

## Pro-Environmental Behaviors and the Prioritization of Environmental Protection over Economic Growth

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### ABSTRACT

This study investigates the impact of individuals' pro-environmental behaviors on their preference for either environmental protection or economic growth. The analysis utilizes the most recent wave of the World Values Survey (WVS), the 7th wave, which includes data from 66 economies. Logistic regression is employed for empirical analysis. The marginal effects of the model highlight the significant role of pro-environmental behavior and confidence in environmental movements in shaping individuals' preferences for environmental protection over economic growth. Whether active or inactive, environmental organization members positively influence the likelihood of prioritizing environmental protection by fostering awareness and alignment with sustainability values. Active members exhibit a stronger effect, reflecting the impact of deeper engagement in environmental activities. Similarly, confidence in environmental protection movements plays a crucial role in promoting pro-environmental attitudes, as individuals with greater confidence are more likely to trust and support collective efforts to address environmental challenges. The findings underscore the importance of fostering participation in environmental organizations and building trust in environmental movements to encourage sustainability-oriented decisions and attitudes at a societal level.

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### INTRODUCTION

Since World War II, Economic growth has become a primary governmental objective in many nations. Environmental protections are frequently sacrificed in the process of economic growth. Environmental activism has been on the rise since the 1960s and 1970s. Environmental concerns started during the 1960s industrialization boom, particularly in the West, when industrial pollution became a greater issue (Hurley, 2009). Traditionally, economic growth has often been associated with increased production, consumption, and industrial activities, which, in turn, can lead to environmental degradation (Stern et al., 1996). The environmental Kuznets curve (EKC) hypothesis is a popular theory among economists that explains environmental concerns. (Grossman & Krueger, 1995; Yasmeen et al., 2024).

The main message of the book "The Limits to Growth" (De Rome & Meadows, 1972) is that a relevant, proactive policy may keep humanity from surpassing the previously stated planetary problems. The second edition of "The Limits to Growth" was published in 1972, "Beyond the Limits" (De Rome & Meadows, 1972). According to scientists, academics, and environmentalists, it includes the fact that environmental catastrophe is a likely consequence of our planet's ongoing resource extraction.

Hence, traditionally, there has been a perceived tradeoff between economic growth and environmental protection. Individuals adopting pro-environmental behaviors aim to reduce this conflict by incorporating sustainability into decision-making processes. The concept of sustainable development of the Brundtland Report continues to be a guiding principle for international environmental efforts today. The United Nations' adoption of the 2030 Agenda for Sustainable Development in 2015 is one of the major achievements of the Brundtland Report (Tsalis et al., 2020).

The theory of planned behavior (TPB) is a cognitive theory by Ajzen (1985) that proposes that, as a general rule, "the stronger the intention to engage in a behavior, the more likely should be its performance." Based on this theory, we can expect that individuals inclined toward pro-environmental behavior would prioritize environmental overgrowth. People with pro-environmental behavior prefer to purchase green products by showing their preferences for environmental protection (Gan et al., 2008). Pro-environmental behavior is measured through participation in environmental organizations and strongly impacts environmental priority (Olli et al., 2001). Pro-environmental

behavior measured through environmental consciousness significantly affects personal preferences for prioritizing environmental overgrowth. (Xu & Li, 2018).

The current study includes several covariates like gender, residence, age, education, and socioeconomic status. Researchers have found that women are more likely than men to display concern for the environment (Arnocky & stroink, 2010). Rural and urban dwellers may have different opinions. The variable is shown to be insignificant, despite the initial assumption that people who reside in urban areas and are more exposed to the negative consequences of climate change would prioritize environmental issues (Shair et al., 2024a; 2024b). People in cities are more likely to care about the environment than people in rural places because pollution is more likely to cause environmental problems (Israel & Levinson, 2004; Čábelková et al., 2023).

There appears to be a negative correlation between age and environmental concerns (Lengfeld & Gerhards, 2008). More environmental worries are felt by highly educated people (Xu & Li, 2018). Social class is also an important determinant of prioritizing the environment. Compared to lower-class individuals, those who believe that they belong to the working class, lower middle class, upper middle class, and upper class tend to report significantly more environmental concern in both African and developed countries (Bano et al., 2024; Sulemana et al., 2016; Sulemana, 2016; Torgler & Garcia-Valiñas, 2007).

