



Perceived national wealth increases support for structural climate policies

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ABSTRACT

Climate change cannot be successfully mitigated solely through individual-level actions. Structural change is urgently needed. While wealthy countries have the greatest capacity to implement structural change, the question remains to what extent perceived country wealth is associated with support for structural climate policies over individual-level behaviour change policies. We found in Australian (Study 1) and UK (Study 2) samples ($N = 967$) that perceived national wealth positively predicts people's support for structural (vs. individual-level behaviour) change policies. In an experimental (Study 3, $N = 401$) and a quasi-experimental study (Study 4, $N = 400$; comparing South African and UK participants), we found that people in both wealthy and poor countries more strongly prefer wealthy (vs. poor) countries to implement structural (vs. individual-level behaviour) change policies. There was some evidence that these effects are mediated by perceiving wealthy countries to have a moral obligation to contribute to the solution of global issues. The findings suggest that there is considerable public support for wealthy countries to spearhead structural transformations to limit climate change. These insights can help environmental organisations and policymakers to gain public support for climate policies by emphasising their countries' moral obligation to implement change and by countering blame-deflecting narratives.

1. Introduction

Up until recently, public debates on climate change often revolved around whether climate change is happening and whether it is caused by human activity (Cann & Raymond, 2018). While climate skepticism has been a major roadblock to enacting climate change policies (Hornsey & Fielding, 2020), fortunately, the proportion of people denying anthropogenic climate change has been constantly decreasing in the past decade (e.g., Hornsey et al., 2022). Currently, the number of people who deny that climate change is occurring is generally low, ranging from 2% in Argentina and Taiwan to 12% in the USA (Leiserowitz et al., 2021). Moreover, in all regions of the world a clear majority is concerned about climate change. The proportion of people who believe that climate change is an emergency ranges from 72% of respondents in Western Europe and North America to 61% in Sub-Saharan Africa (Flynn et al., 2021).

1.1. Effectiveness of climate change policies

Despite this positive development, the change in public opinion on climate change has not yet translated into reductions of CO₂ emissions.

Global CO₂ emissions have increased by 47% in the past decade (International Energy Agency, 2021) and the risk of severe impacts of climate change on humans such as heat waves, droughts, or heavy precipitation is greater than ever (IPCC, 2021). One reason why individuals' beliefs have limited impact on global CO₂ emissions is that people's behaviours are constrained by the physical and social context within which they act (Amel et al., 2017). For example, individuals' carbon footprint is influenced by the primary energy sources used to generate electricity, the industrial infrastructure, and rules and policies of organisations (Amel et al., 2017).

In relation to this, it has been argued that climate change policies are more effective if they aim at structural change than if they aim at individual-level behaviour change (Amel et al., 2017). Structural climate policies, which aim to achieve wide-ranging, systemic transformations, typically encompass actions such as legislative measures, the establishment of market incentives, and public investments (IPCC, 2022; Schiliro, 2012; Stuart, 2022). Effective structural changes to limit climate change are, for example, transitioning from fossil fuels to renewable energy sources, improving or retrofitting the building stock, improving infrastructure for non-motorised and public transport, and reducing rates of deforestation (IPCC, 2022). In contrast, individual

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behaviour change, such as greater household recycling or household energy saving, has a much more limited impact on overall greenhouse gas emissions (Amel et al., 2017; Moser and Kleinhüchelkotten, 2018). For example, reducing greenhouse gas emissions from electricity use can be achieved by saving energy but the impact of this is constrained by the type of energy source used for its generation, that is, whether the energy is generated from high-emission sources like coal or low-emission sources like solar power. In addition, structural changes help create the necessary conditions and infrastructure to support low-carbon lifestyles (IPCC, 2022). For example, a carbon tax can influence consumer behaviours by making climate-friendly products more affordable and less climate-friendly products more expensive.

In principle, policies aimed at structural change and policies aimed at individual-level behaviour change are not mutually exclusive but may complement each other. For example, people with high levels of climate change concern and a strong environmental identity are more likely to strongly support any kind of climate policy (cf. Steg, 2023). However, as concern for climate change grows (Flynn et al., 2021; Hornsey et al., 2022), it becomes increasingly important to identify the factors that shape people's preferences for one type of policy over another. This understanding is crucial because prioritising one policy type might shift attention and resources away from the other (Chater & Loewenstein, 2022). Oftentimes policymakers, institutions, corporations, scientists, and the public only have limited time and financial resources, and therefore a strong focus on policies aimed at individual-level behaviour change may come at the expense of structural change. So far, governments have tended to favour policies aimed at individual-level behaviour change over those aimed at structural change because they do not change the option sets for consumers and do not involve regulations of corporations and thus are politically more palatable (Schubert, 2017; Thaler & Sunstein, 2008). That is why it may be easier to pass a policy introducing a traffic-light labelling system that indicates the eco-friendliness of consumer products than passing legislation seeking to phase out carbon-intensive technologies.

Furthermore, a focus on individual pro-environmental behaviour has been found to reduce people's support for structural change (Hagmann et al., 2019; Knook et al., 2022; Ling & Xu, 2021; Werfel, 2017). For example, the introduction of a green energy default nudge reduced people's support for a carbon tax (Hagmann et al., 2019). Similarly, asking people to report their past energy-saving actions diminished their support for a carbon tax (Werfel, 2017). The authors found that this could not be explained by moral licensing (i.e., people feel they are permitted to engage in immoral behaviours because they have previously behaved in a morally good way) but by increasing the perceived importance of individual actions relative to government regulation. That is, an emphasis on individual-level behaviour change policies may (falsely) give people the impression that climate change can be limited by individuals' actions alone and therefore does not require structural change.

It is therefore crucial to identify factors that lead people to support structural change policies over individual-level behaviour change policies. Uncovering these factors can offer valuable insights for environmental organisations, activists, and policymakers to effectively frame their messaging and strategies in promoting structural change policies. We reasoned that, as wealthy countries have a greater capacity to implement structural change, they may be perceived to have a greater moral obligation to implement structural change as their contribution to global climate change mitigation efforts (cf. Ringius et al., 2002). We specifically sought to explore how the perception of one's country's degree of wealth shapes one's support for structural climate policies over policies aimed at individual-level behaviour change.

1.2. National wealth and structural climate policies

At the national level, the decision whether to implement structural climate policies to limit climate change presents a commons dilemma (Li

et al., 2021). The earth's atmosphere is a common resource and greenhouse gases emitted by one country have adverse effects on the global climate (IPCC, 2021). Therefore, a collective effort is required to successfully stop climate change. While limiting climate change is in most countries' interests because it likely has long-term benefits to countries' economies and people's well-being, structural climate change policies have short-term costs, for instance, because of the decline in revenues from oil and gas extraction, the constraining of deforestation, or the reduced availability of useable land (Bernauer, 2013). Thus, not surprisingly, in a global society with about 200 sovereign countries, there are powerful incentives for countries to free ride on other countries' mitigation efforts (Bernauer, 2013).

