Macroeconomic Analysis: Biased or Not?

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Overview: Economic data influences everything in our day to day lives from food prices to mortgage rates, to who we vote for and how we build ourselves as individuals. Examining economic data is important for determining how the country is doing as a whole and whether or not the country is improving. Historically, Economics is a field dominated by white men. Though many economists claim that economic analysis is not biased or ideological, and economic analysis is merely visualization and conclusions based on data that is collected and analyzed, this is simply not the case.
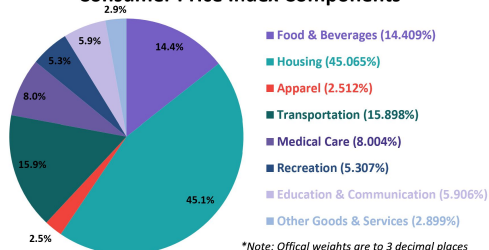
Data Sources: US Bureau of Labor Statistics (https://data.bls.gov/pdq/SurveyOutputServlet), Kaggle(https://www.kaggle.com/datasets/tunguz/us-consumer-price-index-and-inflation-cpi), St. Louis Federal Reserve Bank Economic Data(https://fred.stlouisfed.org/)

Key Questions And Problems:
- What do these data sets mean? What exactly are they showing?
- What are the possible historical and political implications of these data sets?
  - How can these data be explained by historical events and what do they have to say about American history?
- Are there any patterns? If so, are they predictable?
- Who is impacted by this data? How are people affected by this data?
  - Were different groups of people impacted differently during different economic periods?
- Who really benefits from economic analysis?
  - Is economic analysis truly holistic?
  - Is economic analysis equitable?
- Is there any bias based on who performs an economic analysis?
  - Gender, race, sexuality, etc.
  - Historically, economists are predominantly white men

Analysis and Visualizations


Consumer Price Index Components*

- Food & Beverages (14.409%)
- Housing (45.065%)
- Apparel (2.512%)
- Transportation (15.898%)
- Medical Care (8.004%)
- Recreation (5.307%)
- Education & Communication (5.906%)
- Other Goods & Services (2.899%)

*Note: Offical weights are to 3 decimal places
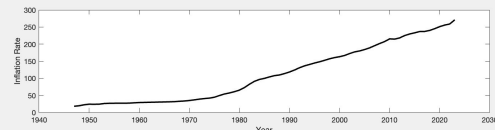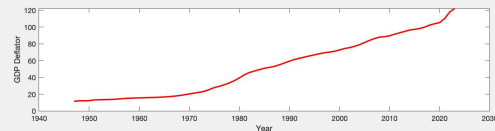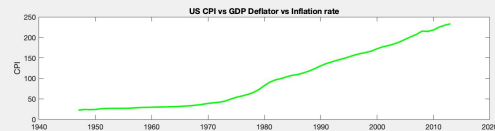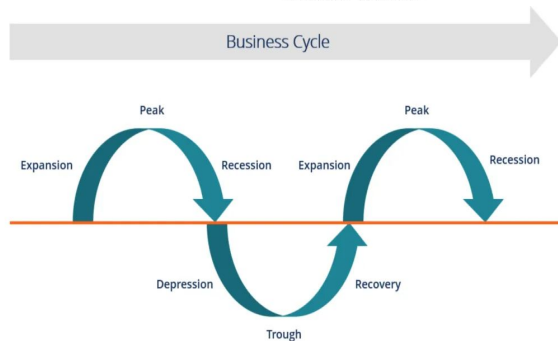
Source: BLS; The most recent annual reweighting was in December 2023

