



# Politicians' perspectives and media preferences regarding carbon neutrality policies: A comparative study in Malaysia and China

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## ABSTRACT

Media coverage of the climate crisis plays a key role in driving climate action. While most surveys related to climate change and its ramifications primarily assess public opinion at a collective level, this study targets politicians as the most influential segment of a population. The study examined politicians' perspectives on two aspects: (a) which policies are likely to be prioritised in their respective countries to achieve carbon neutrality, and (b) which media is the most preferred for promoting these policies. The scope is narrowed to two countries: Malaysia, a leading developing country, and China, a leading industrial country. Through an online survey targeting 40 politicians from each country, our findings reveal a consensus on afforestation and CO<sub>2</sub> capturing technologies as primary pathways towards carbon neutrality. However, while Malaysian politicians prioritise solar energy as the second-best option, their Chinese counterparts favour investing in public transportation alongside solar energy. Politicians consider social media the most suitable for promoting these policies, followed by chat applications in Malaysia, as well as television and online news portals in China. Our findings indicate that in promoting carbon policies, our respondents show a preference for media they perceive as news sources.

Keywords: ***Politician's perspective, carbon neutrality, government policy, media preferences***

## INTRODUCTION

The projected ramifications of climate change are ominously alarming. By 2070, 19% of the Earth's surface is expected to experience an annual average temperature of 29°C or higher, impacting up to 3 billion people and driving climate migration over the coming decades (Xu et al., 2020). The impacts of global warming are most pronounced in the equatorial belt stretching from southern China to northern Australia. Asia is the most affected region with increasingly frequent floods and extreme heatwaves (World Meteorological Organization, 2024). Global warming is overwhelmingly caused by human activities, which release into the atmosphere substantial amounts of greenhouse gases (GHG), such as carbon dioxide (National Academy of Sciences, 2020).

Given the global alarming impacts of climate change, 195 countries have agreed to reduce their GHG emissions by signing the Paris Agreement (United Nations Treaty Collections, 2015). Most countries, including Malaysia, have officially pledged to achieve Carbon Neutrality by 2050 (i.e., to have a balance between emitting and absorbing carbon from the atmosphere). Nevertheless, a few countries such as China, Indonesia, and Saudi Arabia have pledged to do so by 2060, and by 2070 in the case of India (The Net Zero Tracker, 2023). However, the policies that are likely to be prioritised to achieve the said neutrality have not been officially disclosed.

Achieving carbon neutrality requires the reduction of carbon emissions, which in turn necessitates a shift from the consumption of fossil fuel energy sources (i.e., coal, petroleum, and natural gas) to that of clean and renewable energy sources such as solar energy. This shift of energy sources is unwelcomed by corporations who have economic interests associated with fossil fuel consumption (Chan & Tam, 2023). Consequently, governments worldwide have been rather slow in taking tangible actions to reduce their GHG emissions, including in China, which accounted for 29% of global GHG emissions in 2022 (Crippa et al., 2023).

Media coverage of climate change plays a key role in driving climate action. Framing climate change as an urgent issue has been instrumental in shaping public opinion and mobilising support for climate action (Hopke & Hestres, 2018). In 2019, *The Guardian* and other news outlets began to use terms such as “climate catastrophe” and “global heating” to describe the upcoming “climate crisis” (Schäfer et al., 2023). Furthermore, the use of the present tense has also become more common in the media coverage of climate change, denoting the fact that it is unequivocally happening (Stecula & Merkley, 2019). This widespread coverage of climate change reached its peak in 2021 and 2022 (Boykoff et al., 2022), with the media emphasising the economic benefits of taking climate actions, rather than focusing on their costs (Stecula & Merkley, 2019). Nevertheless, mainstream journalism has been criticised for its failure to encourage discussion on pathways towards achieving carbon neutrality (Pepermans & Maesele, 2017).

Political discourse is also as a major catalyst for climate action. Politicians shape public opinion which subsequently translates into climate action (Zawadzki et al., 2020). Moreover, politicians' perspectives significantly influence government decisions and policies, including those aimed at achieving carbon neutrality (Nie et al., 2019). For the purposes of this study, we adopted Heywood's (2021) definition of a politician as an individual actively engaged in the art of government and policymaking. This definition includes both elected officials and senior government administrators.

The body of media research on climate change predominantly examined public awareness of climate change and its consequences at a collective, non-segmented level (Azhari et al., 2023; Li et al., 2023; Liu, 2023; Tyson et al., 2023). However, recent research highlights the need for focusing on specific population segments to obtain meaningful insights when assessing public opinion on climate change (Wonneberger et al., 2020).

The present preliminary study targets politicians as the most influential segment of a population. Its goal is to gain insights from politicians into policies that are likely to be prioritised by governments to attain carbon neutrality in their respective countries. Additionally, this study investigated politicians' perspectives on the viability of different media for promoting their governments' policies to achieve carbon neutrality. The study focused on two economically contrasting countries: Malaysia, a leading developing nation, and China, a global industrial powerhouse. This selection of countries offers valuable insights into contrasting perspectives on carbon neutrality policies between countries at different stages of economic development and industrialisation.

In the next section, we synthesise relevant literature that investigates the public's media preferences and what they trust as sources of information in Malaysia and in China. We also review related research conducted in these two countries to gauge public awareness and willingness to partake individual actions regarding climate change challenges. Following that, we present our research methodology. Afterwards, we describe the findings gathered from our research respondents. Finally, this paper concludes with a discussion of our findings.

## LITERATURE REVIEW

### *Media preferences and trust*

According to DataReportal (2023), the global population has surpassed 8.07 billion. Of this population, 65.7% (5.3 billion) use the Internet, and 61.4% (4.95 billion) are actively engaged in social media. The same report further revealed that the worldwide average number of social platforms used is 7.2. Interestingly, this average slightly increases to 7.7 in Malaysia, remains steady at 7.3 in China, but drops down to 6.6 in the U.S.A., despite 70% of the US population utilising social media (see Table 1).

