

Assessing the Financial Practicality of LEED

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Introduction

- Green building industry has become an emerging branch within the architecture, engineering, and construction (AEC) industries
- Examples of rating systems within the green building industry include: Leader in Environmental and Energy Design (LEED) and Building Research Establishment Environmental Assessment Method (BREEAM), among a few others
- Rating systems are expensive to implement due to the cost of the actual certification paired with the costs of meeting certification requirements
- Data from the U.S. Census Bureau will compare populations and income
- These rating systems should be more available to all populations because of the proven economic, environmental, and health benefits

Hypothesis

- The Green building standard, Leader in Environmental and Energy Design (LEED), is not financially practical for all populations

Methods

Variables

- **Dependent variables:** (1) expenses associated with certification and (2) city-specific demographic indicators taken from most populated cities in Florida.
- **Independent variables:** (1) LEED certification, (2) BREEAM certification and (3) no certification (as control)

Procedures

- Conducted literature review using scholarly databases
- Gathered demographic data from US Census Bureau
- Quantified dependent variables based on independent variable

Discussion

- Populations vary widely across the cities
- The median income is similar for Tampa, Jacksonville, and Orlando between \$46,000 and \$50,000
- Jacksonville and Miami had a similar number of LEED projects despite having different median incomes, disproving my hypothesis
- In the future I plan to use project types as another demographic indicator

