Project 2 Proposal

Team Members:

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GitHub Repository

- https://github.com/UC-Berkeley-I-School/DATSCI200_Project2_Eisenberg_Fleurant_Thomas

Primary Datasets

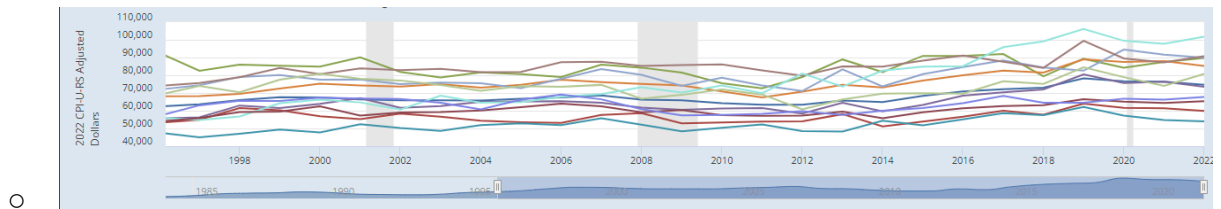- https://www.ers.usda.gov/data-products/food-expenditure-series/
  - State food sales, with taxes and tips, for all purchasers
- Look for a dataset relating to state salaries over the years
  - https://www.minneapolisfed.org/institute/income-distributions-and-dynamics-in-america
  - https://www.minneapolisfed.org/institute/income-distributions-and-dynamics-in-america/chart-and-map-toolkit
  - https://catalog.data.gov/dataset/current-population-survey-cps-weekly-and-hourly-earnings-8d283
  - https://fred.stlouisfed.org/release/tables?eid=259515&rid=249

Data Structure

There are 1330 observations and 13 variables. The variables are:

- Year
  - Ex: 2022
  - This helps identify the year the data was collected
- State
  - Ex: Georgia
  - This helps identify where the data represents
- Nominal Sales - Calculation without inflation (Millions of US Dollars)
  - FAH
    - Ex: 31,625.34
    - How much money is spent on food that is taken home, such as Groceries
  - FAFH

- - ■ Ex. 32,754.83
      - ■ How much money is spent on food away from home, such as Restaurants
  - Total Nominal Food Sales
    - ○ Ex. 64,380.17
    - ○ This is the total amount for the state over a year
  - Constant Dollar Sales(1988 = 100)(Million of US Dollars) - Calculation with inflation
    - ○ FAH
      - ■ Ex: 14,368.32
      - ■ How much money is spent on food that is taken home, such as Groceries
    - ○ FAFH
      - ■ Ex. 13,148.96
      - ■ How much money is spent on food away from home, such as Restaurants
  - Total Constant Dollar food sales
    - ○ This is the total amount for the state over a year
  - Per Capita Sales of Food
    - ○ Amount spent per person on food by state
      - ■ Nominal
        - FAH
        - FAFH
      - ■ Constant dollar sales per capita
        - FAH
        - FAFH
  - Real median income

  - ○

Out of these variables, we think:

  - Median real income and real expenditures on food will be most important. We think as median income increases expenditures on food away from home will increase relative to food spent at home.

Initial Exploration

In the initial exploration of the data, we can plot the national average food sales and salaries over the 25-year period to obtain an initial and general understanding of how the sales and salaries have increased over time. We will also plot nominal and constant dollar sales to understand if they have increased or decreased. Lastly, we will explore the dataset and perform any necessary data cleaning, such as checking for missing values, and ensuring the tables are formatted properly.

What we plan to cover in the final report

We will explore the increase or decreases in food prices over time by running an analysis using the following questions:

1. How does each state's nominal and constant dollar sales compare to that at the national level?
2. What states have the highest and lowest food sales?
    a. Which states have the largest increase in food sales between 1997 and 2022?
3. How have salaries and food prices increased over time?
    a. Is there a relationship between the two variables? If so, what is this relationship?
    b. Do some states more closely correlate food sales and salaries than others?
4. What is the per capita food sales for each state?
    a. How is it different between states and the national level?
    b. Has the state or federal minimum wage increased at the same rate?
    c. Do per capita food sales increase or decrease based on major economic or world events, such as the 2008 recession?