Area Study for Rouge Charcuterie, Boston, MA

Introduction

A Massachusetts-based client wishes to open a high-end butcher shop in the Boston area, and has commissioned an area study to determine the best location to open her store. Because she will be charging high prices for high-quality goods, she wants to focus on high-income neighborhoods. Additionally, she does wishes to avoid competition from nearby butcher shops, so the density of similar retail establishments was evaluated.

Data

This study used IRS income data from 2018 (the most recent data set that is fully available as of the date of this report).[1] To obtain the granularity requested by the client, the IRS data was filtered to include tax returns only from individuals earning more than $100,000 per annum. The total remittance per zip code was divided by the number of taxpayers in each zip code, yielding an approximate index of affluence for each zip code. Geolocational data was retrieved from the OpenDataDE project[2] and was applied to geographically segment the income data set. Zip code centroid data was sourced from OpenDataSoft.[3] Those zip code centroid points were used as center points for FourSquare data queries which provided the area information for this report.

Methodology

The IRS income data (by zip code) was parsed and segmented to describe the most affluent zip codes in Massachusetts as a state, then pared down to the highest 10 incomes by zip code. (Those highest 10 zip codes were in the Boston Metropolitan Area, so all further analysis will focus on that region.   (fig. 1))
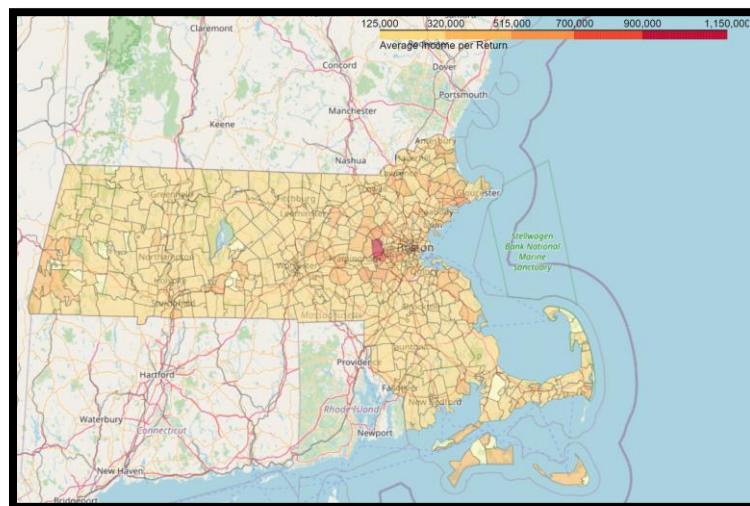

Figure 1

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[1] https://www.irs.gov/pub/irs-soi/18zp22ma.xlsx
[2] https://github.com/OpenDataDE/State-zip-code-GeoJSON/blob/master/ma_massachusetts_zip_codes_geo.min.json
[3] https://public.opendatasoft.com/explore/dataset/us-zip-code-latitude-and-longitude/download/?format=csv&timezone=America/New_York&lang=en&use_labels_for_header=true&csv_separator=%3B