In order to address this commons dilemma, the international community established the United Nations Framework Convention on Climate Change (UNFCCC) in 1992, a treaty that set the goal of reducing greenhouse gas emissions. The UNFCCC was extended by the Kyoto Protocol in 1997 and the Paris Agreement in 2015 (Leggett, 2020). One important agenda item for the UNFCCC is to determine the degree to which each country is obliged to contribute to global climate change mitigation. It has been argued that wealthy industrialised countries bear the greatest responsibility to adopt structural climate policies as they have the greatest capacity to implement structural change (Lange et al., 2007; Ringius et al., 2002). Compared to poorer countries, wealthy countries can more easily cushion the short-term costs of structural transformations (Bruckner et al., 2022; Ringius et al., 2002).

This sense of responsibility arises from collectively endorsed distributive justice norms which suggest that individuals who have the most resources should share them with those that have less (Forsyth, 2018). There is a plethora of anecdotal evidence suggesting that people believe wealthy countries have a greater moral obligation to contribute to the solution of global issues because they have the capacity to do so. For example, during the COVID-19 pandemic in 2021, 76% of U.S. adults reported that it should be either an important or a top priority for the United States to provide COVID-19 vaccines to developing countries (Pew Research Center, 2021). Similarly, the majority of Australians believe that their government should do more to support low-income countries in the face of climate change (Care Australia, 2021). The notion that the wealthy should share the resources with those that have less is also underpinned by moral theories. For example, both the moral foundations theory and the 'morality-as-cooperation' theory emphasise the centrality of fairness in human morality (Curry et al., 2019; Graham et al., 2011). This provides evidence for the possibility that people in wealthy countries (compared to people in less wealthy countries) are more likely to want their country to implement structural climate policies because they believe their country has a moral obligation to contribute to the solution of global issues.

The belief that wealthy countries have a greater moral obligation to implement structural climate change policies is also reflected in the ability-to-pay rule—a prominent equity principle that guides international climate negotiations and which states that a country's share of global abatement costs should be in direct proportion to its GDP (Lange et al., 2007; Ringius et al., 2002). Consistent with countries' economic self-interests, policymakers from wealthy countries are less likely to be in favour of the ability-to-pay rule than policymakers from poorer countries (Lange et al., 2007). Despite this, we propose that people from wealthy countries may want their country to implement greater structural change because they feel it is their country's moral obligation to do so. Thus, people may base their policy support on what they perceive to be their country's obligation irrespective of the consequences. That is, they may want their country to implement structural change because it is the *morally right* thing to do (cf. Sabucedo et al., 2018).

1.3. The present studies

In the present studies, we explored whether perceived national wealth is linked to an increased support for structural climate policies

over individual-level behaviour change policies. We hypothesised that perceived national wealth leads to a greater support for structural (vs. individual-level behaviour) change policies through a perceived moral obligation of one's country to contribute to the solution of global issues.

In an initial pilot study, we validated twelve policies addressing various environmental issues associated with climate change. In Study 1, we tested in an Australian sample whether perceived Australian wealth predicts support for structural (vs. individual-level behaviour) change policies. In Study 2 (pre-registered), we sought to replicate this effect in a UK sample and explored whether it is mediated by perceiving the UK to have a moral obligation to contribute to the solution of global issues. In Study 3 (pre-registered), we used an experimental design in which participants were randomly assigned to either a wealthy or poor fictional country. We hypothesised that participants assigned to the wealthy country would show greater support for structural (vs. individual-level behaviour) change policies to be implemented by their country (vs. by the other country) compared to participants assigned to the poor country. Finally, in Study 4 (pre-registered), we employed a quasi-experimental design recruiting participants from the UK (a wealthy country) and South Africa (a comparatively less wealthy country). We investigated whether UK participants more strongly want their own country (vs. the other country) to implement structural (vs. individual-level behaviour) change policies compared to South African participants.

2. Pilot study

In an initial pilot study ($N = 37$), we sought to validate six policy pairs that describe structural versus individual-level policy solutions addressing various environmental issues linked to climate change (e.g., food waste or deforestation; Table 1; see Klebl & Jetten, 2023). The structural policies focused on legislation because they offer clear and direct effects on climate change mitigation, with more tangible outcomes than market incentives. Moreover, legislation does not require the same upfront investment as costlier public infrastructure investment (e.g., wind turbines) thereby making them more comparable to the individual-level policy options used in these studies. We tested whether participants judged the structural change policies as being aimed more at structural change and less at individual-level behaviour change compared to the individual-level behaviour change policies—e.g., “Please indicate which of the two proposals is more strongly aimed at

Table 1
Individual-level behaviour change policies and structural change policies.

	Individual-level behaviour change policies	Structural change policies
Pair 1	A large campaign to promote practices that reduce consumers' food waste (e.g., reduced plate sizes at buffets and food-sharing groups).	Legislation that requires food retailers to implement new practices to reduce food waste.
Pair 2	An annual nation-wide tree-planting event.	Legislation that limits logging.
Pair 3	Introduction of a new traffic-light labelling system that indicates the eco-friendliness of consumer products.	Legislation requiring companies to phase out carbon-intensive technologies.
Pair 4	A large campaign aimed at encouraging recycling (e.g., making recycling bins more eye-catching).	Legislation that bans the production of single-use plastic.
Pair 5	Promoting lower energy consumption through providing people with personalised home energy reports.	Implementation of stricter insulation standards for the construction industry.
Pair 6	A large nation-wide campaign to encourage people to buy more organic food.	Legislation requiring the implementation of stricter regulations for pesticide use in agriculture.

leading to structural change (that is, challenging the status quo)”. We assessed the items with a slider ranging from -5 (*more strongly Proposal A*) to 0 (*equally strong*) to 5 (*more strongly Proposal B*).

We excluded two participants from the analyses because they failed the attention check. One-sample t -tests were used to test whether means deviate from 0, with positive values indicating that the item was judged as more strongly applying to individual-level behaviour change policies. Across all policies, participants more strongly judged the individual-level behaviour change policies to be aimed at individual-level behaviour change than the structural change policies ($M = 3.08$, $SD = 1.56$), $t(34) = 11.63$, $p < .001$, 95% CI [1.39, 2.53], $d = 1.97$. Furthermore, participants more strongly judged the structural change policies to be aimed at structural change than the individual-level behaviour change policies ($M = -3.17$, $SD = 2.23$), $t(34) = -8.40$, $p < .001$, 95% CI [-1.89, -0.94], $d = 1.42$. These effects were also significant for each policy pair separately (all $ps < .001$; see supplemental materials).

3. Study 1

In Study 1, using a correlational design, we investigated whether the degree to which Australian participants perceive their country to have financial resources positively predicts their support for climate change policies aimed at structural change over those aimed at individual-level behaviour change.

3.1. Method

Participants. Assuming small effect sizes and setting the power at .80, we determined requiring a sample of $N = 395$ at $\alpha = .05$ using G*Power (Faul et al., 2009). We initially aimed to recruit a larger sample of 700 participants from Prolific but as Study 1 was part of a larger survey which included measures that were time-sensitive with regards to the 2022 Australian federal election, we had to terminate the survey on the evening before election day. In total, 487 participants (269 women, 204 men, 11 non-binary people; $M_{\text{age}} = 33.6$, $SD = 11.5$; range = 18–68 years; 66.3% White, 18.0% East or Southeast Asian, 4.5% South Asian, 2.1% Australian Aboriginal or Torres Straits Islander, 1.7% Arab, 6.0% other ethnicities, 1.4% prefer not to say; 3 missing) living in Australia completed the survey. Participants were compensated with AUD3.75. This research has been approved by the Human Ethics Research Committee at [BLINDED].

