

Characterizing the food environment in Scotland and its association with deprivation: a national study

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Introduction

Food environments influence dietary behaviors and health. In Scotland, regional differences in food outlet availability may contribute to health inequalities, yet no study has examined this at the national level. This study aims to:

- Characterize food outlets across Scotland.
- Analyze their distribution by neighborhood deprivation.

Methods

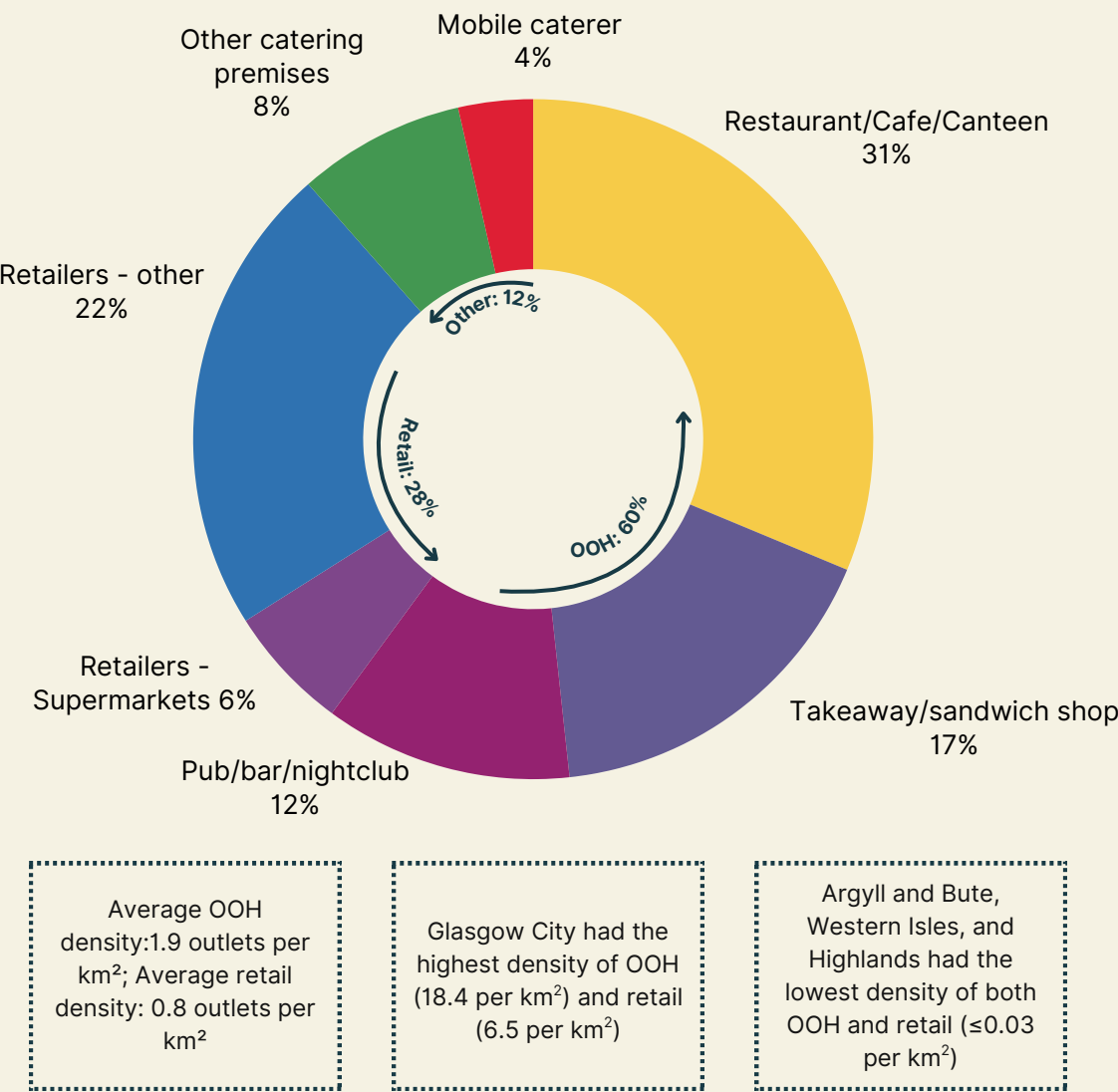
We analyzed **31,135 food businesses** from the Food Standards Agency¹ (2024), categorizing them as:

- **Out-of-home** (OOH; restaurants, pubs, cafés, and takeaways),
- **Retail** (supermarkets and other establishments that primarily sell non-food products with a limited range of food products such as pharmacies), and
- **Others** (mobile caterers, charity organizations, and home caterers).