**Table 1.** Overview of social media adoption

	Population % actively using social media (2023)	Average number of social platforms used (2023)
Malaysia	86	7.7
China	50	7.3
U.S.A.	70	6.6
World	61.4	7.2

Source: DataReportal (2023)

Despite the increasing prevalence of internet usage, there appears to be a decline in interest among users when it comes to news. According to the latest *Reuters Digital News Report* (Newman et al., 2023), the percentage of adults expressing either “very” or “extremely” high interest in news has decreased by a quarter over the past seven years, dropping from 63% in 2017 to just 48% in 2023. Additionally, Newman et al. (2023) found

that the proportion of individuals actively avoiding news has remained consistently high, hovering around 36%, nearing all-time highs.

In their survey of 1,063 Malaysians, Azhari et al. (2023) found that social media was predominantly preferred among respondents (86%), followed closely by chat apps (81%) and online news portals (72%). In contrast, printed media garnered the least popularity, with only 20% of respondents indicating its frequent usage. Notably, academic journals earned high trust, and with 80% of respondents expressing confidence in these academic publications, they are second only to scientists and environmental groups (86%).

Moreover, in surveying 346 students in Malaysia alongside in-depth interviews with seven informants, Yeh et al. (2022) disclosed that students' awareness of environmental issues does not necessarily reflect their education level. Instead, it correlates more strongly with their exposure to these issues on social media. Additionally, Yeh et al. (2022) also identified visual communication to be the most effective means of presenting environmental issues in cyberspace.

In China, according to Statista (2023), television maintains the highest penetration rate among traditional media, reaching an audience of 200 million. In contrast, newspapers have seen a drastic decline, dropping from 52% in 2010 to below 20% in 2020. Social media, on the other hand, is thriving, with over 500 million users, constituting half of the Chinese population. It is noteworthy that Facebook, Twitter, and YouTube are all blocked in China, making the Chinese social media vastly distinct from its counterparts in the world (Chiu et al., 2012).

Moreover, an online survey conducted among young Chinese adults (Gong et al., 2022) concluded that both traditional and social media usage are positively associated with political trust. However, traditional media was judged by respondents to be more credible and having a stronger impact than online media.

### *Status quo of climate change*

Globally, a major study by UNDP and University of Oxford surveyed the opinions of 1.2 million respondents from 50 countries and found that only 64% of respondents see climate change as a global emergency (Flynn et al., 2021), while the remaining 36% do not. Moreover, only 53% of respondents were supportive of using wind, solar, and renewable power.

According to Chan and Tam (2023), this relatively high percentage of scepticism towards climate change challenges (36%) can be partially explained by higher levels of fossil fuel consumption in some societies. In fact, transiting to renewable and greener energy requires drastic changes in lifestyle (e.g., transportation choices) that some people are reluctant to make. Chan and Tam (2023) found consistent evidence supporting this explanation by analysing two publicly available datasets. The first dataset comprised 63,183 adults from 52 countries, and the second dataset included 45,199 respondents (ages 15 and above) from 23 countries.

In Malaysia, the first survey assessing public opinions regarding climate change concerns was recently conducted by Azhari et al. (2023). According to the authors, 86% of the 1,063 respondents expressed that the government should increase incentives for individuals actively working to combat climate change. Furthermore, 60% of respondents were of the opinion that Malaysia should reduce its greenhouse gas emissions, regardless of the actions taken by other countries.

Additionally, respondents in the same survey demonstrated a strong commitment to adopting individual practices aimed at reducing GHG emissions. Notably, 79% of respondents reported reducing home energy usage by turning off electrical appliances and lights when not in use. Additionally, an equally impressive 79% expressed intentions to install household solar panels in the future (Azhari et al., 2023).

On the other hand, Liu (2023) analysed the results from two nationwide surveys in China (3,785 respondents in 2009, and 3,794 respondents in 2016) regarding public opinion on climate change. His analysis revealed that respondents consider the central government as the entity most responsible for taking action on climate change. While satisfaction with the Chinese government's climate action was only at 39% in 2009, it significantly increased to 60% in 2016. Moreover, 73% and 68% of respondents, in 2016, expressed their support for both the cap-and-trade program, and the carbon tax, respectively.

Li et al. (2023) examined the public's perception of carbon neutrality through content analyses on the Chinese social media platform, Weibo. The findings indicate a prevailing sense of optimism concerning carbon neutrality, with positive sentiment micro-posts comprising 83.9%, a striking eightfold higher than the negative ones at 9.9%. For an overview regarding public perception of climate change, readers are invited to refer to Table 2.

In the United States, the most recent survey by the Pew Research Centre, involving 10,329 American adults, highlighted that 67% prioritise the development of renewable energy sources such as wind and solar over fossil fuel (Tyson et al., 2023). Despite this shared preference for renewable energy, the survey also unveiled a significant disparity in climate change beliefs among the American public. While 78% of Democrats see climate change as a major threat, only 23% of Republicans share this viewpoint, resulting in an average of 54% of Americans considering climate change a major threat (Tyson et al., 2023).

**Table 2.** Overview of public awareness of climate change

	Year of latest survey	Number of respondents	Public awareness of climate change (%)	Public willingness to use solar energy (%)
Malaysia	2023	1063	86	79
China	2016	3,794	83	73
U.S.A.	2023	10,329	54	69
World average	2021	1,200,000	64	53

Sources: Azhari et al. (2023), Li et al. (2023), Tyson et al. (2023), and Flynn et al. (2021)

## METHODOLOGY

As aforementioned, most countries are committed to achieving carbon neutrality. The present research aims to determine whether the roadmap to carbon neutrality has been clearly identified by politicians in Malaysia and in China. Furthermore, we investigate which media are considered effective by politicians for promoting carbon neutrality policies in their respective countries. The following questions serve as guidelines to fulfil these objectives:

1. From politicians' perspective, what policies are likely to be prioritised for achieving carbon neutrality in their respective countries?
2. From politicians' perspective, which media are considered effective for promoting carbon neutrality policies that are adopted by their respective countries?

This study adopted a quantitative approach, surveying politicians' perspectives from both Malaysia and China. Descriptive statistics was employed to analyse individual questions, and certain questions were cross-tabulated with others to derive impactful insights from the dataset. Specifically, we conducted comparisons between politicians' perspectives in Malaysia and their counterparts in China regarding carbon neutrality policies. We also compared their views on the most effective media for promoting these policies.

