Predicting Perspectives on Effectiveness of Democracy

Introduction

The Asian Barometer Survey was conducted in two waves (2001 and 2006) gauging public opinion across Asia on public opinion on political values, in particular democracy. Although its intentions may have been different at the time it was conducted, its findings have only become more relevant with time as more and more countries have swung towards authoritarian leadership. In particular, Asia has witnessed massive political shifts in recent years, with some countries like Philippines having shown massive support for an extreme authoritarian leader like Duterte, despite a majority of the population still supporting democratic ideals and institutions[1].

We decided to focus on a relatively more stable democracy in Asia, Japan, to understand what socio-economic and/or political perspectives determine how much faith a citizen has in the effectiveness of democracy. Understanding how perspectives and conditions affect perspectives in a controlled setting like Japan will help us better understand underlying societal trends that exist in society that may move us away from democracy, outside of other extraneous circumstances like extreme economic hardship or civil conflict that may confound our analysis.
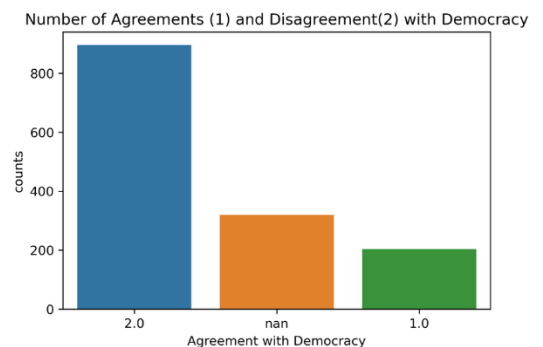
Literature Review

A 2010 Study by Shikole Struber suggests that marriage could cause individuals to identify more with authoritarian and conservative tendencies[2], which suggests that questions related to marriage could potentially be explanatory of beliefs about the effectiveness of democracy.

Another landmark study about authoritarianism in 1959 was conducted by Seymour Martin Lipset, which found that the working class tended to be more authoritarian in tendencies and preferences. However, this study was published many years ago and was focused on Western nations, hence it may no longer be relevant today and in the Asian context.

Exploratory Data Analysis (EDA)

Within the dataset for Japan's 2001 Wave 1 survey, there were 1418 rows with 277 columns. A large majority of the data points were categorical (agree/disagree that democracy is suitable for their country), some of which were ordered (extent of agreement).

In beginning our analysis, we first looked to see what would be a suitable response variable that would answer our research question. We looked through the list of questions that were asked in the survey and settled on Q118 ("Do you agree with the following statement "Democracy is capable of solving the
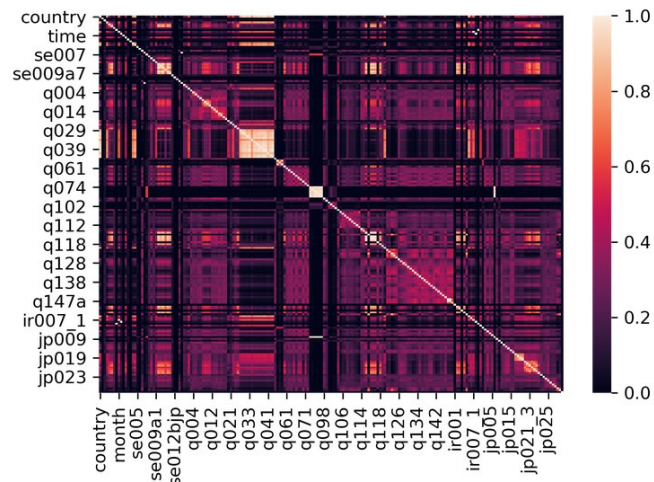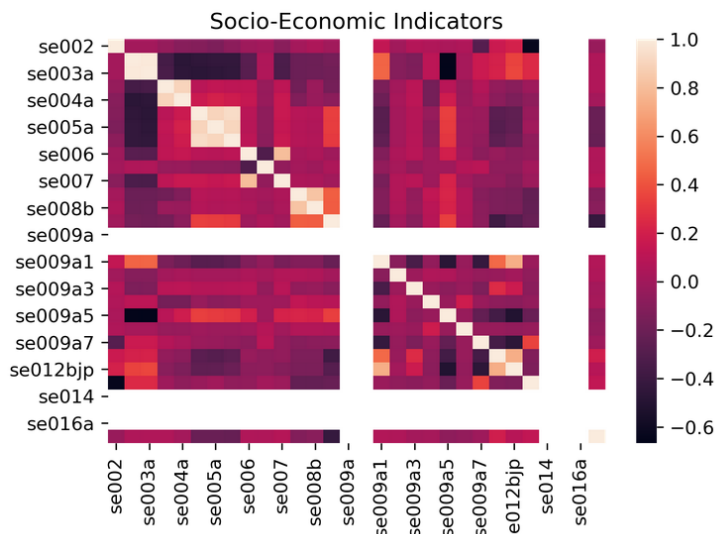

