What Makes a Country Environmentally Friendly?

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Introduction

Carbon emissions, climate change, plastic pollution—environmental issues have been a problem for decades, but in recent years controversies concerning environmental practices have come to a head. As shifting weather patterns negatively impact global food production and rising sea levels increase the risks of catastrophic flooding for nations around the world, immediate environmental action is necessary (United Nations 2019). The international public has taken to making its voice heard on the subject; as awareness has increased, so have popular protests and pressure on domestic governments and international organizations alike to take action and alleviate global environmental issues. Although individuals have the ability to impact the environment through their own actions, whether particular countries decide to adopt environmentally friendly policies or maintain their current environmental practices will determine the future of the planet. It seems as though every state has its own ideas about how to best legislate environmental policy, and some states even deny that these issues require immediate action. International environmental treaties are often viewed as toothless and unenforceable while protests often draw large crowds but result in little governmental action. In light of these challenges, it is vital to ask: what makes a state environmentally friendly? Is a state's environmental friendliness determined by its form of government? Wealth? Identity and culture? Education levels? Or another, more important factor?

In this paper, I seek to explain which factors are most effective in determining a country's environmental policy–specifically how form of government, wealth, public opinion, and educational attainment make a country more or less environmentally friendly. I will begin by outlining my theoretical approach. The current literature largely focuses on how single factors—such as form of government alone—impact environmental friendliness (Clulow 2019,

244). My paper broadens current scholarship to include a multivariate analysis that not only identifies the effects of individual factors, but how these factors interact with one another, revealing   policies countries should focus on to improve environmental performance.

Next, I will outline my methodology, including my hypothesis, variables, and data. I hypothesize that domestic factors are the most telling indicators of a country's environmental friendliness, specifically that form of government is the critical determinant of whether a country's wealth, culture, and education levels are able to influence environmental policy. My hypothesis is rooted in the reasoning that while autocratic states are not obligated to listen to their citizenry in order to maintain power, democratic regimes must satisfy their constituents in order to win reelection and retain political control. Therefore, democratic states with significant wealth, publics that are highly interested in environmental friendliness, and high education levels should be the most environmentally friendly.

Finally, I will present the quantitative results of my research and data, revealing which variables are the biggest indicators of a state's environmental friendliness. I conclude that wealth and educational attainment are the most significant indicators of a state's environmental performance, while a state's form of government is not a significant indicator of environmental friendliness.

Theory

In order to answer the question of which factors most influence environmental friendliness, I will approach the relationship between a state's environmental policy and state-specific characteristics through the lens of liberal international relations theory. Liberalism posits that both domestic and international civic cultures—rather than power politics, as realism theorizes—are the most important indicators of a state's behavior. According to traditional liberal

views, cooperation and conflict on the international scale depend on the representativeness of a domestic government, the level of social cohesion and equity in a society, and the level of a state's international economic interdependence. Liberalism is often characterized as the most effective theory of international relations to explain a country's environmental politics as it accounts for both domestic policy and international interdependence, both of which are vital indicators of a state's environmental friendliness. From these assumptions, I identified four main variables to test how much of a state's environmental friendliness is explained by liberal principles: form of government, wealth, public environmental engagement, and education levels.

According to Keohane and Nye, my chosen variables should indicate international policy since they are "capabilities that are affected by the norms, networks, and institutions associated with international organization" at the time (Keohane and Nye 2012, 47). Because each of these variables is connected to norms and international organizations, I will include controls accounting for that state's international presence; I do not expect to predict a state's environmental performance without acknowledgement of their status on the international stage. Yet, Keohane and Nye also hold that, in consideration with issues like environmental policy, "foreign policy leaders… will have to pay even more attention than usual to domestic politics," emphasizing the importance of state-specific indicators in environmental policy (Keohane and Nye 2012, 202).

