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IZA DP No. 17475

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ABSTRACT

Environment vs. Economic Growth: Do Environmental Preferences Translate Into Support for Green Parties?*

This paper contributes to a better understanding of the drivers of electoral support for Green parties and the environmental actions they promote, which is key to ensuring the long-term feasibility of environmental policies. We examine whether individual environmental preferences translate into voting for Green parties and analyze the mechanisms behind this effect. Employing an individual-level survey from developed and developing economies matched with the political parties' programs globally, we find that individuals who prefer environmental protection over economic growth are likely to translate their preferences into voting and supporting Green parties. These findings are robust to alternative definitions of Green parties and environmental preferences and to potential endogeneity concerns. The key mechanisms behind this relationship are changes in the stringency of environmental regulations, individual economic and social insecurity, and individual- and country-level exposure to environmental changes. The effect of environmental preferences on Green party voting is less pronounced among individuals living in rural areas and economically disadvantaged individuals, including those with lower education and income. These results suggest that support for Green parties and environmental policies is contingent on voters' economic security even when environmental preferences are strong, emphasizing the need for Green parties to address voters' economic concerns.

JEL Classification: D72, H11, Q56, Q58

Keywords: environmental preferences, Green parties, sustainable development, voting

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1. Introduction

Environmental concerns are growing globally. Recent polls indicate that almost 70% of respondents from over 70 countries agree that climate change affects their daily lives, and over 80% demand that their country's governments need to take more action to protect and restore nature and strengthen commitments to climate action (UNDP 2024). Despite this, Green parties are still not that successful in elections and active policymaking (Caroll et al. 2009; Gourley and Khamis 2023; Grant and Tilley 2018; Niranjan and O'Carroll 2024; Richardson and Roots 1994). For instance, although somewhat successful in gaining seats in the 2019 European Parliament elections (Han and Finke 2022), Green parties substantially lost their positions in the 2024 elections (Niranjan and O'Carroll 2024). Do individual environmental preferences translate into active voting for Green parties globally, and what are the mechanisms behind this relationship? This paper addresses such a crucial question.

Recent evidence suggests that Green parties are more likely to receive votes in wealthier countries (Grant and Tilley 2018), during periods of economic growth (Gourley and Khamis 2023), in countries less exposed to international trade (Bez et al. 2023), and following recently occurred natural disasters (Garside and Zhai 2022; Hoffmann et al. 2022; Kronborg et al. 2024). Voting for Green parties is hypothesized to be a phenomenon of a "new middle class" (Clark and Hoffman-Martinot 1998) or post-materialistic (Inglehart 1977) voting, suggesting that women, younger, richer, more educated, and those with stable jobs and from urban areas are more likely to vote for Green parties (Camcastle 2007; Hooghe et al. 2010; Lichtin et al. 2023; Mannoni 2024; Schumacher 2014).[1] Nevertheless, Green parties still face difficulties in gaining stable support in elections (Hooghe et al. 2010).

This paper examines to what extent individual environmental preferences are translated into the Green party voting. Using data from the World Values Survey (WVS) 2017-2022 on over 60,000 individuals from 60 countries globally, we look at whether and how individual environmental preferences affect the intentions to vote for a Green party and what the mechanisms behind this relationship are. Our findings suggest that individuals who prefer environmental protection to economic growth are more likely to vote for Green parties. The changes in the stringency of environmental regulations, individual economic insecurity, and individual- and country-level

[1] A related strand of literature looks at the willingness to pay for environmental goods. In addition to voting for Green parties, willingness to contribute part of own income to protect the environment is another way to reveal individual preferences for environmental protection (e.g., Kahn and Matsusaka 1997). The findings suggest that those with a high income, more educated, and married are more likely to contribute to the protection of the environment (see, e.g., Abate et al. 2020; Otrachshenko et al. 2022; Thalmann 2004).

exposure to environmental changes reduce this effect. At the same time, stronger social protection in a country may reinforce this relationship. In addition, the effect of environmental preferences on voting for Green parties is less pronounced among individuals living in rural areas and among economically disadvantaged individuals, including those with lower education and income. The findings are robust to potential endogeneity concerns and a battery of sensitivity checks.

The contribution of this paper is threefold. First, we provide a comprehensive analysis of mechanisms and heterogeneities in the impact of environmental preferences on Green parties' voting for different socioeconomic groups of individuals, using the most recent available data for 60 countries. Contrary to the narrow strand of literature, we focus on both developed and emerging economies. It is crucial to analyze the studied research question globally, as combating climate change for the future of the next generations requires a joint effort and collaboration from many countries. In addition, understanding the individual-level factors behind the Green party voting in developing countries is especially important since those economies are more vulnerable to climate change despite having lower greenhouse gas emissions than developed countries (Diffenbaugh and Burke 2019; Fankhauser and McDermott 2014; Otrachshenko et al. 2024; Tol et al. 2004). Related work by Norris and Patulny (2005) uses the WVS 1981-2000 data from 14 developed countries. It descriptively shows that sociodemographic profiles of those who are willing to pay taxes for environmental protection and those who intend to vote for Green parties are comparable. Both groups are slightly richer, more educated, and younger than non-supporters of environmental taxes and those who prefer to vote for other parties. In addition, Carroll et al. (2009) examine a similar question using data from the 2005 New Zealand Values Survey and show that those who vote for the Green party are more likely to have environmental and social justice concerns than voters for other parties, while Peeters and Coffé (2024) and Schumacher (2014) find similar results in Belgium and Germany, respectively.

Second, our paper contributes to the literature on the willingness to pay for environmental goods. Broadly speaking, support for Green parties can be considered an environmental good, and payment for this good is the trade-off between economic growth and environmental protection. In other words, the presence of Green parties in the government is associated with more active implementation of (costly) environmental policies (Anderson et al. 2017; Jensen and Spoon 2011), and voting for Green parties indirectly reflects the individual willingness to pay for such policies.

Third, our analysis provides practical implications for policymakers and Green parties. Our findings suggest that Green parties should address the public's economic concerns in their programs to gain more support. As demonstrated, when we combine Green parties and parties addressing both economic and environmental concerns, support for such parties, namely *pro-Green* parties, increases almost threefold. In addition, Green parties should address the concerns of vulnerable groups of individuals. Previous literature and our analysis of mechanisms point out that the environmental impacts disproportionally affect those groups, resulting in financial burdens (e.g., paying environmental taxes, buying air conditioners, and implementing mitigation and adaptation measures at their own expense). In addition to the existing findings, we demonstrate that Green parties might struggle to gain support in countries with a larger share of individuals employed in the agricultural sector. Finally, targeted informational campaigns are required to gain the support of older individuals (over 60 years old) since none or too few of them vote for the Green parties despite being one of the key electorates.

