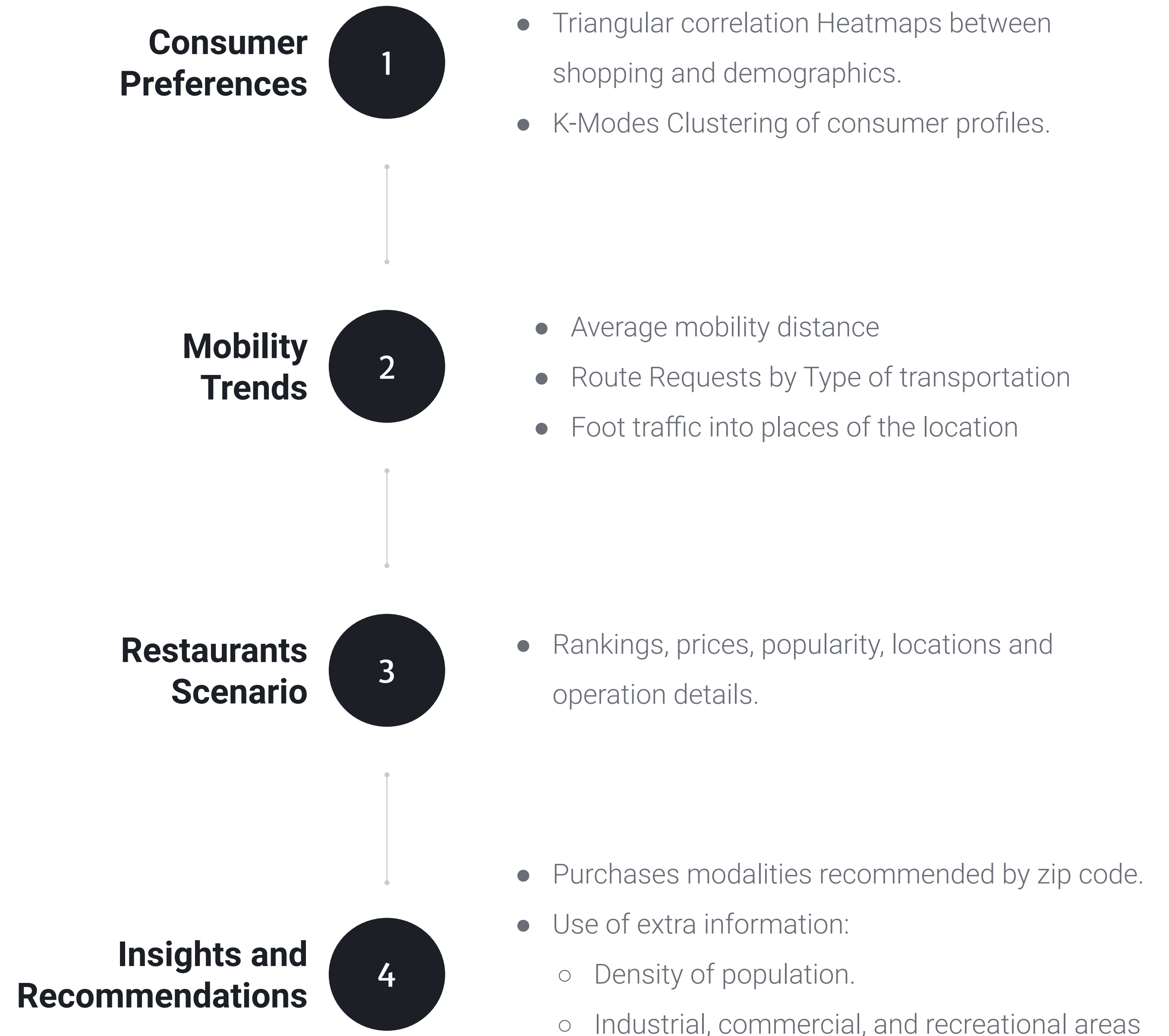
Consumer Behaviors:
Purchases, Payment Preferences, Avoidance of eating at Restaurants