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The most affluent zip codes were isolated to determine the optimal placement for the new store, per the client's specifications. Candidate neighborhoods were concentrated in downtown Boston (fig. 2) and west of the Central Boston Area (fig. 3).
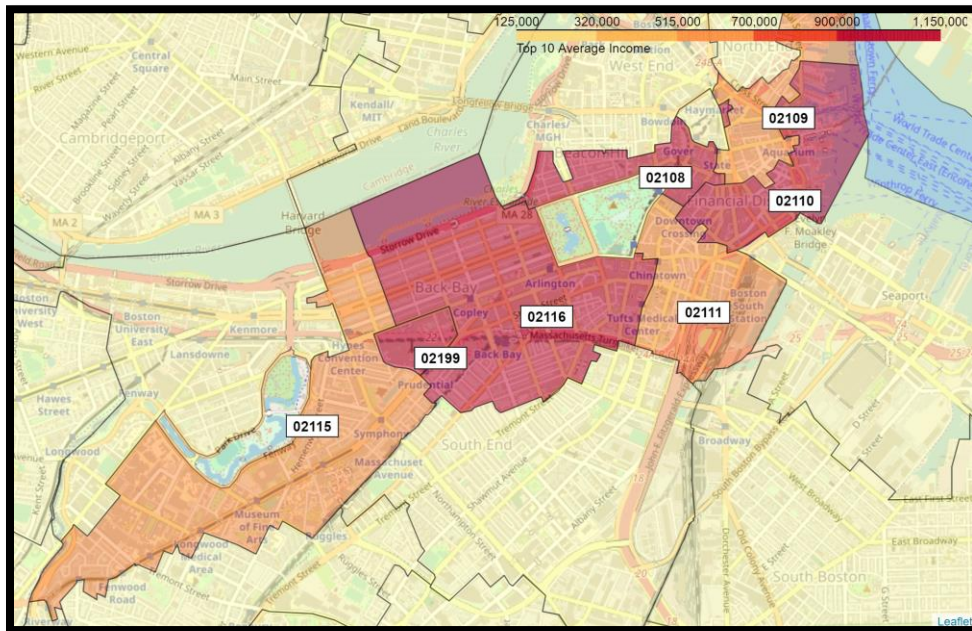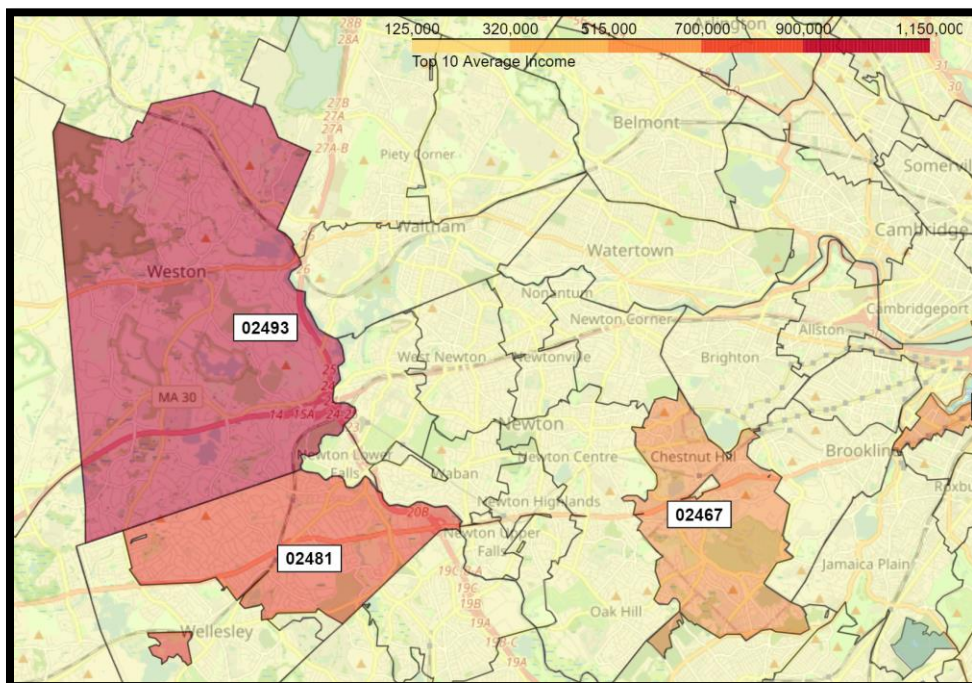