2. Conceptual background and hypotheses

According to the theory of issue voting, public issues salient to the voters are likely to set the political agenda (Bélanger and Meguid 2008; Dennison 2019). That is, if the voters for whom a certain public issue is salient believe that a specific political party is more competent in dealing with this public issue than other parties, they are more likely to vote for such a party (Bélanger and Meguid 2008; Walgrave et al. 2015; 2020). In the context of environmental protection and climate change, this implies that the voters who are concerned about environmental issues are likely to attribute the competency of dealing with those issues to Green parties and, thus, more likely to vote for such parties (Crawley et al. 2021; Han and Finke 2022; Peeters and Coffé 2024). This explains why, for instance, Green parties get more electoral support following natural disasters (Garside and Zhai 2022; Hoffmann et al. 2022; Kronborg et al. 2024) that make environmental concerns more salient to the wider population (Li et al. 2011; Konisky et al. 2016; Ray et al. 2017).

In psychological literature, individual attitudes are seen as good predictors of individual intentions and behavior (Aizen 1988; Sherman and Fazio 1983). From this perspective, voting for Green parties may serve to reveal individual environmental preferences. Previous research shows that environmental attitudes are indeed associated with various types of ecological behavior. For instance, individuals with environmental preferences are more likely to commute by public transport and consume less gasoline (Kahn 2007; Wagner 2016), reduce household energy use (Poortinga et al. 2004), and recycle (Halvorsen 2008) (for reviews, see Dietz et al.

2005 and Turaga et al. 2010). Such pro-environmental behavior is often seen as being motivated by moral values and social justice attitudes rather than economic self-interest (Caroll et al. 2009; Halvorsen 2008; Heinz and Koessler 2021; Turaga et al. 2010).

Several studies on developed economies also suggest that those individuals who have environmental concerns are more likely to vote for Green parties (see Caroll et al. (2009) for the results on New Zealand, Peeters and Coffé (2024) for Belgium, and Schumacher (2014) for Germany). In addition, Comin and Rode (2023) find that in Germany, individuals who adopt solar panels are more likely to vote for a Green party and suggest that this effect might be driven by changes in environmental attitudes due to solar panel adoption. By casting a vote for Green parties, individuals express their explicit support for promoting and implementing environmental policies. Thus, we hypothesize that:

H1: Individuals with environmental preferences are likely to vote for Green parties.

Several potential mechanisms may be behind this relationship. Since the presence of Green parties in the government is likely to be associated with more active implementation of environmental policies (Anderson et al. 2017; Jensen and Spoon 2011), the first mechanism is related to environmental policy stringency and borne costs. In the short run, more stringent environmental policies targeted at reducing greenhouse gas emissions and enforcing environmental protection induce higher direct abatement costs borne by enterprises (Berman and Bui 2001), higher electricity generation costs (Gollop and Roberts 1983), and deterred foreign direct investment (Bialek and Weichenrieder 2021; Cai et al. 2016), although having mostly no effects on trade (Ederington et al. 2005), aggregate employment (Cole and Elliott 2007; Morgenstern et al. 2002), and competitiveness (Jaffe et al. 1995).[2]

More stringent environmental policies are also associated with higher costs borne by the general population through environmental taxes, job losses and subsequent job reallocation costs, increased energy costs, and the adoption of (initially costly) energy-saving technologies (Campagnolo and De Cian 2022; Comin and Rode 2023; Dechezleprêtre et al. 2020; De Groote and Verboven 2019; Thalmann 2004; Ullah et al. 2024; Walker 2013). These costs tighten

[2] Although being initially costly for the economy, more stringent environmental policies bring productivity and innovations growth and improved environmental quality in the medium- and long-run (Berman and Bui 2001; Costantini and Crespi 2008; Galeotti et al. 2020; Henderson 1996; Porter and van der Linde 1995; Rubashkina et al. 2015; Sohag et al. 2024) (for reviews, also see Brännlund and Lundgren 2009; Brunel and Levinson 2013). These benefits can partly be explained by the fact that environmental policies are typically more stringent in democratic countries (Bättig and Bernauer 2009; Mavisakalyan et al. 2023), while corruption reduces environmental policy stringency (Damania et al. 2003).

household budget constraints. The theories of economic voting suggest that such costs have consequences for voting behavior: voters typically attribute changes in economic performance to governmental activities and vote accordingly (see Ivanov 2023; Lewis-Beck and Stegmaier 2019). In addition, Green parties are more likely to focus on environmental policies and less likely on economic growth, making them less attractive to lower-income voters (Schumacher 2014). Thus, household economic insecurity would likely lead to weaker public support for environmental policies and the lower effect of environmental preferences on Green party voting. Therefore, our next set of hypotheses is as follows:

H2: Changes in the stringency of environmental policies reduce the impact of environmental preferences on voting for Green parties.

H3: Individual economic insecurity reduces the impact of environmental preferences on voting for Green parties.

A related mechanism may work through income inequality and its perceptions. Environmental policies typically have strong distributional consequences, with those at the lower end of the income distribution, i.e., lower-income, unskilled, or low-educated individuals, suffering a disproportionately higher financial burden (Boccanfuso et al. 2011; Campagnolo and De Cian 2022; Campanella and Lawrence 2024; Chepeliev et al. 2021; Fullerton 2009; Johnstone and Serret 2006). We thus hypothesize that:

H4: Individual perceptions of income inequality reduce the impact of environmental preferences on voting for Green parties.

On the other hand, social safety net and governmental assistance programs may at least partially alleviate the household's economic insecurity concerns (Azeem et al. 2018; Borjas 2004; Schmidt et al. 2016; Tenzing 2020). This implies that in countries with better social protection programs, individuals are likely to feel more economically secure and protected against the distributional consequences of environmental policies. As a result, the impact of environmental preferences on the Green parties' support may be stronger in those countries. Therefore, we hypothesize that:

H5: The impact of environmental preferences on voting for Green parties is stronger in countries with a higher share of social expenses.

Finally, interacting more with nature in daily life and being exposed to environmental changes may also affect the relationship between environmental preferences and voting for Green

parties. This mechanism is twofold. On the one hand, exposure to natural disasters may exacerbate (perceptions of) economic insecurity (Bui et al. 2014; Carter et al. 2007; Mavisakalyan et al. 2024) and, similarly to the mechanisms described above, make the relationship between environmental preferences and support for Green parties weaker. On the other hand, frequent interaction with nature and the experience of natural disasters increase environmental concerns and support for environmental policies (Li et al. 2011; Konisky et al. 2016; Ray et al. 2017), reinforcing the relationship between environmental preferences and Green party voting. At the individual level, this mechanism may work through occupational choice. For instance, occupations such as farmers and agricultural workers are more exposed to nature and the impacts of climate variability and natural disasters (Huang et al. 2020; Jessoe et al. 2018; Park et al. 2018; Otrachshenko et al. 2024a; Otrachshenko et al. 2024b). These individuals may experience larger income losses due to natural disasters, weakening the impact of their environmental preferences on Green parties' support. Alternatively, they may have stronger environmental concerns, reinforcing the support for Green parties. *A priori,* it is unclear which side of this mechanism would prevail. Therefore, we hypothesize that:

H6a: The impact of environmental preferences on voting for Green parties is likely to differ for individuals living in countries with higher and lower GDP losses due to natural disasters.