Average Mobility of communities

In-depth Analysis: Customer Preferences and Restaurant Scenarios in specific locations

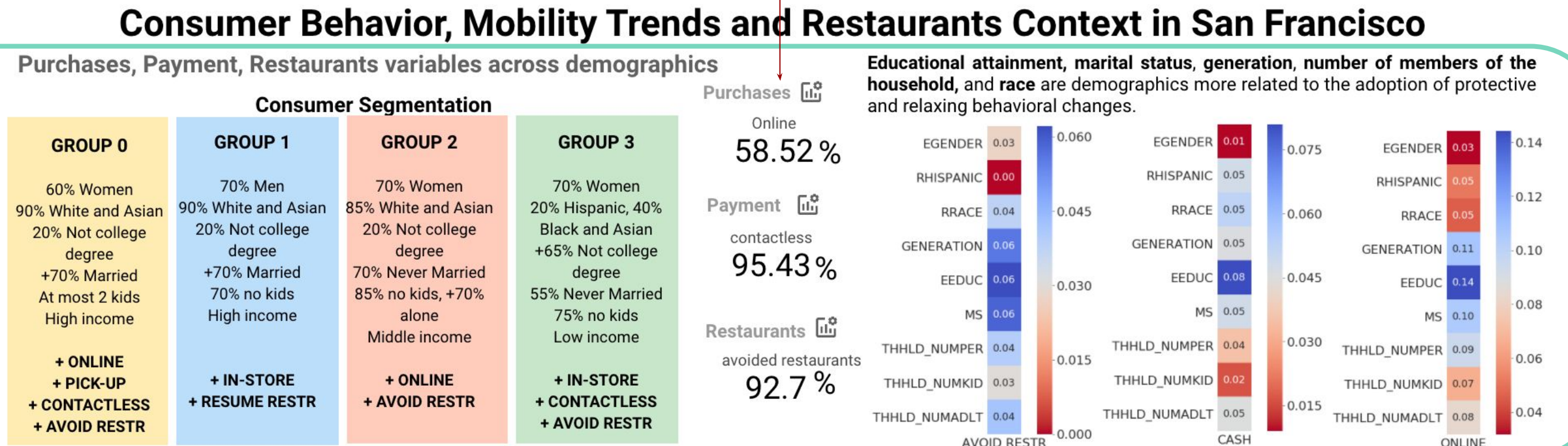
Development of case studies in the West
and South regions.



In-depth Analysis: Customer Preferences and Restaurant Scenarios in specific locations

