

Under the Fujimori Administration: Estimating and Explaining Peruvian Public Opinion on  
Perception of Peruvian Democracy from 2005-2007

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Advanced Independent Study and Research (01:790:492)

Topic: Survey Methods

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May 1, 2019

## Introduction

Alberto Fujimori was the 62<sup>nd</sup> President of Peru from July 28<sup>th</sup>, 1990 to November 22<sup>nd</sup>, 2000. Like some of Peru's former and even contemporary Presidents, he has a history of political corruption, scandals, and human rights abuses. These political and inhumane crimes range from violently shutting down the Congress of Peru in 1992, to orchestrating and ordering armed forces to commit kidnappings and massacres against subsets of the Peruvian population throughout 1990-2000, to even attempting to fax his resignation of his presidency from Japan while avoiding to face charges and arrest in Peru sometime in 2007. Despite all of these acts that he had taken as a former president, however, some – including academics, policymakers, and Peruvian citizens – give him merits in the following areas: massively improving Peru's economy and social infrastructure and suppressing communist activists and parties, especially the Shining Path and Túpac Amaru Revolutionary Movement Marxist groups.

In 1995, Peruvian polling firm Datum reported that Fujimori had an extremely high approval rating among the Peruvian population, specifically 79%; however, 18% of the Peruvian population disliked him (*UPI*, 1995). Fujimori's approval and disapproval ratings tended to stay stable throughout his presidency. In 2009, however, he was convicted of multiple crimes and murders attributed to military death squads that he had hired and was thus sentenced to 25 years in prison. While having such a fate befall upon Fujimori would warrant one to believe that almost the entire Peruvian population hated him as a result, one's belief would be confounded by the fact that about two-thirds of the Peruvian population still liked him. His leadership was well liked, and his neoliberal reforms were responsible for improving Peru's economy by 6.7% from 2002-2008 (*CBCnews*, 2005). Such a social perception of the autocrat by the Peruvian population, then, makes

me wonder to what extent these people continued to have a positive impression of him and the results of his policies up until the aftermath of his arrest and trial in 2007.

In my research paper, I would like to investigate whether, at the time of Fujimori being arrested and on trial in around 2007, Peruvian citizens' attitudes toward leaders (in this case, former Peruvian President Fujimori) who do not bother with parliament or elections, civil rights designed to protect people's liberty against oppression, and the police are associated with them having a perception of their country being a democracy. This investigation can be formalized as follows: I will first peruse some existing literature on this topic and connect the findings of the authors from said literature to my research. The literature will help contextualize and develop my research question. Next, I will formulate and state my research question in the form of null and alternative hypotheses. These hypotheses will be tested using multivariate linear regression and binary logistic regression based on certain variables from World Values Survey (WVS) data. Using, R, I will validate my results by computing and examining the adjusted R-squared and F-statistic for the former, and computing and analyzing the predicted probabilities for the latter. Then, I will tabulate my results and use the most important ones in explaining how and why my hypotheses were rejected and accepted. I will then end with a summary and synthesis of my R data-related research and the accompanying academic readings and their criticisms. With this research, I hope to fill in any potential knowledge gaps in why Peruvians continued to support Fujimori right until his court hearings and imprisonment.

This process is entirely dedicated to analyzing and answering the following question: Did Peruvians, after the Fujimori administration, perceive Peru as a democracy between 2005-2007 (the period during which former Peruvian President Fujimori was arrested and tried), despite

having lived under an former elected president who had shut down democratic institutions and practices, repressed constitutional rights, and strengthened the police force?

## **Literature Review & Theory**

### Existing Research

Alberto Fujimori was elected as the 62<sup>nd</sup> President of Peru in 1990. Peru was facing many economic and political hardships during around this time, two of which, in particular, were the hyperinflation of the Peruvian economy and the Shining Path (in Spanish, Sendero Luminoso), a Peruvian communist revolutionary party, insurgency, respectively. Furthermore, he was a political amateur compared to the other political candidates at the time. He had no political party to support him, no social programs created to implement, and no political personnel to staff his administration or cabinet (Levitsky and Maxwell 7, 2003). Despite his lack of political experience and the civil unrest in the country at the time, he learned how to counter these obstacles and threats throughout his presidency. Some of his most influential counter-measures were his implemented neoliberal reforms and “autogolpe” of the Peruvian Congress in 1992, in which Congress was dissolved, the Peruvian Constitution was suspended, and judiciary members were purged (Haas 383 & 384, 2008). This action thereby put the executive branch as the only major source of political power. This was done so that not only can “false [Peruvian] democracy” (Levitsky and Maxwell 8, 2003) can be eliminated, but also use politically questionable means to sabotage the Shinning Path insurgents. He had done this via his secret military intelligence called the “Grupo Colina”, which had performed extrajudicial killings on suspected Peruvian subpopulations in order to strike fear into political opponents (e.g. the Shining Path) and stabilize peace and order in Peruvian society.

Such tactics and policies were maintained throughout his presidency, until in 2000, when Fujimori was exposed for bribing Congressmen for their votes at the time. He subsequently left

Peru and lived in Japan for 5 years, until he went to Chile in 2005, whereupon he was extradited to Peru and convicted of “crimes against humanity” (usually those associated with the Grupo Colina). Many Peruvians during this time were shocked and abhorred by the crimes he had committed – especially to those whose families were wrongly killed by the Grupo Colina death squads; they were ecstatic to hear that he would be brought to justice. Some Peruvians, however, supported and defended Fujimori, claiming that he is responsible for stopping Peru’s hyperinflation and disarming the “senderistas” (Spanish name for members of the Shining Path) (Lagos, 2003).

