

Predicting food access in an African city.

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Introduction

Throughout history, in spite of having an adequate quantity of food supply, various countries have experienced famine (Sen, 2003). Food access is a chronic problem in Sub-Saharan Africa. According to FAO, Africa produced 110% of the amount of food required to feed the population between 2014-2015 and yet, the region was reported to be severely food insecure within the same period (FAO & ECA, 2018)

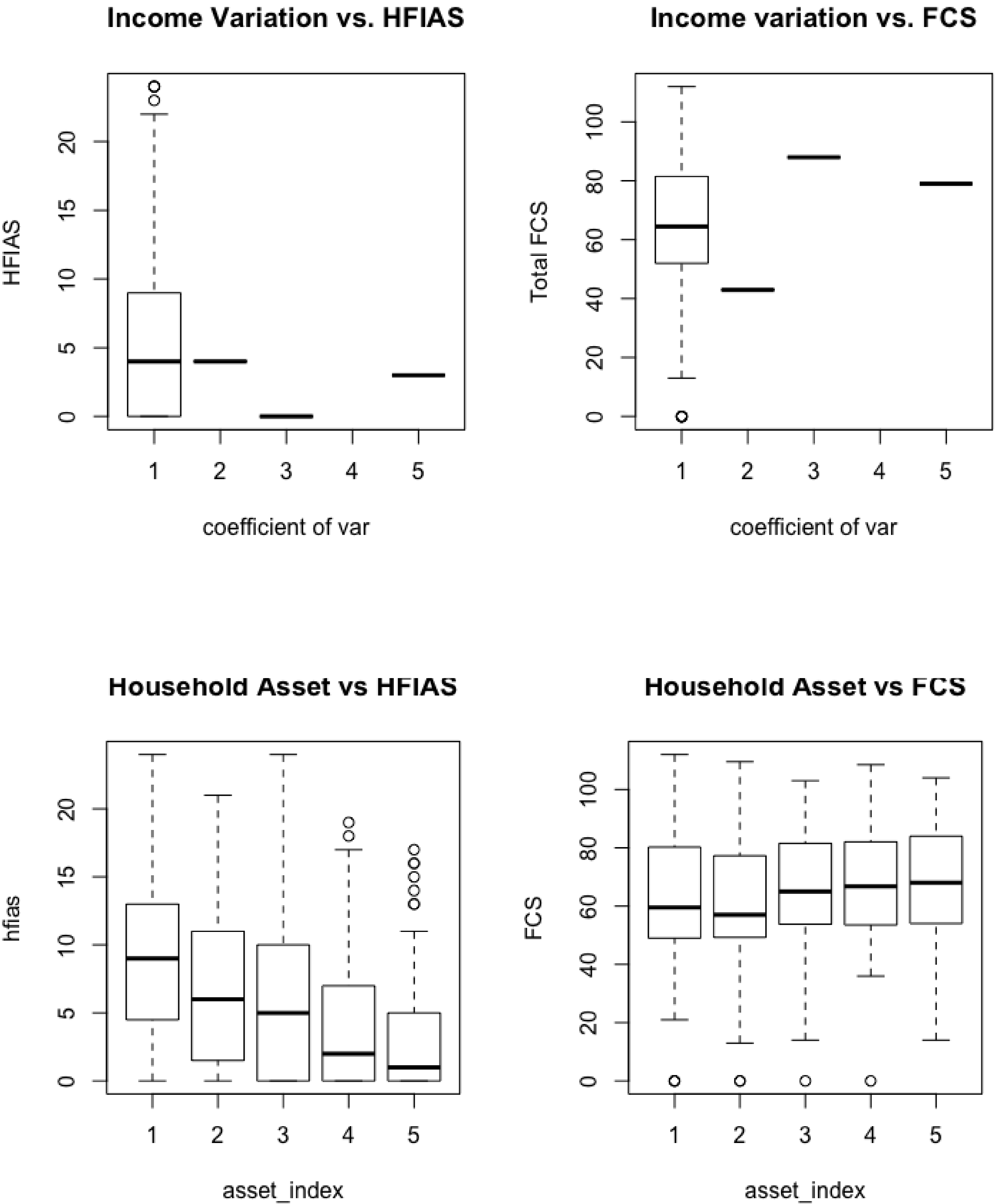
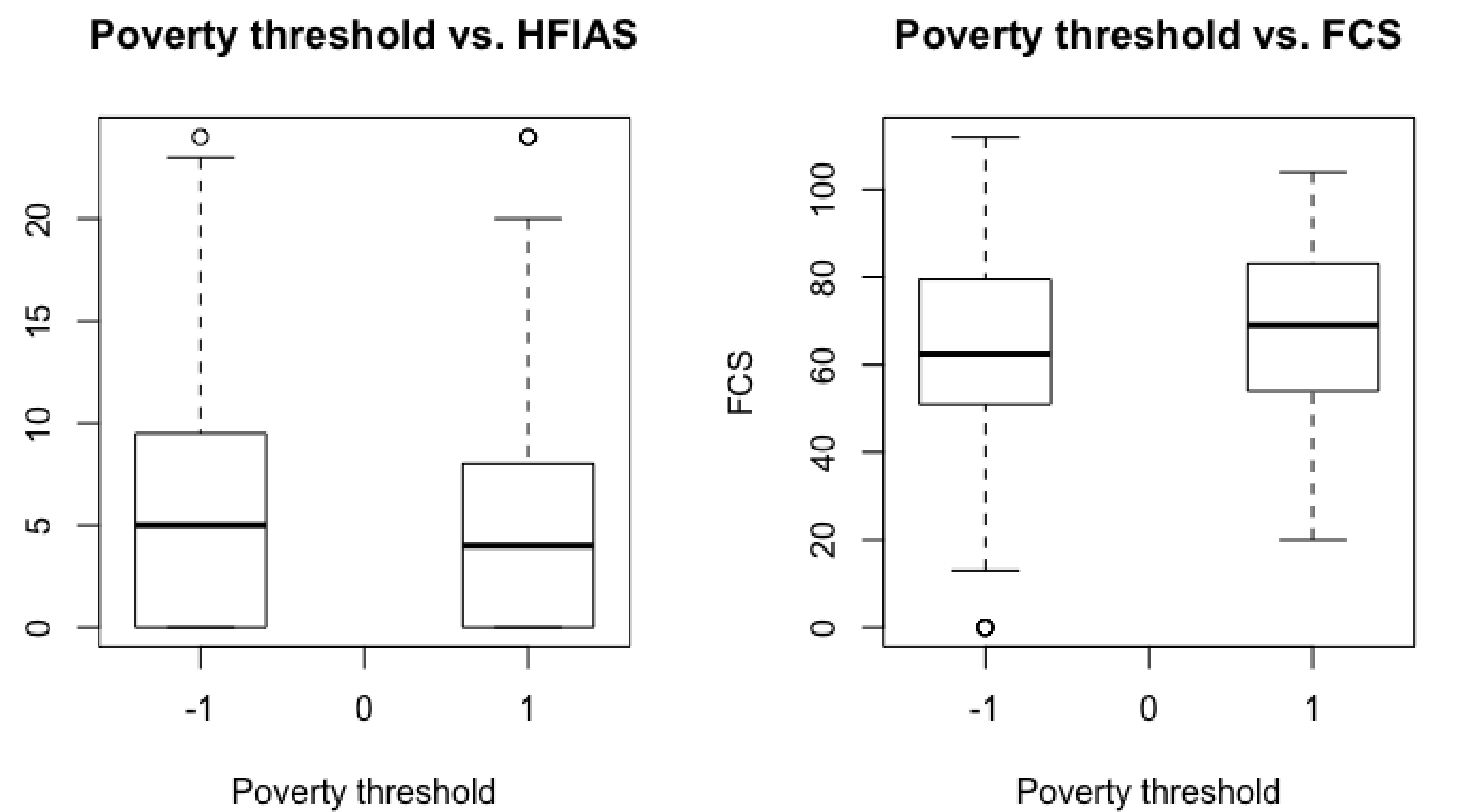
Food desert application in Africa

The food desert concept has been used to identify food insecure areas in most developed countries based on low-income and the absence of a supermarket within a ½ mile radius (USDA, 2019). This conceptual application to African cities is complicated since supermarkets are infrequent and informal food cart vendors are common.