Interactive selection of **consumer preference statistics**

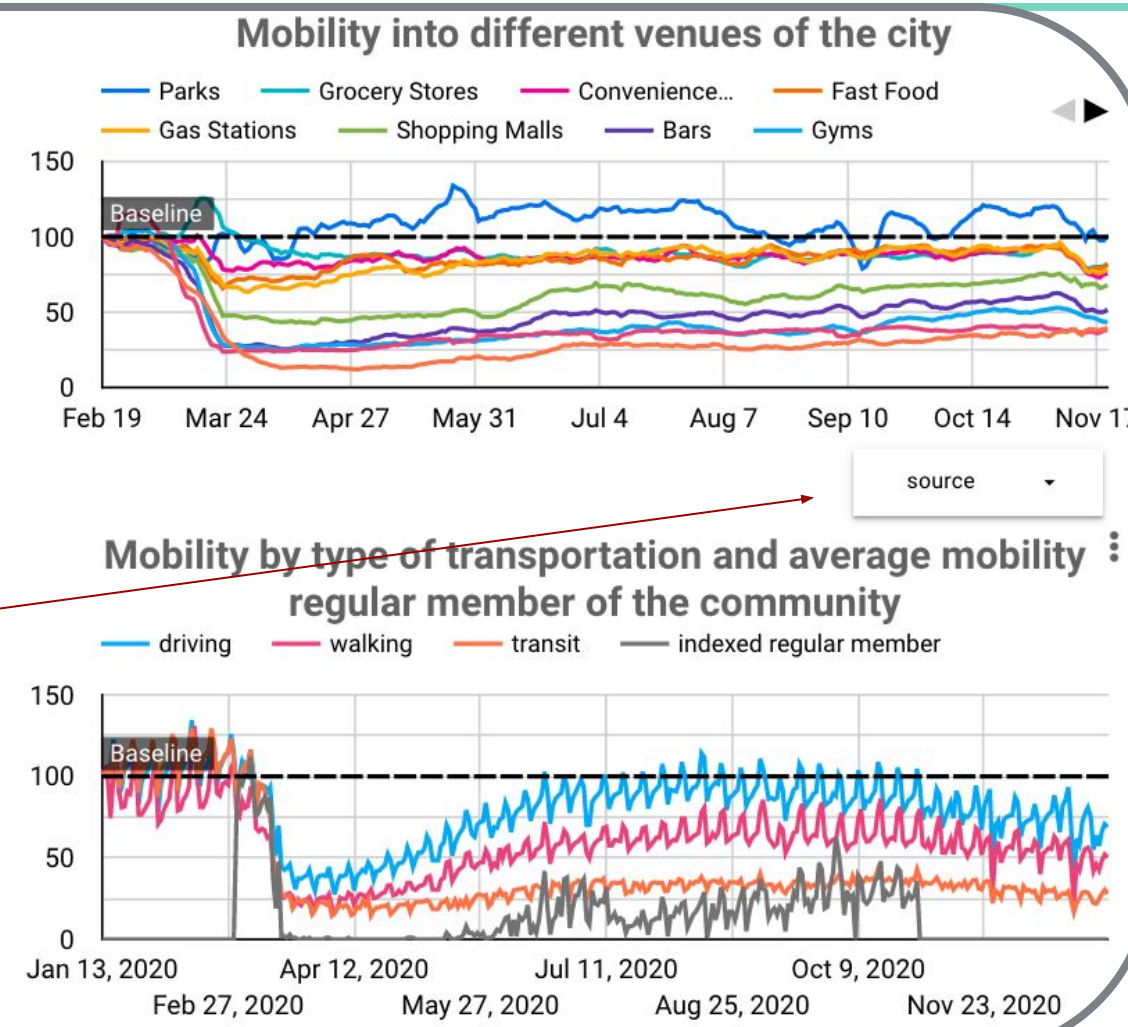
Consumer Preferences



Mobility Trends



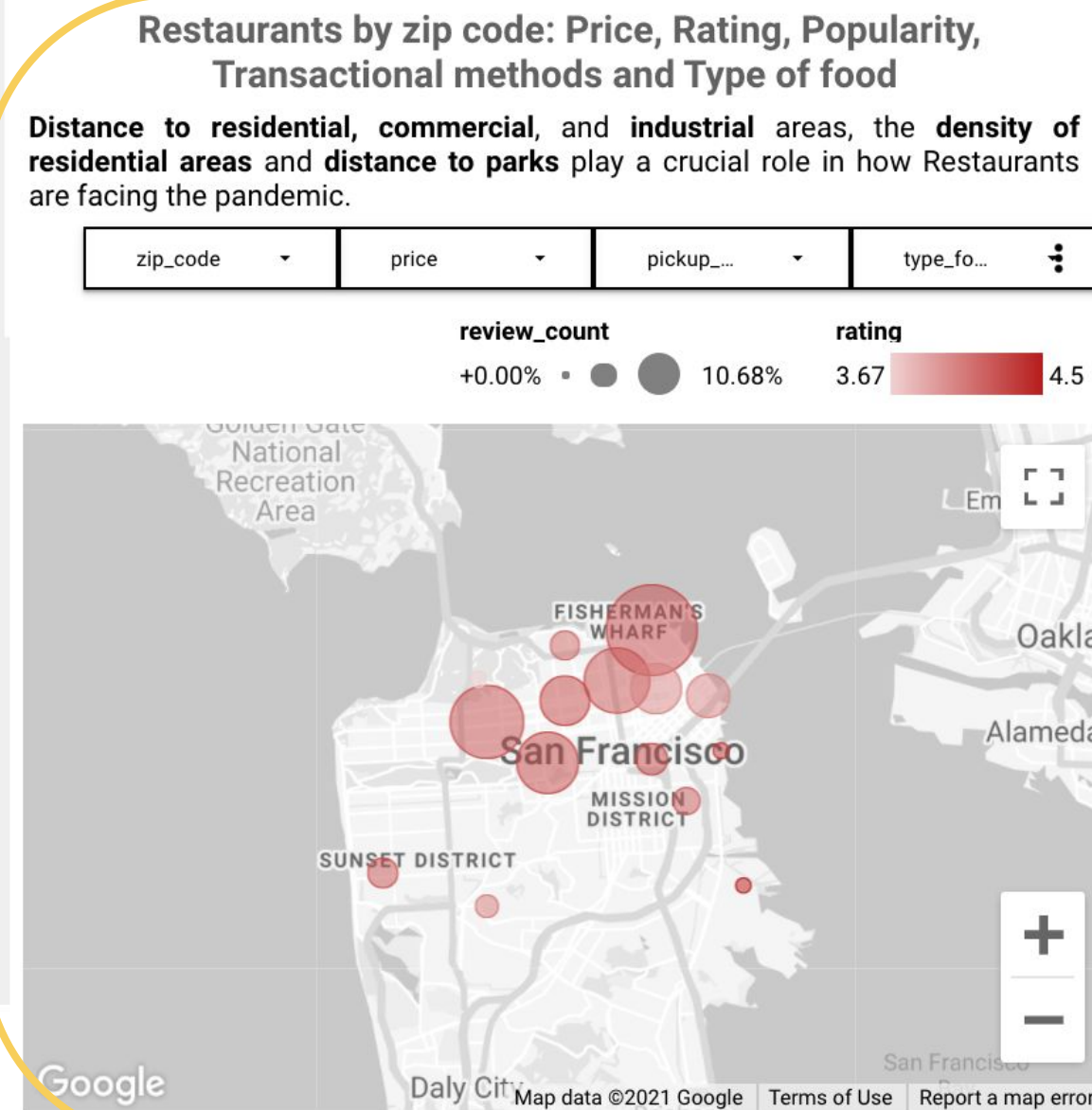
Interactive selection of **mobility source**: Google & Foursquare Data



People doing more online purchases are also using more contactless payment methods and avoiding eating at restaurants.

North Beach, Nob Hill, Chinatown, Financial District, Richmond and Ashbury areas concentrated with more reviews from users.

The neighborhoods with higher average rankings are Pacific Heights, Sunset District, Downtown, South of Market.



Restaurants Scenario



Interactive selection of **zip-code, price, purchase modality** and **type of food**

Besides Residential, Parks represents the venue with higher foot traffic, followed by Groceries and Pharmacies. The most disrupted venues are Gyms, Airports, Offices, and Transit stations.

In-depth Analysis: San Francisco

Consumer Preferences

1

