

Geo-Spatial Methods to Better Understand Urban Food Deserts

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Abstract : Food deserts are a reality in some cities. These deserts can be described as a shortage of healthy food options within close proximity of consumers. The shortage in this case is typically facilitated by a lack of stores in an urban area that provide adequate fruit and vegetable choices. This study explores new avenues to better understand food deserts by examining modes of transportation that are available to shoppers or consumers, e.g. walking, automobile, or public transit. Further, this study is unique in that it not only explores the location of large grocery stores, but small grocery and convenience stores too. In this study, the relationship between some socio-economic indicators, such as personal income, are also explored to determine any possible association with food deserts. In addition, to help facilitate our understanding of food deserts, complex network spatial models that are built on adequate algorithms are used to investigate the possibility of food deserts in the city of Hamilton, Canada. It is found that Hamilton, Canada is adequately serviced by retailers who provide healthy food choices and that the food desert phenomena is almost absent.

Keywords : Canada, desert, food, Hamilton, store

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