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Green in Your Wallet or a Green Planet: Views on Government Spending and Climate Change

Abstract

The scientific community is in a near consensus that climate change is not only anthropogenic but is also a major threat to people around the world. Despite the alarm bells from the scientific community many people in the United States simply deny the science of climate change. Many studies have targeted level of education, party membership, and gender in their role in influencing how individuals perceive climate change. This study showed that views on government spending plays a very important role in the importance of the environment. Individuals who supported decreased government spending tend to view jobs as more important than the environment when compared to individuals who supported increased government spending, this is true among both Republicans and non-Republicans. Generally speaking, the Republican platform typically involves the economy over the environment, and the Democratic platform typically involves more environmentally friendly action. This study posits Republicans that believed the government should increase spending in 2012 were indistinguishable from non-Republicans who supported reductions in government spending. The inability to distinguish between republicans who believe in increased spending and non-republicans who believe in increased spending suggests that views on the environment may be more than simply a partisan issue they may simply have to do with willingness to spend money on the environment.

Keywords

Climate Change, Environment, Denial

Disciplines

Environmental Studies | Models and Methods

Comments

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December 8, 2017
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Green in Your Wallet or a Green Planet:
Views on Government Spending and the Environment

Introduction

97% of scientists believe that Earth's climate is changing due to the impact that humans have had since the industrial revolution. Despite an overwhelming majority of scientist supporting this idea, in the public and governmental spheres there is still discussion as to whether or not humans are having this effect on the environment. Environmentalist ideas are often portrayed as being liberal views as opposed to a scientific consensus. Science often has crossover with political debate because the effects of science have a major impact on human society and governance. The topic of environmental issues and how they are received by the general public is essential in order to understand why there is a difference in the support for climate change amongst scientists and the general population. In order to enact better policies that create a sustainable future, it is essential to understand the background of the people that oppose these types of legislation and reasons why they oppose such legislation and ideas.

Research Questions and Design:

- What factors impact whether or not an individual is likely to support or refute issues such as climate change?
- Are the factors that impact climate change belief specific to one political party?

- If political parties do impact our beliefs towards climate change is it because climate change contradicts a value, idea, or platform held by the party?

Literature Review

Despite beginning to see/feel the impacts that climate change is going to have on the world we live in, the American public is still stuck debating the validity of global warming. Debate over the scientific consensus of anthropogenic climate change, in the United States is much more divided along political party lines when compared to the public opinions foreign nations (Hamilton, 2011, and Zeigler 2017). In a study among industrialized countries only China scored lower than the United States for overall levels of concern for issues of global warming (Hamilton, 2011). In a study of climate change debate, it was also found that among the United States, Germany, and China, political orientation in the United States was by far more relevant than in the other countries, the United States having the most political divide (Ziegler, 2017). Polarization in United States Politics is a reflection of conservative campaigns promoting contrarian science (Hamilton 2011, Antonio & Brulle 2011, Dunlap & Jacques 2013, McCright & Dunlap 2011, McCright & Hall 2011). A difference between the contrarian science used and the main stream science is the setting and the audience to which this information is transmitted. 90% of Contrarian science related to climate change or global warming is not peer reviewed, this allows the author to make and recycle unfounded claims refuting climate science (Dunlap & Jacques, 2013). Contrarian science is often used as a wedge in political issues, and to inspire doubt in the accuracy of climate science (McCright & Hall 2011).

This being said, studies have shown that members of the public with the highest degrees of scientific reasoning and technical reasoning were not the most concerned about issues of climate change, level of education split samples making conservatives less in support and liberals

more in support (Kahan 2012, Hamilton 2011, McCright and Dunlap 2011). This study indicates that widespread apathy towards climate change issues and scientific consensus is not the reason for the current polarized climate. Rather, personal interests and assimilation bias, hearing the information we are comfortable hearing and tuning out the rest, are likely to blame (Kahan 2012, Hamilton 2011, McCright and Dunlap 2011). Previous studies have shown that individuals that identify with the democratic party are more likely to express beliefs and personal concern consistent with scientific consensus with regards to climate change, when compared to their conservative peers (McCright & Hall 2011, Hamilton 2011). This statement however does not show scientific literacy or understanding of the science, what it could posit is that members of the democratic party are more likely to conform to similar ideas, in this case, ideas that are supported by science.

