Understanding the Investment Landscape in Detroit Using Foursquare Data

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Introduction

Over the past several years, the city of Detroit has continued to see investment in a variety of forms. These investments come after decades of population decline in the city, deindustrialization in what had been one of largest manufacturing centers in the US and the city's bankruptcy in 2013.The city is looking forward to a brighter future however with the Little Caesars Arena opening in 2017 and the Q line opening in the same year. These major investments and others will hopefully spur continued investment in the city as more companies move from the suburbs of Detroit into the city proper. While the city has historically benefited from the clustering of the auto industry and continues to do so to some extent, the city must look to other industries to fuel its economic growth. The affordability of the city, and large metropolitan region provides an opportunity for businesses and amenities to move into the city. Understanding where different categories of businesses currently exist in the city will enable potential investors to either locate in a section of the city where competition may be low, or they may wish to locate in a section of the city where their business may benefit from business clustering. For groups and individuals concerned about social justice, understanding the current distribution of businesses in the city can provide valuable information about the unequal investment that the city has seen. This information may be used to fine tune city policy on a more granular level thus distributing investment more evenly in the city.

Overview of the Data

The primary data source for this project is Foursquare and the data queried from the Foursquare API. The names of the neighborhoods and the longitude and latitudes for the neighborhoods were acquired through shapefiles from the city of Detroit and then converted to longitude and latitude. Foursquare data does not capture every business per se but rather it captures venues. A venue is not the same as a business, rather is a place that someone visiting the city of Detroit may wish to go. Examples of venues which are not business would be parks or museums which are captured in the data because the data is about where people using the foursquare app want to go and therefore it does not contain every kind of business. This venue data most crucially for this report included, the name of the venue, its location and what category that it belongs to. In considering how this data relates back to the problems outlined in the introduction, for the business types which are captured in the data, coffee shops for example, they can use this data to either cluster with other coffee shops or they wish to locate in a neighborhood they identify as underserved, in that, lacking many coffee shops. For business types which are not captured in the data, it is important to know about the venues which are available in the area in which they may locate as this will aid in attracting and retaining employees. Notably, Amazon in considering where to place its second headquarters evaluated the amenities of the surrounding area as a criterion when making its decision. The location and distribution of certain types of venues throughout the city have social justice implications as

large portions of the city may be lacking many venues and venue types relative to other parts of the city. The implications of this will vary based on the particular venue, we might expect that museums are clustered together in a central district but given the economic benefits that accompany a museum and other urban planning considerations, we might wish to see them more spread out amongst the neighborhoods of a city.