

# Endogenous green preferences

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## Abstract

Low public support has been an obstacle to the enactment of stronger environmental policies. Yet if policies are enacted, preferences for them may change. Using surveys covering 38 countries around the world, we study the dynamics of environmental policies and individual preferences over twenty years. Exploiting within-country, across birth-cohort variation in exposure to environmental policy stringency, we document that cohorts exposed to more stringent policies in the past are more supportive of environmental policies at the time of the survey, with the effect largely driven by exposure during a period of early adulthood known as the formative age window. Therefore, environmental policy preferences are endogenous on a societal level, with implications for their predictability, as well as their moral and political economy.

**Keywords:** Endogenous preferences; Environmental policy; Environmental preferences; Formative age; Policy support

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# 1 Introduction

Environmental externalities can be effectively addressed through sufficiently stringent policies. However, stringent environmental policies, like carbon taxes, have been obstructed by low public support (Douenne & Fabre, 2022). While public support naturally influences policy outcomes, it is traditionally modelled as fixed, invariant to influence from experience with policies (Stigler & Becker, 1977). But if causal relationships are bi-directional, i.e., public preferences influence subsequent policy outcomes and policy outcomes influence public preferences, then the resulting endogenous relationship affects the evolution of policy.<sup>1</sup> Understanding how green policy preferences evolve is essential, particularly in light of the increasing urgency to address environmental challenges (Dechezleprêtre et al., 2022). Recent theoretical models allow for individuals’ consumption preferences to evolve endogenously, enriching the analysis on the dynamics of various environmental behaviors (Besley & Persson, 2023; Konc et al., 2021; Mattauch et al., 2022). Empirically, however, it remains an open question whether individuals’ preferences for green policies evolve differently in response to exposure to stringent policies compared to more lenient ones.

If voter preferences are exogenous and information perfect, personal experience with policies would not shape an individual’s views. However, voters could update their view of the normative appropriateness and impacts of policies, once exposed to them. Using global survey data from the Integrated Value Surveys (IVS) and a country-specific and internationally comparable measure of Environmental Policy Stringency (EPS) (Kruse et al., 2022), we test this hypothesis in 38 countries over more than 20 years. We exploit within-country, cross-cohort variation in individual exposure to environmental policy stringency to determine whether birth cohorts exposed to more stringent environmental policies are more supportive of environmental policies at the time of the survey. We

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<sup>1</sup>Previous studies document that public support influences policy outcomes (List & Sturm, 2006). Theoretical and empirical analyses model how bidirectional causation between preferences and policy outcomes complicate the evolution of policies (Alesina & Giuliano, 2015; Alesina & Rodrik, 1994; Gerber & Jackson, 1993). Fuchs-Schündeln and Schündeln (2015) document that support for democracy increases with the length of time under the system, resulting in endogenous political preferences.

account for potential confounds, such as exposure to environmental and macroeconomic conditions, country-specific shocks at the time of the survey, generational variations, and country-specific age-specific factors.

We find that individual experience with more stringent environmental policies increases current policy preferences, implying endogeneity of preferences. As experience with policy reshapes familiarity and norms, even societies with tepid initial support for stringent policy find themselves increasingly supportive over time. Increasing exposure to environmental policy stringency by 1 standard deviation increases individual support for government intervention to reduce pollution by 0.18 of a standard deviation. The effect is evident even on specific policy instruments. We document a strong, positive, and statistically significant effect of tax stringency exposure, and in particular CO<sub>2</sub> and fuel tax, on subsequent preferences for environmental taxes.

The salience of environmental policies has been previously documented, however, all past exposure to policy is not equal in its effect.<sup>2</sup> We find strong evidence that policy exposure during the formative age window of 18-25 has a large impact, in line with a growing literature.<sup>3</sup> Conversely, policy stringency in any other age windows does not meaningfully alter individual preferences at the time of the interview. When we compare formative age policy exposure to contemporaneous exposure at the time of the interview, we document an asymmetry of reference points (De Neve et al., 2018), with the demand for government in pollution reduction most pronounced among individuals who experienced a reduction in stringency since their formative age window. Finally, we document a larger effect of policy exposure conditional on poor environmental quality (as measured by fine particulate matter and household air pollution).

Armed with the estimated effects of policy stringency exposure on environmental preferences, we produce a simple counterfactual exercise. We select three countries

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<sup>2</sup>Several studies consider the high salience of environmental policies, particularly those regulating air pollution (Eshbaugh-Soha, 2006). Policies are salient in the business community (Noailly et al., 2021) and among consumers (Rivers & Schaufele, 2015).

<sup>3</sup>The “formative age” or “impressionable years” hypothesis, first studied in Krosnick and Alwin (1989), states that values are formed during early adulthood and do not substantially change afterward.

with historically different environmental policy levels (Brazil, US, Sweden) and study hypothetical global preferences if birth-cohorts had been exposed to each of these policy counterfactuals. We document stark differences in public support under each counterfactual, ranging from 85% of the countries in the sample with lower green preferences than historically observed, had individuals been exposed to Brazil’s history of policy stringency, to 77% of countries with higher preferences under Sweden’s policy counterfactual.

Our results suggest that strong opposition to certain environmental policies may not reflect lasting preferences, but how preferences evolve will depend on what policy outcomes are realized.<sup>4</sup> Among the possible explanations are that media framing (Beattie, 2020) and inaccurate perceptions about policies (Douenne & Fabre, 2022) can only be challenged with new evidence if the policy is passed into law. Moreover, introducing more stringent policies may not be acceptable, while a counterfactual exercise in which a stringent policy were to be reversed may also be unacceptable.<sup>5</sup> If a society’s familiarity and norms can change, we would expect differences in support between an ex-ante proposal and an ex-post review of a policy.<sup>6</sup>

Rising interest in the co-dynamics of climate policy stringency and public support has spurred recent work on modeling endogenous preferences over consumption choices in the economics of climate change (Konc et al., 2021; Mattauch et al., 2022). There is also country-specific suggestive evidence of endogenously evolving support for green policies. In British Columbia, initially tepid support for a carbon tax policy that became law grew substantially in the subsequent years (Murray & Rivers, 2015). Vice

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<sup>4</sup>Low support has been directly expressed through referenda in Washington State (Anderson et al., 2023), Switzerland (Bornstein & Lanz, 2008; Carattini et al., 2017), and California (Burkhardt & Chan, 2017; Holian & Kahn, 2015; Kahn & Matsusaka, 1997), and social protests in France (Douenne & Fabre, 2020, 2022).

<sup>5</sup>Misperceptions are evident in climate policies. For example, citizens tend to ignore that pricing pollution reduces pollution (Kallbekken et al., 2011) and they wrongly think that a carbon tax with equal per capita rebates would be regressive (Douenne & Fabre, 2022).

<sup>6</sup>Experience could foster comfort with policy settings that are familiar (Furnham & Boo, 2011; Tversky & Kahneman, 1974), and rules and other instruments can influence cultural norms for which individuals assign intrinsic value (Bezin, 2015; Bisin & Verdier, 2001, 2011; Schumacher, 2015).

versa, in France, after a carbon tax failed amid widespread social protest, the popularity of such policies appears to have declined further.<sup>7</sup> But these individual cases make it difficult to draw a comprehensive picture. To the best of our knowledge, our paper is the first cross-national attempt to study endogenous environmental preferences over policy options and estimate the causal effect of experience with policy in a quasi-experimental setting, accounting for environmental quality. Endogenous support alters the predictability of the policy path over time, with implications for notions of paternalism and the moral and political economy of policy selection that we discuss in the conclusion.

## 2 Conceptual framework

Environmental policy exposure may affect individual preferences through changes in norms, as well as endogenous learning. Traditionally, an individual's preferences over environmental policy can be represented by a conventional utility function, such that  $U(\psi) = \mu(c(\psi), q(\psi))$ , where  $c$  and  $q$  represent consumption and environmental quality, each a function of policy stringency  $\psi$ .

In our framework, individuals can form policy norms based on past experience, defined as  $\psi_R$ . Deviation of the present policy  $\psi$  from the norm  $\psi_R$  affect utility and are represented as follows:

$$V[\Psi, \psi_R, \alpha, \beta, \gamma] = \mu(c(\psi), q(\psi)) \tag{1}$$

$$- \alpha \cdot d_1(c(\psi), c(\psi_R)) \tag{2}$$

$$- \beta \cdot d_2(q(\psi), q(\psi_R)) \tag{3}$$

$$- \gamma \cdot d_3(\psi, \psi_R) \tag{4}$$

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<sup>7</sup>In Douenne and Fabre (2020), support in France for a carbon tax and rebate was 38% in early 2019. In Dechezleprêtre et al. (2022), 29% of French respondents supported the policy in May 2021.

The first line is the standard utility function, lines (2) through (4) represent the consequences to utility of deviating from consumption, environmental quality and policy norms (where  $\alpha, \beta, \gamma \geq 0$ , and  $d_1, d_2$ , and  $d_3$  are distance functions).<sup>8</sup> An individual chooses their subjective policy stringency such that

$$\psi^s = \underset{\psi}{\operatorname{argmax}} V[\psi, \psi_R, \alpha, \beta, \gamma] \quad (5)$$

When at least one of  $\alpha, \beta, \gamma > 0$ , the derivative of  $\psi^s$  with respect to the policy norm  $\psi_R$  is unambiguously positive. Changes in policy norms do not affect the traditional utility element (line 1), but exert an influence on the optimal stringency level through lines 2-4. In each of these lines an increase in the reference point would produce an increase in the optimal policy stringency, which provides the testable implication that we empirically test in Section 4:

$$\frac{\partial \psi^s}{\partial \psi_R} > 0 \quad (6)$$

If this implication is supported in the data, it reveals a bidirectional relationship between policy stringency and preferences, i.e., endogenous green policy preferences.

A potentially co-existing mechanism is through an information channel. If individuals are inaccurate about their true utility under policy  $\psi$  because of imperfect information, then experience with the policy would induce changes in beliefs toward accuracy. In particular, a case of positive endogeneity would arise if individuals have lower subjective expected utility and the policy is enacted. While experience will enhance the information, experience is impossible if the policy is not enacted.<sup>9</sup>

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<sup>8</sup>See Furnham and Boo (2011) and Tversky and Kahneman (1974) for literature on comfort and familiarity, and Bezin (2015), Bisin and Verdier (2001, 2011), and Schumacher (2015) for cultural norms with intrinsic value.

<sup>9</sup>Misperceptions are evident in climate policies. For example, citizens tend to ignore that pricing pollution reduces pollution (Kallbekken et al., 2011) and they wrongly think that a carbon tax with equal per capita rebates would be regressive (Douenne & Fabre, 2022).

### 3 Data

We use individual survey data from the Integrated Value Surveys (IVS), which harmonize the European Values Study (EVS) and the World Value Survey (WVS). The EVS and the WVS are two large-scale repeated cross-national surveys, which contain, among others, socio-political and environmental attitudes and preferences of individuals and their socio-demographic characteristics (Aghion et al., 2023).

We focus on two measures of environmental preferences. First, we consider the level of agreement of the respondent with the statement “Government should reduce environmental pollution”, stated in a 4-point Likert scale where options are: Strongly disagree, Disagree, Agree, Strongly agree. To exploit all the variation in survey responses, we use the 4-point Likert scale as the main outcome, where higher values are associated stronger agreement.<sup>10</sup> <sup>11</sup> The other environmental preference is constructed from the agreement with “Increase in taxes if used to prevent environmental pollution”.

Our measure of environmental policy exposure comes from the OECD Environmental Policy Stringency Index (EPS), which is a country-specific and internationally-comparable measure of the stringency of environmental policy. Stringency is defined as the degree to which environmental policies put an explicit or implicit price on polluting or environmentally harmful behavior (Kruse et al., 2022). The index is constructed by scoring policies’ stringency on a scale from zero to six and subsequently aggregating the scores into an index, where higher levels are associated with more stringent policies.<sup>12</sup>

Our main variable  $policy\ exposure_{bct}$  for an individual born in year  $b$  in country  $c$  interviewed in year  $t$  is defined as:

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<sup>10</sup>We test for the robustness of the results by constructing two binary versions equal to one if the respondent chooses either “Agree” or “Strongly agree”, and zero otherwise, and a more conservative binary variable that takes value one only if the respondent chooses “Strongly agree”.

<sup>11</sup>Respondents can interpret the question as: (1) the appropriate role of government in addressing pollution and (2) support for government to act to reduce pollution. Each is equally relevant to the question of endogeneity of preferences and the implication of such endogeneity on how policy evolves.

<sup>12</sup>Additional details can be found in the Appendix Section A.1. Figure A1 displays the aggregation structure. For additional information, see Kruse et al. (2022).

$$policy\ exposure_{bct} = \frac{1}{t - (b + 18)} \sum_{\tau=b+18}^t policy\ stringency_{c,\tau} \quad (7)$$

In other words, an individual’s *policy exposure*<sub>bct</sub> is the average environmental policy stringency in their country between age 18 and the year of interview. Environmental policy preferences are recorded from 1990 to 2010, with certain gaps. Respondents interviewed in the same year and country can have different treatment exposure because of variation in their year of birth.<sup>13</sup> Since most countries exhibit a positive trend over time (Appendix Figure A4), we also construct two alternative measures of policy stringency as a robustness check. First, we de-mean each country’s level of environmental policy from the annual cross-sectional average. This procedure also accounts for policies implemented at supra-national levels which would contemporaneously make more stringent several countries (e.g., the EU Emissions Trading System). Second, we de-trend the policy stringency from a country-specific linear trend for the thirty years in the sample (Appendix Figure A5).

To test for the “formative age” hypothesis, we construct the average policy exposure when the respondent was aged 18 to 25 (Appendix Figure A6) and other eight-year age window exposures starting from the range of the impressionable years.<sup>14</sup>

We also use the Environmental Performance Index (Wolf et al., 2022) to measure environmental quality. We consider PM2.5 and Household Air Pollution from solid fuels (HAP) measured as the number of age-standardized disability-adjusted life-years lost per 100,000 people, respectively due to exposure to fine air particulate matter smaller than 2.5 micrometers, and exposure to household air pollution from the use of household solid fuels. We recode the measures such that higher values are associated with better environmental conditions and construct a measure of environmental quality

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<sup>13</sup>Appendix Figure A2 shows the density distribution of EPS exposure in the final estimation sample. The average stringency across cohorts and countries is close to one, with the distribution right-skewed. Appendix Figure A3 shows the distribution by country.

<sup>14</sup>In most cases, N = 8. For the subset of individuals who are either too young or too old, we use all available years over the 8-year formative age window. Results are robust to dropping these individuals and to using alternative definitions of impressionable years (Appendix Table A15).



exposure symmetric to the policy exposure.

## 4 Empirical Approach

To test whether experience with policies feeds back into preferences for policies, we adopt an empirical approach that exploits within-country, across-birth-cohort variation in environmental policy stringency, and removes confounds such as local economic, political, and environmental conditions at the time of interview. Our baseline econometric specification is written as

$$Y_{ibctw} = \beta_1 \text{policy exposure}_{bct} + X'_i \gamma + Z'_{bct} \delta + \kappa_b + \mu_{ct} + \alpha_w + \theta_c \times \text{age} + \varepsilon_{ibctw} \quad (8)$$

where  $Y_{ibctw}$  is the answer to one survey question by individual  $i$ , born in year  $b$  interviewed in year  $t$  in country  $c$  in survey source  $w$ . Our main coefficient of interest is associated with exposure to environmental policy stringency, *policy exposure*, which varies across countries, years of birth, and years of interview. We control for a set of individual covariates  $X'_i$ , capturing socio-economic characteristics (gender; employment status; education - lower, medium, and upper - and ten country-specific income decile dummies) at the year of interview  $t$ . Most importantly, other past experiences of an individual could be correlated with environmental policy stringency and influence environmental preferences. To capture these exposures, we control for a vector of country-cohort specific covariates  $Z'_{bct}$ , in particular, environmental quality (exposure to PM2.5 and HAP) and economic recessions (average number of years in which GDP growth contracted by at least 10% (Barro & Ursúa, 2008)).

The most conservative specification accounts for birth-cohort, country-year of interview, survey (EVS or WVS) fixed effects and country-specific age trends. All regressions are estimated using OLS for ease of interpretation, but similar results are obtained with ordered probit and probit models. We cluster standard errors at the country-year-of-interview level. We use survey sample weights to make the data rep-

representative at the country level and limit our sample to individuals born in the same country in which they are interviewed.

**Identification Strategy.** There are several potential threats to the identification of a causal effect of policy exposure on environmental preferences, which would imply endogeneity of preferences. Spurious correlations may arise due to reverse causality (i.e., countries have more stringent policies because citizens have strong environmental values), or unobserved confounders, such as historic events or economic conditions, that could co-determine individuals' preferences and policy levels in place.

We exploit within-country variation at the birth-cohort level in exposure to environmental policy stringency to establish a plausibly causal impact of experience with environmental policies on green preferences. Below, we detail how our specification addresses a number of potential threats to identify such effect.

First, age-specific factors could matter if different birth cohorts are exposed to different policies with different probabilities. The global positive trend in the stringency of environmental policies may suggest that younger generations are more likely to experience more stringent policies. We address this concern by including birthyear fixed effects  $\kappa_b$ , which account for cohort-specific attitudes so as to compare the individuals only within the same birth cohort.

Second, contemporaneous levels of environmental policy and quality and any other unobserved national and global economic and political conditions may drive differences in preferences. We account for any contemporaneous country-specific characteristics with country-year-of-interview  $\mu_{ct}$  fixed effects. This approach mitigates concerns that the results are driven by other structural time-varying differences between countries and strengthens the hypothesis that observed differences in attitudes towards environmental policies constitute a change in intrinsic preferences due to differences in the stringency of environmental policy exposure.

Third, there could be heterogeneous generational trends in environmental preferences across countries. Countries could lie on differential trends in the evolution of individual values which can lead to larger differences across generations. To rule out

such a possibility, we include country-specific age trends in our specification.

Finally, we also account for the source of the survey  $w$  fixed effects (World Value Survey or the European Value Study), to account for different sampling methodologies and other differences across the two survey sources.