H6b: The impact of environmental preferences on voting for Green parties is likely to differ for individuals in occupations with higher and lower exposure to environmental changes.

3. Methodology

We estimate the following econometric model:

$$GreenVote_{ic} = \beta_0 + \beta_1 EnvPreferences_{ic} + \boldsymbol{\gamma}' \boldsymbol{X_{ic}} + \boldsymbol{\mu_c} + \boldsymbol{t_c} + \varepsilon_{ic} \qquad (1)$$

where *i* stands for an individual and *c* stands for country. $GreenVote$ is a binary variable that equals one if an individual intends to vote for a Green party and zero if an individual intends to vote for any other party. $EnvPreferences$ reflect individual preferences for environmental protection over economic growth (hereinafter, environmental preferences). The definition of this variable is provided in the data section. $\boldsymbol{X}$ is a vector of individual characteristics, including age and its square, biological sex, dummy for having a high education, dummy for being employed, income, rural/urban residence, marital status, number of children, and living in a landlocked country. $\boldsymbol{\mu}$ is a vector of country-fixed effects, t is a vector of survey year fixed effects, and ε is a stochastic disturbance. β_0, β_1, and $\boldsymbol{\gamma}$ are the model parameters to be estimated.

We estimate Equation (1) using the Heckman two-step selection model (Heckman 1979). This approach allows us to account for selection into participating in the elections as not all respondents may have an interest or right to vote. First, we estimate the following selection equation to analyze whether an individual votes in the national election or not:

$$\Pr(Vote_{ic} = 1) = \alpha_0 + \alpha_1 Migrant_{ic} + \alpha_2 IntPolitics_{ic} + \boldsymbol{\delta}' \boldsymbol{X_{ic}} + \boldsymbol{\mu_c} + \boldsymbol{t_c} + \epsilon_{ic} \quad (2)$$

where *i* stands for an individual and *c* stands for country. $Vote$ is a dummy variable that equals one if an individual usually votes in the national election and zero otherwise. We use two variables that account for selection into voting: $Migrant$ and $IntPolitics$. $Migrant$ equals one if a respondent is an international migrant and zero otherwise. $IntPolitics$ is a variable that reflects the extent to which a respondent is interested in politics and ranges from 1 (not at all interested) to 4 (very interested), with the response equal one used as a default category. Both these variables are likely to affect the decision to vote. Specifically, international migrants are less likely to participate in the national elections in the host country because they might be ineligible to vote, while those generally uninterested in politics are also less likely to vote. At the same time, both these variables affect the choice to vote for a specific party specified in Equation (1) only through the decision to participate in the election specified in Equation (2). That is, these variables serve as exclusion restrictions in our model. $\boldsymbol{X}$ is a vector of individual characteristics as defined above, $\boldsymbol{\mu}$ is a vector of country-fixed effects, $\boldsymbol{t}$ is a vector of survey year fixed effects, and ϵ is a stochastic disturbance. $\alpha_0, \alpha_1, \alpha_2,$ and $\boldsymbol{\delta}$ are the model parameters.

Based on Equation (2), we estimate the individual probability of voting in the national election. Accounting for this probability of voting, we then estimate Equation (1) by least squares.[3] Standard errors are bootstrapped.

We provide several robustness checks of our results. First, we estimate Equation (1) with a redefined dependent variable, $ProGreenVote$. This is a binary variable that equals one if an individual intends to vote for a pro-Green party, which lists environmental protection as one of its priorities, and zero if an individual intends to vote for any other party. In addition, we use alternative variables that reflect individual environmental preferences: (i) considering environmental beauty as a country's most important aim compared to economic growth and (ii)

[3] Alternative ways to estimate Equation (1) is to use the probit model at the second stage, i.e. use the Heckman probit selection model (Van de Ven and Van Pragg 1981), or to use the Heckman maximum likelihood estimation. However, these procedures are computationally demanding when many dummy variables are included in the model. Moreover, estimates and marginal effects in non-linear models with interaction terms are inconsistent (see Ai and Norton 2003; Balli and Sørensen 2013; Greene 2010), while having interaction terms is important for studying mechanisms behind our effects of interest. We thus apply the Heckman two-step estimation.

membership in environmental organizations. Definitions of these variables are provided in the data section.

In addition, we provide several checks to ensure that our results are not affected by potential endogeneity. First, it might be the case that individual unobserved factors, e.g., personality traits, affect both environmental preferences and voting for Green parties. To alleviate this concern, we use the procedure suggested by Oster (2019). It allows us to empirically check whether potential unobserved factors nullify the impact of environmental preferences on voting for Green parties.

Second, one might be concerned about a possible simultaneity issue in our model. On the one hand, environmental preferences affect voting for Green parties in Equation (1). On the other hand, this voting may reinforce pro-environmental behaviors that strengthen environmental preferences. To address this possible issue, we apply the instrumental variable approach.

We use several instrumental variables related to environmental preferences and affect voting for Green parties only via environmental preferences. The first set of instruments relates to personal qualities and moral values, such as the feeling of responsibility, tolerance and respect for others, and unselfishness. These variables are based on a survey question of whether respondents consider these qualities important to be taught to children at home (see the next section for variable definitions). Economic and psychological literature shows that these moral values, especially when taught in childhood, are good predictors of environmental preferences (see De Groot and Steg 2007; Dietz et al. 2005; Gifford and Nilsson 2014; Halvorsen 2008; Heinz and Koessler 2021; Turaga et al. 2010). The second instrument is the individual perception of the state of human rights protection in the country of the respondent's residence. This instrument relates to social justice attitudes, which are also shown to be related to environmental preferences (Caroll et al. 2009; De Groot and Steg 2007; Heinz and Koessler 2021; Reese and Jacob 2015).

In the next step, we analyze the heterogeneity of results by individual socioeconomic characteristics. Specifically, we estimate Equation (1) for different subsamples of individuals disentangled by education, employment status, income, age groups, gender, having children, and living in an urban/rural area, and test whether the results differ for different subsamples. Through this analysis, we test whether the effect of environmental preferences on voting for Green parties varies with individual socio-demographic profiles.

