State Weights for the Consumer Expenditure Survey

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Branch of Information and Analysis

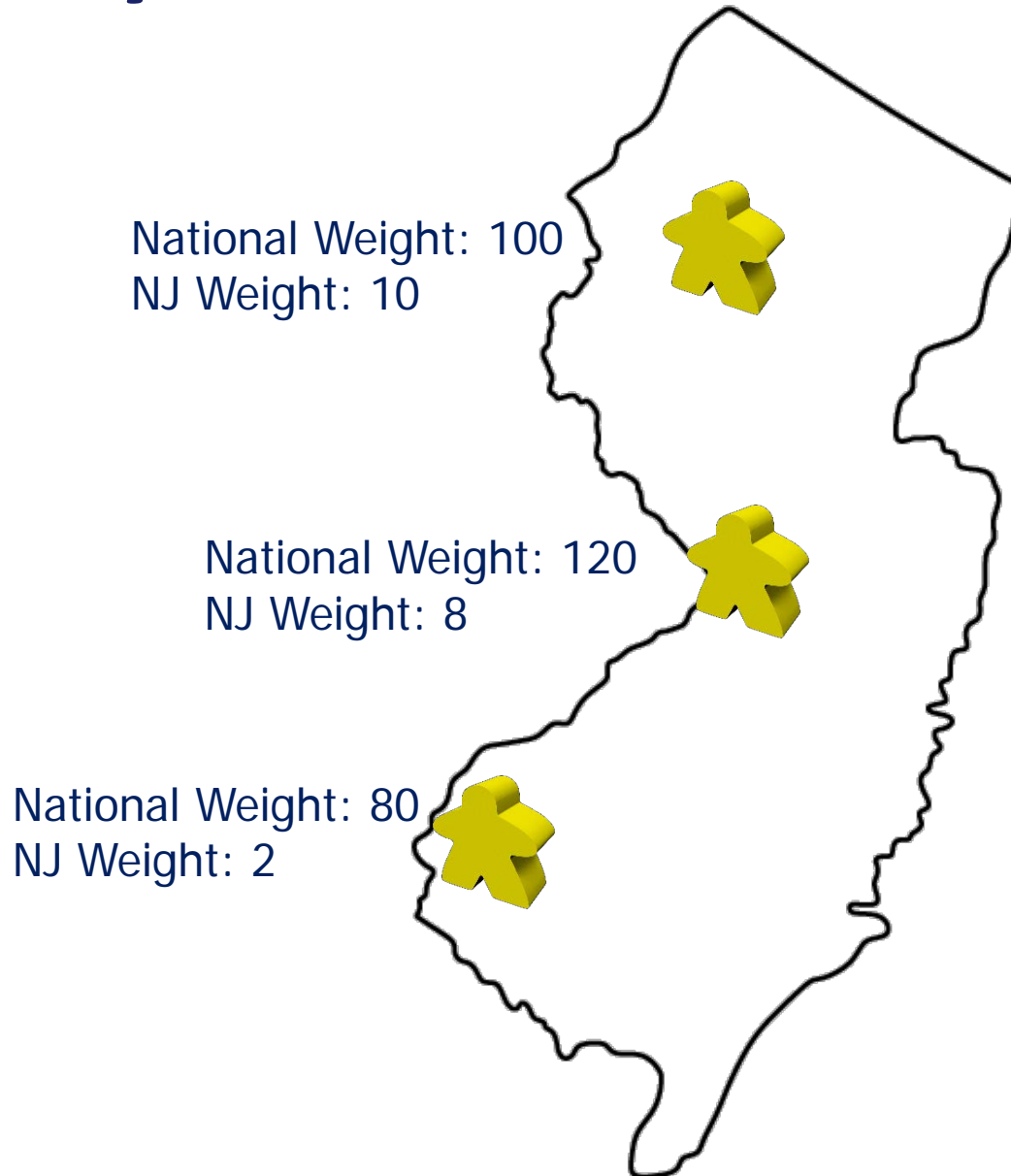2018 Microdata Users Workshop

18-20 July 2018

State Estimates

- Impossible with current population weights.

