


## Climate Protest Scarcity in East Asia: Cross-Country Analysis Using Resource Mobilization Theory

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### Abstract

Climate protests have been recognized as a catalyst for social transformation. Previous studies focused on protests in Western countries where protests were abundant. Few studies paid attention to regions where protests were scarce. As a first step towards understanding the reasons for climate protest scarcity in East Asia, we used Resource Mobilization Theory and explored factors correlated with climate protest significance among different countries. In addition to confirming factors already identified in previous studies (e.g., the density of non-governmental organizations), we uncovered two novel factors: working hours and trust in strangers. By examining these correlations, we discuss potential mechanisms underlying the protest scarcity in East Asia.

**Keywords:** *climate action, cross-country analysis, cultural psychology, Hofstede Cultural Dimensions, social movements*

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### Introduction

The impacts of climate change are becoming evident in nature and human society. To address this issue, human society has been pursuing technological innovation for sustainability (OECD, 2011; World Bank, 2012). Despite these efforts, no projected decline in global greenhouse gas emissions is expected in the coming decade. Scholars now argue that technological innovation alone is insufficient to reduce greenhouse gas emissions. Instead, they call for large-scale social transformation (Hickel & Kallis, 2020).

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Climate protests have been recognized as a catalyst for social transformation. Climate protests can shape environmental awareness and attitudes among policymakers and the ordinary public. One prominent example is Fridays For Future, an international climate protest started by Greta Thunberg in August 2018. This movement grew continuously, culminating in a worldwide gathering of 7.6 million people in September 2019 (Neuber et al., 2021). Thunberg has delivered numerous speeches before politicians and economic elites, including the European Parliament and the United Nations. The movement has thus gained support from policymakers, as well as scholars and educators (Marris, 2019).

Fridays For Future had educational outcomes in addition to political impacts—as protest participants provided “learning” opportunities. Protesters demonstrated increased environmental concern and pro-environmental behavior (Barbosa et al., 2021) and also recognized the power of collective action—an essential element of effective civic engagement (Deisenrieder et al., 2020). Protests also provided “teaching” opportunities for young participants who have been able to influence the awareness and behavior of others, including parents and teachers (Fisher, 2019). Climate protests have thus reversed the roles of adults and children, offering a pathway of rearticulating mainstream culture rather than reproducing it.

Numerous studies on climate protests are emerging, but a research gap remains. Previous studies focused on Western countries where climate protests are prevalent (Cologna et al., 2021; Haugestad et al., 2021). Few have examined regions where climate protests are scarce, such as East Asia (e.g., Japan, Singapore, South Korea, and Taiwan). It has remained unknown why East Asia has few climate protests, which is noteworthy given the relatively large per-capita environmental impacts of East Asian countries.

The scarcity of climate protests in East Asia cannot be fully explained by the economy, education, democracy, or climate policies. East Asian countries are generally as affluent as Western countries. East Asian youths have even higher environmental literacy than their Western counterparts (Komatsu et al., 2021). Japan, South Korea, and Taiwan are democratic countries. Climate policies in East Asia are lagging behind those implemented in Western countries (Climate Action Tracker, n.d.), suggesting that East Asian youths may harbor dissatisfaction with climate policies in their countries. Additionally, we cannot assume that East Asian people are simply incapable of collective action. This was evidenced by their successful efforts to reduce the impact of the COVID-19 pandemic through collective actions, such as wearing masks, following mobility restrictions, and maintaining social distancing (Sachs, 2021).

This study is the first step in investigating the reasons for the scarcity of climate protests in East Asia. We take a comparative approach and attempt to identify factors correlated with the significance of climate protests. Although correlation does not prove causation, identifying such factors can shed light on potential reasons for the protest scarcity and help determine whether climate protests are effective for social transformation in East Asia. Notably, effective social movements can vary across different regions (Jobin et al., 2021).