- Increase of online and pick-up purchases: Millennials, Generation X and high education
- Avoidance of eating at restaurants related to married people, high education and generations X and Jones. Resumed of eating at restaurants: white race
- Cash and in-store purchases: black and hispanic communities

Mobility Trends

2

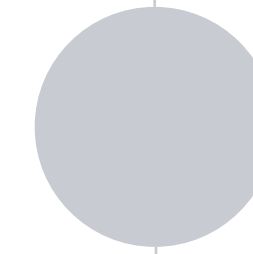
- Venues more affected with low traffic: Retail and Recreation, Transit Stations, Workplaces, Airports, Gyms, Bar, Shopping Malls
- All commute types of transportations under the baseline
- Walking reveals the highest disruption. Average mobility of 2 kms

Restaurants Scenario

3

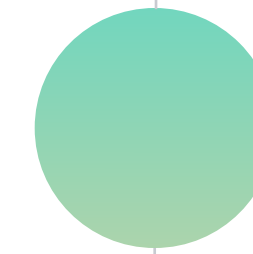
- Safe spots: Golden Gate Park surroundings
- North and South of the park businesses in risk
- More delivery services and most strategic position: Twin Peaks surrounding.
- Around 30% of businesses in Financial District, The Castro and Noe Valley are not listing delivery as purchase modality.

