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## Empirical Project

This project will be due by **5pm on Friday, April 20th**. Assignments should be submitted by email as a pdf document. Any tables or figures you include should be contained within that pdf document. The assignment will be graded on a 20-point scale. A one point deduction will be taken for assignments turned in late. The deduction will increase by one point every 24 hours.

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## The Big Picture

Throughout class we have seen empirical evidence ranging from standard national accounting data (GDP, capital stock, etc.) to more unusual proxies for economic variables of interest (estimates of age heaping, stature inferred from skeletons, etc.). However unusual some of these data sources may seem, they all still fall firmly within traditional quantitative evidence in the social sciences. Some social scientists are beginning to consider the value of less traditional sources of information. Consider the work of Deidre McCloskey drawing on literature to demonstrate that changes in the ‘virtues *praised* by people’ as evidenced by changes in rhetoric helped create the modern world of sustained economic growth.<sup>1</sup> The goal of this project is to explore the same types of topics from these two very different angles, using traditional economic statistics and analysis of the rhetoric and beliefs surrounding the economy to gain a more complete picture of economic well being.

## Project Details

The basic idea is to combine traditional economic data with evidence from the tone of political speeches and from public opinion polls to assess economic well being during a boom and during a bust. This will involve several steps:

1. For a country of your choosing, identify two separate national elections. One election should take place during a period of strong economic performance for the country. The other election should take place during a period of weak economic performance. Write one paragraph justifying your choice of years and describing the main election taking place in each year.

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<sup>1</sup>The quoted phrase comes from page 142 of McCloskey’s review of *A Farewell to Alms* in the European Review of Economic History (2008, vol. 12). For McCloskey’s own work, see her three-volume *The Bourgeois Era*.

2. Produce a graph that shows income per capita for your chosen country over at least a twenty year period. Your time span should encompass both of the election years you have chosen. On your graph, use two vertical lines to clearly indicate when your two elections are taking place. It should be clear from the graph that one of these elections is taking place during a period of weak growth in income per capita while the other is taking place during a period of strong growth in income per capita.
3. Create a table that compares three different economic indicators between your two election years. These indicators should all capture some different dimension of economic well being. You cannot use income per capita as one of your indicators. Write one to two paragraphs explaining your choice of indicators and interpreting any differences in their values between the two election years.
4. Find a campaign speech related to the economy for both the incumbent party's candidate and an opposing party's candidate for each of your election years. For example, if you were looking at the 2012 and 2016 US presidential elections as your two different years, for 2012 you would find a speech by Barack Obama and one by Mitt Romney and for 2016 you would need a speech by Hillary Clinton and a speech by Donald Trump. Using anecdotes and text analysis of these speeches, write a one page discussion of whether incumbent and opposition party attitudes toward the economy are consistent with the economic indicators you focused on in parts 2 and 3. You may include tables or figures if helpful.
5. Finally, use poll data to compare the general public's opinion of economic conditions between these two different years. You should find poll data on at least two different questions related to the economy. For example, if you were looking at the 2016 US presidential election, one of your poll questions could be the "How would you rate economic conditions in this country today?" question asked by the Pew Research Center. Present the data in a table and include a one to two paragraph discussion of how the attitudes reflected by the poll data relate to the other evidence you have found in parts 2, 3 and 4.

The final product should be a single pdf document presenting the evidence you have found through the combination of text, tables and figures asked for in each part. Please number each part. Your text should reference whatever tables and figures you choose to include. For those tables and figures, be certain to think carefully about the clearest way to present the information. Include all titles, labels, legends, captions, and footnotes necessary for a reader to clearly and correctly interpret the data being presented. All figures and tables should be made by you.

Be certain to cite all of your sources. You are welcome to use any standard citation style (APA, MLA, Chicago, etc.). If you have any questions about when citations are required or exactly what information to include in your citation, feel free to email me or stop by my office hours.

## Potentially Useful Links

- [Google Books](https://books.google.com): <https://books.google.com>

Google Books provides a wealth of digitized, searchable texts ranging from novels to government reports. If you click on ‘Search tools’ you will be able to narrow your search to specific dates of publication, to only documents fully available online, and to specific types of documents. Particularly if you are looking at older time periods, Google Books may be a valuable source for the text of political speeches or for published polling data.

- [Duke’s Introduction to Text Analysis](http://guides.library.duke.edu/text_analysis): [http://guides.library.duke.edu/text\\_analysis](http://guides.library.duke.edu/text_analysis)

This is a guide prepared by Duke’s library that provides a fairly comprehensive introduction to text analysis. There is a tab in the guide for ‘Analysis Methods and Tools’ that provides links to a wide range of web-based tools for text analysis and a variety of text analysis software packages.

- [Voyant](http://voyant-tools.org/): <http://voyant-tools.org/>

This is just one example of one of the web-based tools listed by the Duke text analysis site. You can provide either a block of text or a url and Voyant will then automatically generate several tables and graphs helping you analyze the inputted text.

- [IBM Watson’s Tone Analyzer](https://tone-analyzer-demo.mybluemix.net/): <https://tone-analyzer-demo.mybluemix.net/>

This is a slightly more sophisticated web-based tool developed by IBM to detect emotions, social tendencies and writing style in a text. The link above points to a free demo version of the tone analyzer where you can enter your own text and have Watson provide an analysis.

- [NBER US Business Cycle Expansions and Contractions](http://www.nber.org/cycles.html): <http://www.nber.org/cycles.html>

This website lists the peaks, troughs and durations of US business cycles back to 1854. When identifying periods of strong and weak economic growth for your country of choice, you will want to find a similar source of dates. Note that Wikipedia can be a useful starting place when searching for this type of information. For example, these NBER US business cycle dates are referenced on the Wikipedia page [List of recessions in the United States](#).

- [World Bank Open Data](http://data.worldbank.org/): <http://data.worldbank.org/>

This is the data portal for the World Bank. You can find a broad range of variables for different countries through this site. Students often find the [World Development Indicators](#) particularly useful. These data include

detailed statistics on the population, economy, environment, markets and global links of individual countries.

- Various government statistics websites

Some of the best sources of data for a country are the governmental agencies responsible for gathering and publishing economic statistics. In the United States, these agencies would include the [Census Bureau](#), the [Bureau of Labor Statistics](#), the [Bureau of Economic Analysis](#) and many others. If you go to any of these websites, you find links to detailed datasets. Searching for comparable government agencies for your country of focus will likely lead to a wealth of official statistics.

- [Purdue Online Writing Lab](https://owl.english.purdue.edu/owl/section/2/): <https://owl.english.purdue.edu/owl/section/2/>

This online writing lab provides helpful guides to citation styles including APA style, MLA style and the Chicago Manual of Style. Note that the site also provides useful guides for conducting research and general writing.

- [William & Mary Libraries](https://libraries.wm.edu/): <https://libraries.wm.edu/>

Always remember that we have an excellent library with excellent librarians ready to help you. Research librarians have extensive knowledge about available data sources and can help point you down the right path, making the research process far more efficient. You can even click [here](#) to make a research appointment.