Additionally, in liberalism, a state's regime type is a significant factor in determining environmental policy. Studies have found that democracies tend to perform better in terms of emission levels than non-democracies (Clulow 2019, 244). Therefore, it can be theorized that democracies will have more overall environmentally friendly policies than autocracies for the following reasons.

First, democracies, by definition, allow their citizens to participate in government policymaking, something that autocracies fail to do. In democracies, there are more opportunities for environmental factors to influence policymaking and hold elected politicians accountable, implying that a democratic state's environmental policies and subsequent behavior should be more environmentally friendly. Interest groups are a major part of the political decision-making process within democracies, and environmental activists are able to lobby the government and encourage leaders to pass environmentally friendly legislation. The voice of the public is much louder in democracies than autocracies, so if a democracy has a substantially engaged and environmentally concerned public, "the stringency of environmental policies" should be raised (Fredriksson 2005, 363).

Secondly, because of political competition for re-election, policymakers will be more inclined to listen to public opinion than autocratic dictators who do not need popular support to maintain their sovereignty. Democracies are characterized by regular and fair elections; unpopular leaders who do not listen to the voice of the public will be ousted by popular vote. Therefore, in a democracy with an environmentally engaged public, leaders are incentivized to pass environmentally friendly legislation. In autocracies, even if the public is very focused on environmental friendliness, leaders have no incentive to pass legislation that reflects public opinion.

On the other hand, the very characteristics that encourage environmental friendliness in democracies could also lead to less environmentally friendly policies. Democratic regimes take into consideration opinions of all the people, including those that may be *against* environmental regulations. Autocratic regimes, alternatively, do not have to consider the wants of the people at all; if a dictator favors environmental regulation, it will be much easier for that dictator to

implement stringent policies and enforce obedience than it is in a democratic society. Whether the public's opinion on environmental policies actually makes an impact on a state's environmental policies will be analyzed below.

Various studies have found that GDP per capita has a positive effect on environmental concern up to a certain point, and analyses of the International Social Survey Program (ISSP) have emphasized this (Franzen and Vogl, 2013, Franzen and Diekmann, 1999). A state's wealth would be expected to impact its environmental friendliness positively, especially because wealthier countries have the freedom to pursue greener industries. A wealthier country has the ability to focus on implementing environmentally friendly policies rather than on pursuing development and building the economy through industry. Additionally, as liberalism predicts, wealthier countries are more economically interdependent on the global stage, which should lead to increased international cooperation with environmental policies.

At the same time, wealthier states may be confined to what is sometimes called the carbon curse: resource-rich countries produce more carbon commissions and weaker incentives to invest in improvements of energy efficiency (Friedrichs and Inderwildi 2013, 1356-1365). Fuel rich countries tend to be wealthier, and it is difficult for them to evade carbon-intensive developmental pathways (Friedrichs and Inderwildi 2013, 1356-1365). Once a wealthy, developed state has a successful, but environmentally harmful, industry, it could be more difficult for that state to abandon that industry for a greener one.

The value placed on environmental friendliness by a state's civic culture should also be telling of how environmentally friendly a state's policies are. In recent years, the status of public opinion on environmental issues has increased as the public becomes more passionate about these problems, and one would expect that governments would reflect the public's growing

interest in pro-environmental policy. Yet, previous studies have found a "value-action gap" when it comes to environmental policy, raising the question of whether or not public value of environmental issues actually makes an impact on environmental policies (Blake 1999, 257).

For environmental issues, especially, taking consideration of a state's public interest in environmental friendliness is vital: "These issues directly affect particular groups, and touch the lives of nearly all citizens. If domestic interest groups are powerful enough to block policies favored by the president… top officials may no longer be able to determine policy" (Keohane and Nye 2012, 203). In democracies particularly, a state's public environmental engagement should be expected to have a significant impact on that state's environmental policy, as clean air and protection from climate change are issues that play a major role in the lives of everyone.

