

Economic Changes by President: 1965 to 2019

I was curious about whether there were any patterns in economic data over the last 54 years in the US: seasonally-adjusted unemployment rates (%), real wage growth (%), real GNP growth and national debt as a % of GDP. My sources for data was [alfred.stlouisfed.org](https://fred.stlouisfed.org).

Unemployment: <https://fred.stlouisfed.org/series/UNRATE>
 Real Wage Growth: <https://fred.stlouisfed.org/series/LCEAMN01USM659S>
 GDP: <https://fred.stlouisfed.org/series/GDPC1>
 National Debt: <https://fred.stlouisfed.org/series/GFDEBTN>

I correlated this data with presidential administrations and recessions and graphed it.
[I'll present my results first and, if you're interested, you can check out my methods and spreadsheets at the end.](#)

| President | Began | Ended | Party |
|---------------------------------------|-------------------|------------------|------------|
| 36. Lyndon B. Johnson | November 22, 1963 | January 20, 1969 | Democrat |
| 37. Richard Nixon | January 20, 1969 | August 9, 1974 | Republican |
| 38. Gerald Ford | August 9, 1974 | January 20, 1977 | Democrat |
| 39. Jimmy Carter | January 20, 1977 | January 20, 1981 | Democrat |
| 40. Ronald Reagan | January 20, 1981 | January 20, 1989 | Republican |
| 41. George Bush | January 20, 1989 | January 20, 1993 | Republican |
| 42. Bill Clinton | January 20, 1993 | January 20, 2001 | Democrat |
| 43. George W. Bush | January 20, 2001 | January 20, 2009 | Republican |
| 44. Barack Obama | January 20, 2009 | January 20, 2017 | Democrat |
| 45. Donald Trump | January 20, 2017 | In Office | Republican |

| Recession | President | Start | End | Months |
|-----------|-----------|---------|---------|--------|
| 1 | Nixon | 12/1969 | 11/1970 | 11 |
| 2 | Ford | 11/1973 | 3/1975 | 16 |
| 3 | Carter | 1/1980 | 7/1980 | 6 |
| 4 | Reagan | 7/1981 | 11/1982 | 16 |
| 5 | Bush 1 | 7/1990 | 3/1991 | 8 |
| 6 | Bush 2 | 3/2001 | 11/2001 | 8 |
| 7 | Bush 2 | 11/2007 | 6/2009 | 18 |

Presidential Terms:

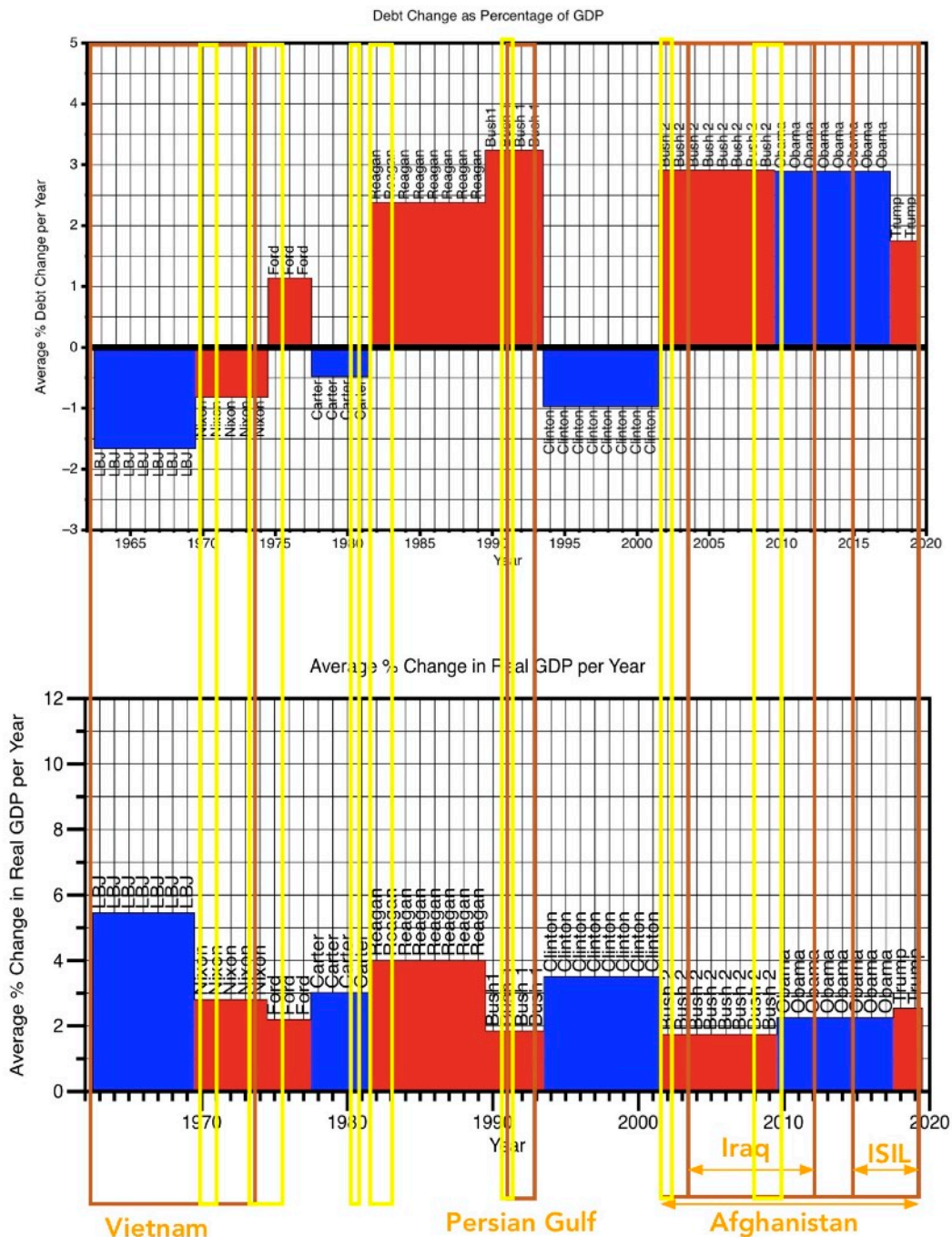
| War | President | Start | End | Months |
|--------------|------------|---------|---------|--------|
| Vietnam | Eisenhower | 11/1955 | 4/1973 | 208 |
| Persian Gulf | Bush 1 | 8/1990 | 2/1991 | 7 |
| Afghanistan | Bush 2 | 10/2001 | 8/2019 | 213 |
| Iraq | Bush 2 | 3/2003 | 12/2011 | 105 |
| War on ISIL | Obama | 6/2014 | 8/2019 | 61 |

Real GDP and Debt as a % of Real GDP

- Real GDP measures the US economic output in a year, considering inflation.
- US Debt as a % of Real GDP measures how big the US debt accumulated in a year is, compared to the Real GDP.

Below, the top graph shows whether our debt increased or decreased, and the bottom graph shows whether GDP increased or decreased under each president. Red outlines show when wars occurred, yellow outlines show recessions.