Results

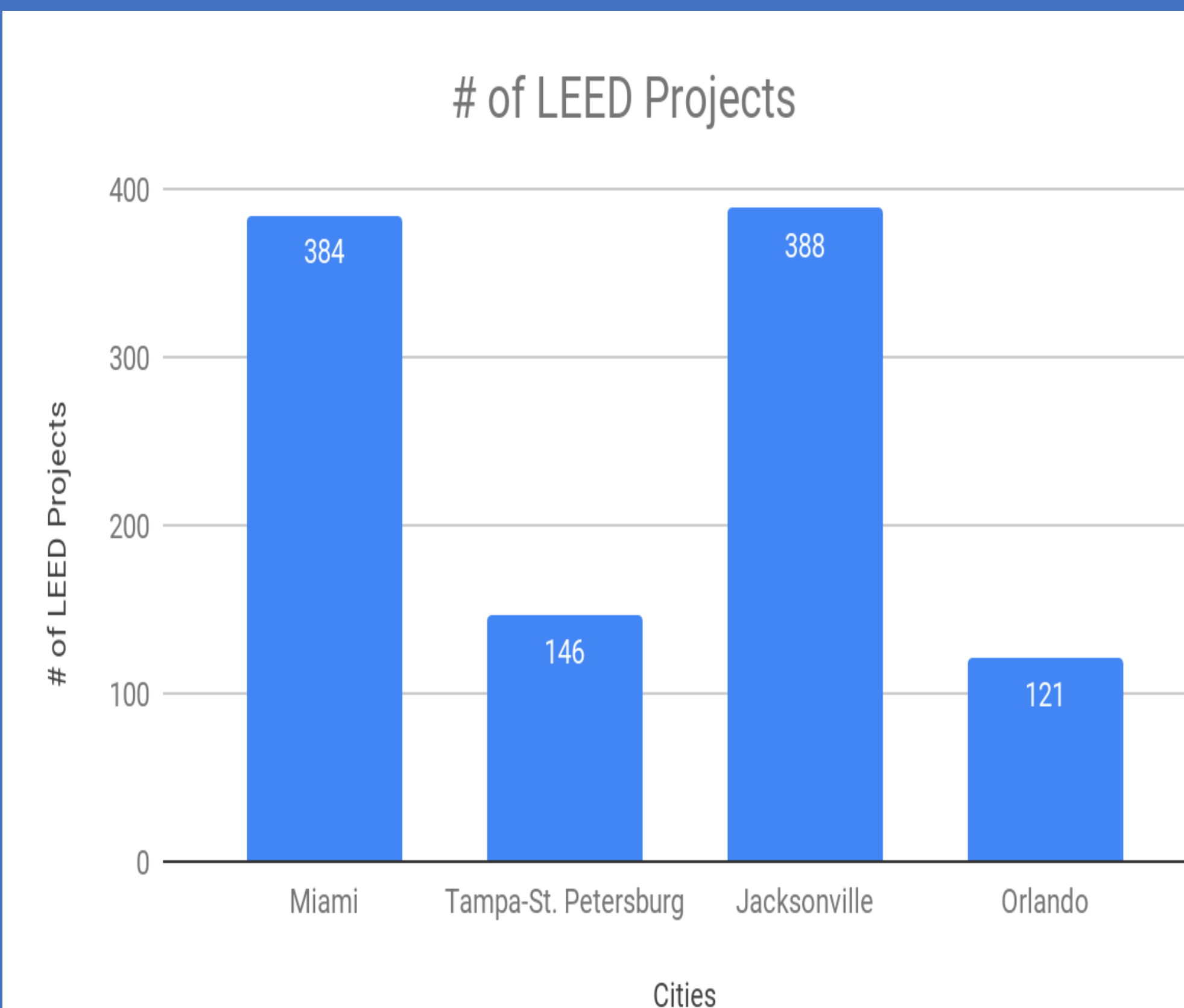


Figure 1: The number of LEED projects in various Florida cities

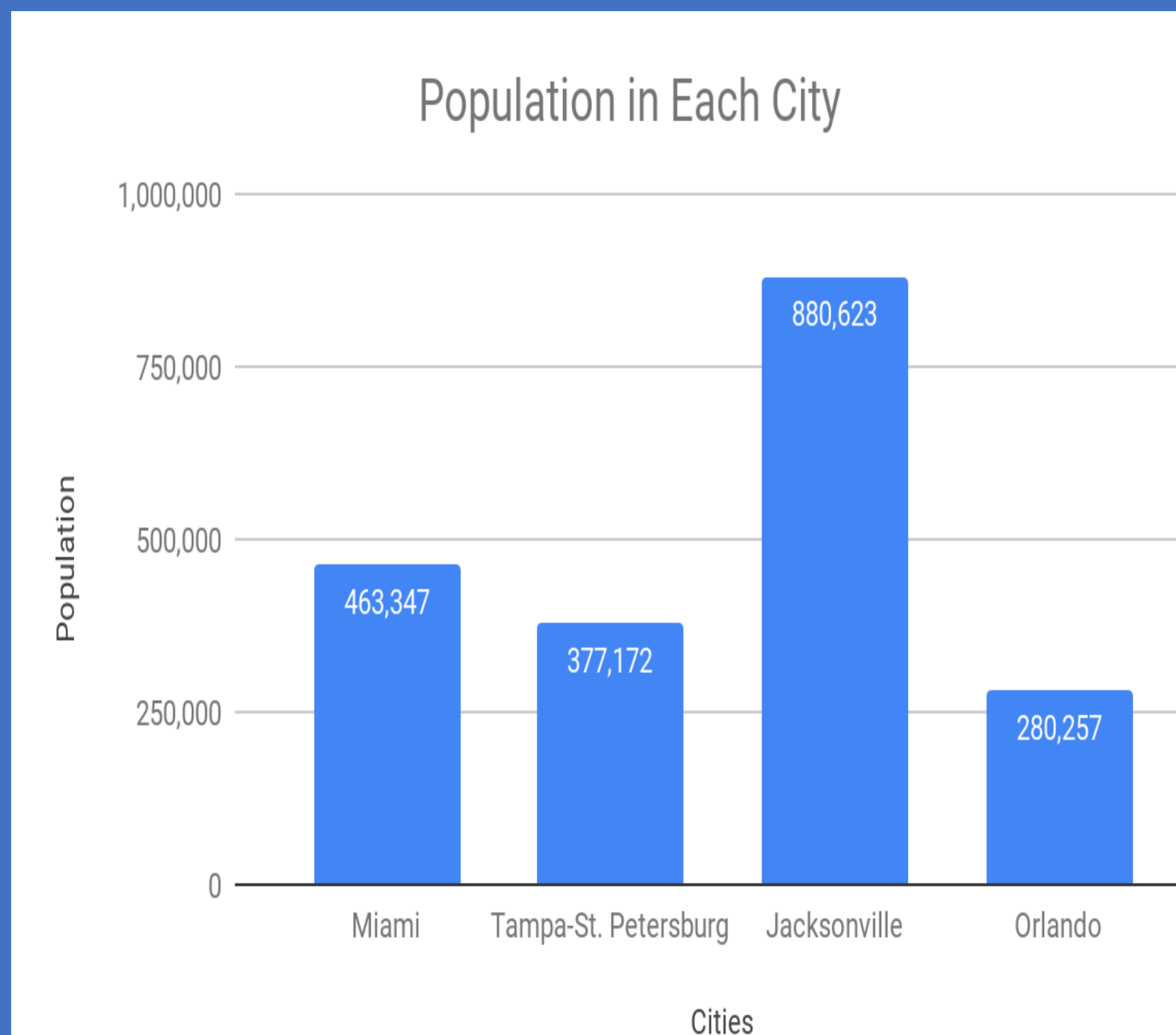


Figure 2: The total populations of the cities from Figure 1

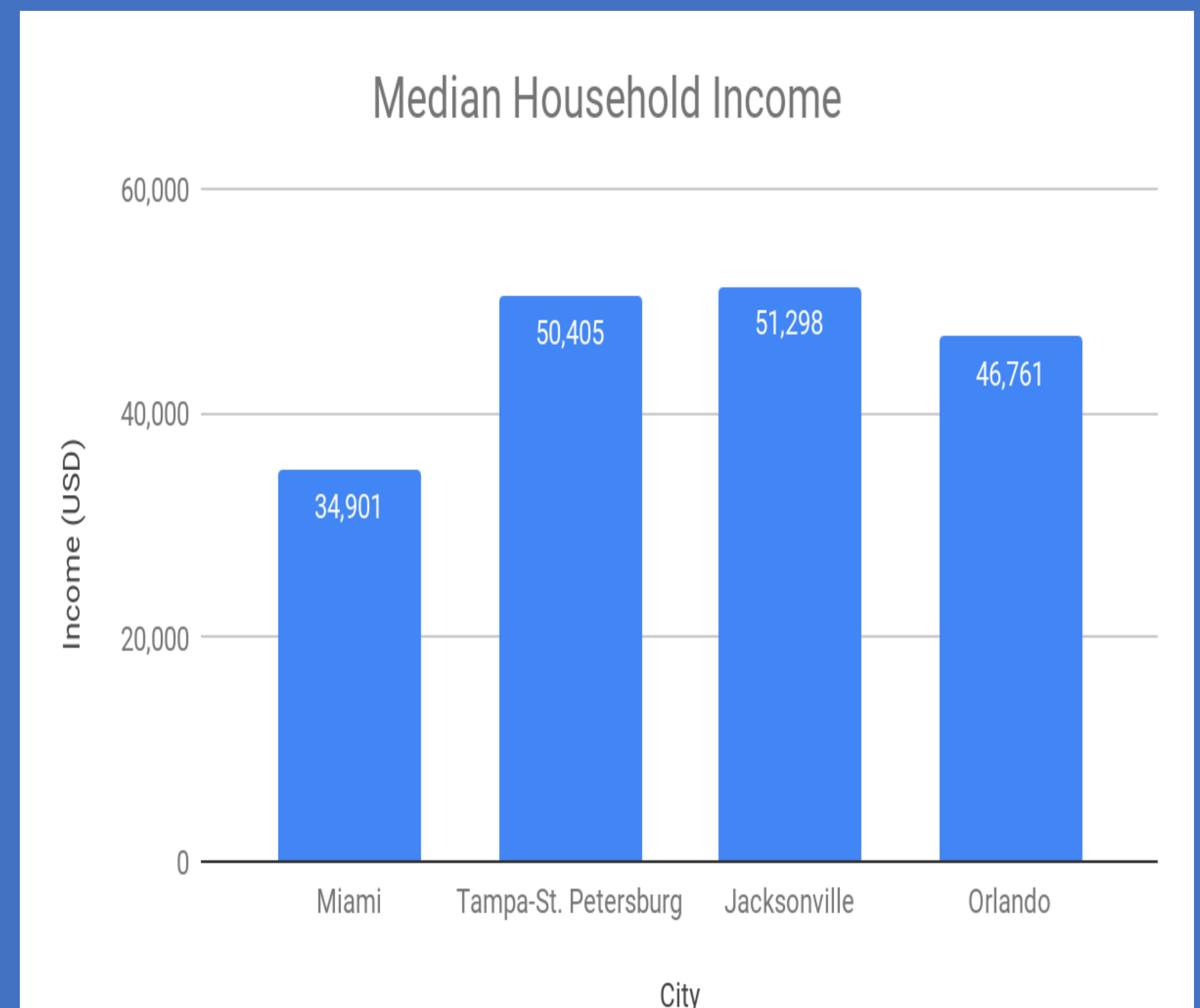


Figure 3: The median household incomes of the cities from Figure 1

References:

- U.S. Census Bureau (2017). QuickFacts. Retrieved from <https://www.census.gov/quickfacts/fact/table/orlandocityflorida,jacksonvillecityflorida,tampacityflorida,miamicityflorida/PST045217>
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