For this preliminary research, a pilot online survey was conducted, targeting politicians in Malaysia and China. Using convenience sampling, we reached out to 40 Malaysian politicians in the state of Kedah, and 40 Chinese politicians in either Henan Province or Chongqing municipality. This sample size was deemed sufficient for uncovering preliminary insights into politicians' perspectives, as the central limit theorem (CLT) requires a sample size greater than 30 to ensure statistical robustness, and Roscoe's guidelines for comparative analysis recommend at least 30 respondents per subgroup (Memon et al., 2020). To ensure respondent anonymity, respondents' names and contact information were not recorded.

### *Research instrument*

Based on the literature review, we constructed a questionnaire which was divided into three sections, comprising 11 items:

1. **Demographic information:** This section anonymously collected necessary demographic information about the participating politicians.
2. **Policies for reducing CO<sub>2</sub> emissions?** This section explored politicians' perspectives on policies that are likely to be prioritised to achieve carbon neutrality in their respective countries.
3. **Media to inform the public of carbon policies?** This section was designed to discern politicians' preferences regarding the media they use to receive news and the media they consider effective for promoting carbon neutrality policies.

## FINDINGS

### *Demographic profile*

The surveyed Malaysian politicians were relatively younger and less experienced in politics in comparison with their Chinese counterpart. Notably, 88% of the Malaysian respondents fell within the age range of 20 to 49 years, in contrast to only 63% of their Chinese counterparts being within the same age group. Correspondingly, merely one-third of the Malaysian respondents had a political tenure exceeding three years, as opposed to the substantial majority (83%) of Chinese respondents who had accumulated over three years of political experience.

Remarkably, respondents in both groups engaged in diverse occupations, as explicitly outlined in Table 3. Education, computer science and marketing are prominent

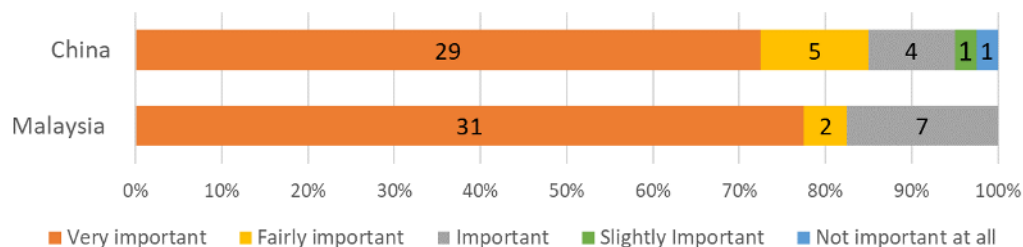
among Malaysian respondents, while administration, education and social services stand out among Chinese respondents. However, while only 68% of Malaysian respondents had an undergraduate degree or higher, the significant majority of Chinese respondents (93%) held qualifications of comparable levels.

**Table 3.** Summary of participating politicians' occupations

Respondent occupation	Respondents in Malaysia	Respondents in China
Engineering & Architecture	4	2
Management	1	4
Finance & Marketing	6	2
Banking & Insurance		1
Journalism & Media	3	3
Computer Science	6	1
Administration	4	10
Social Services	1	6
Law & Justice	2	3
Health care	2	1
Education	7	6
Tourism	4	1

### *Politicians' perspective on carbon neutrality policies*

Nearly all respondents acknowledged the significance of reducing CO<sub>2</sub> emissions. Among the participating politicians, a substantial majority, comprising 82.5% of Malaysians and 85% of Chinese representatives, deemed this reduction to be fairly or very important, as shown in Figure 1.



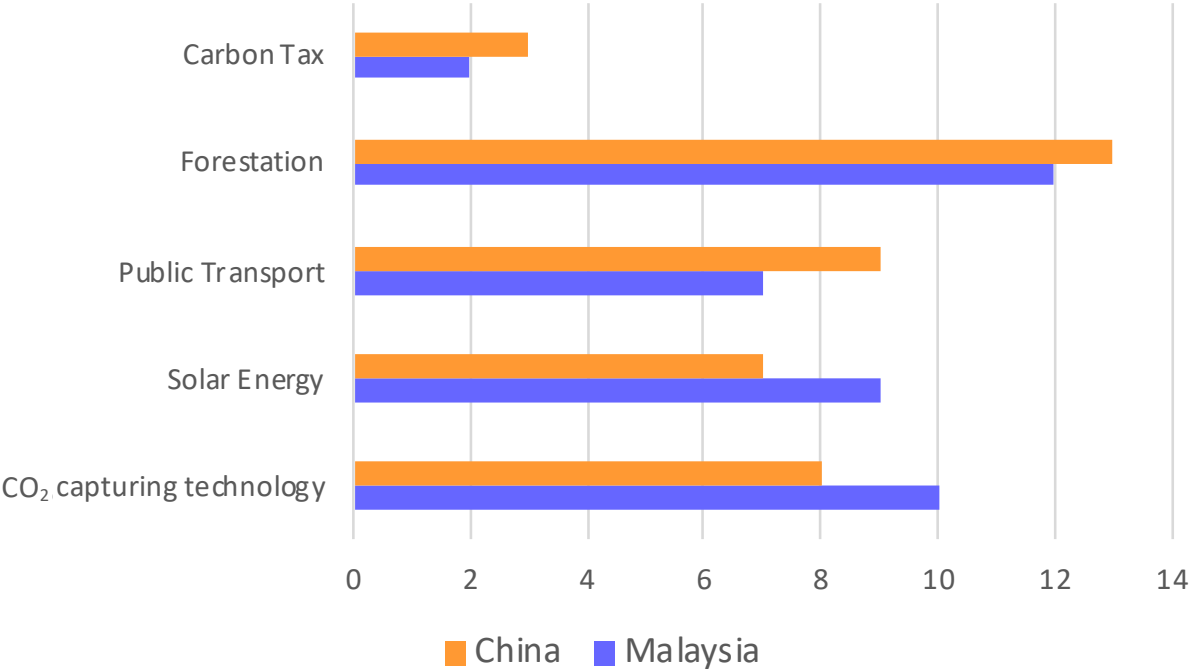
**Figure 1.** How important is reducing CO<sub>2</sub> emissions?

A common priority among Malaysian and Chinese respondents is forestation and CO<sub>2</sub> capturing technologies, which function as artificial forests for storing carbon. As Figure 2 shows, 12 of 40 Malaysian respondents (30%) and 13 of 40 Chinese respondents (33%) agreed on emphasising the high importance of implementing forestation policies. Additionally, 25% of Malaysian respondents (10 individuals) and 20% of their Chinese counterparts (8 individuals) prioritised investments in CO<sub>2</sub> capturing technologies.