- First test estimates produced in 2013 for three states.

- First official weights published for 2016.

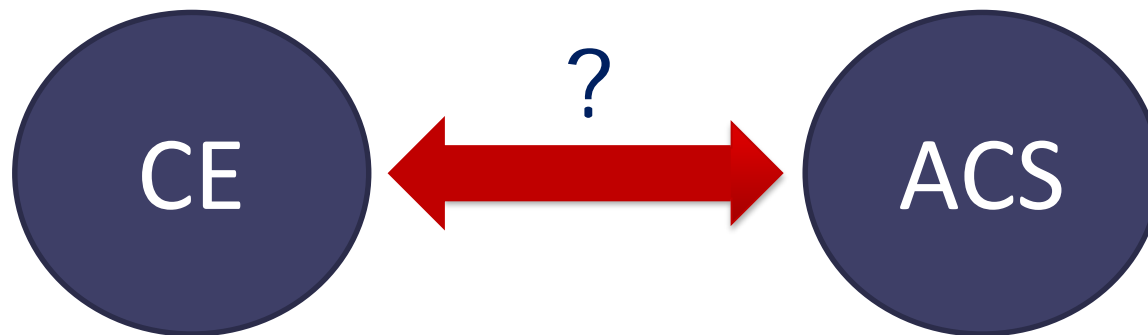- Weights will be produced again for 2017 data.

How do they work?

- Suppose the population of New Jersey was 20.

- Each consumer unit in New Jersey is re-weighted to represent the population of New Jersey *instead of* the national population.

National Weight: 100
NJ Weight: 10

National Weight: 120
NJ Weight: 8
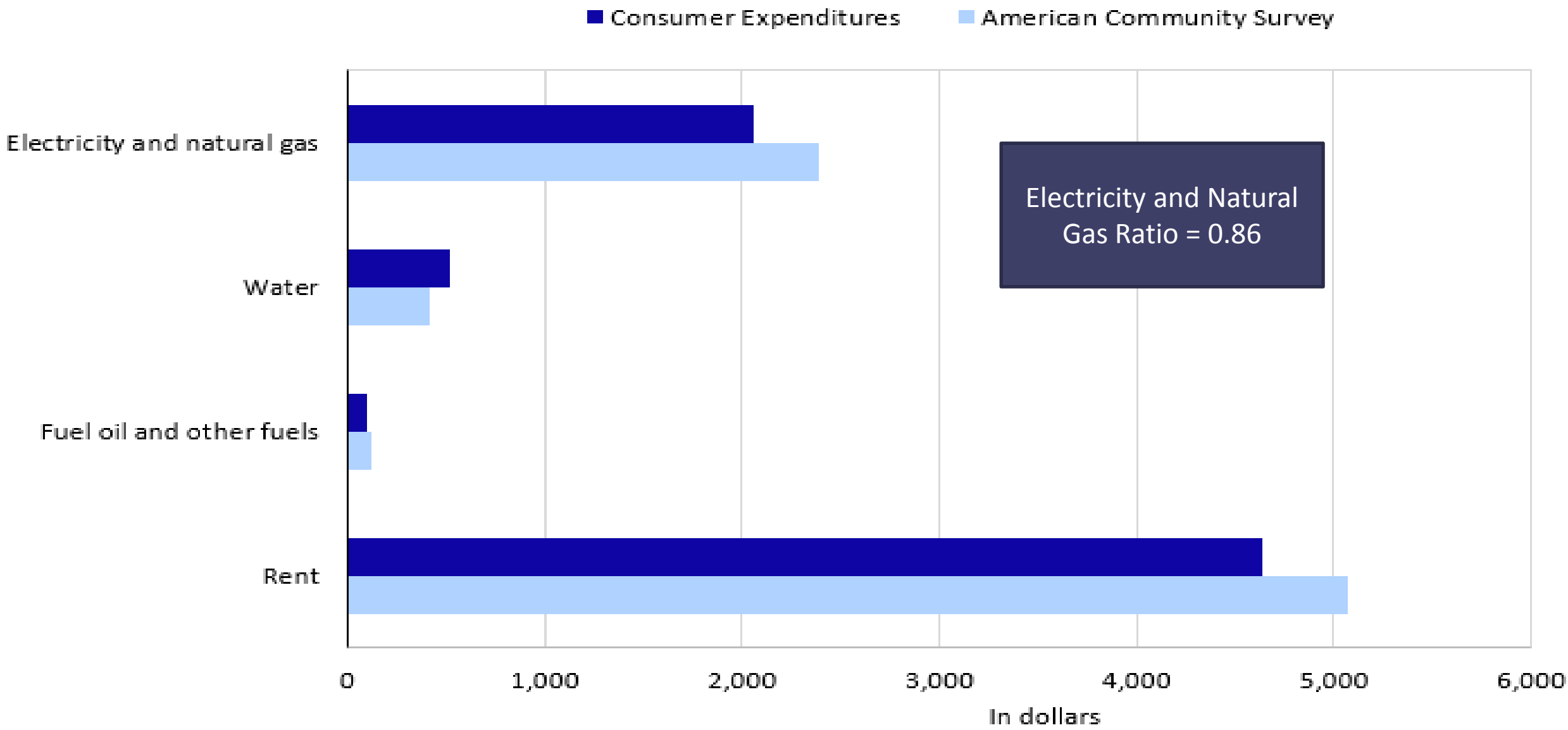
National Weight: 80
NJ Weight: 2