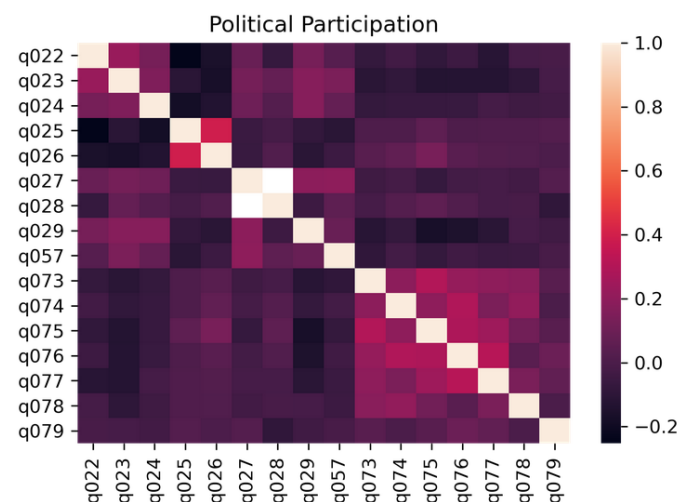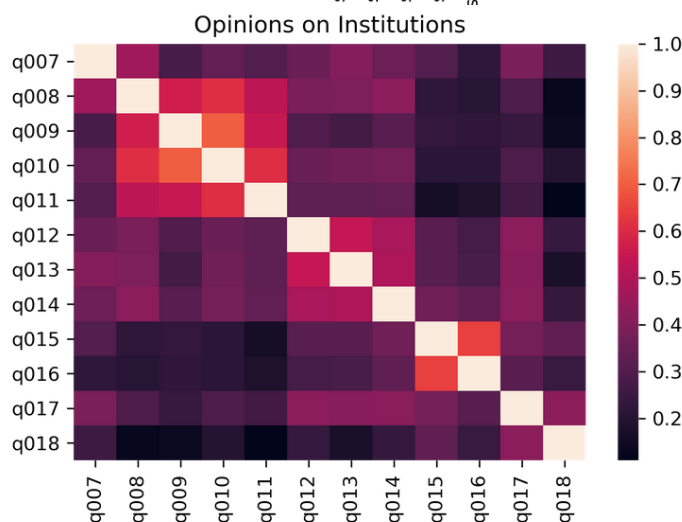Number of Agreements (1) and Disagreement(2) with Democracy

problems of our society?"). The other questions were either too vaguely phrased (Q117 with statements like "Under some circumstances, an authoritarian government can be preferable to a democratic one"), or too strongly worded (Q121 with "We should get rid of parliament and elections and have a strong leader decide things."). We found that about 30% of the responses to this question was negative and decided to omit analyzing these responses.

As there were many questions in the survey, we suspected that multicollinearity could exist in our model as some of the questions could have very similar answers. To determine the similarity across the variables, we used a Jaccard square. However, this proved to be too dense to analyze. We noticed that the questions could be clustered into general categories (socio-economic data, opinions on the economy, opinions on democratic institutions, extent of political involvement). We decided to look at the Pearson Chi-squared coefficients within each category, where there would more likely be data correlated to one another.