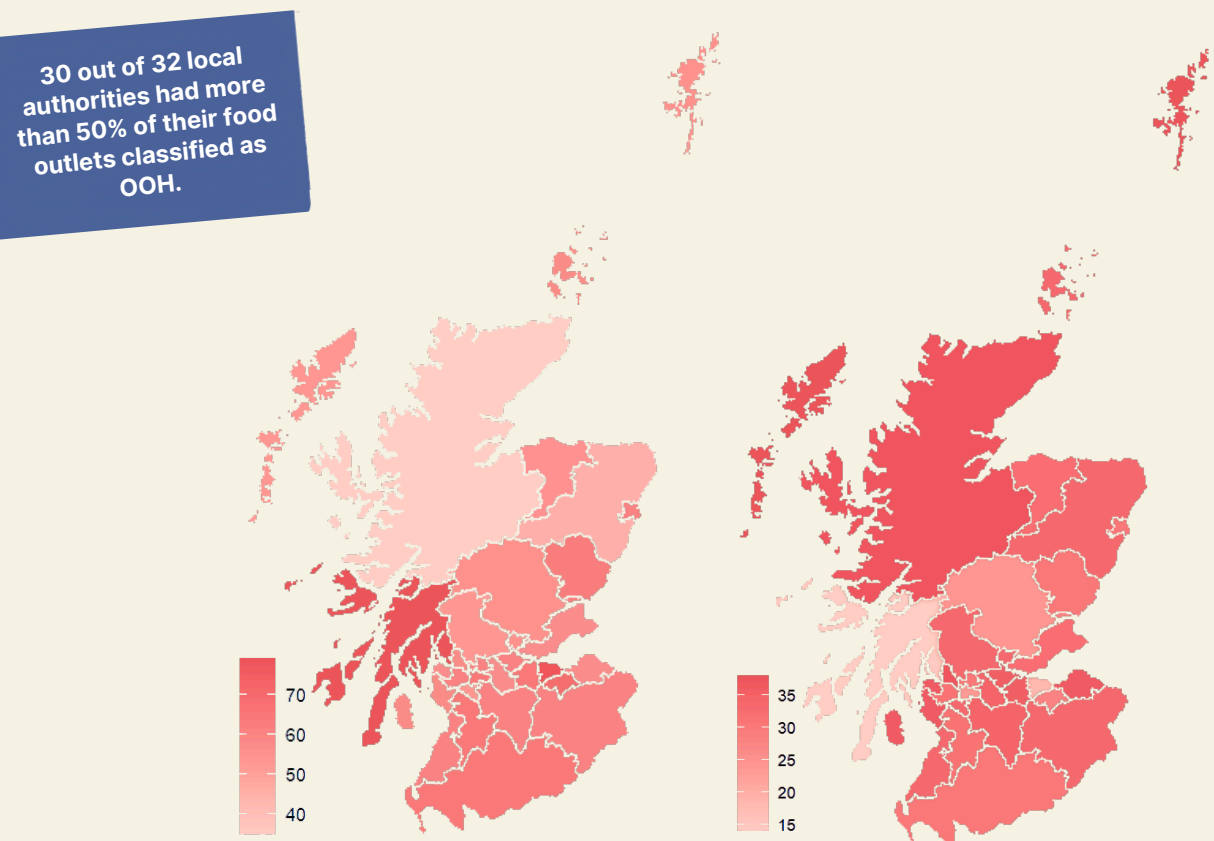
Neighborhood deprivation was quantified using the Scottish Index of Multiple Deprivation² (SIMD).