The existing comparative studies have identified factors correlated with protest significance (Laux, 2021; Prendergast et al., 2021). However, none of these studies focused on the contrast between East Asia and the West. Laux (2021) analyzed data from Japan and South Korea, but his findings were heavily influenced by data from African countries. This is because the most significant contrast in protest significance was observed between African countries (Ghana and Tunisia) and Western countries. Prendergast et al. (2021) focused on the contrast between cities in the Global North and those in the Global South. The contrast between East Asia and the West was beyond their scope. Moreover, their comparative analysis often lacked important data from the sole East Asian city included (Yokohama, Japan). To our knowledge, no studies have attempted to identify factors that explain protest scarcity in East Asia.

Finally, the existing comparative studies emphasize personal factors that prevent protest participation, while socio-political factors are not fully considered. Our study was no exception. The existing comparative studies

and our study thus aim to identify personal factors and provide hypotheses for the scarcity of climate protests in East Asia. These hypotheses should be further examined by future socio-political studies.

## Materials and Methods

### Theory

The theoretical framework of this study is based on Resource Mobilization Theory (RMT). Since the 1970s, RMT has been a major theory for examining reasons behind social movement success (Jenkins, 1983; Klandermans, 1984).

RMT posits that social movements develop when individuals have sufficient resources to take action. Klandermans (1984) succinctly conceptualizes the key points of RMT. One participates in a social movement if one (1) knows of the opportunities to participate; (2) is capable of using these opportunities; and (3) is willing to do so. In light of this conceptualization, we review previous studies on climate actions to list potential factors for the success of climate protests (see the next subsection).

### Knowledge About Opportunities

Table 1 presents the potential factors we chose. We recognized that other factors could play a role, and our choice was partly determined by data availability.

For one to know about climate protest opportunities, information about the opportunities must be disseminated in society and made accessible to the public. Grassroots environmental organizations and non-governmental organizations often play an important role in disseminating this information (Gorman, 2021). We thus used data for the ratio of active members of environmental organizations in society (Table 1) and the density of NGOs per 1 million people. This approach was consistent with previous studies. Haugestad et al. (2021) and Laux (2021) identified membership in environmental organizations and the density of NGOs as important factors for predicting climate protest participation.

**Table 1.** *Factors Considered and Data Used in This Study*

Factors	Description	Data Source
Knowledge about the opportunity		
Membership in environmental organizations	The percentage of (both active and inactive) members of environmental organizations to the total population	World Value Survey Wave 7 (Haerpfer et al., 2022)
Density of NGOs (number of NGOs admitted by UNFCCC per 1 million people)	The number of NGOs listed on the UNFCCC website	UNFCCC (n.d.)
Capability of using the opportunity		
Working hours	Annual working hours in 2017	Our World in Data (Giattino et al., 2020)
Subjective health condition	The percentage of those who chose “very good” and “good” among the response options.	World Value Survey Wave 7 (Haerpfer et al., 2022)
Trust in strangers	The percentage of people who trust in those whom one first meets	World Value Survey Wave 7 (Haerpfer et al., 2022)
Willingness to use the opportunity		
Threat	Percentage of those who see climate change as a very serious threat	Institute of Economics and Peace (2021)
Priority of the environment over the economy	Percentage of people who want to prioritize environmental protection over economic growth	World Value Survey Wave 7 (Haerpfer et al., 2022)
Tertiary education attainment	Percentage of 25- to 64-year-olds who received tertiary education	OECD.Stat (n.d.); Hsueh (2018); Department of Statistics, Singapore (n.d.)
Confidence in environmental movements	Percentage of people who are confident in environmental protection movements	World Value Survey Wave 7 (Haerpfer et al., 2022)

### Capability of Using the Opportunities

To use protest opportunities, one requires personal resources, such as time and energy. RMT traditionally recognizes time and energy as important factors for the success of social movements. To represent the levels of these personal resources, we used data for annual working hours and subjective health conditions.

Besides personal resources, sufficient interpersonal resources are crucial for protest participation. People often participate in social movements because they are asked to do so. To represent the level of interpersonal resources, we used data for trust, that is, the ratio of people who trusted strangers.

## **Willingness to Use the Opportunities**

To be willing to use protest opportunities, one needs to first understand the potential outcome and value of their actions. Previous studies on climate protest participants have emphasized the importance of feeling the threat of climate change and the priority of the environment over economic issues (Brügger et al., 2020; Deisenrieder et al., 2020).