Procedure and materials. After providing informed consent, we presented participants with a short paragraph describing some of the environmental problems Australia is currently facing (e.g., increased risk of bushfires due to climate change). This paragraph was included to establish context and facilitate participants' understanding of the policy pairs. Participants were then presented with the six environmental policy pairs in a random order (see Table 1) and were asked to indicate on a slider ranging from -5 (*strongly prefer Proposal A*) to 0 (*equal preference*) to 5 (*strongly prefer Proposal B*) which of the two policy proposals they would want the Australian government to implement. For each policy pair, structural and individual-level behaviour change policies were randomly presented as either Proposal A or Proposal B.

After this, participants were asked to indicate on a scale from 0 (*not at all*) to 6 (*very much so*) the extent to which they perceive Australia to have financial resources (“To what extent do you believe Australia has the financial resources to address important global issues?”). We also assessed participants' political orientation in relation to economic issues (“Please indicate your political beliefs on issues of the economy, e.g., social welfare, government spending, tax cuts”) and social issues (“Please indicate your political beliefs on social issues, e.g., immigration, same-sex marriage, abortion”) on a Likert scale from 1 (*left*) to 7 (*right*), because political orientation has been shown to be a predictor of climate policy support (Drews & Van den Bergh, 2016). In addition, as part of a larger survey, participants were asked to indicate their opinion on a number of social and political issues in Australia such as the

COVID-19 pandemic. Finally, two simple attention checks were used (e. g., “To check your attention, please select three”).

3.2. Results and discussion

Nineteen participants were excluded from the analyses. Ten participants failed at least one attention check and nine did not consent to the use of their data.¹ The policy items were recoded so that positive values indicated a preference for structural policies and negative values indicated a preference for individual-level behaviour change policies. Linear mixed-effects models with participants and policy pairs as random intercepts were used (R package lme4; Bates et al., 2015). Perceived national financial resources ($M = 4.50$, $SD = 1.45$) positively predicted people’s support for structural (vs. individual-level behaviour) change policies ($M = 1.99$, $SD = 1.89$), $b = 0.51$, $SE = 0.06$, $t(466) = 9.21$, $p < .001$, 95% CI [0.40, 0.62], $R^2 = .15$. This effect remained significant when controlling for social ($M = 2.73$, $SD = 1.60$) and economic ($M = 3.03$, $SD = 1.97$) political orientation, $b = 0.31$, $SE = 0.06$, $t(464) = 5.22$, $p < .001$, 95% CI [0.19, 0.42], $R^2 = .04$.²

The results suggest that perceiving one’s country as having more financial resources is linked to a greater support for one’s country to implement structural change over policies aimed at individual-level behaviour change.

4. Study 2

In Study 2, we sought to replicate the findings of Study 1 using a UK sample and an improved measure of perceived national wealth. Moreover, we hypothesised that perceived national wealth predicts structural (vs. individual-level behaviour) change policies through perceiving one’s country to have more of a moral obligation to contribute to the solution of global issues.

4.1. Method

Participants. Using an application for Monte Carlo power analyses for mediation models (Schoemann et al., 2017), we determined requiring a sample size of $N = 352$ to allow for an 80% chance to detect a small effect size ($r = .20$; $\alpha = .05$, two-tailed) in a mediation model with one mediator. A larger sample of 500 participants living in the UK was recruited from Prolific and 480 participants (277 women, 199 men, 3 non-binary people, one other gender; $M_{\text{age}} = 42.6$, $SD = 12.6$; range = 18–65 years; 88.1% White, 6.3% Asian, 2.9% Black, 2.3% other ethnicities, 0.4% prefer not to say) completed the survey in return for £1.35. The pre-registration can be accessed at <https://osf.io/at7u6>.

Procedure and materials. After providing informed consent, participants were presented with a paragraph describing environmental problems the UK is currently facing (e.g., increased risk of floods due to climate change). Participants were asked to imagine that they were elected to the UK parliament and had to vote on the allocation of a £10 billion budget for policies addressing those environmental problems. The purpose of this design was to increase the relevance of the task for participants, encouraging them to think carefully about policy options. As in Study 1, they were then randomly presented with the climate change policy pairs and asked which of the two policy proposals they would want the UK government to implement. After this, perceived national wealth was assessed, using a three-item measure ($\alpha = .83$): “To what extent do you believe the UK is a wealthy country?”; “To what

extent do you believe the UK has more financial resources than other countries?”; and “To what extent do you believe the UK has the financial resources to address important global issues?”. Finally, we assessed perceived moral obligation of one’s country to contribute to solving global issues with a three-item measure ($\alpha = .89$): “The UK has a moral obligation to do its bit to solve global issues”; “It is immoral for the UK to refrain from trying to solve global issues”; and “Contributing to finding solutions to global issues is the morally right thing to do for the UK”. Both measures were assessed on a Likert scale from 0 (*not at all*) to 6 (*very much so*). In addition, we used one simple attention check, and we measured perceived inequality, desire for drastic changes, and anomie for an unrelated study.

4.2. Results and discussion

Fourteen participants were excluded because they failed the attention check, and three participants were excluded because they did not consent to the use of their data.

Main analysis. Linear mixed-effects models with participants and policy pairs as random intercepts were used (Bates et al., 2015). As predicted, perceived national wealth ($M = 4.26$, $SD = 1.07$) was positively associated with people’s support for structural (vs. individual-level behaviour) change policies ($M = 1.75$, $SD = 1.67$), $b = 0.31$, $SE = 0.07$, $t(461) = 4.30$, $p < .001$, 95% CI [0.11, 0.45], $R^2 = .04$. This effect remained significant when controlling for social ($M = 3.08$, $SD = 1.58$) and economic ($M = 3.25$, $SD = 1.38$) political orientation, $b = 0.19$, $SE = 0.07$, $t(459) = 2.72$, $p = .007$, 95% CI [0.05, 0.32], $R^2 = .01$.

Mediation analysis. A mediation analysis was conducted using the PROCESS macro for SPSS (Hayes, 2017), with perceived national wealth as the independent variable, support for structural (vs. individual-level behaviour) change policies as the dependent variable, and moral obligation of one’s country to contribute to solving global issues as the mediator (see Fig. 1).

