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Survey experimental evidence from Mexico and Sweden

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Abstract

Economists and policy experts have long argued for the implementation of carbon taxes as the most cost-efficient climate policy instrument to decrease carbon emissions and enhance climate change mitigation. Public support for such taxes is generally lacking, however, compromising their political feasibility. While a range of determinants of climate policy attitudes have been studied, the role of institutional context, and specifically corruption perceptions in explaining public aversion towards climate taxes has been largely un-explored. This paper investigates the links between corruption perceptions, trust, and attitudes towards climate taxes in a survey experiment fielded in Sweden and Mexico. Using mirrored vignettes to stimulate high-corrupt and low-corrupt perceptions, the analyses evaluate the effect of corruption perceptions on trust and attitudes towards climate taxes and explore potential individual-level mechanisms at play using post-treatment questions. The study shows that increased corruption perceptions decrease positive attitudes towards climate taxes, even among those who hold pro-environmental value orientations and concerns and political value orientations in favor of state regulation. It suggests that decreased levels of political and institutional trust in particular may explain this effect. The paper contributes to an increased understanding of the negative effect of corruption perceptions on climate policy attitudes and policy-specific beliefs, and outlines avenues for future research.

Key words: Carbon taxes, Corruption, Trust, Policy attitudes, Survey experiment.

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Introduction

Global warming is one of the most pressing global challenges of today. According to the United Nations International Panel on Climate Change, IPCC, the primary cause of climate change is human combustion of fossil fuels, and emissions of carbon dioxide (CO_2) and other greenhouse gases (GHGs) into the atmosphere. Without more ambitious climate targets and policies, the global temperature may increase by 2.4°C or more by the end of this century (Climate Action Tracker, 2021; UNEP, 2021).[1] While the latest report from the IPCC shows that there has been a consistent expansion in policies and laws addressing climate change mitigation, more climate action is needed. To limit further global warming and avoid adverse effects of climate change, immediate action and policy instruments across all sectors are needed (IPCC, 2022).

According to many economists, implementing carbon taxes[2] is the most cost-efficient way to decrease carbon emissions, and it is a policy instrument that has been widely promoted by policy experts and still is today (OECD, 2019, 2021; World Bank, 2021; IMF, 2021). The 2021 United Nations Handbook on Carbon Taxation for Developing Countries promoted carbon taxes as an important part of the government toolbox of economic policy instruments that countries have at their disposal to mitigate climate change (UN, 2021). With lessons learned from research mainly conducted in developed countries, this policy instrument is seemingly promoted as a universal solution to climate change.

Carbon taxes are being considered or implemented on national and subnational levels in many Western countries and beyond (World Bank, 2021). With carbon taxes on the policy agenda in many countries, more research is needed to determine the political feasibility and effectiveness of this particular climate policy instrument in diverse institutional contexts. While carbon taxes have been found to effectively stimulate reductions in emissions (e.g. Andersson, 2019; Ghazouani et al. 2020; Li & Yao, 2020), they may not work as effectively everywhere. What has worked in low corrupt countries with high levels of trust, for example, may not work in more corrupt countries where levels of trust are usually lower.

While many determinants of policy attitudes have been studied in the literature on climate policy support, the role of institutional factors such as quality of government (QoG) and corruption in explaining attitudes have surprisingly been lacking. Likewise political trust, despite having been studied rather extensively (e.g. Hammar & Jagers, 2006; Konisky et al., 2008; Hammar et al., 2009; Kollmann & Reichl, 2013; Harring & Jagers, 2013; Fairbrother et al., 2019; Stadelmann-Steffen & Eder, 2021), has received very little attention compared to the attention that it needs and deserves (Lamb & Minx, 2020).

A handful of observational studies examine the correlations between corruption, QoG, and trust with attitudes towards and the stringency of climate policies (e.g. Harring, 2014; Rafaty, 2018; Davidovic & Harring, 2020; Davidovic et al., 2020; Fairbrother et al., 2019; Kulin & Sevä, 2021; Davidovic, 2022). While QoG and corruption appear to correlate with public attitudes towards environmental and climate taxes in

[1] A global warming of 1.5°C or more most likely will make extreme weather events such as floods, droughts, storms, heat waves, and fires more common (IPCC, 2022).

[2] A carbon tax is a tax rate applied to the emission of GHGs and specifically CO_2. Essentially, a price on carbon is established by setting a tax rate on the amount of CO_2 emissions released during the combustion of fossil fuels (Williams, 2017).

particular, the evidence of causal effects is limited. Specifically, questions remain regarding whether citizens' corruption perceptions shape climate policy attitudes, and the individual-level mechanisms at play.

This paper speaks to this research gap. First, the study aims to show whether there is an effect of citizens' corruption perceptions on their support for and acceptance of climate taxation. Specifically, it investigates if perceptions of high corruption decrease acceptance and support for carbon taxes and climate taxes in general. Second, exploring the underlying mechanisms, it investigates the effect of corruption perceptions on social, political, and institutional trust. The mediating role of various trust-related mechanisms vis-a-vis policy-specific beliefs (PSBs) in explaining the observed effect of corruption perceptions on public attitudes towards climate taxes is also scrutinized. Third, by examining the moderating role of value orientations on the link between corruption perceptions and policy attitudes, it aims to encourage research on how to increase public support for climate taxes across different segments of the population.

Adopting survey experiments to fulfill the above aims and collecting and analyzing data from more than 2000 individuals in Sweden and Mexico respectively, the study shows that increased corruption perceptions significantly reinforce negative attitudes towards climate taxes and decrease positive policy attitudes foremost among those holding pro-environmental values and concerns and pro-state regulation orientations. Exploratory analyses suggest that decreased levels of political and institutional trust in particular may explain the negative effect. However, further analyses to gauge the more specific underlying individual-level mechanisms are needed.

The study contributes to an increased understanding of public resistance towards carbon taxes in particular. It provides insights into how corruption perceptions both in high-corrupt and low-corrupt settings impact climate policy attitudes and potentially informs policy makers how to construct more effective and successful climate policies in diverse institutional contexts. The study has important policy implications, and in continuing the research agenda promises more practical recommendations for policy makers.

What we know about the link between corruption and public attitudes towards climate policies and the way forward

While many determinants of climate policy attitudes, including attitudes towards environmental taxation have been studied in the literature (e.g. Drews & van den Bergh, 2016; Carattini et al., 2018; Maestre-Andrés et al., 2019; Bergquist et al., 2022), the role of quality of government (QoG) and corruption[3] have received limited attention and have been largely left unexplored.