The findings also suggest that the second phase toward carbon neutrality is likely to involve the integration of solar energy and public transportation policies, placing emphasis on solar energy in Malaysia and public transportation in China. In Malaysia, as shown in Figure 2, 23% of the respondents (9 individuals) anticipated the prioritised

adoption of solar energy policies, while 18% (7 individuals) believed public transportation policies to be more important. Conversely, in China, 18% of the respondents anticipated prioritising the implementation of solar energy, while 23% expected a focus on public transportation.

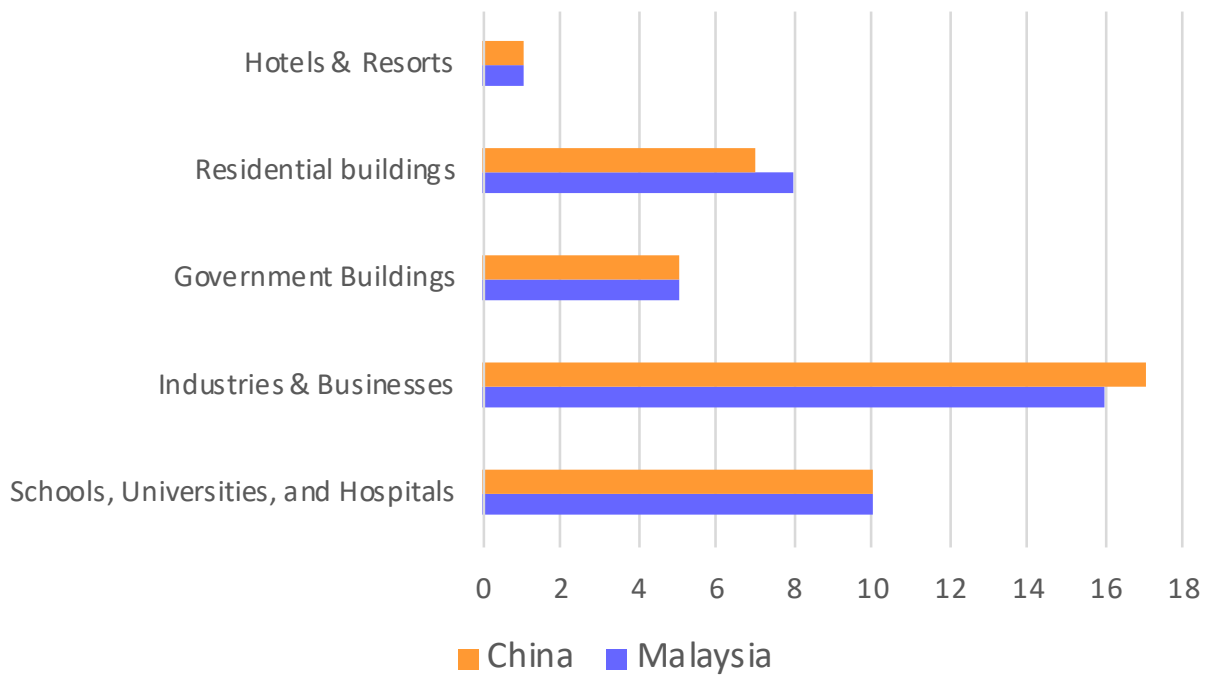
Respondents from both countries shared an additional common outlook: they all anticipated the implementation of a carbon tax to be the final measure in achieving carbon neutrality. Indeed, only two Malaysian respondents (5%) and three Chinese counterparts (8%) prioritised the implementation of a carbon tax over other policies, as Figure 2 clearly depicts.



**Figure 2.** Which part of the government policy to reduce CO<sub>2</sub> should be prioritised?

Concerning the deployment of solar panels as a greener energy source, there seems to be a consensus among Malaysian and Chinese politicians on prioritising businesses and industries over other sectors, as shown in Figure 3. In fact, 16 of Malaysian respondents (40%), as well as 17 of Chinese respondents (43%), anticipated the implementation of regulations to encourage the installation of solar panels in industries and businesses in their respective countries. For the tourism industry, the installation of such panels is likely to be optional, with an overwhelming majority of respondents (98%) not wishing to hinder the competitiveness of their respective countries in this sector.

Furthermore, as Figure 3 illustrates, 25% of Malaysian respondents (10 individuals) and an equal percentage of Chinese respondents expected a delayed implementation of regulations encouraging the education and healthcare sectors to transition to solar energy. Interestingly, 20% of Malaysian respondents (8 individuals) and 17% of Chinese respondents (7 individuals) foresaw policies encouraging the public to adopt solar energy in residential areas. In contrast, only 13% of respondents in each country (5 individuals) anticipated their respective governments to lead by example and transition to solar energy in their administration buildings.