A significant total effect was found, $b = 0.31$, $SE = 0.07$, $t(461) = 4.30$, $p < .001$, 95% CI [0.17, 0.45], $R^2 = .04$. Perceived national wealth positively predicted perceived moral obligation of one’s country to contribute to solving global issues ($M = 4.76$, $SD = 1.31$), $b = 0.50$, $SE = 0.05$, $t(461) = 9.67$, $p < .001$, 95% CI [0.40, 0.60], $R^2 = .17$, and moral obligation was a positive predictor of support for structural (vs. individual-level behaviour) change policies, $b = 0.33$, $SE = 0.06$, $t(460) = 5.29$, $p < .001$, 95% CI [0.21, 0.45], $R^2 = .06$. As predicted, there was an indirect effect of perceived national wealth on support for structural (vs. individual-level behaviour) change policies via moral obligation, $b = 0.16$, $SE = 0.04$, 95% CI [0.10, 0.25]. There was no direct effect of perceived national wealth on support for structural (vs. individual-level behaviour) change policies, $b = 0.14$, $SE = 0.08$, $t(461) = 1.87$, $p = .063$, 95% CI [−0.008, 0.29], $R^2 = .01$. The indirect effect remained significant when controlling for social and economic political orientation, $b = 0.06$, $SE = 0.03$, 95% CI [0.002, 0.12] (see supplemental materials for details).

In summary, the findings suggest that people who perceive their country as wealthy are more likely to want their country to implement

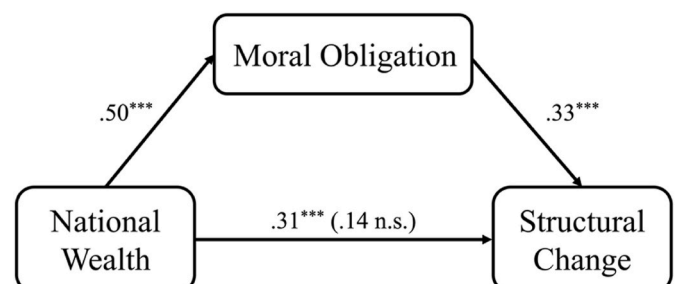


Fig. 1. Mediation analysis for Study 2.

¹ Additional analyses revealed that in all studies excluding participants had no substantive impact on the results. The zero-order correlations for all variables used in the analyses are reported in the supplementary materials for each study.

² Including additional control variables in the analyses for Studies 1 and 2 did not change the patterns of results (see supplemental materials).

climate policies aimed at structural change over those aimed at individual-level behaviour change because they believe that their country has the moral obligation to contribute to the solution of global issues.

5. Study 3

In Studies 1 and 2, we found that perceived national wealth is positively associated with support for structural (vs. individual-level behaviour) change policies. However, both studies were correlational and focused on the perceived wealth of a specific country (Australia or the UK). To address these limitations, in Study 3, we employed an experimental design in which we manipulated national wealth by assigning participants to either a fictional wealthy or poor country. We hypothesised that imagining living in a wealthy (vs. poor) country would increase people's support for structural (vs. individual-level behaviour) change policies adopted by their own country (relative to people's support for structural (vs. individual-level behaviour) change policies adopted by the country at the opposite end of the wealth spectrum).

5.1. Method

Participants. Based on the power analysis for Study 2, we recruited 400 participants living in the UK from Prolific in return for £1.50 and 401 participants (289 women, 109 men, 2 non-binary people, one missing; $M_{\text{age}} = 39.0$, $SD = 12.3$; range = 18–78 years; 82.3% White, 8.7% Asian, 3.7% Black, 4.5% other ethnicities, 0.7% prefer not to say) completed the survey. The pre-registration is available at <https://osf.io/zbf4h>.

Procedure and materials. Participants were introduced to a fictional world with six countries that have similar populations but differ in terms of their wealth (adapted from Tanjitpiyanond et al., 2022). Participants were randomly assigned to either the wealthiest country (with a GDP of \$2,100 billion) or the poorest country (with a GDP of \$60 billion). The differences in GDP reflect real-world differences between wealthy and poor countries. In both conditions, the assigned country was called “Hima” and the country on the opposite of the wealth spectrum was called “Dinh”. Participants were told that Hima is a very wealthy/poor country that has a 35 times greater/smaller GDP than Dinh's and has the most/least modern infrastructure, most/least advanced economy, and best/worst employment opportunities of the six countries. As a manipulation check, participants indicated the degree to which their country is wealthy and poor (e.g., “Hima is a wealthy country”). To further reflect on the wealth of their country, participants were asked to indicate the extent to which Hima is wealthier and poorer than other countries in the world. All items were measured on a scale from 0 (*not at all*) to 6 (*very much so*).

As in Study 2, participants then reported the degree to which they perceive their country to have a moral obligation to contribute to the solution of global issues ($\alpha = .87$) and were presented with a paragraph describing environmental problems the world is currently facing. They were asked to imagine that they had been elected to Hima's parliament and asked to vote on policy proposals addressing those environmental problems. Furthermore, participants were told that all countries are affected by environmental problems to a similar degree and that environmental destruction in one country has impact on all countries. The same climate change policies as in the previous studies were randomly presented (the wording was slightly adapted for the present design; see supplemental materials). Prior to each policy pair, a short paragraph on the negative impacts of the environmental issue the policies aim to address was presented (e.g., “Deforestation increases overall CO₂ emissions which are a major contributor to climate change”). The inclusion of these paragraphs aimed to provide context and enhance participants' understanding of the policy pairs. Participants were then asked to imagine that Dinh's parliament discusses the same policy

proposals and were asked to indicate which proposals they would want Dinh to implement. Finally, we used two simple attention checks.

5.2. Results and discussion

Twenty-five participants were excluded from the analyses because they failed at least one attention check and one participant was excluded because they did not consent to the use of their data. In total, 193 participants were in the poor-country condition and 182 participants were in the wealthy-country condition.

Manipulation checks. We used linear regression analyses to test whether conditions differed in their perceived wealth. Participants assigned to the wealthy country ($M = 5.88$, $SD = 0.49$) judged their country to be wealthier than those assigned to the poor country ($M = 0.07$, $SD = 0.27$), $b = 5.81$, $SE = 0.04$, $t(373) = 144.40$, $p < .001$, 95% CI [5.74, 5.90], $R^2 = .98$. Similarly, participants in the wealthy country condition ($M = 0.17$, $SD = 0.68$) judged their country as less poor compared to participants in the poor-country condition ($M = 5.85$, $SD = 0.65$), $b = -5.68$, $SE = 0.07$, $t(373) = -82.56$, $p < .001$, 95% CI [-5.82, -5.55], $R^2 = .95$. There were no differences between conditions in participants' social and economic political orientation, age, gender, education, and household income, suggesting random allocation of participants to conditions had been successful (see supplemental materials).

Main analyses. A linear mixed-effects model with participants and policy pairs as random intercepts was used. As predicted, the difference between preferring structural (vs. individual-level behaviour) change policies implemented by one's own country versus the country on the opposite side of the wealth spectrum was greater in the wealthy-country condition ($M = 0.83$, $SD = 1.96$) than in the poor-country condition ($M = -1.58$, $SD = 2.04$), $b = 2.37$, $SE = 0.21$, $t(373) = 11.21$, $p < .001$, 95% CI [1.96, 2.79], $R^2 = .27$ (see Fig. 2). Post-hoc analyses revealed that people in the wealthy-country condition more strongly preferred their own country ($M = 1.68$, $SD = 1.84$) to implement structural (vs. individual-level behaviour) change policies than the poor country ($M = 1.02$, $SD = 1.07$), $t(181) = 5.69$, $p < .001$, 95% CI [0.54, 1.11], $d = 0.43$. People assigned to the poor country showed the opposite pattern, that is, they more strongly preferred the wealthy country ($M = 2.19$, $SD = 1.99$) to implement structural (vs. individual-level behaviour) change policies than their own country ($M = 0.61$, $SD = 1.77$), $t(192) = 10.77$, $p < .001$, 95% CI [1.29, 1.87], $d = 0.84$.