The set of fixed effects ensures that the identifying variation comes from changes in exposure to environmental policy stringency across birth cohorts within a country interviewed in a given year. Although we saturate our specifications with fixed effects, there could remain confounding past exposures correlated with environmental policies, which we address by controlling for economic conditions and environmental quality.

To emphasize the role of the fixed effects, Appendix Figure A8 shows the unconditional correlation between the stated survey answers and environmental policy stringency exposure, negative and statistically significant at the 95% level (Panel a), and the strongly positive and statistically significant relationship between the residual variation in preferences and policy exposure (Panel b). Our set of fixed effects accounts for potential confounders that change the direction of the association between preferences and policies. For instance, consider that a relatively stringent country is likely to have been relatively stringent in the past and have lower pollution levels at time of interview. Low pollution levels should predict weaker support for government action than would be expected in countries with high pollution. Including country-by-year-of-interview fixed effects allows us to isolate the role of variation in past policy exposure, while removing the confounding influence of variation in contemporaneous pollution, policy stringency, and economic conditions.

## 5 Environmental Policy Stringency and Preferences

### 5.1 Main Results

In this section, we present the baseline estimates from Equation (8) and summarize the robustness of our results to more demanding specifications, to the inclusion of additional controls, and to a range of placebo exercises.

Table 1 reports the estimates from our baseline specification. The coefficient on environmental policy stringency exposure is positive and statistically significant, in line with the theoretical prediction. In our preferred and most conservative specification that accounts for economic recessions and environmental quality (column 5), increasing EPS exposure by 1 standard deviation increases individual support for government to reduce pollution by 0.18 of a standard deviation. In other words, an increase in policy stringency from the U.S. level (2.91) to Sweden’s level (3.61) in 2019 corresponds to a 5.7% increase in the Likert support for government to reduce pollution.<sup>15</sup>

**Types of environmental policies.** The EPS is a composite index of different environmental policies (see Appendix Section A.1 for further details). Different policy instruments can have different salience for consumers. Some policies may attract more political and media attention. Some may be more noticeable in perceptions or experiences with cost burden or incidence (Huse & Koptug, 2022; Rivers & Schaufele, 2015). Using various sub-indices of the EPS index (market-based instruments, non-market-based instruments, environmental taxes, and carbon trading schemes), we find no conclusive evidence that the effect of policy stringency on support for government to reduce pollution is solely driven by a specific sub-category of policy instruments (Appendix Figure A10).

Nevertheless, we document heterogeneous effects of environmental policies on preferences for a specific policy instrument, measured as the stated level of agreement with the survey question on “Increase in tax to prevent pollution”. Figure 1 displays the estimated coefficients on various dimensions of environmental policy on tax preferences. More stringent exposure to a broad index of taxes increases support for an increase in tax to prevent pollution. In particular, a one standard deviation increase in the exposure level to environmental tax stringency ( $\approx 79\%$  of the average exposure) is associated with a 0.12 standard deviation increase in the support for a tax increase. Using the same real-world comparison between U.S. and Sweden in 2019, an increase from the U.S. environmental tax stringency level (0.25) to Sweden’s level (3.75) corresponds

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<sup>15</sup>Table A2 reports the full estimates including controls.

to a 18% increase in the Likert support for increase in tax to prevent pollution.

Results have more pronounced statistical significance and larger magnitude for the stringency of combined carbon and diesel taxation, where a one standard deviation increase in the stringency of these two policy instruments ( $\approx 71\%$  of the average exposure) increases tax support by around 0.17 of a standard deviation. By disentangling CO2 and diesel tax exposure, we find that the effect is mostly driven by carbon tax.

Environmental tax policies are one of the most salient policy instruments (Dechezleprêtre et al., 2022; Douenne & Fabre, 2022). We document that past exposure to them affects preference formation. Specific policy types appear to reflect the dynamics of positive feedback that we document at the composite EPS level. Well-documented initial skepticism about taxes (Anderson et al., 2023; Douenne & Fabre, 2020) could make tax policies especially well-suited to the positive endogeneity that arises from experience. Exposure to specific policy types (as in, policy design or mechanism) might mediate the effect of experience on preferences.<sup>16</sup>

**Robustness.** We conduct several tests to probe the robustness of our results. We replicate our baseline results and find coefficients quantitatively very similar when using alternative measures of policy stringency de-meaned from the annual cross-sectional average and de-trended from a country-specific linear trend (Appendix Table A3). We also check the extent to which the starting age of exposure matters from early adolescence (14 years old). We find that for all policy exposure measures, including demeaned and detrended, the effect appears more robust from age 16 (Appendix Table A4). This is reassuring, as the channel of norm-formation that we hypothesize would require an individual to be aware of and influenced by a stringency level.<sup>17</sup>

We also adopt alternative estimation methods, using ordered probit (Appendix

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<sup>16</sup>Unfortunately, the survey does not ask other questions about support for additional pollution policy types, so we are unable to test, for example, the effect of exposure to non-market policies on subsequent support for non-market policies. Given the limited salience and higher costs of non-market policies, the dynamics could be different.

<sup>17</sup>Differently than exposure to democratic institutions which are assumed to be understood by individuals as of age of six (Acemoglu et al., 2021), environmental policies and their effects are posited to be internalized from adult life (Aklin et al., 2013).

Table A5), probit and linear probability models for binary outcomes (Appendix Tables A6 and A7). Results remain quantitatively comparable. In the latter exercise, increasing stringency exposure from the US level to Sweden’s level in 2019 increases the probability of agreeing with the government’s role in reducing pollution by 5 percentage points (7.5% at the mean) and of strongly agreeing by 9.4 percentage points (31%). Results are also robust to alternative fixed effects (Appendix Table A8) and to “leave-one-country-out” (Appendix Figure A11).

**Falsification tests.** A concern may be that the effect of environmental policy exposure on environmental preferences conflates the consequences of general social and political changes, correlated with environmental policies, generating spurious correlation. To assuage this concern, we consider attitudinal survey questions unrelated to the environment on family relationships, societal well-being, and economic values (see Appendix Table A9 for a complete description of the questions). Using 13 alternative outcomes, we find no effect that is statistically distinguishable from zero, except for one at the 5% level, consistent with sampling variation given the multiple tests conducted (Appendix Table A10).

## 5.2 Age windows

Individual preferences are particularly malleable during certain years of life. An expanding literature documents how values, norms, and preferences can be shaped by exposure to conditions and events, most notably in early adulthood. The formative age (or impressionable years) hypothesis states that individual values are formed during a period of great mental plasticity in early adulthood between 18 and 25 years and remain mostly unaltered afterward (Krosnick & Alwin, 1989).<sup>18</sup>

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<sup>18</sup>Other relevant work in social psychology includes Cutler (1974), Greenstein (1965), and Torney and Hess (1967). The importance of the formative age window has been recently borrowed by a growing strand of economic research that has empirically documented effects on attitudes towards migrants (Cotofan et al., 2022), attitudes towards democracy (Magistretti & Tabellini, 2022), confidence in political institutions and leaders (Aksoy et al., 2020), job preferences (Cotofan et al., 2023), political preferences (Barone et al., 2022), preferences for redistribution (Carreri & Teso, 2023; Roth & Wohlfart, 2018), and trust in science (Eichengreen et al., 2021). The only papers that explore the hypothesis in the context of environmental preferences study the effect of formative age exposure to

We construct measures of policy stringency exposure in various eight-year age windows, starting from the 18-25 window. Figure 2 reports the coefficients on each eight-year age window, with the formative window’s one in red. The coefficient on the formative age window is the only statistically significant and comparable in magnitude to the effect of exposure from age 18 to the year of interview, suggesting no evidence of the effect getting smaller as an individual acquires more information throughout their life. A one standard deviation increase in formative age exposure to environmental policy stringency is associated with 0.16 of a standard deviation increase in individual support for government intervention to reduce pollution. Results are robust to the use of binary versions of the outcome (Appendix Figure A9), alternative definitions of formative age (Appendix Table A15), and alternative de-meanned and detrended exposure measures (Appendix Table A16).

Policy outcomes could reveal societal preferences, contributing to endogenous preference formation. Societal preferences could directly shape an individual’s norms and thus her own policy support. Our results are robust to controlling for societal environmental policy preferences during the respondent’s formative age window (Appendix Table A17).

### 5.3 Heterogeneity

**Environmental policy direction.** The importance of the impressionable years among the age windows of exposure indicates that distant experiences play a role in shaping preferences today. Nevertheless, policies can vary widely over time, and a natural question arises about whether a change to higher or lower stringency than experienced during the impressionable years leads to different effects on present-day preferences. Without specifically testing for this heterogeneity, one might incorrectly assume that past exposure shapes preferences symmetrically (De Neve et al., 2018).

To test for asymmetric effects, we compare formative age exposure with the contemporaneous level of policy stringency in a binary variable ( $\Delta policy$ ), equal to one if

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natural disasters (Falco & Corbi, 2023) and climate-induced migration (Zappalà, 2023).

the contemporaneous policy is less stringent than the formative age’s level (i.e., “Negative”). Figure 3a displays the heterogeneous marginal effects of formative-age policy exposure and shows that this asymmetry exists. The effect of formative-age stringency levels is more pronounced among individuals exposed to a more lax policy environment during the year of interview. For two individuals in the same birth-cohort but interviewed in different years, experiencing a more lenient policy in the year of interview drives a stronger reaction to an increase in exposure stringency in terms of a higher demand for government action against pollution.

To determine the age window of exposure to environmental policy that most matters for individuals, we compare exposure during any age window to the current level of policy stringency (Appendix Table A19). We fail to recover a similar effect using exposure in any other age window than the formative age, suggesting that this specific period has a prominent role as a reference point against which individuals evaluate the current state (Abel, 1990; Coppock & Green, 2016; Roth & Wohlfart, 2018).

**Environmental quality.** As a final testable mechanism, we explore whether the effect of more stringent environmental policies on individual support is conditional on environmental quality. We conjecture that more stringent policies where environmental quality is low increase the policies’ salience and perceived value to individuals. This, in turn, increases lasting support for government action to reduce pollution.

We construct an indicator if PM2.5 or HAP exposure is below the sample median (i.e., worse environmental quality conditions). Figure 3b shows the heterogeneous marginal effects of EPS exposure by environmental quality. The results confirm that the role of exposure to stringent policy in predicting support for government pollution reduction is conditional on poor environmental quality. The uninteracted term of exposure to environmental quality below the median is negative and in certain cases not significant, suggesting that environmental conditions downgrade individual support of the government’s role in reducing pollution and we are not identifying a “poor environmental quality effect”. Rather, we are identifying the effect of experience of both poor conditions and more stringent policies meant to address them. This combination



induces support for government pollution actions. The effect underlines the importance of stringent policies targeting poor environmental conditions to gather support for government to reduce pollution.

**Socio-demographics.** We briefly summarize heterogeneous effects of policy exposure by respondents’ socio-demographic and economic characteristics. There is no substantial heterogeneity across most of the characteristics (gender, employment status, income, political orientation), except for education: lower-educated individuals are more likely than higher-educated ones to have green preferences as a result of more stringent environmental policies (Appendix Tables A23). We also document that the effect of policy exposure is driven by individuals less interested in politics and with less confidence in the government. This may be because individuals with limited political knowledge may be more influenced by their formative experiences than those who regularly update their views. This adds evidence that policy outcomes are critical to convey societal norms. Finally, individuals who think the government should take more responsibility are more prone to support government action to reduce pollution (Appendix Table A24).

## 6 Counterfactual policy stringency

We use our reduced-form estimates to assess the importance of the uncovered mechanism on the endogeneity of preferences to policy exposure in the environmental political process. We answer the following question: if individuals were exposed to another counterfactual policy stringency level, all else equal, how would the change in policy preferences predicted by our model be? We choose as counterfactuals three countries with notable historically different policy stringency levels: Brazil (cross-cohort average policy stringency exposure is 0.46), United States (average policy exposure 1.75, close to the cross-country average 1.74), and Sweden (average policy exposure 2.57).

We predict the counterfactual change in green preferences using the difference between the observed level of policy stringency and the counterfactual policy level in

each of the three countries, and the associated coefficient on EPS.<sup>19</sup> Figure 4 shows the model-predicted shares of respondents with *strong* green preferences under each counterfactual. If individuals had past environmental policy exposure as stringent as the US, the average support for green policies would be similar across countries (28.18 observed in the data vis-à-vis 28.11 under the US counterfactual). We observe stark differences in public support if birth cohorts were exposed to a stringency level equal to Brazil’s (mean is 14.2) and equal to Sweden’s (mean is 38.44). Nine countries under the Sweden counterfactual and four countries under the US counterfactual have a share of public support strictly above 50%. If we simplistically assume a one-to-one mapping between stated green preferences and revealed voting preferences in a majority voting rule system, these cases indicate countries that may pass more stringent environmental policies, setting in motion a dynamic loop of more stringent policies induced by higher support which then feeds back into higher future demand for policies.

## 7 Conclusion

We document that support for environmental policies increases significantly when individuals have been exposed to more stringent environmental policies during their adulthood and especially during their formative age window. Using environmental policy stringency and environmental policy preferences data across more than thirty-five countries over the world, we compare individuals in the same birth cohort within the same country across different points in time. We provide evidence that higher exposure to environmental taxes increases subsequent preferences for environmental taxes, and not other environmental policy instruments. Similarly, stringent environmental policies have no impact on non-environmental policy preferences. We document that our effect is stronger among cohorts exposed to a more lenient environmental policy mix in the year of the interview relative to their formative age exposure, as well as

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<sup>19</sup>We consider the marginal effect of EPS exposure on the probability to *strongly agree* with the statement “Government should reduce pollution” in column 4, Panel B, Table A7 to define environmental preferences in a conservative manner and interpret the results in terms of shares of respondents.

among cohorts exposed to lower environmental quality during their formative window.

This paper reveals that the relationship between environmental policy and public support is bidirectional, and thus endogenous. From a public policy perspective, these results indicate that although implementing major environmental policies might be a difficult task, individuals will increase their support for such policies over time. The complex co-dynamics of environmental preferences and policies can make equilibrium policy stringency levels more difficult to predict. The path to an equilibrium policy level, if one exists, would likely follow a different and longer path, with important implications for societal welfare. Endogenous environmental policy preferences have implications for moral and political economy, as well. Consider a social planner who determines that an unpopular, misunderstood policy will be broadly appreciated in the fullness of time. Imposing policy, even if deemed welfare-improving, in a manner that contradicts the preferences of individuals is considered paternalistic and can draw objections on ethical grounds. Evidence like ours of how appreciation for the policy will change over time has the potential to weaken the normative premises underlying some of these objections.

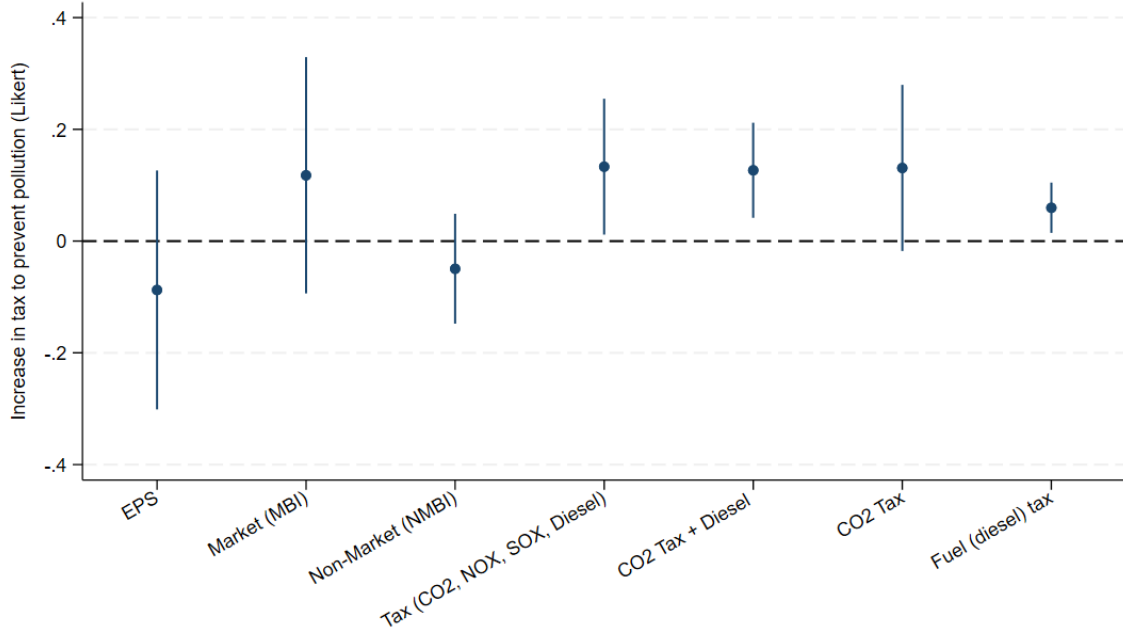
There are important avenues for future research within this area. Given the urgency of climate change, it would be valuable to replicate the analysis, studying climate policy preferences, in isolation from other environmental policy, as data become available. This approach would exploit longitudinal data of public support for carbon taxes and other instruments (e.g., cap-and-trade, subsidies) to evaluate how policy preferences change after an increase or decrease in the stringency of a climate policy.

