

The Relationship Between Political Party Affiliation and Environmental Policy Stance Government should take among those who Believe in Global Warming

Krystian Luniewski, Quantitative Analysis Center, Wesleyan University

Introduction

- Studies show party affiliation and favored policy for solving GW has association, but it's suggested that other attitudinal variables play a role as well.
- "More Democrats supported the intervention of the government whereas Republicans favored a more individualistic approach in finding a solution for global warming" (Tvinnereim et al., 2017)
- "Liberals and Democrats are more likely to hold beliefs about global warming consistent with the scientific consensus and to express concern about this problem than are conservatives who tend to steer towards more capitalistic ideologies" (McCright & Dunlap, 2011)
- "Conservative males had a more unique profile where education tended to have the opposite affect on their belief in global warming when compared to others" (Dasandi et al., 2022)
- It's unclear to what extent these attitudinal variables in correspondence with political party affiliation have an affect on global warming and how these trends could predict the type of policies an individual would be willing to support

Methods

Sample

- National Surveys on Energy and Environment dataset was constructed by randomly selecting a sample of 929 adult residents, age 18 or older of the US were surveyed via telephone.
- Includes data about belief in global warming and content about public policy proposals for global warming on a federal, state, and international level.
- The sample data has been weighted by age, race, educational attainment, income and gender to reflect population parameters provided by the United States Census Bureau

Measures (all variables are categorical)

- **Political Party** –elicits whether someone is democrat or republican
- **Global Warming Belief** -; shows if person believes in global warming
- **Carbon Tax Policy** - does individual support taxing carbon-based fuel
- **Adapt Policy** –does individual support adapting to global warming through the means of innovating new combative technology.
- **Education** –indicates level of education from less than HS – Grad
- **Gender** – whether male or female

