The Impact of Gasoline Prices on US Gasoline Consumption

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Overview:

The research question this project will be asking is, “Does an increase in gasoline prices lead to a decrease in gasoline consumption in the United States?” The analysis will be guided by the principle that as prices increase, quantity demanded tends to decrease assuming other factors remain constant. Gas prices tend to be influenced by global events and holiday periods that change travel patterns. The analysis will only focus on the National US level to ensure data consistency.

Data:

The 3 public datasets I will be using are:

* Product Supplied for Finished Motor Gasoline
* US Gasoline and Diesel Retail Prices
* Table\_Automobile\_Profile

These datasets are from the US Energy Information Administration and the US Bureau of Transportation Statistics which in turn reference the sources of the data as the US Department of Transportation, Federal Highway Administration, and Bureau of Labor Statistics.

The 3 main features will be date in mm/yyyy format, US Product Supplied of Finished Motor Gasoline (Thousands of Barrels), and US All Grades All Formulations Retail Gasoline Price (Dollars per Gallon).

I do plan on providing background in other trends related to automobiles and gas prices such as vehicular registration, seasonality, and notable events that cause large changes to gas prices.

Methods:

Step 1 is to import both datasets into VS Code. Step 2 will be to standardize the data and merge on the year column. Step 3 will be conducting EDA. Step 4 will be fitting a linear regression model to the data and then interpreting the results.

Citations:

All citations will be in APA style.