How Perceptions of Climate Change Efforts Influence Support for Individual and National Climate Change Action

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Study Information

1. Title: How Perceptions of Climate Change Efforts Influence Support for Individual and National Climate Action
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3. Research Questions
    a. What are the effects of individuals' trust and effectiveness perceptions on their support for climate action?
    b. How do trust and effectiveness perceptions interact in influencing individuals' support for climate action?
    c. Do these effects vary based on the specific level of action (individual versus national)?

Study Design and Sampling Plan

4. Study Design

This is a randomized vignette experiment located within a single wave survey on contemporary issues fielded in the United States to a sample representative of the adult population.

5. Data

As of the date of submission, the data collection has not been started and none of the data have been quantified, constructed, observed, or reported by the researcher.

6. Data Collection Procedures

The survey will be fielded online to a representative sample of the adult population of the US. Respondents will be recruited via respondi. Subjects will be compensated. The surveys will be fielded between May and June 2020.

7. Sample Size

About 5,400

8. Sample Size Rationale

The sample size is mainly driven by power considerations. Since an experiment is included in this survey, there must be enough observations in each of the eight treatment conditions (so approximately 675 in each).

9. Stopping Rule

Sampling will stop once the targeted number of observations and sociodemographic quotas are reached.

10. Blinding

Respondents will not know the treatment group to which they have been assigned.

Survey Instrument and Analysis: Experiment

This is a vignette experiment that randomly assigns either a high or low hypothetical trustworthiness perception and a high or low hypothetical effectiveness perception, as well as one of two climate action levels, in an initial prompt, and then asks respondents to indicate how strongly they support individual and national climate action.

"Suppose that [many/few] individuals will change their energy consumption to reduce climate change/Suppose that [many/few] countries will implement policies to reduce climate change. If this avoids [most/few] of the economically and environmentally damaging consequences of climate change, how strongly do you agree or disagree with the following statements?"

Randomize the order:

> 1) "I want to reduce my own energy consumption by doing things like buying more energy-efficient appliances, switching off unused appliances, walking for short journeys, or only using heating and air conditioning when really needed."
>
> 2) "The U.S. government should introduce policies to reduce greenhouse gas emissions, such as increasing fossil-fuel taxes, subsidizing renewable energy, or banning the least energy-efficient appliances."

Answer scale: Strongly disagree, Somewhat disagree, Neither agree nor disagree, Somewhat agree, Strongly agree

I will estimate the effects of trust and effectiveness perceptions on support for climate action, as well as determine how these effects differ across the individual and national levels, by regressing respondents' answers on the dummy variables for each treatment condition. Specifically, I will first regress respondents' answers to the individual climate action question on the interaction of the dichotomous individual trust and effectiveness treatment categories, and will then regress respondents' answers to the national climate action question on the interaction of the dichotomous national trust and effectiveness treatment categories. Although the effectiveness prime does not itself have a given "level," it is automatically attached to whatever level the trust prime is in since it is presented following the trust prime. Moreover, in both regressions I will control for any possibly confounding sociodemographic variables that are collected in the survey. So my regressions will look as follows:

1. *individual climate action ~ individual trust X effectiveness + sociodemographic variables*

2. *national climate action ~ national trust X effectiveness + sociodemographic variables*

This way, I am able to see whether those who receive higher individual-level trust and effectiveness primes are significantly more or less likely to support individual-level climate action; whether those who receive higher national-level trust and effectiveness primes are significantly more or less likely to support national-level climate action; and whether the size of each perception's effect is

increasing in the other's (looking at the interaction effect). I will then compare the size and sign of the trust and effectiveness variables across the two levels, in order to see if trust and effectiveness perceptions have different effects across the levels. Ultimately, this will allow me to determine whether these trustworthiness and effectiveness effects differ for individual versus national climate action support.

The goal is to determine how trust and effectiveness perceptions affect support across the different levels of climate action, since both their individual and the interactive effects are unclear and since it is possible that these effects differ depending on which level of support is in question. I expect that higher trust or effectiveness perceptions increase support at the national level (reciprocal strategy) but decrease support at the individual level (free-riding strategy). Moreover, I expect that trust and effectiveness perceptions exhibit a positive interaction effect in both levels. I am particularly interested in testing whether the trust and effectiveness effects differ based on the level of action. The idea is that individuals may be playing different strategies—reciprocation versus free-riding—depending on the level of action they are considering supporting. More formally, my hypotheses are as follows:

1) H1: One who has higher levels of belief in the effectiveness of national climate action or higher trust in other countries to act will be more likely to support national climate change efforts.

2) H2: One who has lower levels of belief in the effectiveness of individual climate action or lower trust in other people to act will be more likely to take individual action.

3) H3: In either the individual or the national case, effectiveness and trust will have a positive interaction, since greater (or lesser) trust perceptions should increase (or decrease) the impact of effectiveness perceptions, just as greater (or lesser) effectiveness perceptions should increase (or decrease) the impact of trust perceptions.

Sociodemographics, Other

See questionnaire for further details on measurement and question design.