It is obvious that the problem is global in scope and that the only way environmental protection initiatives can be successful is if individuals are prepared to consider the environment when making decisions as consumers and citizens of the world. This encourages individual action and personalizes environmental challenges. This study investigates the impact of individuals' pro-environmental behaviors on their priority, either environmental protection or economic growth. The key independent variables include Membership in Environmental Organizations and Confidence in Environmental Protection Movements. The significance of this study lies in addressing the global challenge of environmental protection by examining the role of individuals' pro-environmental behaviors in shaping their priorities and attitudes. As environmental issues demand collective action, it is critical to understand how individuals align with environmental organizations and integrate environmental concerns into their decisions as consumers and global citizens.

## METHODOLOGY

This study investigates the impact of individuals' pro-environmental behaviors on their propensity to prioritize environmental protection or economic growth. The analysis is based on secondary data from the latest Wave 7 of the World Values Survey (WVS), conducted between 2017 and 2021. The dataset encompasses responses from over 78,000 participants across 66 countries, with adjustments to account for missing values. A binary logistic regression model is applied to examine the empirical relationship, given the dichotomous nature of the dependent variable (Shair et al., 2022; 2023). The econometric specification of the employed model is presented as follows:

$$\ln \left( \frac{P(\text{Environment priority}_i=1)}{1-P(\text{Environment priority}_i=1)} \right) = \alpha_0 + \alpha_1 PE_i + \alpha_2 CE_i + X\beta + \varepsilon_i \quad (1)$$

In the equation, the dependent variable is binary,  $PE_i$  pro-environmental behavior,  $CE_i$  is confidence level on the environmental protection movements,  $X\beta$  is the vector of variables and coefficients. The coefficients of the equation 1 will be converted into marginal effects.

The study incorporates various variables to explore the determinants of prioritizing environmental protection over economic growth. The dependent variable, Prioritize Environment, is coded as one if an individual prioritizes environmental protection over economic growth and zero otherwise. The key independent variables include Membership in Environmental Organizations, a multinomial categorical variable indicating pro-environmental behavior, classified into three categories: 'Do not belong,' 'Inactive,' and 'Active.' Confidence in Environmental Protection Movements is an ordinal categorical variable reflecting the level of confidence an individual has in environmental protection movements, with four categories: 'None at all,' 'Not very much,' 'Quite a lot,' and 'A great deal.'

The model also includes several covariates. Gender is captured by a binary variable coded as 1 for male respondents and zero otherwise. Rural is another binary variable, coded as 1 for respondents from rural areas and 0 for those from urban areas. Age is an ordinal categorical variable with three groups: '16–29,' '30–49,' and 'above 49 years old.' Education is an ordinal categorical variable with three levels: 'Lower,' 'Middle,' and 'Higher education.' Lastly, Socioeconomic Status is an ordinal categorical variable with five categories: 'Lower,' 'Working,' 'Lower middle,' 'Upper middle,' and 'Upper class.'

## DESCRIPTIVE ANALYSIS

The descriptive statistics of the variables are presented in Table 1. The variable prioritize environment represents whether individuals prioritize environmental protection over economic growth, measured as a binary variable (1 if

environmental protection is prioritized, zero otherwise). For the whole sample, which consists of 89,712 observations, the mean value of the variable is 0.589, with a standard deviation of 0.492. This indicates that 58.9% of respondents prioritize environmental protection, while the remaining 41.1% prioritize economic growth. The minimum and maximum values of 0 and 1 reflect the binary nature of the variable.