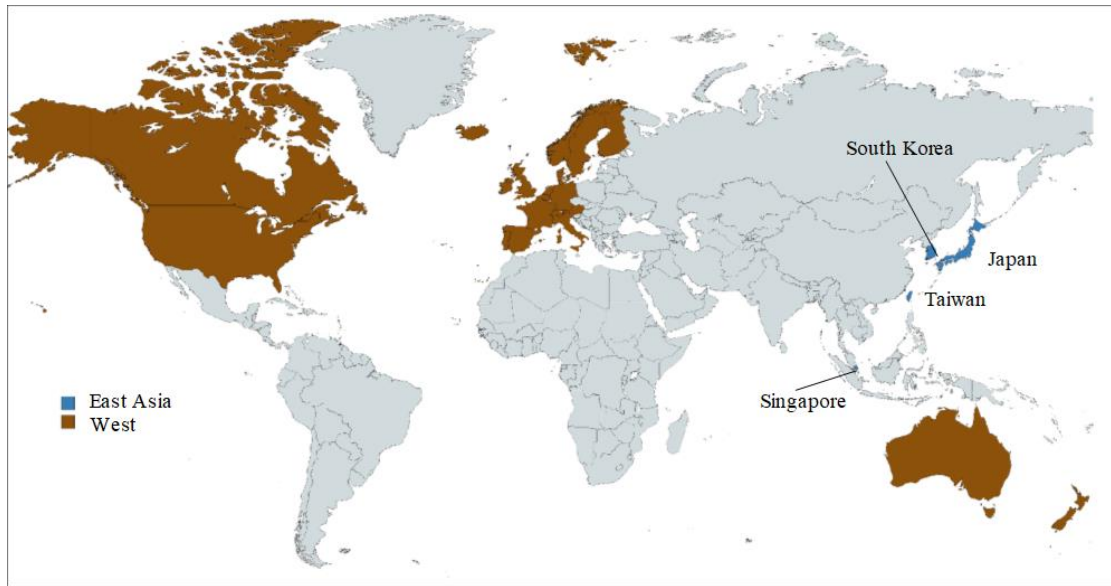
To evaluate the threat of climate change, we used data from the Institute of Economics and Peace (2021) among others (Stokes et al., 2015; UNDP, 2021). This dataset included recent data and covered all the East Asian countries examined in this study. We also confirmed that using an alternative dataset did not change our conclusions.

To be willing to use the opportunities of climate protests, one must believe that their action can lead to an expected outcome (the instrumentality of their actions, Brügger et al., 2020). The assessment of instrumentality requires two factors: (1) the capacity to form an opinion about climate protests and (2) belief in the effectiveness of environmental movements. To evaluate the former factor, we used data for the ratio of people who received tertiary education (OECD.Stat, n.d.). Due to the limitations of the original dataset, data for some countries were supplemented by domestic data (Hsueh, 2018; Department of Statistics, Singapore, n.d.). To evaluate the latter factor, we used data for the ratio of people who were confident in environmental movements.

## **Methods of Analysis**

We chose Japan, Singapore, South Korea, and Taiwan as our East Asian samples. The 2019 Democracy Index (Economist Intelligence Unit, 2020) classified countries into four categories: full democracy, flawed democracy, hybrid regimes, and authoritarian regimes. Japan, South Korea, and Taiwan were classified as full democracies. Singapore was classified as a flawed democracy. We excluded China, Hong Kong, and North Korea that were classified as hybrid regimes.

Our comparison group consisted of 24 Western countries, including Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, New Zealand, Norway, Portugal, Spain, Sweden, Switzerland, the United Kingdom, and the United States (Figure 1). These countries joined the Organisation for Economic Co-Operation and Development (OECD) by the 1970s and were classified as either “full democracy” or “flawed democracy.” These selection criteria allowed us to focus on countries with similar political and economic institutions while excluding Latin American countries and former socialist countries.