Table 1: Environmental Policy Stringency (EPS) exposure during adult years

	Government should reduce pollution (Likert)				
	(1)	(2)	(3)	(4)	(5)
Environmental Policy Stringency (EPS) exposure	0.228** (0.109)	0.225** (0.110)	0.219** (0.107)	0.228** (0.109)	0.236** (0.111)
Recession exposure		-0.515 (0.381)	-0.528 (0.406)	-0.534 (0.378)	-0.518 (0.392)
PM2.5 exposure			0.0144 (0.281)		0.217 (0.291)
HAP exposure				-0.305 (0.298)	-0.377 (0.307)
Individual controls	✓	✓	✓	✓	✓
Survey FE	✓	✓	✓	✓	✓
Year of birth FE	✓	✓	✓	✓	✓
Country $\times$ Year of interview FE	✓	✓	✓	✓	✓
Country-age linear trends	✓	✓	✓	✓	✓
Mean outcome	2.909	2.909	2.909	2.909	2.909
SD Outcome	0.896	0.896	0.896	0.896	0.896
Mean EPS exposure	0.9	0.977	0.977	0.977	0.977
SD EPS exposure	0.696	0.696	0.696	0.696	0.696
$N$	16889	16889	16889	16889	16889
adj. $R^2$	0.1324	0.1324	0.1323	0.1324	0.1323

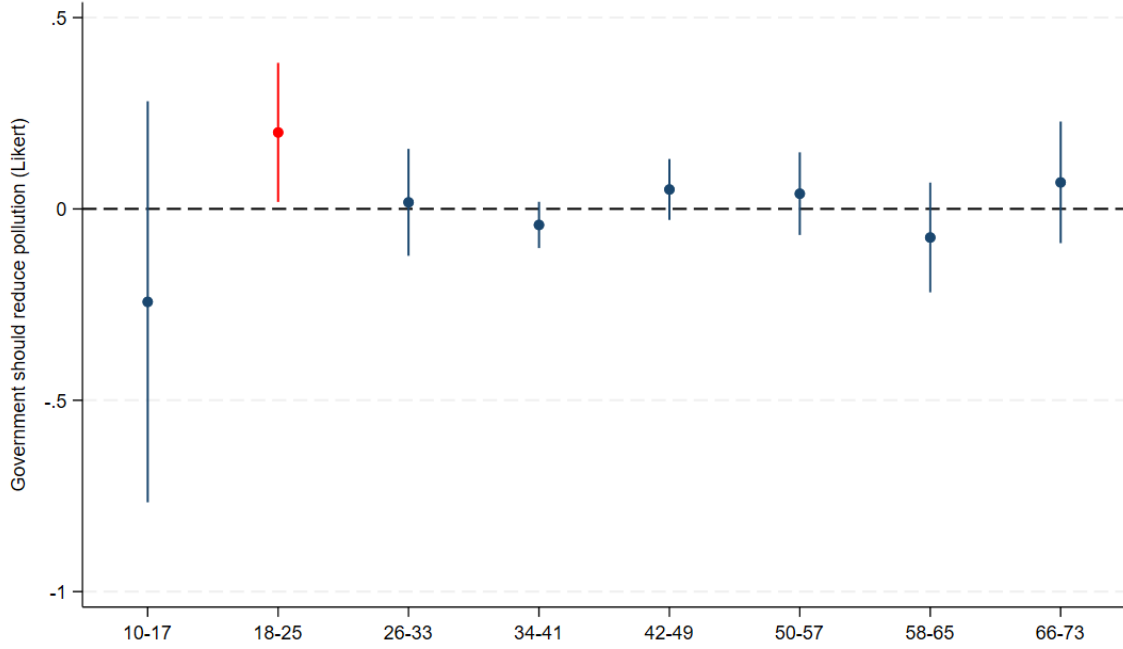
*Notes:* The outcome variable ranges from 1 to 4 (with higher values reflecting stronger agreement with the statement “Government should reduce environmental pollution”). All regressions control for male dummy, unemployment dummy, 3-category education (Lower, Middle, Upper), 10-class subjective income decile scale. Recession exposure is a dummy variable that takes value one if during her adult years the individual has experienced at least one year in which the real GDP per capita growth rate of its country is at least 10% below the previous year’s growth rate. PM2.5 and HAP exposure are respectively the adult years average of age-standardized disability-adjusted life-years lost per 100,000 people due to exposure to fine air particulate matter smaller than 2.5 micrometers (PM2.5) and due to exposure to household air pollution (HAP) from the use of household solid fuels (PM2.5 and HAP exposure variables are inverted such that higher values imply higher quality and divided by 1000 to improve readability of coefficients). All regressions also include year of birth, country-by-year of interview, survey fixed effects, and country-by-age linear trends. Observations are weighted using survey weights. Standard errors are clustered by country-year of interview. Significance levels: \*  $p < 0.1$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ .

Figure 1: Effect of EPS sub-indices exposure in adulthood on tax increase preferences



*Notes:* The figure shows the coefficient associated with the average level of sub-index in the x-axis during the adulthood of an individual, using as an outcome the question “Increase in tax to prevent pollution” in the Likert scale. All regressions control for male dummy, unemployment dummy, 3-category education (Lower, Middle, Upper), 10-class subjective income decile scale, recession exposure, PM2.5 and HAP exposure. The regression also includes year of birth, country-by-year of interview, survey fixed effects, and country-by-age linear trends. Observations are weighted using survey weights. Standard errors are clustered at the country-year of interview level. Bins represent the 95% confidence intervals around point estimates. Tabular results are reported in Appendix Table A12

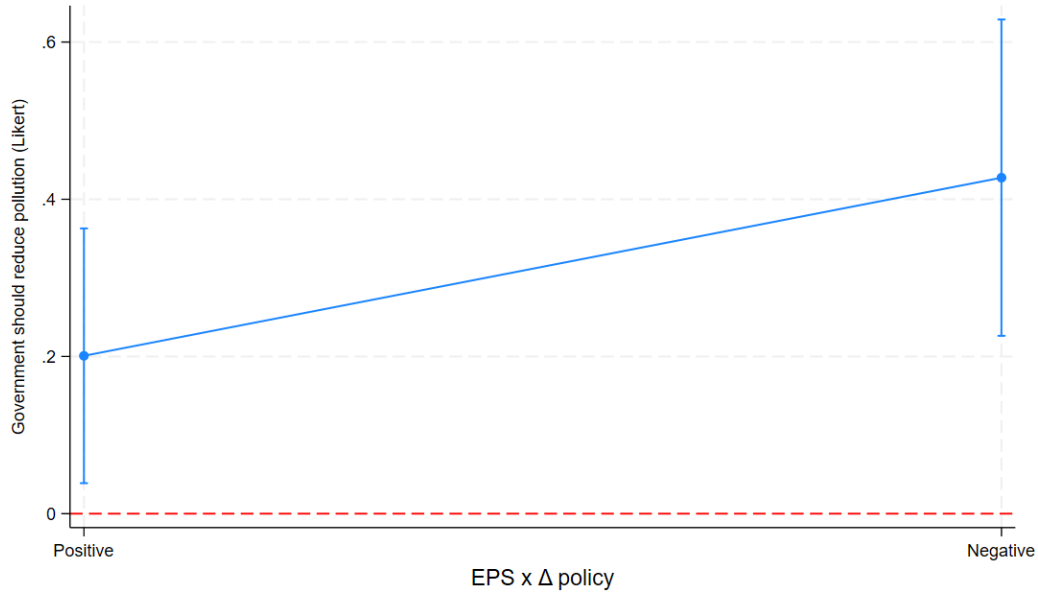
Figure 2: Effect of EPS exposure on environmental preferences by age window



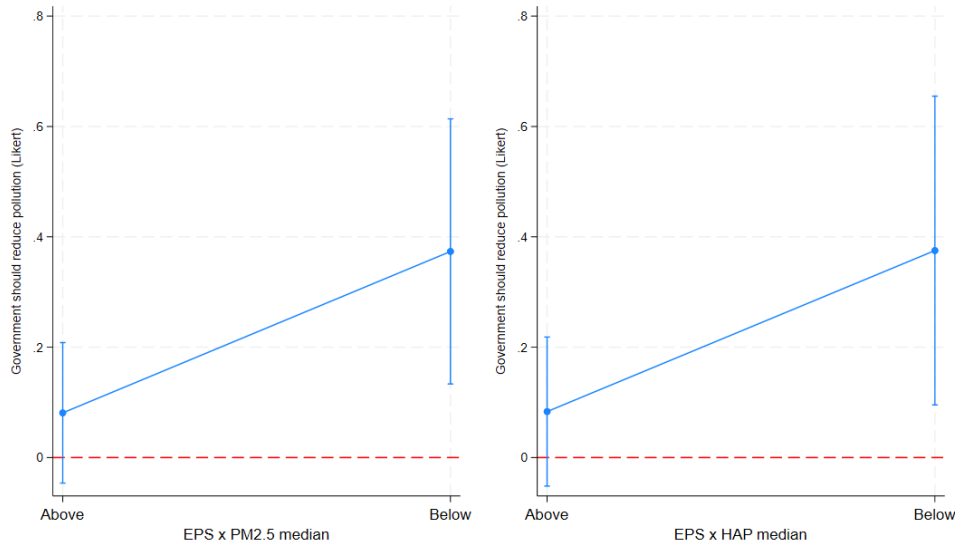
*Notes:* The figure plots the coefficients associated with the average level of EPS during each eight-year age window reported in the x-axis using the question “Government should reduce pollution” as outcome in Likert scale. The regression controls for male dummy, unemployment dummy, 3-category education (Lower, Middle, Upper), 10-class subjective income decile scale, recession exposure, PM2.5 and HAP exposure. The regression also includes year of birth, country-by-year of interview, survey fixed effects, and country-by-age linear trends. Observations are weighted using survey weights. Standard errors are clustered at the country-year of interview level. Bins represent the 95% confidence intervals around point estimates.

Figure 3: Heterogeneous effects of policy exposure on environmental preferences

(a) Deviations from contemporaneous policy level

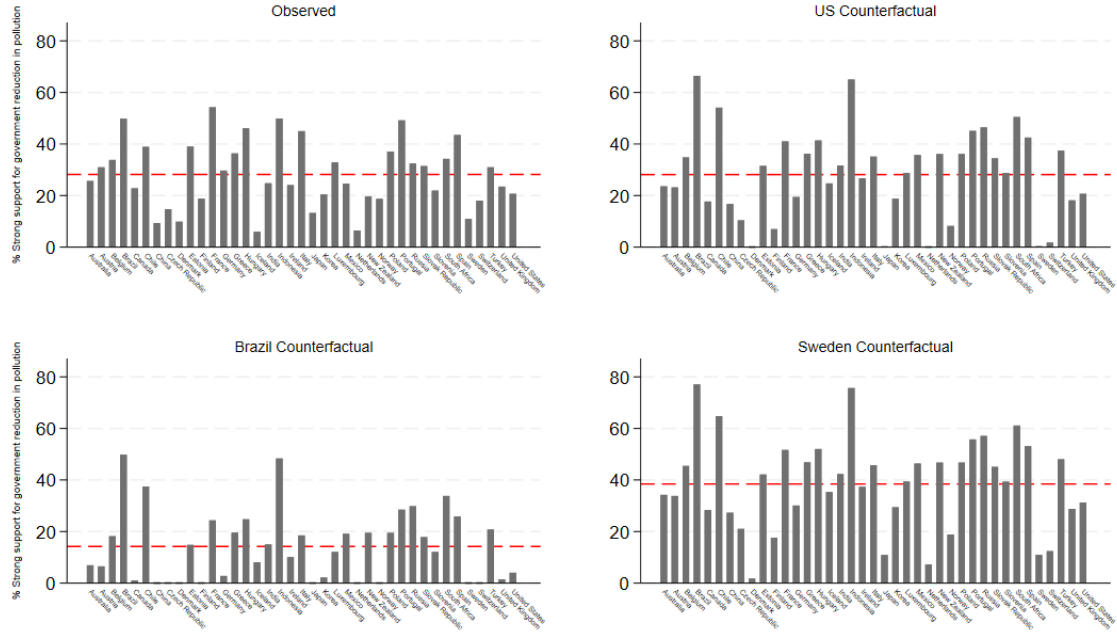


(b) Environmental quality (PM2.5 and HAP) exposure



*Notes:* The figures plots the marginal effect of EPS exposure in formative age on three different heterogeneity dimensions. Panel (a) interacts EPS exposure with a dummy ( $\Delta$  policy) equal to one (i.e., negative) when the environmental policy stringency in the year of the interview is lower than the average stringency in the formative age. Point estimates are reported in Table A18. Panel (b) interacts EPS exposure with a dummy for the exposure to environmental quality measures (PM2.5 and household air pollution - HAP) is above or below the median in the sample. Point estimates are reported in Table A22. Each regression controls for male dummy, unemployment dummy, 3-category education (Lower, Middle, Upper), 10-class subjective income decile scale, recession exposure, PM2.5, and HAP exposure. The regression also includes the year of birth, country-by-year of interview, survey fixed effects, and country-by-age linear trends. Observations are weighted using survey weights. Standard errors are clustered at the country-year <sup>22</sup>interview level. Bins represent the 95% confidence intervals around point estimates.

Figure 4: Green preferences for counterfactual policy stringency



*Notes:* Each histogram reports the share of respondents that strongly agree with the statement “Government should reduce pollution” observed in the country across survey waves (top-left corner histogram) and predicted using three different counterfactual policy experiments. From the top-right corner histogram clockwise, each histogram reports the model-predicted support induced by the difference between the birth-cohort exposure in policy stringency in the country and the exposure in policy stringency experienced by the same birth cohort in the US, in Sweden, and in Brazil, using the coefficient on EPS in column 4, Panel B, Table A7. The red dashed line indicates the observed cross-country average in support and under each counterfactual. Figure A13 displays world maps for under each counterfactual policy experiment showing which countries have a predicted support for green policies that is lower, constant, or higher than observed in the data.



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# A Online Appendix

## A.1 Data Appendix

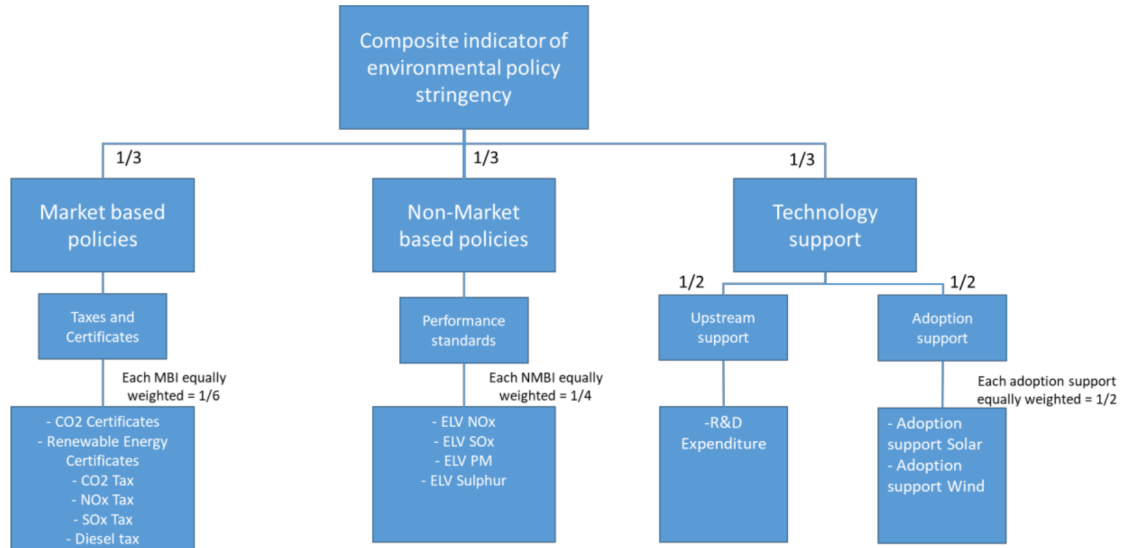
### A.1.1 Environmental Policy Stringency

The EPS comprises three sub-indices with equal weight that, in turn, are composed of several policies. The index aggregates the scores given to each policy's stringency on a scale of zero to six. The stringency of environmental policies is measured in different units. As an example, the carbon tax is measured by the tax rate for CO<sub>2</sub> emissions, with the raw values in national currency converted to USD/tonne CO<sub>2</sub> for international comparison. To aggregate several policy types into a composite index of policy stringency, their stringency is measured on a common scale. The lowest score of zero is assigned to observations with no policy in place. The remaining scores are assigned using the distribution of observations that have the policy in place. The highest score of six is assigned to observations with values above the 90th percentile of observations that have the respective policy implemented. To assign the remaining scores, the difference between the 90th and the 10th percentile is divided into five equal bins that define the thresholds (Kruse et al., 2022).

The first sub-index is market-based instruments (MBI) that group policies that put a price on pollution. In particular, it accounts for CO<sub>2</sub> Trading Schemes, Renewable Energy Trading Scheme, CO<sub>2</sub> Taxes, Nitrogen Oxides (NO<sub>x</sub>) Tax, Sulphur Oxides (SO<sub>x</sub>) Tax, Fuel Tax (Diesel). The second sub-index includes Non-Market Based instruments (NMBI), entailing policies that mandate emission limits and standards: Emission Limit Value (ELV) for nitrogen oxides (NO<sub>x</sub>); ELV for sulphur oxides (SO<sub>x</sub>); ELV for Particulate Matter (PM); Sulphur content limit for diesel. The final sub-index, Technology Support (TS), entails that support innovation in clean technologies and their adoption, including Public research and development expenditure (R&D) and Renewable energy support for Solar and Wind. Each component of the sub-index has equal weight within each sub-index (i.e. MBI components have 1/6 weight, NMBI components have 1/4 weight and TS components have 1/2 weight).