Public opinion polls have consistently reported high approval ratings of Fujimori throughout his presidency. Support for Fujimori jumped from 53% in March 1992 to 81% after the autogolpe (April 1992). Until 1995, his approval rating averaged 66% (Levitsky and Maxwell 8, 2003). The drastic increase in Fujimori’s approval ratings before and after the autogolpe is usually contributed to the fact that the Peruvian public had perceived a restoration of political order as a result of the autogolpe (Stokes 222, 1997). Peruvians, despite living in a “hybrid regime” at the time – where democratic institutions were present but were either embedded or obstructed by authoritarian features (Crabtree 288, 2001), seemed to be tolerant of the impediments and abuses that had Peruvians taken (e.g. Fujimori’s autogolpe, Grupo Colina’s extrajudicial killings, etc.). The most important things to them were having the hyperinflation of the Peruvian economy quelled and the terrorist attacks of the Shining Path ceased. If their leader was authoritarian but was efficient in taking measures to counter both of these continual threats, then they were receptive to their leader’s authoritarianism (Shifter 96 & 97, 2001).

Fujimori’s approval ratings may still be high even after his arrest and trial since 2005, but the same cannot be said for those of the armed forces and courts (after all, they had taken part in

and were biased toward the extrajudicial killings, respectively) – that is, until Fujimori was brought to justice in court in 2005. As both the military and courts supported Fujimori being arrested and tried for his crimes, Peruvians now seem to be increasingly supportive of them. According to an international barometer, from 2004-2007, Peruvian public's rating of corruption in the armed forces and court system fell from 4.2 to 3.5 and from 4.5 to 4.2, respectively (on a scale of 1 to 5, with 5 being "extremely corrupt") (Root 468, 2009). Such improved ratings of the armed forces and courts, as well as Fujimori's consistently high approval ratings at the time, make me wonder by how much Peruvians' opinions toward having a strong leader (e.g. Fujimori) who does not bother with parliament or elections, civil rights protecting people's liberty, and police (not the armed forces, since police are much more ubiquitous and have a more direct impact on the daily lives of Peruvians) influence their consideration of Peru as a democracy.

### Hypotheses

Now that I have searched for, presented, and explained the existing academic literature on the history and politics of Fujimori's regime from circa 1990-2000, I will now state and formalize my alternative and null hypotheses in relation to my research question. My hypotheses, based on certain variables from the WVS – Wave 5 (2005-2009) dataset, are as follows:

$H_0$ : In a comparison of individuals, between 2005-2007, those who were in favor of a leader who does not bother with parliament or elections, considered civil rights that protect people's liberty against oppression as not essential to democracy, and had confidence in the police force were not more likely to perceive Peru as a democracy than those who did not. ( $\beta_1 = 0$ ,  $\beta_2 = 0$ , and  $\beta_3 = 0$ ; &  $Pr(democracy_i = 1 \mid leader_{1i} = 1, rights_{2i} = 0, police_{3i} = 1) = Pr(democracy_i = 1 \mid leader_{1i} = 0, rights_{2i} = 1, police_{3i} = 0)$ )

H<sub>A</sub>: In a comparison of individuals, between 2005-2007, those who were in favor of a leader who does not bother with parliament or elections, considered civil rights that protect people's liberty against oppression as not essential to democracy, and had confidence in the police force were more likely to perceive Peru as a democracy than those who did not. ( $\beta_1 \neq 0$ ,  $\beta_2 \neq 0$ , and  $\beta_3 \neq 0$ ; &  $Pr(democracy_i = 1 \mid leader_{1i} = 1, rights_{2i} = 0, police_{3i} = 1) \neq Pr(democracy_i = 1 \mid leader_{1i} = 0, rights_{2i} = 1, police_{3i} = 0)$ )

Extracting the information from my research question: The independent variables are the respondent's belief in having a strong leader who does not have to bother with parliament and elections, the respondent's consideration of civil rights protecting people's liberty against oppression as essential or inessential to democracy, and the respondent's level of confidence in the police force, denoted as *leader*, *rights*, and *police* – respectively – above. The dependent variable, then, is the respondent's consideration of Peru as a democracy, denoted as *democracy* above.

## **Data & Methodology**

The data that I will be using to test and explain my hypotheses is the WVS – Wave 5 (2005-2009) dataset. Its file name is “F00007944-WV5\_Data\_R\_v20180912.rds.” and can be publicly found and freely accessed on the official WVS website (filling out an online consent form to download the data is required, however). It spans time-series data from 2005-2009, and contains variables that measure support for democracy, gender equality, cultural diversity, environmentalism, political ideology, globalization, etc. Its population is the worldwide human population, but its sample size only contains those living in almost every country (e.g. Russia, Japan, Peru, etc.). Upon brief screening of the dataset, however, extremely small and obscure islands, territories, and other geographic regions seem to be excluded. I would presume this was

done due to the physical infeasibility and economic costs of surveying those who come from such areas. But, such exclusion, I would believe, would not bias the survey results by any significant amount and is thus still valid to use and analyze.

Since my research focuses on the Peruvian population from 2005-2007, I have subset the WVS dataset such that I only have survey data on Peruvian respondents and their item choices during around said time period. The country code for Peru is shown in Appendix A. My sample size is now 1500, and I now have access to their answer choices to certain questions that was used and posed at the time of this survey's fieldwork and publication. The most important survey questions to focus on, however, are V148, V157, V136, and V163 (as coded in the dataset). The first three correspond to my independent variables of interest, which are the respondent's belief in having a strong leader who does not have to bother with parliament and elections, the respondent's consideration of civil rights protecting people's liberty against oppression as essential or inessential to democracy, and the respondent's level of confidence in the police force, respectively. They each have values that range from 1-4, 1-10, and 1-4, also respectively. The value labels for these coded questions are provided in Appendix B. The last, however, corresponds to my dependent variable of interest, which is the respondent's consideration of Peru as a democracy. It has values that range from 1-10. The value labels for this coded question are also provided in Appendix B.