**Figure 1.** Map of East Asian Countries and Western Countries

This study first confirmed that East Asian countries had fewer climate protests than Western countries. We used the total number of climate protests from 2018 to 2019, as reported on the Fridays For Future (n.d.) website. Data from 2020 and onwards were excluded. Climate protests in this period were impacted by the COVID-19 pandemic.

This study then identified factors that exhibited systematic differences between East Asian and Western countries. The magnitude of the difference was measured using Glass's delta ( $\delta$ ), an effect-size parameter defined as the difference in means between the two groups divided by the standard deviation of the control group (Ellis, 2010).

This study further examined the strength of relationships between the identified factors and the number of protests per 1 million people. We used a common logarithm to account for the large variations in the number of protests among countries. Pooling all samples, including East Asian and Western countries, we calculated the Pearson correlation coefficient ( $r$ ) between each factor and the number of protests per 1 million people. Because  $r$  is strongly affected by outliers, we calculated upper and lower 95% confidence intervals (CIs) of  $r$  values to assess the stability of the correlation. We used a bootstrapping method with replacement for the calculations (Fox, 2008).

Throughout our analysis, we did not perform hypothesis testing. Statistical significance is not always relevant in a practical context. An extremely weak relationship or an extremely small difference can be statistically significant if the sample size is large enough. Instead of reporting significance, it is recommended to report effect sizes such as  $r$  and  $\delta$  (Thompson, 2002), which we have done in this study.

### **Comparison With the Laux and Prendergast et al. Studies**

Previous comparative studies did not focus specifically on the difference between East Asia and the West (Laux, 2021; Prendergast et al., 2021), but these studies provided useful insights for our study. We included factors from these studies identified as important. Laux (2021) identified the density of NGOs and the priority of the environment over the economy as important factors. Prendergast et al. (2021) identified civic skills and organizational membership as important factors. We considered all of these factors except civic skills, as international data for civic skills were unavailable.

One unique contribution of our study was the inclusion of trust in strangers as a factor. This cultural dimension has been largely overlooked in previous studies but may be critical in comparing East Asia and the West (see Chang, 2022). People in East Asia tend to have a weaker sense of individualism and a greater distinction between those who are familiar and those who are not (Markus & Kitayama, 2010). This is different from people in the West, who have a stronger sense of individualism. This issue is revisited in the discussion section.

## Results

The number of climate protests per 1 million people in East Asian countries ranged between 0.32 (Japan) and 1.26 (Taiwan, Table 2). The number for Western countries ranged between 4.9 (Greece) and 80.4 (Sweden). This means that even Greece had four to 15 times more protests than any East Asian country. The mean common logarithm of the number of climate protests was -0.15 for East Asia and 1.17 for the West. Glass's delta ( $\delta$ ) for this difference was 3.95. Climate protests were thus fewer in East Asia than in the West.

