The Nature and Impact of the Great Recession (Dec 2007 – Jun 2009) on the US Socio-Economic Environment

Between December 2007 and June 2009 there was a severe financial crisis in the U.S. which caused an immense meltdown of the economy, in other to identify and communicate the relative impact of the recession on the U.S. socio-economic environment, visualizations, dashboards, and stories have been built on Tableau. Data was collected from four different sources which are:

- GeoFred - https://geofred.stlouisfed.org/
- Bureau of Labor Statistics (BLS) - https://www.bls.gov/data/
- Center for Medicare & Medicaid Services (Health Indicator) - https://www.cms.gov/
- Zillow - https://www.zillow.com/research/data/
- Bureau of Economic Analysis - https://www.bea.gov/data

Data was collected across multiple pages from each of the sources mentioned above, off which they were all combined, cleaned, and properly prepared using Tableau Prep to the format that is suitable for Tableau Desktop.

The data that was collected from the different sources span several U.S. socio-economic indicators which include – Personal Income, Labor Force, Gross Domestic Product (GDP), Housing, Crime Rates, among many others. Only five of the states in the U.S. were used as the focal point for the analysis, these states include – North Carolina, Massachusetts, Florida, and California.

Additional Inferences

Some questions around the impact of the great recession on the chosen socio-economic indicators were asked of the data collected and appropriate answers were provided based on the visualizations, dashboards, and stories built on Tableau. Here are some of the questions that gave led to some interesting insights and there corresponding answers, these inferences are the additional insights that were found after the previous assignment. The remaining insights can be found in the R Shiny App, they aren't different from what was found in the previous assigment:

Q1. How did the recession affect GDP growth rate during the whole period?

It can be seen that GDP was somewhat steady or the same during recession, with slight decrease but it bounced back really quick after recession. (See Appendix A for reference/visualization)

Q2. Was there any impact of the recession on the GDP Per Capita in the five states during the period?

The Total GDP Per Capita was increasing steadily per year before recession but during recession it remained slightly the same at first then dropped but post-recession the Total GDP bounced back and started increasing. (See Appendix B for reference/visualization)

Q3. How did the recession affect the Population of each states throughout the whole period?

The key highlight was that the Population of California kept on increasing throughout all periods and was not affected by the recession but the state of Massachusetts had their Population somewhat the same throughout all period. (See Appendix C for reference/visualization)

Q4. How did the great recession of 2007-2009 affect the Home Values?

The Home Values was increasing before recession but as the recession started, the Home Values started decreasing even post-recession. (See Appendix D for reference/visualization)

Q5. What was the effect of the recession on the Home Vacancies Rate over the years (periods)?

Home Vacancy was higher during Recession than before and after Recession. (See Appendix E for reference/visualization)

Q6. What impact did the recession have on the Home Ownership Rate across the five states between 2007 and 2009?

Home Ownership was dropping throughout the whole period for all states except for Massachusetts which was steadily and slightly increasing. (See Appendix F for reference/visualization)