Mediation analysis. A mediation analysis was conducted using the PROCESS macro for SPSS (Hayes, 2017), with condition (poor vs. wealthy) as the independent variable, preference for structural (vs. individual-level behaviour) change policies as the dependent variable and moral obligation of one's country to contribute to solving global issues as the mediator.³

A significant total effect was revealed, $b = 1.24$, $SE = 0.18$, $t(373) = 6.94$, $p < .001$, 95% CI [0.89, 1.59], $R^2 = .11$. Participants assigned to the wealthy country ($M = 5.18$, $SD = 0.97$) reported a greater moral obligation of one's country to contribute to solving global issues than participants assigned to the poor country ($M = 3.74$, $SD = 1.43$), $b = 1.45$, $SE = 0.13$, $t(373) = 11.43$, $p < .001$, 95% CI [1.20, 1.70], $R^2 = .26$. Moral obligation was positively associated with support for structural (vs. individual-level behaviour) change policies, $b = 0.43$, $SE = 0.07$, $t(372) = 6.12$, $p < .001$, 95% CI [0.29, 0.56], $R^2 = .08$. As predicted, there was an indirect effect of condition (poor vs. wealthy) on support for structural (vs. individual-level behaviour) change policies via moral

³ We only report the mediation analysis with the preference for structural (vs. individual-level behaviour) change policies for one's own country as the dependent variable as this measure matches the mediator variable. The pre-registered mediation analysis with the difference between one's own country and the other country as the dependent variable is reported in the supplemental materials.

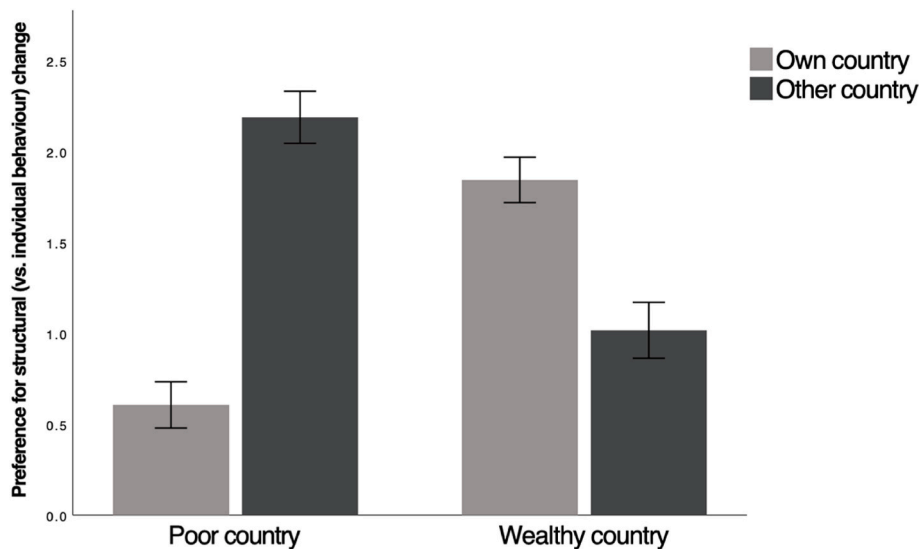


Fig. 2. Preferences for structural (vs. individual-level behaviour) change policies implemented by one's own country and the other country for the poor-country and wealthy-country conditions (Study 3).

obligation, $b = 0.62$, $SE = 0.12$, 95% CI [0.40, 0.86]. Moreover, there was a direct effect of condition (poor vs. wealthy) on support for structural (vs. individual-level behaviour) change, $b = 0.62$, $SE = 0.20$, $t(373) = 3.14$, $p = .002$, 95% CI [0.23, 1.01], $R^2 = .02$.

In summary, the findings suggest that people in wealthy countries are more strongly in agreement that their own country should implement structural (vs. individual-level behaviour) change policies than poor countries, whereas people in poor countries more strongly prefer wealthy countries to implement structural change than their own country. As in Study 2, the effect of national wealth on support for structural (vs. individual-level behaviour) change policies was mediated by perceived moral obligation of one's country to contribute to the solutions of global issues.

6. Study 4

In Study 4, we sought to replicate Study 3 using a real-world design. We conducted a quasi-experimental study in which we recruited participants from the UK (a wealthy country) and South Africa (a comparatively less wealthy country). We hypothesised that people in the UK would more strongly want their own country (vs. the other country) to implement structural (vs. individual-level behaviour) change policies compared to people in South Africa.

6.1. Method

Participants. We recruited 200 participants living in South Africa (144 women, 56 men; $M_{age} = 29.17$, $SD = 7.30$; range = 18–62 years; 83% Black, 8.5% Coloured, 6.5% White, 2.0% Indian/Asian) and 200 participants living in the UK (136 men, 63 women, one non-binary person; $M_{age} = 37.51$, $SD = 11.13$; range = 18–65 years; 90% White, 4.5% Asian, 3.0% Black, 2.0% other ethnicities, 0.5% prefer not to say) from Prolific in return for £1.20. The sample size was based on the power analysis for Study 2. The pre-registration can be accessed at <https://osf.io/3azwr>.

Procedure and materials. We used a design similar to Study 3 but compared participants living in the UK (a wealthy country) and participants living in South Africa (a comparatively less wealthy country). We chose to recruit participants from UK and South Africa because those countries differ in terms of their GDP but are rather similar in terms of population size and they emit similar amounts of CO₂ (Climate Watch, 2020). Participants were presented with a bar plot showing the GDP of

six countries where the UK had the highest GDP and South Africa had the lowest GDP. Similar to Study 3, participants were told that the UK is a wealthier country than South Africa (e.g., its GDP is 7 times larger than South Africa's GDP). Participants were then presented with the moral obligation measure twice, once asking about the moral obligation of one's own country to contribute to solving global issues ($\alpha = .86$) and once asking about the moral obligation of the other country ($\alpha = .83$). After this, participants were first presented with the policy proposal pairs and asked to indicate which policies they would want their own country to implement, and then asked to indicate which they would want the other country to implement. As in Study 3, a short paragraph on the negative impacts of the environmental issue the policies aim to address was presented before each policy pair. As a manipulation check, participants indicated on a scale from 0 (*not at all*) to 6 (*very much so*) the degree to which South Africa and the UK are wealthy (e.g., "South Africa is a wealthy country"). Finally, one simple manipulation check was used and participants were asked to report their social and economic political orientation.

6.2. Results and discussion

Fifteen participants were excluded from the analyses. Eleven South African participants and three UK participants failed the attention check and one South African participant did not consent to the use of their data.

