

Dayton, Ohio:

Which types of employers should policy makers try to attract to spur population growth?



Introduction / Business Problem:

The city of Dayton, Ohio has experienced population declines, hurting the city's economic prospects.

From Wikipedia:

"Since the 1980s, [...] Dayton's population has declined, mainly due to the loss of manufacturing jobs and decentralization of metropolitan areas, as well as the national housing crisis that began in 2008. While much of the state [of Ohio] has suffered for similar reasons, the impact on Dayton has been greater than most. Dayton had the third-greatest percentage loss of population in the state [of Ohio] since the 1980s, behind Cleveland and Youngstown. Despite this, Dayton has begun diversifying its workforce from manufacturing into other growing sectors such as healthcare and education."

The unfortunate consequence of population declines is that there is **less tax revenue** available to allocate into services and infrastructure that would otherwise help to grow the local economy (and attract more businesses). In this context, policy makers must carefully prioritize economic incentives.

Much of the population decline has been driven by shifts in the city's employer portfolio. Investments in healthcare and education seem like sensible approaches to reversing the decline.

But what if there are other categories of employers that are linked to faster population growth?

This question could potentially be answered by examining how Dayton's employer portfolio compares to faster-growing cities of similar size.

Data Sources

The following three data sources will be used for this study:

1. https://en.wikipedia.org/wiki/List_of_United_States_cities_by_population

This Wikipedia table lists the top cities in the United States by population. Dayton, OH is among those listed, ranked at 195. Conveniently, the table provides estimates of population growth rate since the 2010 census, along with the estimated population in 2019. The table also provides city land area, with which we can evaluate population density.

With this data, I intend to identify a subset of cities that are like Dayton in terms of total population and city land area.

2. <https://www.census.gov/quickfacts/fact/table/US/PST045219>

The Census QuickFacts website provides an interface for comparing demographic statistics between cities. Conveniently, the site also provides the ability to export stats tables for multiple cities to a CSV file.

QuickFacts will be used to report and export census data for the cities in this study. This data set will be explored to see which city stats may be linked to population growth.

3. **Foursquare API** location data will be used to compare Dayton's employer portfolio to the other cities. My goal here is to identify which employer types in Dayton are under-represented and over-represented compared to similar cities with faster population growth.