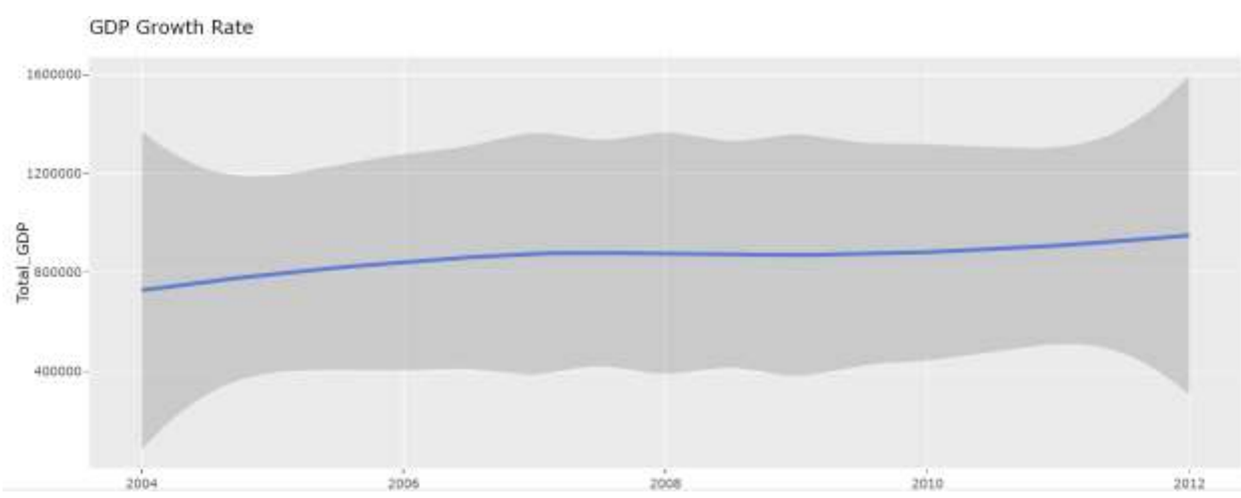
Q7. How did the recessing affect different Health Expenditures within the time period of 2004 – 2012?

The percent change in expenditure in health across all five categories were decreasing between 2007-2009 at national level. (See Appendix G for reference/visualization)

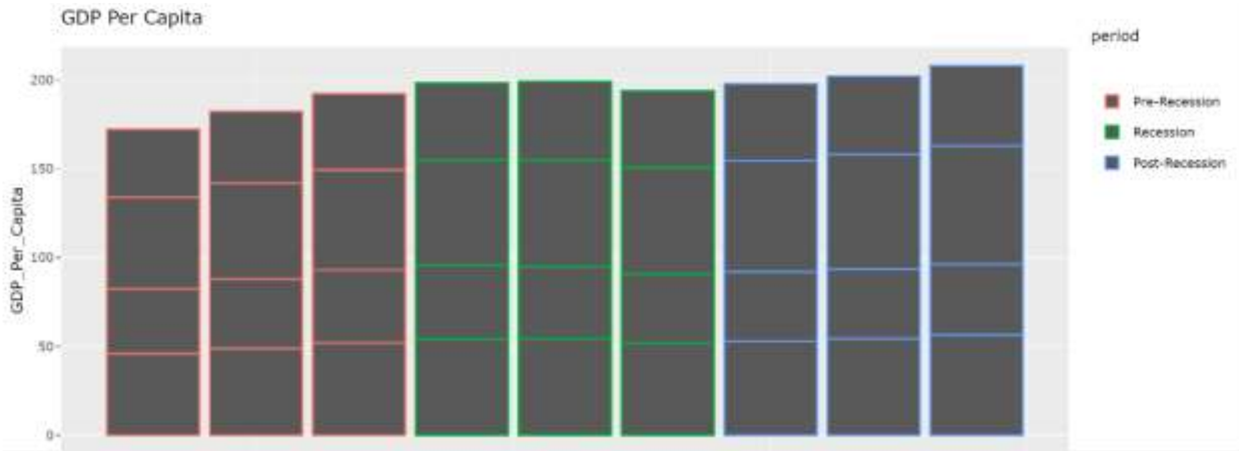
Comparisons

I found using R more complicated because of the coding involved unlike the ease that comes with the drag and drop ability of Tableau. There was a lot of flexibility in using R, because I could easily include things, I was not able to include with Tableau. For example, changing variables dynamically on output was easy for me with R, although it involved a lot of coding to do that, these were not possible for me with Tableau. I was also able to do both cleaning and visualization on the same platform unlike Tableau which needs Tableau Prep to first clean the data (depending) before taking to Tableau Desktop for visualization.

