Abstract

This thesis performs a comparative analysis of traditional models of food access and a proposed model of food access that uses volunteered geographic information (VGI). Moreover, food businesses are often manually classified, which limits the number of businesses used for a given study. This thesis explores VGI as a potential improvement in the classification of food businesses. Field research was conducted in a subset of the selected facilities in order to determine the actual quality of the data retrieved from the experimental sources. The goal is to create a more nuanced and accurate representation of food access for a given person in a given place. Finally, data is compared for areas with different socio-economic conditions. Median income, car access, and percent minority from the 2010-2014 American Community Survey (ACS) 5-year estimates were used to define contrasting study areas. Two census tracts in Los Angeles were selected for the study area using these criteria: (1) an affluent area near La Cañada; and (2) a less affluent area in South Los Angeles. This thesis explores the quality and completeness of three data sets for census tracts with contrasting socio-economic conditions in order to identify whether or not problems exist with traditional methods and data. Furthermore, this thesis compares the data from census tracts with contrasting socio-economic conditions in order to determine whether or not the data varies based on the community served. The results of this thesis indicate that VGI does not represent a significant addition to commercial data because so few of the businesses are represented in the VGI data set. Moreover, the use of North American industry classification standard (NAICS) codes to classify businesses proved to be problematic. Specifically, numerous businesses that were classified as super markets or grocery stores were in fact smaller than convenience stores and sold fewer items. Finally, sentiment

analysis of reviews will require a larger data set and specifically trained models in order to be evaluated further.