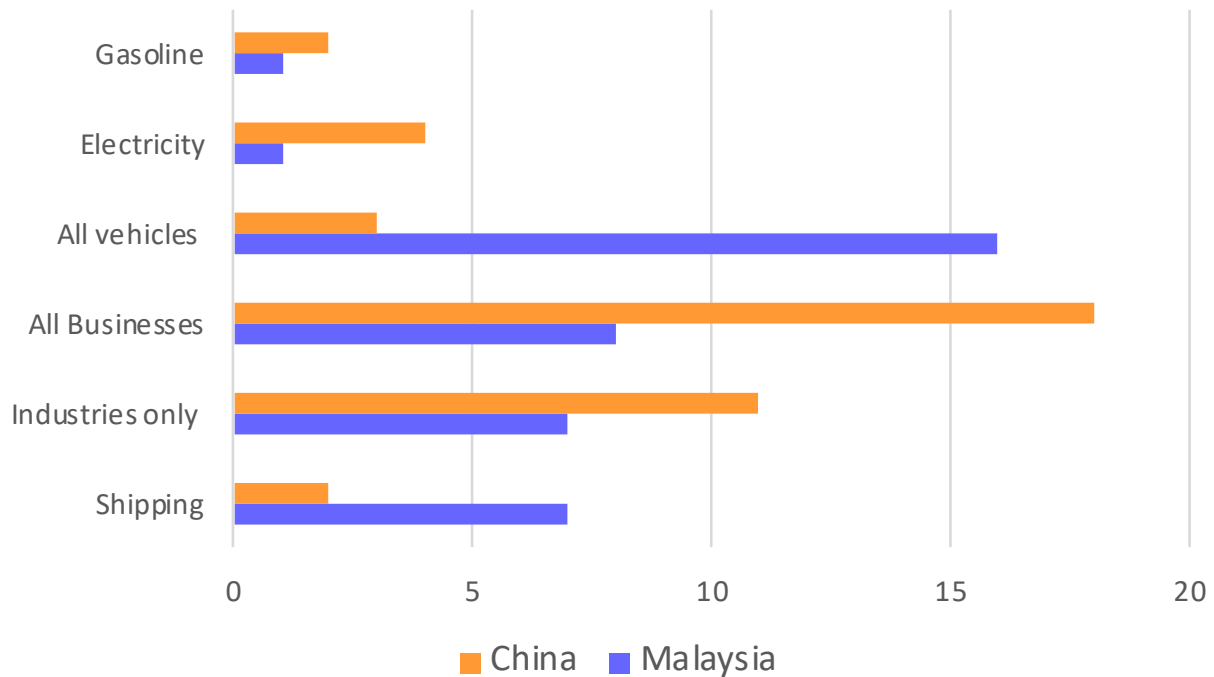


**Figure 3.** Where should solar panels be deployed first?

Moreover, when it comes to the properties that are likely to be targeted for initial carbon taxation, politicians' perspectives diverged significantly. On one hand, as depicted in Figure 4, Chinese respondents expected the nation's thriving industries and businesses to actively contribute to the government's efforts in achieving carbon neutrality. Specifically, 28% of respondents (11 individuals) anticipated a carbon tax exclusively on industries, and another 43% (18 respondents) expected the tax to be on all Chinese businesses. On the other hand, Figure 4 also shows that Malaysian respondents expected their compatriots to assist the government in achieving carbon neutrality. In fact, 40% of respondents (16 individuals) expected the first application of the carbon tax to be applied to all vehicles in Malaysia.

The divergence in perspectives among Malaysian and Chinese politicians persists, particularly in the sectors where respondents were reluctant to implement a carbon tax that may impede competitiveness. On one side, Chinese respondents were reluctant to hinder China's exportation capacity. Figure 4 shows that only two Chinese respondents (5%) anticipated the application of a carbon tax in the shipping sector. On the flip side, Malaysian respondents clearly did not wish to hold back the industrial development in Malaysia. On average, only seven Malaysian respondents (18%) expected the carbon tax to be implemented in each of the shipping, industry, and general business sectors.

Finally, Figure 4 also reveals that Malaysian and Chinese respondents shared a similar view regarding the application of a carbon tax on gasoline and electricity. Only one Malaysian respondent (2.5%) anticipated a carbon tax on electricity, with an equal expectation for gasoline. In China, four respondents (10%) foresaw a carbon tax on electricity, while only two respondents (5%) anticipated a carbon tax on gasoline.

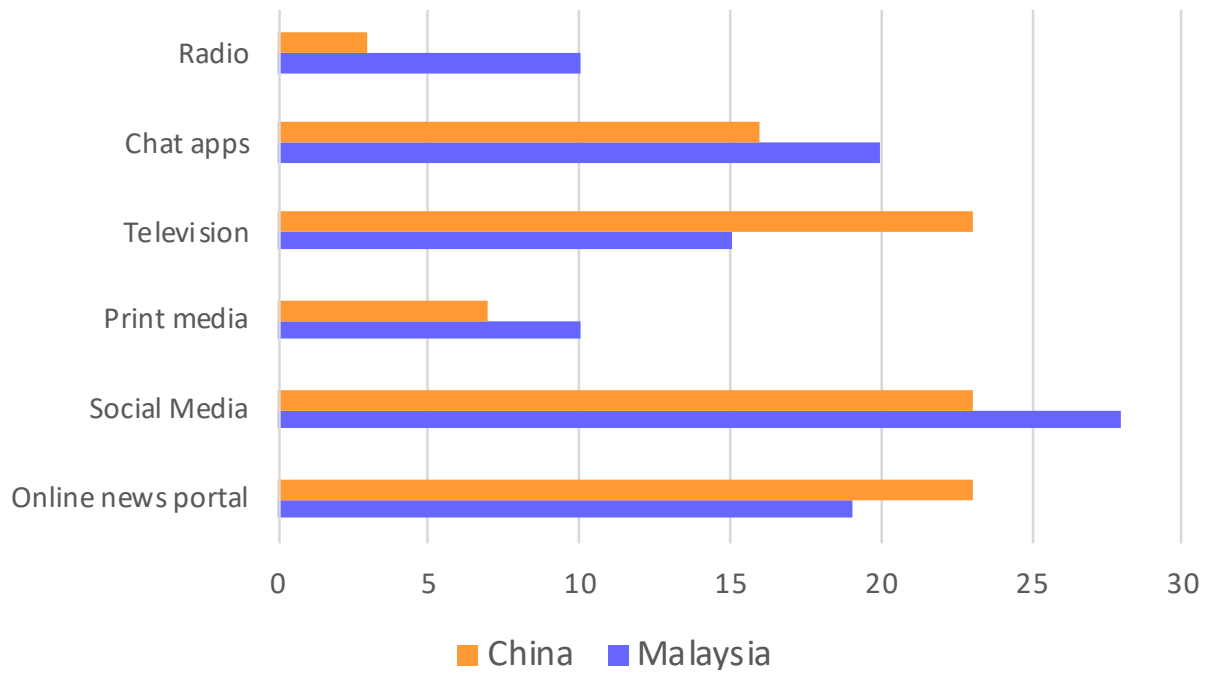


**Figure 4.** Where should carbon tax be implemented first?

### *Politicians' media preferences for promoting carbon policies*

All respondents, Malaysians and Chinese alike, confirmed the prevailing global trend wherein traditional radio and print media have receded in prominence, giving way to the ascendancy of online news portals, chat applications, and social media. As substantiated by Figure 5, this decline of radio and print media usage is more conspicuous in China than in Malaysia. Only 3 out of 40 Chinese respondents (8%) reported still relying on radio updates, while print media maintained attention from merely 7 Chinese respondents (18%). In the Malaysian context, 10 respondents (25%) affirmed their continued reliance on each of these traditional sources.

