briq-institute.org



ECONtribute Policy Brief No. 035



Armin Falk

Mark Fallak

Lasse Stötzer

June 2023

www.econtribute.de



Funding by the Deutsche Forschungsgemeinschaft (DFG, German Research Foundation) under Germany's Excellence Strategy – EXC 2126/1-390838866 is gratefully acknowledged.

# **Executive Summary**

## Nine out of ten Germans are willing to pay for climate protection

In a representative briq survey, a broad majority of Germans is willing to donate a part of a freely disposable sum of money to climate protection. Higher income, economic preferences such as altruism or patience, and party preferences predict pro-climate donations. Moreover, a majority of Germans say they take the climate impact into account when deciding about consumption and transportation.

We elicit individual willingness to fight climate change using an incentivized donation decision. More specifically, we asked the 2,002 respondents to divide 198 euros between themselves and a charitable organization that fights global warming. The amount of 198 euros was chosen because, by donating all of it, respondents could offset the annual CO2 emissions of an average German citizen. We incentivize the decision by implementing the choices of a random subset of participants.

Almost 90 percent of respondents donate at least part of the money to offset CO2 emissions. On average, respondents gave slightly less than half, around 96 euros. Altruistic individuals donated significantly more. Voters of the right-wing party AfD donated just under 57 euros, while supporters of the other parties gave an average of 102 euros.

Willingness to fight climate change increased with rising income. However, even in the lowest income group with less than 1,300 euros per month, an average donation of 88 euros indicates a high willingness to forego a financial advantage for the sake of climate protection.

Parents contributed on average about 10 percent more. People who deny climate change or see it as a mainly natural phenomenon donated on average 40 percent less than the rest of the population.

That Germans seem to be conscious of climate issues is also reflected in their consumption behavior and transportation choices. A large majority of those surveyed stated that they try to save water and energy, and buy more regional, seasonal and vegetarian foods. Two-thirds regularly use bicycles, public transportation, or other environmentally friendly alternatives to driving by car.

Germans are also willing to become politically active against climate change, albeit to a somewhat lesser extent. Almost one-fourth of respondents said they had taken part in demonstrations, signed petitions, or actively supported climate protection organizations in the last twelve months. About one in eight have bought climate protection certificates to offset CO2 emissions.

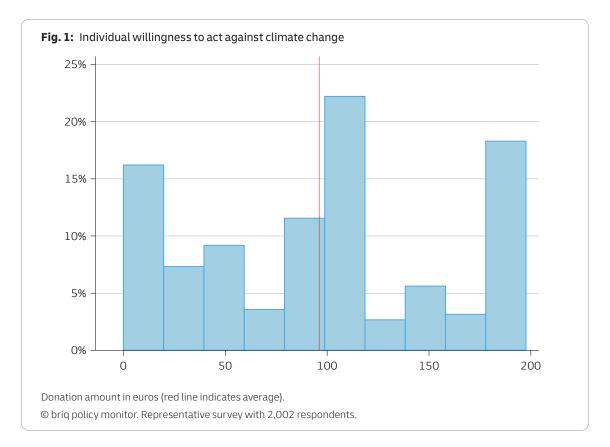
# Results

## Individual willingness to act against climate change

Everyone can contribute to fighting climate change. But the personal commitment to protect the climate comes at a cost, whether it is spending more on energy-efficient appliances and climate-friendly products or refraining from climate-damaging activities. Are Germans prepared to forego their own advantages for the sake of climate protection?

To answer this question, we administer a survey to a representative sample of 2,002 German adults. We measured the individual willingness with the help of a donation decision. Respondents were given 198 euros,<sup>1</sup> which they could freely divide between themselves and a charitable organization that fights global warming.<sup>2</sup>

This decision captures the central trade-off that individuals face when deciding whether to take climate action, namely the notion that protecting the climate comes at a cost. The more money the respondents are willing to forgo and donate, the higher their willingness to act against climate change. We incentivize the decision by implementing the choices of a random subset of participants.



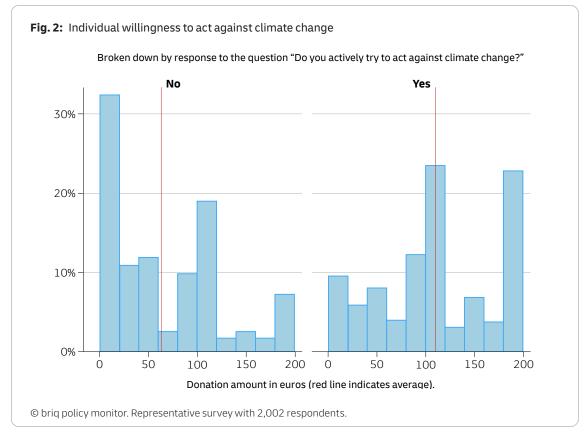
The results show that Germans are quite willing to forego their own advantages for the sake of climate protection. Almost 90 percent donated at least part of their money to offset CO2 emissions. Nearly one in six donated the entire 198 euros. On average, respondents donated 96 euros, which corresponds to the compensation of 3.8 tons. A majority of 52 percent offset at least half of per-capita emissions with their payment.