Finally, we examine the mechanisms behind the relationship between environmental preferences and voting for Green parties. As discussed above, we analyze three sets of mechanisms: 1) the stringency of the country's environmental policies and individual economic insecurity, 2) individual income inequality tolerance, and 3) individual susceptibility to extreme weather events through respondents' own occupational choice. To understand whether and how these mechanisms affect the relationship between environmental preferences and voting for Green parties, we include the interaction terms of environmental preferences and the specific mechanism variable in Equation (1). A negative sign on the interaction term would imply that the specified mechanism reduces the effect of environmental preferences on voting for Green parties, while the positive one implies that the mechanism reinforces the main effect.

4. Data

Our main data source is the World Values Survey (WVS), wave 7 (2017-2022). This cross-sectional survey includes rich information on individuals' values, preferences, and socio-demographic characteristics. The survey was carried out in more than 60 countries over the period 2017-2022, and individuals from different countries were surveyed during different years using a unified questionnaire.[4]

4.1. Dependent variables

To define intentions to vote for a Green party, we use the following WVS survey question: "*If there were a national election tomorrow, for which party on this list would you vote? Just call out the number on this card. If DON'T KNOW: Which party appeals to you most?*" In each country, this question provides a list of political parties registered in this country in the survey year. Based on this question, we construct a dummy variable *Green,* which equals 1 if a respondent intends to vote for a Green party, and 0 if a respondent intends to vote for any other party.

We have followed two approaches to classify the parties as "Green" and "non-Green". First, we use the Global Party Survey (GPS) 2019 (Norris 2020). For over 1,000 parties globally, it asks

[4] Our sample includes 60 countries: Andorra, Argentina, Armenia, Australia, Bangladesh, Bolivia, Brazil, Canada, Chile, Colombia, Cyprus, Czechia, Ecuador, Egypt, Ethiopia, Germany, Greece, Guatemala, Hong Kong SAR, India, Indonesia, Iran, Iraq, Japan, Kazakhstan, Kenya, Kyrgyzstan, Lebanon, Libya, Macau SAR, Malaysia, Maldives, Mexico, Mongolia, Morocco, Myanmar, the Netherlands, New Zealand, Nicaragua, Nigeria, Pakistan, Peru, Philippines, Puerto Rico, Romania, Russia, Serbia, Slovakia, South Korea, Taiwan, Tajikistan, Thailand, Tunisia, Turkiye, Ukraine, United States, Uruguay, Uzbekistan, Venezuela, and Zimbabwe. The WVS wave 7 also includes China, Jordan, Singapore, and Vietnam, however, the question on voting intentions was not asked in those countries. Also, we exclude Great Britain and Northern Ireland as the information on Green parties and country-level mechanism variables are only available for the United Kingdom, but not separately for Great Britain and Northern Ireland.

knowledgeable experts in 170 countries to evaluate their country's parties' position on different issues, including environmental protection. The question on the environmental protection positions of parties in the Global Party Survey is phrased as follows: "*Next, where do parties currently stand on the issue of ENVIRONMENTAL PROTECTION? Where would you place each party on the following scale? 0=Strongly favors environmental protection, 10=Strongly opposes environmental protection.*" For parties that are available in both WVS and GPS, we use this continuous measure to define whether a party is Green or not. If the GPS score of a party is below 3.5, we define such party as "Pro-Green", and if the score is equal to or below 2, we define such party as "Green".

Since not all the parties available in WVS also appear in the GPS, in addition to GPS, we have manually searched for parties' programs and classified the parties as "Pro-Green" if their programs mention environmental protection as one of the priorities and as "Green" if their programs include environmental protection as a main ideological focus.

4.2. Explanatory variables

We measure individual preferences over environmental protection vs. economic growth using the following WVS question: "*Here are two statements people sometimes make when discussing the environment and economic growth. Which of them comes closer to your own point of view?: 1 Economic growth and creating jobs should be the top priority, even if the environment suffers to some extent; 2 Protecting the environment should be given priority, even if it causes slower economic growth and some loss of jobs; 3 Other answer.*"

In addition, we use two alternative measures of environmental preferences. The first measure is based on a survey question "*People sometimes talk about what the aims of this country should be for the next ten years. Would you please say which one of these you, yourself, consider the most important? (1) A high level of economic growth, (2) Making sure this country has strong defense forces, (3) Seeing that people have more say about how things are done at their jobs and in their communities, and (4) Trying to make our cities and countryside more beautiful*." Similarly to the measure of environmental preferences described above, we code the variable as 1 if a respondent considers economic growth as the most important aim, 2 if making cities and countryside more beautiful is the most important aim, and 3 if a respondent chooses another option.

The other variable is individual environmental activism measured by the respondent's membership in environmental organizations based on a survey question: "*Now I am going to*

read off a list of voluntary organizations. For each organization, could you tell me whether you are an active member, an inactive member or not a member of that type of organization? Environmental organization." with possible answers 2=Active member, 1=Inactive member, and 0=Do not belong. We use this variable as a dummy that equals one if a respondent is a member of an environmental organization (either active or inactive) and zero otherwise.

In the estimation, we also control for several socio-demographic characteristics, including age and its square, biological sex, employment status, income, having a high education, rural/urban residence, marital status, and having children. These variables are also available from WVS. We also use information on whether respondents live in a landlocked country.

4.3. Instrumental variables

The first set of instruments we use is the child qualities important to be taught at home. These variables are based on a survey question: "*Here is a list of qualities that children can be encouraged to learn at home. Which, if any, do you consider to be especially important?*" If such qualities as "feeling of responsibility," "tolerance and respect for other people," and "not being selfish (unselfishness)" are mentioned by a respondent, we code a respective variable as being equal to one and code it as zero otherwise.

The second instrument is the respondents' evaluation of human rights protection in their country. It is based on the following WVS question: "*How much respect is there for individual human rights nowadays in this country?*" The answers range from 1 (no respect at all) to 4 (a great deal of respect for individual human rights".

4.4. Mechanisms

Several variables are used to test the mechanisms behind the environmental preferences-voting relationship.

The stringency of environmental regulations in a country is measured using data from the World Economic Forum's Travel and Tourism Competitiveness reports (World Economic Forum 2015 and 2017).[5] This measure is based on an expert assessment of environmental regulations'

[5] An alternative measure of environmental policy stringency used in the literature (see, e.g., Mavisakalyan et al. 2023; Sohag et al. 2024) is a multidimensional EPS index developed by the Organization for Economic Co-operation and Development (OECD) (Botta and Kozluk 2014; Brunel and Levinson 2013). This index measures the extent of various environmental regulations and ranges from 0 (least stringent on all environmental policy instruments) to 6 (most stringent on all environmental policy instruments). However, this index is only available for OECD countries and selected non-OECD countries, while our sample includes many developing countries. The correlation between the World Economic Forum's stringency of environmental regulations measure that we use in our analysis and the OECD EPS index is 0.75.

stringency based on the question: "*How would you assess the stringency of your country's environmental regulations?"* and ranges from 1 (very lax, among the worst in the world) to 7 (among the world's most stringent). We use data on this indicator for 2015 and 2017 (the first year of WVS data we use for the analysis) and compute the difference in the stringency of environmental regulations between those years. A positive value of the difference means that in two years (from 2015 to 2017), a country made its environmental policies more stringent, while a negative value means a country weakened those policies.