Figure 2

Figure 3

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Upon identifying key areas of competition based on income, retail establishments similar to that which was proposed were identified. Locations indicated by markers represent butcher shops or similar establishments. (fig. 4)
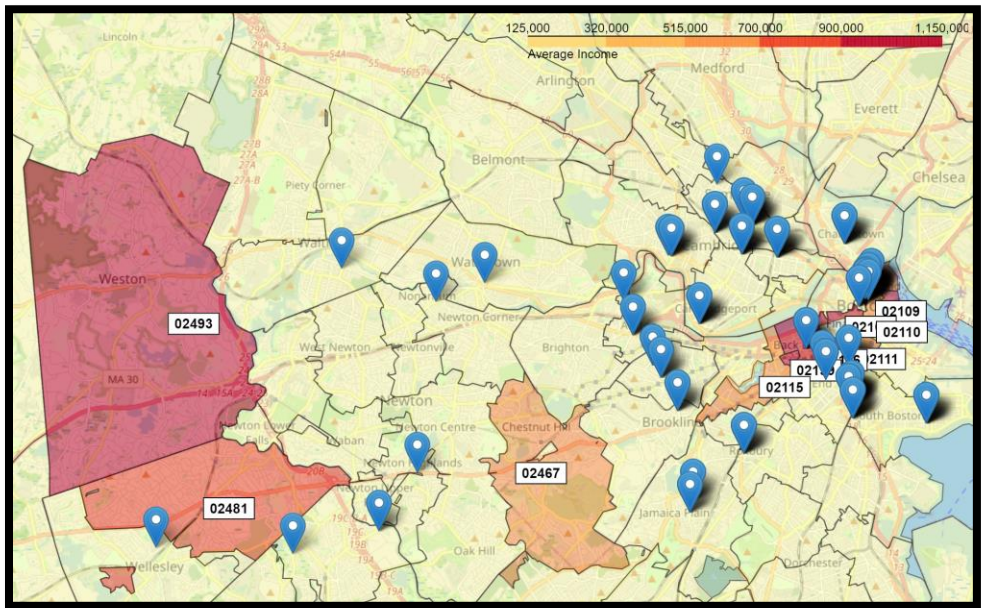

Figure 4

Results

Visually, it is clear that zip codes 02493, 02481, and 02467 are underserved by butch shops. This is confirmed via follow-on analysis resulting in the following metrics (fig. 5). It is clear that three of the most affluent zip codes are serviced by the fewest venues.
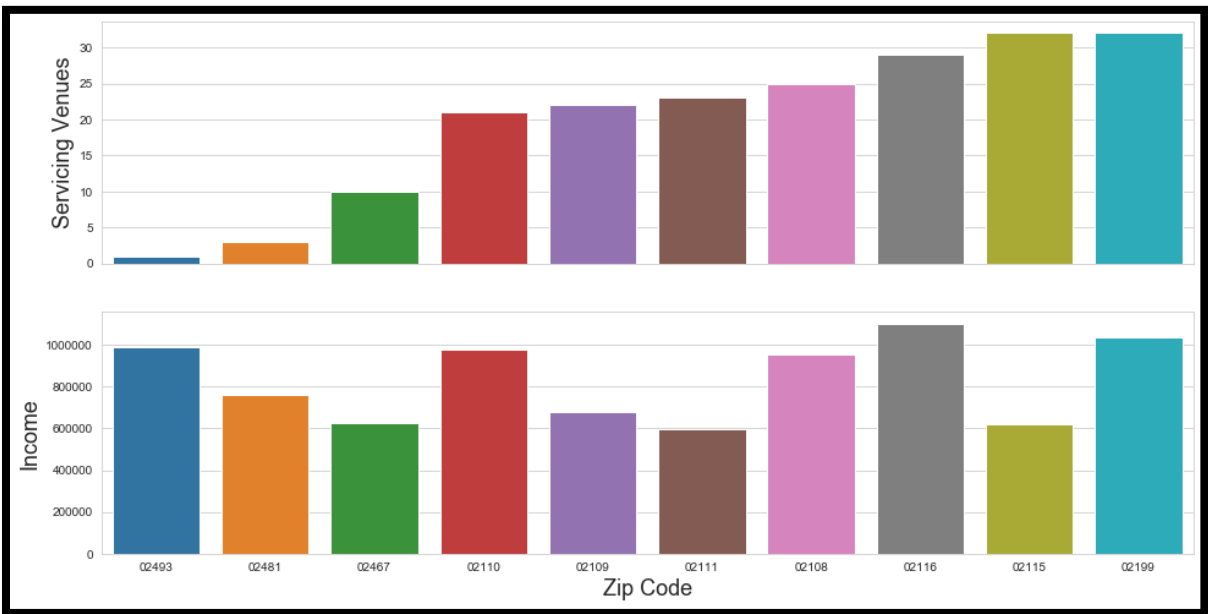