It should also be noted, however, using some inspectional commands in R, that these four coded questions each have several responses for negatively signed values. Based on my previous experience with survey data, I would presume that these correspond to respondents selecting "I don't know" or "Refused" as their choices to said questions. These negative values could not only inflate my regression models' results, but also provide me with



potentially highly biased interpretations of said results. As such, I have cleaned them such that the coded questions only have positive values. This can be seen in my R code in Appendix C (indeed, this is where you will see me programmatically manipulate the dataset and computationally test my hypotheses using regressions).

Before I proceed to explain as to why the four aforementioned coded questions are valid and consistent measures of the independent and dependent variables stated and used in my research question and hypotheses, respectively, I would like to state that I will also recode the questions such that they only have binary outcomes after I initially test my hypotheses. In other words, the questions will eventually be recoded to have only values of 0 and 1, each providing “No” and “Yes” choices to said questions, respectively. These recoded questions and the meanings of their new values can be seen in the following table:

Table 1: Binary Outcomes of Recoded Questions Asked to Peruvians in Circa 2006

|  | <u>0</u>  | <u>1</u>                                      |
|--|---|---|
| <u>Independent Variables</u>                       |   |   |
| Having a Strong Leader<br>(V148)                   | It is a bad way of governing<br>this country    | It is a good way of governing<br>this country |
| Civil Rights Protecting<br>People’s Liberty (V157) | Not an essential characteristic<br>of democracy | An essential characteristic of<br>democracy   |
| Level of Confidence in Police<br>(V136)            | No confidence in police                         | Have confidence in police                     |
| <u>Dependent Variable</u>                          |   |   |
| Consideration of Peru as a<br>Democracy (V163)     | Peru is not a democracy                         | Peru is a democracy                           |

**Note:** Names of variables are not stated in full; they are only stated partially for the sake of conserving table space and simpler interpretation. Keep this in mind when reading upcoming tables. For full variable names, consult Appendix B.

While one may comment that it is not a wise idea to reassign the survey questions such that they only have two choices each – and thereby eliminating any other choices that they originally had, I would like to defend my efforts for the following rationale: it will not only allow for quicker and simpler interpretation of the respondents' choices to the questions, but also facilitate the computation and interpretation of the upcoming second regression model, a binary logistic regression. While an ordered logistic regression may avoid this recoding altogether, I do not possess the conceptual understanding or computational skills to perform such a type of regression. As such, I had to resort to completing such a task so that it can accommodate and utilize my current understanding of binary logistic regression. Those with higher and stronger statistical skills can perform other kinds – more complex – regression models to these questions, which may yield the same or different conclusions.

Now that I have explained my recoding of the survey questions, I would like to explain as to why I am using these particular questions as measures of the independent and dependent variables in my research question and hypotheses. Not only does the wording of the survey questions completely match the variables I would like to measure and test, but also their value labels – both original and recoded ones – yield regression coefficients that may seem plausible to interpret and believe. No other international survey data, based on my previous searches, seem to fulfill these two exact criteria.

My hypotheses will be tested using two types of regressions of the dependent variable on the independent variables from my research question. The first is a multivariate linear regression. While this type of regression is simple to perform and understand, it will allow me to not only see any initial results that may be interpreted and accepted prematurely, but also use it as a benchmark for later – more complex – regressions. The F-statistic and its p-

value for this regression, however, will determine whether the coefficients on my independent variables are statistically significant. The second is a binary logistic regression. While this type of regression is more complex in terms of computation and intuition, it will allow me to not only have a much clearer picture of my interpretations of the variables, but also is a more appropriate model of determining the response relationship between the independent and dependent variables. Whether the predicted probability of the dependent variable when the independent variables have certain values is equal to that of the dependent variable when the independent variables have other values, however, will determine the statistical significance of this logit regression model. These two types of regression models are mathematically expressed as follows (see hypothesis section if variable notation is not understandable or clear):

#### Regression models

1. Multivariate OLS linear regression:  $democracy_i = \hat{\alpha}_i + \hat{\beta}_1 * leader_{1i} + \hat{\beta}_2 * police_{2i} + \hat{\beta}_3 * rights_{3i} + \hat{\varepsilon}_i$

2. Binary logistic regression:  $Pr(democracy_i = 1 | X) = \text{logit}^{-1} (\hat{\alpha} + \hat{\beta}_1 * leader_{1i} + \hat{\beta}_2 * police_{2i} + \hat{\beta}_3 * rights_{3i})$

#### **Results & Discussion**

Using R, I perform the multivariate linear regression and binary logistic regression models using the four questions of interest from the same WVS dataset – the original ones for the former and the recoded ones for the latter. Table 1 shows the coefficient results yielded from multivariate regression, while Table 2 shows the coefficient results yielded from binary logistic regression.

It is important to note, however, that, for each type of regression, I initially performed a regression of respondent's considering Peru as a democracy on just the respondent's belief in a strong leader who does not bother with parliament or elections. These initial univariate regressions were done so that they can not only be used as benchmarks for the multivariate regressions that followed immediately after, but also to allow scatterplots that can demonstrate the response relationship between the main independent variable of interest, respondent's belief in a strong leader who does not bother with parliament or elections, and the dependent variable, respondent's consideration of Peru as a democracy.