In terms of education, many studies have found a correlation between higher education levels and an individual's environmental friendliness (Brecard et al. 2009, 115). The causal logic surrounding this correlation ranges from the rational economic benefits of green behavior to the increased concern over social welfare that comes with education (Meyer 2015, 108-121). As citizens become more educated, recognition of the long-term economic benefits of environmentally friendly policies begins to outweigh the short-term negatives. Additionally, education brings an increased concern over social welfare—a concern that should be directly affected by environmental policies.

A highly educated citizenry translates to a highly educated government, so leaders in highly educated countries may be more sympathetic to environmentally friendly policies. I theorize that having higher education levels will lead to having more environmentally friendly policies, especially in democracies, since the educated citizens will vote for leaders and policies

that agree with their friendlier opinions on environmental behavior. Having a highly educated citizenry in an autocracy should be less effective, since the policymakers are not elected.

Methodology and data

Hypothesis: I predict that domestic factors will be significant indicators of a state's environmental policy. Specifically, I hypothesize that a state's form of government will be the most significant predictor of environmental friendliness. Form of government exists at the center of my predictions for environmental friendliness since I expect democracy to be required for wealth, public opinion, and education to have significant effects on environmental policy. Even if the public of an autocratic state places a high cultural value on environmental friendliness, the state is under no obligation to satisfy the public's wants. Additionally, wealthy autocracies may be less likely to spend their money on environmentally friendly policies because they do not have to be reelected by a satisfied citizenry. Finally, the significance of a highly educated citizenry should hinge upon whether or not the state's government takes the citizenry's opinions into account. Therefore, I predict that wealthy democracies with a highly educated population that values environmental friendliness should be the most environmentally friendly.

Dependent Variable

Environmental Friendliness: Conceptually, a country's environmental friendliness can be measured by its willingness to sign international environmental treaties and whether it meets "the resource… needs of current and future generations without compromising the health of the ecosystems that provide them" (Morelli 2011, 6). Yet, treaties do not always make a tangible difference in a country's environmental policy, and this conceptual definition therefore does not translate to actual environmental performance. Operationally, this study will instead measure a country's environmental friendliness by its ranking on the 2018 Environmental Performance

Index (EPI), a ranking indicated by scores across "ten issue categories covering environmental health and ecosystem vitality" (Yale University 2018, 3). This index does not include treaties, but focuses on actual indicators of a country's emissions, such as air quality, biodiversity, climate and energy, and agriculture. Each country included in the EPI is given a score on a common scale from 0 to 100, with 0 indicating worst performance and 100 indicating best performance (See Appendix A).

Independent Variables

Form of Government: In order to measure how democratic a country is, I utilized The Economist Intelligence Unit's 2018 Democracy Index. The Economist Intelligence Unit's Democracy Index goes further than other prominent freedom indices in that they include more indicators than political freedom and civil liberties. The Democracy Index is based on five categories, including electoral process and pluralism, the functioning of government, political participation, political culture, and civil liberties. After a comprehensive analysis of key indicators within these categories, a country is classified as one of four types of regime: "full democracy," "flawed democracy," "hybrid regime," or "authoritarian regime." Countries are then assigned a score on a scale from 0-10, with 0 being least democratic and 10 being most democratic (See Appendix B).

Wealth: While measuring the wealth and development of each country in my study, I utilized The World Bank's data for a country's Gross Domestic Product (GDP). I chose to use GDP per capita to measure states' wealth because it provides a simple estimation of a country's output in a standardized way across all countries. GDP per capita is also used to estimate the size of a country's economy, an important factor to consider when measuring a country's overall wealth.