Table 1: Descriptive statistics

| Variable   | Whole sample |       |           |     |     | A sample of<br>individuals prioritize<br>the environment | A sample of<br>individuals prioritize<br>growth |
|--|--------------|-------|-----------|-----|-----|--|---|
|  | Observations | Mean  | Std. dev. | Min | Max | Mean   | Mean  |
| Prioritize environment                               | 89,712       | 0.589 | 0.492     | 0   | 1   |  |   |
| Membership in an environmental organization          |              |       |           |     |     | 1  | 0   |
| Do not belong  | 95,794       | 0.859 | 0.348     | 0   | 1   | 0.846  | 0.871   |
| Inactive   | 95,794       | 0.086 | 0.281     | 0   | 1   | 0.092  | 0.083   |
| Active   | 95,794       | 0.055 | 0.228     | 0   | 1   | 0.062  | 0.047   |
| Confidence in the Environment<br>Protection Movement | 90,776       | 2.622 | 0.88      | 1   | 4   | 2.72   | 2.493   |
| Male   | 97,125       | 0.474 | 0.499     | 0   | 1   | 0.471  | 0.49  |
| Rural  | 97,183       | 0.322 | 0.467     | 0   | 1   | 0.319  | 0.335   |
| Age: 16-29   | 96,709       | 0.252 | 0.434     | 0   | 1   | 0.26   | 0.247   |
| Age: 30-49   | 96,709       | 0.396 | 0.489     | 0   | 1   | 0.398  | 0.396   |
| Age: Above 49  | 96,709       | 0.351 | 0.477     | 0   | 1   | 0.342  | 0.357   |
| <u>Education</u>                                     |              |       |           |     |     |  |   |
| Lower  | 96,149       | 0.317 | 0.465     | 0   | 1   | 0.293  | 0.355   |
| Middle   | 96,149       | 0.349 | 0.477     | 0   | 1   | 0.341  | 0.36  |
| Higher   | 96,149       | 0.334 | 0.472     | 0   | 1   | 0.366  | 0.285   |
| <u>Socioeconomic status</u>                          |              |       |           |     |     |  |   |
| Upper  | 91,673       | 0.02  | 0.14      | 0   | 1   | 0.019  | 0.021   |
| Upper middle   | 91,673       | 0.212 | 0.409     | 0   | 1   | 0.22   | 0.205   |
| Lower middle   | 91,673       | 0.389 | 0.487     | 0   | 1   | 0.394  | 0.386   |
| Working  | 91,673       | 0.264 | 0.441     | 0   | 1   | 0.259  | 0.267   |
| Lower  | 91,673       | 0.115 | 0.319     | 0   | 1   | 0.108  | 0.121   |

The variable membership in environmental organization captures individuals' pro-environmental behavior, categorized into three levels: 'Do not belong,' 'Inactive,' and 'Active.' In the sample comprising 95,794 observations, 85.9% of respondents report no membership in environmental organizations, with a mean of 0.859 and a standard deviation of 0.348. Around 8.6% of respondents are inactive members (mean = 0.086, standard deviation = 0.281), while 5.5% are active members (mean = 0.055, standard deviation = 0.228). Among individuals who prioritize environmental protection, 84.6% do not belong to any environmental organization, slightly lower than the overall average. In comparison, 9.2% are inactive members, and 6.2% are active members, slightly higher than the whole sample averages. Conversely, among individuals who prioritize economic growth, 87.1% do not belong to any environmental organization, which is slightly above the overall average, while 8.3% are inactive members, and only 4.7% are active members, both below the overall averages. These findings suggest that individuals who prioritize environmental protection are more likely to engage in pro-environmental behavior, as evidenced by their higher levels of active or inactive membership in environmental organizations, compared to those who prioritize economic growth. This distinction underscores differences in environmental engagement between the two groups.

The variable Confidence in Environmental Protection Movement measures respondents' confidence in such movements on a scale from 1 (None at all) to 4 (A great deal). The mean confidence level in the sample of 90,776 observations is 2.622 (SD = 0.88), indicating moderate confidence overall. Among individuals who prioritize environmental protection, the mean confidence is higher at 2.72, reflecting greater trust in these movements. Conversely, the mean confidence level is lower at 2.493 for those prioritizing economic growth, suggesting comparatively less trust. These findings highlight a clear alignment between confidence in environmental movements and the prioritization of environmental protection, with lower confidence observed among individuals favoring economic growth.

