**Project Title**

Is Oil Price a good indicator of Consumer Spending?

**Team Members**

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**Proposed Research Questions**

1. How is consumer consumption impacted by the oil price states?
2. What category of consumer expenditure is more impacted by a change in oil price? Housing and Utilities, Food, Services or Personal consumption expenditures?

**Proposed Hypotheses**

**We hypothesize that as the price of oil increases, consumer consumption will decrease in all three categories of consumer expenditures.**

**Project Description/Outline**

In this project, we will analyze different datasets to determine if there is a correlation between the change in oil prices and consumer consumption across three main categories: Housing and Utilities, Food Services or Personal consumption expenditures. We will determine what the correlation is and determine if the relationship is positive or negative for each category. We will also run different statistical analysis to get to the bottom of our research questions.

In order to do so, we plan on utilizing certain tools such as VBA (if we only have an excel file and need to summarize the data there), Python and its libraries, Matplotlib to visualize our statistical analysis and API to easily access datasets from different companies’ websites.

We plan on looking at datasets across a total of ten states (five states with the highest per capita income and 5 states with the lower per capita income). We also plan to look at the GDP per state to help us draw any conclusions on consumers residing in the states of interest.

**Datasets to be Used:**

1. Oil Price per state: <https://www.eia.gov/opendata/qb.php?category=241529>
2. Consumer Consumption:

<https://apps.bea.gov/iTable/iTable.cfm?reqid=70&step=1&acrdn=7#reqid=70&step=1&acrdn=7>

1. Personal Income per state:

<https://apps.bea.gov/iTable/iTable.cfm?reqid=70&step=1&acrdn=8>

1. GDP per state: <https://www.bea.gov/data/gdp/gdp-state>

**Rough Breakdown of Tasks**

We haven’t decided who will be in charge of what but so far we understand that the tasks will be split among ourselves for dataset extraction, dataset cleaning, dataset analysis, dataset visualization and dataset presentation.