Public Environmental Engagement: In order to get an idea of how much value a state's public places on environmental friendliness, I decided to create a variable called public environmental

engagement. Public environmental engagement includes how invested a state's citizens are in protecting the environment: whether they participate in protests, donate to environmental groups, or place environmental issues over economic ones. In order to measure a country's public environmental engagement, I accessed data compiled by the World Values Survey (WVS), the "largest non-commercial, cross-national, time series investigation of human beliefs and values ever executed" (Inglehart R. et al. 2014). The WVS conducts nationally representative surveys in almost 100 countries which cover the full range of global variations, from very poor to very rich. In order to develop their comprehensive questionnaire, social scientists from all over the world create questions measuring "cultural values; attitudes and beliefs toward gender, family, and religion; attitudes and experience of poverty, education, health, and security; social tolerance and trust; attitudes toward multilateral institutions; cultural differences; and similarities between regions and societies" (Inglehart R. et al. 2014). A handful of these questions concern environmental involvement, and these are the questions I utilized for my study. My sample is limited to the countries that were given these environmental-related questions, comprising a total of 51 countries from different regions around the world (See Appendix C).

I operationalized this data by creating a 'culture' variable in my compiled data that gave a score from 0-100, measuring the percentage of respondents who had answered survey questions in an environmentally engaged way. For example, in Argentina, 46.41% of respondents said that believing that looking after the environment is important is either very much like them or like them. I then averaged the percentage of respondents answering environmental questions in the affirmative, creating a comprehensive score for each country in the study (See Appendix D).

Education: A state's education levels may be measured in many different ways, but for this study I chose to measure educational attainment by a state's mean years of schooling, the average

number of completed years of education of a country's population (Roser 2018). I acquired data for each state in my study's mean years of schooling through the United Nations Human Development Data for 2018.

Control Variables

Population: I included population as one of the control variables within my study. A country with a much higher population density should have greater carbon emissions, pollution, and waste simply because more people live in that country. I measured population through data from the World Bank for each of the countries in my study.

International Involvement: Although I am hypothesizing about the domestic factors determining environmental policy, it is important to account for a state's presence on the global scale in order to estimate its international involvement. I did this by creating a variable that accounts for how many international treaties each of the states in my study has signed since 1900 by using data from the International Red Cross. Most of these treaties originated in the United Nations. I thought that treaties would provide a straightforward way to estimate a country's international presence because more internationally involved states should be willing to sign more treaties.

Miles of Coastline: My final control variable is the miles of coastline a country possesses. Because rising sea levels are a major consequence of climate change, I thought that states with more coastline may be more sensitive to environmental issues, and therefore would enact more environmentally friendly policies. I used data compiled by the CIA World Factbook to estimate the miles of coastline, defined as the total length of boundary between the land area and the sea, and included this variable in my analysis.

Results

Methodology: In order to test the significance of my hypotheses, I collected data for all of my variables and performed three multivariate regressions. I decided on this quantitative method because it allows a researcher to see how much of the dependent variable—in my case, environmental performance—is explained by the independent variables—form of government, GDP, public environmental engagement, and educational attainment. A multivariate regression also shows whether the relationship between independent variables and dependent variables is significant. My results were as follows:

Model 1

VARIABLES	(1) EPI Score
Form of Government	0.119
	(0.690)
GDP per capita	0.000253***
	(7.83e-05)
Public Environmental Engagement	0.0648
	(0.189)
Educational Attainment	1.265**
	(0.480)
Population	-1.07e-05***
	(3.81e-06)
International Treaties Signed	0.173
	(0.096)
Miles of Coastline	0.000084
	(0.000112)
Constant	35.86***
	(5.786)
Observations	51
R-squared	0.659

Standard errors in parentheses
*** $p<0.01$, ** $p<0.05$, * $p<0.1$

In my first regression, I simply calculated the relationship between a state's EPI score and my independent variables while holding constant for all of the other variables. According to the regression analysis, the only independent variables that have a significant relationship with EPI scores are a state's GDP per capita and educational attainment. Form of government and public environmental engagement, on the other hand, did not have a significant relationship with EPI score in this regression.