In contrast, social media has emerged as the predominant source of news for politicians in both nations, followed closely by news portals and chat applications. In Malaysia, 70% of the respondents (28 individuals) obtained news through social media, 47.5% (19 individuals) through online news portals, and 50% (20 individuals) through chat applications, such as WhatsApp. A comparable pattern is observed in China, where 57.5% of the 40 respondents (23 individuals) reported receiving news through social media and online news portals, while 40% (16 respondents) reported receiving news through chat applications, such as WeChat, as depicted in Figure 5.

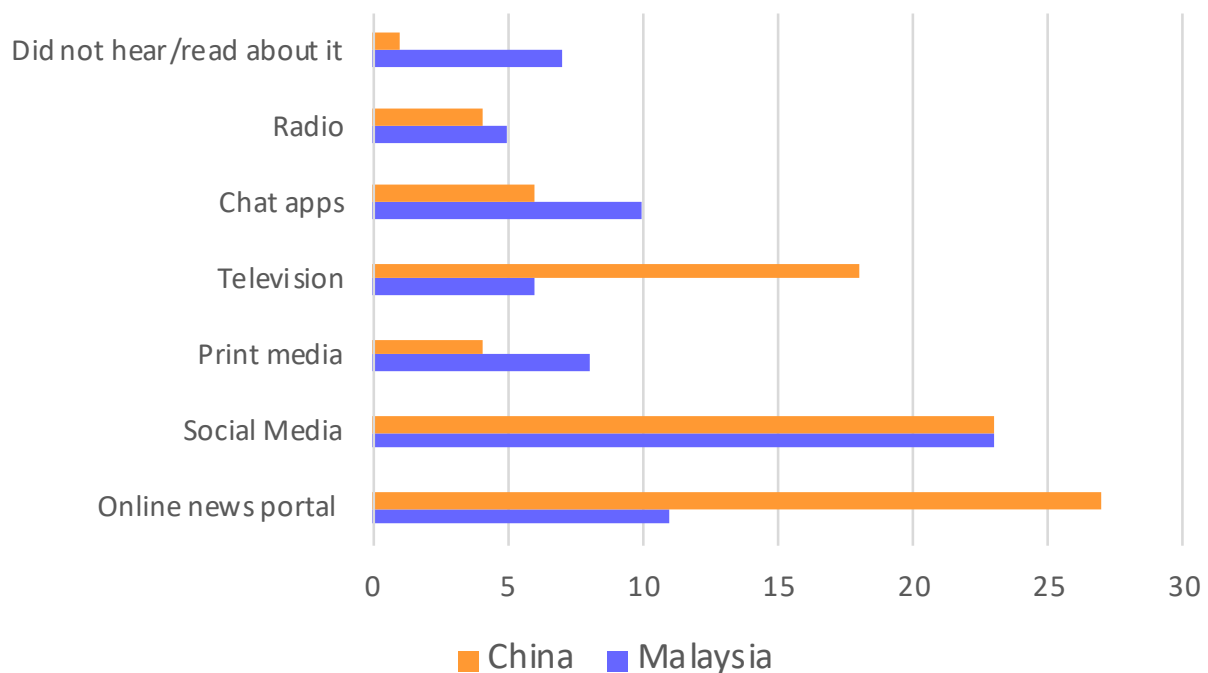


**Figure 5.** Where do you usually hear/read the news?

The findings also show that while television remains a prominent news source for politicians in China, its prominence appears to have fallen behind in Malaysia. In China, 23 respondents (57.5%) relied on television for news, while in Malaysia, only 15 respondents (37.5%) cited television as a source for news, as shown in Figure 5.

When asked about their awareness of their respective countries' policies for achieving carbon neutrality, the majority of respondents reported being well-informed on the subject. With only one respondent (3%) lacking knowledge about carbon neutrality, Chinese respondents appear to be more informed than their Malaysian counterparts, of whom seven respondents (18%) reported not having heard nor read about the topic, as Figure 6 illustrates.

Participating politicians, who were already informed about their respective countries' policies for achieving carbon neutrality, were subsequently asked to specify the media sources that informed them on the policies under investigation. Once again, social media emerged as the primary source of information on climate change and carbon neutrality in both countries. As depicted in Figure 6, 57.5% of both Malaysian and Chinese respondents, comprising 23 individuals in each group, reported being informed about their government's carbon emission reduction policy through social media.



**Figure 6.** Where did you hear/read about the government policy to reduce CO<sub>2</sub> emissions?

Interestingly, climate change and carbon neutrality appear to garner more attention on Chinese television and online news portals in comparison with Malaysia. Figure 6 clearly shows that 18 Chinese respondents (45%) learned about their government's CO<sub>2</sub> reduction policy through television, while 27 respondents (67%) relied on online news portals, surpassing social media by 10%. In contrast, merely six of Malaysian respondents (15%) reported being informed about the topic through television, while only 11 respondents (27.5%) relied on online news portals.

Our findings also show that chat applications, such as WhatsApp, are far more prominent as sources of information for politicians in Malaysia than their counterparts in China (e.g., WeChat). As shown in Figure 6, 10 Malaysian respondents (25%) reported learning about CO<sub>2</sub> reduction policies through chat applications, whereas only six Chinese respondents (15%) reported such applications as their source of information.

Furthermore, our findings, depicted in Figure 6, illustrate a comparable trend in the significance of print media for politicians in Malaysia and in China. Similar to chat applications, the number of respondents relying on print media as an information source is twice as high in Malaysia compared to China. In Malaysia, eight respondents (20%) learned about CO<sub>2</sub> reduction policy from print media, whereas in China, only four respondents (10%) reported print media as their source of information.

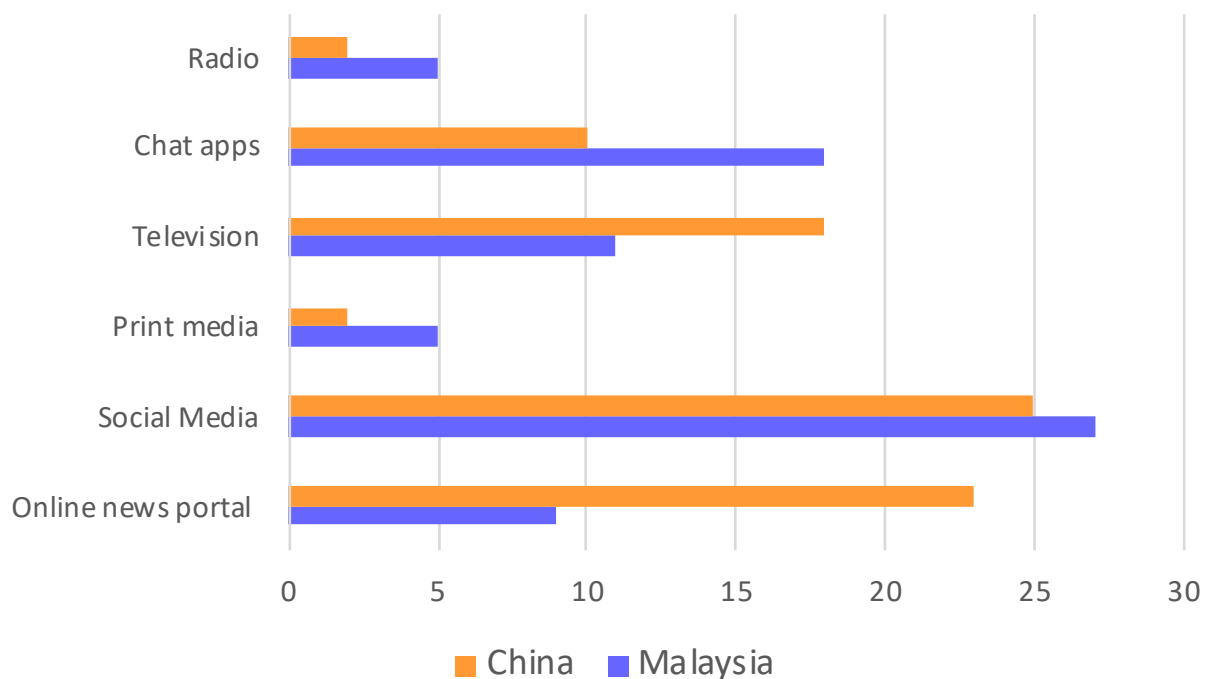
Finally, and more importantly, we surveyed politicians' media preferences for promoting their respective government policies regarding CO<sub>2</sub> reduction. Our findings, depicted in Figure 7, highlight a consensus among both Malaysian and Chinese respondents that social media is the preferred media for promoting these policies. In fact, 27 Malaysian respondents (67.5%) and 25 Chinese respondents (62.5%) concurred that social media is the preferred choice.

Our findings also reveal that radio and print are the least favoured media for promoting CO<sub>2</sub> reduction policies among both Malaysian and Chinese politicians. Figure

7 clearly shows that merely two Chinese respondents (5%) and five Malaysian respondents (12.5%) regarded radio as a suitable medium for promoting these policies. Similarly, an equally negligible proportion of respondents perceived print media as a viable option for promoting the said policies.

However, there is a divergence in the views of Malaysian and Chinese politicians when it comes to promoting CO<sub>2</sub> reduction policies on television, chat applications, or online news portals. As illustrated in Figure 7, Chinese respondents favoured television significantly more than chat applications for promoting these policies. Specifically, 18 Chinese respondents (45%) preferred television, while only 10 Chinese respondents (25%) appreciated chat applications for the same purpose. Conversely, among Malaysian respondents, only 10 respondents (25%) preferred promoting CO<sub>2</sub> reduction policies on television, whereas 18 respondents (45%) would rather do so on chat applications.

The viewpoints of Malaysian and Chinese politicians continue to diverge further when contemplating the use of online news portals for promoting CO<sub>2</sub> reduction policies, as depicted in Figure 7. Among Chinese respondents, 57.5% (23 individuals) viewed news portals as a viable option for promoting these policies, ranking second only to social media (62.5%). In contrast, among Malaysian respondents, only 9 individuals (22.5%) deemed online news platforms a suitable option.



**Figure 7.** Which media should the government use to reach more people when promoting CO<sub>2</sub> reduction policies?

## DISCUSSION

This study provides valuable insights into politicians' perspectives on carbon neutrality policies and their media preferences for promoting these policies. Most media research on climate change tends to gauge public opinion at a collective level. In contrast, the present

preliminary study focused on politicians as the most influential segment of a population, and the segment potentially responsible for making decisions that enable their nations to achieve carbon neutrality in the future. We compared politicians' perspectives in two countries with distinct socioeconomic configurations: Malaysia, a leading developing country, and China, a leading industrial country.

Our findings indicate that nearly all participating politicians recognise the paramount importance of addressing climate change challenges and clearly perceive the roadmap to carbon neutrality. Politicians from both nations prioritise afforestation policies (30% of Malaysians and 33% of Chinese) and CO<sub>2</sub> capturing technologies (25% of Malaysians and 20% of Chinese). Politicians' perspectives diverge regarding their second phase policies towards carbon neutrality. Solar energy (23%) appears to take precedence over public transportation policies (18%) in Malaysia, whereas in China, public transportation (23%) receives greater emphasis than solar energy (18%). Politicians in both countries agree that implementing a carbon tax should be a last resort, with only 5% of Malaysians and 8% of Chinese prioritising this policy.

Regarding the use of solar energy as a green energy source, politicians in Malaysia (40%) and China (43%) agree on prioritising the deployment of solar panels in businesses and industries. In the tourism sector, 98% of respondents in both countries are reluctant to impede their countries' competitiveness. Surprisingly, however, only 13% of respondents in each country expect their governments to transition to solar energy in administrative buildings.

When considering the implementation of a carbon tax, politicians showed distinct outlooks, aligning with the socioeconomic situations of their countries. In China, 71% expect industries to participate in carbon neutrality efforts, while only 5% anticipate a carbon tax in the shipping sector, seamlessly reflecting China's industrial status. In Malaysia, a country that aims to attract foreign investment, only 18% expect a carbon tax in shipping, industry, and general business sectors. However, 40% of Malaysian respondents support a carbon tax on all vehicles to aid carbon neutrality efforts. It is worth noting that respondents were all from the rural Kedah state, where reliance on private vehicles is high due to inadequate public transportation.

Next, our results clearly show the declining relevance of radio and print media as news sources, especially in China. Only 18% of Chinese respondents obtain news from print, and just 8% listen to the radio for news. In contrast, a quarter of Malaysian respondents still rely on these traditional media for news. The decline of radio and print media is a global phenomenon associated with the rise of social media as primary news sources. In 2023, the Pew Research Center surveyed 8,842 Americans to determine their news preferences. While 58% preferred digital devices and 27% preferred TV, only a minority opted for radio (6%) or print (5%) (Liedke & Wang, 2023).

Moreover, findings from our survey showcase social media as the primary source of news for the vast majority of respondents in both Malaysia (70%) and China (57.5%). Additionally, news consumption through online news portals is as common as through social media for Chinese respondents (57.5%), while online news portals are slightly less popular amongst Malaysian respondents (47%). These findings align with a major United Nations Children's Fund (UNICEF) survey, dating back to 2021, of over 21,000 individuals across 21 countries, revealing a significant trend in news consumption. Among

respondents aged 14 to 24, 45% rely on social media for news, compared to 17% of those over 40 (UNICEF, 2021).

More importantly, our findings also highlight two contrasting aspects of media consumption in China and Malaysia. Firstly, television remains relevant in China, with 57.5% of respondents getting their news from it, a proportion equal to that of social media. In Malaysia, its importance has declined to 38%, nearly half as popular as social media. Secondly, chat applications are increasingly used to obtain news, especially in Malaysia, with 50% using WhatsApp as a news source compared to 40% using WeChat as a news source in China.

In response to the second research question on politicians' preferences for promoting carbon neutrality policies, our findings show that social media is the preferred choice for the majority of Malaysian (67.5%) and Chinese (62.5%) politicians. This inclination towards promoting carbon policies on social media correlates with respondents' preference to receiving news through these platforms. Conversely, our findings indicate that print and radio are the least favoured media for promoting CO<sub>2</sub> reduction policies among politicians in both countries, with only 12.5% of Malaysian respondents and 5% of Chinese respondents regarding them as viable options. This disinterest correlates with the low popularity of print and radio for receiving news among respondents.

However, notable differences emerge in politicians' preferences for promoting carbon policies through television, chat applications, and online news portals. While the majority of Chinese respondents (57.5%) prefer television and online news portals for promoting carbon policies, only 25% and 22.5% of Malaysian respondents, respectively, share this preference. In contrast, a majority of Malaysian respondents (45%) view chat applications, particularly WhatsApp, as an effective medium for promoting carbon policies, while only 25% of Chinese respondents appreciate using chat applications, such as WeChat, for this purpose.

These findings suggest that government policies for attaining carbon neutrality should be primarily promoted on social media, which serves as the primary news source for politicians, and for the general public. Our findings also suggest that television in China and WhatsApp in Malaysia could complement social media campaigns for promoting carbon neutrality policies. Print and radio, on the other hand, should play a minor supporting role, with minimal resources allocated to these media for promoting carbon neutrality policies.

The particular emphasis accorded to WhatsApp by Malaysian respondents reflects the widespread popularity of this chat application in Malaysia. This observation aligns with the research conducted by Nizah and Bakar (2019), which underscores the decisive role WhatsApp played in shaping public opinion during the Malaysian 14th General Elections in 2018. Given its demonstrated effectiveness in influencing public discourse, WhatsApp emerges as a powerful medium for promoting government policies in Malaysia, including those related to carbon neutrality.

Finally, the relatively low preference of Malaysian respondents to promote carbon policies on television is likely due to the perception that their compatriots, particularly the youth, primarily view television for entertainment rather than for news. Several studies have demonstrated that Malaysian youths utilise television for entertainment and social surveillance purposes, rather than for talk shows or factual programs (Ahmad & Alimom, 2020; Nasser et al., 2020).

Table 4 clearly shows the correlation that emerges between politicians' perspectives regarding the optimal media for promoting carbon neutrality policies and the media they rely upon as sources of information. This correlation manifests consistently across various media and among both Malaysian and Chinese politicians. Essentially, when it comes to promoting carbon policies, respondents show a preference for media they perceive as news sources.

**Table 4.** Media preferences for receiving news and for promoting CO<sub>2</sub> reduction policies

	Preferences for news in China (%)	Preferences for promoting carbon policies in China (%)	Preferences for news in Malaysia (%)	Preferences for promoting carbon policies in Malaysia (%)
Social media	57.5	62.5	70	67.5
Chat apps	40	25	50	45
Online news portals	57.5	57	47	22.5
Television	57.5	45	37	25
Print	18	5	25	12.5
Radio	8	5	25	12.5

## CONCLUSION

This study surveyed the opinions of 40 Malaysian and 40 Chinese politicians regarding future policies aimed at achieving carbon neutrality within their respective countries. Our findings reveal agreement among politicians from both countries on prioritising afforestation and the development of CO<sub>2</sub>-capturing technologies as the primary pathways toward carbon neutrality. However, politicians' perspectives diverge on secondary policies, reflecting the distinct socioeconomic configurations of their countries. While Malaysian politicians prioritise deploying solar energy, their Chinese counterparts emphasise investing in public transportation alongside solar energy. The shift to solar energy is expected to be led by industries and businesses, with the exception of the tourism sector. Moreover, while politicians from both countries view implementing a carbon tax as a last resort policy, Chinese respondents expect such a tax to target the industrial sector, whereas Malaysian respondents anticipate its application to all vehicles.

On the other hand, our findings reveal consensus among politicians from both countries regarding social media as the most effective medium for promoting carbon neutrality policies. However, politicians' perspectives diverge again when identifying the second-most suitable medium for promoting these policies. Chinese politicians favour online news portals and television as alternative options, whereas Malaysian politicians prioritise chat applications, particularly WhatsApp, as the next preferred medium.

Finally, our descriptive analysis highlights a notable correlation between the media considered by politicians as the best option to promote carbon neutrality policies in their respective countries, and the media they consider to be reliable sources for news.

## LIMITATIONS

Politicians and government officials who participated in this survey from Malaysia were all localised in the Kedah state, while their counterparts from China who took part in the survey were all based in Henan Province or Chongqing Municipality. Nevertheless, the diverse backgrounds of the respondents allow the findings of this study to serve as a strong indicator for their respective countries. Furthermore, the results can serve as a solid foundation for nationwide surveys regarding politicians' perspectives on carbon neutrality in other countries.

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