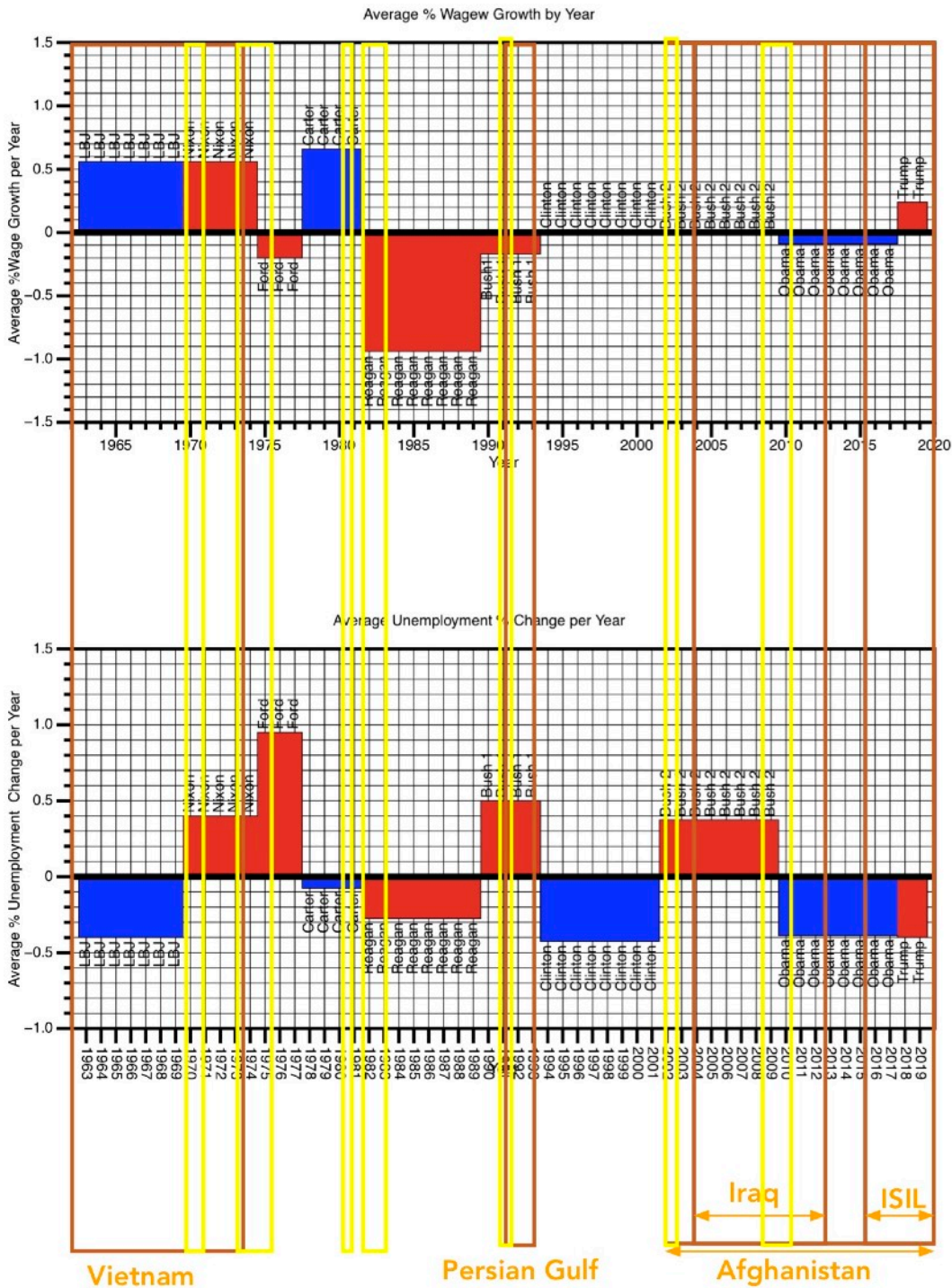
Debt Patterns: The debt graph shows that debt decreased with every Democrat except Obama, during the great recession. The debt increased with every Republican except Nixon



GDP Patterns: Every time a Democratic president came into office, the GDP increased

Every time a Republican president came into office, GDP went down, except for Reagan, and slightly, Trump.

Real Wage Growth and Unemployment rate Change



Real Wage Growth Patterns How much has buying power has changed after inflation?

- Until about 1980, Republicans and Democrats presided over wage growth.. The Reagan era saw a huge decrease in buying power, and since then wages have been flat, except for a slight rise with Trump.

Unemployment Rate Patterns

- All Democratic presidents oversaw a decrease in the unemployment rate
- Republican presidents, except for Reagan and Trump, oversaw increases in unemployment rate

Calculation Methods:

The tables I uses are listed at the beginning of this analysis, with their URLs, and they came from the St Louis Federal Reserve Bank. Some of these listed data every month and others every quarter.

To calculate % GDP change for a given president, I simply subtracted the GDP growth rate at the beginning of a president's term, from that at the end, then divided by the initial GDP growth rate:

$$\text{LBJ Example: } \frac{(\$4920.605 - \$3747.278) \text{ billion} \cdot 100}{\$3747.278 \text{ billion}} = 31.31\%$$

To find average % GDP Growth each year, I divided the total % growth by the years: in office (sometimes a fraction)

$$\frac{31.31\% \text{ c}}{23 \text{ months}} = 5.45\% / \text{year}$$

To Calculate % Change in Debt for a president, I first found the change in Debt as a % of Real GDP. Again, I subtracted the % Debt change rate at the beginning of a president's term, from that at the end, then divided by the initial debt change rate:

$$\text{Reagan Example: } \frac{49.73\% - 30.71\% \cdot 100}{30.71\%} = 19.02\%$$

Then dividing total % change in a term by the years in the terms, I found the average change in debt per year for a given president

$$\frac{19.02\% \cdot 12 \text{ months/yr}}{96 \text{ months}} = 2.38\% / \text{year}$$

Calculations for % change in Real Wage Growth and Unemployment rate were done as above.

Original charts of data are shown as links