One more note that should be said regarding the coefficients on the independent variables in both of the regression models: the coefficients on the constants will not be interpreted, as the constants themselves do not yield any meaningful interpretation in the context of respondent item choices.

Interpreting the coefficients on the independent variables yielded from multivariate linear regression in Column 2 of Table 2: A 1 unit increase in the respondent's tentative belief in having a strong leader is associated with a 0.07 unit increase in the respondent's consideration of Peru as a democracy, holding the respondent's level of confidence in the police and varying regard for civil rights protecting liberty against oppression constant. A 1 unit increase in the respondent's varying regard for civil rights protecting liberty constant is associated with a 0.03 unit increase in the respondent's consideration of Peru as a democracy, holding the respondent's level of confidence in the police and tentative belief in having a strong leader constant. And a 1 unit increase in the respondent's level of confidence in the police is associated with a 0.34 unit decrease in the respondent's consideration of Peru as a democracy, holding the respondent's tentative belief in

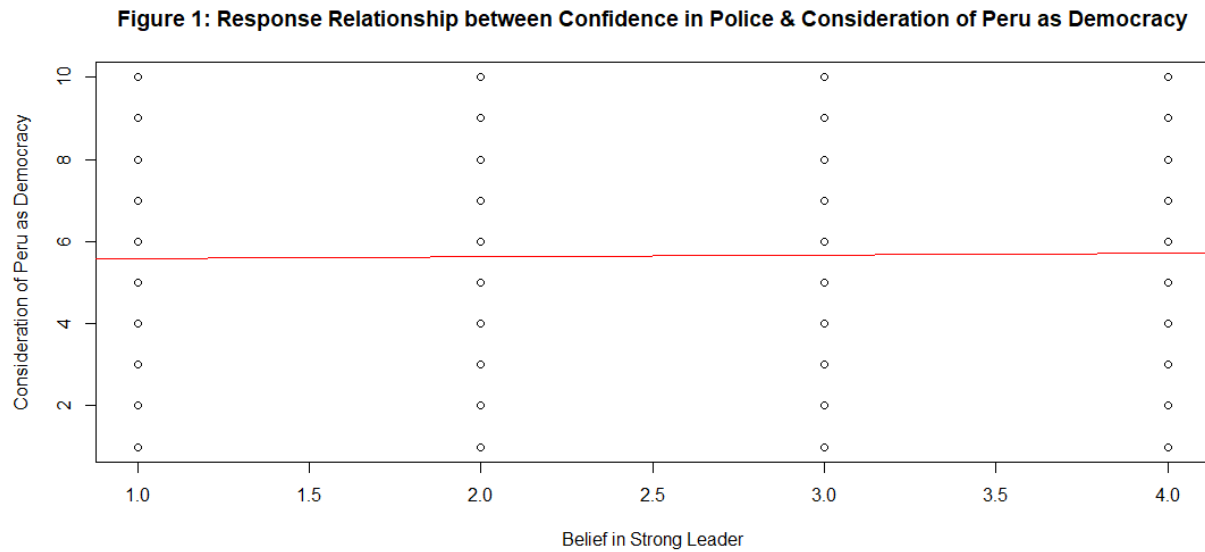
having a strong leader and varying consideration for civil rights protecting people's liberty constant.

**Table 2: Estimated Effects of WVS Respondent Item Choices on Consideration of Peru as a Democracy in Circa 2006**

|  | (1)               | (2)                |
|--|-------------------|--------------------|
| Having a Strong Leader                   | 0.04<br>(0.07)    | 0.07<br>(0.07)     |
| Civil Rights Protecting People's Liberty |                   | 0.03<br>(0.03)     |
| Level of Confidence in Police            |                   | -0.34***<br>(0.09) |
| Intercept                                | 5.54***<br>(0.19) | 6.27***<br>(0.39)  |
|  |                   |                    |
| Number of Observations                   | 1500              | 1500               |
| Adj R <sup>2</sup>                       | -0.0004           | 0.01146            |

**Note:** Heteroskedasticity-robust standard errors in parentheses. \*\*\* indicates  $p < 0.01$ . \*\* indicates  $p < 0.05$ . \* indicates  $p < 0.10$ . Numbers, except for adjusted-R squared values, are rounded to 2 digits. Independent and dependent variables are cleaned, ordinal variables. For column 2, F-statistic and its associated p-value, rounded to four digits, are 5.8210 and 0.0006, respectively. Data is from the WVS – Wave 5 (2005-2009) dataset. Name of dataset is F00007944-WV5\_Data\_R\_v20180912.rds.

To illustrate the change in the respondent considering Peru as a democracy with respect to the respondent's answer choice for one of the independent variables, I have created a scatterplot that shows the association between the respondent's belief in a strong leader and the respondent considering Peru as a democracy, which is Figure 1.



Interpreting the coefficient on the respondent's belief in a strong leader in Column 1 of Table 2: A 1 unit in the respondent's tentative belief in a strong leader who does not bother with parliament or elections is associated with a 0.04 unit increase in the respondent considering Peru as a democracy. While Figure 2 minutely shows the changes from one digit to the other, the changes are existent, nonetheless. However, it could be argued that there may be no relationship between the two variables, since the fitted line is almost perfectly horizontal (this would require research beyond this paper).