Results

Classification of food outlets across Scotland



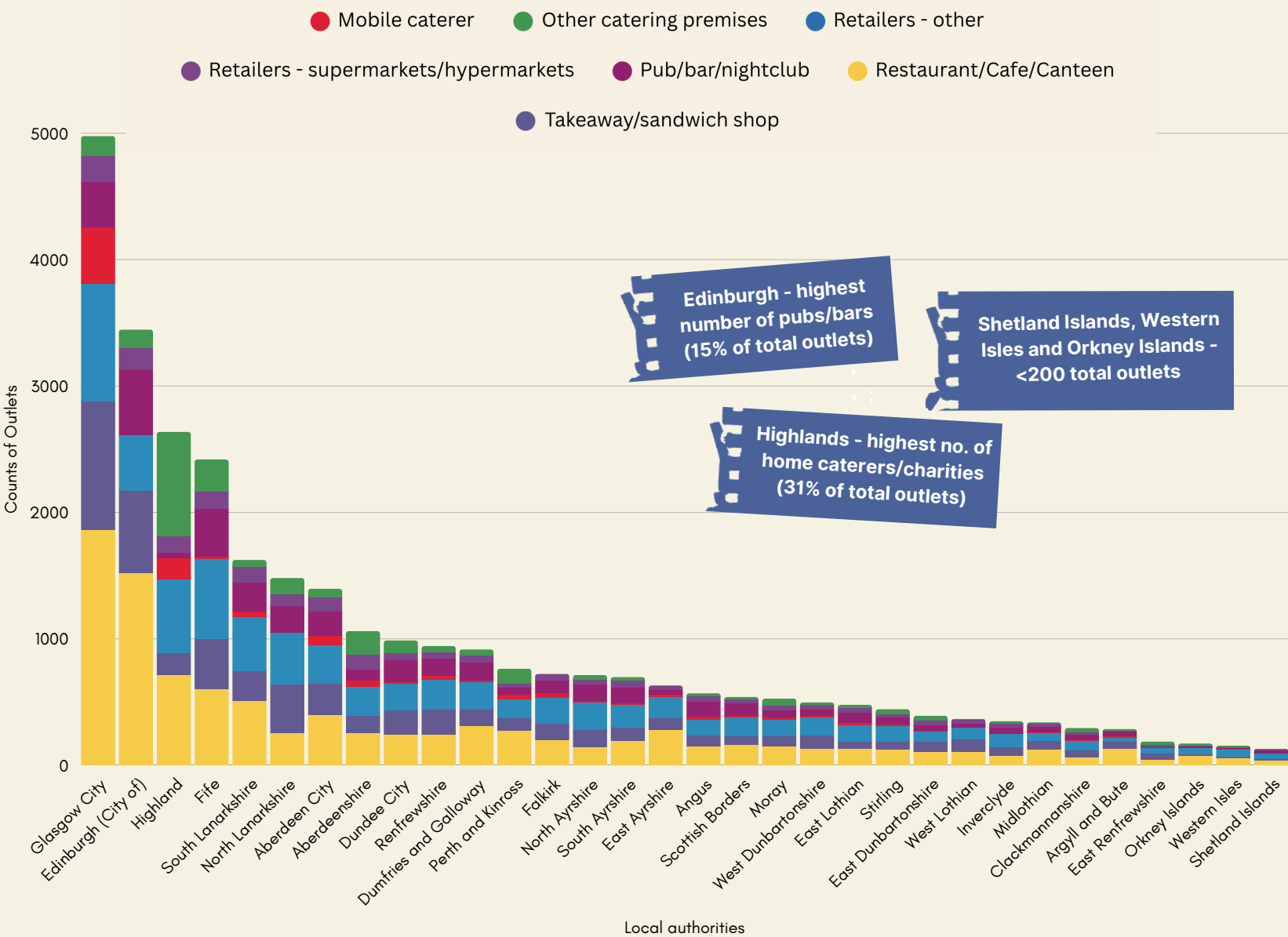
Proportion of food outlets by local authority in Scotland