**Table 2.** Factor Comparisons Among Countries

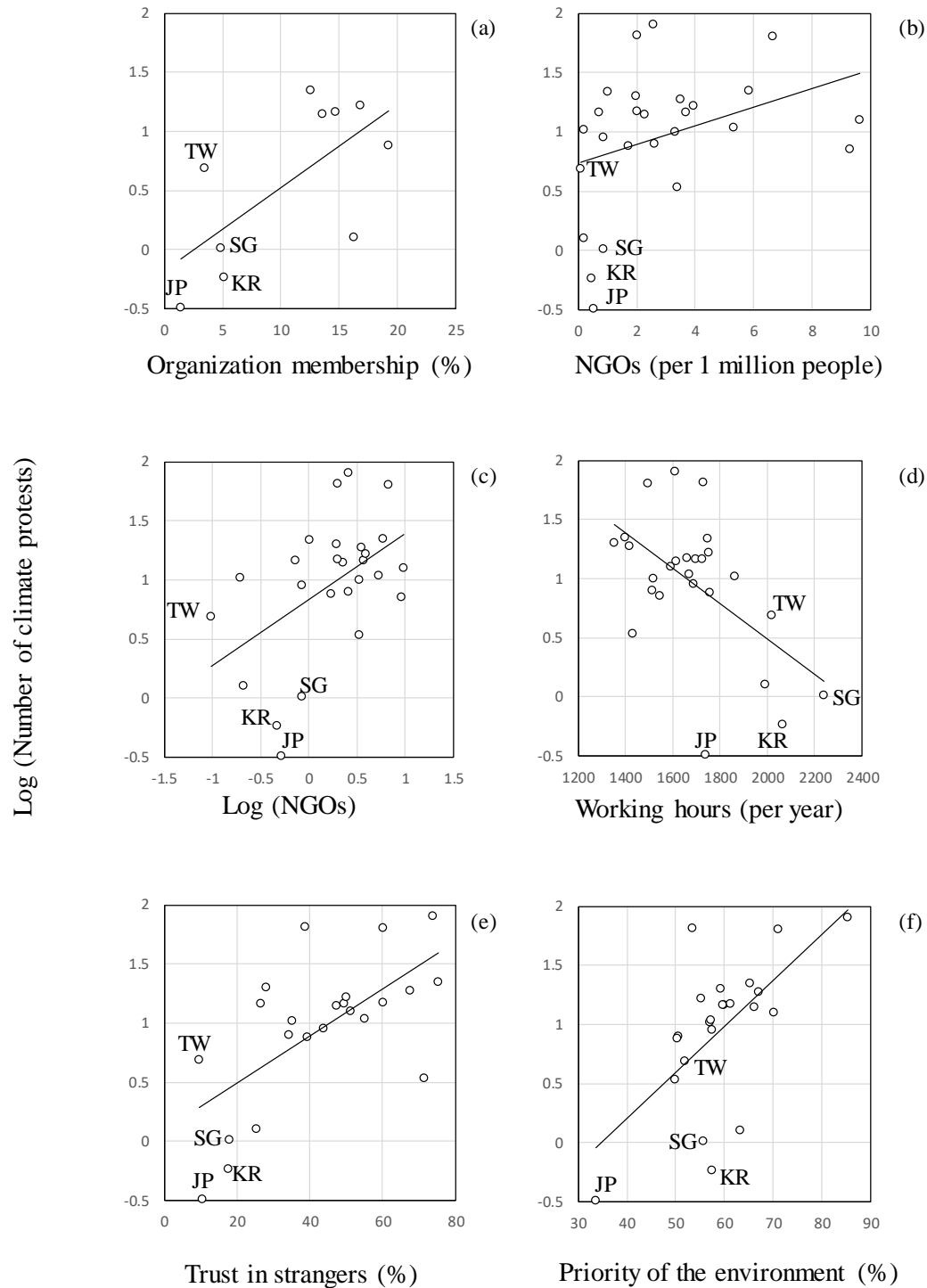
Factors	Japan	Singapore	South Korea	Taiwan	Mean (East)	Mean (West)	SD (West)	Glass's delta ( $\delta$ )
<b>Significance of protests</b>								
Number of climate protests per 1 million people	0.32	1.02	0.59	1.26	0.79	20.50		
Log of the number of climate protests	-0.49	0.01	-0.23	0.10	-0.15	1.17	0.33	3.95
<b>Knowledge about the opportunity</b>								
Membership in environmental organizations (%)	1.4	4.9	5.1	16.3	6.9	13.4	5.0	1.31
Density of NGOs (per 1 million people)	0.52	0.85	0.47	0.21	0.51	3.31	2.58	1.08
<b>Capability of using the opportunity</b>								
Working hours (per year)	1738	2238	2063	1990	2007	1627	158	-2.42
Subjective health condition (%)	51.2	72.0	90.4	64.5	69.5	71.0	5.7	0.26
Trust in strangers (%)	10.4	18.0	17.5	25.3	17.8	48.3	17.1	1.78
<b>Willingness to use the opportunity</b>								
Threat (%)	57.7	72.9	53.6	59.8	61.0	56.1	15.0	-0.33
Priority of the environment over the economy (%)	33.6	55.8	57.4	63.2	52.5	60.5	8.7	0.92

Factors	Japan	Singapore	South Korea	Taiwan	Mean (East)	Mean (West)	SD (West)	Glass's delta ( $\delta$ )
Tertiary education attainment (%)	48	63	45	45	50	37	8	-1.70
Confidence in environmental movements (%)	44.1	62.6	64.8	71.9	60.9	58.4	5.6	-0.44