The descriptive statistics for key demographic variables reveal notable trends across the whole sample and subgroups. Among the 97,125 observations, Male respondents constitute 47.4% (SD = 0.499), with slightly lower representation among those prioritizing the environment (47.1%) compared to growth (49%). For Rural respondents (97,183 observations), 32.2% (SD = 0.467) are from rural areas, with a slightly lower proportion among environmentalists (31.9%) than growth advocates (33.5%). Age distribution (96,709 observations) shows 25.2% are aged 16–29, 39.6% aged 30–49, and 35.1% above 49 years. Younger respondents are more likely to prioritize the environment (26%) than growth (24.7%), while older respondents are more likely to prioritize growth (35.7%) than the environment (34.2%).

The descriptive statistics for education suggest that among the whole sample (96,149 observations), 31.7% have lower education, 34.9% have middle education, and 33.4% have higher education. Individuals prioritizing the environment are more likely to have higher education (36.6%) and less likely to have lower education (29.3%)

compared to those prioritizing growth, where 35.5% have lower education and only 28.5% have higher education. For Socioeconomic Status (91,673 observations), most respondents fall into the lower middle (38.9%), working (26.4%), or upper middle (21.2%) classes. Those prioritizing the environment are slightly more represented in the upper middle class (22%) and lower middle class (39.4%) compared to those prioritizing growth (20.5% and 38.6%, respectively). Conversely, individuals prioritizing economic growth are more likely to belong to the lower class (12.1%) compared to environmentalists (10.8%). These patterns suggest a positive association between higher education, socioeconomic status, and environmental prioritization.

## RESULTS AND DISCUSSION

### Regression analysis

The marginal effects of the logit model in Table 2 provide an interpretation of pro-environmental behavior and other covariates' influence on the likelihood of prioritizing environmental protection over economic growth, expressed as percentage changes. The dependent variable is binary, coded as one if an individual prioritizes environmental protection and zero otherwise. Compared to the baseline category (Do not belong), being an inactive member of an environmental organization increases the probability of prioritizing environmental protection by 3.24 percentage points in Model 1. This effect remains consistent across Models 2 and 3, increasing the likelihood by 3.27 and 2.60 percentage points, respectively. In Model 4, the effect reduces to 1.38 percentage points but remains statistically significant, suggesting a moderate yet positive influence. Being an active member of an environmental organization has a stronger effect. Compared to the baseline, active membership increases the probability of prioritizing environmental protection by 7.60 percentage points in Model 1, with similar effects in Models 2 and 3 (7.76 and 7.80 percentage points, respectively). In Model 4, the effect slightly decreases to 4.60 percentage points but remains significant, indicating that active involvement in environmental organizations substantially impacts environmental prioritization.

Table 2: Marginal effects of the Logit model

| Variables                              | Model 1                | Model 2                 | Model 3                 | Model 4                 |
|--|------------------------|-------------------------|-------------------------|-------------------------|
| <b>Pro-environmental behavior</b>      |                        |                         |                         |                         |
| Do not belong (base)                   |                        |                         |                         |                         |
| Inactive member                        | 0.0324***<br>(0.00577) | 0.0327***<br>(0.00579)  | 0.0260***<br>(0.00602)  | 0.0138**<br>(0.00618)   |
| Active member                          | 0.0760***<br>(0.00693) | 0.0776***<br>(0.00696)  | 0.0780***<br>(0.00719)  | 0.0460***<br>(0.00756)  |
| Confidence in environment organization |                        |                         |                         | 0.0691***<br>(0.00203)  |
| Male                                   |                        | -0.0192***<br>(0.00332) | -0.0196***<br>(0.00343) | -0.0173***<br>(0.00354) |
| Rural                                  |                        | -0.0207***<br>(0.00356) | 0.000985<br>(0.00376)   | -0.000558<br>(0.00389)  |
| Age: 16-29                             |                        |                         |                         |                         |
| Age: 30-49                             |                        | -0.0103**<br>(0.00423)  | -0.0123***<br>(0.00436) | -0.00588<br>(0.00448)   |
| Age: Above 49                          |                        | -0.0219***<br>(0.00436) | -0.0127***<br>(0.00456) | -0.00487<br>(0.00470)   |
| <b>Education</b>                       |                        |                         |                         |                         |
| Lower (base)                           |                        |                         |                         |                         |
| Middle                                 |                        |                         | 0.0328***<br>(0.00424)  | 0.0384***<br>(0.00439)  |
| Higher                                 |                        |                         | 0.101***<br>(0.00447)   | 0.105***<br>(0.00460)   |
| <b>Socioeconomic status</b>            |                        |                         |                         |                         |
| Lower class (base)                     |                        |                         |                         |                         |
| Upper                                  |                        |                         | -0.0350**<br>(0.0136)   | -0.0409***<br>(0.0139)  |
| Upper middle                           |                        |                         | 0.00386<br>(0.00653)    | -0.00224<br>(0.00678)   |
| Lower middle                           |                        |                         | 0.00984*<br>(0.00585)   | 0.00504<br>(0.00609)    |
| Working                                |                        |                         | 0.00985<br>(0.00606)    | 0.00995<br>(0.00632)    |
| Observations                           | 88,703                 | 88,183                  | 83,399                  | 78,997                  |