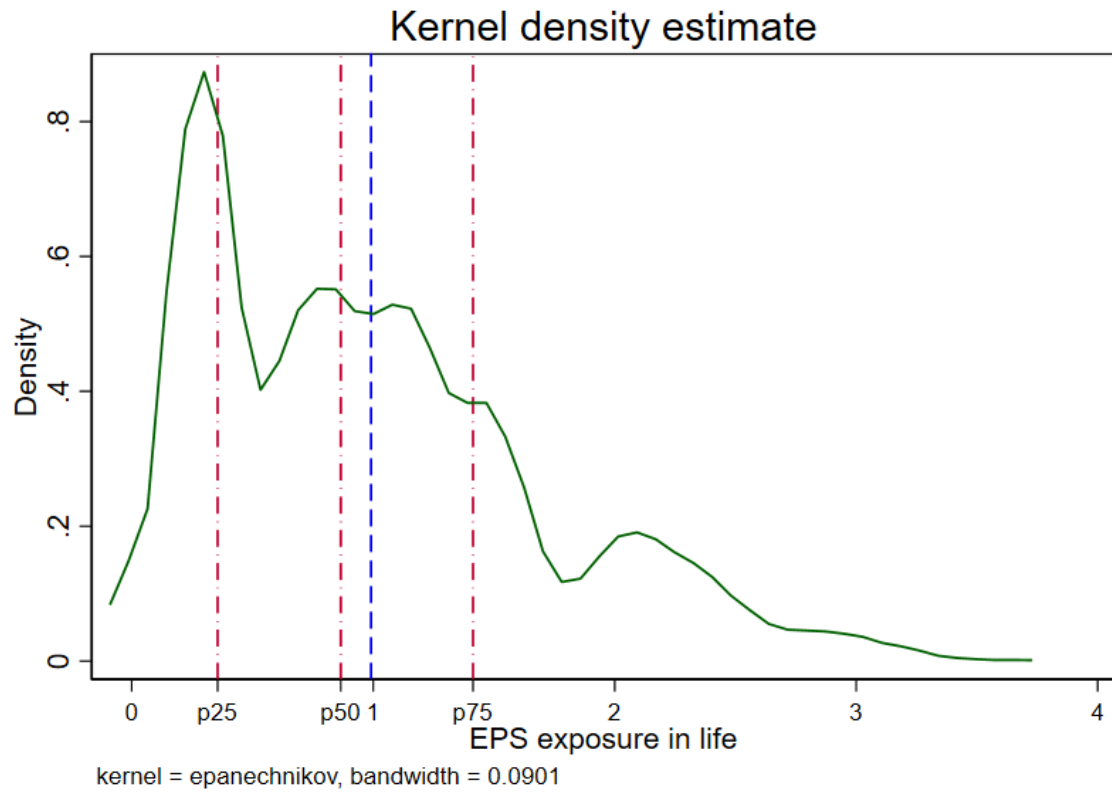
## A.2 Figures

Figure A1: Construction of Environmental Policy Stringency Index



*Notes:* The figure shows the aggregation structure of the revised EPS index from Kruse et al. (2022).

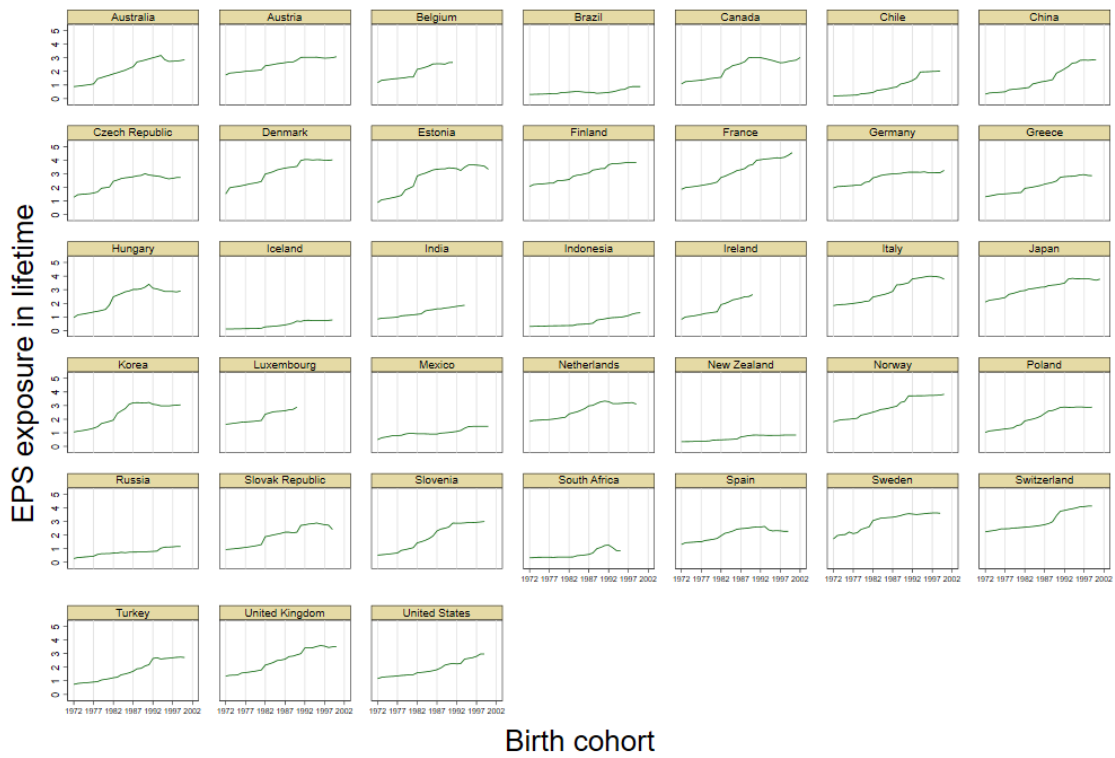
Figure A2: EPS average exposure density distribution



*Notes:* The figure shows the density distribution of EPS exposure during life in the final estimation sample, with red dot-dashed lines indicating the 25<sup>th</sup>, 50<sup>th</sup>, 75<sup>th</sup> percentile and the blue dashed line indicating the mean.

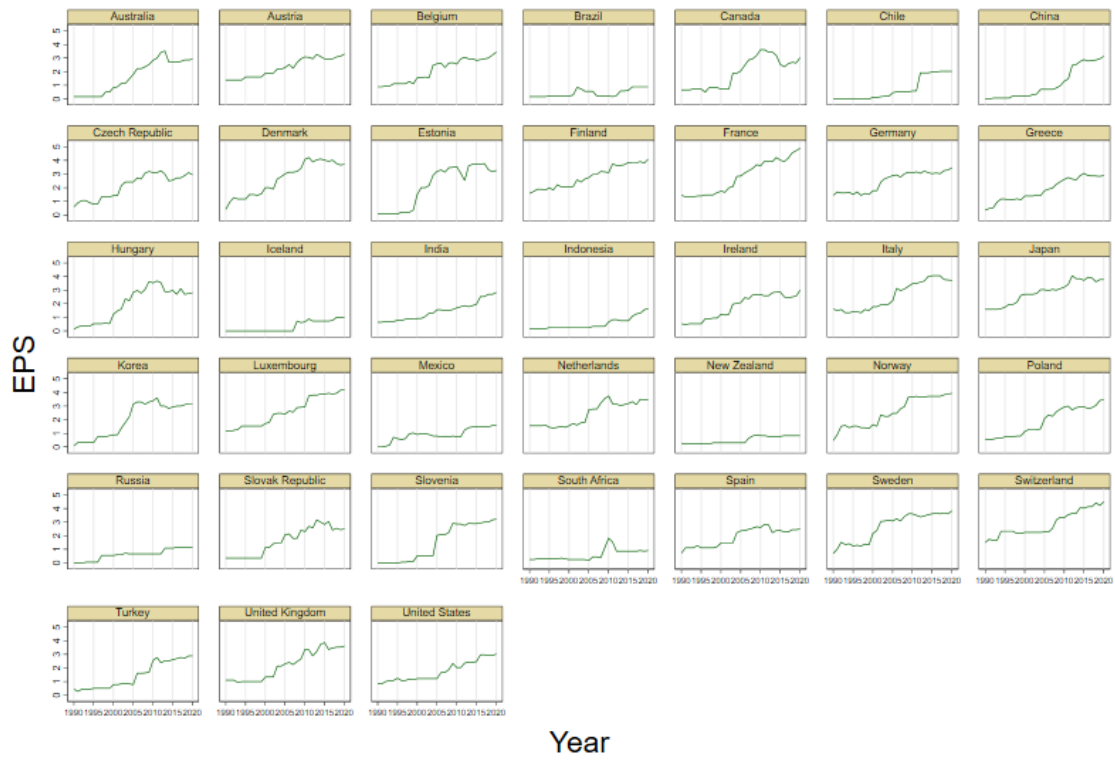


Figure A3: Country-specific EPS exposure by birth cohort



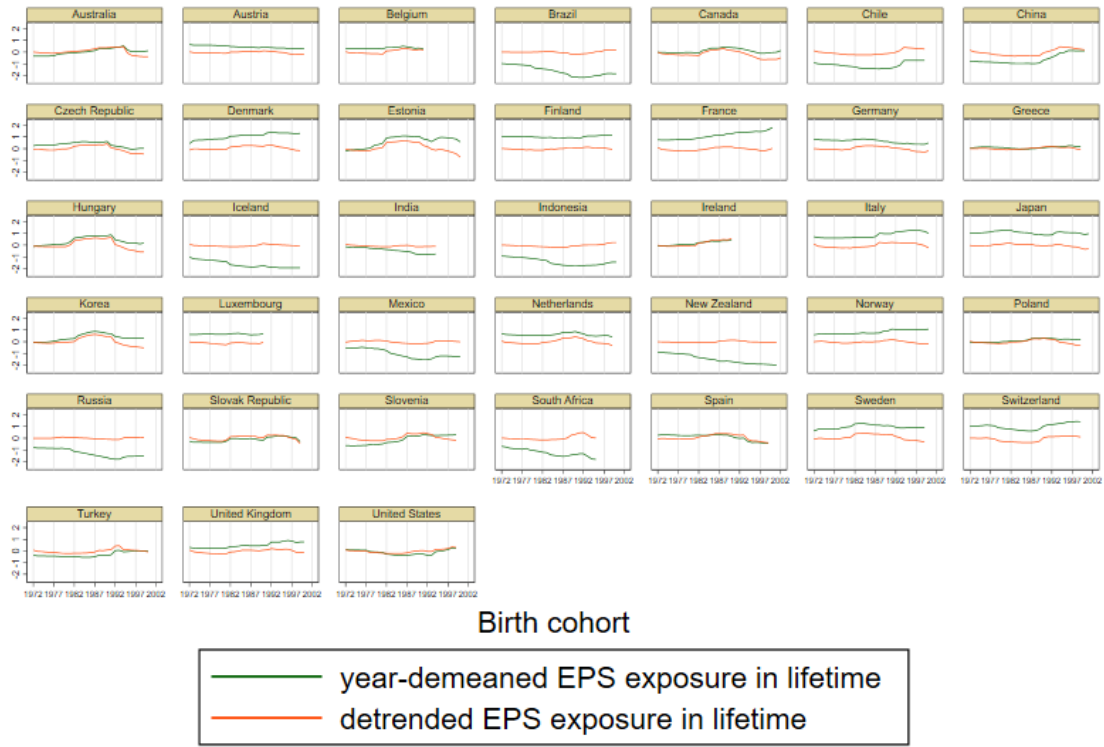
*Notes:* The figure shows the time series of adulthood mean EPS exposure by cohort for each country over the 30 years available.

Figure A4: Country-specific EPS time series



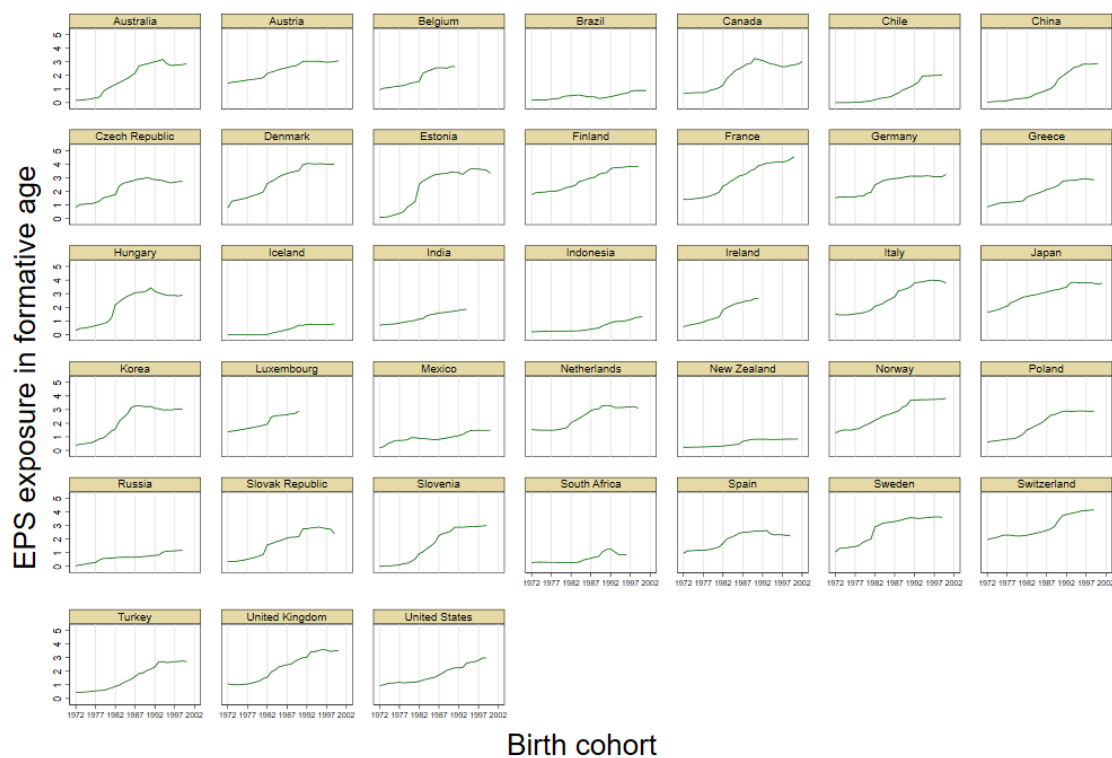
*Notes:* The figure shows the time series of EPS for each country over the 30 years available.

Figure A5: Country-specific relative EPS exposure in adult life by birth cohort



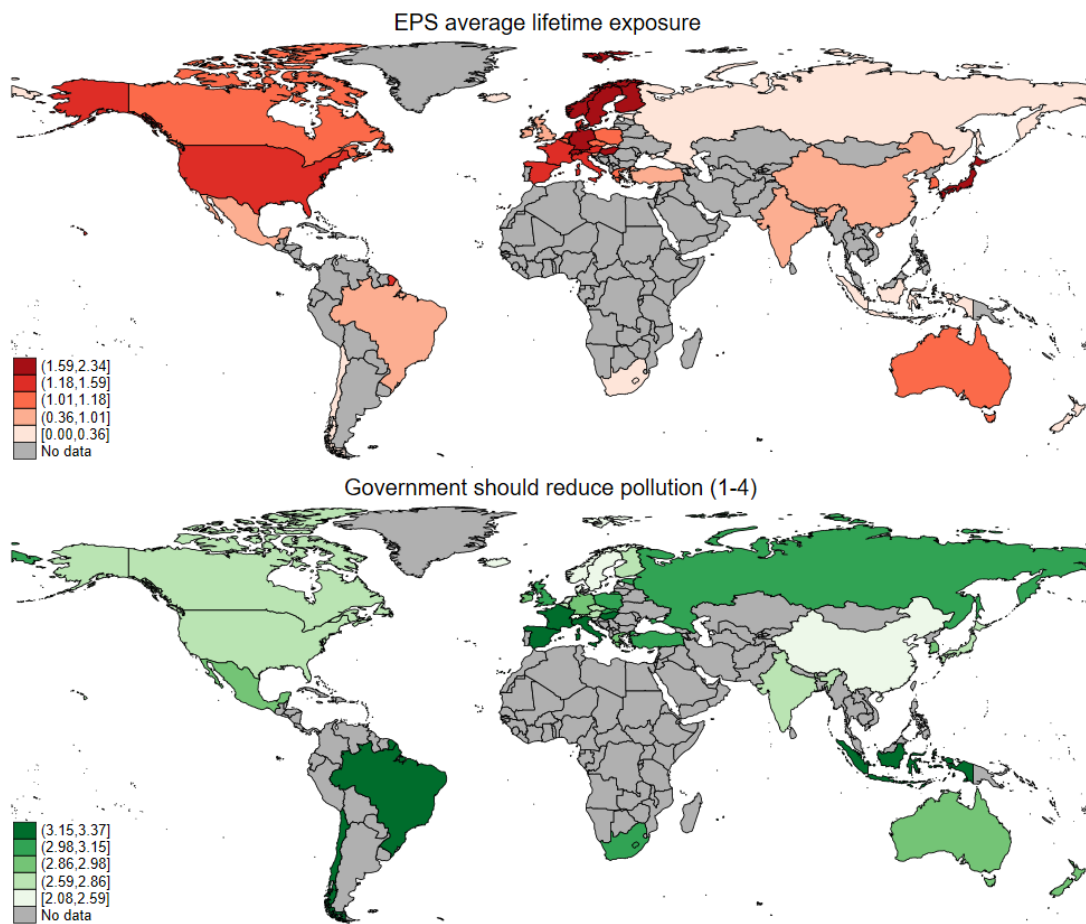
*Notes:* The figure shows the time series of adulthood mean year-demeaned (in green ) and detrended (in red) EPS exposure by cohort for each country over the 30 years available.

Figure A6: EPS exposure in formative age (18-25) by country across birth cohorts



*Notes:* The figure shows the average EPS exposure across birth cohorts in each country in the IVS sample. Since EPS data are available from 1990 onwards, the oldest birth cohort is those who were born in 1972.

Figure A7: Country pooled average of EPS average exposure across cohorts in baseline sample

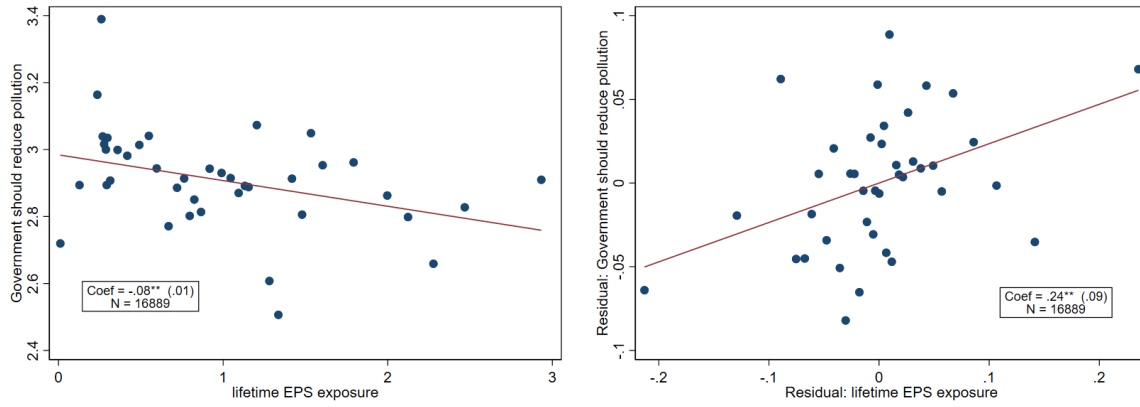


*Notes:* The world map shows the pooled country mean in the final estimation sample of EPS average exposure.