Manipulation Checks. In order to test whether South Africa and the UK differ in their perceived wealth, linear regression analyses were used. South African participants judged the UK ($M = 5.55$, $SD = 0.81$) to be wealthier than South Africa ($M = 1.46$, $SD = 1.50$), $t(187) = 30.40$, $p < .001$, 95% CI [3.83, 4.36], $d = 2.22$. Consistent with this, UK participants judged the UK ($M = 5.11$, $SD = 0.91$) to be wealthier than South Africa ($M = 1.70$, $SD = 1.07$), $t(196) = 32.45$, $p < .001$, 95% CI [3.20, 3.61], $d = 2.31$. South African participants ($M = 4.21$, $SD = 1.83$) were politically more right-wing than UK participants ($M = 3.87$, $SD = 2.15$) in economic political orientation, $b = 0.89$, $SE = 0.17$, $t(362) = 5.15$, $p < .001$, $R^2 = .07$, and South African participants ($M = 3.30$, $SD = 1.47$) were politically more right-wing than UK participants ($M = 2.75$, $SD = 1.64$) in social political orientation, $b = 0.97$, $SE = 0.22$, $t(383) = 4.47$, $p < .001$, $R^2 = .05$. Moreover, South African participants ($M = 29.29$, $SD = 7.42$) were younger than UK participants ($M = 37.62$, $SD = 11.17$), $b = 8.33$, $SE = 0.97$, $t(383) = 8.58$, $p < .001$, 95% CI [6.42, 10.24], $R^2 = .16$; and there was a higher proportion of women among South African

participants compared to UK participants, $b = 0.41$, $SE = 0.05$, $t(382) = 8.71$, $p < .001$, 95% CI [0.32, 0.50], $R^2 = .17$.

Measurement invariance analyses. We performed invariance analyses using the lavaan package in R to test the validity of cross-country comparisons of the moral obligation and policy pair variables (Milfont & Fischer, 2010; Rosseel, 2012). We tested configural invariance to determine whether the same general factor structure was present across groups, assessed metric invariance to examine whether factor loadings were equivalent, and finally evaluated scalar invariance to determine whether item intercepts were consistent across the different groups (see supplemental materials for details). Across all variables, configural invariance models (Comparative Fit Indices (CFIs) ≥ 0.97 , Tucker-Lewis Indices (TLIs) ≥ 0.95 , RMSEAs ≤ 0.05) and metric invariance models (CFIs ≥ 0.97 , TLIs ≥ 0.96 , RMSEAs ≤ 0.06) showed a good fit. Metric invariance models did not demonstrate a significant decrement in fit compared to the configural invariance models, $\Delta\chi^2_s \leq 7.10$, $ps \geq .175$, suggesting that factor loadings were equivalent across groups.

The scalar invariance model exhibited a good fit for the moral obligation (own country) variable (CFI > 0.99 , TLI > 0.99 , RMSEA = 0.07) and did not show a significant decrement in fit compared to the configural model, $\Delta\chi^2 = 4.85$, $p = .088$. However, decreases in fit were observed for the other three variables, $\Delta\chi^2_s \geq 19.34$, $ps < .001$. We found that a good fit was achieved by excluding the first policy pair in the policy measure (own country) and the first and sixth pair in the policy measure (other country) (CFI's ≥ 0.97 , TLIs ≥ 0.96 , RMSEAs ≤ 0.05). Moreover, the fit did not significantly decrease compared to the metric invariance model, $\Delta\chi^2_s \leq 9.07$, $ps \geq .059$. However, the moral obligation (other country) variable could not be adjusted as it only consisted of three items, and therefore should be interpreted with caution. Although the original variables were used for the analyses reported below, we also conducted analyses with adjusted variables. These analyses are reported in the supplemental materials and reveal no difference in the patterns of results.

Main analyses. A linear mixed-effects model with participants and policy pairs as random effects was conducted. As predicted, the difference between the preference for structural (vs. individual-level behaviour) change policies for one's own country and the other country was greater for UK participants ($M = 0.74$, $SD = 1.49$) than for South African participants ($M = -0.48$, $SD = 2.19$), $b = 1.05$, $SE = 0.20$, $t(383) = 5.33$, $p < .001$, 95% CI [0.66, 1.43], $R^2 = .10$ (see Fig. 3). This effect remained significant when controlling for economic and social political orientation, age, and gender, $b = 1.23$, $SE = 0.25$, $t(357) = 4.92$, $p < .001$, 95%

CI [0.74, 1.72], $R^2 = .07$. Post-hoc tests revealed that UK participants more strongly preferred structural (vs. individual-level behaviour) change policies to be implemented by their own country ($M = 1.99$, $SD = 1.65$) than by South Africa ($M = 1.25$, $SD = 1.84$), $t(196) = 7.01$, $p < .001$, 95% CI [0.53, 0.95], $d = .42$. Furthermore, South African participants more strongly preferred the UK ($M = 0.52$, $SD = 2.30$) to implement structural (vs. individual-level behaviour) change policies compared to their own country ($M = 0.04$, $SD = 1.94$), $t(187) = 2.98$, $p = .003$, 95% CI [0.16, 0.79], $d = .22$.

Mediation analyses. A mediation analysis using the PROCESS macro for SPSS (Hayes, 2017) with condition (South Africa vs. the UK) as the independent variable, preference for structural (vs. individual-level behaviour) change policies as the dependent variable, and moral obligation of one's country to contribute to solving global issues as the mediator, was conducted. There was a significant total effect, $b = 1.95$, $SE = 0.18$, $t(383) = 10.63$, $p < .001$, 95% CI [1.59, 2.31], $R^2 = .23$. UK participants ($M = 4.88$, $SD = 1.24$) reported a greater perceived moral obligation of one's country to contribute to solving global issues than South African participants ($M = 4.05$, $SD = 1.52$), $b = 0.97$, $SE = 0.16$, $t(383) = 6.02$, $p < .001$, 95% CI [0.65, 1.28], $R^2 = .09$. Moral obligation had no significant effect on support for structural (vs. individual-level behaviour) change policies, $b = 0.11$, $SE = 0.06$, $t(382) = 1.92$, $p = .056$, 95% CI [-0.003, 0.23], $R^2 = .01$. The indirect effect of condition (South Africa vs. the UK) on support for structural (vs. individual-level behaviour) change policies via moral obligation was not significant, $b = 0.11$, $SE = 0.07$, 95% CI [-0.01, 0.25]. Moreover, there was a direct effect of condition (South Africa vs. the UK) on support for structural (vs. individual-level behaviour) change policies, $b = 1.84$, $SE = 0.19$, $t(383) = 9.64$, $p < .001$, 95% CI [1.47, 2.22], $R^2 = .19$.

