

Tracing Food Accessibility and Consumer Behavior in Atlanta Using Mobility Data

The dynamics of urban food accessibility are complex, including availability, location, and consumer preferences. This research challenges traditional methods for identifying food deserts by the United States Department of Agriculture claiming that fixed-distance methods fail to represent the complicated spatial dynamics found in different geographical contexts. This study redefines food accessibility at the block group level in Atlanta using advanced mobility data analytics, to identify discrepancies and inform equitable resource allocation. Using spatial choice methodologies, the study investigates the relationship between physical geography and consumer behaviour. Mobility data from Safegraph is evaluated to reveal consumer travel patterns and to grocery stores, offering insights into actual food purchasing patterns. By comparing these data to USDA measures, the study reveals places with differing degrees of food access and investigates demographic connections. Results highlight disparities in accessibility and reveal socio-economic indicators of food scarcity and abundance. Moreover, the study identifies areas with multiple food choices and investigates their alignment with demographic profiles. Overall, this research advances the understanding of urban food access by incorporating granular mobility data, offering insights to inform policy and promote equitable distribution of food resources.

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