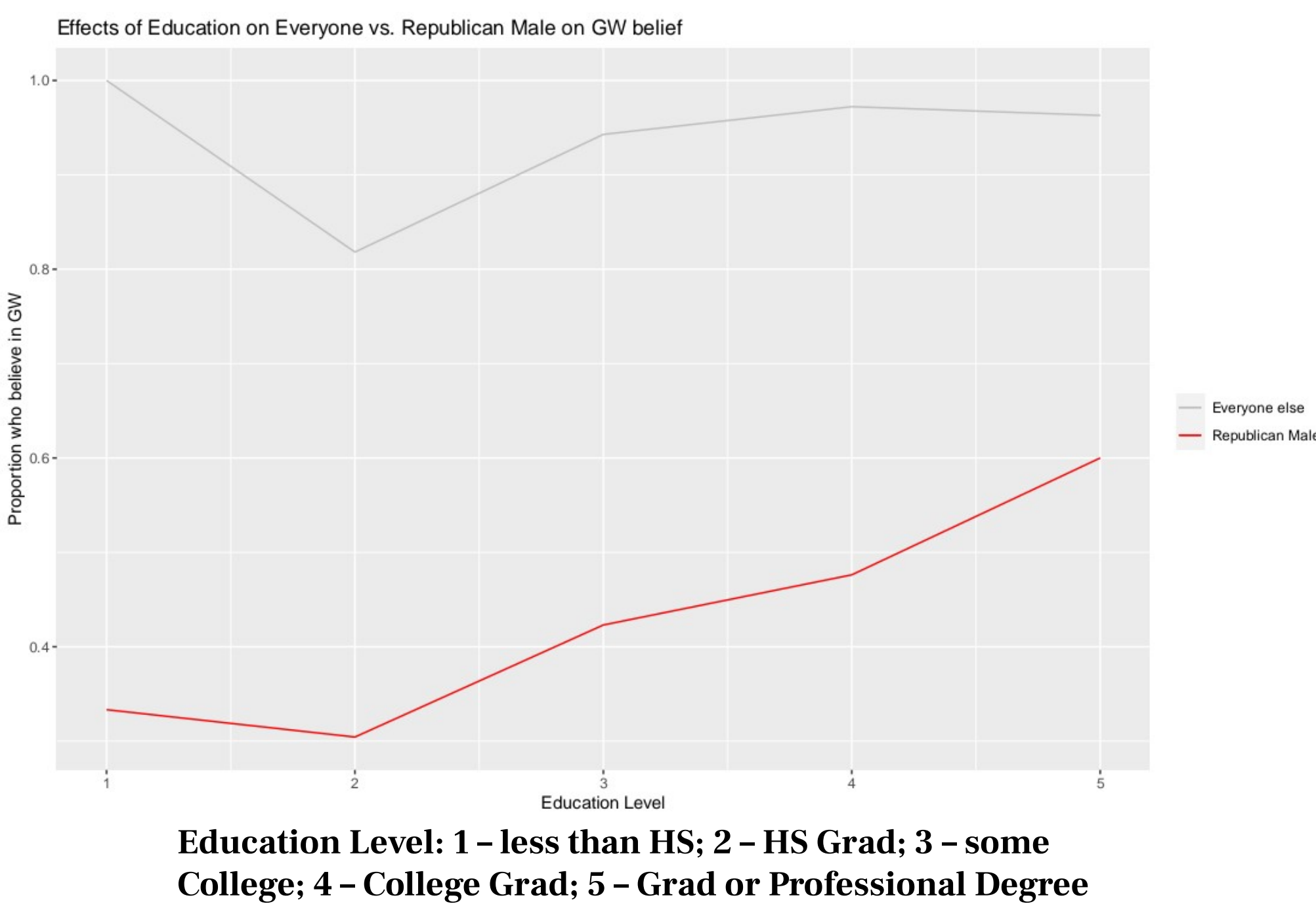
Research Questions

- Is there a relationship between Political Party Affiliation and belief in Global Warming?
- Do other demographics (education/gender) after the relation between political party affect the belief in global warming?
- Among those who recognize that Global Warming exists and controlling for chosen demographic variables, what is the relationship between political party affiliation and the policy stance the US government should take to combat Global Warming?

Belief in Global Warming

Out of the US residents sampled, who are either republican or democrat:

- 72.81% of individuals believed that global warming exists.
 - 87% of Democrats and 50% of Republicans believe in GW
- 22.54% completed high school or less; remaining 77.46% completed some college or higher.
- Testing the theory if there indeed is an anomaly between education and the effect it has on a republican male's belief in global warming.



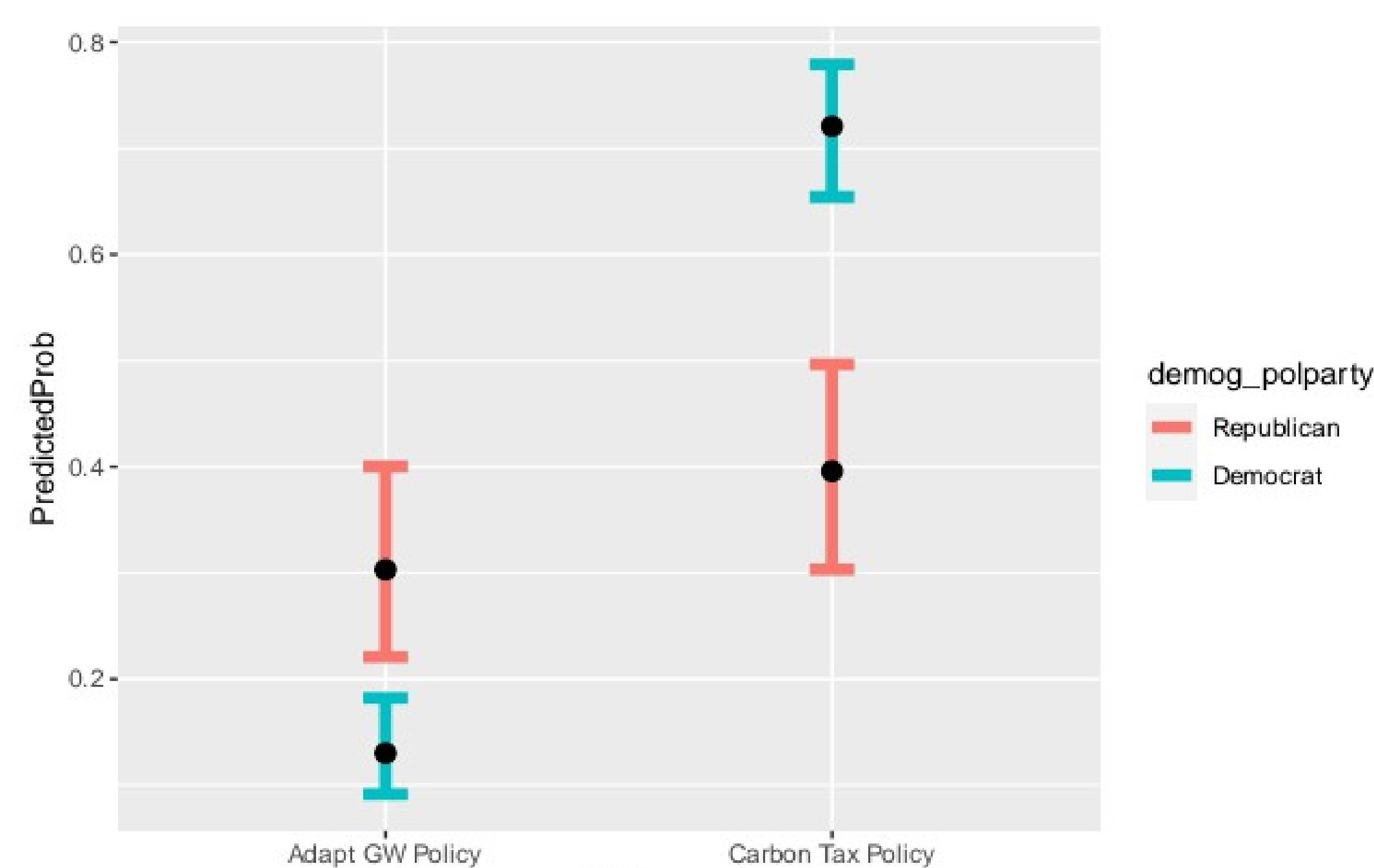
- Education level had a more potent effect on republican males whereas for everyone else the effects seemed to be minimal.
- For RM, education has a statistically significant (p-value = .0401) while for everyone else effects were not statistically significant or different (p-value = .0872).
- The odds of a republican male believing in global warming is 1.4 more likely for each additional increase in education level, on average.
- WM proportion range: 30%-60%; Everyone proportion: 83% - 100%
 - Caution: Results may be skewed due to reduced sample size when making subsets and some participants refusing to respond to the question regarding education