How well do they do?

- Use of other sources which already have state weights for comparison. (e.g. American Community Survey (ACS))

- Does the state weight produce a difference from other sources that is equal to or better than the national weight?
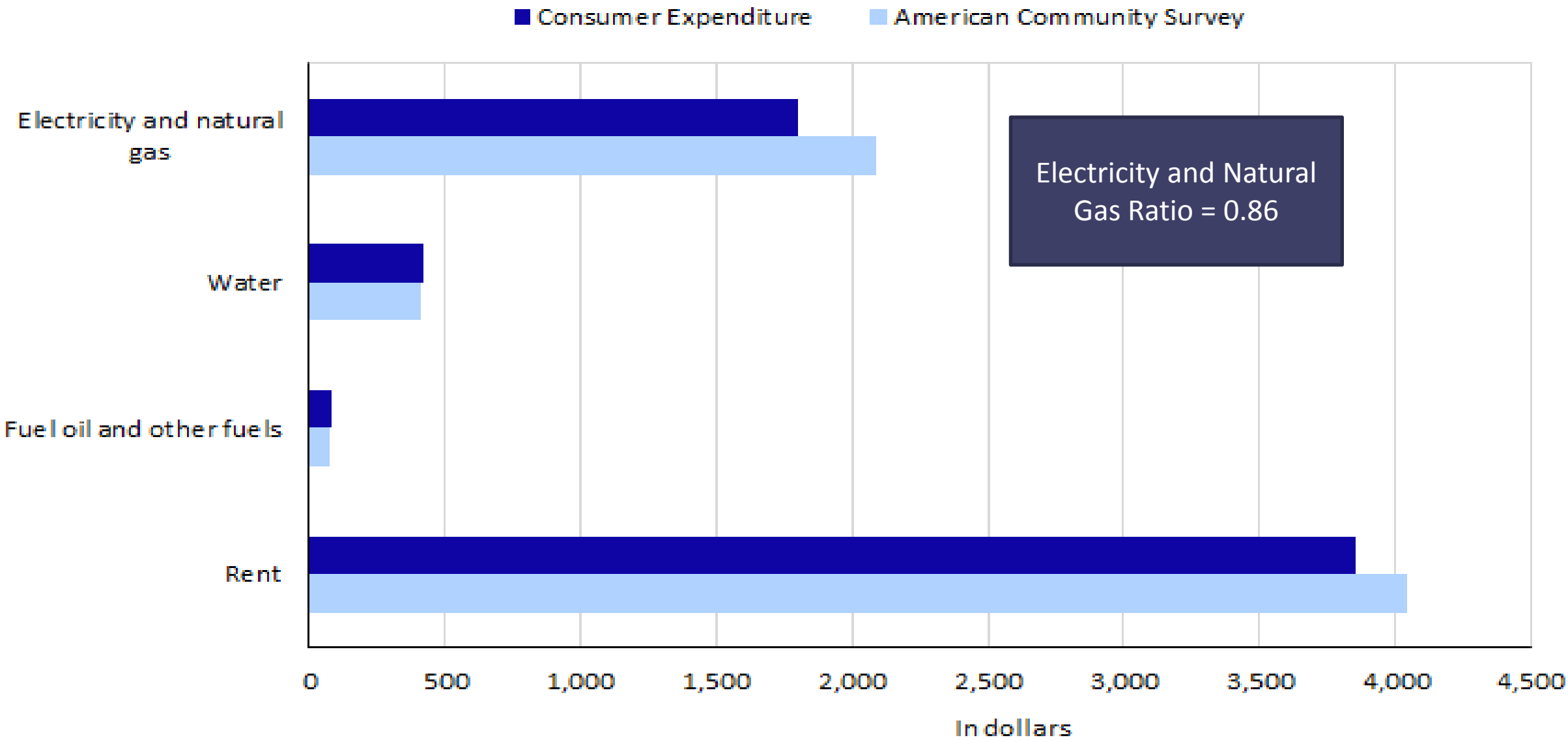
Chart 1. Expenditure comparisons between the American Community Survey and Consumer Expenditures Survey for the state of New Jersey, 2016