Individual economic insecurity is measured through two WVS questions. The first question is about the self-assessed financial satisfaction of a respondent: "*How satisfied are you with the financial situation of your household?*" with answers ranging from 1 (completely dissatisfied) to 10 (completely satisfied). The second question that we use is about the respondent's worries about losing a job: "*To what degree are you worried about the following situations? Losing my job or not finding a job*" with the answers ranging from 1 (not at all) to 4 (very much).

We measure income inequality perceptions through the WVS question: *"How would you place your views on this scale? 1 means you agree completely with the statement on the left (Incomes should be made more equal); 10 means you agree completely with the statement on the right (There should be greater incentives for individual effort); and if your views fall somewhere in between, you can choose any number in between."* That is, if the response to this question is closer to 1, then an individual is inequality-averse, while if a response is closer to 10, an individual is more tolerant of income inequality.

The information on social protection expenses as a percentage of GDP comes from the World Social Protection Report of the International Labour Organization (ILO 2021). As a measure of exposure to natural disasters, we use the losses due to extreme environmental events as a percentage of GDP in 2017-2019, which is available from the Global Climate Risk Index developed by the Germanwatch (Eckstein et al. 2021, 2020, and 2019).

We use the respondent's occupation as a proxy for individual-level exposure to environmental events. It is likely that certain occupations, especially in agriculture, are more exposed to extreme weather events, both in terms of direct exposure because of outdoor work and in terms of income-related exposure, e.g., agricultural income losses due to floods or droughts. We code this variable as 1 if a respondent is a farm worker (e.g., farm laborer or tractor driver), farm owner, or farm manager, and 0 otherwise.

Descriptive statistics for all variables used in the analysis are shown in Table A1 in the appendix.

6. Results

6.1. Main results

Table 1 presents the main results on the relationship between environmental preferences and voting for Green parties.[6] Accounting for selection in voting, we find that those who prefer environmental protection over economic growth are 3.1 percentage points (p.p.) more likely to vote for a Green party than those who prefer economic growth over environmental protection.

Table 1. Environmental preferences and voting for Green parties.

	Heckman two-step selection
Main equation (dep. variable: Vote for a Green party)	
Environmental preferences (default: Prefer economic growth)	
Prefer environmental protection	0.031***
	(0.002)
Selection equation (dep. variable: Vote in the national election)	
Migrant	-0.791***
	(0.028)
Interested in politics (default: Not at all)	
Not very interested	0.404***
	(0.017)
Somewhat interested	0.698***
	(0.018)
Very interested	0.863***
	(0.025)
No. of observations	
Total	63,785
Selected	49,167
Non-selected	14,618

Notes: *** p<0.01, ** p<0.05, * p<0.1. Estimated coefficients after the Heckman two-step selection model are reported. Bootstrapped standard errors are in parentheses. Green parties are parties that have environmental protection as a key priority (see Section 4.1. for details). Both main and selection equations include individual socioeconomic characteristics, country fixed effects, and survey year fixed effects. Individual socioeconomic characteristics are age and its square, biological sex, employment status, income, dummy for having a high education, dummy for being married, having children, urban/rural residence, and living in a landlocked country.

When we use alternative model specifications and modify dependent or independent variables, similar patterns are observed. In column (1) of Table 2, we find that individuals with environmental preferences are more likely to vote for pro-Green parties by 8.5 p.p., compared to those who prefer economic growth. Interestingly, this impact is almost threefold compared to the one in Table 1. One possible explanation for this notable difference is that parties that address both economic concerns and environmental protection issues in their programs gain more support.

[6] Full regression results for Table 1 are presented in Table A2 in the appendix.

In column (2) of Table 2, when we use an alternative definition of environmental preferences (i.e., considering environmental beauty as the main aim for a country), individuals with environmental preferences are more likely to vote for Green parties by 3.3 p.p. than those who consider economic growth to be the most important. Finally, members of environmental organizations are 2.9 p.p. more likely to vote for Green parties compared to non-members (see column (3) of Table 2). Variables used as exclusion restrictions, i.e., being a migrant and being interested in politics, are statistically significant in selection equations in all models, suggesting that our model's identification is not weak.

Table 2. Environmental preferences and voting for Green parties, additional results.

	Env. preferences and voting for pro-Green parties (1)	Env. beauty and voting for Green parties (2)	Membership and voting for Green parties (3)
Main equation			
Environmental preferences (default: Prefer economic growth)			
Prefer environmental protection	0.085***		
	(0.003)		
Most important aim (default: Economic growth)			
Environmental beauty		0.034***	
		(0.004)	
Membership in environmental organizations (default: Not a member)			0.029***
			(0.003)
Selection equation (dep. variable: Vote in the national election)			
Migrant	-0.791***	-0.795***	-0.794***
	(0.028)	(0.029)	(0.028)
Interested in politics (default: Not at all)			
Not very interested	0.404***	0.406***	0.405***
	(0.017)	(0.017)	(0.016)
Somewhat interested	0.698***	0.700***	0.698***
	(0.018)	(0.018)	(0.017)
Very interested	0.863***	0.866***	0.862***
	(0.026)	(0.026)	(0.025)
No. of observations			
Total	63,785	62,895	63,337
Selected	49,167	48,277	48,719
Non-selected	14,618	14,618	14,618

Notes: *** p<0.01, ** p<0.05, * p<0.1. Estimated coefficients after the Heckman two-step selection model are reported. Bootstrapped standard errors are in parentheses. The dependent variable in the main equation is the vote for pro-Green parties in column (1) and the vote for Green parties in columns (2) and (3). Green parties are parties that have environmental protection as a key priority, while pro-Green parties are parties that have environmental protection as one of their priorities (see Section 4.1. for details). Both main and selection equations include individual socioeconomic characteristics, country fixed effects, and survey year fixed effects. Individual socioeconomic characteristics are age and its square, biological sex, employment status, income, dummy for having a high education, dummy for being married, having children, urban/rural residence, and living in a landlocked country.

The results of Oster's (2019) check of the baseline specification in Table 1 suggest that unobserved factors are unlikely to drive our results.[7] Specifically, the influence of unobserved factors should be 8.6 times higher to nullify the impact of environmental preferences on voting for Green parties.