Some studies (e.g. McCright & Dunlap, 2011) address the issue of continued political polarization of climate change debate through identifying one demographic that disproportionately makes up the debate, white male conservatives. In a study of industry organizations, think tanks, media pundits, and Republican politicians the dominant demographic is white males (McCright and Dunlap, 2011). McCright & Hall (2011) found that in a comparison of confident conservative white males, other conservative white males, and the rest of the population, a higher percent of confident conservative white males deny the claims of global warming related statements more than any other group (McCright and Dunlap, 2011). These demographic of white conservative men that hold positions like politicians, media pundits, and think tanks that deny global warming serves as a representation of issues that remain deeper than politics and lay in the realm of personal interest as mentioned by (McCright & Hall 2011).

Understanding these results will provide useful insight into better understanding why there is such a polarization with topics such as global warming and climate change.

The cause of climate change is one of the reasons why there are disputes global warming. As previously indicated many well educated conservative groups still strongly refute the ideas of global warming. A key indicator into why the issue is disputed can be found in the wording of “Global Warming” or “Climate Change”. Global warming implies that something (humans) is warming our climate, while climate change indicates a change, just like our climate has changed since the ice age, and how many things in the earth system are constantly changing. Studies have shown that Republicans are more likely to be supportive of issues climate change than they are of global warming (Schuldt, 2017). Some studies suggest that while political party identification is often an indicator of personal beliefs, membership in a party does not affect views rather our personal views are often a stronger indicator towards environmental related action than political party (Zeigler, 2015, and Schuldt, 2017). Despite the two words generally referring to the same things the difference linguistically is that people think global warming more so implies a human impact, and thereby humans are responsible for mitigating this issue.

This study

Climate Change in addition to other environmental issues can takes place in many different ways, and have impacts on many different people. Climate Change is often the first issue that comes up during discussions of environmental issues. Climate change in most political debates refers to the increased number of greenhouse gasses put into our atmosphere because of human activity. Greenhouse gasses such as Carbon dioxide, or methane have been given their name because when they are in the atmosphere they absorb and retransmit the reflected heat

energy from the earth, similar to a greenhouse. A warmer climate has many human impacts, rising sea levels, increased number and severity of storms, loss of biodiversity to name a few.

These impacts of a climate change greatly effect most of the world in some type of way.

Hypothesis

In a comparison of individuals, I hypothesize that Republicans who support limited government spending will be the least likely to support environmental issues, when compared to Republicans with support for government spending and Non-Republicans.

Mitigating climate change has many impacts on human society, mitigating climate change can sometimes mean not utilizing the cheap forms of energy. In a global market or even domestically not using the cheapest materials might mean that another region that cares less about the climate might use this resource making the same end product cheaper. This case of the tragedy of the commons seemingly creates a quandary, forcing individuals to sacrifice the economy for the sake of our environment or vice versa.

The Republican platform often features policies in support of limited government spending. Ignoring resources because of their environmental impact increases the prices of goods and can be harmful to businesses when other businesses utilize these resources. Additionally, investment in green infrastructure is very expensive, if Republicans support limited government spending it is unlikely that they will be supportive of large quantities of government spending on green infrastructure. The threat of large government spending on green investment could be a reason why Republicans are less likely to support ideas like climate change.

Research Design

Introduction

In order to test the hypotheses, I examined data from the National Election Study dataset from the 2012 election including 5,916 respondents from across the United States. I selected this data because there is a very large sample size from across the United States with many demographic based variables and many variables regarding action on political as well as environmental issues. The variable *envjob_self*, looking at respondent's choice of the environment or jobs on a 1 (environment) – 7 (jobs) scale, was chosen to be the dependent variable because it represents what respondents think is more important the environment or the economy.

Variable measurements:

In order to operationalize *envjob_self*, I use the *sprvpr_sself* and *pid_x* variables. The *sprvpr_sself* variable asks the respondent what is your opinion regarding government spending (1 reduce government spending – 7 increase government spending). The mean value of *sprvpr_sself* (mean=3.88) indicates a very slight lean towards reducing government spending but still relatively neutral. The median and mode values for this variable were both 4 indicating these respondents were neutral towards the issue (table 1). To further simplify the variable, I created a dummy variable indicating the support for reductions in government spending and those who did not support reductions in government spending. The mean value for this dummy variable is 0.39 (0, Do not support reductions in government spending – 1, Support for reductions in government spending) (table 1). The variable *pid_x* asks the respondent to indicate their party affiliation on a 7-point scale (1, strong Democrat – 7, strong Republican). The mean value for *pid_x* was 3.52 indicating a leaning of the sample towards identifying with the democratic party, the median value was an independent democrat, and the most frequent response was strong democrat (table 1). The dummy variable Republican was created from the

pid_x variable to simplify the interaction between Republicans support for spending and its impact on their views of the environment.