Insights and Recommendations for cities analyzed



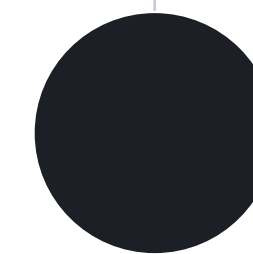
San Francisco

- **Increase** Delivery options:
 - Low and medium density residential areas
 - Commercial, Industrial areas
- **Increase** Pick-up options:
 - Mixed areas
 - Areas at most 2 km. from high density neighborhoods

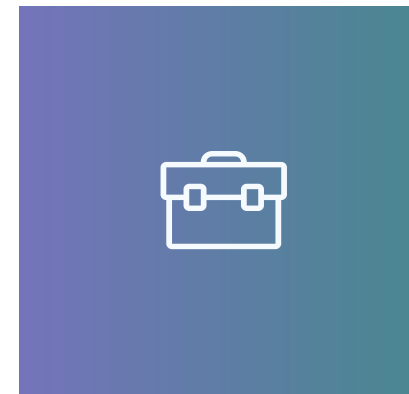


Miami

- **Switch** from Delivery to Pick-up options:
 - Medium and high density residential areas
 - Consider preferences by demographics (using consumer profiles created)
- **Increase** Pick-up options:
 - Areas at most 6 km. from high density neighborhoods



Network effects of impact



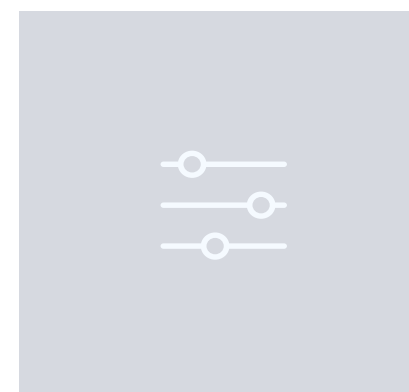
Restaurants

- Help an industry that experienced over **4.5 million lost jobs** at peak in 2020



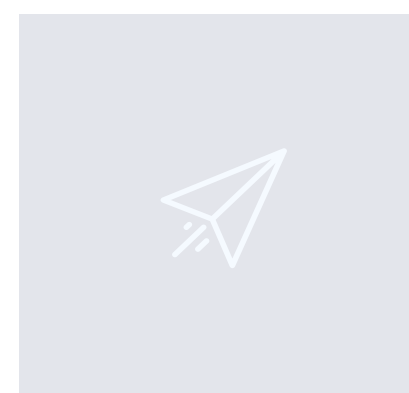
Local / State Governments

- Leverage the data to create hyper-local and high-fidelity policies to effect the positive change needed



Agencies / Consultants

- Expand on our models to offer greater advice to clients



Other Ancillary Verticals

- Capitalize on these consumer behaviour trends that overlap with similar business models

Thank you.

Data Sources

Bureau of Economic Analysis

Data

- GDP
- Personal Consumption
- Income
- Employment

Federal Reserve Bank of St.

Louis

- Unemployment

Household Pulse Survey 2020

Restaurants Platforms

- Yelp Dataset
- OpenTable Data

Annual Retail Trade Survey

- Monthly Retail Sales and Inventories

Mobility Patterns

- Apple Mobility Reports
- Descartes Lab Mobility Changes
- Google Community
- Foursquare Community Mobility Data