In addition, we estimate our model using the instrumental variable approach. The results presented in Table 3 suggest that after accounting for potential endogeneity, the impact of environmental preferences on voting for Green parties becomes higher in magnitude but remains positive and statistically significant. All in all, these findings suggest that our baseline results in Table 1 may serve as a lower-bound estimate of the impact of environmental preferences on voting for Green parties. Thus, our findings are in line with our hypothesis H1 and suggest that environmental preferences are indeed positively associated with voting for Green parties. That is, individuals with environmental preferences are likely to support environmental policies that Green parties put forward and promote.

6.2. Heterogeneity

Individuals in some socioeconomic groups may differ in their voting behavior because of their economic situations. To analyze whether this is the case, we disentangle the results in Table 1 by the socioeconomic characteristics of respondents. As shown in Figure 1, compared to the baseline model in Table 1, the impact of environmental preferences on voting for Green parties is less pronounced for individuals who are less educated, have a lower income, have children, and live in a rural area. These socioeconomic groups are likely to be less economically secure. Thus, it is likely that those voters may prefer parties that prioritize improving economic conditions more than Green parties. These findings suggest that individual economic situations may affect the relationship between environmental preferences and voting for Green parties. In the next section, we test this mechanism more formally.

We find no gender and employment status differences in the impact of environmental preferences on voting for Green parties. We also find mostly no age differences, except for middle-aged individuals, for whom the effect of environmental preferences on voting for Green parties is lower than in a baseline model. It is worth mentioning that we could not estimate the impact of environmental preferences on Green parties' voting for individuals over 60 years old, given a few responses in this age group who vote for Green parties. This may suggest that older individuals prioritize economic growth over environmental protection.

[7] We used ordinary least squares (OLS) estimation of Equation (1) to conduct the Oster's (2019) check procedure.

Table 3. Environmental preferences and voting for Green parties, IV results.

	IV estimation with a Heckman correction
Main equation, second stage (dep. variable: Vote for a Green party)	
Environmental preferences	
(default: Prefer economic growth)	
Prefer environmental protection	0.167**
	(0.081)
Selection equation (dep. variable: Vote in the national election)	
Migrant	-0.603***
	(0.159)
Interested in politics (default: Not at all)	
Not very interested	0.232***
	(0.034)
Somewhat interested	0.427***
	(0.058)
Very interested	0.548***
	(0.071)
First stage (dep. variable: Environmental preferences)	
Child qualities	
Feeling of responsibility	0.008
	(0.007)
Tolerance and respect for other people	0.044***
	(0.011)
Not being selfish (unselfishness)	0.036***
	(0.010)
Respect for human rights	
Not much respect	0.019*
	(0.011)
Fairly much respect	0.027**
	(0.012)
A great deal of respect	0.021
	(0.013)
R-squared	0.079
First stage F statistics	129.58
No. of observations	55,856

Notes: *** p<0.01, ** p<0.05, * p<0.1. Estimated coefficients after the two-stage least squares (2SLS) estimation are reported. To account for selection, the main and selection equations are estimated sequentially. Bootstrapped standard errors are in parentheses. Green parties are parties that have environmental protection as a key priority (see Section 4.1. for details). Both main and selection equations, as well as the first stage equation, include individual socioeconomic characteristics, country fixed effects, and survey year fixed effects. Individual socioeconomic characteristics are age and its square, biological sex, employment status, income, dummy for having a high education, dummy for being married, having children, urban/rural residence, and living in a landlocked country.

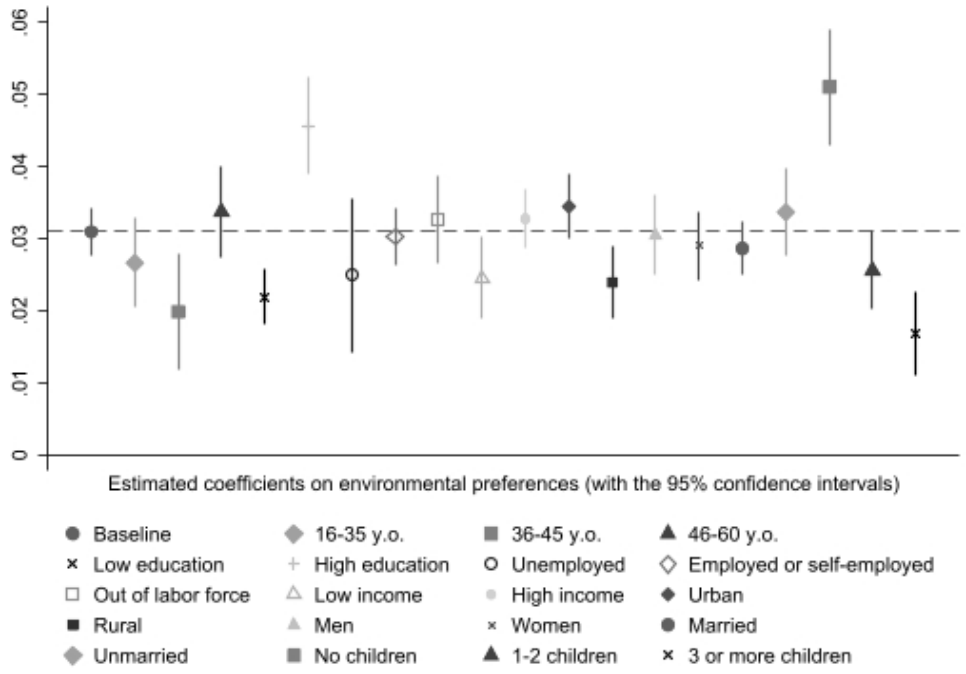

Figure 1. Heterogeneity by individual socioeconomic characteristics.

Notes: The figure presents the estimated impact of environmental preferences on voting for Green parties by individual socioeconomic characteristics. The baseline model is from Table 1. The coefficients with their 95% confidence intervals after the Heckman two-step selection model estimation are reported. Standard errors are bootstrapped. Green parties are parties that have environmental protection as a key priority (see Section 4.1. for details). Both main and selection equations include individual socioeconomic characteristics, country fixed effects, and survey year fixed effects. Individual socioeconomic characteristics are age and its square, biological sex, employment status, income, dummy for having a high education, dummy for being married, having children, urban/rural residence, and living in a landlocked country.

6.3. Mechanisms

In this section, we test several mechanisms that may alter the effect of environmental preferences on voting for Green parties. The results are presented in Table 4.

The first mechanism is environmental policy stringency. As shown in column (1) of Table 4, changes in the stringency of environmental policies reduce both the support for Green parties and the effect of environmental preferences on voting for Green parties. Thus, we find empirical support for our hypothesis H2. This implies that although strengthening the stringency of environmental policies may align with individual preferences for environmental protection, these measures might be costly, reducing support for Green parties.

To understand why the country-level stringency of environmental policies reduces individual support for Green parties, one needs to look at more nuanced mechanisms at the individual level. As discussed above, one such mechanism is perceptions of individual economic insecurity that environmental policies might induce. As shown in columns (2) and (3) of Table

4, satisfaction with the financial situation of the household reinforces the impact of environmental preferences on voting for Green parties, while the respondents' worries about losing their own jobs reduce this impact. This supports our hypothesis H3.