The associations between the independent and dependent variables may seem reasonable and understandable enough, but my hypotheses cannot be fully examined unless I test for their statistical significance. Since the F-statistic, 5.82, is greater than the critical value of the 5% significance level, 1.96 (in other words, the F-statistic is statistically significant at the 5% level), it could be said that  $H_0$  can be rejected. Therefore, there exists a relationship between the respondent's answer choices to questions of their belief in a strong leader, regard for civil rights

protecting people's liberty, and confidence in the police and the respondent's consideration of Peru as a democracy between 2005-2007.

Interpreting the coefficient on the respondent's belief in a strong leader in Column 1 of Table 3: A 1 unit increase in the respondent's tentative belief in a strong leader who does not bother with parliament of elections is associated with a 0.13 decrease in the log odds of the respondent considering Peru as a democracy. Since the log odds on the change in the dependent variable yields no easy or intuitive interpretation, I will instead compute the predicted probabilities of the respondent considering Peru as a democracy conditional on their item choices for the independent variables (for further reference on the log odds coefficient results, consult Column 2 of Table 2).

**Table 3: Determinants of Considering Peru as a Democracy in Circa 2006**

|  | (1)             | (2)              |
|--|-----------------|------------------|
| Having a Strong Leader                   | -0.13<br>(0.11) | -0.21*<br>(0.11) |
| Civil Rights Protecting People's Liberty |                 | 0.30*<br>(0.15)  |
| Level of Confidence in Police            |                 | 0.50**<br>(0.16) |
| Intercept                                | 0.16*<br>(0.08) | -0.12<br>(0.15)  |
|  |                 |                  |
| Number of Observations                   | 1500            | 1500             |

**Note:** Standard errors in parentheses. \*\*\* indicates  $p < 0.01$ . \*\* indicates  $p < 0.05$ . \* indicates  $p < 0.10$ . Numbers are rounded to 2 digits. Coefficients on the independent variables are measured in log odds. Standard errors of constants are from logit. Independent and dependent variables have been turned into binary variables; each recoded to 0 and 1. Each variable has its own meaning of each of these values. Data is from the WVS – Wave 5 (2005-2009) dataset. Name of dataset is F00007944-WV5\_Data\_R\_v20180912.rds.

Table 4 indicates two cases for the predicted probability of the respondent considering Peru as a democracy, given their answer choices to the independent variables. Case 1, replicating  $H_A$ ,

shows the predicted probability of the respondent considering Peru as a democracy, given that they believe in a strong leader, do not consider civil rights protecting people's liberty as essential to democracy, and have confidence in the police. Case 2, replicating  $H_0$ , shows the predicted probability of the respondent considering Peru as a democracy, given that they do not believe in a strong leader, consider civil rights protecting people's liberty as essential to democracy, and do not have confidence in the police. The predicted probabilities of Cases 1 and 2 are 0.54 and 0.53, respectively; their difference is -0.0019. Graphical illustrations and written interpretations of these values are given above Figure 2, which is the predicted probability of the respondent considering Peru as a democracy.

**Table 4: Predicted Probabilities of Respondent Considering Peru as a Democracy in circa 2006**

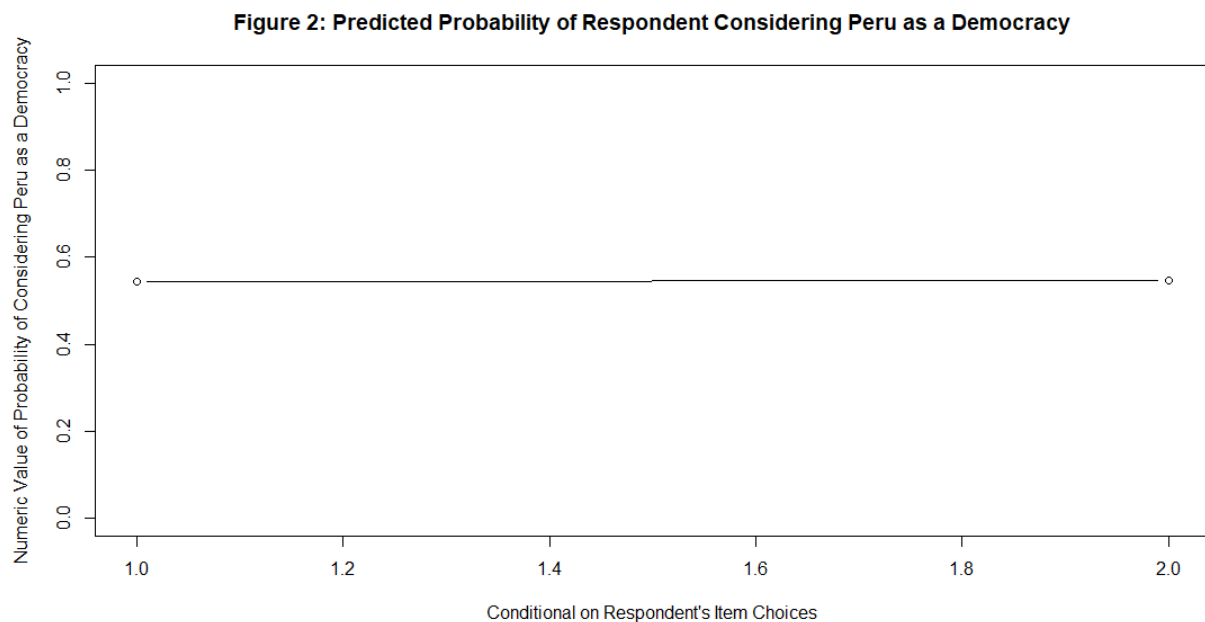
|                        | Belief in Strong Leader? | Thinks Civil Rights Protecting People's Liberty is Essential to Democracy? | Have Confidence in the Police? | Predicted Probability of Considering Peru as a Democracy |
|------------------------|--------------------------|--|--------------------------------|--|
| Case 1                 | Yes<br>(V148 = 1)        | No<br>(V157 = 0)   | Yes<br>(V136 = 1)              | 0.54   |
| Case 2                 | No<br>(V148 = 0)         | Yes<br>(V157 = 1)  | No<br>(V136 = 0)               | 0.55   |
| Difference             |                          |  |                                | -0.0019  |
| Number of Observations |                          |  |                                | 1500   |