The data show that when a state's GDP per capita increases by one dollar, its EPI score is expected to increase by 0.000253, an amount that, though small, is statistically significant at the 99% level. Therefore, it can be concluded that how wealthy a country is does, in fact, significantly impact its environmental policies. Form of government, on the other hand, was not a significant variable: with a 1-point increase in a country's democracy score, EPI score is expected to increase by a small and insignificant amount, signifying that the probability that the relationship is attributed to chance cannot be ruled out. Similarly, a one unit increase in a state's public environmental engagement score is associated with a .0648 unit increase in the EPI score—another statistically insignificant amount. Educational attainment and EPI score, though, appear to have an extremely meaningful relationship. When a state's mean years of educational attainment increase by one year, its EPI score is expected to increase by 1.265, a relationship significant at the 95% level.

Of my control variables, only one was statistically significant: population. Interestingly, population and EPI score have a negative correlation that is significant at the 99% level. Therefore, as population increases, a country's EPI score is expected to decrease quite significantly.

The estimated constant of the regression is 35.86. This means that when the other independent variables are 0, a state's environmental performance score is expected to be 35.86. The R-squared in this regression is 0.659, meaning that 65.9% of the variance in EPI score is explained by my variables. This is a moderately high R-squared value, but there may be other, more important indicators of a country's environmental friendliness.

For my next regressions, I decided to make form of government a binary variable called Democracy, in which a state was coded as 1 if it had a democracy score of over 6. I then interacted, or multiplied, democracy with both public environmental engagement, GDP per capita, and educational attainment, and the results were as follows:

Model 2

VARIABLES	(1) EPI Score	(2) EPI Score	(3) EPI Score
Democracy	1.863	-0.895	6.746
	(3.332)	(10.22)	(11.16)
Public Environmental Engagement	0.0480	0.0409	0.0338
	(0.196)	(0.299)	0.204
Democracy#Public Environmental Engagement	0.0487		
	(0.413)		
GDP per capita	0.000413*	0.000257**	0.000295***
	(0.000211)	(7.61e-05)	(9.98e-05)
Democracy#GDP per capita		-0.000180	
		(0.000227)	
Educational Attainment	1.339***	1.288**	1.424**
	(0.489)	(0.508)	(0.547)
Democracy#Educational Attainment			-0.692
			(1.157)
Population	-1.09e-05***	-1.07e-05***	-1.11e-05
	(3.81e-06)	(3.85e-06)	(3.87e-06)
International Treaties Signed	0.163	0.176*	0.179*
	(0.0972)	(0.0965)	(0.0963)
Miles of Coastline	8.11e-05	8.13e-05	8.46e-05
	(0.000118)	(0.000121)	(0.000119)
Constant	35.34***	36.56***	35.23***

	(6.238)	(7.109)	(6.364)
Observations	51	51	51
R-squared	0.664	0.659	0.662

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

When I interacted democracy with public environmental engagement, the regression considered public environmental engagement for democracies separately from non-democracies. Yet, public environmental engagement was still not a significant variable, implying that public opinion about environmental policy is not significant, no matter the regime type. When I interacted democracy and GDP per capita, the relationship was also not significant, and whether a country is democratic does not reveal how its wealth affects environmental performance. Finally, I interacted democracy with a country's educational attainment, and again, the relationship was not significant. Therefore, a state's form of government does not seem to signify the implications of wealth, a highly engaged public, or high education levels.

Conclusion

According to my analysis, GDP per capita, educational attainment, and population are the most significant indicators of a state's environmental friendliness. When democracies are interacted with GDP per capita, public environmental engagement, and educational attainment, none of the relationships were significant. Therefore, my hypothesis was partially correct: wealthier and more educated countries do have more environmentally friendly policies, but the effects of these variables do not hinge upon whether or not a country is a democracy. Instead, wealth and education increase a country's environmental friendliness regardless of whether that country is a democracy. Public environmental engagement, too, is never a significant indicator of environmental friendliness.