Another individual-level mechanism is related to perceptions and tolerance of income inequality. In column (4) of Table 4, we find that the impact of environmental preferences on voting for Green parties is lower for respondents who are more likely to think that income inequality creates incentives for individual efforts and is greater for respondents who support fighting income inequality. Thus, we do not find support for hypothesis H4. This result implies that individuals who support fighting income inequality are likely to prioritize economic growth over environmental protection and, thus, vote for parties that focus on economic growth more than Green parties do.

As discussed above, the availability of social protection programs in a country may reduce the perceptions of economic insecurity. In column (5) of Table 4, we show that a higher share of social expenditures in the country's GDP leads to more votes for Green parties and reinforces the effect of environmental preferences on the Green parties' voting, supporting our hypothesis H5.

Finally, the relationship between environmental preferences and voting for Green parties may differ for individuals more exposed to nature and environmental changes. In column (6) of Table 4, we use GDP losses due to natural disasters in the respondent's country of residence as a mechanism and show that the higher losses reduce the support for Green parties and lower the effect of environmental preferences on this support. This finding is in line with our hypothesis 6a. It may imply that disaster-related economic losses may exacerbate the economic insecurity in the country, which is translated into lower support for Green parties.

At the individual level, this mechanism works similarly. Specifically, in column (7) of Table 4, we show that farmers and farm workers who frequently interact with nature and are more likely to be exposed to the consequences of natural disasters are also more likely to vote for Green parties. However, the impact of environmental preferences on their voting for these parties is lower than that of individuals in less exposed occupations. Thus, it is likely that natural disasters may induce income losses in more exposed occupations, reducing the impact of environmental preferences on voting for Green parties. This is in line with our hypothesis H6b.

Table 4. Mechanisms.

	Env. policy stringency (1)	Econ. insecurity (2)	Worries about losing a job (3)	Inequality tolerance (4)	Social expenses (5)	GDP losses (6)	Exposed occupation (7)
Main equation (dep. variable: Vote for a Green party)							
Environmental preferences (default: Prefer economic growth)							
Prefer environmental protection	0.034***	0.019***	0.066***	0.062***	0.009***	0.036***	0.033***
	(0.002)	(0.004)	(0.005)	(0.005)	(0.003)	(0.002)	(0.002)
Mechanisms							
Change in environmental policy stringency 2015-2017	-0.065***						
	(0.004)						
Economic insecurity (default: completely dissatisfied with the household's financial situation)		-0.003***					
		(0.000)					
Worries about losing own job (default: Not at all)			0.007***				
			(0.001)				
Income inequality tolerance				-0.001***			
				(0.000)			
Social expenses (% of GDP)					0.004***		
					(0.000)		
GDP losses due to natural disasters (% of GDP)						-0.000***	
						(0.000)	
Occupation exposed to natural disasters (default: Less exposed)							0.020***
							(0.003)
Prefer env. protection*Mechanism	-0.012**	0.002***	-0.013***	-0.005***	0.004***	-0.001***	-0.031***
	(0.006)	(0.001)	(0.002)	(0.001)	(0.000)	(0.000)	(0.004)
Selection equation (dep. variable: Vote in the national election)							
Migrant	-0.772***	-0.790***	-0.781***	-0.792***	-0.913***	-0.658***	-0.791***
	(0.027)	(0.029)	(0.029)	(0.029)	(0.022)	(0.026)	(0.029)
Interested in politics (default: Not at all)							
Not very interested	0.420***	0.404***	0.407***	0.405***	0.376***	0.399***	0.404***
	(0.017)	(0.017)	(0.016)	(0.017)	(0.015)	(0.015)	(0.016)
Somewhat interested	0.708***	0.698***	0.702***	0.698***	0.615***	0.618***	0.698***
	(0.017)	(0.017)	(0.017)	(0.018)	(0.016)	(0.016)	(0.017)
Very interested	0.876***	0.860***	0.866***	0.862***	0.820***	0.798***	0.863***
	(0.025)	(0.025)	(0.024)	(0.025)	(0.023)	(0.022)	(0.026)
No. of observations							
Total	55,710	63,630	62,282	63,500	63,772	62,196	63,785
Selected	44,529	49,012	47,664	48,882	48,643	48,844	49,167
Non-selected	11,181	14,618	14,618	14,618	14,129	13,352	14,618

Notes: *** p<0.01, ** p<0.05, * p<0.1. Estimated coefficients after the Heckman two-step selection model are reported. Bootstrapped standard errors are in parentheses. Green parties are parties that have environmental protection as a key priority (see Section 4.1. for details). Both main and selection equations include individual socioeconomic characteristics, country fixed effects, and survey year fixed effects. The model in column (1) does not include country fixed effects since environmental policy stringency is measured at a country level. Individual socioeconomic characteristics are age and its square, biological sex, employment status, income, dummy for having a high education, dummy for being married, having children, urban/rural residence, and living in a landlocked country.

7. Conclusion

This paper suggests that individuals with environmental preferences are more likely to vote for Green parties. This finding implies that raising public environmental awareness could strengthen support for Green parties and environmental policies that those parties promote. At the same time, we find that environmental preferences have an almost threefold higher effect on voting for pro-Green parties than for Green parties. That is, parties that consider environmental protection along with other economic policies and priorities may get stronger support from the public.

We also find that the impact of environmental preferences on Green party voting is lower among economically less secure individuals, including those with lower education and income and living in rural areas. One potential explanation for such a pattern is that despite having preferences for environmental protection, economically insecure individuals are unwilling to contribute financially and are afraid of extra environmental regulations and taxes that Green parties might implement. Thus, economically less secure voters would prefer policies and parties that focus on supporting economic growth and improving the overall economic situation. This suggests that support for Green parties and environmental policies is contingent on voters' economic security even when environmental preferences are strong, emphasizing the need for Green parties to address voters' economic concerns. In line with those arguments, we find that individual economic insecurity and changes in the stringency of environmental regulations may reduce the effect of environmental preferences on voting for Green parties. At the same time, stronger social protection policies reinforce the effect of environmental preferences on voting for Green parties.

Our results suggest that changes in countries' environmental regulations within two years impair Green parties' support, highlighting the need for careful and gradual policies addressing public environmental concerns. In addition, we find that the impact of environmental preferences on voting for Green parties is lower for individuals in occupations that are more likely to interact with nature and be exposed to environmental changes, such as farmers and agricultural workers. This finding implies that countries with more individuals employed in occupations exposed to natural disasters (e.g., agricultural sectors) may have lower support for Green parties. Thus, focusing on the long-term feasibility of implemented environmental policies is essential for ensuring sustainable development, especially in less economically advanced countries.