In addition, we asked respondents to indicate whether they personally take action to protect the climate.

<sup>1</sup> The amount of 198 euros was chosen because, by donating the full amount, respondents could offset the annual CO2 emissions of an average German citizen. It costs around 25 euros to offset one a ton of CO2 emissions (Source: https://www.atmosfair.de/de/kompensieren/wunschmenge/). According to World Bank estimates, the average inhabitant of Germany causes around 7.9 tons of CO2 emissions per year. (Source: https://data.worldbank.org/indicator/EN.ATM.CO2E. PC?locations=DE)

<sup>2</sup> The amount donate was given to the award-winning charity atmosfair. atmosfair actively contributes to CO2 mitigation by promoting, developing and financing renewable energies worldwide. In this way, a donation saves CO2 that would otherwise be created by fossil fuels.

More than two-thirds (71 percent) answered yes. There is a strong correlation with the willingness to donate: Those who said that they personally take action donated on average 110 euros (47 euros more than respondents who said that they do not take personal action against climate change).

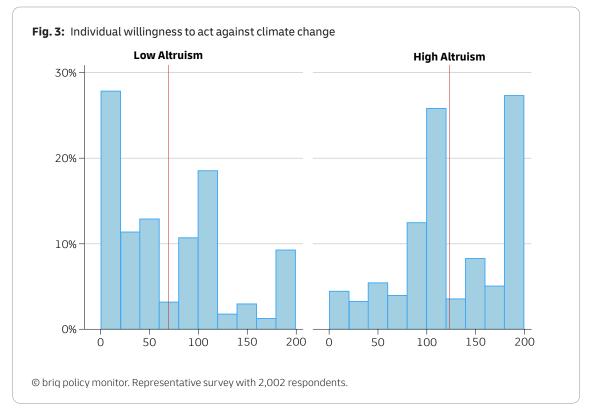


#### Determinants of willingness to act against climate change

We observe large differences in climate donations. Which factors predict individual willingness to fight climate change?

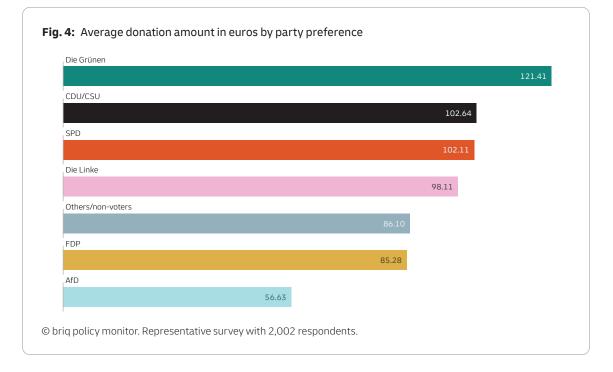
Climate donations are strongly related to economic preferences. Especially, altruism positively predicts the donation amount. This relationship seems intuitive: Climate change can be seen as a global public good, which makes climate protection an act of cooperation. Other determinants of climate-friendly behavior are patience and positive reciprocity. Since the impact of today's actions against climate change will only materialize in the future, patience is necessary. Research further shows that most people are conditionally cooperative, i.e, they behave prosocially if others do and vice versa. Our survey confirms that people with a positive reciprocal attitude have a higher willingness to donate.

The difference is most pronounced in altruism. People in the top half of the distribution in the "altruism score" donated an average of 55 euros (80 percent) more than less altruistic individuals (see Fig. 3).



In addition to economic preferences, individual characteristics such as political preferences, income, parenthood, and the respondents' climate skepticism play a role.

Respondents who vote for the right-wing party AfD show the lowest willingness to act against climate change. They donate around 57 euros while supporters of the other parties donate 102 euros on average. Will-ingness to donate is highest among Green Party voters, of whom 69 percent gave over half of the 198 euros.



As expected, the financial resources of households influence climate donations. However, even in the lowest
income group with a net monthly income under 1,300 euros, the average donation was around 88 euros.