These results are consistent with much of the existing theory surrounding environmental policy. Current scholarship emphasizes the ability of wealthy countries to focus more on environmentally friendly policy than developing countries. My results conflict with the carbon curse theory, which posits that wealthier, resource-rich countries do not pursue energy efficient policies as the more resource-rich countries in my sample do have more environmentally friendly policies. Additionally, education has long been linked to environmental friendliness, and my results affirm the established theory that increased education leads a country to have more environmentally friendly policies.

An unexpected feature of my results is the insignificance of a country's form of government on its environmental policies. Although past scholarship indicates that more democratic countries do tend to have lower emissions levels, for example, my results depart from this view. When considering a country's wealth and education levels, the form of government is no longer a significant predictor of environmental friendliness.

Another unexpected result from my analysis is the significance of population on environmental friendliness. Although it is widely accepted that larger populations lead to more environmental degradation, how population affects environmental policy decisions has not been extensively studied. In the future, scholars should analyze the relationship between population levels and a government's decisions about environmental policy.

Implications of my quantitative conclusions are threefold: first, the international public should be aware that wealthier countries are more likely to have environmentally friendly policies. Foreign aid should be focused on increasing the long-term wealth of poorer countries, as wealth leads to significant increases in environmental friendliness under any form of government. Second, education should become a major focus of environmental advocacy groups

and state governments hoping to improve environmental policy. Increasing a country's average educational attainment has a clear and significant positive correlation with environmental friendliness, so efforts to increase mean years of schooling within states could lead to environmental payoffs. Third, although population cannot be ethically controlled, global leaders should be aware that higher populations are associated with less environmentally friendly policies within states.

My analysis is not without limitations, though; there are many more specific variables that could be important indicators of a state's environmental performance, especially considering my relatively low R-squared. These include, but are not limited to, a state's geographical region, employment trends, average temperature, and reliance on fossil fuels. Because these variables could be very significant in deciding a state's environmental policies, their roles cannot be ruled out in any sound analysis.

Yet, I am confident that my results—considering the relationship between environmental friendliness and form of government, GDP, public environmental engagement, and educational attainment—provide an accurate prediction of environmental friendliness when it comes to these variables. As time goes on and environmental issues become increasingly problematic, I expect that a country's GDP per capita and education levels will be sound and important indicators of that country's environmental friendliness.

APPENDIX A

Environmental Performance

The ten issue categories included in my environmental performance variable are Air Quality, Water & Sanitation, Heavy Metals, Biodiversity & Habitat, Forests, Fisheries, Climate & Energy, Air Pollution, Water Resources, and Agriculture. All of these categories effectively reflect a country's environmental friendliness and sustainability, and each includes numerous indicators that measure the issue category. Air quality considers how indoor and outdoor air pollution, caused by natural or man-made contaminants released into the atmosphere, are leading threats to human health. Water and sanitation includes indicators measuring sanitation and access to drinking water. Heavy metals can cause extreme health challenges, and the EPI measures them through lead exposure. The biodiversity and habitat indicator is measured by terrestrial biome protection, marine protected areas, species protection index, protected area representatives index, and species habitat index. A country's forest score is measured by tree cover loss. Fish stock status and Regional Marine Trophic Index indicate a country's fishery score. A country's response to climate change and energy are measured by carbon dioxide emission intensity, methane emission intensity, nitrous oxide emission intensity, and black carbon emission entity. Sulfur dioxide and nitrogen oxide emissions indicate a country's levels of air pollution. Water resources are measured by a country's wastewater treatment, which minimizes the negative impacts of sewage. Agricultural productivity is indicated by the Sustainable Nitrogen Management Index.

APPENDIX B

Democracy Score

The index values are used to place countries within one of four regime types:

1. Full democracies: scores greater than 8

2. Flawed democracies: scores greater than 6, and less than or equal to 8

3. Hybrid regimes: scores greater than 4, and less than or equal to 6

4. Authoritarian regimes: scores less than or equal to 4

Full democracies are classified as countries that not only respect basic political freedoms and civil liberties, but also tend to be underpinned by a political culture that emphasizes and places great value on democracy: the government functions satisfactorily, the media is independent, checks and balances exist, and the judiciary is independent.