Standard errors in parentheses, \*\*\* p<0.01, \*\* p<0.05, \* p<0.1

These results demonstrate that pro-environmental behavior, particularly active membership in environmental organizations, significantly increases the likelihood of prioritizing environmental protection. Active membership consistently shows a larger effect than inactive membership, emphasizing the importance of deeper engagement in environmental activities. While the effects diminish slightly in Model 4, likely due to the inclusion of additional covariates, the impact of pro-environmental behavior remains robust and statistically significant.

Individuals associated with environmental protection organizations, whether active or inactive, are more likely to prefer the environment overgrowth because of their increased exposure to environmental issues, values, and advocacy efforts (Johnson & Frickel, 2011). These organizations create awareness about the consequences of environmental degradation and emphasize the importance of sustainability, influencing members' priorities and attitudes (Mosley, 2010). Even inactive members often retain the knowledge and values acquired through their association, shaping their preferences (Barr et al., 2011). In contrast, individuals not connected to such organizations may lack the same level of awareness or motivation to prioritize environmental concerns, as they are less exposed to structured campaigns or discussions about the tradeoffs between economic growth and environmental sustainability (Steg & Vlek, 2009).

In Model 4, the marginal effect of Confidence in Environmental Protection Movements is 0.0691, indicating an increase in confidence level is statistically positively associated with increasing the likelihood of prioritizing environmental protection over economic growth. Moving from environmental protection to a very low amount ('None at all,' to 'Not very much'), or a moderate amount ('Quite a lot,' to 'A great deal') increases the probability that one would prioritize environmental protection by 6.91 percentage points. This positive effect illustrates how much environmental causes depend on confidence in environmental protection movements in shaping peoples' environmental priorities. The result reveals that the greater the individuals' confidence in the environmental movement, the greater the likelihood they will prioritize environmental protection. This suggests that pro-environmental attitudes and behavior must be fostered socially by encouraging trust and confidence in such movements. The coefficient turns out to be highly statistically significant, and hence, this relationship is quite robust.

Individuals with higher confidence in the environmental protection movement are more likely to prefer environmental overgrowth because they believe in the effectiveness of collective efforts to address environmental challenges (Dunlap & York, 2008; Nawrotzki, 2012). This confidence fosters a sense of optimism and trust in the movement's ability to create meaningful change, encouraging pro-environmental attitudes and behaviors (Raman et al., 2024). In contrast, individuals with less confidence may view environmental protection efforts as ineffective or inadequate, leading them to prioritize economic growth instead (Dreus & Van den Bergh, 2016). Confidence in the movement also strengthens individuals' alignment with its goals and values, reinforcing their belief that prioritizing environmental sustainability is a viable and impactful choice for the future (Fischer et al., 2012).