Figure A8: Binned scatter plot of environmental preferences and EPS exposure

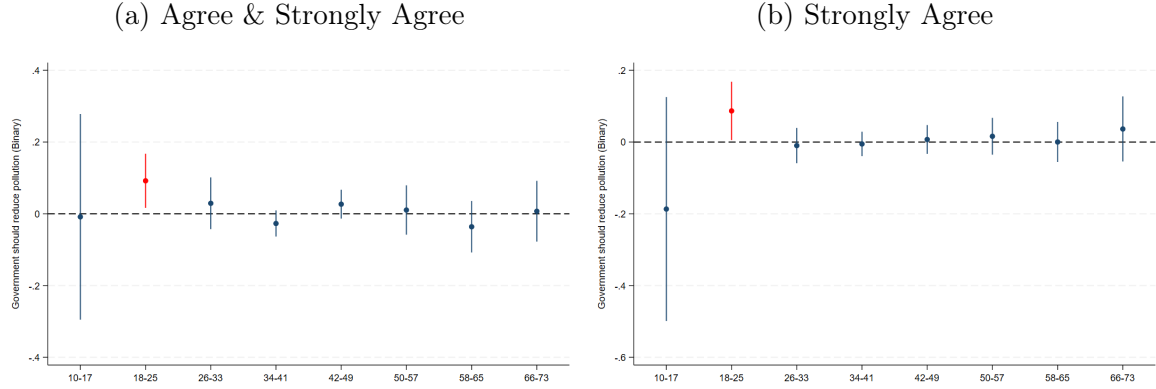
(a) Partial correlation

(b) Residualized partial correlation



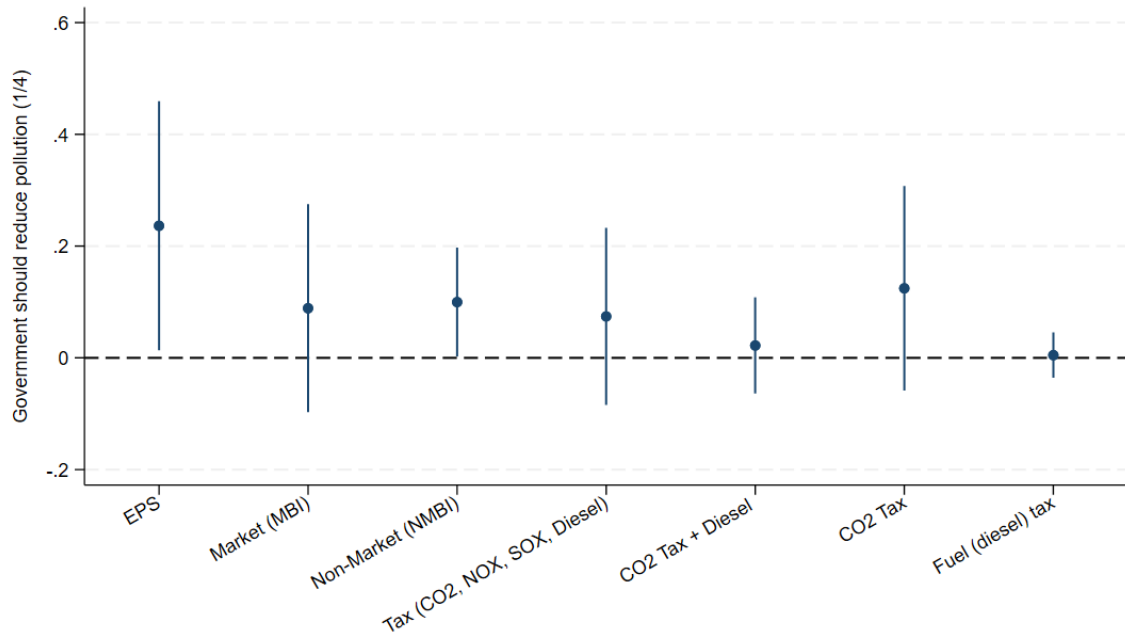
*Notes:* The baseline estimation sample is split into 40 equal-sized bins. Panel (a) shows the raw partial correlation of each mean of that bin between EPS exposure and the government's role in reducing pollution. In Panel (b) each data point shows the mean residual of that bin after controlling for year of birth, country-by-year of interview, survey fixed effects, and country-by-age linear trends. Observations are weighted by the survey weights.

Figure A9: Effect of EPS exposure in other age windows using binary outcomes



*Notes:* The figure plots the coefficients associated with the average level of EPS during each eight-year age window reported in the x-axis using the question “Government should reduce pollution” as outcome recoded in two different binary versions. In panel (a), the binary variable takes value one if respondents state either agree or strongly agree. In panel (b), the binary takes value one if respondents state strongly agree. The regression controls for male dummy, unemployment dummy, 3-category education (Lower, Middle, Upper), 10-class subjective income decile scale, recession exposure, PM2.5 and HAP exposure. The regression also includes year of birth, country-by-year of interview, survey fixed effects, and country-by-age linear trends. Observations are weighted using survey weights. Standard errors are clustered at the country-year of interview level. Bins represent the 95% confidence intervals around point estimates. Tabular results are reported in Table A14.

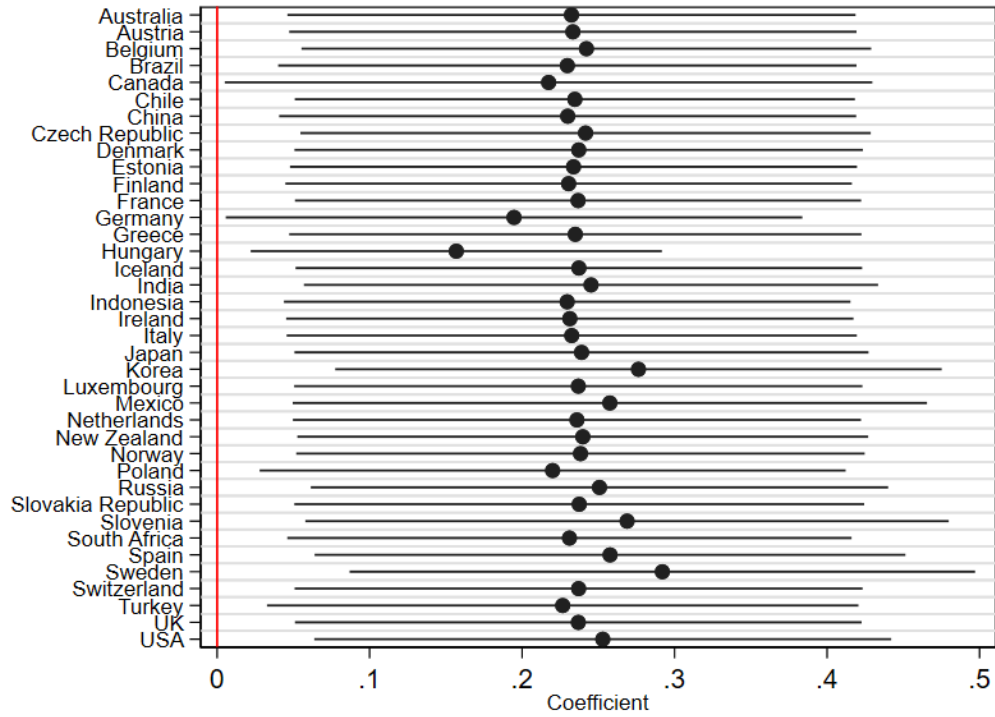
Figure A10: Effect of EPS sub-indices exposure in adulthood on government's role to reduce pollution



*Notes:* The figure shows the coefficient associated with the average level of sub-index in the x-axis during the adulthood of an individual, using as outcome the question “Government should reduce pollution” in the Likert scale. All regressions control for male dummy, unemployment dummy, 3-category education (Lower, Middle, Upper), 10-class subjective income decile scale, recession exposure, PM2.5 and HAP exposure. The regression also includes year of birth, country-by-year of interview, survey fixed effects, and country-by-age linear trends. Observations are weighted using survey weights. Standard errors are clustered at the country-year of interview level. Bins represent the 95% confidence intervals around point estimates. Tabular results are reported in Appendix Table A11.

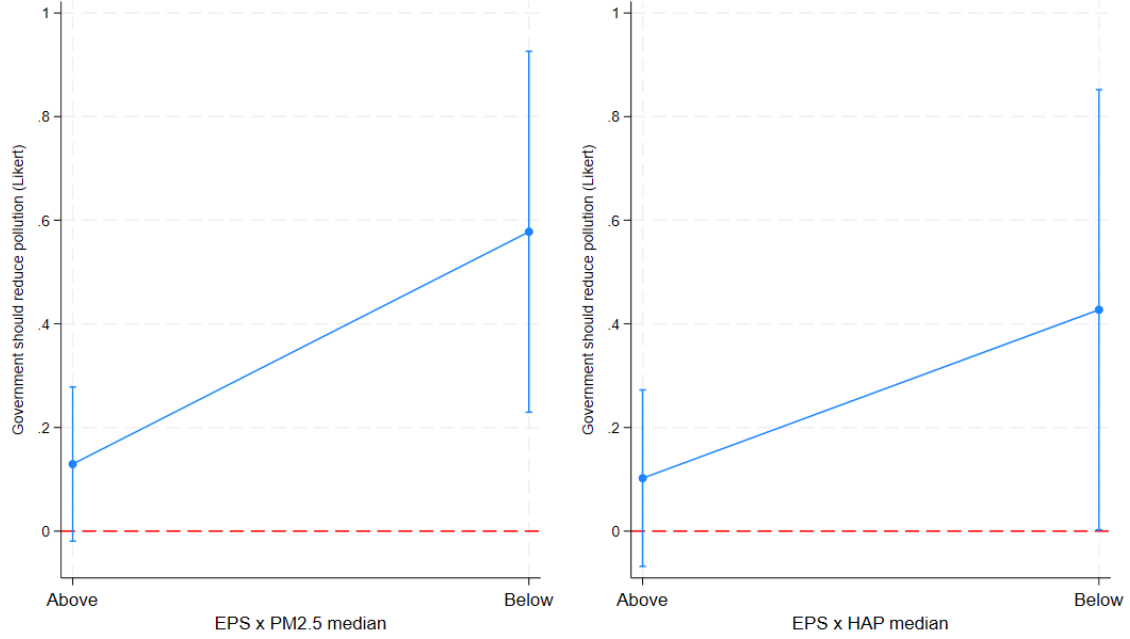


Figure A11: EPS exposure - leave-one-country-out



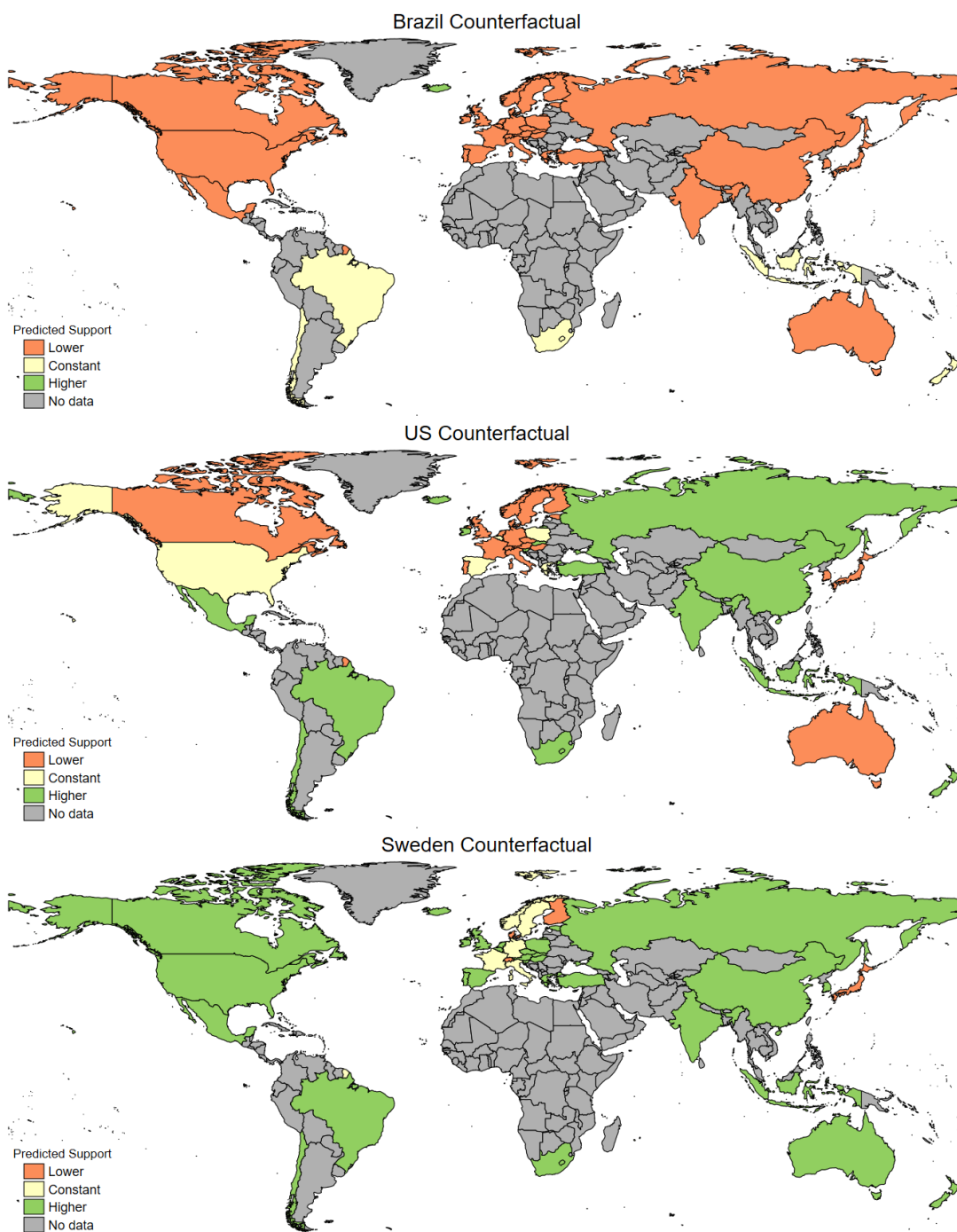
*Notes:* We plot the marginal effect of EPS exposure in adulthood in 38 different regressions where we exclude each time a different country as reported in the y-axis. The regression controls for male dummy, unemployment dummy, 3-category education (Lower, Middle, Upper), 10-class subjective income decile scale, recession exposure, PM2.5 and HAP exposure. The regression also includes year of birth, country-by-year of interview, survey fixed effects, and country-by-age linear trends. Observations are weighted using survey weights. Standard errors are clustered at the country-year of interview level. Bins represent the 90% confidence intervals around point estimates.

Figure A12: Policy stringency effect on environmental preferences by environmental quality exposure during adulthood



*Notes:* The figure shows the marginal effect of EPS exposure in adulthood when exposure to environmental quality measures in the same period is above or below the median in the sample on the question “Government should reduce pollution” as outcome in Likert scale. The regression controls for male dummy, unemployment dummy, 3-category education (Lower, Middle, Upper), 10-class subjective income decile scale, recession exposure. The regression also includes year of birth, country-by-year of interview, survey fixed effects, and country-by-age linear trends. Observations are weighted using survey weights. Standard errors are clustered at the country-year of interview level. Bins represent the 95% confidence intervals around point estimates. Tabular results are reported in Table A21.

Figure A13: Predicted support for government reduction in pollution using Brazil, US, and Sweden counterfactual policy stringency exposures



*Notes:* Each map shows the predicted change in the share of respondents that strongly agree with the statement "Government should reduce pollution", using, respectively, Brazil, US and Sweden's levels of birth-cohorts exposure to past environmental policy stringency, and using the coefficient on EPS in column 4, Panel B, Table A7.

