THE UNIVERSITY OF CHICAGO
DATA SCIENCE INSTITUTE

Rural Advancement Foundation International (RAFI) works with policy and advocacy groups to address unequal food access and the dominance of large corporations in grocery markets nationwide. RAFI partnered with the University of Chicago's Data Science Clinic to visualize grocery market concentration and food access metrics in different core-based statistical areas (CBSA) and analyze geographic factors linked to these metrics.

The analysis identified CBSAs at the extremes of the relevant metrics. Figure 1 illustrates how food access and market concentration vary, showcasing areas of concern and opportunity.

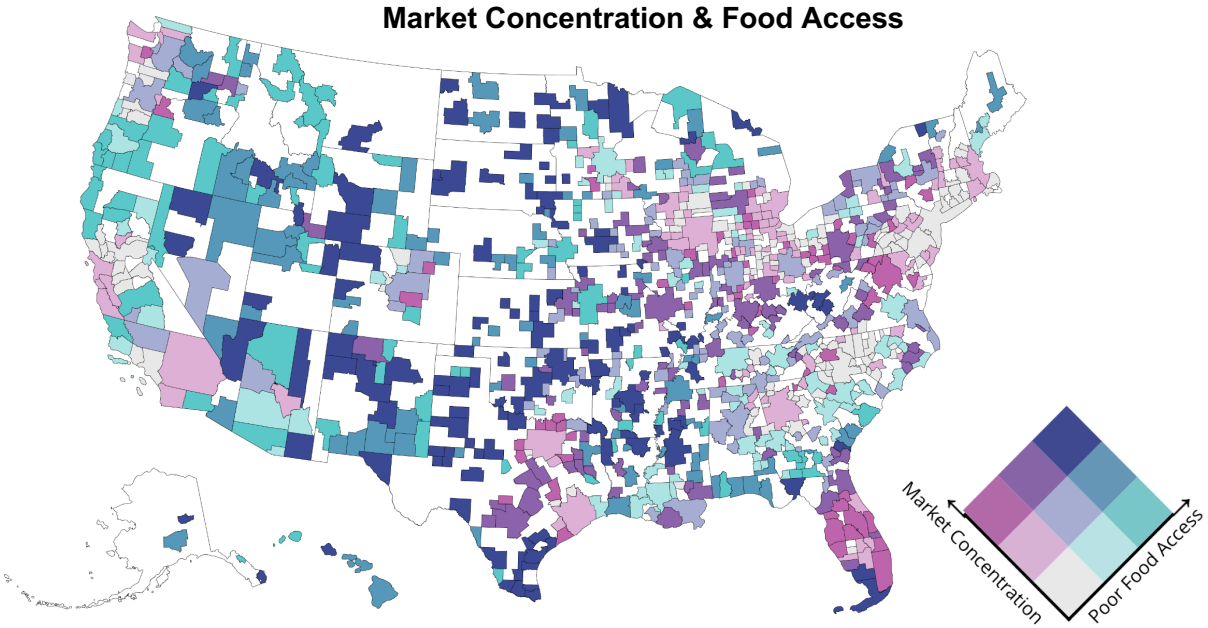

Figure 1: This map displays the combination of food access and market concentration terciles at the CBSA level in 2023. The legend is sourced from the RAFI Grocery Gap Atlas.

The team analyzed the relationship between geographic features and key metrics (Figure 2). They found a significant relationship indicating that the closer a micropolitan statistical area (MiSA) is to a metropolitan statistical area (MSA), the greater the food access. Moreover, proximity to infrastructure and population density leads to increased food access. However, no significant relationships involving market concentration were uncovered. The neighborhood-level geographic analysis showed a moderate predictive power of a neighborhood's location and its food access but no predictive power with market concentration. While initial analysis highlights disparities in food access and provides a framework for effective policy, more work is needed to understand how market concentration evolves nationwide.

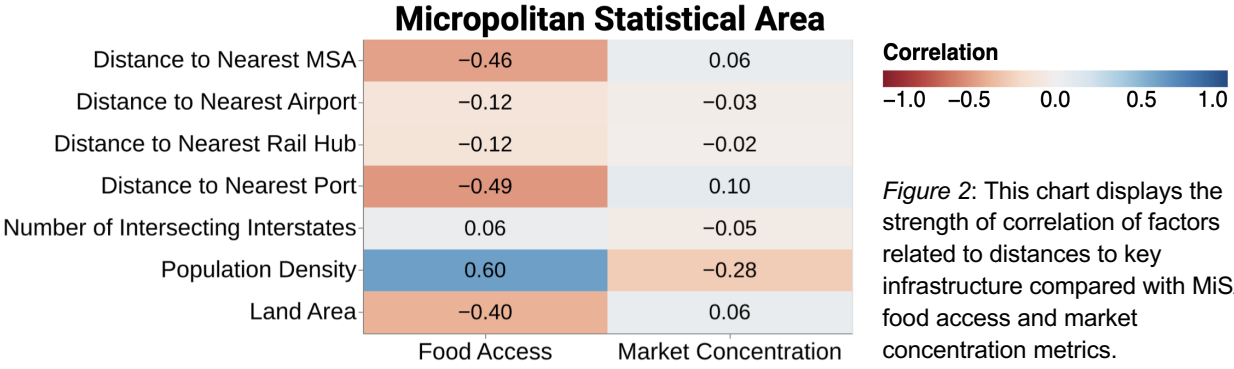

Figure 2: This chart displays the strength of correlation of factors related to distances to key infrastructure compared with MiSA food access and market concentration metrics.