A handful of observational studies examine the correlations between corruption – the main focus in this paper – and attitudes towards environmental and climate policy instruments (e.g. Harring, 2014, 2016; Davidovic & Harring, 2020; Davidovic et al., 2020). They show that on the country level, high levels of

[3] In this paper, corruption is perceived as one of the three underlying dimensions of QoG - the other two dimensions are bureaucratic effectiveness and rule of law (see theory section in Davidovic, 2022). While these are the common defining features, QoG as a concept and what it entails is contested (see e.g. Agnafors, 2013; Rothstein, 2021).

corruption are associated with greater aversion towards climate taxes. They find that in countries with corrupt political institutions support for such taxes is generally lower, whereas in countries with less corruption support is conversely higher, especially among those who hold pro-environmental and leftist political value orientations.

These studies show that levels of corruption correlate with levels of support for climate taxes cross-nationally, and provide convincing theoretical explanations as to why these patterns may exist. However, evidence of the causal effects of corruption on climate policy attitudes is limited and the more specific individual-level mechanisms at play have not been investigated. One reason for this may be the lack of data on policy attitudes over time (Oehl et al., 2017), and data allowing for more detailed analyses of theorized underlying individual-level mechanisms.

Applying other methods on individual-level data regarding corruption perceptions and climate policy attitudes seems like a fruitful way forward. Experiments in particular may allow for more in-depth analyses of the individual-level mechanisms and getting one step closer to determining the causality of observed cross-national relationships.[4] Moreover, in continuing this research agenda, measuring corruption perceptions of citizens rather than those of country experts in explaining policy attitudes seems crucial to arrive at informed policy implications.[5]

A closer look at the literature on corruption, trust, and policy attitudes

A review of the literature can further enhance our understanding of the theorized relationship between corruption perceptions and climate policy attitudes and give us some ideas about the underlying individual-level mechanisms. This section reviews the relevant literature within and outside the environmental policy domain exploring the links between quality of government (QoG), corruption perceptions, trust, public support for policies, and climate policy attitudes.

Defining the relationship between corruption and attitudes towards climate taxes

Corruption is considered as one dimension of QoG, defined as the capacity of the state to perform its activities in an efficient and impartial manner, and without corruption (Rothstein & Teorell, 2008). In this paper, it is argued to be a crucial dimension that impacts climate policy attitudes. In countries where corruption is high, aversion towards climate taxes has been found to be high (Harring, 2016).[6] Potential reasons are fear of money being lost to corrupt activities and wasted by inefficient political institutions. People may,

[4] Previous cross-sectional studies, particularly on the country level, are prone to higher risks of omitted variable bias since holding variation in other country-level characteristics than institutional quality constant is difficult. Analyzing the relationships on the individual-level in an experimental setting, allows holding other individual- level characteristics that may explain policy attitudes constant and isolating the effect of corruption perceptions.

[5] Although corruption perceptions of experts have been found to be highly correlated with those of the general public (e.g., Svallfors, 2013), and the former have served as useful proxies of the latter in cross-sectional studies.

[6] Malfunctioning institutions have been found to generate aversion towards economic incentives and demand for stricter regulations (Aghion et al., 2010; Dimitrova-Grajzl et al., 2011; Pinotti, 2011). This is explained by a lack of confidence in business actors and trust in other people to voluntarily contribute to public goods provision.

e.g., believe that revenues will be either wasted or stolen by corrupt politicians and bureaucrats or that tax-systems have been designed with loopholes allowing for evasion or unfair tax-loadings (Fairbrother, 2016).

Studies show that there is a strong positive relation between institutional quality and tax morale and a strong negative relationship between perceived tax evasion and *tax morale*, referring to individuals' intrinsic willingness to pay taxes (Alm & Torgler, 2006). Moreover, distrust in fellow citizens and politicians in particular is found to increase beliefs that others are evading taxes (Hammar et al., 2009). Thus, apart from beliefs that tax revenues may end up in the hands of corrupt politicians or bureaucrats and used for other purposes than climate change mitigation and public goods provision, tax evasion and noncompliance possible in corrupt systems may impact tax support. It should be noted that lacking social trust may not be the issue here, rather lacking institutional trust in proper enforcement and political trust in decision-making and choices of proper mitigation policies in the first place may impact policy attitudes.[7]

Similarly, studies on attitudes towards welfare policies show that people who perceive public officials as effective, fair, and uncorrupt are more supportive of higher taxes, spending, and welfare redistribution (Hetherington, 2004; Rudolph & Evans, 2005; Rothstein et al., 2012; Svallfors, 2013). Where officials are perceived as corrupt and untrustworthy, support is lower. Questions of the state's capacity to implement market-based policy instruments (Dahlström et al., 2013), such as taxes, may make implementation of such tools less likely and efficient. When the state is perceived to credibly enforce policies and effectively monitor and punish free riders (D'Arcy & Nistotskaya, 2016), aversion towards taxes can be expected to be lower.

In sum, trusting that taxes will be implemented without corruption, that everyone will pay their taxes (i.e. that the taxes will apply to everyone equally, without possibilities to evade them), and that the taxes will be handled properly, professionally, and efficiently by bureaucrats is expected to explain policy attitudes. In institutional contexts where corruption is low, credible enforcement high, and the bureaucracy highly skilled, professional, and effective public support for climate taxes can be expected to be higher than in contexts with high corruption.[8]

The mediating role of trust and policy-specific beliefs (PSBs)

Previous correlational studies of the relationship between QoG and climate policy attitudes have examined whether trust plays a mediating role using structural equation models (Davidovic & Harring, 2020; Davidovic, 2022). Different types of trust are analyzed in the same model, using traditional measures of trust, and finding only limited evidence of mediating effects. Political trust in particular appears to be one indirect pathway.[9] The availability of measures has limited the ability to examine the more specific individual-level mechanisms, however. More empirical analyses are needed to determine the explanatory power of trust on climate policy attitudes.

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[7] For example, if there is trust in proper and equal enforcement of policy instruments, there is less need for trusting others to voluntarily contribute to public goods and comply with policy instruments).

[8] Perceptions of the level of corruption in public authorities can be assumed to be important for climate taxes in particular, since this is a policy tool that involves money being transferred directly from citizens to the state. Similar transfers take place with fines related to some environmental regulations, but on a general basis, taxes always involve transfers of money and from a broader segment of the population.