**Note:** Recoded questions and their values are in parenthesis. Numbers, except for the difference – which is rounded to 4 digits, are rounded to 2 digits. Case 1 refers to  $H_A$ , while Case 2 refers to  $H_0$ . “Yes” implies that the recoded value, 1, was chosen for that question, while “No” implies that the recoded value, 0, was chosen for that question.

Figure 2 illustrates points at which certain values of the independent variables take, which determines what is the probability of the respondent considering Peru as a democracy. The first and second points represent the first and second cases in Table 4, respectively. Interpreting each



point: A respondent that believes in a strong leader, considers civil rights protecting people's liberty as not essential to democracy, and has confidence in the police is associated with a 54% increase in the probability of the respondent considering Peru as a democracy. And a respondent that does not believe in a strong leader, considers civil rights protecting people's liberty as essential to democracy, and does not have confidence in the police is associated with a 55% increase in the probability of the respondent considering Peru as a democracy. The difference in these predicted probabilities is -0.0019, which means that there is a -0.19% point change in going from the first to



the second point. Such a miniscule difference in the predicted probabilities indicates that there is very little difference in what the respondent chooses as their answer choices to the survey questions, with respect to determining their response to considering Peru as a democracy. However, since the predicted probabilities are different from each other,  $H_0$  can be rejected. Therefore, there, indeed, exists a probabilistic relationship between the respondent's answer choices to their belief in a strong leader, regard for civil rights protecting people's liberty as

essential or inessential to democracy, and confidence in the police and their consideration of Peru as a democracy between 2005-2007.

## **Conclusion**

This research was motivated by my intellectual curiosity regarding to what extent did Peruvians, after the Fujimori administration, perceive Peru as a democracy between 2005-2007, the period during which former Peruvian President Fujimori was arrested and tried, despite their previous living under a former elected president who had shut down democratic institutions and practices, repressed constitutional rights, and strengthened the police force. I stated and formalized this research into hypotheses, which were later testing using multivariate linear regression and binary logistic regression. I have always believed that Peruvians who had lived under Fujimori would still perceive Peru to be a democracy, given that they believed in a strong leader who does not bother with parliament or elections, regarded civil rights protecting people's liberty as not essential to democracy, and had confidence in the police, between 2005-2007. This belief of mine, after testing the null hypotheses in the two regression models, seems to be suggestively correct, as the null hypotheses were statistically significant and thus had to be rejected. The results from both of these regression models seem to further my expectations of Peruvians still considering Peru as a democracy. No matter the reprehensible actions or extreme beliefs Fujimori had done or held – respectively, Peruvians would still support him and perceive Peru to be a democracy because of him, even after his presidency and during his legal battles. Such implications of my findings seem to suggest that such autocrats, if they have a history of improving their countries economically and socially – while doing as such at the expense of human lives and political crimes, could and would be beloved by many of their fellow citizens. A discovery such as this warrants further investigation into the successes of populism and neoliberal reforms of autocratic leaders in democracy studies.

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## Appendix C

# Joel Cabrera

# Survey Methods

# Professor McCabe

# May 1, 2019

###Load & Clean/Subset data

```
WVS <- readRDS("F00007944-WV5_Data_R_v20180912.rds", refhook = NULL) #using 05-09  
WVS dataset
```

```
WVS <- subset(WVS, COW == 135) #subset to peru only  
nrow(WVS)
```

#Removing Negative Values

#IVs

```
WVS$V148[WVS$V148 < 0] <- NA #belief in strong leader
```

```
WVS$V136[WVS$V136 < 0] <- NA #confidence in police
```

```
WVS$V157[WVS$V157 < 0] <- NA #civil rights for liberty
```

#DV

```
WVS$V163[WVS$V163 < 0] <- NA # perception of quality of democracy in Peru
```

#Linear regressions

#Univariate

```
unireg <- lm(V163 ~ V148, data = WVS)
```

```
summary(unireg)
```

#Multivariate

```
mulreg <- lm(V163 ~ V148 + V136 + V157, data = WVS)
```

```
summary(mulreg)
```

#Plot

```
plot(x = WVS$V148, #x-values
```

```
     y = WVS$V163, # y-values
```

```
     main = "Figure 1: Response Relationship between Confidence in Police & Consideration of  
Peru as Democracy", # label for main title
```

```
     ylab = "Consideration of Peru as Democracy", #y-axis label
```

```
     xlab = "Belief in Strong Leader", #x-axis label
```

```
     pch = 1) # point type
```

```
abline(unireg, col = "red") #adds reg. line
```

