



Explaining citizens' perceptions of international climate-policy relevance



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ABSTRACT

This paper empirically analyses the antecedents of citizens' perceptions of the relevance of international climate policy. Its use of representative surveys in the USA, China and Germany controls for different environmental attitudes and socio-economic factors between countries. The findings of the micro-econometric analysis suggest that the perceived relevance of international climate policy is positively affected by its perceived effectiveness, approval of the key topics discussed at international climate conferences, and environmental attitudes, but is not affected by perceived procedural justice. A higher level of perceived trust in international climate policy was positively related to perceived relevance in the USA and in China, but not in Germany. Citizens who felt that they were well informed and that their position was represented at climate summits were more likely to perceive international climate policy as relevant in China in particular. Generally, the results show only weak evidence of socio-demographic effects.

1. Introduction

The COP 21 Paris Agreement (UNFCCC, 2015) provides a framework for the first long-term global climate treaty. It therefore represents a landmark in international climate-policy efforts to keep the increase in global temperature at less than 2 °C above pre-industrial levels. Ultimately, however, the success of the Paris Agreement will depend upon countries' ability to act on their climate commitments by implementing measures domestically. In line with the findings of Oberholzer-Gee et al. (1997) and Shwom et al. (2010), citizens' acceptance of international climate-policy outcomes is expected to indicate the level of domestic public support for these measures. With the exception of those by Bostrom et al. (2012) and Schleich et al. (2016), comparisons of climate-policy perceptions across countries are typically limited to analyses of awareness of the reasons and consequences of climate change (e.g., European Commission, 2011; Leiserowitz et al., 2012; Lorenzoni and Pidgeon, 2006; Tranter and Booth, 2015). A better understanding of cross-national differences and similarities in the factors driving citizens' perceptions of international climate-policy acceptance could aid the design of more-effective international climate policy, in particular if politicians try to take their citizens' stance on these issues into account. However, no study thus far has empirically explored these factors in a multivariate framework.

The primary objective of this paper is to explore in a cross-country comparison the antecedents of citizens' acceptance of international

climate policy – or, more precisely, of their perceptions of international climate-policy relevance. We explore the effects of citizens' perceptions of policy effectiveness, procedural justice, trust, and environmental attitudes on perceptions of international climate-policy relevance. Our econometric analysis relies on original representative surveys among citizens in the USA and China (two of the largest emitters globally), and in Germany (the largest emitter in the European Union). Thus, our findings also allow for insights into differences across these countries. This research is novel through its focus on the antecedents of citizens' perceptions of climate-policy relevance and the use of multivariate cross-country analyses with representative samples.

The remainder of the paper is organised as follows. Section 2 presents a brief review of the literature on the antecedents of perceptions of international climate-policy relevance. Section 3 describes the survey, variables used in the econometric analysis, and sample demographics; it also provides descriptive statistics for the samples of the three countries. Section 4 then presents and discusses the findings, distinguishing between the effects of perceived climate-policy characteristics, environmental attitudes and socio-demographics. Finally, Section 5 summarises the main findings, and discusses policy implications.

2. Background

From an economics perspective, the public-goods (global-com-

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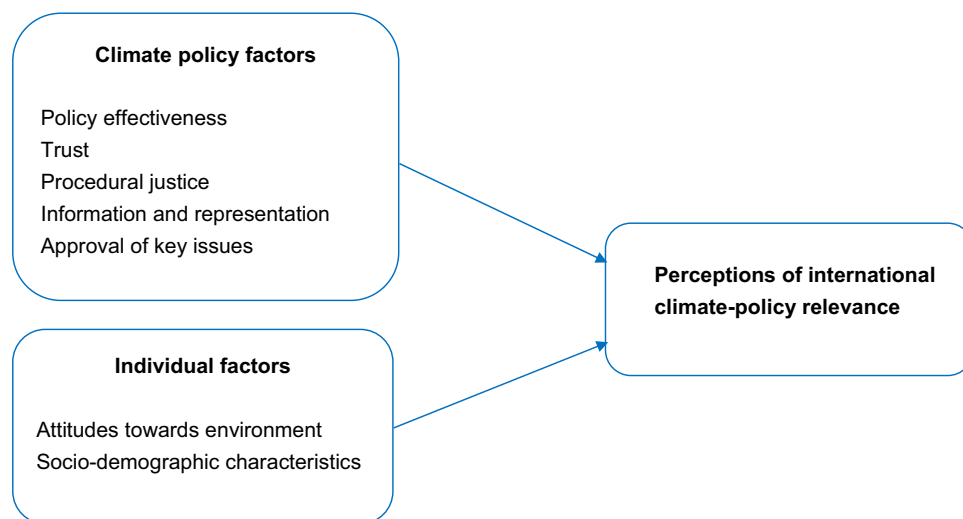


Fig. 1. Antecedents of citizens' perceptions of international climate-policy relevance.

mons) nature of countries' efforts to mitigate greenhouse-gas emission rationalises international climate policy (e.g., McKibbin and Wilcoxon, 2002). Since mitigation efforts are costly, countries have little incentive – when deciding on the level of their efforts – to consider the benefits of these on the wellbeing of other countries. Instead, they are likely to be better off by free-riding on other countries' efforts. As a result, global mitigation efforts are too low (representing a prisoner's dilemma, or tragedy of the commons). This situation provides the economic rationale and justification for international climate policy.

Citizens' perceptions of international climate-policy relevance may be negatively affected by several factors that have characterised such policy in the past. First, citizens may question policy *effectiveness*. After the Kyoto Protocol was adopted in 1997, progress in international climate policy was slow and faced several setbacks. Most prominently, the COP 15 climate summit in Copenhagen in 2009 did not produce a post-Kyoto agreement. Industrialised countries (notably the USA) feared that greenhouse-gas emission targets might threaten the competitiveness of their economy (e.g., Pauwelyn, 2007). Emerging and developing countries (in particular China) were concerned that emission targets might inhibit their future economic growth ('cap on development') (e.g., Banerjee, 2012). Eventually, a post-Kyoto agreement was established at COP 21. The Paris Agreement reaffirms the 2 °C target, and also calls for efforts to keep the global temperature increase below 1.5 °C (UNFCCC, 2015). Yet, similarly to the voluntary mitigation pledges that countries had made earlier (for instance, at COP 15) (e.g., Goldemberg and Guardabassi, 2015; Höhne et al., 2012; Roelfsma et al., 2014), the so-called Intended Nationally Determined Contributions (INDCs) – which formed the basis of the Paris Agreement – are unlikely to be effective in reaching the 2 °C target (OECD, 2015). While perceptions of the effectiveness of international climate policy per se have not yet been explored, Rhodes et al. (2014) did not find a relationship between the acceptance of various domestic policy instruments and the perception of policy effectiveness for a representative sample of citizens in British Columbia, Canada.

Second, in the absence of a supranational authority, the outcomes of international climate conferences cannot be credibly enforced. In the past, climate negotiations have also floundered over the issues of enforcement of commitments and monitoring of emissions. Therefore, citizens may not *trust* countries (or politicians) to follow through on the commitments made at these summits. For example, due to a lack of

domestic political support, the USA refused to ratify the Kyoto Protocol, and Canada formally withdrew from it in 2011. Likewise, China was previously unwilling to have its greenhouse-gas emissions monitored by third parties. Therefore, and in line with Furlong (2005), citizens' perceptions of international climate policy may also be shaped by their confidence in the structure or process of international climate policy (*trust*). Notably, the empirical studies by Hammar and Jagers (2006), and Jagers et al. (2010) show that citizens' trust in government correlates with their attitudes towards policy instruments. The descriptive statistics provided in the study by Schleich et al. (2016) suggest that a large share of the population in the USA, China and Germany lacks trust in international climate agreements.

Empirical studies analysing individuals' perception of international climate policy have focused on individual preferences for various burden-sharing criteria (*distributive justice*). Relying on representative surveys among citizens, Carlsson et al. (2013) (for the USA and China), Bechtel and Scheve (2013) (for France, Germany, the UK and the USA), and Schleich et al. (2016) (for the USA, China and Germany) explore citizens' preferences for criteria to be applied when apportioning the future costs of climate-change mitigation across countries – such as the 'polluter pays' principle, ability-to-pay, capabilities or egalitarian approaches.

In addition to distributive justice, individuals may also be concerned about *procedural justice* associated with international climate policy. For example, Lind and Tyler (1988) stress that citizens care not only about the outcome but also about the justice of the process – i.e., whether they perceive the process to be fair and transparent. If these conditions are not met, individuals are less willing to accept the outcomes. Klinsky and Dowlatabadi (2009), and Okereke (2010) note that procedural justice in climate policy requires the interests of all countries to be represented at the climate negotiations, in particular the interests of those countries most vulnerable to the effects of climate change.

Citizens' perceptions of climate-policy relevance may also depend on their perceptions of climate conferences and negotiations. As far as climate conferences, we explore the impact of whether citizens feel that they are well *informed* about these conferences and that their interests are well *represented* there. As far as contents of climate negotiations, we explore citizens' *approval of the key issues* discussed at climate conferences. As pointed out by Grubb (2006, p. 506), effective future

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