[9] Political and institutional trust tend to stick out as more significant predictors of climate policy support than social trust in these analyses, in terms of effect size and statistical significance.

Corruption, as a form of unfair and untrustworthy behavior, is expected to reduce social, political, and institutional trust (You, 2017). It may reduce trust in other people to contribute to climate change mitigation efforts, but also in their propensity to comply with climate policy instruments. Moreover, it may reduce trust in politicians to decide on the best policy solutions to address climate change and allocate or invest tax revenues properly. It may also reduce trust in bureaucrats to implement them effectively and fairly. This may impact both trust levels and beliefs about the policy itself. If taxes are not credibly and properly enforced, and revenues collected and employed in an effective manner, without corruption, the tax itself may be deemed less effective (see Harring, 2016). In other words, corruption may impact trust, which includes beliefs about decision-making, enforcement and compliance, and the perceived effectiveness, fairness, and efficiency of the policy itself (i.e., 'policy-specific beliefs', PSBs).[10]

Fairness perceptions are a crucial mechanism linking 'revenue recycling' to support for carbon taxes (Jagers et al., 2021). In corrupt settings, poor use of tax revenues and unequal enforcement, may cause individuals to believe that taxes are unfair, lowering support. It may also make them consider taxes ineffective and cost-inefficient (i.e. that they will not reach their emission reduction objective in the least costly way), and that they will inflict higher costs on certain segments of the population more than others (i.e. that they will have a regressive effect).

While carbon taxes have been found to be effective in reducing emissions in the short term (Ghazouani et al., 2020), they have also been found to impose welfare losses especially among the poor (Moz-Christofoletti et al., 2021).[11] Distributions of costs and benefits of climate policy instruments across various groups influences public support, but devoting revenues to climate change mitigation has been found to raise overall support for carbon taxes (Dolsak et al., 2020). How governments allocate tax revenues is argued to be a key factor in explaining acceptability, and the enduring success of carbon taxes (Steenkamp, 2021). Believing that taxes are just another source of income, and not an instrument mainly employed to reduce emissions, may generate negative climate policy attitudes. The role of PSBs in explaining acceptability of climate policy instruments may vary across policy contexts, however (Ejelöv & Nilsson, 2020).

Theorizing potential heterogenous effects: corruption perceptions, value orientations, and attitudes towards climate policy instruments

Taking the literature one step further in understanding climate policy preferences of different segments of the population, the current paper aims to explore potential heterogenous effects of corruption perceptions on climate policy attitudes. Recent studies suggest that the effects of environmental concern and pro-envi-

[10] Determining the order of things in this causal chain, i.e. whether QoG impacts trust and in turn PSBs, is difficult. The paper, however, provides new insights into whether corruption perceptions may impact both trust and PSBs. Hence, putting these central individual-level explanatory factors of climate policy support in a more nuanced light.

[11] Many economists would disagree, however (e.g. Sterner et al., 2012; Jaccard, 2020). While regressive effects on low-income households of carbon taxes is a typical misconception among the public, it still affects attitudes.

ronmental values may not necessarily translate into support for climate policies and environmental protection (e.g. Smith & Mayer, 2018; Tam & Chan, 2019; Fairbrother et al., 2019). They show that the link between climate change awareness and concerns on the one hand and pro-environmental behaviors and policy attitudes on the other is generally weaker in contexts where political, institutional, and social trust are low, suggesting that trust is a moderator of the link between values and concerns and climate policy attitudes.

These studies all suggest that pro-environmental value orientations do not uniformly translate into pro-environmental behaviors and policy attitudes. However, they tend to overlook the role of the institutional context, and specifically individuals' corruption perceptions.[12] The few studies that do look at the role of institutional context in explaining policy attitudes, have found that environmentally concerned individuals are more likely to support climate taxes in low corrupt institutional settings. Similar effects have been found with regards to political value orientations, with leftist being more supportive of environmental and climate taxes than rightists in low corrupt countries (Davidovic, et al. 2020; Davidovic, 2022).

This paper argues that corruption perceptions may reduce positive attitudes among both leftists and rightists and environmentally and less environmentally concerned individuals alike. In fact, climate tax support can be expected to be low across the board since carbon taxes tend to be unpopular. However, increased corruption perceptions may especially reduce favorable attitudes towards climate taxes among environmentally concerned and left-oriented individuals, since they have more to lose by supporting these instruments in high-corrupt settings.

Leftists, who tend to be in favor of government regulation and more environmentally concerned than their rightist counterparts (Dunlap & McCright, 2008; Liu et al., 2014; Hamilton & Saito, 2015; McCright et al., 2016; cf. Fairbrother, 2016; Harring & Sohlberg, 2016), should become more negative towards taxes than rightists, who typically are against them. Those who care about nature and are concerned by climate change should similarly be less supportive of taxes than those who lack pro-environmental orientations and are less supportive of their cause.

Rightists and non-greens should be less susceptible to increased corruption perceptions and the consequences of corruption on effective implementation of climate taxes since they are already negative towards them and may not worry as much as to where tax revenues may end up or if others will comply. But the opposite may also be true. That is, rightists and non-greens (or 'greys') in corrupt settings may suspect that the carbon tax likely will not fulfill its originally intended emission reduction goal (which they do not hold in high regard), and hold similarly negative attitudes towards climate taxes as greens and leftists in highly corrupt settings.

[12] Individuals' corruption perceptions rather than actual levels of corruption in society can be argued to be key. This is because trust in others is contingent or shaped by *perceptions* of the trustworthiness of others and corruption, rather than the actual trustworthiness of others and levels of corruption in society (You, 2017). While corruption perceptions may differ from the actual level of corruption in a country, the latter impacts the former (Melgar et al., 2010). Thus, high levels of corruption perceptions are enough to cause negative effects on social, political, and institutional trust in society. In fact, as argued in this paper, measuring citizens' own corruption perceptions may be crucial to arrive at reasonable and informed policy recommendations.

Theoretical model and research hypotheses

The theorized causal relationship between corruption perceptions and attitudes towards climate taxes is illustrated in Figure 1. As illustrated by the theoretical model, corruption perceptions are assumed to impact both public attitudes towards climate taxes and trust. Specifically, they are hypothesized to generate negative policy attitudes and reduce levels of trust.