###Conversion into Binary Variables

#IVs

```
WVS$V148[WVS$V148 < 3] <- 1 # good way of running country
```

```
WVS$V148[WVS$V148 > 2] <- 0 # bad way of running country
```

```
WVS$V157[WVS$V157 < 6] <- 0 # Not essential characteristic of democracy
```

```

WVS$V157[WVS$V157 > 5] <- 1 # essential characteristic of democracy

WVS$V136[WVS$V136 < 3] <- 1 # confidence in police
WVS$V136[WVS$V136 > 2] <- 0 # no confidence in police

#DV
WVS$V163[WVS$V163 < 6] <- 0 # Peru is not democratically governed
WVS$V163[WVS$V163 > 5] <- 1 # Peru is democratically governed

##Check
table(WVS$V136)
table(WVS$V148)
table(WVS$V157)
table(WVS$V163)

#Binary Logistic regressions
#Only V148
blogit0 <- glm(V163 ~ V148, data = WVS,
               family = binomial(link = "logit"))
summary(blogit0)

#All IVs
blogit1 <- glm(V163 ~ V148 + V157 + V136, data = WVS, #All IVs
               family = binomial(link = "logit"))
summary(blogit1)

##Getting more intuitive interpretations
# Only V148
#pprob <- predict(blogit0, newdata = data.frame(V148 = c(0,1)), #only V148; below include all
other IVs
               # type = "response")
#pprob

#All IVs
pprob1 <- predict(blogit1, newdata = data.frame(V136 = 1,
                                                V148 = 1,
                                                V157 = 0),
               type = "response", se = F)
pprob1

pprob2 <- predict(blogit1, newdata = data.frame(V136 = 0,
                                                V148 = 0,
                                                V157 = 1),
               type = "response", se = F)
pprob2

```

```

#Difference & Check
pprob1 - pprob2
c(pprob1, pprob2)

##Plotting logit
# Pr(Y = 1 | V148)
#plot(pprob, type = "b",
#      ylim = c(0, 1), #NOTE: ylim = c(.6, 1) does not display fitted line; have to use c(0, 1)
#      instead
#      #main = "Predicted Probability V163 = 1",
#      #xlab = "Values of V157, holding constant V148 and V136",
#      #ylab = "Predicted Probability V163 = 1")

#Change in Prob
# change the labels for xlab
plot(x = c(1,2),
     y = c(pprob1, pprob2), type = "b",
     ylim = c(0, 1), #NOTE: ylim = c(.6, 1) does not display fitted line; have to use c(0, 1) instead
     main = "Figure 2: Predicted Probability of Respondent Considering Peru as a Democracy",
     xlab = "Conditional on Respondent's Item Choices",
     ylab = "Numeric Value of Probability of Considering Peru as a Democracy")

```

V124. How about people from other countries coming here to work. Which one of the following do you think the government should do? (*Read out and code one answer*):

- 1 Let anyone come who wants to?
- 2 Let people come as long as there are jobs available?
- 3 Place strict limits on the number of foreigners who can come here?
- 4 Prohibit people coming here from other countries?

I 'd like to ask you how much you trust people from various groups. Could you tell me for each whether you trust people from this group completely, somewhat, not very much or not at all? (*Read out and code one answer for each*):

|  | Trust<br>completely | Trust<br>somewhat | Do not trust<br>very much | Do not<br>trust at all |
|--|---------------------|-------------------|---------------------------|------------------------|
| V125. Your family                        | 1                   | 2                 | 3                         | 4                      |
| V126. Your neighborhood                  | 1                   | 2                 | 3                         | 4                      |
| V127. People you know personally         | 1                   | 2                 | 3                         | 4                      |
| V128. People you meet for the first time | 1                   | 2                 | 3                         | 4                      |
| V129. People of another religion         | 1                   | 2                 | 3                         | 4                      |
| V130. People of another nationality      | 1                   | 2                 | 3                         | 4                      |

I am going to name a number of organizations. For each one, could you tell me how much confidence you have in them: is it a great deal of confidence, quite a lot of confidence, not very much confidence or none at all? (*Read out and code one answer for each*):

|   | A great<br>deal | Quite a lot | Not very<br>much | None at all |
|---|-----------------|-------------|------------------|-------------|
| V131. The [churches]*                           | 1               | 2           | 3                | 4           |
| V132. The armed forces                          | 1               | 2           | 3                | 4           |
| V133. The press                                 | 1               | 2           | 3                | 4           |
| V134. Television                                | 1               | 2           | 3                | 4           |
| V135. Labor unions                              | 1               | 2           | 3                | 4           |
| V136. The police                                | 1               | 2           | 3                | 4           |
| V137. The courts                                | 1               | 2           | 3                | 4           |
| V138. The government (in your nation's capital) | 1               | 2           | 3                | 4           |
| V139. Political parties                         | 1               | 2           | 3                | 4           |
| V140. Parliament                                | 1               | 2           | 3                | 4           |
| V141. The Civil service                         | 1               | 2           | 3                | 4           |
| V142. Major Companies                           | 1               | 2           | 3                | 4           |
| V143. Environmental organizations               | 1               | 2           | 3                | 4           |
| V144. Women's organizations                     | 1               | 2           | 3                | 4           |
| V145. Charitable or humanitarian organizations  | 1               | 2           | 3                | 4           |
| V146. The [European Union]**                    | 1               | 2           | 3                | 4           |
| V147. The United Nations                        | 1               | 2           | 3                | 4           |

\* [Substitute "religious leaders" in non-Christian countries]

\*\* [Substitute appropriate regional organization outside Europe (e.g., in North America, NAFTA)]

I'm going to describe various types of political systems and ask what you think about each as a way of governing this country. For each one, would you say it is a very good, fairly good, fairly bad or very bad way of governing this country? (*Read out and code one answer for each*):

|   | Very good | Fairly good | Fairly bad | Very bad |
|---|-----------|-------------|------------|----------|
| V148. Having a strong leader who does not have to bother with parliament and elections                    | 1         | 2           | 3          | 4        |
| V149. Having experts, not government, make decisions according to what they think is best for the country | 1         | 2           | 3          | 4        |
| V150. Having the army rule  | 1         | 2           | 3          | 4        |
| V151. Having a democratic political system  | 1         | 2           | 3          | 4        |