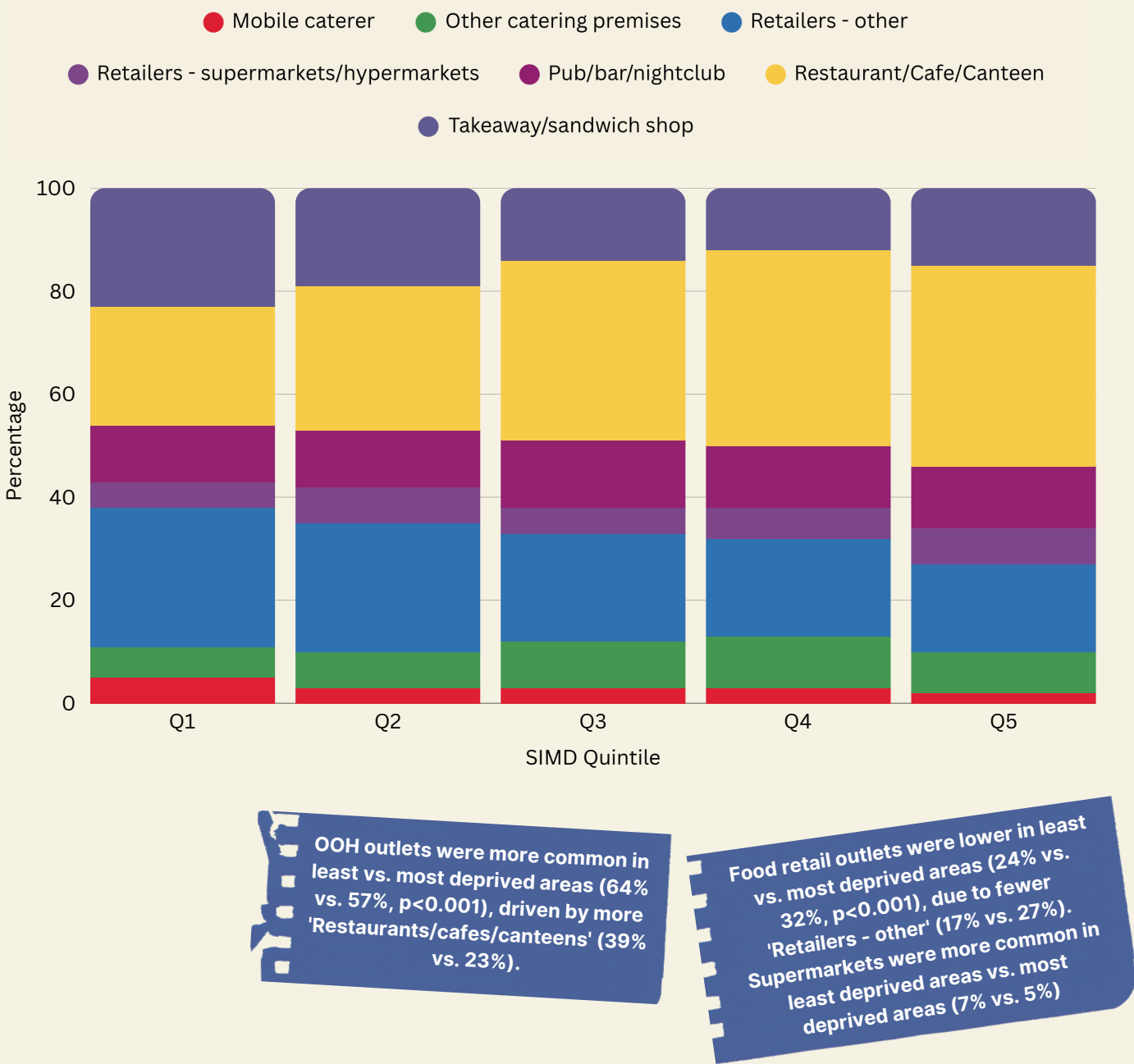
Proportion of OOH

Proportion of Retail

Frequency of food outlets by local authority in Scotland



Association of SIMD with classification of outlets



Conclusion

- In an average sq-km of Scotland, OOH outlets are approximately double the number of retail outlets .
- Overall, takeaways were more common in deprived areas, while restaurants and cafés were more common in affluent ones, but this was not true across all local authorities.
- These insights can aid policies such as the Good Food Nation (Scotland) Act, to improve the healthfulness of food environments.

References:
¹<https://ratings.food.gov.uk/open-data>
² <https://www.nrscotland.gov.uk/statistics-and-data/geography/nrs-postcode-extract>