### A.3 Tables

Table A1: Summary statistics

	N	mean	SD	min	max
Government should reduce environmental pollution	16889	2.909	0.896	1.000	4.000
<i>Environmental Policy Stringency Exposure</i>					
EPS	16889	0.977	0.696	0.000	3.639
Market (MBI)	16889	0.696	0.547	0.000	4.000
Non-Market (NMBI)	16889	1.568	1.219	0.000	5.250
Tax (CO2, NOX, SOX, Diesel)	16889	1.001	0.771	0.000	4.000
CO2 Tax + Diesel Tax	16889	1.718	1.168	0.000	5.038
CO2 (Tax/Cap-and-Trade)	16889	0.238	0.655	0.000	5.000
CO2 (Tax/Cap-and-Trade) + Diesel Tax	16889	1.179	0.810	0.000	4.667
Fuel (Diesel) Tax	16889	3.060	1.862	0.000	6.000
<i>Environmental Quality Exposure</i>					
PM2.5	16889	1184.094	679.706	148.837	2302.446
HAP	16889	847.243	1419.208	0.429	7043.224
Recession exposure	16889	0.010	0.037	0.000	0.286
Number of countries	38				

*Notes:* Summary statistics are computed using the final estimation sample. Environmental Quality exposure measures are expressed in terms of the average number of age-standardized disability-adjusted life-years lost per 100 million people, and in the estimation sample the measures of environmental quality are transformed for ease of interpretation such that higher values are associated with better environmental conditions). Recession exposure takes value one if the national GDP growth rate dropped by at least 10% during the adult years of the individual (Barro & Ursúa, 2008)

Table A2: Environmental Policy Stringency (EPS) exposure during adult life (with controls' estimates)

	Government should reduce pollution (Likert)				
	(1)	(2)	(3)	(4)	(5)
Environmental Policy Stringency (EPS) exposure	0.228** (0.109)	0.225** (0.110)	0.219** (0.107)	0.228** (0.109)	0.236** (0.111)
Recession exposure		-0.515 (0.381)	-0.528 (0.406)	-0.534 (0.378)	-0.518 (0.392)
PM2.5 exposure			0.314* (0.186)		0.354** (0.173)
HAP exposure				-0.198*** (0.0713)	-0.221** (0.0905)
Male	0.0268 (0.0183)	0.0267 (0.0183)	0.0267 (0.0183)	0.0269 (0.0183)	0.0269 (0.0183)
<i>Education: Reference category: Lower education</i>					
Middle	-0.0716** (0.0307)	-0.0718** (0.0307)	-0.0718** (0.0307)	-0.0718** (0.0307)	-0.0718** (0.0307)
Upper	-0.243*** (0.0433)	-0.243*** (0.0433)	-0.243*** (0.0433)	-0.243*** (0.0433)	-0.243*** (0.0433)
Unemployed	0.0660*** (0.0221)	0.0661*** (0.0221)	0.0660*** (0.0221)	0.0656*** (0.0221)	0.0656*** (0.0221)
<i>Income deciles: Reference category: Bottom decile</i>					
2 <sup>nd</sup>	-0.00528 (0.0361)	-0.00519 (0.0362)	-0.00521 (0.0362)	-0.00526 (0.0363)	-0.00524 (0.0363)
3 <sup>rd</sup>	-0.0444 (0.0391)	-0.0443 (0.0391)	-0.0443 (0.0391)	-0.0441 (0.0392)	-0.0441 (0.0392)
4 <sup>th</sup>	-0.0779** (0.0339)	-0.0779** (0.0338)	-0.0779** (0.0339)	-0.0776** (0.0339)	-0.0775** (0.0339)
5 <sup>th</sup>	-0.0277 (0.0321)	-0.0281 (0.0321)	-0.0281 (0.0321)	-0.0279 (0.0322)	-0.0278 (0.0322)
6 <sup>th</sup>	-0.0415 (0.0392)	-0.0418 (0.0392)	-0.0418 (0.0392)	-0.0414 (0.0393)	-0.0414 (0.0393)
7 <sup>th</sup>	-0.0853** (0.0401)	-0.0857** (0.0400)	-0.0857** (0.0400)	-0.0854** (0.0401)	-0.0853** (0.0401)
8 <sup>th</sup>	-0.0671* (0.0385)	-0.0671* (0.0385)	-0.0671* (0.0385)	-0.0668* (0.0386)	-0.0667* (0.0386)
9 <sup>th</sup>	-0.151*** (0.0553)	-0.152*** (0.0553)	-0.152*** (0.0553)	-0.152*** (0.0554)	-0.152*** (0.0554)
10 <sup>th</sup>	-0.0983* (0.0555)	-0.0990* (0.0555)	-0.0991* (0.0554)	-0.0987* (0.0555)	-0.0985* (0.0555)
Survey FE	✓	✓	✓	✓	✓
Year of birth FE	✓	✓	✓	✓	✓
Country × Year of interview FE	✓	✓	✓	✓	✓
Country-age linear trends	✓	✓	✓	✓	✓
Mean outcome	2.909	2.909	2.909	2.909	2.909
SD Outcome	0.896	0.896	0.896	0.896	0.896
N	16889	16889	16889	16889	16889
adj. $R^2$	0.132	0.132	0.132	0.132	0.132

*Notes:* The outcome variable ranges from 1 to 4 (with higher values reflecting stronger agreement with the statement “Government should reduce environmental pollution”). All regressions control for male dummy, unemployment dummy, 3-category education (Lower, Middle, Upper), 10-class subjective income decile scale. Recession exposure is a dummy variable that takes value one if during the formative age the individual has experienced at least one year in which the real GDP per capita growth rate of its country is at least 10% below the previous year's growth rate. PM2.5 and HAP exposure are respectively the average of age-standardized disability-adjusted life-years lost per 100,000 people due to exposure to fine air particulate matter smaller than 2.5 micrometers (PM2.5) and due to exposure to household air pollution (HAP) from the use of household solid fuels (PM2.5 and HAP exposure variables are inverted such that higher values imply higher quality and divided by 1000 to improve readability of coefficients). All regressions also include year of birth, country-by-year of interview, survey fixed effects, and country-by-age linear trends. Observations are weighted using survey weights. Standard errors are clustered by country-year. Significance levels: \*  $p < 0.1$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ .

Table A3: EPS exposure with relative measure (starting from 18 years)

	Government should reduce pollution (Likert)			
	(1)	(2)	(3)	(4)
<b>Panel A: Year-demeaned relative exposure</b>				
EPS average exposure	0.190* (0.109)	0.182* (0.106)	0.190* (0.107)	0.194* (0.109)
<b>Panel B: Country-detrended exposure</b>				
EPS average exposure	0.220* (0.110)	0.214** (0.107)	0.224** (0.109)	0.231** (0.111)
Recession exposure	✓	✓	✓	✓
PM2.5 exposure		✓		✓
HAP exposure			✓	✓
Individual controls	✓	✓	✓	✓
Survey FE	✓	✓	✓	✓
Year of birth FE	✓	✓	✓	✓
Country × Year of interview FE	✓	✓	✓	✓
Country-age linear trends	✓	✓	✓	✓

*Notes:* The outcome variable ranges from 1 to 4 (with higher values reflecting stronger agreement with the statement “Government should reduce environmental pollution”). All regressions control for male dummy, unemployment dummy, 3-category education (Lower, Middle, Upper), 10-class subjective income decile scale. Recession exposure is a dummy variable that takes value one if during adulthood the individual has experienced at least one year in which the real GDP per capita growth rate of its country is at least 10% below the previous year’s growth rate. PM2.5 and HAP exposure are respectively the adult years average of age-standardized disability-adjusted life-years lost per 100,000 people due to exposure to fine air particulate matter smaller than 2.5 micrometers (PM2.5) and due to exposure to household air pollution (HAP) from the use of household solid fuels (PM2.5 and HAP exposure variables are divided by 1000 to improve readability of coefficients). All regressions also control for survey, year of birth, country-by-year of interview fixed effects and country-age linear trends. Observations are weighted using survey weights. Standard errors are clustered by country-year. Significance levels: \*  $p < 0.1$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ .

Table A4: EPS exposure in adult life with different starting ages

	Government should reduce pollution			
	(1)	(2)	(3)	(4)
<b>Panel A: Baseline exposure measure</b>				
EPS average exposure	0.226 (0.349)	0.367 (0.240)	0.345* (0.185)	0.398*** (0.140)
<b>Panel B: Year-demeaned relative exposure</b>				
EPS average exposure	0.263 (0.324)	0.467** (0.224)	0.331* (0.187)	0.400** (0.152)
<b>Panel C: Country-detrended exposure</b>				
EPS average exposure	0.201 (0.351)	0.353 (0.241)	0.335* (0.184)	0.390*** (0.141)
Starting age	14 years	15 years	16 years	17 years
Recession exposure	✓	✓	✓	✓
EQ exposure	✓	✓	✓	✓
Individual controls	✓	✓	✓	✓
Survey FE	✓	✓	✓	✓
Year of birth FE	✓	✓	✓	✓
Country × Year of interview FE	✓	✓	✓	✓
Country-age linear trends	✓	✓	✓	✓
<i>N</i>	11730	13129	14449	15605

*Notes:* The outcome variable ranges from 1 to 4 (with higher values reflecting stronger agreement with the statement “Government should reduce environmental pollution”). All regressions control for male dummy, unemployment dummy, 3-category education (Lower, Middle, Upper), 10-class subjective income decile scale. Recession exposure is a dummy variable that takes value one if during adulthood the individual has experienced at least one year in which the real GDP per capita growth rate of its country is at least 10% below the previous year’s growth rate. PM2.5 and HAP exposure are respectively the adult years average of age-standardized disability-adjusted life-years lost per 100,000 people due to exposure to fine air particulate matter smaller than 2.5 micrometers (PM2.5) and due to exposure to household air pollution (HAP) from the use of household solid fuels (PM2.5 and HAP exposure variables are divided by 1000 to improve readability of coefficients). All regressions also control for survey, year of birth, country-by-year of interview fixed effects and country-age linear trends. Observations are weighted using survey weights. Standard errors are clustered by country-year. Significance levels: \*  $p < 0.1$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ .

Table A5: Ordered Probit: EPS average exposure during adulthood

	Government should reduce pollution (Likert)			
	(1)	(2)	(3)	(4)
Environmental Policy Stringency (EPS) exposure	0.129* (0.0703)	0.130* (0.0704)	0.130* (0.0676)	0.355** (0.157)
Recession exposure	0.00229 (0.0565)	-0.00384 (0.0574)	-0.0186 (0.0557)	-0.00549 (0.0514)
PM2.5 exposure		-0.0838 (0.158)		0.564** (0.275)
HAP exposure			0.201*** (0.0494)	-0.203** (0.0942)
Individual controls	✓	✓	✓	✓
Survey FE	✓	✓	✓	✓
Year of birth FE	✓	✓	✓	✓
Country × Year of interview FE	✓	✓	✓	✓
Country-age linear trends	✓	✓	✓	✓
Mean Outcome	2.923	2.923	2.923	2.923
SD Outcome	0.90	0.90	0.90	0.90
N	16889	16889	16889	16889

*Notes:* The outcome variable ranges from 1 to 4 (with higher values reflecting stronger agreement with the statement “Government should reduce environmental pollution”). All regressions control for male dummy, unemployment dummy, 3-category education (Lower, Middle, Upper), 10-class subjective income decile scale. Recession exposure is a dummy variable that takes value one if during adulthood the individual has experienced at least one year in which the real GDP per capita growth rate of its country is at least 10% below the previous year’s growth rate. PM2.5 and HAP exposure are respectively the adult years average of age-standardized disability-adjusted life-years lost per 100,000 people due to exposure to fine air particulate matter smaller than 2.5 micrometers (PM2.5) and due to exposure to household air pollution (HAP) from the use of household solid fuels (PM2.5 and HAP exposure variables are divided by 1000 to improve readability of coefficients). All regressions also control for survey, year of birth, country-by-year of interview fixed effects and country-age linear trends. Observations are weighted using survey weights. Standard errors are clustered by country-year. Significance levels: \*  $p < 0.1$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ .



Table A6: Environmental Policy Stringency (EPS) exposure with binary outcomes. Probit estimates.

	Government should reduce pollution			
	(1)	(2)	(3)	(4)
<b>Panel A: Agree &amp; Strongly Agree</b>				
EPS exposure	0.265* (0.145)	0.191 (0.141)	0.275* (0.141)	0.221 (0.143)
Recession exposure	0.000541 (0.0666)	-0.0105 (0.0728)	-0.00919 (0.0684)	-0.0142 (0.0720)
PM2.5 exposure		-1.186** (0.579)		-0.824 (0.536)
HAP exposure			-0.983* (0.524)	-0.714 (0.530)
EPS Marginal effect	0.095* (0.052)	0.068 (0.050)	0.098** (0.050)	0.079 (0.050)
Mean outcome	0.67	0.67	0.67	0.67
SD Outcome	0.47	0.47	0.47	0.47
<b>Panel B: Strongly Agree</b>				
EPS exposure	0.368** (0.181)	0.434** (0.182)	0.366** (0.184)	0.447** (0.190)
Recession exposure	-0.0316 (0.0635)	-0.0227 (0.0602)	-0.0303 (0.0621)	-0.0227 (0.0609)
PM2.5 exposure		0.990** (0.504)		1.143* (0.647)
HAP exposure			0.213 (0.452)	-0.238 (0.470)
EPS Marginal effect	0.125** (0.061)	0.147** (0.062)	0.124** (0.062)	0.152** (0.065)
Mean outcome	0.30	0.30	0.30	0.30
SD Outcome	0.46	0.46	0.46	0.46
<i>N</i>	16889	16889	16889	16889

*Notes:* All regressions are estimated using a Probit model and control for male dummy, unemployment dummy, 3-category education (Lower, Middle, Upper), 10-class subjective income decile scale. Recession exposure is a dummy variable that takes value one if during adulthood the individual has experienced at least one year in which the real GDP per capita growth rate of its country is at least 10% below the previous year's growth rate. PM2.5 and HAP exposure are respectively the adult years average of age-standardized disability-adjusted life-years lost per 100,000 people due to exposure to fine air particulate matter smaller than 2.5 micrometers (PM2.5) and due to exposure to household air pollution (HAP) from the use of household solid fuels (PM2.5 and HAP exposure variables are divided by 1000 to improve readability of coefficients). All regressions also control for survey, year of birth, country-by-year of interview fixed effects and country-age linear trends. Observations are weighted using survey weights. Standard errors are clustered by country-year. Significance levels: \*  $p < 0.1$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ .

Table A7: Environmental Policy Stringency (EPS) exposure with binary outcomes. OLS estimates.

	Government should reduce pollution			
	(1)	(2)	(3)	(4)
<b>Panel A: Agree &amp; Strongly Agree</b>				
Environmental Policy Stringency (EPS) exposure	0.0862* (0.0441)	0.0634 (0.0431)	0.0895** (0.0429)	0.0718 (0.0438)
Recession exposure	0.00137 (0.0202)	-0.00180 (0.0219)	-0.000247 (0.0206)	-0.00203 (0.0217)
PM2.5 exposure		-0.355* (0.178)		-0.259 (0.173)
HAP exposure			-0.265* (0.154)	-0.179 (0.158)
Mean outcome	0.67	0.67	0.67	0.67
SD Outcome	0.47	0.47	0.47	0.47
<b>Panel B: Strongly Agree</b>				
Environmental Policy Stringency (EPS) exposure	0.113* (0.0573)	0.132** (0.0577)	0.112* (0.0584)	0.134** (0.0596)
Recession exposure	-0.00756 (0.0217)	-0.00490 (0.0208)	-0.00708 (0.0213)	-0.00493 (0.0209)
PM2.5 exposure		0.298* (0.174)		0.310 (0.193)
HAP exposure			0.0797 (0.151)	-0.0232 (0.142)
Mean outcome	0.30	0.30	0.30	0.30
SD Outcome	0.46	0.46	0.46	0.46
<i>N</i>	16889	16889	16889	16889

*Notes:* All regressions control for male dummy, unemployment dummy, 3-category education (Lower, Middle, Upper), 10-class subjective income decile scale. Recession exposure is a dummy variable that takes value one if during adulthood the individual has experienced at least one year in which the real GDP per capita growth rate of its country is at least 10% below the previous year's growth rate. PM2.5 and HAP exposure are respectively the adult years average of age-standardized disability-adjusted life-years lost per 100,000 people due to exposure to fine air particulate matter smaller than 2.5 micrometers (PM2.5) and due to exposure to household air pollution (HAP) from the use of household solid fuels (PM2.5 and HAP exposure variables are divided by 1000 to improve readability of coefficients). All regressions also control for survey, year of birth, country-by-year of interview fixed effects and country-age linear trends. Observations are weighted using survey weights. Standard errors are clustered by country-year. Significance levels: \*  $p < 0.1$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ .

Table A8: Environmental Policy Stringency (EPS) exposure and environmental preferences. Alternative Specifications.

	Government should reduce pollution (Likert)				
	(1)	(2)	(3)	(4)	(5)
Environmental Policy Stringency (EPS) exposure	0.227** (0.108)	0.181** (0.0898)	0.175** (0.0860)	0.127** (0.0527)	0.124** (0.0521)
Recession	✓	✓	✓	✓	✓
EQ controls	✓	✓	✓	✓	✓
Individual controls	✓	✓	✓	✓	✓
Survey FE	✓	✓	✓	✓	✓
Country $\times$ Year of interview FE	✓	✓	✓	✓	✓
Year of birth FE	✓	✓	✓	✓	✓
Country-age linear trends	✓	✓	✓	✓	✓
Age FE		✓		✓	
Continent $\times$ Age FE			✓		✓
Continent-age linear trends				✓	✓
Mean Outcome	2.909	2.909	2.909	2.909	2.909
SD Outcome	0.896	0.896	0.896	0.896	0.896
$N$	16889	16889	16889	16889	16889
adj. $R^2$	0.132	0.133	0.134	0.132	0.133

*Notes:* The outcome variable ranges from 1 to 4 (with higher values reflecting stronger agreement with the statement “Government should reduce environmental pollution”). All regressions control for male dummy, unemployment dummy, 3-category education (Lower, Middle, Upper), 10-class subjective income decile scale, recession exposure and PM2.5 and HAP exposure. Observations are weighted using survey weights. Standard errors are clustered by country-year. Significance levels: \*  $p < 0.1$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ .

Table A9: Description of other values used as outcomes in the falsification exercise

Variable	Description	Categories
A025	Respect and love for parents	1 = Respect if earned 2 = Neither 3 = Always respect
A026	Parents responsibilities to their children	1 = Parents have a life of their own and should not be asked to sacrifice their own well-being for the sake of their children 2 = Neither 3 = Parents' duty is to do their best for their children even at the expense of their own well-being
A048	Abortion when woman not married	0 = Disapprove 1 = Approve
A049	Abortion if not wanting more children	0 = Disapprove 1 = Approve
A165	Most people can be trusted	0 = Can't be too careful 1 = Most people can be trusted
C001	Jobs scarce: Men should have more right to a job than women	1 = Disagree 2 = Neither 3 = Agree
C002	Jobs scarce: Employers should give priority to (nation) people than immigrants	1 = Disagree 2 = Neither 3 = Agree
C036	To develop talents you need to have a job	1 = Strongly agree 2 = Agree 3 = Neither agree nor disagree 4 = Disagree 5 = Strongly disagree
C037	Humiliating to receive money without having to work for it	1 = Strongly agree 2 = Agree 3 = Neither agree nor disagree 4 = Disagree 5 = Strongly disagree
C038	People who don't work turn lazy	1 = Strongly agree 2 = Agree 3 = Neither agree nor disagree 4 = Disagree 5 = Strongly disagree
C039	Work is a duty towards society	1 = Strongly agree 2 = Agree 3 = Neither agree nor disagree 4 = Disagree 5 = Strongly disagree
D018	Child needs a home with father and mother	0 = Tend to disagree 1 = Tend to agree
E124	Respect for individual human rights nowadays	1 = There is a lot of respect for individual human rights 2 = There is some respect 3 = There is not much respect 4 = There is no respect at all

Table A10: Placebo test using other outcomes

	(1) A025	(2) A026	(3) A048	(4) A049	(5) A165	(6) C001	(7) C002	(8) C036	(9) C037	(10) C038	(11) C039	(12) D018	(13) E124
EPS exposure	0.0853 (0.107)	0.0505 (0.0977)	0.0839 (0.0805)	0.0173 (0.0712)	-0.000162 (0.0169)	0.0495** (0.0249)	0.0356 (0.0342)	-0.0455 (0.0545)	0.0602 (0.0621)	-0.0216 (0.0588)	0.000166 (0.0407)	-0.0112 (0.0273)	-0.0283 (0.0273)
Recession exposure	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
EQ exposure	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Individual controls	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Survey FE	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Year of birth FE	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Country × Year of interview FE	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Country-age linear trends	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Mean Outcome	2.404	2.451	0.569	0.550	0.325	1.616	2.332	2.204	2.714	2.384	2.368	0.797	2.294
SD Outcome	0.915	0.851	0.495	0.497	0.468	0.841	0.864	1.093	1.194	1.143	1.048	0.402	0.821
N	21602	21803	12514	12744	69889	71638	71332	38440	38276	50954	50862	31194	44904
adj. $R^2$	0.158	0.083	0.129	0.137	0.187	0.276	0.169	0.127	0.088	0.108	0.070	0.157	0.160

Notes: All regressions control for male dummy, unemployment dummy, 3-category education (Lower, Middle, Upper), 10-class subjective income decile scale. Recession exposure is a dummy variable that takes value one if during adulthood the individual has experienced at least one year in which the real GDP per capita growth rate of its country is at least 10% below the previous year's growth rate. PM2.5 and HAP exposure are respectively the adult years average of age-standardized disability-adjusted life-years lost per 100,000 people due to exposure to fine air particulate matter smaller than 2.5 micrometers (PM2.5) and due to exposure to household air pollution (HAP) from the use of household solid fuels. All regressions also include year of birth, country-by-year of interview, survey fixed effects, and country-by-age linear trends. Observations are weighted using survey weights. Standard errors are clustered by country-year. Significance levels: \*  $p < 0.1$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ .

Table A11: Exposure to EPS sub-indices during adulthood on government intervention preferences

	Government should reduce pollution (Likert)						
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Policy exposure	0.236** (0.111)	0.0889 (0.0930)	0.0998** (0.0487)	0.0742 (0.0791)	0.125 (0.0914)	0.00492 (0.0202)	0.00889 (0.0650)
Policy	EPS	Market	Non-Market	Tax	CO2+Diesel	CO2	Diesel
Recession exposure	✓	✓	✓	✓	✓	✓	✓
Environmental Quality exposure	✓	✓	✓	✓	✓	✓	✓
Individual controls	✓	✓	✓	✓	✓	✓	✓
Survey FE	✓	✓	✓	✓	✓	✓	✓
Year of birth FE	✓	✓	✓	✓	✓	✓	✓
Country × Year of interview FE	✓	✓	✓	✓	✓	✓	✓
Country-age linear trends	✓	✓	✓	✓	✓	✓	✓
Mean Outcome	2.909	2.909	2.909	2.909	2.909	2.909	2.909
SD Outcome	0.896	0.896	0.896	0.896	0.896	0.896	0.896
Mean Exposure	0.977	0.696	1.568	1.001	1.718	0.377	3.060
SD Exposure	0.696	0.547	1.219	0.771	1.168	1.202	1.862
<i>N</i>	16889	16889	16889	16889	16889	16889	16889
adj. <i>R</i> <sup>2</sup>	0.132	0.132	0.132	0.132	0.132	0.132	0.132

*Notes:* All regressions control for male dummy, unemployment dummy, 3-category education (Lower, Middle, Upper), 10-class subjective income decile scale. Recession exposure is a dummy variable that takes value one if during adulthood the individual has experienced at least one year in which the real GDP per capita growth rate of its country is at least 10% below the previous year's growth rate. Environmental Quality exposure are PM2.5 and HAP exposure, respectively the adult years average of age-standardized disability-adjusted life-years lost per 100,000 people due to exposure to fine air particulate matter smaller than 2.5 micrometers (PM2.5) and due to exposure to household air pollution (HAP) from the use of household solid fuels. All regressions also control for survey, year of birth, country-by-year of interview fixed effects and country-age linear trends. Observations are weighted using survey weights. Standard errors are clustered by country-year. Significance levels: \*  $p < 0.1$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ .

Table A12: Exposure to EPS sub-indices during adulthood on tax increase preferences

	Increase in tax if used to prevent pollution						
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
<b>Panel A: Likert</b>							
Policy exposure	-0.0875 (0.107)	0.118 (0.106)	-0.0495 (0.0494)	0.133** (0.0611)	0.127*** (0.0428)	0.131* (0.0747)	0.0596** (0.0226)
Mean Outcome	2.587	2.587	2.587	2.587	2.587	2.587	2.587
SD Outcome	0.859	0.859	0.859	0.859	0.859	0.859	0.859
<b>Panel B: Binary (Agree &amp; Strongly Agree)</b>							
Policy exposure	-0.0474 (0.0520)	0.0968** (0.0482)	-0.0274 (0.0247)	0.0828** (0.0325)	0.0794*** (0.0237)	0.0904** (0.0388)	0.0368*** (0.0129)
Mean Outcome	0.581	0.581	0.581	0.581	0.581	0.581	0.581
SD Outcome	0.493	0.493	0.493	0.493	0.493	0.493	0.493
<b>Panel C: Binary (Strongly Agree)</b>							
Policy exposure	-0.00174 (0.0342)	-0.0139 (0.0453)	0.00483 (0.0154)	0.0136 (0.0278)	0.0282 (0.0187)	0.0111 (0.0387)	0.0144 (0.00995)
Mean Outcome	0.133	0.133	0.133	0.133	0.133	0.133	0.133
SD Outcome	0.339	0.339	0.339	0.339	0.339	0.339	0.339
Policy	EPS	Market	Non-Market	Tax	CO2+Diesel	CO2	Diesel
Recession exposure	✓	✓	✓	✓	✓	✓	✓
Environmental Quality exposure	✓	✓	✓	✓	✓	✓	✓
Individual controls	✓	✓	✓	✓	✓	✓	✓
Survey FE	✓	✓	✓	✓	✓	✓	✓
Year of birth FE	✓	✓	✓	✓	✓	✓	✓
Country × Year of interview FE	✓	✓	✓	✓	✓	✓	✓
Country-age linear trends	✓	✓	✓	✓	✓	✓	✓
Mean Exposure	0.914	0.671	1.443	0.971	1.683	0.374	2.991
SD Exposure	0.689	0.545	1.206	0.776	1.202	1.217	1.918
<i>N</i>	20480	20480	20480	20480	20480	20480	20480
adj. <i>R</i> <sup>2</sup>	0.090	0.090	0.090	0.090	0.090	0.090	0.090

*Notes:* All regressions control for male dummy, unemployment dummy, 3-category education (Lower, Middle, Upper), 10-class subjective income decile scale. Recession exposure is a dummy variable that takes value one if during adulthood the individual has experienced at least one year in which the real GDP per capita growth rate of its country is at least 10% below the previous year's growth rate. Environmental Quality exposure are PM2.5 and HAP exposure, respectively the adult years average of age-standardized disability-adjusted life-years lost per 100,000 people due to exposure to fine air particulate matter smaller than 2.5 micrometers (PM2.5) and due to exposure to household air pollution (HAP) from the use of household solid fuels. All regressions also control for survey, year of birth, country-by-year of interview fixed effects and country-age linear trends. Observations are weighted using survey weights. Standard errors are clustered by country-year. Significance levels: \*  $p < 0.1$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ .

Table A13: Environmental Policy Stringency and Other Environmental Preferences: Heterogeneous Effects

	Give part of income (Likert)					Tax increase (Likert)						
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
EPS exposure	-0.127* (0.0728)	-0.167** (0.0728)	-0.130* (0.0734)	-0.132* (0.0726)	-0.149* (0.0822)	-0.143* (0.0815)	-0.112 (0.112)	-0.139 (0.116)	-0.0988 (0.114)	-0.110 (0.112)	-0.110 (0.114)	-0.0763 (0.115)
Uninteracted Term 1	0.00499 (0.0427)	0.0612 (0.0414)	-0.0240 (0.0557)	-0.0307 (0.0565)	0.0812 (0.0835)	0.0647 (0.0883)	-0.0499 (0.0308)	0.0471 (0.0291)	0.0265 (0.0499)	-0.00541 (0.0514)	-0.0813 (0.0609)	0.122* (0.0640)
Uninteracted Term 2		0.0976** (0.0392)						0.107** (0.0396)				
Interaction Term 1	-0.0287 (0.0263)	0.0300 (0.0256)	0.00608 (0.0305)	0.0371 (0.0276)	0.0229 (0.0436)	-0.0860 (0.0525)	0.0255 (0.0412)	0.0201 (0.0267)	-0.0364 (0.0376)	0.0148 (0.0478)	0.111** (0.0538)	-0.237** (0.0572)
Interaction Term 2		0.112** 0.0940*						(0.0260) (0.0486)				
Interaction Term	Unemployed (=1)	Education (Middle=1; Upper=2)	Poor (=1)	Rich (=1)	Left-wing (=1)	Right-wing (=1)	Unemployed (=1)	Education (Middle=1; Upper=2)	Poor (=1)	Rich (=1)	Left-wing (=1)	Right-wing (=1)
Recession exposure controls	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
EQ exposure controls	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Individual controls	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Survey FE	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Year of birth FE	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Country × Year of interview FE	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Country-age linear trends	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Mean Outcome	2.720	2.720	2.720	2.720	2.740	2.740	2.598	2.598	2.598	2.598	2.614	2.614
SD Outcome	0.858	0.858	0.858	0.858	0.852	0.852	0.860	0.860	0.860	0.860	0.859	0.859
N	25545	25545	25545	25545	21021	21021	20709	20709	20709	20709	16848	16848
adj. R <sup>2</sup>	0.103	0.104	0.103	0.103	0.099	0.099	0.090	0.090	0.090	0.090	0.088	0.090

Notes: The outcome variable ranges from 1 to 4 (with higher values reflecting stronger agreement with the statement "Government should reduce environmental pollution"). All regressions control for male dummy, unemployment dummy, 3-category education (Lower, Middle, Upper), 10-class subjective income decile scale. Recession exposure is a dummy variable that takes value one if during adulthood the individual has experienced at least one year in which the real GDP per capita growth rate of his country is at least 10% below the previous year's growth rate. PM2.5 and HAP exposure are respectively the adult years-average of age-standardized disability-adjusted life-years lost per 100,000 people due to exposure to fine air particulate matter smaller than 2.5 micrometers (PM2.5) and due to exposure to household air pollution (HAP) from the use of household solid fuels (PM2.5 and HAP exposure variables are inverted such that higher values imply higher quality). Poor is a dummy variable equal to one if individuals report belonging to the first two lowest deciles of the income scale, and zero otherwise. Rich is a dummy variable equal to one if individuals report belonging to the first two highest deciles of the income scale, and zero otherwise. Left-wing is a dummy variable equal to one if individuals report belonging to the first two steps in a ten-point political scale that goes from one (Left) to ten (Right). Right-wing is a dummy variable equal to one if individuals report belonging to the last two steps in a ten-point political scale that goes from one (Left) to ten (Right). All regressions also include year of birth, country-by-year of interview, survey fixed effects, and country-by-age linear trends. Observations are weighted using survey weights. Standard errors are clustered by country-year. Significance levels: \*  $p < 0.1$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ .



Table A14: Effect of Environmental Policy Stringency (EPS) exposure by age windows using binary outcomes.

	Government should reduce pollution							
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
<b>Panel A: Agree &amp; Strongly Agree</b>								
EPS exposure	-0.00840 (0.143)	0.0920** (0.0377)	0.0293 (0.0360)	-0.0270 (0.0182)	0.0269 (0.0201)	0.0105 (0.0343)	-0.0361 (0.0358)	0.00717 (0.0423)
Age window	10-17	18-25	26-33	34-41	42-49	50-57	58-65	66-73
Mean outcome	0.698	0.667	0.654	0.654	0.647	0.649	0.679	0.708
SD Outcome	0.459	0.471	0.476	0.476	0.478	0.477	0.467	0.455
<b>Panel B: Strongly Agree</b>								
EPS exposure	-0.187 (0.156)	0.0868** (0.0406)	-0.00985 (0.0246)	-0.00535 (0.0170)	0.00722 (0.0201)	0.0161 (0.0256)	0.000245 (0.0279)	0.0365 (0.0453)
Age window	10-17	18-25	26-33	34-41	42-49	50-57	58-65	66-73
Mean outcome	0.314	0.303	0.307	0.307	0.295	0.302	0.324	0.342
SD Outcome	0.464	0.460	0.461	0.461	0.456	0.459	0.468	0.475
Recession exposure	✓	✓	✓	✓	✓	✓	✓	✓
EQ exposure	✓	✓	✓	✓	✓	✓	✓	✓
Individual controls	✓	✓	✓	✓	✓	✓	✓	✓
Survey FE	✓	✓	✓	✓	✓	✓	✓	✓
Year of birth FE	✓	✓	✓	✓	✓	✓	✓	✓
Country × Year of interview FE	✓	✓	✓	✓	✓	✓	✓	✓
Country-age linear trends	✓	✓	✓	✓	✓	✓	✓	✓
N	6623	17070	20300	20211	17904	14522	11179	7788

*Notes:* All regressions control for male dummy, unemployment dummy, 3-category education (Lower, Middle, Upper), 10-class subjective income decile scale. Recession exposure is a dummy variable that takes value one if during adulthood the individual has experienced at least one year in which the real GDP per capita growth rate of its country is at least 10% below the previous year's growth rate. PM2.5 and HAP exposure are respectively the adult years average of age-standardized disability-adjusted life-years lost per 100,000 people due to exposure to fine air particulate matter smaller than 2.5 micrometers (PM2.5) and due to exposure to household air pollution (HAP) from the use of household solid fuels. All regressions also include year of birth, country-by-year of interview, survey fixed effects, and country-by-age linear trends. Observations are weighted using survey weights. Standard errors are clustered by country-year. Significance levels: \*  $p < 0.1$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ .

Table A15: Environmental Policy Stringency (EPS) exposure and environmental preferences. Alternative definitions of formative age.

	Government should reduce pollution (Likert)							
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
EPS exposure	0.398 (0.246)	0.398 (0.246)	0.516** (0.242)	0.287*** (0.0901)	0.392* (0.198)	0.318 (0.200)	0.198** (0.0819)	0.185* (0.0944)
Formative age	16-23	16-24	16-25	17-23	17-24	17-25	18-23	18-24
Recession exposure	✓	✓	✓	✓	✓	✓	✓	✓
EQ exposure	✓	✓	✓	✓	✓	✓	✓	✓
Individual controls	✓	✓	✓	✓	✓	✓	✓	✓
Survey FE	✓	✓	✓	✓	✓	✓	✓	✓
Year of birth FE	✓	✓	✓	✓	✓	✓	✓	✓
Country × Year of interview FE	✓	✓	✓	✓	✓	✓	✓	✓
Country-age linear trends	✓	✓	✓	✓	✓	✓	✓	✓
Mean Outcome	2.923	2.923	2.921	2.919	2.911	2.916	2.913	2.915
SD Outcome	0.880	0.880	0.881	0.890	0.886	0.884	0.896	0.893
Mean Exposure	0.964	0.964	0.979	0.859	0.982	0.991	0.879	0.885
SD Exposure	0.719	0.719	0.722	0.664	0.717	0.722	0.673	0.681
<i>N</i>	6064	6064	5919	14805	7418	7185	17215	16282
adj. $R^2$	0.126	0.126	0.127	0.135	0.136	0.132	0.132	0.135

*Notes:* All regressions control for male dummy, unemployment dummy, 3-category education (Lower, Middle, Upper), 10-class subjective income decile scale. Recession exposure is a dummy variable that takes value one if during adulthood the individual has experienced at least one year in which the real GDP per capita growth rate of its country is at least 10% below the previous year's growth rate. PM2.5 and HAP exposure are respectively the adult years average of age-standardized disability-adjusted life-years lost per 100,000 people due to exposure to fine air particulate matter smaller than 2.5 micrometers (PM2.5) and due to exposure to household air pollution (HAP) from the use of household solid fuels. All regressions also include year of birth, country-by-year of interview, survey fixed effects, and country-by-age linear trends. Observations are weighted using survey weights. Standard errors are clustered by country-year. Significance levels: \*  $p < 0.1$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ .

Table A16: EPS exposure during formative age on environmental preferences

	Government should reduce pollution (Likert)			
	(1)	(2)	(3)	(4)
<b>Panel A: Baseline exposure measure</b>				
EPS average exposure	0.190** (0.0887)	0.190** (0.0880)	0.206** (0.0917)	0.207** (0.0914)
Mean Exposure	0.914	0.914	0.914	0.914
SD Exposure	0.681	0.681	0.681	0.681
<b>Panel B: Year-demeaned relative exposure</b>				
EPS average exposure	0.156 (0.0982)	0.183* (0.102)	0.156 (0.0980)	0.183* (0.102)
Mean exposure	-0.230	-0.230	-0.230	-0.230
SD exposure	0.684	0.684	0.684	0.684
<b>Panel C: Country-detrended exposure</b>				
EPS average exposure	0.160* (0.0948)	0.181* (0.0982)	0.166* (0.0952)	0.190* (0.0995)
Mean exposure	-0.112	-0.112	-0.112	-0.112
SD exposure	0.230	0.230	0.230	0.230
Recession exposure	✓	✓	✓	✓
PM2.5 exposure		✓		✓
HAP exposure			✓	✓
Individual controls	✓	✓	✓	✓
Survey FE	✓	✓	✓	✓
Year of birth FE	✓	✓	✓	✓
Country × Year of interview FE	✓	✓	✓	✓
Country-age linear trends	✓	✓	✓	✓
Mean Outcome	2.909	2.909	2.909	2.909
SD Outcome	0.896	0.896	0.896	0.896
N	16889	16889	16889	16889

*Notes:* The outcome variable ranges from 1 to 4 (with higher values reflecting stronger agreement with the statement “Government should reduce environmental pollution”). All regressions control for male dummy, unemployment dummy, 3-category education (Lower, Middle, Upper), 10-class subjective income decile scale. Recession exposure is a dummy variable that takes value one if during adulthood the individual has experienced at least one year in which the real GDP per capita growth rate of its country is at least 10% below the previous year’s growth rate. PM2.5 and HAP exposure are respectively the adult years average of age-standardized disability-adjusted life-years lost per 100,000 people due to exposure to fine air particulate matter smaller than 2.5 micrometers (PM2.5) and due to exposure to household air pollution (HAP) from the use of household solid fuels. All regressions also control for survey, year of birth, country-by-year of interview fixed effects and country-age linear trends. Observations are weighted using survey weights. Standard errors are clustered by country-year. Significance levels: \*  $p < 0.1$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ .

Table A17: EPS exposure during formative age on environmental preferences controlling for aggregate country-level preferences during formative age

	Government should reduce pollution		
	(1)	(2)	(3)
EPS average exposure	0.172* (0.101)	0.0766* (0.0402)	0.0837* (0.0423)
Country-level formative-age preferences	-0.0115 (0.141)	-0.0981* (0.0586)	0.0675 (0.0856)
Outcome variable	Likert	Strongly agree	Strongly agree & Agree
Recession exposure	✓	✓	✓
PM2.5 exposure	✓	✓	✓
HAP exposure	✓	✓	✓
Individual controls	✓	✓	✓
Survey FE	✓	✓	✓
Year of birth FE	✓	✓	✓
Country $\times$ Year of interview FE	✓	✓	✓
Country-age linear trends	✓	✓	✓
Mean Outcome	2.902	0.298	0.662
SD Outcome	0.896	0.457	0.473
$N$	13569	13569	13569
adj. $R^2$	0.133	0.082	0.128

*Notes:* The regression controls for the country-level average support for government action to reduce pollution measured during the earliest available of the formative age of each individual. The outcome variable ranges from 1 to 4 (with higher values reflecting stronger agreement with the statement “Government should reduce environmental pollution”) in column 1. The outcome variable is a dummy equal to 1 if the individual strongly agrees with the statement, and 0 otherwise, in column 2. The outcome variable is a dummy equal to 1 if the individual either strongly agrees or agrees with the statement, and 0 otherwise, in column 3. All regressions control for male dummy, unemployment dummy, 3-category education (Lower, Middle, Upper), 10-class subjective income decile scale. Recession exposure is a dummy variable that takes value one if during adulthood the individual has experienced at least one year in which the real GDP per capita growth rate of its country is at least 10% below the previous year’s growth rate. PM2.5 and HAP exposure are respectively the adult years average of age-standardized disability-adjusted life-years lost per 100,000 people due to exposure to fine air particulate matter smaller than 2.5 micrometers (PM2.5) and due to exposure to household air pollution (HAP) from the use of household solid fuels. All regressions also control for survey, year of birth, country-by-year of interview fixed effects and country-age linear trends. Observations are weighted using survey weights. Standard errors are clustered by country-year. Significance levels: \*  $p < 0.1$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ .

Table A18: EPS exposure during formative age and contemporaneous policy level

	Government should reduce pollution (Likert)	
	(1)	(2)
EPS exposure ( $\beta_1$ )	0.199** (0.0824)	0.274** (0.108)
$\Delta policy < 0$	-0.258*** (0.0416)	-0.234*** (0.0423)
EPS exposure $\times \Delta policy < 0$ ( $\beta_3$ )	0.229*** (0.0549)	0.194*** (0.0520)
Exposure	Formative age	Adulthood
Individual controls	✓	✓
Recession exposure	✓	✓
EQ exposure	✓	✓
Survey FE	✓	✓
Year of birth FE	✓	✓
Country $\times$ Year of interview FE	✓	✓
Country-age linear trends	✓	✓
Mean Outcome	2.912	2.909
SD Outcome	0.896	0.896
Mean $\Delta policy$	0.126	0.135
SD $\Delta policy$	0.332	0.342
$N$	17070	16889
adj. $R^2$	0.133	0.133

*Notes:* All regressions control for male dummy, unemployment dummy, 3-category education (Lower, Middle, Upper), 10-class subjective income decile scale. Recession exposure is a dummy variable that takes value one if, during her formative age, the individual has experienced at least one year in which the real GDP per capita growth rate of its country is at least 10% below the previous year's growth rate. EQ exposure includes PM2.5 and HAP exposure, which are respectively the formative age's average of age-standardized disability-adjusted life-years lost per 100,000 people due to exposure to fine air particulate matter smaller than 2.5 micrometers (PM2.5) and due to exposure to household air pollution (HAP) from the use of household solid fuels. Observations are weighted using survey weights. Standard errors are clustered by country-year. Significance levels:

\*  $p < 0.1$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ .

Table A19: EPS exposure across age windows and contemporaneous policy level

	Government should reduce pollution (Likert)						
	(1)	(2)	(3)	(4)	(5)	(6)	(7+)
EPS exposure	0.199** (0.0824)	0.0153 (0.0721)	-0.0539 (0.0326)	0.0576 (0.0403)	0.0360 (0.0491)	-0.0746 (0.0732)	0.0582 (0.0752)
$\Delta policy < 0$	-0.258*** (0.0416)	-0.130 (0.143)	-0.0834* (0.0468)	0.0816 (0.0613)	0.115 (0.0959)	0.103 (0.0926)	-0.110 (0.110)
EPS exposure $\times \Delta policy < 0$	0.229*** (0.0549)	0.124 (0.140)	0.117* (0.0654)	-0.0948 (0.0575)	-0.0819 (0.123)	-0.0814 (0.0821)	0.122 (0.119)
Age window	18-25	26-33	34-41	42-49	50-57	58-65	66-73
Individual controls	✓	✓	✓	✓	✓	✓	✓
Recession exposure	✓	✓	✓	✓	✓	✓	✓
EQ exposure	✓	✓	✓	✓	✓	✓	✓
Survey FE	✓	✓	✓	✓	✓	✓	✓
Year of birth FE	✓	✓	✓	✓	✓	✓	✓
Country $\times$ Year of interview FE	✓	✓	✓	✓	✓	✓	✓
Country-age linear trends	✓	✓	✓	✓	✓	✓	✓
Mean Outcome	2.912	2.899	2.901	2.879	2.884	2.944	3.000
SD Outcome	0.896	0.912	0.909	0.906	0.917	0.905	0.888
Mean $\Delta policy$	0.132	0.123	0.111	0.106	0.090	0.094	0.096
SD $\Delta policy$	0.338	0.328	0.314	0.308	0.286	0.292	0.295
$N$	17070	20300	20211	17904	14522	11179	7788
adj. $R^2$	0.133	0.135	0.142	0.162	0.163	0.171	0.168

*Notes:* All regressions control for male dummy, unemployment dummy, 3-category education (Lower, Middle, Upper), 10-class subjective income decile scale. Recession exposure is a dummy variable that takes value one if during adulthood the individual has experienced at least one year in which the real GDP per capita growth rate of its country is at least 10% below the previous year's growth rate. EQ exposure includes PM2.5 and HAP exposure, which are respectively the adult years average of age-standardized disability-adjusted life-years lost per 100,000 people due to exposure to fine air particulate matter smaller than 2.5 micrometers (PM2.5) and due to exposure to household air pollution (HAP) from the use of household solid fuels. Observations are weighted using survey weights. Standard errors are clustered by country-year. Significance levels: \*  $p < 0.1$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ .

Table A20: EPS and EQ exposure during adulthood

	Government should reduce pollution (Likert)			
	(1)	(2)	(3)	(4)
EPS exposure	0.516** (0.212)	0.170 (0.108)	0.446** (0.210)	0.0858 (0.125)
Environmental Quality exposure	-0.0658 (0.0525)	-0.127* (0.0673)	-0.0790 (0.0586)	0.0152 (0.0745)
Environmental Quality variable	PM2.5		HAP	
Sample	Below	Above	Below	Above
Recession exposure	✓	✓	✓	✓
Individual controls	✓	✓	✓	✓
Survey FE	✓	✓	✓	✓
Year of birth FE	✓	✓	✓	✓
Country × Year of interview FE	✓	✓	✓	✓
Country-age linear trends	✓	✓	✓	✓
Mean outcome	2.962	2.878	3.005	2.826
SD outcome	0.877	0.923	0.881	0.912
<i>N</i>	8885	8004	9013	7876
adj. <i>R</i> <sup>2</sup>	0.095	0.172	0.100	0.159

*Notes:* All regressions control for male dummy, unemployment dummy, 3-category education (Lower, Middle, Upper), 10-class subjective income decile scale. Recession exposure is a dummy variable that takes value one if during adulthood the individual has experienced at least one year in which the real GDP per capita growth rate of its country is at least 10% below the previous year's growth rate. PM2.5 and HAP exposure are respectively adult years average of age-standardized disability-adjusted life-years lost per 100,000 people due to exposure to fine air particulate matter smaller than 2.5 micrometers (PM2.5) and due to exposure to household air pollution (HAP) from the use of household solid fuels (PM2.5 and HAP exposure variables are inverted such that higher values imply higher quality and divided by 1000 to improve the readability of coefficients). All regressions also include year of birth, country-by-year of interview, survey fixed effects, and country-by-age linear trends. Observations are weighted using survey weights. Standard errors are clustered by country-year. Significance levels: \*  $p < 0.1$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ .

Table A21: EPS and environmental quality exposure during adulthood

	Government should reduce pollution (Likert)	
	(1)	(2)
EPS exposure ( $\beta_1$ )	0.129* (0.0759)	0.102 (0.0869)
Below median EQ ( $\beta_2$ )	-0.468*** (0.156)	-0.374 (0.245)
EPS exposure $\times$ Below median EQ ( $\beta_3$ )	0.448*** (0.132)	0.325 (0.220)
EQ variable	PM2.5	HAP
Recession exposure	✓	✓
Individual controls	✓	✓
Survey FE	✓	✓
Year of birth FE	✓	✓
Country $\times$ Year of interview FE	✓	✓
Country-age linear trends	✓	✓
$N$	16889	16889
adj. $R^2$	0.133	0.132

*Notes:* All regressions control for male dummy, unemployment dummy, 3-category education (Lower, Middle, Upper), 10-class subjective income decile scale. Recession exposure is a dummy variable that takes value one if during adulthood the individual has experienced at least one year in which the real GDP per capita growth rate of its country is at least 10% below the previous year's growth rate. Below median EQ is a binary variable equal to one if individuals have been exposed to an environmental quality measure (PM2.5 or HAP) that is strictly below the median exposure value. All regressions also control for survey, year of birth, country-by-year of interview fixed effects and country-age linear trends. Observations are weighted using survey weights. Standard errors are clustered by country-year. Significance levels: \*  $p < 0.1$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ .



Table A22: EPS and environmental quality exposure during formative age

	Government should reduce pollution (Likert)	
	(1)	(2)
EPS exposure ( $\beta_1$ )	0.0810 (0.0650)	0.0833 (0.0690)
Below median EQ ( $\beta_2$ )	-0.246* (0.156)	-0.267* (0.245)
EPS exposure $\times$ Below median EQ ( $\beta_3$ )	0.293*** (0.109)	0.292*** (0.144)
EQ variable	PM2.5	HAP
Recession exposure	✓	✓
Individual controls	✓	✓
Survey FE	✓	✓
Year of birth FE	✓	✓
Country $\times$ Year of interview FE	✓	✓
Country-age linear trends	✓	✓
$N$	17070	17070
adj. $R^2$	0.133	0.132

*Notes:* All regressions control for male dummy, unemployment dummy, 3-category education (Lower, Middle, Upper), 10-class subjective income decile scale. Recession exposure is a dummy variable that takes value one if during adulthood the individual has experienced at least one year in which the real GDP per capita growth rate of its country is at least 10% below the previous year's growth rate. Below median EQ is a binary variable equal to one if individuals have been exposed to an environmental quality measure (PM2.5 or HAP) that is strictly below the median exposure value. All regressions also control for survey, year of birth, country-by-year of interview fixed effects and country-age linear trends. Observations are weighted using survey weights. Standard errors are clustered by country-year. Significance levels: \*  $p < 0.1$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ .

Table A23: Environmental Policy Stringency and Individual Preferences for Government Intervention: Heterogeneous Effects

	Government should reduce pollution (Likert)						
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
EPS exposure	0.263** (0.114)	0.276** (0.116)	0.326*** (0.118)	0.274** (0.115)	0.277** (0.116)	0.225** (0.104)	0.210** (0.103)
Uninteracted Term 1	0.00127 (0.0310)	0.0625** (0.0303)	-0.0387 (0.0479)	0.0859 (0.0647)	-0.0775 (0.0761)	0.0567 (0.0443)	-0.0883 (0.0765)
Uninteracted Term 2			-0.110* (0.0634)				
Interaction Term 1	0.0260 (0.0249)	0.00406 (0.0325)	-0.0380 (0.0362)	0.0111 (0.0384)	-0.0201 (0.0611)	0.00451 (0.0456)	0.0968 (0.0597)
Interaction Term 2			-0.138*** (0.0467)				
Interaction Term	Male (=1)	Unemployed (=1)	Education (Middle=1; Upper=2)	Poor (=1)	Rich (=1)	Left-wing (=1)	Right-wing (=1)
Recession exposure controls	✓	✓	✓	✓	✓	✓	✓
EQ exposure controls	✓	✓	✓	✓	✓	✓	✓
Individual controls	✓	✓	✓	✓	✓	✓	✓
Survey FE	✓	✓	✓	✓	✓	✓	✓
Year of birth FE	✓	✓	✓	✓	✓	✓	✓
Country × Year of interview FE	✓	✓	✓	✓	✓	✓	✓
Country-age linear trends	✓	✓	✓	✓	✓	✓	✓
Mean Outcome	2.922	2.922	2.922	2.922	2.922	2.915	2.915
SD Outcome	0.900	0.900	0.900	0.900	0.900	0.900	0.900
<i>N</i>	16889	16889	16889	16889	16889	13719	13719
adj. <i>R</i> <sup>2</sup>	0.132	0.132	0.133	0.132	0.132	0.121	0.121

*Notes:* The outcome variable ranges from 1 to 4 (with higher values reflecting stronger agreement with the statement “Government should reduce environmental pollution”). All regressions control for male dummy, unemployment dummy, 3-category education (Lower, Middle, Upper), 10-class subjective income decile scale. Recession exposure is a dummy variable that takes value one if during adulthood the individual has experienced at least one year in which the real GDP per capita growth rate of its country is at least 10% below the previous year’s growth rate. PM2.5 and HAP exposure are respectively the adult years average of age-standardized disability-adjusted life-years lost per 100,000 people due to exposure to fine air particulate matter smaller than 2.5 micrometers (PM2.5) and due to exposure to household air pollution (HAP) from the use of household solid fuels (PM2.5 and HAP exposure variables are inverted such that higher values imply higher quality). Poor is a dummy variable equal to one if individuals report belonging to the first two lowest deciles of the income scale, and zero otherwise. Rich is a dummy variable equal to one if individuals report belonging to the first two highest deciles of the income scale, and zero otherwise. Left-wing is a dummy variable equal to one if individuals report belonging to the first two steps in a ten-point political scale that goes from one (Left) to ten (Right). Right-wing is a dummy variable equal to one if individuals report belonging to the last two steps in a ten-point political scale that goes from one (Left) to ten (Right). All regressions also include year of birth, country-by-year of interview, survey fixed effects, and country-by-age linear trends. Observations are weighted using survey weights. Standard errors are clustered by country-year. Significance levels: \*  $p < 0.1$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ .

Table A24: Environmental Policy Stringency and Individual Preferences for Government Action: Heterogeneous Effects

	Government should reduce pollution (Likert)			
	(1)	(2)	(3)	(4)
EPS exposure	-0.0126 (0.0852)	-0.00539 (0.113)	0.197* (0.113)	0.220* (0.112)
<i>Interest in politics</i>				
Somewhat interested	0.0204 (0.0519)			
Not very interested	0.0486 (0.0522)			
Not at all interested	0.0312 (0.0494)			
Somewhat interested × EPS exposure	0.0788* (0.0398)			
Not very interested × EPS exposure	0.121** (0.0465)			
Not at all interested × EPS exposure	0.220*** (0.0533)			
<i>Confidence: The Government</i> (Baseline: A great deal)				
Quite a lot		0.0440 (0.0653)		
Not very much		0.0201 (0.0724)		
None at all		0.0270 (0.0815)		
Quite a lot × EPS exposure		0.0208 (0.0605)		
Not very much × EPS exposure		0.0610 (0.0780)		
None at all × EPS exposure		0.187** (0.0761)		
<i>Government vs People Responsibility</i>				
Government responsibility			0.0722** (0.0347)	
Government responsibility × EPS exposure			0.0674** (0.0323)	
People responsibility				-0.0529 (0.0620)
People responsibility × EPS exposure				0.0586 (0.0501)
Recession exposure	✓	✓	✓	✓
EQ exposure	✓	✓	✓	✓
Individual controls	✓	✓	✓	✓
Survey FE	✓	✓	✓	✓
Year of birth FE	✓	✓	✓	✓
Country × Year of interview FE	✓	✓	✓	✓
Country-age linear trends	✓	✓	✓	✓
Mean Outcome	2.926	2.950	2.922	2.922
SD Outcome	0.896	0.892	0.900	0.900
<i>N</i>	15414	12102	16646	16646
adj. <i>R</i> <sup>2</sup>	0.132	0.120	0.136	0.132

*Notes:* All regressions control for male dummy, unemployment dummy, 3-category education (Lower, Middle, Upper), 10-class subjective income decile scale. All regressions control for survey, country-year of interview, year of birth FE. Recession exposure is a dummy variable that takes value one if during adulthood the individual has experienced at least one year in which the real GDP per capita growth rate of its country is at least 10% below the previous year's growth rate. PM2.5 and HAP exposure are respectively the adult years average of age-standardized disability-adjusted life-years lost per 100,000 people due to exposure to fine air particulate matter smaller than 2.5 micrometers (PM2.5) and due to exposure to household air pollution (HAP) from the use of household solid fuels. Observations are weighted using survey weights. Standard errors are clustered by country-year. Significance levels: \*  $p < 0.1$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ .