Research Article

Exploring factors explaining the scarcity of climate protests in East Asia

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Climate protests have been recognized as a catalyst for large-scale social transformation. Previous studies focused on protests in Western countries where protests were abundant. Few studies paid attention to regions where protests were scarce. It has thus remained unknown why East Asia has few climate protests. To explore potential reasons, we conducted a comparative study. We examined factors correlated with climate protest significance in different countries. Protest significance was correlated with the following four factors: (1) the density of non-governmental organizations (r = 0.498), (2) working hours (r = -0.558), (3) trust in strangers (r = 0.648), and (4) the priority of the environment over the economy (r = 0.621). The former three factors were, in turn, associated with weak individualism in East Asia. Our study thus illustrates cultural dimensions to understand protest scarcity in East Asia. This study also highlights climate actions that are effective in East Asian cultural contexts.

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Introduction

The impacts of climate change are becoming evident in nature and human society (Benevolenza & DeRigne, 2019; Román-Palacios & Wiens, 2020). To address this issue, human society has been pushing technological innovation for sustainability. Major international organizations support Green Growth that seeks technological innovation for sustainability while sustaining economic growth (OECD, 2011; UNEP, 2011; World Bank, 2012). Despite these efforts, global greenhouse gas emissions have been rising (Glavovic, Smith, & White, 2022; Liu et al., 2022). Both scholars and international organizations predict no

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decline in global greenhouse gas emissions in the coming decade (Nieto et al., 2018; United Nations Framework Convention on Climate Change, 2021).

Scholars now argue that technological innovation alone is insufficient for achieving the necessary reductions in greenhouse gas emissions (Hickel & Kallis, 2020; Isik et al., 2021, 2022; Keyßer & Lenzen, 2021). Instead, scholars call for large-scale social transformation (Kallis et al., 2018; Komatsu et al., 2022c, 2023). The latest International Panel on Climate Change (IPCC) reports discussed social transformation extensively (IPCC, 2022; see also Parrique, 2022). This contrasts with past IPCC reports that paid limited attention to social transformation.

Climate protests have been recognized as a catalyst for large-scale social transformation (Marris, 2019; Schlosser et al., 2020). Climate protests can shape environmental awareness and attitudes among policymakers and the ordinary public (Neves, 2020; Taylor et al., 2019). One prominent example is Fridays For Future, an international climate protest started by Greta Thunberg in August 2018 (Marquardt, 2020; Neuber et al., 2021). This movement grew continuously, culminating in a worldwide gathering of 7.6 million people in September 2019 (Connell et al., 2019; de Moor et al., 2020; 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; Schiermeier et al., 2019).

Fridays For Future has had educational outcomes, in addition to political impacts. Participating in protests has provided opportunities for 'learning'. Protesters have demonstrated increased environmental concern and pro-environmental behavior (Barbosa et al., 2021; Neuber et al., 2021; Xie et al., 2019). Protesters have also recognized the power of collective action, an essential element of effective civic engagement (Deisenrieder et al. 2020; McCloskey, 2019). Protests have provided 'teaching' opportunities for young participants. Young participants have been able to influence the awareness and behavior of others, including parents and teachers (Biswas & Mattheis, 2022; Deisenrieder et al. 2020; Sisco et al., 2021). Climate protests have thus reversed the roles of adults and children (Barraclough et al., 2021; Fisher, 2019; Marris, 2019). This reversal offers a pathway of rearticulating mainstream culture rather than reproducing it (Komatsu et al., 2020, 2021; Silova et al., 2019). Critical scholars have long recognized the necessity of shifting the mainstream culture for sustainability (Bowers, 1995; Komatsu et al., 2019; Plumwood, 1993; Rappleye & Komatsu, 2020a; Schumacher, 1973).

Numerous studies on climate protests are emerging, but there still exists a research gap. Many previous studies focused on Western countries where climate protests are prevalent (Cologna et al., 2021; Emilsson

et al., 2020; Haugestad et al., 2021; Martiskainen et al., 2020; Neuber et al., 2021). Few have examined regions where climate protests are scarce, such as East Asia (Mesimäki, 2019; Chang, 2022). It has thus remained unknown why East Asia has few climate protests. This is noteworthy given the relatively large per-capita environmental impacts of East Asian countries (Hickel, 2020; O'Neil et al., 2018).

The scarcity of climate protests in East Asia cannot be fully explained by the economy, education, or democracy. 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; OECD, 2009). Japan, Korea, and Taiwan are democratic countries. Additionally, we cannot also assume that East Asian people are simply incapable of collective action. This was evident during the Covid-19 pandemic. East Asian people successfully reduced the pandemic impact through collective actions, such as wearing masks, following mobility restrictions, and maintaining social distancing (Rappleye et al., 2021; Sachs, 2021; Silova et al., 2021).

This study is the first step in investigating reasons for protest scarcity in East Asia. This study takes a comparative approach and attempts to identify factors correlated with protest significance. Although correlation does not prove causation, identifying such factors sheds light on potential reasons for the protest scarcity. This also helps 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: Chang, 2022).

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 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 (Australia, New Zealand, Spain, and the United States). Prendergast et al. (2021) focused on the contrast between cities in Global North and those in Global South. The contrast between East Asia and the West was beyond their scope. Moreover, their comparative analysis often lacked important data from the only city in East Asia (Yokohama, Japan). To our best knowledge, no studies have attempted to identify factors that explain protest scarcity in East Asia.

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 (Edwards & Gillham, 2013; Jenkins, 1983; Klandermans, 1984). Several recent studies on climate protests also used this theory (Chia, 2021; Rainsford & Saunders, 2021).

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 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

We chose the factors presented in **Table 1** as potential factors. We recognized that other factors could play a role. Our choice was partly determined by data availability.

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., 2020)
Density of NGOs (number of NGOs admitted by UNFCCC per 1 million people)	The number of NGOs listed on the UNFCCC website.	UNFCCC (2022)
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., 2020)
Trust in strangers	The percentage of people who trust in those whom one first meets	World Value Survey Wave 7 (Haerpfer et al., 2020)
Willingness to use the opportunity		
Threat (1)	Percentage of those who believe that climate change is a serious personal threat	Gallup Poll (Pelham, 2009; Pugliese & Ray, 2009)
Threat (2)	Percentage of those who believe that climate change is harming or will harm people	Pew Research Center (2015)
Threat (3)	Percentage of those who concern if climate change will harm you personally at some point in your lifetime	Pew Research Center (2015)

Factors	Description	Data source
Threat (4)	Percentage of those who believe in a climate emergency	UNDP (2021)
Priority of the environment over economy	Percentage of people who want to prioritize environmental protection over economic growth	World Value Survey Wave 7 (Haerpfer et al., 2020)
Tertiary education attainment	Percentage of 25–64 year-olds who received tertiary education	OECD Stats (2022); Hsueh (2018)
Confidence in environmental movements	Percentage of people who are confident in environmental protection movements	World Value Survey Wave 7 (Haerpfer et al., 2020)

Table 1. Factors considered and data used in this study.

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 play an important role in disseminating this information in several countries (Gorman, 2021). Non-governmental organizations (NGOs) support for the protests and also disseminate information (Taylor & Syal, 2019). We thus used data for the ratio of active members of environmental organizations in society (World Value Survey Wave 7, Haerpfer et al., 2020) and the density of NGOs admitted by United Nations Framework Convention on Climate Change (UNFCCC, 2022) 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.

Laux (2021) identified internet accessibility as one important factor. We did not consider this factor due to the relatively high levels of internet accessibility across our target countries.

Capability for 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 (Jenkins, 1983;

Klandermans, 1984). To represent the levels of these personal resources, we used data for annual working hours (Our World in Data, Giattino et al., 2020) and subjective health conditions (World Value Survey Wave 7, Haerpfer et al., 2020).

Besides personal resources, sufficient interpersonal resources are crucial for protest participation. People often participate in social movements because they are asked to do so (Schussman & Soule, 2005). This is seemingly the case for recent climate protests (Moor et al., 2020). To represent the level of interpersonal resources, we used data for trust, that is, the ratio of people who trusted strangers (World Value Survey Wave 7, Haerpfer et al., 2020).

Willingness to use the opportunities

To be willing to use protest opportunities, one needs to first understand 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 priority of the environment over economic issues (Boyes & Stanisstreet, 2012; Brügger et al., 2020; Deisenrieder et al., 2020; Metag et al., 2017).

To evaluate the threat of climate change, we used data from three different surveys. Each has its advantages and disadvantages. Gallup Poll (Pelham, 2009; Pugliese & Ray, 2009) provided data for all four East Asian countries (Japan, Korea, Singapore, and Taiwan), but it was dated. Pew Research Center (2015) asked two different questions about the threat of climate change, providing a nuanced understanding of the issue. However, Pew Research Center (2015) lacked data for Singapore and Taiwan. UNDP (2021) collected more recent data, but only covered Japan in East Asia. To evaluate the priority of the environment over other issues, we used the ratio of people prioritizing environmental protection over economic issues (World Value Survey Wave 7, Haerpfer et al., 2020).

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, Bamberg et al., 2015, 2018). Climate protest participants in Western countries often believe in the instrumentality of their actions (Brügger et al., 2020; Haugestad et al., 2021). 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 Stats, 2022). Data for Taiwan was unavailable in OECD Stats (2022). Equivalent domestic data was used instead (Hsueh, 2018). To evaluate the latter factor, we used data for the ratio of people who were confident in environmental movements (World Value Survey Wave 7, Haerpfer et al., 2020).

Methods of analysis

We chose Japan, Korea, Singapore, 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. This classification was based on factors including electoral process and pluralism, civil liberties, functioning of government, political participation, and political culture. Japan, Korea, and Taiwan were classified as full democracies. Singapore was classified as a flawed democracy. We excluded China, Hong Kong, and North Korea. These countries 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. These countries joined the Organisation for European Economic Co-operation (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. Although we used the Democracy index to choose countries, our conclusions remained the same when using other datasets (V-Dem Institute, 2019; Freedom House, 2022).

This study first confirmed that East Asian countries had fewer climate protests than Western countries. We used the total number of climate protests during 2018–2019 reported on the Fridays For Future (2022) website. Data from 2020 and onwards was excluded. Climate protests in this period were impacted by the Covid-19 pandemic (Buettner, 2020; Fisher & Nasrin, 2020; Neuber et al., 2021).

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, 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; Glass et al., 1981).

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 take into account the large variations in the number of protests among countries. Pooling all samples including East Asian countries and Western countries, we calculated the Pearson correlation coefficient (r) between each factor and the number of protests per 1 million people. We also calculated upper and lower 95% confidence intervals (CIs) of r values using a bootstrapping method with replacement (Diaconis & Efron, 1983; Fox, 2008). This

calculation was conducted using open-source statistical software supported by the University of Amsterdam (https://jasp-stats.org/getting-started/). Notably, the calculation of a bootstrapping CI does not require assumptions about the underlying statistical distribution.

Throughout our analysis, we did not perform hypothesis testing. Statistical significance is not always relevant in a practical context. A very weak relationship or a very small difference can be found to be statistically significant if the sample size is large enough. This problem was once acknowledged by renowned statisticians (Berkson, 1938) and has resurfaced as a concern recently (Komatsu & Rappleye, 2017a, b; Thompson, 2002). Instead of reporting significance, it is recommended to report effect sizes such as *r* and Glass' delta, which we have done in this study.

Comparison with Laux's and Prendergast et al.'s studies

As noted in the introduction, previous comparative studies did not focus specifically on the difference between East Asia and the West (Laux, 2021; Prendergast et al., 2021). However, these studies provided useful insights for our study. We included almost all factors they 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. An 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, 1991, 2010; Triandis et al., 1988; Yamagishi et al., 1998). 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). 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 for this difference was 3.95. Climate protests were thus fewer in East Asia than in the West.

Factors	Japan	Korea	Singapore	Taiwan	Mean (East)	Mean (West)	SD (West)	Glass's delta
Significance of protests								
Number of climate protests per 1 million people	0.32	0.59	1.02	1.26	0.79	20.50		
Log of the number of climate protests	-0.49	-0.23	0.01	0.10	-0.15	1.17	0.33	3.95
Knowledge about the opportunity								
Membership in environmental organizations (%)	1.4	5.1	4.9	16.3	6.9	13.4	5.0	1.31
Density of NGOs (per 1 million people)	0.52	0.47	0.85	0.21	0.51	3.31	2.58	1.08
Capability of using the opportunity								
Working hours (per year)	1738	2063	2238	1990	2007	1627	158	-2.42
Subjective health condition (%)	51.2	90.4	72.0	64.5	69.5	71.0	5.7	0.26
Trust in strangers (%)	10.4	17.5	18.0	25.3	17.8	48.3	17.1	1.78
Willingness to use the opportunity								
Threat (1) (%)	80		59	70	70	63	15	-0.48
Threat (2) (%)	86	93			90	80	8	-1.16
Threat (3) (%)	82	89			86	64	11	-1.87
Threat (4) (%)	79				79	74	6	-0.92
Priority of the environment over the economy (%)	33.6	57.4	55.8	63.2	52.5	60.5	8.7	0.92

Factors	Japan	Korea	Singapore	Taiwan	Mean (East)	Mean (West)	SD (West)	Glass's delta
Tertiary education attainment (%)	48	45		45	46	37	8	-1.18
Confidence in environmental movements (%)	44.1	64.8	62.6	71.9	60.9	58.4	5.6	-0.44

Table 2. Comparison of the factors among countries

We observed systematic differences between East Asia and the West in membership of environmental organizations (delta = 1.31, **Figure 1**), 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 (a higher threat perception for East Asian countries than for Western countries).

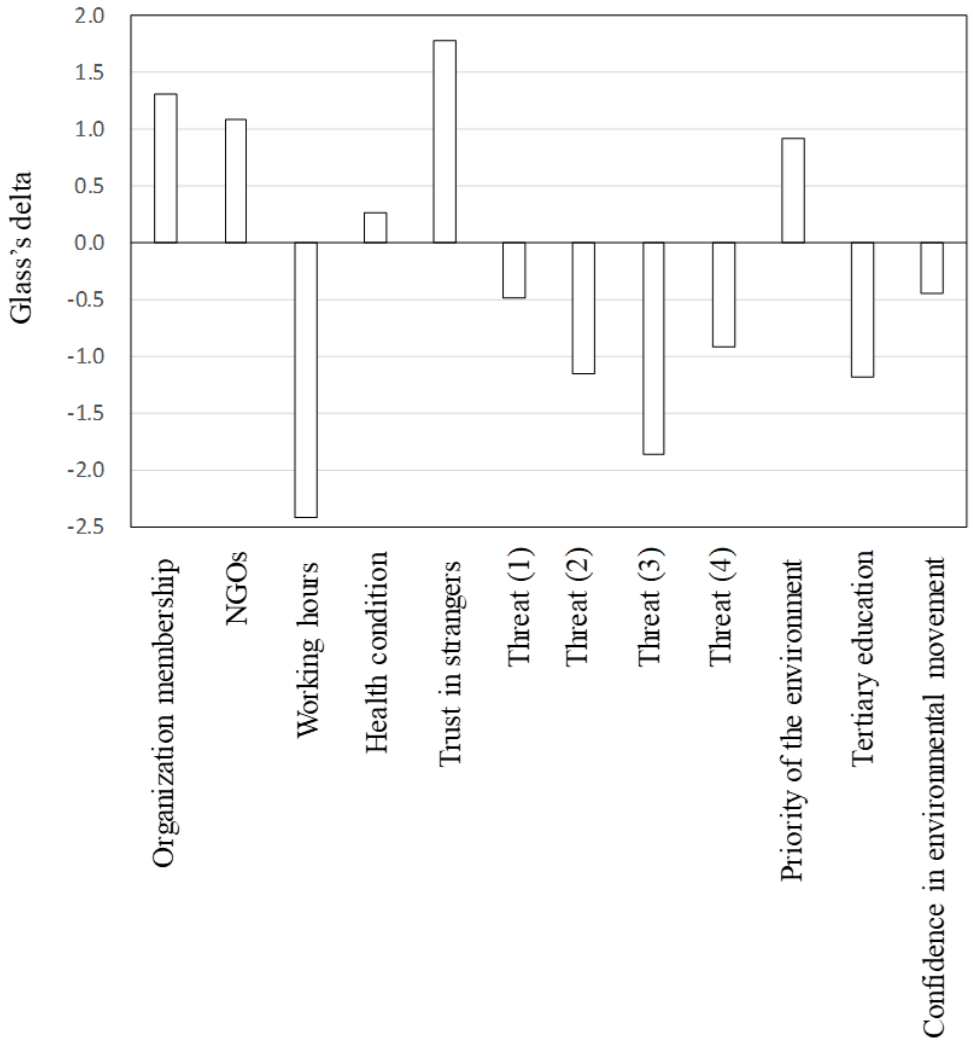

Figure 1. Differences in various factors between East Asia and the West (the West minus East Asia)

We observed moderate to strong correlations between the identified factors and climate protest significance (the number of climate protests per 1 million people). 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

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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**).

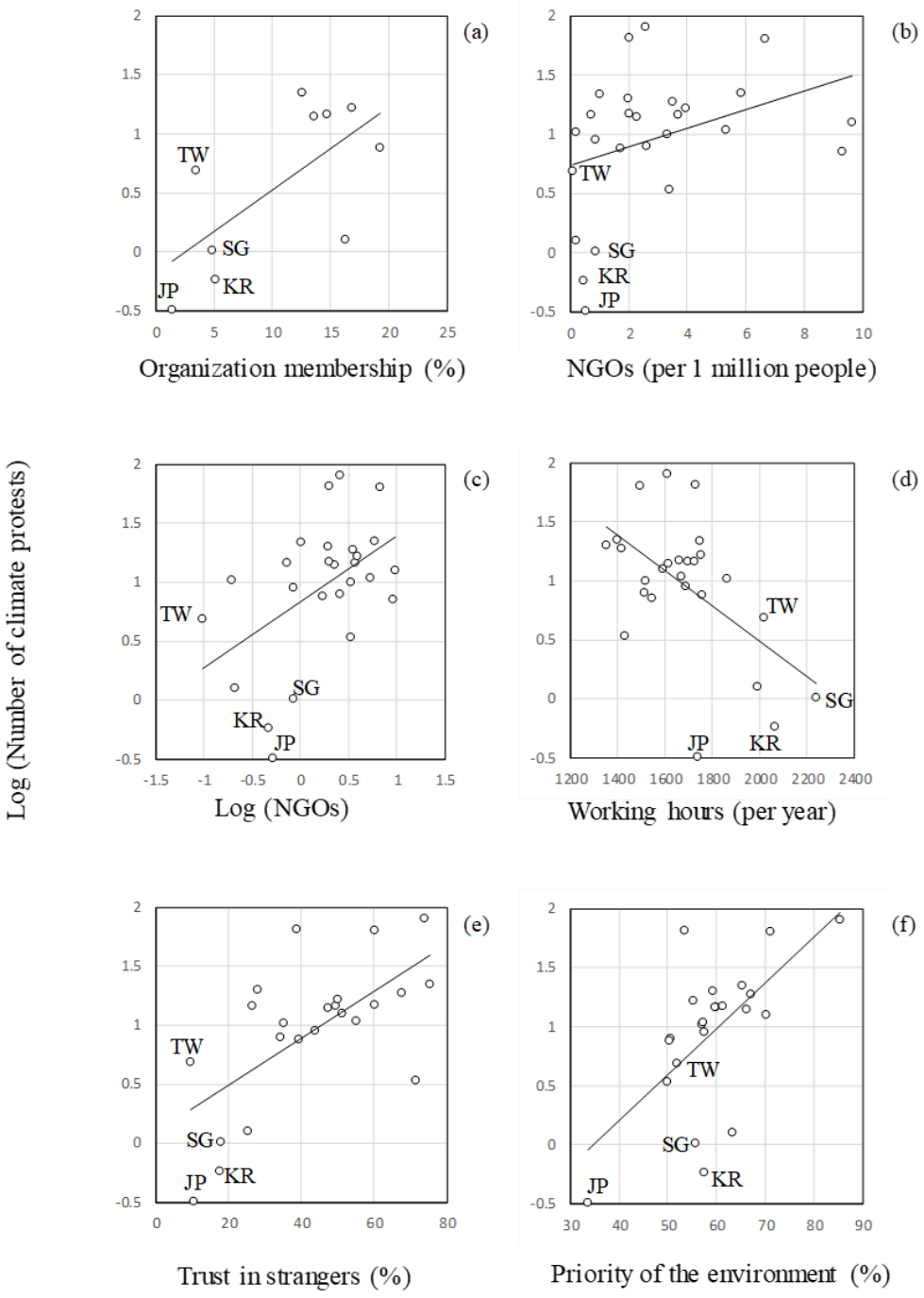

Figure 2. Relationships of the number of climate protesters (per 1 million, log scale) with (a) organization membership, (b) the number of NGOs per 1 million people (normal scale), (c) the number of NGOs per 1 million people (log scale), (d) working hours, (e) trust in strangers, and (f) priority of the environment over the economy. Data for Japan (JP), Korea (KR), Singapore (SG), and Taiwan (TW) are indicated.

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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.

	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

Table 3. Correlation coefficients [Confidence Intervals (CIs)] between factors identified.

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 and trust in strangers and others, **Table 2; Figure 1**). 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 six options presented, the highest percentage of respondents (34%) chose the option related to interpersonal relationships ("if a friend attend 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 climate protests. Many interviewees mentioned limited time due to long learning hours as the biggest obstacle. This meshes with quantitative data showing that East Asian teenagers have longer learning hours than their Western counterparts, except for Japanese teenagers (Komatsu & Rappleye, 2018; Rappleye & Komatsu, 2018). Chang (2022) also noted that young activists in Taiwan had to make compromise 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 (Rappleye et al., 2021; Sachs, 2021; Silova et al., 2021). Measures to combat the pandemic (wearing masks, following mobility restrictions, and maintaining social distancing) require little time or collaboration with strangers. Similarly, we can explain the widespread adoption of recycling in many East Asian countries (Zuckerman, 2020). Recycling generally requires little time nor 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 et al., 2010; Hofstede Insights, 2022). 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. Similar strong correlations were observed when using individualism scores updated by Taras et al.'s (2012).

These correlations and existing literature allow us to contemplate the underlying processes for protest scarcity in East Asia. Cultural psychology suggests that weak individualism in East Asia leads to a clear distinction between in-groups and out-groups (Markus & Kitayama, 1991, 2010; Triandis et al., 1988; Yamagishi et al., 1998), which may contribute to lower trust in strangers (see Yamagishi & Yamagishi,

1994). The same cultural perspective may explain why working hours tend to be longer in regions with weak individualism including East Asia. In such regions, individuals often form strong emotional bonds with their colleagues, which may result in long working hours. Research suggests that those in such regions tend to prefer teamwork and may experience less stress when working long hours (Kiffin-Petersen & Cordery, 2003; Yang et al., 2012). Low trust in strangers may also be related to a lower density of NGOs. Social trust has been found to be linked to donations received by NGOs (Waniak-Michalak & Perica, 2021).

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).

Practical implications

If weak individualism is indeed the primary cause for protest scarcity in East Asia, it is unlikely that East Asia experiences a surge in climate protests. Cultural change typically takes a considerable amount of time (Markus & Conner, 2014). This 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). The survey also revealed that more people were willing to participate in petitions and donations in the future. This suggests that petitions and donations may be more effective than climate protests for social transformation in East Asia.

The idea we present aligns with the arguments of Chang (2022) and Jobin et al. (2021). Chang (2022) indicated that Taiwanese young activists did not simply borrow climate protests from the West; they created alternative approaches. For example, Taiwanese young activists collaborated with pro-environmental teachers in their school and organized events within the school rather than out of it. Jobin et al. (2021) also propose that societies with different political, social, cultural, and economic conditions may use different methods to achieve high environmental performance. Both Chang (2022) and Jobin et al. (2021) thus challenge the conventional view that differences between Western and non-Western countries indicate the latter's inferiority.

Some educators in East Asian countries may argue that protests are essential for healthy democracy (see Jobin et al., 2021 for a related discussion). For those who take this position, we suggest strengthening networks among people to lay the foundation for collective action. East Asian people tend to trust those they know personally, although they do not trust strangers (World Value Survey Wave 7, Haerpfer et al., 2020). Previous studies have identified measures to connect people for collective action (Rubin, 2012; Stephan et al., 2015). In our context, it is crucial to connect the ordinary public with key actors of climate protests like NGOs. Schools can invite NGOs to their classrooms to allow students to learn about NGOs' activities. Universities can also offer courses that involve collaboration with NGOs. Such networking opportunities can help students trust NGOs and respond to the call of protests issued by NGOs.

There may be readers who advocate for increased individualism in East Asia as a means of supporting climate protests. Policymakers and politicians in this region often suggest measures to enhance the individualistic nature of their societies (see Komatsu et al., 2019; Silova et al., 2021). However, we should carefully consider this cultural shift. Weak individualism has environmental and social benefits (Komatsu et al., 2019, 2022a, b; Nisbett, 2003; Markus & Conner, 2014). Countries with weak individualism tend to have smaller environmental impacts and fewer social problems (Komatsu et al., 2019, 2020, 2021; Rappleye et al.,2021; Silova et al., 2021). Those with less individualistic orientation tend to engage in more pro-social and pro-environmental behavior (Arnocky et al., 2007; Chuang et al., 2016; Duff et al., 2022; Piff et al., 2010). We recognize the potential benefits of shifting towards individualism in East Asia. However, we should weigh the advantages and disadvantages of this cultural shift carefully to ensure greater social and environmental benefits.

Limitations and future research directions

This study has presented potential explanations for protest scarcity in East Asia, which is an underexplored issue. This study has also offered practical recommendations for social transformation in East Asia. However, this study has several limitations. One major limitation is a heavy reliance on previous studies conducted in Western countries (Deisenrieder et al. 2020; Neuber et al., 2021). This may have resulted in overlooking important factors. To address this gap, future studies need to examine differences between participants and non-participants of climate protests in East Asia. This may be challenging due to the small number of participants. Ethnographic studies can be a useful alternative because they do not require large sample sizes. Currently, only one ethnographic study has been conducted in Taiwan (Chang, 2022). Additional studies are needed in other East Asian countries.

Exchanging results from such ethnographic studies and comparative studies will contribute to a deeper understanding of the phenomenon at hand (Heath, 2020; List & Spiekermann, 2013; Rappleye & Komatsu, 2020b).

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