All models show a statistically significant decrease in having males associated with the likelihood of preferring environmental protection. In Model 2, the reason is that the probability goes down 1.92 percentage points, and about the same in Model 3 (1.96 percentage points) and Model 4 (1.73 percentage points). It is consistent with a gender gap that is gendered such that females prioritize environmental protection more than males. Living in a rural area has a different effect on different models. In Model 2, living in a rural area reduces the probability by 2.07 percentage points, which is statistically significant. However, the effects become negligible and statistically insignificant in Models 3 and 4, indicating that the influence of rural residence is sensitive to the inclusion of additional covariates. Compared to individuals aged 16–29, those aged 30–49 are less likely to prioritize environmental protection, with a reduction of 1.03 percentage points in Model 2, increasing slightly to 1.23 percentage points in Model 3. This effect diminishes to 0.59 percentage points in Model 4, which is no longer statistically significant. Older individuals (aged above 49) show a stronger reduction in likelihood compared to the youngest group, with a decrease of 2.19 percentage points in Model 2. This effect was reduced in Models 3 (1.27 percentage points) and 4 (0.49 percentage points), becoming statistically insignificant in the final model.

The results suggest that males and, to a lesser extent, older individuals are less likely to prioritize environmental protection. The rural-urban divide appears significant only in simpler models, losing its effect as more variables are included. These findings highlight demographic differences in environmental priorities, with gender and age playing consistent roles in shaping environmental attitudes.

Education shows a strong positive association with environmental prioritization. Individuals with middle education are 3.28 percentage points (Model 3) and 3.84 percentage points (Model 4) more likely to prioritize environmental protection compared to those with lower education, with statistically significant results. The effect is even stronger for individuals with higher education, who are 10.1 percentage points (Model 3) and 10.5 percentage points (Model 4) more likely to prioritize environmental protection. These results suggest that higher educational attainment substantially increases pro-environmental attitudes. In contrast, the effects of socioeconomic status are more nuanced. Individuals in the upper class are 3.5 percentage points (Model 3) and 4.09 percentage points (Model 4) less likely to prioritize environmental protection compared to the lower class, a statistically significant result that may reflect differing priorities or values. The upper middle class shows minimal and statistically insignificant effects, with a marginal reduction in environmental prioritization in Model 4. Similarly, the working and lower middle classes exhibit small positive effects, with lower-middle-class individuals showing a 0.984 percentage point increase in Model 3 that weakens and becomes statistically insignificant in Model 4.

These findings emphasize the critical role of education in fostering environmental priorities, with higher education having the most pronounced impact. Socioeconomic status reveals more complex dynamics, where the upper class negatively associates with environmental prioritization, while other groups show weak or negligible effects. This suggests that while education strongly predicts pro-environmental attitudes, socioeconomic factors may interact with different variables to shape environmental preferences.

### **Heterogeneity analysis**

Table 3 presents the marginal effects of the logit model and highlights the influence of pro-environmental behavior on the likelihood of prioritizing environmental protection over economic growth across different income groups. The dependent variable is binary, coded as one if an individual prioritizes environmental protection and zero otherwise. The results, expressed in percentage points, reveal significant variations across income levels. For inactive membership in environmental organizations, the whole sample shows a statistically significant increase of 1.38 percentage points in the likelihood of prioritizing environmental protection. Among low-income individuals, inactive membership has a positive but statistically insignificant effect, increasing the likelihood by 2.52 percentage points. In contrast, the lower-middle-income group shows a significant 2.26 percentage point decrease, indicating a negative association. For the upper-middle-income group, inactive membership has a small positive but statistically insignificant effect (1.54 percentage points), while in the high-income group, it significantly increases the likelihood of prioritizing environmental protection by 3.98 percentage points.

For active membership, the whole sample shows a significant increase of 4.60 percentage points in the likelihood of prioritizing environmental protection. However, the effect is weaker and statistically insignificant in the low-income group (2.14 percentage points) and virtually absent in the lower-middle-income group, where the effect is a negligible and insignificant decrease of 0.33 percentage points. In contrast, active membership has a stronger, statistically significant effect in the upper-middle-income group, increasing the likelihood by 6.50 percentage points. The largest effect is observed in the high-income group, where active membership significantly increases the likelihood of prioritizing environmental protection by 10.8 percentage points.