■ Consumer Expenditures   ■ American Community Survey

Electricity and Natural Gas Ratio = 0.86

Electricity and natural gas

Water

Fuel oil and other fuels

Rent

0   1,000   2,000   3,000   4,000   5,000   6,000

In dollars

Source: U.S. Bureau of Labor Statistics, Consumer Expenditure Surveys Public-Use Microdata.

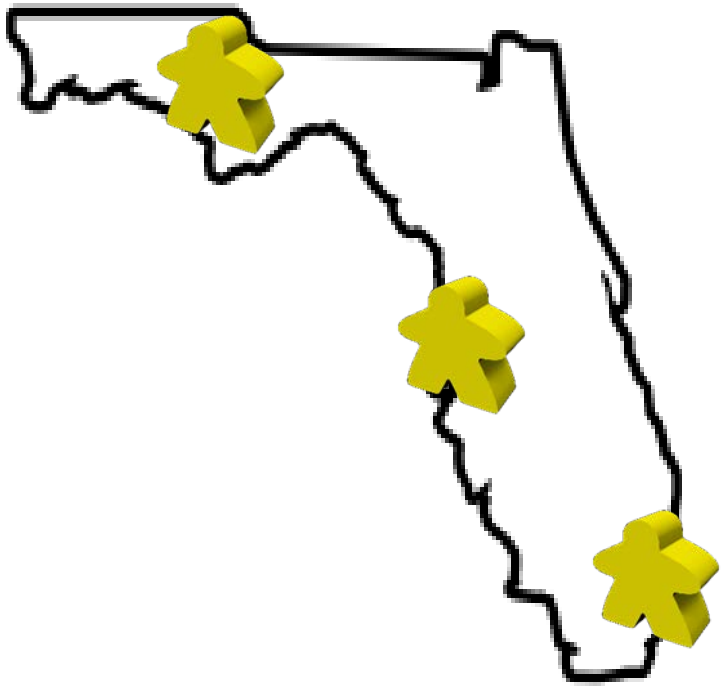# Chart 2. Expenditure comparison between the American Community Survey and Consumer Expenditures Survey at the national level, 2016

■ Consumer Expenditure   ■ American Community Survey

Electricity and Natural Gas Ratio = 0.86

In dollars

Source: U.S. Bureau of Labor Statistics, Consumer Expenditure Surveys Public-Use Microdata.

How well do they do?

■ Compare population targets to US Census.

1. Add up the weights for Florida from PUMD.
~8.5 Million Consumer Units (CU)

2. Compute average number of persons per CU with the weight.
2.4 persons per CU

3. Multiply and compare to census value.
8.5 * 2.4 = 20.4 million persons

Approximately equal to the 20.66 reported Florida population.

Who uses them?

- ## Academics
  - ▶ Researchers have been asking for greater geographic detail for a long time. This is an effort to provide it where we can.
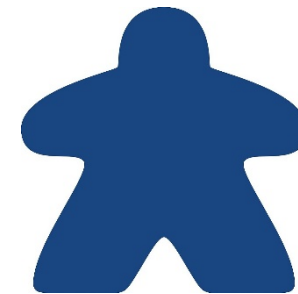
- ## Government
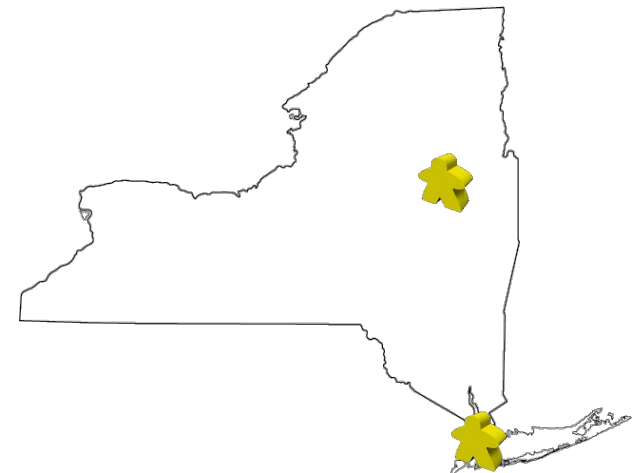 - ▶ The New Jersey weights were utilized by the New Jersey State Government.
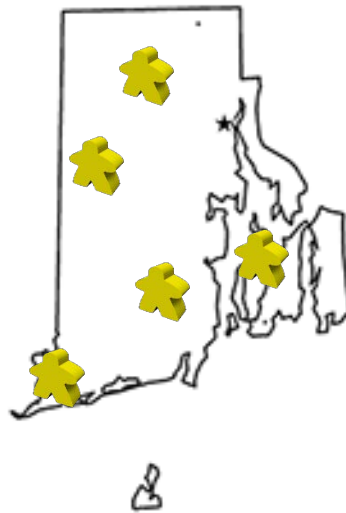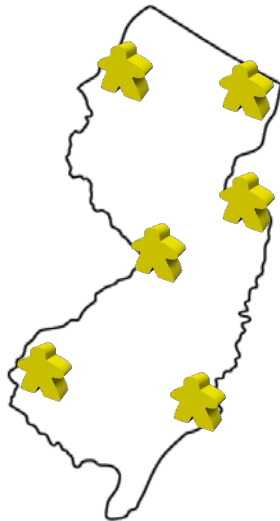
- ## You!
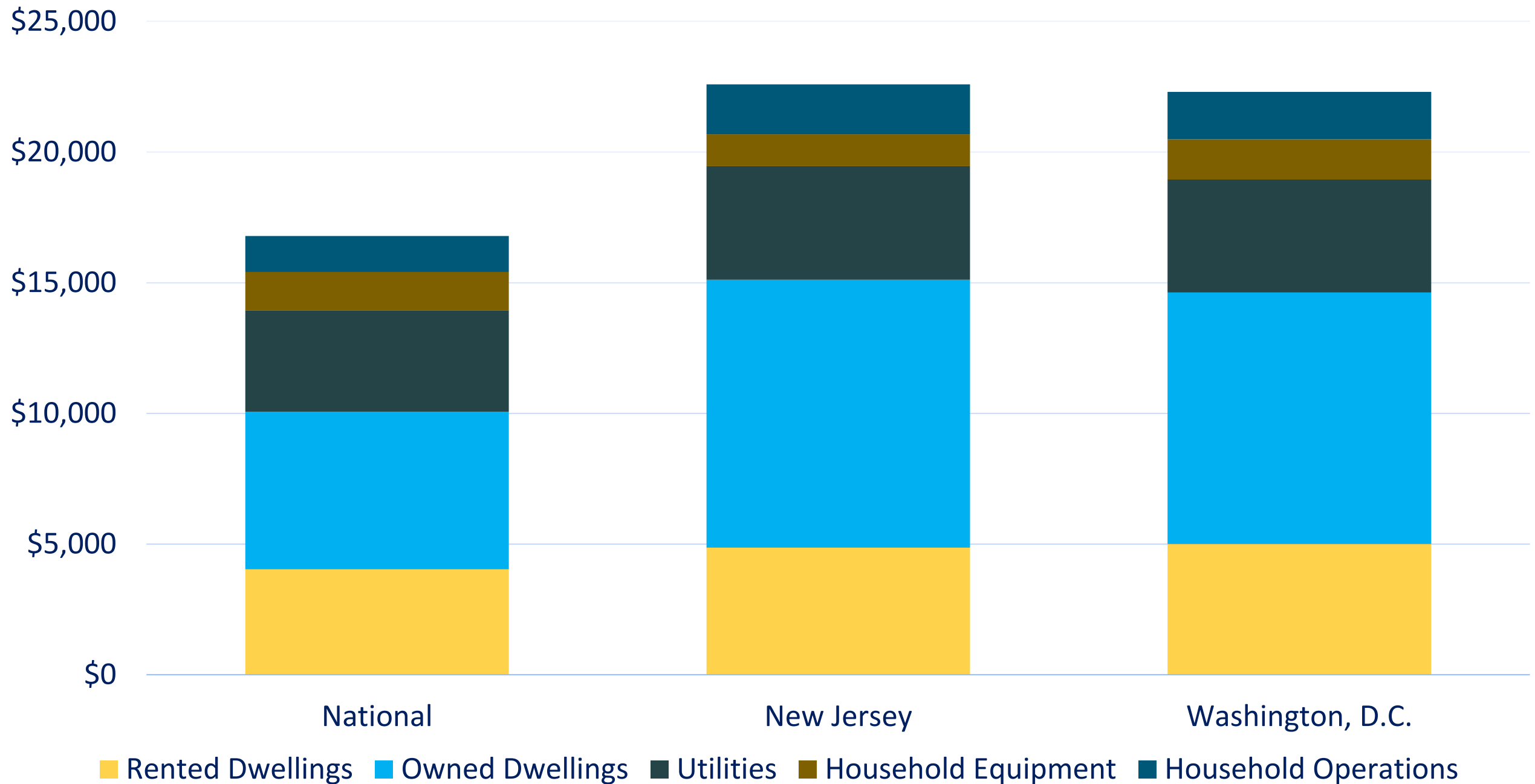 - ▶ Curious individuals can now answer questions about state level expenditures.
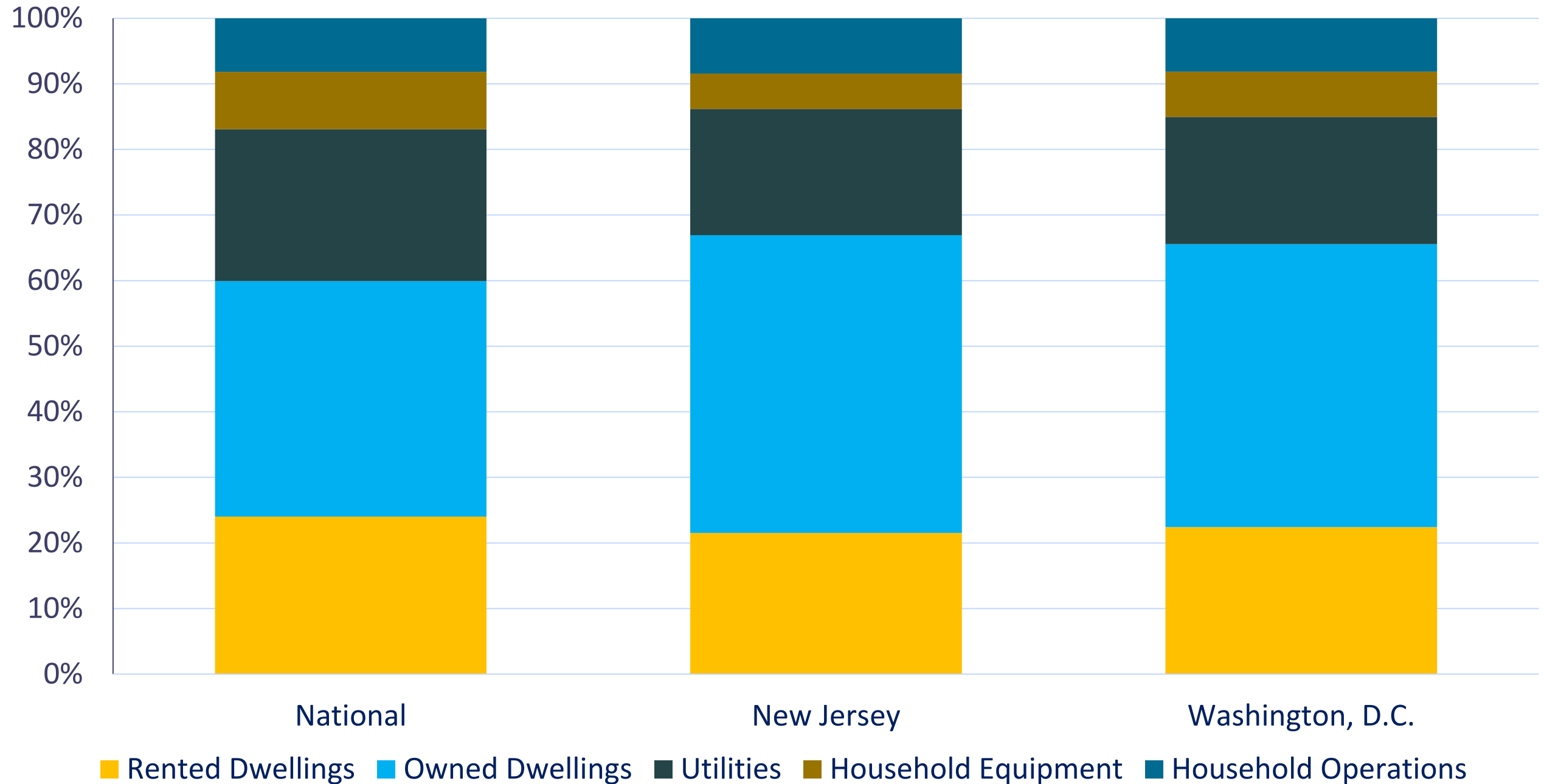
Do you have an example?

- Use case to do a static examination of the housing market in New Jersey.

- New Jersey has the highest population density of any state.

HOUSING EXPENDITURES AND COMPONENTS BY SELECTED GEOGRAPHIES

Legend: Rented Dwellings | Owned Dwellings | Utilities | Household Equipment | Household Operations

Proportion of Housing Expenditures by Selected Geographies

National | New Jersey | Washington, D.C.

Rented Dwellings   Owned Dwellings   Utilities   Household Equipment   Household Operations

Shares of Total Expenditure, by Major CPI Item Categories

	New Jersey Shares	National Shares	Absolute Difference
Food and Beverages	0.12	0.13	0.01
Housing	0.39	0.33	0.06
Apparel	0.03	0.03	0.00
Transportation	0.12	0.16	0.04
Medical Care	0.09	0.08	0.01
Recreation	0.04	0.05	0.01
Education	0.04	0.02	0.02
Other Goods and Services	0.19	0.20	0.01

Where's the data?

https://www.bls.gov/cex/csxresearchtables.htm#stateweights

https://www.bls.gov/cex/research_papers/pdf/consumer-spending-by-state-bls-puts-new-jersey-to-the-test.pdf

What's next?

- Every state is being evaluated for its potential to generate a weight.

- The following concerns are evaluated,
  - ▶ Sample size
  - ▶ Confidentiality
  - ▶ Long term retention in the survey

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