Our paper opens several avenues for future research. First, our findings underscore the importance of understanding the drivers of electoral support for Green parties and the environmental actions they promote. Future research may further focus on how individual- and aggregate-level economic and environmental shocks affect support for Green parties.

Second, we provide evidence on the impact of environmental preferences on the likelihood of voting for Green parties and the underlying mechanisms behind this relationship. More research is also needed to understand what factors affect the likelihood that the elected Green parties stay in power once those parties are elected. For instance, recent qualitative research suggests that populist rhetoric emphasizing the economic insecurity brought by environmental actions imposes a serious threat to the feasibility of those actions in the future (Campanella and Lawrence 2024; White 2023). Our results highlight the need for measures mitigating disproportionate burdens on vulnerable households, e.g., via targeted subsidies or job training programs, to protect those most affected by the transition to a greener economy and, thus, to gain stronger support for Green parties.

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Appendix

Table A1. Descriptive statistics of variables used in the analysis.

Variable	Obs	Mean	Std. dev.	Min	Max
Dependent variables					
Vote for a Green party	58,279	0.049	0.215	0	1
Vote for a pro-Green party	58,279	0.268	0.443	0	1
Environmental preferences					
Environmental protection vs. Economic growth					
Prefer economic growth (default)	63,053	0.407	0.491	0	1
Prefer environmental protection	63,053	0.562	0.496	0	1
Prefer other option	63,053	0.031	0.173	0	1
Environmental beauty vs. Economic growth					
Economic growth is the most important (default)	62,500	0.487	0.500	0	1
Environmental beauty is the most important	62,500	0.092	0.289	0	1
Another option is the most important	62,500	0.421	0.494	0	1
Member of an environmental organization	63,096	0.163	0.369	0	1
Independent variables					
Age	63,785	42.352	16.517	16	103
Age squared	63,785	2066.50	1552.58	256	10609
Male	63,785	0.487	0.500	0	1
Has a higher education	63,785	0.338	0.473	0	1
Employment status					
Unemployed (default)	63,785	0.080	0.272	0	1
Employed or self-employed	63,785	0.597	0.490	0	1
Out of labor force	63,785	0.322	0.467	0	1
Income					
Low income (default)	63,785	0.236	0.425	0	1
High or middle income	63,785	0.746	0.435	0	1
Income (response missing)	63,785	0.018	0.131	0	1
Lives in an urban area	63,785	0.672	0.470	0	1
Married	63,785	0.632	0.482	0	1
Children					
No children (default)	63,785	0.310	0.463	0	1
1-2 children	63,785	0.424	0.494	0	1
3 or more children	63,785	0.266	0.442	0	1
Lives in a landlocked country	63,785	0.201	0.401	0	1
Key variables of the selection equation					
Usually votes in national elections	63,785	0.771	0.420	0	1
Migrant	63,785	0.060	0.238	0	1
Interested in politics					
Not at all (default)	63,785	0.213	0.410	0	1
Not very interested	63,785	0.304	0.460	0	1
Somewhat interested	63,785	0.351	0.477	0	1
Very interested	63,785	0.132	0.338	0	1
Instrumental variables					
Child qualities that are important to be taught at home					
Feeling of responsibility (1=mentioned, 0=not mentioned)	63,448	0.646	0.478	0	1
Tolerance and respect for other people (1=mentioned, 0=not mentioned)	63,378	0.626	0.484	0	1
Not being selfish (unselfishness) (1=mentioned, 0=not mentioned)	62,981	0.274	0.446	0	1
Human rights are respected in a country					
No respect at all (default)	63,047	0.098	0.298	0	1
Not much respect	63,047	0.276	0.447	0	1
Fairly much respect	63,047	0.454	0.498	0	1
A great deal of respect	63,047	0.172	0.377	0	1
Mechanisms					
Change in environmental policy stringency 2015-2017	55,710	-0.028	0.232	-0.71	0.47

Economic insecurity (1=financial satisfaction above mean, 0=financial satisfaction below mean)	63,536	6.187	2.444	1	10
Worries about losing own job (1=not at all, 4=very much)	61,930	2.802	1.113	1	4
Income inequality tolerance (1= Incomes should be made more equal; 10= There should be greater incentives for individual effort)	63,292	6.287	2.995	1	10
Social expenses in GDP (% of GDP)	62,772	7.707	5.533	0.4	19.4
Losses due to natural disasters (% of GDP)	62,196	1.156	8.005	0	63.3
Occupation exposed to extreme weather events (1=Farmer or farm worker, 0=other occupation)	63,785	0.070	0.255	0	1

Note: Individuals below age 18 in our sample are from Brazil and Nicaragua, where the voting age is 16 years old.

Table A2: Full regression results for Table 1.

	Main equation (dep. variable: Vote for a Green party)	Selection equation (dep. variable: Vote in the national election)
Environmental preferences (default: Prefer economic growth)		
Prefer environmental protection	0.031***	
	(0.002)	
Prefer other option	0.028***	
	(0.006)	
Migrant		-0.791***
		(0.028)
Interested in politics (default: Not at all)		
Not very interested		0.404***
		(0.017)
Somewhat interested		0.698***
		(0.017)
Very interested		0.863***
		(0.024)
Age	0.000	0.051***
	(0.000)	(0.002)
Age squared	-0.000**	-0.000***
	(0.000)	(0.000)
Male	-0.009***	0.024*
	(0.002)	(0.013)
High education	0.011***	0.272***
	(0.002)	(0.015)
Employment status (default: Unemployed)		
Employed or self-employed	-0.002	0.095***
	(0.004)	(0.024)
Out-of-labor force	-0.006	-0.016
	(0.004)	(0.025)
Income (default: Low income)		
High income	-0.015***	0.051***
	(0.002)	(0.015)
Income (missing response)	-0.017**	-0.347***
	(0.008)	(0.046)
Urban	0.004*	-0.091***
	(0.002)	(0.015)
Married	-0.005**	0.116***
	(0.002)	(0.016)
Children (default: No children)		
1-2 children	-0.008***	0.072***
	(0.003)	(0.019)
3 or more children	-0.001	0.082***
	(0.003)	(0.023)
Living in a landlocked country	-0.002	-0.300***
	(0.011)	(0.102)
Constant	0.026**	-0.906***
	(0.013)	(0.088)
Lambda	-0.006	
	(0.007)	
No. of observations		
Total	63,785	
Selected	49,167	
Non-selected	14,618	

Notes: *** p<0.01, ** p<0.05, * p<0.1. Estimated coefficients after the Heckman two-step selection model are reported. Bootstrapped standard errors are in parentheses. Green parties are parties that have environmental protection as a key priority (see Section 4.1. for details). Both main and selection equation include country fixed effects and survey year fixed effects.