These findings suggest that pro-environmental behavior, particularly active membership, has the strongest positive influence in higher-income groups, with diminishing effects in lower-income groups. Inactive membership also shows a notable positive impact in high-income groups but has a negative effect in lower-middle-income groups. These results highlight how income levels and resource availability shape the effectiveness of pro-environmental behavior in driving environmental priorities, with stronger associations in higher-income contexts.

Confidence in environmental protection movements, measured on a scale from 'None at all' to 'A great deal,' significantly influences the likelihood of prioritizing environmental protection over economic growth, with effects varying across income groups. In the whole sample, each increase in confidence level raises the probability of prioritizing environmental protection by 6.91 percentage points, indicating a strong and statistically significant relationship. The effect is smaller and statistically insignificant among low-income individuals at 1.06 percentage points, suggesting limited influence in this group. In the lower-middle-income group, confidence has a moderate but significant impact, increasing the likelihood by 2.66 percentage points. For upper-middle-income individuals, confidence exerts a stronger influence, raising the probability by 6.09 percentage points, comparable to the whole sample. The largest effect is observed in the high-income group, where increased confidence significantly boosts the likelihood of prioritizing environmental protection by 13.0 percentage points. These results highlight that confidence in environmental movements is critical in fostering pro-environmental priorities, particularly in higher-income populations.

Confidence in environmental organizations is a key driver of prioritizing environmental protection, with its impact varying across income groups. While the effect is negligible in low-income groups, it becomes more pronounced as income levels rise, peaking in the high-income sample. These findings suggest that confidence in environmental organizations plays a pivotal role in fostering environmental prioritization, particularly in economically advantaged populations, where resources and stability may enable greater environmental focus.

The marginal effects of the logit regression model demonstrate how various factors influence the probability of an individual prioritizing the environment over economic growth. Gender shows significant variation across income groups, with males in lower and higher-income brackets less likely to prioritize the environment. Rural residence positively influences environmental preference in lower-income groups but negatively affects high-income groups. Age presents a nuanced impact; older individuals in lower-middle-income groups are more likely to favor the environment, while in high-income groups, older individuals are less likely to do so.

Education consistently increases environmental preference, with middle and higher education levels showing significant positive effects across most income groups, although lower education negatively impacts low-income individuals. Socioeconomic status reveals a complex relationship; while being from the upper class has a negative effect overall, lower-middle-income individuals from the upper-middle class show increased environmental preference. Working status has a strong positive influence in low- and lower-middle-income groups but a slight

negative impact on upper-middle-income groups. These results highlight the non-linear and heterogeneous nature of the relationships, emphasizing the importance of tailoring environmental policies to demographic and socioeconomic contexts. Education, in particular, emerges as a critical intervention point for fostering pro-environmental preferences.