(*Show Card T*)

Many things may be desirable, but not all of them are essential characteristics of democracy. Please tell me for each of the following things how essential you think it is as a characteristic of democracy. Use this scale where 1 means “not at all an essential characteristic of democracy” and 10 means it definitely is “an essential characteristic of democracy” (*read out and code one answer for each*):

|   | Not an essential characteristic of democracy |   |   |   |   |   |   | An essential characteristic of democracy |   |    |
|---|--|---|---|---|---|---|---|--|---|----|
| V152. Governments tax the rich and subsidize the poor.          | 1  | 2 | 3 | 4 | 5 | 6 | 7 | 8  | 9 | 10 |
| V153. Religious authorities interpret the laws.                 | 1  | 2 | 3 | 4 | 5 | 6 | 7 | 8  | 9 | 10 |
| V154. People choose their leaders in free elections.            | 1  | 2 | 3 | 4 | 5 | 6 | 7 | 8  | 9 | 10 |
| V155. People receive state aid for unemployment.                | 1  | 2 | 3 | 4 | 5 | 6 | 7 | 8  | 9 | 10 |
| V156. The army takes over when government is incompetent.       | 1  | 2 | 3 | 4 | 5 | 6 | 7 | 8  | 9 | 10 |
| V157. Civil rights protect people's liberty against oppression. | 1  | 2 | 3 | 4 | 5 | 6 | 7 | 8  | 9 | 10 |
| V158. The economy is prospering.                                | 1  | 2 | 3 | 4 | 5 | 6 | 7 | 8  | 9 | 10 |
| V159. Criminals are severely punished.                          | 1  | 2 | 3 | 4 | 5 | 6 | 7 | 8  | 9 | 10 |
| V160. People can change the laws in referendums.                | 1  | 2 | 3 | 4 | 5 | 6 | 7 | 8  | 9 | 10 |
| V161. Women have the same rights as men.                        | 1  | 2 | 3 | 4 | 5 | 6 | 7 | 8  | 9 | 10 |

(*Show Card U*)

V162. How important is it for you to live in a country that is governed democratically? On this scale where 1 means it is “not at all important” and 10 means “absolutely important” what position would you choose? (*Code one number*):

|                      |   |   |   |   |   |   |   |   |                      |
|----------------------|---|---|---|---|---|---|---|---|----------------------|
| Not at all important |   |   |   |   |   |   |   |   | Absolutely important |
| 1                    | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10                   |

(*Show Card V*)

V163. And how democratically is this country being governed today? Again using a scale from 1 to 10, where 1 means that it is “not at all democratic” and 10 means that it is “completely democratic,” what position would you choose? (*Code one number*):

|                       |   |   |   |   |   |   |   |   |                       |
|-----------------------|---|---|---|---|---|---|---|---|-----------------------|
| Not at all democratic |   |   |   |   |   |   |   |   | Completely democratic |
| 1                     | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10                    |



## **Appendix A**

### PCOW COW Country Code

| <b><u>Code</u></b> | <b><u>Label</u></b>          |
|--------------------|------------------------------|
| 2                  | USA United States of America |
| 20                 | CAN Canada                   |
| 52                 | TRI Trinidad and Tobago      |
| 70                 | MEX Mexico                   |
| 90                 | GUA Guatemala                |
| 100                | COL Colombia                 |
| 135                | PER Peru                     |
| 140                | BRA Brazil                   |
| 155                | CHL Chile                    |
| 160                | ARG Argentina                |
| 165                | URU Uruguay                  |
| 200                | UKG United Kingdom           |
| 210                | NTH Netherlands              |
| 220                | FRN France                   |
| 225                | SWZ Switzerland              |
| 230                | SPN Spain                    |
| 232                | AND Andorra                  |
| 255                | GMY Germany                  |
| 290                | POL Poland                   |
| 310                | HUN Hungary                  |
| 325                | ITA Italy                    |
| 345                | YUG Yugoslavia               |
| 349                | SLV Slovenia                 |
| 352                | CYP Cyprus                   |
| 355                | BUL Bulgaria                 |
| 359                | MLD Moldova                  |
| 360                | ROM Romania                  |
| 365                | RUS Russia                   |
| 369                | UKR Ukraine                  |
| 372                | GRG Georgia                  |
| 375                | FIN Finland                  |
| 380                | SWD Sweden                   |
| 385                | NOR Norway                   |
| 432                | MLI Mali                     |
| 439                | BFO Burkina Faso             |
| 452                | GHA Ghana                    |
| 517                | RWA Rwanda                   |
| 530                | ETH Ethiopia                 |
| 551                | ZAM Zambia                   |
| 560                | SAF South Africa             |
| 600                | MOR Morocco                  |
| 630                | IRN Iran                     |
| 640                | TUR Turkey                   |
| 645                | IRQ Iraq                     |
| 651                | EGY Egypt                    |
| 663                | JOR Jordan                   |
| 710                | CHN China                    |
| 713                | TAW Taiwan                   |
| 714                | HKG Hong Kong                |
| 732                | ROK South Korea              |
| 740                | JPN Japan                    |
| 750                | IND India                    |
| 800                | THI Thailand                 |
| 816                | DRV Vietnam                  |
| 820                | MAL Malasia                  |
| 850                | INS Indonesia                |
| 900                | AUL Australia                |
| 920                | NEW New Zealand              |