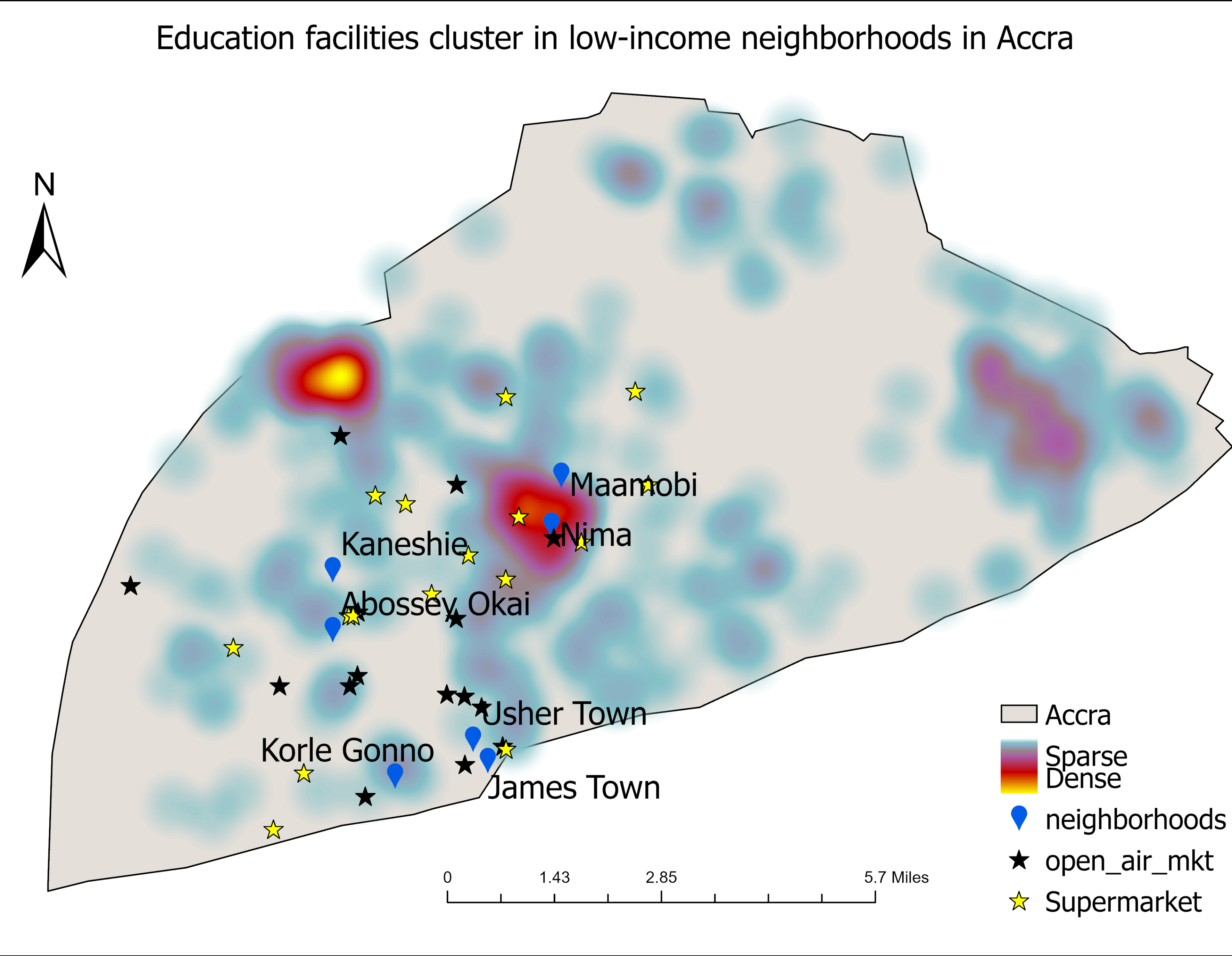
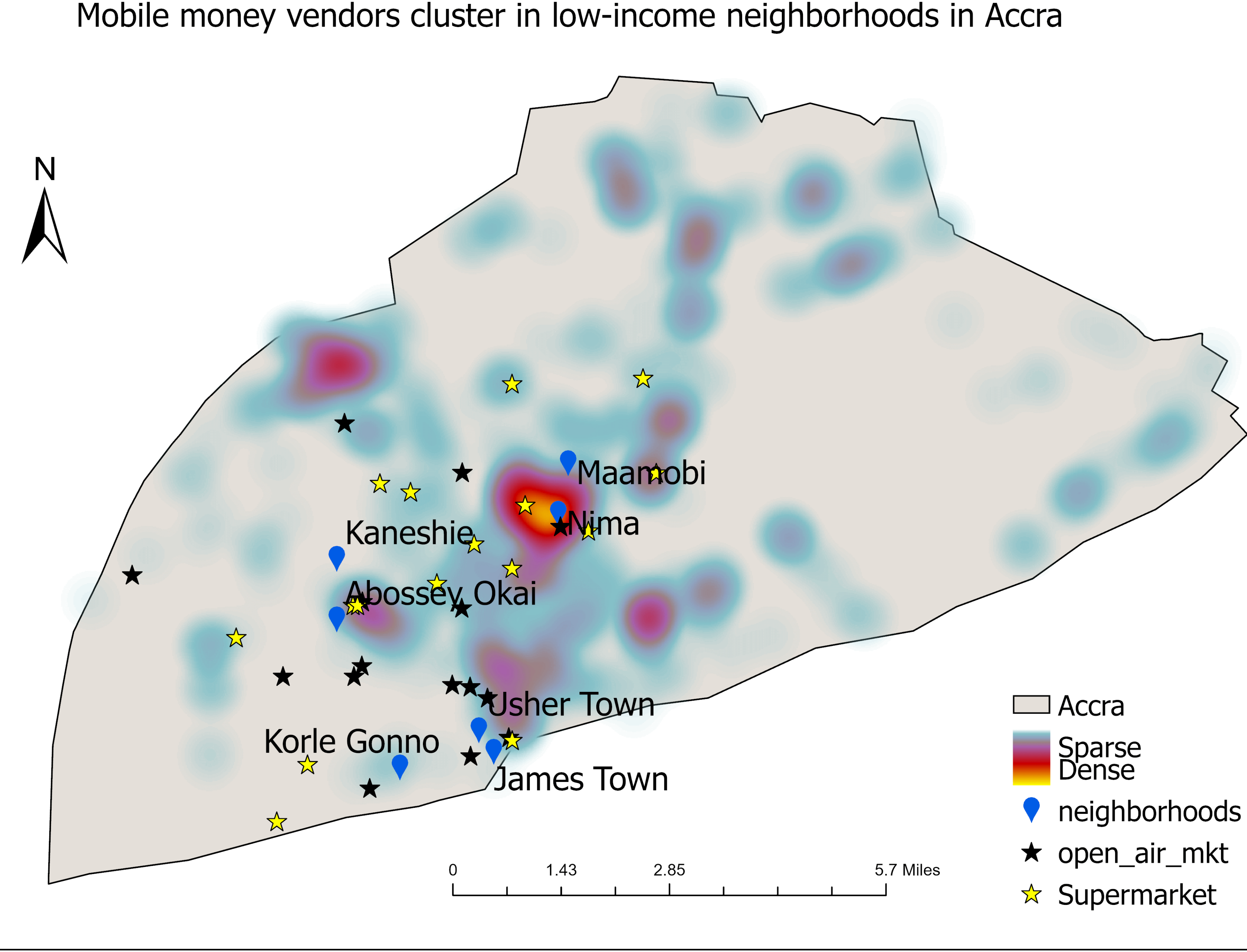
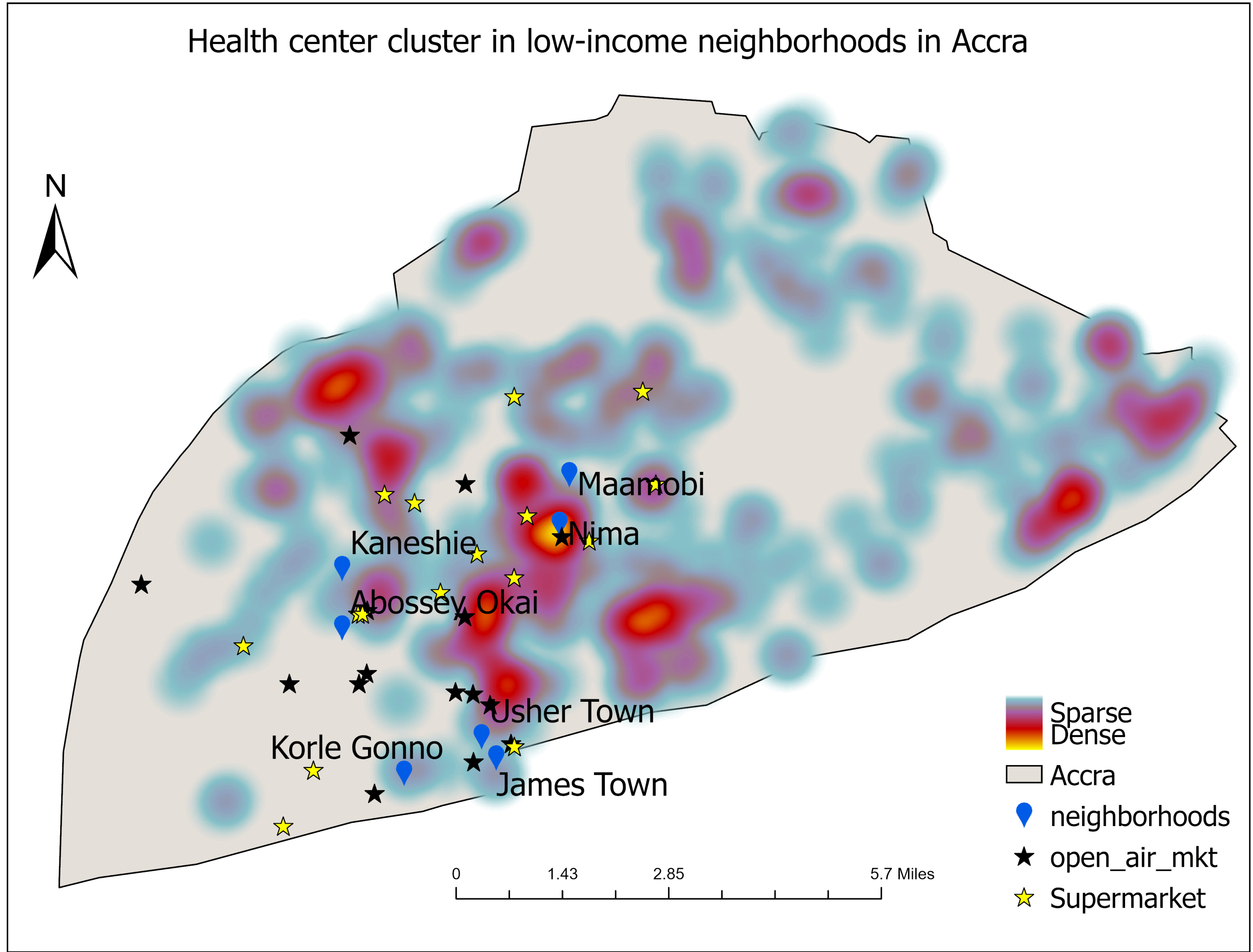
Research questions

- Overall: What does food access mean in a large African city and do there appear to be food deserts?
1. To what extent does socioeconomic status and specifically the variability in household income relate to food access?
 2. Is there a spatial relationship between various indicators of public and private investment in the city (including health centers, schools, transportation networks) and food access?

Analyzing income-related variables of households



Heat maps of neighborhood infrastructure



Residential area	Average FCS	Average HFIAS
Abossey Okai	62.1	4.89
James Town	70.5	6.08
Kaneshie	64.6	5.611
Maamobi	65.8	5.701
Nima	66	6.12
Other areas	66.5	5.24