We observed systematic differences between East Asia and the West in membership of environmental organizations ( $\delta = 1.31$ , Table 2), the density of NGOs ( $\delta = 1.08$ ), working hours ( $\delta = -2.42$ ), trust in strangers ( $\delta = 1.78$ ), and the priority of the environment over the economy ( $\delta = 0.92$ ). The state of health was lower for East Asian countries, but the difference was small ( $\delta = 0.26$ ). Other factors differed, but East Asian countries had more favorable numbers than Western countries.

We observed moderate to strong correlations between the identified factors and climate protest significance. The correlation between membership in environmental organizations and climate protest significance was strong ( $r = 0.669$  with a CI of [0.047, 0.966], Figure 2a). The relatively large CI was primarily due to a small sample size (10), leading to the exclusion of this factor from subsequent analyses. Although the correlation between the density of NGOs and protest significance was weak ( $r = 0.355$  with a CI of [0.062, 0.620]), the relationship became stronger when we used the common logarithm of the NGO density ( $r = 0.498$  with a CI of [0.270, 0.705], Figures 2b and 2c). Strong correlations were observed for the relationships of protest significance with working hours ( $r = -0.558$  with a CI of [-0.787, -0.223], Figure 2d), with trust in strangers ( $r = 0.648$  with a CI of [0.307, 0.862], Figure 2e), and with the priority of the environment over the economy ( $r = 0.621$  with a CI of [0.153, 0.848], Figure 2f).



**Figures 2a–2f.** Correlations Between Identified Factors and Climate Protest Significance

*Note.* Figures 2a–2f show correlations between identified factors and climate protest significance, including (a) organization membership; (b) the number of NGOs per 1 million people (normal scale); (c) the number of NGOs per 1 million people (log scale); (d) working hours; (e) trust in strangers; and (f) priority of the environment over the economy. Data for Japan (JP), Singapore (SG), South Korea (KR), and Taiwan (TW) are indicated.

Among the factors identified, we found relatively strong correlations between the density of NGOs, working hours, and trust in strangers (Table 3). The correlations of these factors with the priority of the environment were weaker. That is, the density of NGOs, working hours, and trust in strangers were closely associated, whereas the priority of the environment was not closely associated with these factors.

**Table 3.** Correlation Coefficients [Confidence Intervals (CIs)] Between Factors Identified.

	Log [NGOs] (per 1 million people)	Working hours (per year)	Trust in strangers (%)	Priority of the environment (%)
Log [NGOs] (per 1 million people)	1.00			
Working hours (per year)	-0.708 [-0.857, -0.554]	1.00		
Trust in strangers (%)	0.755 [0.611, 0.864]	-0.685 [-0.909, -0.380]	1.00	
Priority of the environment (%)	0.374 [0.094, 0.624]	-0.256 [-0.533, -0.007]	0.584 [0.193, 0.805]	1.00

## Discussion and Conclusions

### Comparison With Previous Studies

Previous comparative studies have mainly focused on factors related to knowledge about protest opportunities (the density of NGOs) and willingness to use the opportunities (the priority of the environment over the economy) to explain variations in protest significance among countries (Laux, 2021; Prendergast et al., 2021). This study identified additional factors related to the capability of using the opportunities (working hours, trust in strangers, and others, Table 2). This is a valuable contribution to the existing literature.

Our findings are supported by our unpublished survey data. We surveyed 130 Taiwanese on factors helping them participate in climate protests. Among the six options presented, the highest percentage of respondents (34%) chose the option related to interpersonal relationships (“if a friend attends with me”). The second-highest percentage (33%) chose the option related to working hours (“if I do not need to work/study so much”).

Our findings are also partially supported by an ethnographic study conducted in Taiwan (Chang, 2022). Chang (2022) interviewed Taiwanese youths to identify factors that prevented them from participating in climate protests. Interviewees mentioned limited time due to long learning hours as the biggest obstacle. Chang (2022) also noted that young activists in Taiwan had to make compromises because their teachers and parents feared potential conflicts with other individuals. This fear may be related to relatively low levels of trust in strangers.