Figure 5

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When servicing venues are compared to the average income of the top 10 zip codes, it is also clear that the higher the average income in the zip code, the fewer the servicing butcher shops (fig. 6). The client's inclination that the higher-income zip codes would be well-served by a new butcher shop appears to be correct, per the data.
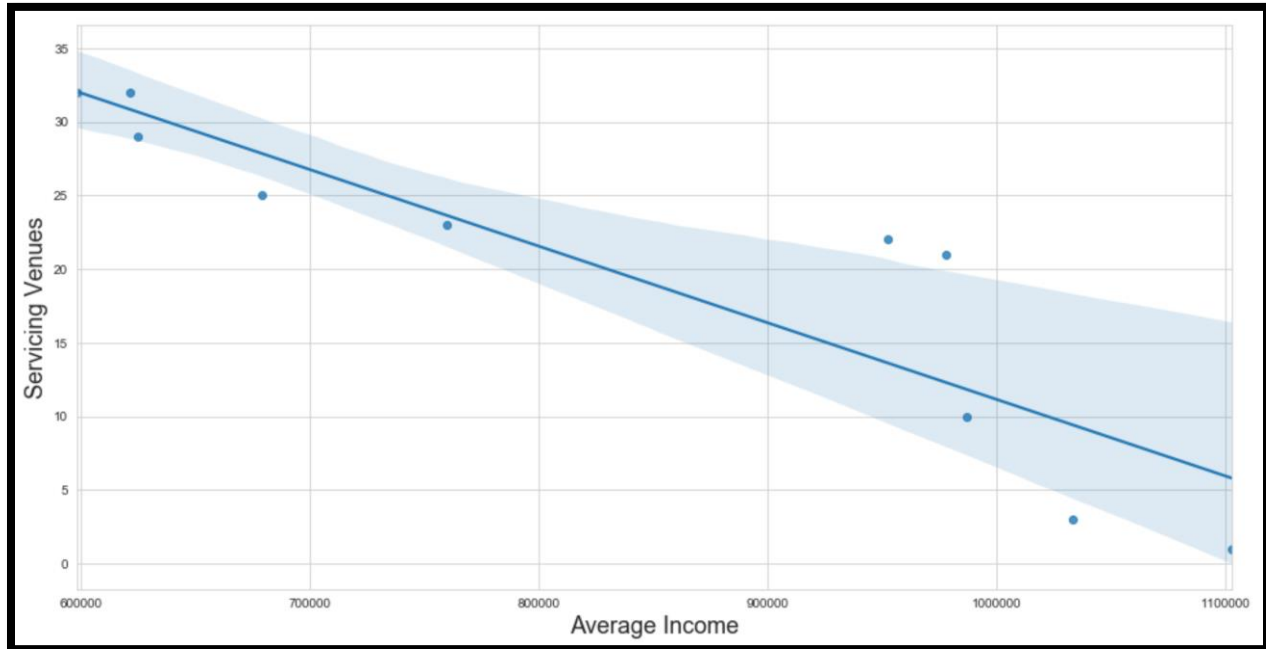

Figure 6

Discussion

It should be noted that when expanding the candidate set of zip codes past the 10 that were analyzed, the correlation between income and servicing venues loses fidelity. This indicates that a boutique shoppe selling high-end and expensive goods may only be viable in top-tier income zip codes. Investment in low- or mid-income areas presents increased risk.

Conclusion

We can strongly recommend that the client investigate the 02493, 02481, and 02467 zip codes for business development. There is a strong correlation between the average income in a zip code and the lack of servicing by butcher shops. Further, given the concept of a high-end shop, the client is well-positioned to compete in the top 10 zip codes examined. If the client chooses to delve into more moderately priced offerings, we recommend a new study using different methods.