The variables, science_use, dem_edugroup, and dem_age_group_r were held at their respective means. The variable science_use represents the respondent's answers to the question how much should scientific consensus impact government policy (1 always – 5 never)? The mean response for science_use was 2.93 (table 1). The variable dem_edugroup asked the respondents their level of highest education. The median value for dem_edugroup_r was some post high school (table 1). The variable dem_age_group_r asked respondents their age. The median age group for dem_age_group_r was 50-54 (table 1).

Model Estimation:

To test the hypothesis I used the linear regression model. The linear regression model was chosen because of the interval nature (7-point scale) of the dependent variable envjob_self.

Results:

Support for reductions in government spending (spend_less) was shown to have a statistically significant impact on the dependent variable, making the respondent more likely to be supportive of the creation of jobs over the environment (envjob_self) with a coefficient of 0.646 ($P < 0.01$) (Table 2). Similarly, the dummy variable Republican was also found to have a statistically significant impact on the respondent's choice of jobs over the environment with a coefficient of 1.029 ($P < 0.01$) (Table 2). The interaction between Republican and support for government spending increased the likelihood the respondent would choose the jobs over the environment ($P < 0.01$) (Table 2). The coefficient for the interaction variable was 0.440. Similar to the regression table, the graph of the regression indicates that Republicans that believe the government should reduce spend less are the most likely to choose jobs over the environment.

The mean choice of Republicans that support increased government spending, and non-Republicans that support reductions in government spending are indistinguishable due to overlapping confidence intervals. Lastly non-Republicans that believe in increased government spending have most environmental leaning choice mean (Figure 1). Considering this information, we are able to reject the null hypothesis that there is no difference between the choice of job or environment between Republicans that favor reductions in government spending and their peers. The information from this regression is consistent with the theory that spending in addition to political party has a major impact on how people view the environment.

Discussion/Conclusions

The regression in this study shows that views on government spending as well as political party do impact the choice of environment or jobs. The desire for reductions in government spending makes people prefer jobs over the environment more than people in the same party who support increase in government spending for both Republicans and non-Republicans. Generally speaking, the Republican platform typically involves the economy over the environment, and the Democratic platform typically involves more environmentally friendly action. Despite this generalization the few Republicans that do support more government spending are indistinguishable from democrats who support decreased government spending in terms of their choice of jobs or the environment, due to overlapping confidence intervals. This evidence confirms our argument that spending is an important factor when it comes to action on environmental issues, positing an important explanation why people will not support environmental action. People will not support environmental actions because they believe that jobs are more important than the environment

Previous literature has shown that despite a consensus among the scientific community that the world is experiencing issues of anthropogenic climate change, there are many things that may contribute to climate change denial or the hindrance to environmental action. The biggest impact on belief in climate change comes from the political party that people associate with (Hamilton 2011, Antonio & Brulle 2011, Dunlap & Jacques 2013, McCright & Dunlap 2011, McCright & Hall 2011). This is likely due to issues of assimilation bias where people gather information and conform their ideas to the ideas that is similar to their own. Sources of this form of bias may come from watching only one news channel, particularly one that is biased towards one political party. Related to the issue of assimilation bias is the finding that increased levels of education also increase polarity in the climate change debate (Kahan 2012, Hamilton 2011, McCright and Dunlap 2011). This is along the same lines as assimilation bias because more educated people might just use more biased information to educate themselves on the issue.

Looking deeper into the issues of divide on the issue by party some evidence shows that white men are among the largest demographic of climate change deniers (McCright and Dunlap, 2011). The research on this topic seems to suggest that climate change denial is likely a result of personal greed. The evidence from this study supports the previous literature suggesting that greed is a major motivation in slowing climate action. The results from this study show when people have to choose between the economy and the environment people who want to limit the amount that the government spends people's money show less support for the environment.

Using this information to further policy action towards the environment, I suggest future environmental actions take jobs and the economy into account. If more environmental or sustainable action can also emphasize long term economic growth or economic sustainability,

these actions might be more successful among people who previously may not have supported environmental actions.