Flawed democracies, like full democracies, are required to maintain free and fair elections and respect basic civil liberties. Unlike full democracies, though, flawed democracies contain significant weaknesses in their forms of governance.

Hybrid regimes tend to have substantially irregular elections that prevent them from being free and fair in addition to serious weakness in political culture, functioning of government, and political participation. Corruption is common, and the press and the judiciary are not independent.

Authoritarian regimes are states where political pluralism is either absent or extremely limited, and many of these states have outright dictatorships. Elections are neither free nor fair, civil liberties are violated, media are state-owned, and there is no independent judiciary.

Wealth In order to measure the wealth and development of each country in my study, I utilized The World Bank's data for income and GDP per capita. I chose GDP per capita rather than other

forms of measuring a country's wealth because it divides the country's gross domestic product by

its total population, making it a good example of a country's standard of living. GDP per capita

is also an effective way of making cross-country comparisons.

APPENDIX C

Public Environmental Engagement

Countries included in my sample include the following:

1. Algeria

2. Azerbaijan

3. Argentina

4. Australia

5. Armenia

6. Brazil

7. Belarus

8. Chile

9. China

10. Colombia

11. Cyprus

12. Ecuador

13. Estonia

14. Georgia

15. Germany

16. Ghana

17. Haiti

18. India

19. Iraq

20. Japan

21. Kazakhstan

22. Jordan

23. South Korea

24. Kuwait

25. Lebanon

26. Libya

27. Malaysia

28. Mexico

29. Morocco

30. New Zealand

31. Nigeria

32. Pakistan

33. Peru

34. Philippines

35. Poland

36. Romania

37. Russia

38. Rwanda

39. Singapore

40. South Africa

41. Zimbabwe

42. Sweden

43. Thailand

44. Tunisia

45. Turkey

46. Ukraine

47. Egypt

48. United States

49. Uruguay

50. Uzbekistan

51. Yemen

APPENDIX D

Public Environmental Engagement

The minimum sample size used by the WVS is 1200 and must represent all people of age 18 or

older within private households in each country. The survey is translated into all languages

which serve as the first language for 15% or more of the population in each country where the

survey is conducted. Interviews are conducted face-to-face with respondents, and non-response

issues are minimized by investigators.

      The questions that I focused on from the WVS were as follows:

1. Active/Inactive membership: Environmental organization

    a. 0. – Not a member

    b. 1. – Inactive member

    c. 2. – Active member

2. Looking after the environment is important to this person; to care for nature and save life

   resources

    a. 1. – Very much like me

    b. 2. – Like me

    c. 3. – Somewhat like me

    d. 4. – A little like me

    e. 5. – Not like me

    f. 6. – Not at all like me

3. Most serious problem of the world

    a. 1. – People living in poverty and need

    b. 2. – Discrimination against girls and women

    c. 3. – Poor sanitation and infectious diseases

      d. 4. – Inadequate education

      e. 5. – Environmental pollution

4. Protecting environment vs. Economic Growth

      a. 1. – Protecting the environment should be given priority, even if it causes slower economic growth and some loss of jobs

      b. 2. – Economic growth and creating jobs should be the top priority, even if the environment suffers to some extent

      c. 3. – Other answer

5. Past two years: given money to ecological organization

      a. 1. – Yes

      b. 2. – No

6. Past two years: participated in demonstration for environment

      a. 1. – Yes

      b. 2. – No

These questions were most relevant to my topic of public engagement in environmental friendliness. I measured the percentage of environmentally friendly answers for each question in each country that the survey was performed, creating a comprehensive variable of environmental friendliness by averaging the percentage for each country.

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