We then conducted a mediation analysis, with condition (South Africa vs. the UK) as the independent variable, the difference between preference for structural (vs. individual-level behaviour) change policies implemented by one's own country and the other country as the dependent variable, and the difference between moral obligation to contribute to solving global issues of one's country and the other country as the mediator. A significant total effect was revealed, $b = 1.22$, $SE = 0.18$, $t(383) = 6.94$, $p < .001$, 95% CI [0.89, 1.59], $R^2 = .10$. UK participants ($M = 0.36$, $SD = 0.50$) showed a greater difference between perceived moral obligation of their own country and the other country than South African participants ($M = -0.27$, $SD = 0.72$), $b = 0.60$, $SE = 0.07$, $t(383) = 8.47$, $p < .001$, 95% CI [0.46, 0.74], $R^2 = .16$. The effect of the difference between moral obligation of one's own and the other

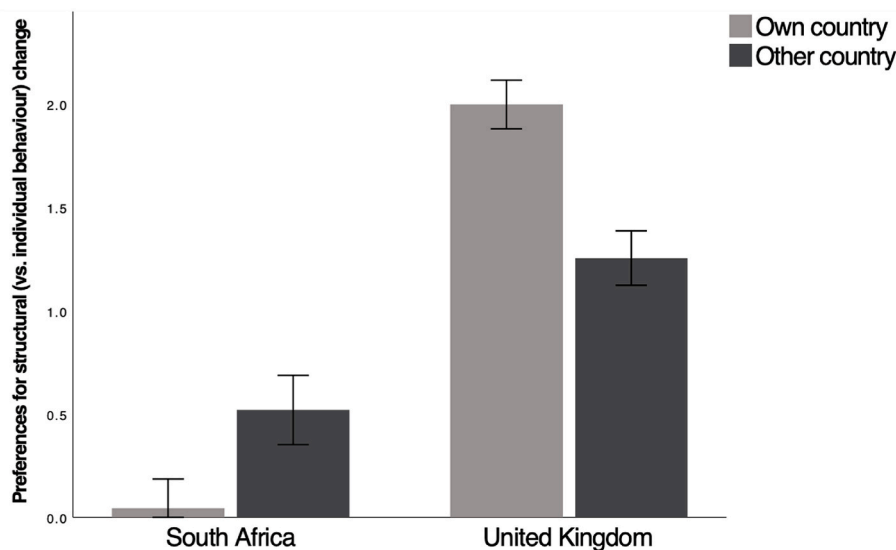


Fig. 3. Preferences for structural (vs. individual-level behaviour) change policies implemented by one's own country and the other country for South Africa and the United Kingdom (Study 4).

country on support for structural (vs. individual-level behaviour) change policies was not significant, $b = 0.25$, $SE = 0.14$, $t(382) = 1.83$, $p = .068$, 95% CI $[-0.02, 0.52]$, $R^2 = .01$. Furthermore, the indirect effect was not significant, $b = 0.15$, $SE = 0.10$, 95% CI $[-0.03, 0.36]$. Finally, there was a direct effect of condition (South Africa vs. the UK) on the difference between preference for structural (vs. individual-level behaviour) change policies for one's own country and the other country, $b = 1.07$, $SE = 0.21$, $t(383) = 5.17$, $p < .001$, 95% CI $[0.66, 1.47]$, $R^2 = .06$.

Due to the non-significant findings, we exploratively examined the effects of moral obligation of one's own country on preference for structural (vs. individual-level behaviour) change policies for each country separately. A linear mixed-effects model analysis revealed a significant effect for UK participants, $b = 0.30$, $SE = 0.08$, $t(195) = 3.60$, $p < .001$, 95% CI $[0.13, 0.46]$, $R^2 = .06$, and a non-significant effect for South African participants, $b = -0.01$, $SE = 0.08$, $t(186) = -0.11$, $p = .911$, 95% CI $[-0.17, 0.15]$, $R^2 < .01$. Similarly, the difference between perceived moral obligation of one's country and the other country significantly predicted the difference between preference for structural (vs. individual-level behaviour) change policies for one's own country and the other country for UK participants, $b = 0.50$, $SE = 0.18$, $t(195) = 2.80$, $p = .006$, 95% CI $[0.15, 0.85]$, $R^2 = .04$, but not for South African participants, $b = 0.11$, $SE = 0.20$, $t(186) = 0.54$, $p = .590$, 95% CI $[-0.29, 0.50]$, $R^2 < .01$.

In summary, we replicated the findings of Study 3 in a real-world context. The present findings suggest that when reminded of their country's relatively high wealth, people living in the UK showed a stronger preference for their country to implement structural (vs. individual-level behaviour) change policies than South Africa (a comparatively less wealthy country). Conversely, when reminded of their country's relative low wealth, people in South Africa, more strongly would like the UK to implement structural (vs. individual-level behaviour) change policies than their own country. The proposed mediation through moral obligation of one's own (vs. the other country) to contribute to the solution of global issues was not significant. Exploratory analyses revealed that this is due to moral obligation not predicting support for structural (vs. individual-level behaviour) change policies among South African participants. One possible explanation for this finding is that perceived moral obligation to contribute to the solution of global issues is dependent on the current social and political discourse in the respective country. For example, compared to other social and political issues, climate change is viewed as a less urgent and important problem in South Africa than in the UK (Gebrekal, 2022).

7. General discussion

Across four studies, we found support for our hypothesis that greater perceived national wealth is linked to people's support for structural climate policies over those aimed at individual-level behaviour change. Perceiving one's country as wealthier positively predicted people's support for structural (vs. individual-level behaviour) change policies in a UK sample (Study 1) and an Australian sample (Study 2), and this could not be explained by people's political orientations. Testing the causality of this association in Study 3, we found that people assigned to a fictional wealthy country preferred their own country to implement structural (vs. individual-level behaviour) change policies more than a poor country, whereas people assigned to a fictional poor country preferred a wealthy country to implement structural (vs. individual-level behaviour) change policies more than their own country. Study 4 showed that these findings extend to a real-world context. Individuals living in the UK, when reminded of their country's relatively high wealth, wanted their own country to implement structural (vs. individual-level behaviour) change policies more than South Africa (a comparatively less wealthy country). People living in South Africa, when reminded of their country's relatively low wealth, wanted the UK to implement structural (vs. individual-level behaviour) change policies more than their own country.

We found some evidence for our hypothesis that the observed effects are mediated by perceiving one's country to have more of a moral obligation to contribute to the solution of global issues. There was support that people who perceive their country as wealthy (Study 2) or imagine living in a wealthy (vs. poor) country (Study 3) want their country to implement climate policies aimed at structural change over those aimed at individual-level behaviour change because they believe that their country has a moral obligation to contribute to the solution of global issues. However, the mediation was not significant in Study 4, as moral obligation did not predict support for structural (vs. individual-level behaviour) change policies among South African participants. We speculated that this may be due to the current social and political discourse in South Africa where climate change is viewed as a less important issue relative to other social and political issues (cf. Gebrekal, 2022). Future research should investigate whether this is unique to South Africa or applies to poorer countries more generally and whether a more specific belief that one's country has a moral obligation to contribute to limiting climate change may instead predict South African individuals' support for structural climate policies.

Together, the present studies suggest that people in both wealthy and poor countries, and within wealthy countries particularly those who view their country as wealthy, believe that national wealth entails a greater obligation to implement structural change necessary to limit climate change. This contrasts with tendency of policymakers from wealthy countries to resist equity principles that require wealthy countries to contribute more to climate change mitigation than poor countries (Lange et al., 2007). The present findings, however, suggest that people accept a greater responsibility for their country to adopt structural climate policies because they view it as the morally right thing to do.