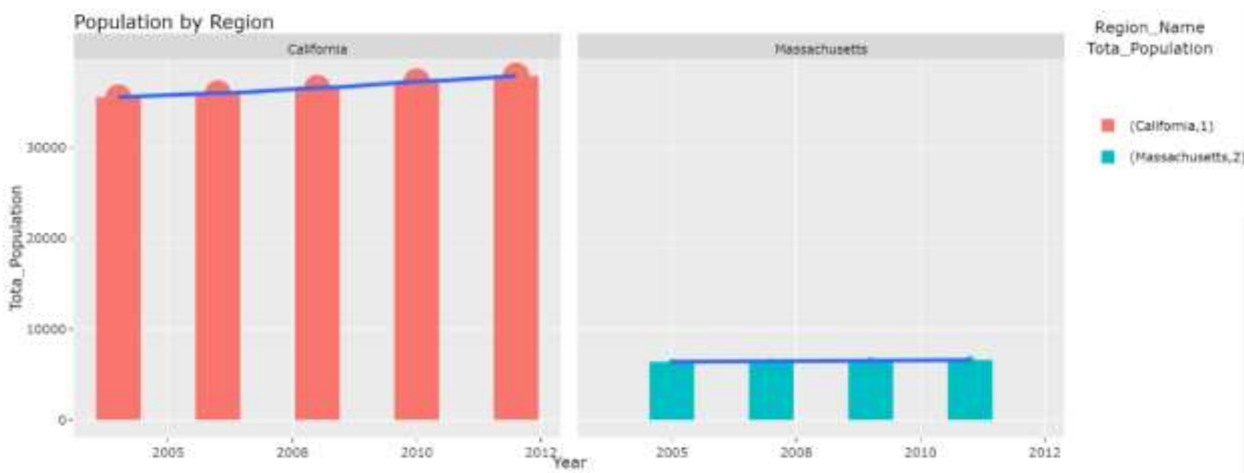
APPENDIX A



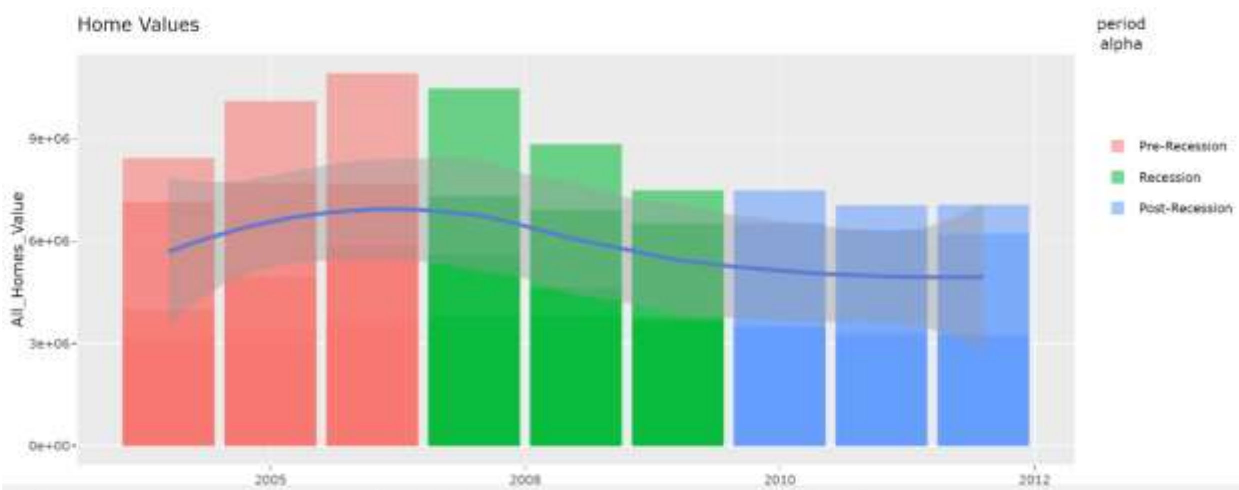
APPENDIX B



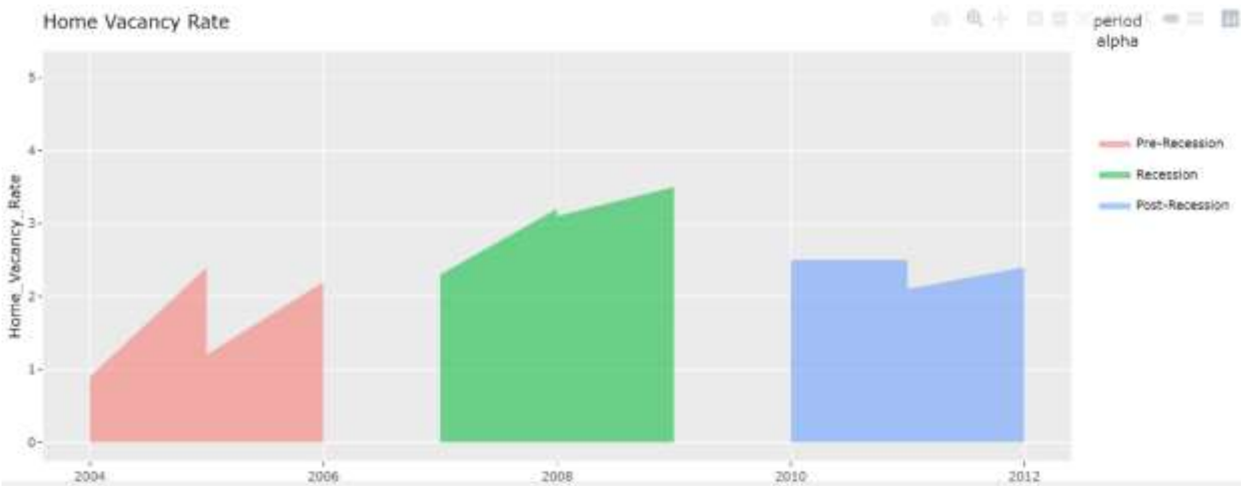
APPENDIX C



APPENDIX D

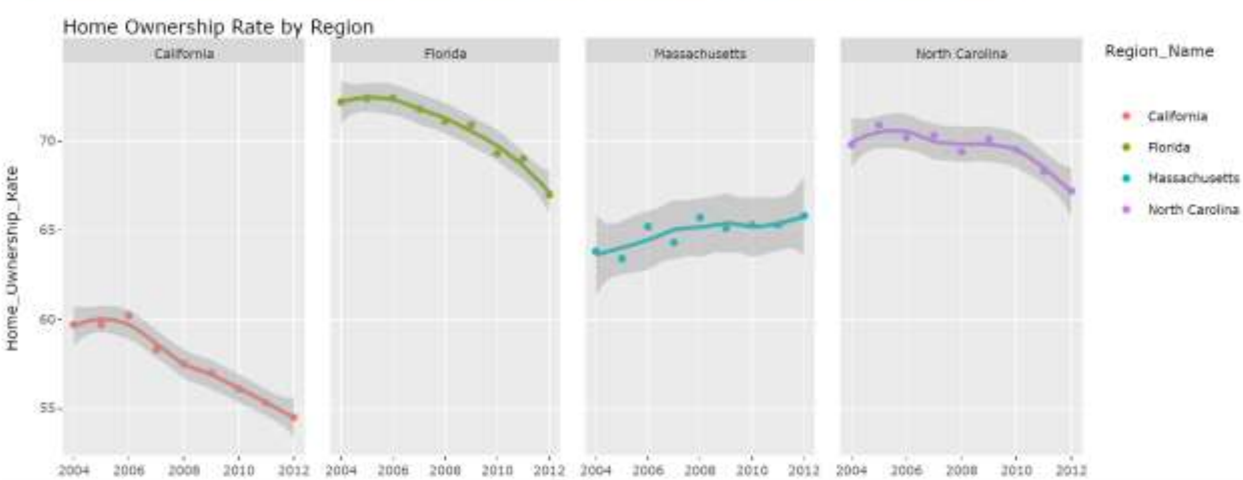


APPENDIX E



APPENDIX F

Home Ownership was dropping throughout the whole period for all states except for Massachussetts which was steadily and slightly increasing



APPENDIX G

The percent change in expenditure in health across all five categories were decreasing between 2007-2009 at national level.