$$CPI = \frac{\sum_{i=1}^{n} CPI_i \times weight_i}{\sum_{i=1}^{n} weight_i}$$

$$GDP\ deflator = \frac{Nominal\ GDP}{Real\ GDP} \times 100$$
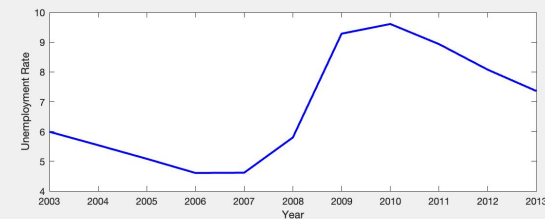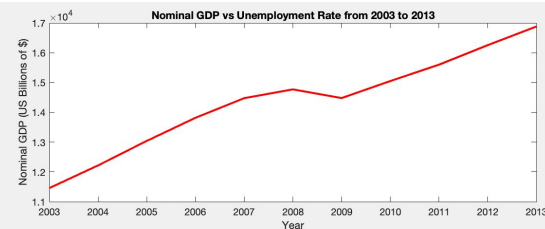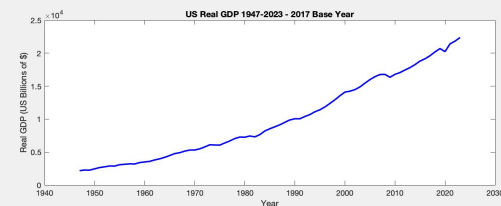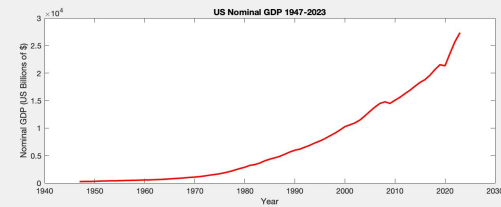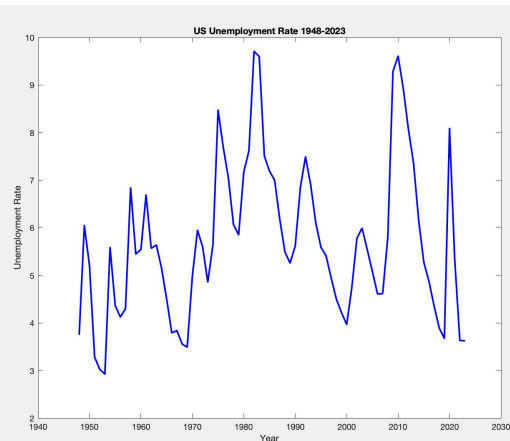
Conclusions and Insights

- Economic analysis is vital to just about everything in our daily lives. It influences what we buy, how we buy it, interest rates, what we eat and drink, who we associate with, etc. Some of the primary reasons for macroeconomic analysis are for institutions such as the Federal Reserve Bank to assess the state of the economy and determine if anything needs to change in the economy in order for the economic goals of the FED are maintained. These three goals include: maximum employment with a rate of 5% or less, steady prices(steady inflation at or below 2% annually), and moderate long term interest rates.

- Economic data such as nominal and real GDP examine how the domestic economy doing as a whole. From these data points the GDP deflator can be calculated, which is a measure of inflation similar to the CPI and the inflation rate. Though these values are not always equal, and there are pros and cons to each of them, they all show the same general trend of how American markets have inflated over time. There are instances, such as the Great Depression, the recession in the 1970s, the 2008 financial crisis, and the COVID-19 pandemic that prove that the inflation rate cannot be controlled due to the vast factors and unpredictable circumstances that can change it in the blink of an eye. Unemployment is also uncontrollable and follows the general trend of the business cycle.

- Economic practices can reinforce already existing gender biases. For instance, some common economic practices taken in their most simplistic version, can reinforce historical gender bias. For example, if markets are competitive and workers are paid for their marginal product, then the gender wage gap can must only reflect differences in the productivity between male and female workers. In order to address these biases, the field of economics should receive the same attention in addressing the strong gender bias that reflects the historical values of society in order to address the fallacies that may come from studying it as well the discrepancies in how data is analyzed and collected.

- Economic data, and data in general will always be flawed. However, addressing these flaws and finding new ways to present data and discuss it, expanding opportunities and influence for historically underrepresented groups in economics, and learning to apply economic principles as well as data analysis techniques in not only helpful and informative ways, but with fair and equitable solutions in mind, are important steps to take in order to level the playing field of economic data analysis and make it sustainable and equitable for all.