Tables and Figures

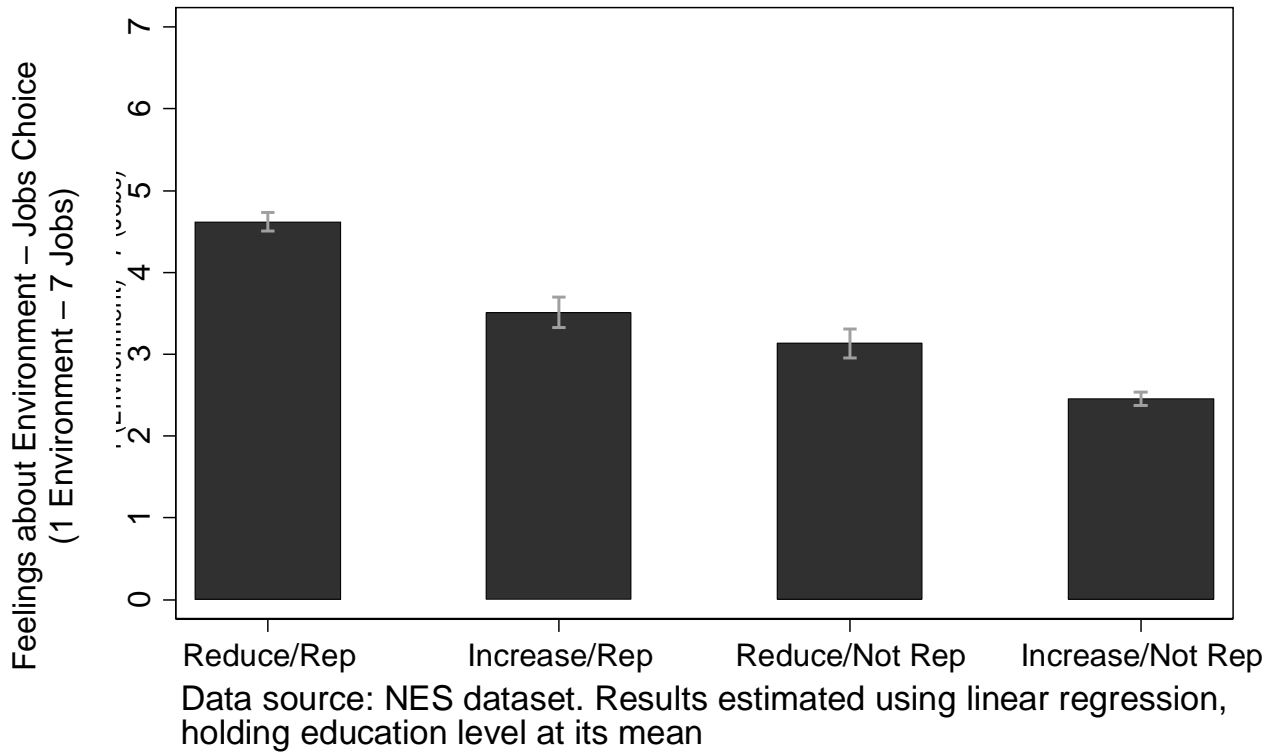
Table 1: Descriptive Statistics of Variables					
	Variable name in dataset	Mean	Median	Mode	Observations
Environment Job choice (1 Environment – 7 Jobs)	Envjob_self	3.16	3	1	5,006
Scale of Support for Government spending (1 Reduce Spending – 7 Increase spending)	spsrvpr_sself	3.88	4	4	5,242
Support for less government spending	Dummy variable using pid_x: (1-4)=Support (1) (5-7)=Do not Support (0)	0.39	Do not support reducing government spending	Do not support reducing government spending	
Political Identification (1 Strong Democrat – 7 Strong Republican)	pid_x	3.52	Independent Democrat	Strong Democrat	5,892
Republican?	Dummy variable using pid_x: (1-4)=No (0) (5-7)=Yes (1)	0.34	Not Republican	Not Republican	5,892
How often should gov. use science (1 Always – 5 Never)	science_use	2.93	Half of the time	Some of the time	5,396
Level of highest education	dem_edugroup		Some post HS, no Bachelors	Some post HS, no Bachelors	5,866
Age	dem_age_group_r		50-54	55-59	5,855

Table 2: Effects on choice whether to support
the Environment or the creation of Jobs
(1 Environment – 7 Jobs)

Support for reduced government spending	0.646*** (0.103)
Republican	1.029*** (0.107)
Republican X Support for reduced government spending	0.440*** (0.154)
Science should impact policy most of the time	0.151*** (0.0316)
Level of Education	-0.114*** (0.0280)
Age	0.0463*** (0.00978)
Constant	2.035*** (0.156)
Survey Responses	4,191
R-squared	0.302

Dependent Variable: 1 (Environment) – 7
(Jobs). Independent Variable 1: Scale of
Support for Government spending (1 Reduce
Spending – 7 Increase spending). Independent
Variable 2: 0 (Not Republican), 1
(Republican). Science should impact
government decisions (1 always – 5 Never).
Results estimated using a linear regression
model. Robust Standard errors in parentheses.
Data source: National Election Study. ***
p<0.01, ** p<0.05, * p<0.1

Figure 1: Feelings about Environment – Jobs Choice
By Support for Government Spending and Identifying as Republican



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