Understanding why people's views are at odds with those of their policymakers requires further research. For example, the influence of interest groups, political parties, or economic elites may hinder the incorporation of equity principles into international climate policy (Burstein, 2003; Lange et al., 2007). However, public opinion can have a strong influence on policy outcomes (Burstein, 2003; Moore et al., 2022), and thus, turning support for structural change into collective action may effectively lead policymakers to adopt structural climate policies (cf. Louis, 2009). Future research is needed to investigate whether and under which conditions people's support for structural policies translates into collective action intentions and ultimately into collective action participation (Louis, 2009).

The present investigation extends existing research that has identified factors contributing to overall climate policy support (such as high levels of climate change concern and a strong environmental identity, Steg, 2023), by investigating a factor that increases people's support for effective climate policies over those with more limited effectiveness. As such, it acknowledges that climate policies vary in terms of their effectiveness, broadly ranging from policies aimed at individual-level behaviour change to those aimed at structural change. Individual-level behaviours have only limited impact on greenhouse gas emissions because they are constrained by the physical and social context within which people act such as the industrial infrastructure and cultural norms of one's country (Amel et al., 2017). For example, a country's greenhouse gas emissions may be high despite individuals saving energy if fossil fuels are the country's primary energy source. In contrast, even high energy usage may not lead to high emissions in a society in which renewables are the main energy source.

By contrasting people's support for structural climate policies with those aimed at individual-level behaviour change, we also acknowledge the reality of policy-making processes where often policymakers, institutions, corporations, scientists, and the public only have limited time and financial resources to focus on or implement policies. Moreover, it recognises that support for individual-level behaviour change policies may diminish support for structural climate policies by (falsely) giving people the impression that climate change can be limited by individuals'

actions and does not require structural change (Hagmann et al., 2019; Knook et al., 2022; Ling & Xu, 2021; Werfel, 2017).

By recognising the importance of focusing on structural solutions to climate change, the present research moves beyond the conventional scope of environmental psychology. As psychology has the individual at the centre of its analysis, it typically focuses on individual-level behaviours (Chater & Loewenstein, 2022). Yet, individuals are ultimately responsible for decisions on the institutional and governmental levels and influence policymaking through public opinion and collective action. This underscores the potential for environmental psychology to expand its scope and play a more significant role in understanding the structural dimensions of climate change mitigation.

Future research should investigate other factors that may influence people's support for climate policies aimed at structural change over those aimed at individual-level behaviour change. For example, perceived inequality, perceived political stability, trust in institutions and the government, or political participation may influence the degree to which people support the structural transformations required to limit climate change. Support for structural climate policies may also be affected by ideological factors such as political orientation or free market beliefs, as well as cultural values (cf. Hornsey et al., 2016). Finally, people's social identities may influence the extent to which people support structural change. For example, people who are more vulnerable to climate change such as women, racial and sexual minorities, and people of lower socio-economic status may be more strongly motivated to endorse structural change (e.g., Benevolenza & DeRigne, 2019; Berberian et al., 2022).

A limitation of our research is that we employed a forced-choice design, which allowed us to assess participants' relative preferences for structural and individual-level policies. However, this approach did not allow us to measure the absolute levels of policy preferences, raising the possibility that perceived national wealth decreased preference for individual-level behaviour change policies rather than increased preferences for structural policies. To develop a more comprehensive understanding of policy preferences in relation to national wealth and other relevant factors, future research should investigate support for structural policies separately from support for individual behaviour change policies. Furthermore, the use of measurement-of-mediation designs limits causal inferences due to the possible presence of confounding variables and the lack of clear temporal precedence (Pirlott & MacKinnon, 2016). Future research should use manipulation-of-mediator designs to provide stronger evidence of causality. Another limitation of our research is its primary focus on legislative structural policies. Future research should investigate whether the observed effect extends to other structural policies such as public investments and market incentives, and whether perceived national wealth differentially impacts public support for these different types of structural climate policies (IPCC, 2022; Schiliro, 2012; Stuart, 2022). Finally, the demographic composition of our study samples is limited, with a majority of participants being women and White (in the UK and Australian samples). For a broader generalisability of our findings, future research should aim to include more diverse samples.

Although our studies used both Western and non-Western samples, future research should also investigate whether the effect of perceived country wealth on support for structural climate policies generalises to all countries, and whether there are moderators of the observed effect. For example, fossil fuel dependency may moderate the degree to which national wealth predicts structural (vs. individual-level behaviour) change policies (cf. Hornsey et al., 2018). In countries whose wealth is directly linked to high CO₂ emissions (Matthews, 2016), the association may be weaker due to economic interests. Alternatively, it may be stronger if people in fossil fuel reliant countries perceive an even greater obligation for their country to contribute to climate change mitigation. Furthermore, research should investigate whether perceived national wealth does not only increase support for structural climate policies but also increases support for structural approaches to other global issues

such as poverty or global health crises.

Our findings hold implications for environmental organisations and environmental activists. Particularly in wealthy countries, they may gain public support for structural climate policies by appealing to their country's moral obligation to implement structural change. By doing so, environmental organisations and activists may counter common narratives in wealthy countries that deflect the blame for climate change to developing countries. For example, some Australian politicians and media have rejected a responsibility for climate change by arguing that China and India are to blame for a large part of emissions (Murali et al., 2021). Australian environmental organisations and activists may appeal to Australia's moral obligation to implement structural climate policies because it is a wealthy country and as such has the capacity to do so without having to face severe negative consequences (Bruckner et al., 2022; Ringius et al., 2002). The present findings may also help policymakers who seek to identify the most effective message framing to gain support for structural climate policies or to incorporate equity principles such as the ability-to-pay rule in international climate negotiations (Lange et al., 2007).

8. Conclusion

Climate change is one of the greatest threats facing humanity. To avoid catastrophic consequences of climate change such as intense droughts, rising sea levels, or water scarcity, it is no longer sufficient to focus on individual-level behaviour change but structural change is urgently needed (IPCC, 2022). The present investigation showed that people believe that wealthy countries have a greater obligation to implement structural changes to limit climate change than poor countries, and within wealthy countries, those who perceive their country as wealthier are more likely to endorse structural climate policies over policies aimed at individual-level behaviour change. These findings are encouraging news to environmental organisations and activists in wealthy countries, as well as to policymakers who seek to incorporate ability-to-pay principles in international climate negotiations. Overall, they suggest that there is public support for wealthy countries to be at the forefront of the structural change needed to control and limit climate change.

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Ethics statement

This research has been approved by the Human Ethics Research Committee (2022/HE001111) at the University of Queensland.

Disclosure of data collection and analysis

The data and materials of all studies are available at https://osf.io/yfp27/?view_only=bc32ed9fce04a369d7e979e52601a96. We confirm that all measures, conditions, data exclusions, and methods of determining sample sizes were reported.

CRediT author statement

Christoph Klebl: Conceptualization, Methodology, Investigation, Formal analysis, Writing - Original Draft. **Jolanda Jetten:** Conceptualization, Methodology, Writing - Review & Editing, Funding acquisition.

Declaration of competing interest

None.

Appendix A. Supplementary data

Supplementary data to this article can be found online at <https://doi.org/10.1016/j.jenvp.2023.102055>.

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