The factors mentioned above can also help explain the successful management of the COVID-19 pandemic in East Asian countries (Sachs, 2021). Measures to combat the pandemic (wearing masks, following mobility restrictions, and maintaining social distancing) require little time or collaboration with strangers.

### Underlying Processes

We observed correlations among the density of NGOs, working hours, and trust in strangers (Table 3). All these three factors are interrelated and linked to the level of individualism. Our supplementary analysis revealed strong correlations between these three factors and individualism scores based on Hofstede’s Cultural Dimensions (Hofstede Insights, n.d.). The correlation coefficients were, respectively, 0.720 (with a CI

of [0.506, 0.852]), -0.699 (with a CI of [-0.850, -0.350]), and 0.612 (with a CI of [0.320, 0.786]) for the density of NGOs, working hours, and trust in strangers. These correlations and existing literature allow us to contemplate the underlying processes for protest scarcity in East Asia.

Cultural psychology has demonstrated that the dominant self-construal (how individuals define themselves) differs among societies with different levels of individualism, acknowledging the presence of considerable variations within societies (Markus & Kitayama, 2010). Independent self-construal is dominant in a society with strong individualism, whereas interdependent self-construal is dominant in a society with weak individualism. Individuals raised in such cultural contexts develop independent or interdependent selves through interactions with others and social institutions (Rappleye & Komatsu, 2017).

For an independent self, the basic unit of society is often assumed to be an individual. Consequently, an independent self assumes that one exists independently from others and that the self creates relationships with others according to one's necessity.

For an interdependent self, relationships rather than individuals are the constituent elements. Consequently, in regions with weak individualism, such as East Asia, a clear distinction between in-groups and out-groups tends to prevail, with individuals fostering strong relationships within their in-groups but showing less trust in strangers (Yamagishi & Yamagishi, 1994; Markus & Kitayama, 2010). The same cultural perspective sheds light on the reasons behind long working hours in regions with weak individualism, including East Asia. In such regions, individuals often form strong emotional bonds with their colleagues and are expected to prioritize achieving collective goals over private goals. This may result in long working hours (Yang et al., 2012).

Low trust in strangers may also be related to a lower density of NGOs in East Asia. Those in East Asia tend to hesitate to support NGOs with which they do not have close relationships. This argument aligns with the findings of Waniak-Michalak and Perica (2021), who established a connection between social trust and the donations received by NGOs.

This study emphasizes the importance of considering cultural dimensions in understanding protest scarcity in East Asia. Cultural dimensions have been underexplored in previous comparative studies (Laux, 2021; Prendergast et al., 2021). Future studies should explore how these cultural dimensions interact with political and social dimensions in East Asia to provide a more comprehensive understanding of this complex phenomenon.

## **Practical Implications**

If weak individualism is indeed one major cause of protest scarcity in East Asia, it is unlikely that East Asia will experience a surge in climate protests. Cultural change typically takes a considerable amount of time, which may discourage those who seek more climate protests in East Asia for social transformation.

Notably, effective climate actions can vary among regions. Climate protests are merely one of many forms of climate action. Some climate actions require less interaction with strangers than climate protests. A recent survey conducted in Japan revealed that although only 2.9% of respondents had participated in protests and demonstrations; 13.9% had engaged in petitions; and 14.1% had donated (Japanese Trade Union Confederation, 2021). Cross-country analyses also reported that Japanese and South Koreans tended to be more willing to donate for reforestation and petition to support climate action than their Western counterparts (Dechezleprêtre et al., 2023). This suggests that petitions and donations may be more effective than protests for social transformation in East Asia. Similarly, shareholder activism may be a potent tool for steering the private sector towards environmentally responsible practices in East Asia. Shareholder activism requires little interaction with unfamiliar parties and has started to gain traction in East Asia (Griffin & Jaffe, 2022). These arguments align with the perspectives put forth by Chang (2022) and Jobin et al. (2021), who propose that different societies may use different methods to achieve high environmental performance.

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