Opinions on Economy

Socio-Economic Indicators
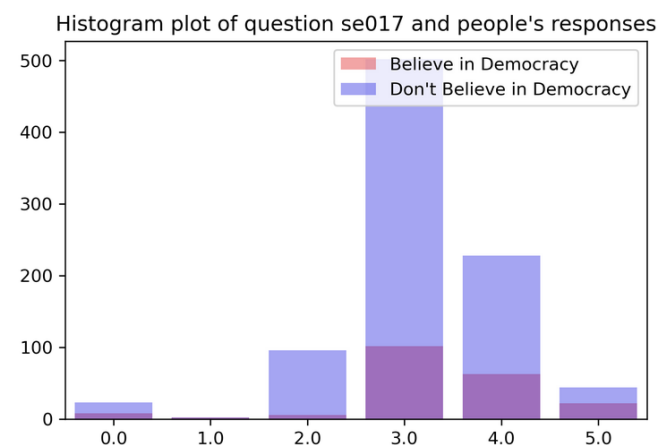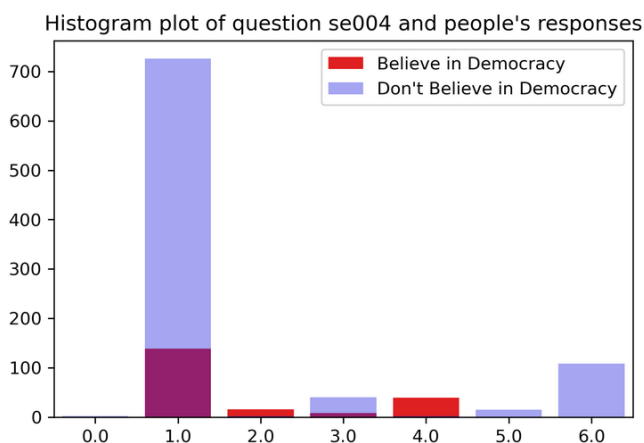

Opinions on Institutions

Political Participation

In a brief look-through the similarity matrices, we found clusters of questions that were relatively correlated to one another. In particular, q73 – q79 in "Political Participation" were relatively correlated to one another, which made sense, as these questions were about various forms of political participation, and it made sense that an individual who was participative in the political process would do so through various forms. This highlighted variables to be eliminated in our final model.

From our literature review, we formed some hypothesis about what could affect someone's perception about the effectiveness of marriage, namely: marriage (se004), class (se017),

Histogram plot of question se004 and people's responses

Histogram plot of question se017 and people's responses

Overall, we found that the richer someone was, the more likely they were to believe in democracy, and that married individuals were more likely to believe in democracy than