Results

Support of Policies

Out of the US residents sampled, who are either republican or democrat and believe in global warming:

- 61.43% of individuals believe in the Carbon Tax Policy
- 18.47% of individuals believe in Adapting to Global Warming Policy
- Testing for the probability of a republican vs a democrat supporting each of the policies.



- Higher percentage of Republicans support the Adapt GW Policy; Democrats, by an overwhelming amount, are more in favor of the Carbon Tax Policy.
- Controlled logistic regression for education and gender:
 - The odds that a Republican will support the Adapt GW Policy is 3 times more likely than for a Democrat. (p-value of .000223)
 - The odds that a Republican will support the Carbon Tax is 76% less than the odds of a democrat supporting the policy (p-value of 1.99e-07).
- Gender came out to be not statistically significant when taking into account policy preference (p-value > 0.05)

Discussion

- Contrary to the literature's belief, as education for republican male's increases so does their chances in believing in global warming.
- A higher percentage of democratic party members tend to believe in global warming then republicans.
- The two policies that have been studied show that republicans have more of an incentive to support policies that have potential in providing financial gain, though in the short-run they are bound to face losses. Democrats are more in favor of tax policies that follow scientific finding.
- Gender didn't affect whether a person picked one policy or the other.
- Further research is required to control for more attitudinal variables in relation to political party affiliation and the effects they have on GW belief. On top of that, look at more policy proposals to hopefully find some kind of trend and/or common ground that both parties can agree on. Lastly, who is willing to fund these projects or policies?

EndreTvinnereimaPersonEnvelopeKjerstiFløttumbØyvindGjerstadMikael PoulJohannessonÅsta DyrnesNordøc, et al. "Citizens' Preferences for Tackling Climate Change. Quantitative and Qualitative Analyses of Their Freely Formulated Solutions." *Global Environmental Change*, Pergamon, 2 Aug. 2017, <https://www.sciencedirect.com/science/article/pii/S0959378016302850?via%3Dihub>.

Dasandi, Niheer, et al. "Positive, Global, and Health or Environment Framing Bolsters Public Support for Climate Policies." *Nature News*, Nature Publishing Group, 20 Oct. 2022, <https://www.nature.com/articles/s43247-022-00571-x>.

McCright, Aaron M., and Riley E. Dunlap. "The Politicization of Climate Change and Polarization in the American Public's Views of Global Warming, 2001–2010." *The Sociological Quarterly*, vol. 52, no. 2, 2011, pp. 155–194., <https://doi.org/10.1111/j.1533-8525.2011.01198.x>.