Table 3: Heterogeneity analysis

| Variables                              | Whole sample            | Low-income sample     | Lower middle-income sample | Upper middle-income sample | High-income sample      |
|--|-------------------------|-----------------------|----------------------------|----------------------------|-------------------------|
| <u>Pro-environmental behavior</u>      |                         |                       |                            |                            |                         |
| Do not belong (base)                   |                         |                       |                            |                            |                         |
| Inactive member                        | 0.0138**<br>(0.00618)   | 0.0252<br>(0.0346)    | -0.0226**<br>(0.0115)      | 0.0154<br>(0.0103)         | 0.0398***<br>(0.0111)   |
| Active member                          | 0.0460***<br>(0.00756)  | 0.0214<br>(0.0359)    | -0.00327<br>(0.0135)       | 0.0650***<br>(0.0122)      | 0.108***<br>(0.0149)    |
| Confidence in environment organization | 0.0691***<br>(0.00203)  | 0.0106<br>(0.0123)    | 0.0266***<br>(0.00380)     | 0.0609***<br>(0.00317)     | 0.130***<br>(0.00396)   |
| Male                                   | -0.0173***<br>(0.00354) | -0.0391*<br>(0.0221)  | -0.00152<br>(0.00704)      | -0.00799<br>(0.00574)      | -0.0283***<br>(0.00612) |
| Rural                                  | -0.000558<br>(0.00389)  | 0.0433*<br>(0.0260)   | 0.0262***<br>(0.00714)     | 0.0295***<br>(0.00624)     | -0.0152*<br>(0.00855)   |
| Age: 16-29 (base)                      |                         |                       |                            |                            |                         |
| Age: 30-49                             | -0.00588<br>(0.00448)   | 0.00430<br>(0.0245)   | -0.0215***<br>(0.00811)    | -0.00545<br>(0.00710)      | -0.0289***<br>(0.00926) |
| Age: Above 49                          | -0.00487<br>(0.00470)   | 0.00968<br>(0.0298)   | 0.0202**<br>(0.00971)      | -0.0168**<br>(0.00783)     | -0.0513***<br>(0.00894) |
| <u>Education</u>                       |                         |                       |                            |                            |                         |
| Lower (base)                           |                         |                       |                            |                            |                         |
| Middle                                 | 0.0384***<br>(0.00439)  | -0.0457*<br>(0.0267)  | 0.0430***<br>(0.00836)     | 0.0275***<br>(0.00701)     | 0.0531***<br>(0.00884)  |
| Higher                                 | 0.105***<br>(0.00460)   | 0.0181<br>(0.0292)    | 0.123***<br>(0.00897)      | 0.0505***<br>(0.00748)     | 0.132***<br>(0.00922)   |
| <u>Socioeconomic status</u>            |                         |                       |                            |                            |                         |
| Lower class (base)                     |                         |                       |                            |                            |                         |
| Upper                                  | -0.0409***<br>(0.0139)  | 0.0870<br>(0.0750)    | 0.0171<br>(0.0211)         | -0.112***<br>(0.0267)      | 0.00370<br>(0.0272)     |
| Upper middle                           | -0.00224<br>(0.00678)   | 0.0283<br>(0.0400)    | 0.0416***<br>(0.0125)      | -0.0532***<br>(0.0110)     | 0.0211<br>(0.0135)      |
| Lower middle                           | 0.00504<br>(0.00609)    | 0.0989***<br>(0.0360) | 0.0276**<br>(0.0112)       | -0.0251***<br>(0.00926)    | 0.0145<br>(0.0128)      |
| Working                                | 0.00995<br>(0.00632)    | 0.126***<br>(0.0400)  | 0.0444***<br>(0.0115)      | -0.0184*<br>(0.00979)      | 0.0137<br>(0.0132)      |
| Observations                           | 78,997                  | 2,129                 | 20,313                     | 29,841                     | 26,714                  |

Standard errors in parentheses, \*\*\* p<0.01, \*\* p<0.05, \* p<0.1

## CONCLUSION

This study investigates the impact of individuals' pro-environmental behaviors on their priority of either environmental protection or economic growth. The marginal effects of the Logistic regression model highlight the significant role of pro-environmental behavior and confidence in environmental movements in shaping individuals' preferences for environmental protection over economic growth. Whether active or inactive, memberships in environmental organizations positively influence the likelihood of prioritizing environmental protection by fostering awareness and alignment with sustainability values. Active members exhibit a stronger effect, reflecting the impact of deeper engagement in environmental activities. Similarly, confidence in environmental protection movements plays a crucial role in promoting pro-environmental attitudes, as individuals with greater confidence are more likely to trust and support collective efforts to address environmental challenges.

These results underscore the importance of fostering participation in environmental organizations and building trust in environmental movements to encourage sustainability-oriented decisions and attitudes at a societal level. Individuals not affiliated with such organizations or lacking confidence in environmental movements are less likely to prioritize environmental protection, highlighting the need for broader advocacy and awareness efforts. Additionally, to encourage pro-environmental behaviors and promote environmental protection over economic growth, policymakers should prioritize measures that enhance public engagement with environmental organizations and build confidence in environmental movements. This could include providing financial and institutional support to environmental organizations to expand their outreach and activities and incentivizing membership and active participation through community programs and public recognition initiatives. Awareness campaigns highlighting the effectiveness of environmental movements in addressing challenges can strengthen public confidence and trust.

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