

Supermarket availability and socio-economic deprivation in urban Ireland

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Supermarkets are a major actor in the local food system¹. In Ireland, it is estimated that 76% of energy from food and drink is consumed in the home, and supermarkets account for 91% of food purchased from retailers by consumers². Area level (geographically determined based on census data) socio-economic deprivation affects availability of healthy foods³. The relationship between supermarket outlet availability and area level deprivation in Ireland is unknown. The aim of this study was to investigate the relationship between the density of supermarket locations and area-level population and deprivation in Dublin, Ireland. The addresses, including Eircodes, of five leading grocery retailers in Dublin, Ireland was collected from grocery retailer websites and validated using Google Maps. Electoral District (ED) boundaries were sourced from the Irish Central Statistics Office. The deprivation index and population of each of these EDs was sourced from the Irish Pobal HP Deprivation Index 2016 and mapped onto a geographical map of Dublin, Ireland in the form of polygons using the ArcGIS Online Geographic Information System. Supermarkets were mapped on top of this using point locations. Data was analysed using Microsoft Excel and IBM SPSS V24 to investigate the relationship between the density of supermarket locations and area-level population and deprivation. The five leading grocery retailers in Ireland including SuperValu, Tesco, Dunnes Stores, Lidl and Aldi made up 89% of supermarket share in 2020. Between them they had 185 supermarkets across Dublin. Areas of lower socio-economic deprivation (very affluent, affluent and marginally above average) contained 69.1% (n = 931,582) of Dublin's population and 73% (n = 135) of Dublin's supermarkets equating to 0.14 supermarkets per 1000 population. Areas of higher socio-economic deprivation (marginally below average, disadvantaged and very disadvantaged) contained 30.9% (n = 415,777) of Dublin's population and 27% (n = 50) of Dublin's supermarkets equating to 0.12 supermarkets per 1000 population. There were 0.76 supermarkets per 1000 population in the most affluent area of Dublin, whereas there were 0.00 supermarkets per 1000 population in the most disadvantaged areas of Dublin. However, the distribution of supermarkets across area of deprivation was not found to be statistically significant using Kruskal Wallis H analysis. The study found no significant difference between the density of geographic availability of supermarkets in areas of low and high deprivation in Dublin, Ireland. However, the study observed a non-significant trend towards supermarkets being located in less deprived areas. Notably areas in the highest level of deprivation, classified as very disadvantaged, had no supermarkets. This finding has implications for the health and wellbeing of people living in more deprived areas thereby providing evidence to inform future planning policy on the Irish food environment.

Acknowledgments

With thanks to the FSAI for funding this research.

References

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