Monthly income	Below 1300 €	1300 to 2600 €	2600 to 3600 €	3600 to 5000 €	Above 5000 €
Donations	87.62€	91.48€	95.39€	103.55€	122.72€

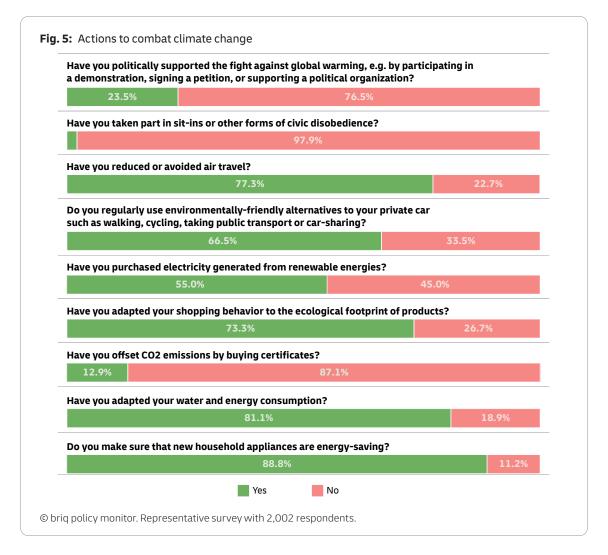
Future generations will suffer most from inadequate climate protection. Consequently, respondents with children contributed on average 10 percent more.

People who deny climate change or see it as a mostly natural phenomenon donate on average 40 percent less than other respondents (64 euros vs. 105 euros). More than one in four climate skeptics (27 percent) kept all the money.

## Actions

Climate-friendly behavior has many facets. What actions do Germans take to combat climate change?

Climate protection is an integral part of many Germans' everyday lives. For example, 81 percent of respondents said they have adjusted their water and energy consumption. 73 percent take the ecological footprint of goods into account by buying regional and seasonal goods and consuming less meat. Almost 89 percent make sure that new appliances are energy-saving.



The majority of Germans are also trying to be more climate-friendly when it comes to mobility and transportation. Over 77 percent said they had been reducing or avoiding air travel altogether. Two-thirds regularly use a bicycle, public transport, or other environmentally friendly alternatives to non-electric cars.

Germans are somewhat more hesitant when it comes to political engagement: Just under one-fourth (23.5 percent) had participated in demonstrations, signed petitions, or actively supported climate protection organizations in the last twelve months. Only 2 percent reported that they had participated in sit-ins or other civil disobedience actions. Around one in eight (13 percent) set off CO2 emissions by buying certificates.

# Methods

We collected survey data from a representative sample of 2,002 study participants in Germany. To be eligible to participate in the study, respondents had to reside in Germany and be at least 18 years old. We collected the data in collaboration with the survey company Pureprofile. The experiment was computerized using the Qualtrics online survey tool. The data was collected between July 15 and 28, 2022. To ensure the highest possible quality of answers, all participants have to pass an attention check.

We used a stratified sampling approach to ensure that the samples represent the adult German population in terms of age, gender, and education. 48.25 % are male, the average age of the respondents is 51.8 years, and the median net income per month is between 1,600 and 2,600 euros. 22.98% of respondents live in eastern Germany (including Berlin), and 32.57% live in cities with more than 100,000 inhabitants.

## Survey items: Willingness to act against climate change

We measured the individual willingness with the help of a donation decision. Respondents were given 198 euros, which they could freely divide between them and a charitable organization that fights global warming. The amount donated was given to the award-winning charity atmosfair, which actively contributes to CO2 mitigation by promoting, developing and financing renewable energies worldwide. Thereby, a donation saves CO2 that would otherwise be caused by fossil fuels. The amount of 198 euros was chosen because, by donating the full amount, respondents could offset the annual CO2 emissions of an average German citizen. It costs around 25 euros to offset one a ton of CO2 emissions. According to World Bank estimates, the average inhabitant of Germany causes around 7.9 tons of CO2 emissions per year. We incentivize the decision by implementing the choices of ten randomly selected participants.

#### Hypothetical behavior and actions

The questions regarding respondents' actions were introduced by stating "We are interested in whether you have taken any of the following actions against climate change over the last year." The wording of the questions, translated to English:

	Question	Scale
Behavior (hypothetical)	Do you actively try to act against climate change?	Yes/No
	Have you politically supported the fight against global warming, e.g. by participating in a demonstration, signing a petition, or supporting a political organization?	
Actions	Have you taken part in sit-ins or other forms of civil disobedience?	Yes/No
	Have you reduced or avoided air travel?	100,110
	Do you regularly use environmentally-friendly alternatives to your private car such as walking, cycling, taking public transport or car-sharing?	

	Have you purchased electricity generated from renewable energies?	
	Have you adapted your shopping behavior to the ecological footprint of products?	
Actions	Have you adapted your water and energy consumption?	Yes/No
	Have you offset CO2 emissions by buying certificates?	
	Do you make sure that new household appliances are energy-saving?	

#### Additional measures

We collect detailed information on individual background characteristics. These include age, gender, education, employment status, net income, number of children, political party preferences, and state of residence. We further obtain an individual-level measure of altruism, patience and reciprocity following the methodology in the Global Preferences Survey.<sup>3</sup>

<sup>3</sup> Falk, Armin, Anke Becker, Thomas Dohmen, Benjamin Enke, David Huffman, and Uwe Sunde. "Global Evidence on Economic Preferences." *The Quarterly Journal of Economics* 133, no. 4 (2018): 1645–1692