unmarried individuals, which is interesting as the latter trend is the opposite of what it is generally in the US.
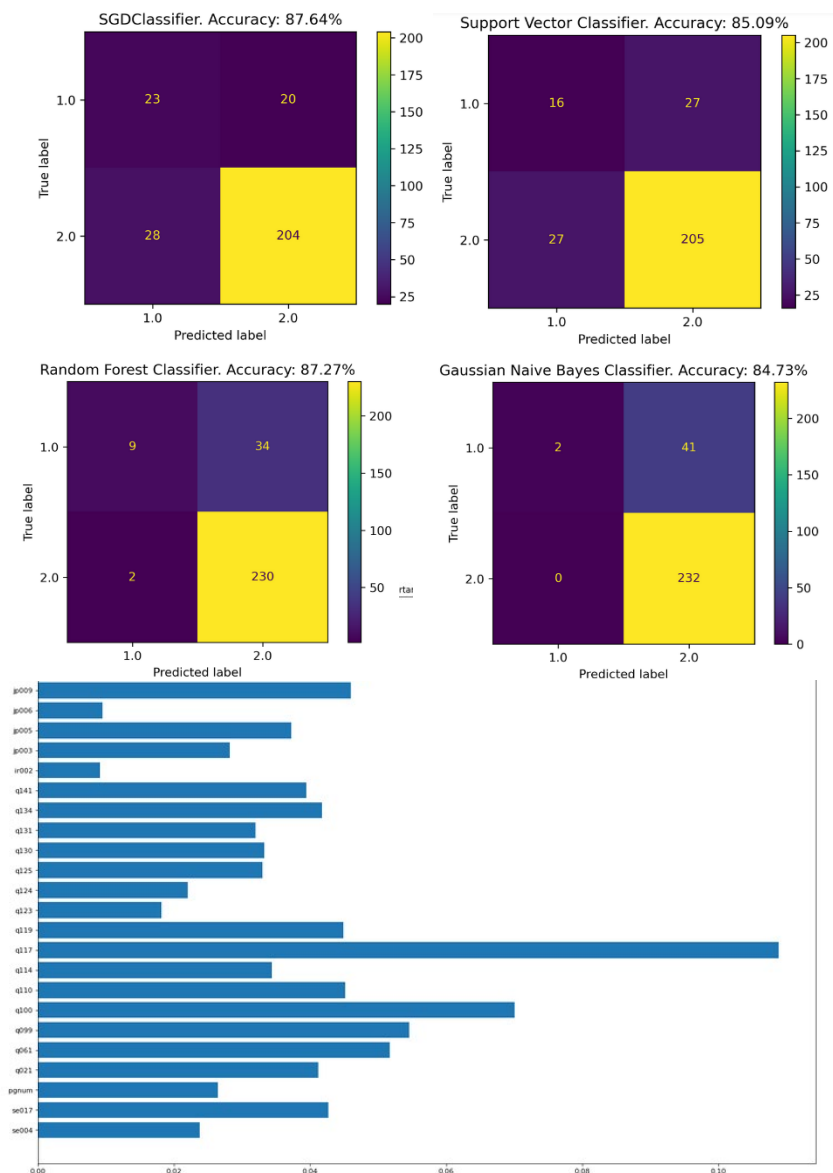
Proposed Methodology

As our response variable was binary, we decided to use supervised classification models to predict our response variable. While we initially considered running a logistic regression, with possible "circles" in data due to interactions between different responses, it was unlikely that the data would be linearly separable, hence we decided to try out the following modes:

- SGDClassifier
- Random Forest Classifier
- GaussianNB
- SupportVectorClassification

With a pool of 277 separate variables, we needed a way to extract the most relevant predictors. Hence, we ran a backward selection to determine the most relevant features to train the models.

Analysis

After training the four models, we obtained the following results:

The SGDClassifier appeared to be the strongest model with the lowest false positive rate. However, our aim was not only to build the most accurate classifier but also to find the most relevant factors, hence we chose the Random Forest Model as it was the most expressive.

From the list of features, we can see that the most important features are, order: Do you agree democracy is always preferable to any other kind of government (q117), Where would you place our country under the present government (q100), where would you place our country under (previous authoritarian ruler) (q099), how much impact do you feel government policies have on your daily life? (q061).

Conclusion

Above all else, the ABS has shown us that, at least for the period surrounding 2001 in a country with relative stability

(Japan), citizen's preferences regarding democracy are relatively consistent with their perception of its effectiveness, and also that the perception of citizens of the current or historical authoritarian or dictatorial leanings of their country influence their perception on the effectiveness of democratic institutions in their country. Countries with more effective policies that influence the daily lives on citizens are also more likely to have more democratic tendencies.

Overall, we recommend through the ABS survey that governments looking to preserve democracy in their nations should keep a keen mind not only their policies (paying particular attention to policies that directly influence daily life), but also the overarching narrative of their nation, as the perception of citizens of their country seems to matter much more than their actual socio-economic circumstances. This conclusion, though effective, is also ethically questionable, as it encourages countries to engage in propaganda.

However, it is important to note that this analysis holds for the narrow conditions that Japan in 2001 had, and should not be generalized to smaller nations with more economic or civil instability, in which case it would be unethical to conclude that nations should simply focus on perception rather than concrete results.