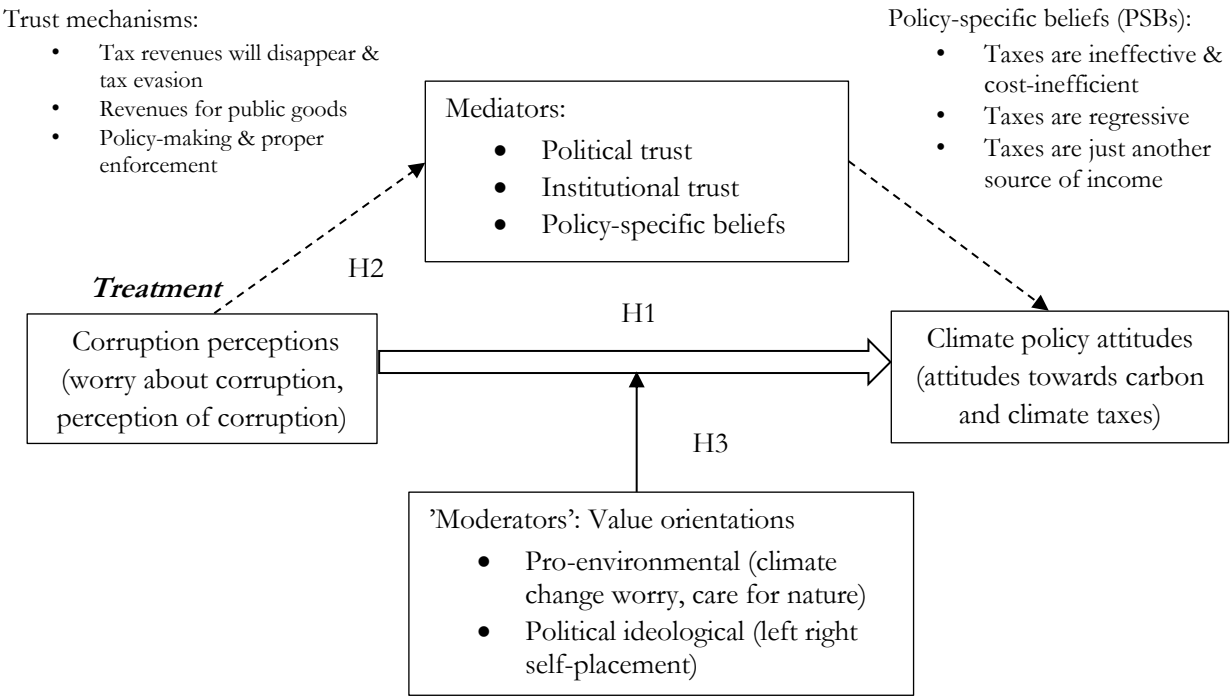
While there is no consensus in the literature on the direction of causality between QoG and trust, most scholars seem to argue that QoG foremostly impacts trust and not the other way around (e.g. Rothstein & Uslaner, 2005; Delhey & Newton, 2005; Kumlin & Rothstein, 2010; Richey, 2010; Rothstein & Eek, 2009; Dinesen & Sønderskov, 2021).[13] This paper posits that corruption perceptions impact trust, but acknowledges that they may be mutually reinforcing.

The effect of corruption perceptions on policy attitudes is also expected to be moderated by value orientations. Since there is not enough evidence to date on why leftists and rightists support or do not support climate taxes, and to some extent this also holds true for individuals holding green and 'grey' values, it is premature to postulate hypotheses on the direction and strength of the effect of corruption perceptions on climate policy attitudes among these groups. But since greens and leftists have been found to be less supportive of climate taxes in high-corrupt settings, corruption perceptions are expected to negatively impact attitudes particularly of those holding pro-environmental values and concerns and leftist political value orientations.

In addition to hypothesis testing, exploratory analyses of the more specific individual-level trust-mechanisms and policy-specific beliefs (PSBs) that potentially can explain the effect of corruption perceptions on policy attitudes are conducted. This may provide policy makers with a better idea on how to decrease negative attitudes towards climate taxes across different segments of the population, or at least spur investigations of hitherto unexplored mechanisms.

[13] Similarly, social and political trust are found to be positively correlated at the individual level, but there is limited evidence of a causal relationship. A recent study finds that political trust has a strong and positive causal effect on social trust, and limited evidence of the reverse causal direction (Dinesen et al., 2022), Another finds that social trust also impacts political trust (Bargsted et al., 2022). The current paper does not investigate the nature of this relationship. It examines both types of trust together with institutional trust to determine their explanatory power.

FIGURE 1, THEORETICAL MODEL



From this theoretical model three main hypotheses are derived and empirically tested:

H1: Increased corruption perceptions reduce positive attitudes towards climate taxes.
H2: Increased corruption perceptions reduce levels of political and institutional trust.
H3: The negative relationship between corruption perceptions and attitudes towards climate taxes is more pronounced among pro-environmentally and leftist oriented individuals.

Case selection and data

Sweden and Mexico as suitable cases

The survey experiment was conducted in Sweden and Mexico. The underlying rationale behind this choice was to study whether increased corruption perceptions may reduce positive attitudes towards climate taxes, or reinforce negative ones, in two diverse institutional settings. One with high and one with low levels of corruption. If we find similar effects in both cases, we can be more certain about the theorized relationship.

Moreover, both countries have carbon taxes in place,[14] and climate change is a salient issue in both countries, making them two suitable cases for a first experimental study on the effect of corruption perceptions on climate policy attitudes.

Mexico, a country with high documented distrust in public and political institutions and low trust in other people and strong perceptions that corruption is widespread (Morris & Klesner, 2010), is an interesting case to show the real impact of corruption on policy attitudes, but at the same time a more difficult case methodologically. Swaying corruption perceptions upwards in Mexico may be more difficult than in Sweden, where corruption is much lower. It may also be difficult to sway corruption perceptions downwards, in a highly corrupt setting.[15]

Sweden has been extensively studied, with regards to carbon taxes (e.g. Hammar & Jagers, 2006; Jagers & Hammar, 2009; Jagers et al., 2019; Andersson, 2019; Ewald et al., 2021). Mexico has not. Previous studies on Sweden have not included corruption and apart from being a familiar case was deemed interesting since it is the country with the highest carbon tax today. Mexico, being a relatively understudied case, may provide new insights on the climate policy perceptions of citizens and how they relate to the institutional setting.

Data collection and sample statistics

A pilot study of the experiment was run on mainly Swedish and Mexican students (about 100 respondents from each country) to ensure survey quality and evaluate the need for adjustments and correction of errors. No major adjustments were made to the final surveys, and no analyses were performed on the data from the pilot study.[16]

The final survey experiment was fielded in Mexico and Sweden between September 15 and October 19, 2022, in collaboration with the survey research company *Luc.id* (Coppock & McCeallan, 2019), now a Cint Group Company.[17] In total, 3001 Swedish respondents and 3015 Mexican respondents completed the surveys. After removing inattentive respondents who failed either one of the two data quality checks, those who spent less than 3-5 minutes on the survey,[18] and potentially problematic observations such as influential outliers based on various statistics, and data errors etc. (see Appendix B1), the samples on which analyses were conducted included 2,047 respondents from Sweden and 2,144 respondents from Mexico.[19]

The data were collected using nationally representative quotas on age and gender, with region, household income and education on natural fallout. However, the final samples deviate from the Swedish and Mexican populations on observable characteristics such as income and education. This implies that

[14] Sweden introduced its first carbon tax as early as in 1991, while Mexico has a carbon tax in place since 2014. Interested readers may want to learn more about the Swedish carbon tax here and the Mexican carbon tax here.
[15] The experiments confirm that this may be the case, since the hypothesized relationships emerge more clearly in the Swedish data than they do in the Mexican data. While the high-corrupt treatment reduces trust and positive policy attitudes in both countries, the low-corrupt treatment only appeared to have a significant effect in Sweden.
[16] A pre-analysis plan was pre-registered at the Open Science Framework (OSF) during the fielding of the pilot study, prior to the final data collection, and can be found through the following link: https://doi.org/10.17605/OSF.IO/U7PJG
[17] https://www.cint.com/
[18] The average time to complete the Swedish survey was 10 minutes and the Mexican survey 15 minutes. Those who spent less than 3 minutes on the Swedish survey or less than 5 minutes on the Mexican one were excluded.
[19] Considerations regarding sample size are discussed in relation to the power analysis (see Appendix G).

generalizations from the study to the general populations should be done with some caution (see Sample statistics and discussion on generalizability, Appendix F).

Research design

Survey experiment using mirrored vignettes

The survey experiment is a 'mirror experiment' that uses real world examples of corruption to observe an effect on attitudes towards climate taxation in general and existing carbon taxes in the respondents' countries. Hypothetical vignettes in survey experiments are popular in political science, but greater use of mirror experiments or controlled survey experiments that mimic real world situations and use real politicians has been endorsed by scholars (McDonald, 2020). The basic idea of the experiment is to sway subjects' corruption perceptions to observe an effect on policy attitudes, using real world examples and information about corruption. Since features of the institutional context itself cannot be manipulated, the experiment focuses on perceptions.

Since the experiment investigates the impact of citizens' corruption perceptions on their attitudes towards existing and future climate taxes, it refrains from using real world examples of corruption involving governing politicians to avoid adverse effects on political opinions. Instead, corruption perceptions are swayed using available data on general country performance rankings (such as Transparency International's Corruption Perceptions Index), publicly known corruption scandals involving past government figures that have been widely reported in media, and recent opinion polls of citizens' corruption perceptions in the respondents' countries.[20]

Hypothetical vignettes were considered, but they entail forcing respondents to think in several stages and would make the treatment effect unclear. Asking respondents whether they would support a carbon tax in a fictitious country without prior knowledge about the country or tax and giving them hypothetical treatment information, for example, may bias experimental results and exaggerate treatment effects on approval questions employed (McDonald, 2020).[21] This makes the use of more realistic vignettes a better choice for the current study.

After receiving one of the randomized vignettes, respondents were asked to answer four questions about their policy attitudes and a series of post-treatment questions, to map potential underlying individual-level mechanisms. Moderating effects of value orientations on the link between corruption perceptions and policy attitudes are explored using questions about pro-environmental attitudes and political views asked at the beginning of the survey. It should be noted that the analysis of moderating effects and exploratory analysis of mediating mechanisms are observational. The contents of the survey are described in more detail in the next section.

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[20] The research design employs similar strategies commonly used in the research on corruption messaging, where information about corruption is used to observe effects on political attitudes and behavior (Agerberg, 2021).

[21] The treatment effect in this case would be the effect of imagining oneself to be a citizen of a hypothetical country, with a hypothetical carbon tax, and given hypothetical and possibly unfamiliar corruption scenarios, on policy attitudes. Without prior knowledge about the country or the tax, which in this case is difficult to provide without treatment contamination, this may exaggerate treatment effects on the outcome questions employed.

The survey(s)

The survey experiment consists of randomized vignettes and a questionnaire of 25 questions (see Appendix A1). First, the respondents answered some basic background questions regarding their age, gender, education, and income etc., followed by questions on their political views and pro-environmental attitudes, and among them a simple screener question (see Appendix B1).

To study the effect of corruption on policy attitudes, respondents were then randomized into one of three groups of which two received the 'low-corrupt' or 'high-corrupt' treatment information, and the third group (the control group) received no treatment information (see Appendix A2). Then respondents were given an introductory text consisting of a few sentences on climate change and some bullet points on the carbon tax in their country, followed by four standard questions from the climate policy literature capturing attitudes towards climate taxes:

- How acceptable do you find the carbon tax in Sweden/Mexico?
- How supportive or opposed to are you of the carbon tax in Sweden/Mexico?
- To what extent are you in favor or against an increase in the carbon tax in Sweden/Mexico?
- How willing would you be to pay higher taxes to reduce climate change?

In the literature on attitudes towards climate change mitigation policies, it has been argued that different types of policy attitudes such as acceptance (of an existing policy), acceptability (of a future policy), and support (involving a behavioral intention such as willingness to pay for a climate policy) are theoretically and empirically distinct measures that need to be treated as such (Kyselá et al., 2019). Accordingly, this study aims to measure acceptance and support for an existing policy (a carbon tax), and acceptability or potential to accept an increase in the existing carbon tax, and support or readiness to support higher taxes to reduce climate change.

After the outcome questions two post-treatment questions followed, asking respondents to indicate how much they agree or disagree with a series of statements (10 in total, presented in randomized order). They were designed to measure 'trust-mechanisms' and policy-specific beliefs about the carbon tax. Then a few questions about respondents' perceptions of the public administration in their country followed. The first two representing the manipulation checks to determine if the treatment information influenced respondents' corruption perceptions:

- How worrying do you perceive the level of corruption in Sweden/Mexico? With five response categories ranging from not at all worrying (1) to extremely worrying (5).
- How widespread do you think corruption is in Sweden/Mexico? With a seven-point response scale ranging from not widespread at all (1) to very widespread (7).[22]

[22] The manipulation checks show that there are statistically significant differences in corruption perceptions across the three groups (see Appendix B1). In both Sweden and Mexico, differences between the high-corrupt and low-corrupt treatment groups are found, with the former having higher corruption perceptions on average. In Sweden, there is also a statistically significant difference between the low-corrupt treatment group and control group, with the former displaying lower corruption perceptions.

The manipulation checks were followed by another data quality screener, to identify the most inattentive respondents (see Appendix B1). Then respondents answered questions about their general level of trust in other people, politicians, and institutions using traditional survey items from international surveys and some measures of confidence in the work of various government authorities. Lastly, they were asked to indicate to what degree they agree or disagree with three different statements, capturing each of the three different types of trust using original questions.

Analysis and results

Policy attitudes in Sweden and Mexico

Before asking respondents about their climate policy attitudes, they were given some baseline information about the carbon tax in their country.[23] They were then asked four questions about their policy attitudes, with responses ranging from negative (1) to positive (5) attitudes. Table 1 shows the distribution of policy attitudes across the four measures of the dependent variable.

A fairly large share of the Swedish respondents is unsupportive and unaccepting of the existing carbon tax (up to 39%), and a majority appear to be against an increase in the carbon tax (55%) and unwilling to pay higher taxes for climate change mitigation (49%). The Mexican respondents appear to be both more accepting and supportive of the existing carbon tax (up to 44%) and more willing to pay climate taxes in general (35%). That said, respondents in both countries on average demonstrate more negative than positive attitudes towards climate taxes.[24]

Moreover, both Mexican and Swedish respondents think that the existing carbon tax in their country may be compromised by public resistance. 64% of the Mexican respondents agree that an increase in the carbon tax is unfeasible, due to a lack of sufficient political and public support, while 67% accept the implementation of climate taxes, but would prefer other types of policy instruments, such as subsidies, bans, or information. 42% of the Swedish respondents accept the implementation of climate taxes, while 47% think that there is too much resistance to the tax and that an increase in it is not politically feasible.

Hence, we can conclude that the high-corrupt treatment had an impact in both samples, whereas the low-corrupt treatment only influenced the Swedish sample.

[23] The information consisted of the following. The carbon tax in Sweden/Mexico was implemented in 1991/2014 with the aim to reduce the use of fossil fuels. The taxes are levied on fossil fuels mainly for engine operation and heating. Each fossil fuel is assigned a tax rate based on its carbon dioxide content. The current carbon tax on gasoline, for example, is SEK 2.64 per liter/MXN$ 10.8 per liter (see Appendix A1).

[24] The distributions of responses on each of the four outcome variables are illustrated in Figure 1, Appendix D3.

TABLE 1. DESCRIPTIVE STATISTICS OF THE FOUR OUTCOME VARIABLES

Dependent variable	Measure/construct Survey questions and response categories	Mean Swe | Mex	Std. Dev. Swe | Mex	Min	Max	N Swe | Mex
Acceptance of CO_2 tax	'How acceptable do you find the carbon tax in Sweden/Mexico?' [1=Completely unacceptable, 5=Completely acceptable]	2.91 | 3.16	1.15 | 0.98	1	5	1991 | 2143
Support for CO_2 tax	'How supportive or opposed to are you of the carbon tax in Sweden/Mexico?' [1=Completely opposed, 5=Completely supportive]	2.92 | 3.23	1.12 | 1.02	1	5	1989 | 2144
CO_2 tax increase	'To what extent are you in favor or against an increase in the carbon tax in Sweden/ Mexico?' [1=Strongly against, 5=Strongly in favor]	2.39 | 2.87	1.10 | 1.02	1	5	1992 | 2143
WTP climate taxes	'How willing would you be to pay higher taxes to reduce climate change?' [1=Very unwilling, 5=Very willing]	2.62 | 3.11	1.20 | 1.23	1	5	1992 | 2142

Note: Statistics retrieved from the total number of Mexican and Swedish respondents who responded. For a list of descriptive statistics of all the variables employed in the analyses of this paper, see Appendix F: Table 1 & 2.

Hypotheses testing: corruption perceptions, trust, and policy attitudes

To test the hypotheses, different tests were performed.[25] Since the manipulation checks showed that there is a statistically significant difference in corruption perceptions between the high-corrupt treatment group, low-corrupt treatment group and the control group, the tests compare the differences between treatment groups and between the treatment groups compared to the control group. Below, the average treatment effect of the high-corrupt treatment is central.

The dependent variable is measured using four different measures: 1) acceptance of the existing CO_2 tax, 2) support of the existing CO_2 tax, 3) potential to accept an increase in the existing CO_2 tax, and 4) readiness to support (WTP) climate taxes in general. In the following, the four measures are employed as separate outcome variables to probe the three hypotheses.

H1: Increased corruption perceptions reduce positive attitudes towards climate taxes.

Sweden

Independent samples t-tests show that there is a significantly lower mean level of acceptance of the existing CO_2 tax ($p=0.003$), a CO_2 tax increase ($p=0.036$), and WTP climate taxes ($p=0.009$) in the high-corrupt

[25] The tests were performed excluding potentially problematic outliers, data errors, and influential observations identified using various diagnostic tests (dfbeta values, studentized residuals, and Cook's d) (see Appendix B1).

treatment group than the control group. There are also statistically significant differences in all four policy attitudes when comparing the high-corrupt and low-corrupt treatment groups (p=.001). The high-corrupt treatment group on average holds more negative climate policy attitudes than then low-corrupt treatment group.

Ordered logit models confirm that there is a statistically significant difference in support for the existing CO_2 tax (p=.01) between the high-corrupt and low-corrupt treatment groups, and in acceptance between the high-corrupt and low-corrupt treatment group (p=.01) and the control group (p=.05). These models also show differences in attitudes towards an increase in the CO_2 tax. The high-corrupt treatment group is on average less supportive of an increase than the low-corrupt treatment group (p=.05), and also displays lower WTP climate taxes than the low-corrupt treatment group (p=.01) and the control group (p=.05) (Table 2A).

The tests indicate that individuals with high corruption perceptions hold more negative attitudes towards climate taxes. They are less accepting and supportive of existing carbon taxes, increases in existing taxes, and also display lower WTP for climate taxes in general. Hence, H1 is strongly supported by the data in the Swedish sample.

TABLE 2A, THE EFFECT OF HIGH-CORRUPT TREATMENT ON CLIMATE POLICY ATTITUDES, SWEDEN

Swedish sample	Acceptance CO_2 tax	Support CO_2 tax	Increase CO_2 tax	WTP climate taxes
High-corrupt treatment (vs low-corrupt treatment)	0.76** [0.63,0.93]	0.76** [0.63,0.92]	0.79* [0.65,0.96]	0.75** [0.61,0.90]
Observations:	1359	1359	1359	1359
High-corrupt treatment (vs control group)	0.80* [0.66,0.97]	0.90 [0.74,1.08]	0.85 [0.70,1.03]	0.80* [0.66,0.97]
Observations:	1348	1348	1348	1348

Note: Ordered logit models, regressing each of the four outcome variables on a treatment indicator. Reported coefficients are odds ratios. An odds ratio above 1 indicates a positive effect; an odds ratio below 1 indicates a negative effect. Confidence intervals in brackets. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

Mexico

An independent samples t-test portrays statistically significant differences in the mean level of acceptance for the existing CO_2 tax between the high-corrupt treatment group and the control group (p=.01). The high-corrupt treatment group displays lower levels of acceptance of the CO_2 tax on average. An ordered logit model also displays a statistically significant difference in acceptance between the high-corrupt treatment group and the control group (p=.01) (Table 2B).

In sum, H1 receives limited support by the data in the Mexican sample. The tests show that increased corruption perceptions reduce policy acceptance but do not find any statistically significant differences in the other policy attitudes, including support for the existing CO_2 tax, acceptance of an increase in the tax, and general WTP taxes for climate change mitigation. A potential explanation for the limited treatment effect may be that Mexican respondents already have higher corruption perceptions on average (i.e. higher priors than the Swedish respondents).

TABLE 2B, THE EFFECT OF HIGH-CORRUPT TREATMENT ON CLIMATE POLICY ATTITUDES, MEXICO

Mexican sample	Acceptance CO_2 tax	Support CO_2 tax	Increase CO_2 tax	WTP climate taxes
High-corrupt treatment (vs low-corrupt treatment)	1.02 [0.84,1.23]	0.86 [0.71,1.04]	0.90 [0.75,1.09]	0.92 [0.76,1.10]
Observations:	1424	1424	1424	1424
High-corrupt treatment (vs control group)	0.79* [0.66,0.96]	0.94 [0.78,1.13]	1.09 [0.91,1.31]	0.94 [0.78,1.13]
Observations:	1454	1456	1456	1456

Note: Ordered logit models, regressing each of the four outcome variables on a treatment indicator. Reported coefficients are odds ratios. An odds ratio above 1 indicates a positive effect; an odds ratio below 1 indicates a negative effect. Confidence intervals in brackets. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

H2: Increased corruption perceptions reduce levels of political and institutional trust.

Sweden

T-tests show that there is a statistically significant difference in levels of political trust (p=.003) and institutional trust (p=.01) between the low-corrupt and high-corrupt treatment group, the latter showing lower mean levels of trust. There are no statistically significant differences in trust levels when the comparison is made between each treatment group and the control group. Also, there are no statistically significant differences in social trust across groups as expected.

OLS regressions regressing a binary treatment indicator contrasting the high-corrupt treatment group against the low-corrupt treatment group and control group on each type of trust, confirm similar effects (Table 3A). Hence, H2 is partially supported by the data in the Swedish sample since there is a difference in political and institutional trust across the treatment groups, but there are no significant differences when the comparison is made against the control group.

TABLE 3A, THE EFFECT OF THE HIGH-CORRUPT TREATMENT ON LEVELS OF TRUST, SWEDEN

Swedish sample	Social trust	Political trust	Institutional trust
High-corrupt treatment (vs low-corrupt treatment)	-0.10 [-0.39,0.20]	-0.37** [-0.61,-0.18]	-0.33** [-0.57,-0.09]
Observations:	1330	1331	1330
High-corrupt treatment (vs control group)	0.10 [-0.19,0.39]	-0.16 [-0.41,0.08]	-0.09 [-0.33,0.15]
Observations:	1305	1307	1306

Note: OLS regression, regressing each type of trust as the dependent variable on a treatment indicator. Unstandardized coefficients. Confidence intervals in brackets. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

Mexico

T-tests show that the level of political trust (p=.02) and institutional trust (p=.03) is lower in the high-corrupt treatment group than in the control group. There is no difference in mean levels of social trust across groups. The effects are similar to the effects found in the Swedish sample. However, the Mexican sample displays statistically significant differences when comparing the high-corrupt treatment group to both the low-corrupt treatment group and the control group.

In OLS regressions, the high-corrupt treatment group displays lower political trust (p=.03) and institutional trust (p=.04) than the control group, and lower institutional trust (p=.05) than the low-corrupt treatment group. There is no difference in social trust across groups as expected (Table 3B). Hence, H2 is supported by the data in the Mexican sample.

TABLE 3B, THE EFFECT OF THE HIGH-CORRUPT TREATMENT ON LEVELS OF TRUST, SWEDEN

Mexican sample	Social trust	Political trust	Institutional trust
High-corrupt treatment (vs low-corrupt treatment)	-0.25 [-0.53,0.01]	-0.19 [-0.41,0.03]	-0.23* [-0.45,-0.00]
Observations:	1426	1425	1425
High-corrupt treatment (vs control group)	0.26 [-0.01,0.53]	-0.25* [-0.47,-0.03]	-0.23* [-0.45,-0.01]
Observations:	1459	1459	1459

Note: OLS regression, regressing each type of trust as the dependent variable on a treatment indicator. Unstandardized coefficients. Confidence intervals in brackets. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

The following analyses examine the moderating relationships between corruption perceptions, pro-environmental and political ideological value orientations, and climate policy attitudes. The aim is to observe whether the policy attitudes of individuals with certain value orientations may be more susceptible to corruption perceptions than others. Specifically, the aim is to examine if even those who hold pro-environmental and leftist political value orientations (i.e. individuals who are typically concerned about climate change and in favor of government regulation) may have less favorable attitudes towards climate change taxes in corrupt institutional settings. The analyses are observational, and thus employ corruption perceptions as the independent variable.

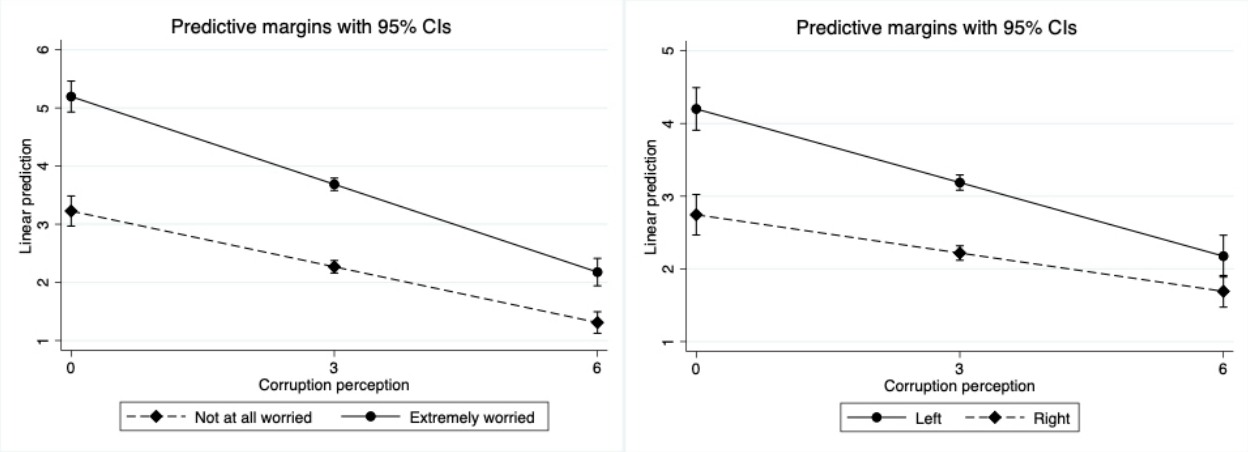
H3: The negative relationship between corruption perceptions and attitudes towards climate taxes is more pronounced among pro-environmentally and leftist oriented individuals.

Sweden

First, the interaction between pro-environmental value orientations and corruption perceptions is examined. OLS regressions find a significant interaction effect between climate change worry and corruption perceptions on support for the existing tax (p=.01) (Appendix D1: Table 1). High corruption perceptions decrease support for the carbon tax even among those worried about climate change (Figure 2). Moreover, interactions between care for nature and corruption perceptions are found for all policy attitudes (Appendix D1: Table 2; Appendix D3: Figure 2).

Given the categorical nature of outcome variables, with response categories measured using Likert-scales, ordered logit models are applied. Ordered logit models, including controls, show a significant interaction between climate change concern and corruption perception on acceptance (p=.05) and support (p=.01) for the existing CO_2 tax (Appendix D1, Table 4). The same interactions are found using care for nature (Appendix D2, Table 5). Individuals who hold strong climate change concerns and green values are less supportive and accepting of existing CO_2 taxes if they perceive the level of corruption in their country as high.

FIGURE 2, MARGINAL EFFECTS OF CLIMATE CHANGE WORRY AND LEFT-RIGHT ORIENTATION AT DIFFERENT LEVELS OF CORRUPTION PERCEPTIONS, SWEDEN



Note: The graphs were produced from linear regression models with robust standard errors. Interaction terms between corruption perception index (corruption worry and corruption perception) and a continuous left-right variable (1=Left, 11=Right) and climate change concern (1=Not at all worried, 5=Extremely worried). Models include controls for age, education, gender, living area of residence, and personal income. The dependent variable in left plot is support for the existing CO_2 tax, while the dependent variable in the right plot is WTP climate taxes.

Ordered logit models do not show any significant interactions between corruption perceptions and left-right orientation. OLS regressions, however, show a significant interaction effect for WTP climate taxes (p=.03), suggesting that leftists have lower WTP climate taxes when corruption perceptions are high. Rightists, on the other hand, who have low WTP climate taxes when corruption perceptions are low, exhibit even lower WTP such taxes when corruption perceptions are high (Appendix D1: Table 3). The moderating effect is rather weak, however.

Corruption perceptions appear to have a negative effect on the climate policy attitudes of greens and leftists, while attitudes of greys and rightists appear less negative as corruption perceptions increase. The marginal effects of rightist values on WTP climate taxes and weak environmental concern on support for the existing carbon tax seem to decrease when corruption perceptions are higher (Figure 2).[26] Hence, H3 is supported by the data in the Swedish sample.

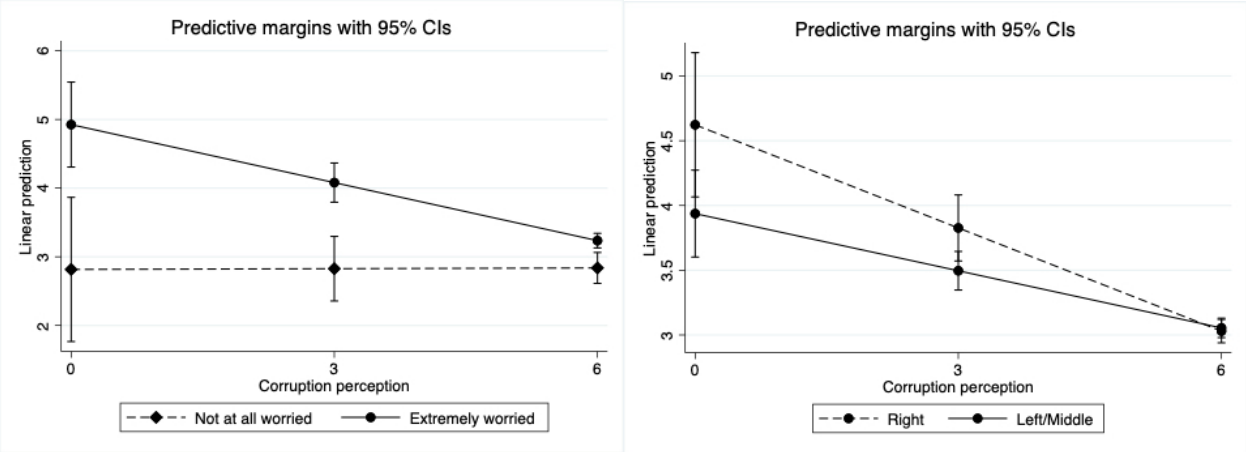
[26] Corruption perceptions appear to have a more negative impact on carbon tax support of those who are strongly environmentally concerned than those who are weakly environmentally concerned. The difference in support is not significant between leftists and rightists although leftists appear to be more affected (Appendix D3: Figure 3).

Mexico

Now, the interaction between pro-environmental value orientations and corruption perceptions on policy attitudes in the Mexican sample is examined. OLS regression with robust standard errors shows a significant interaction between care for nature and corruption perceptions on acceptance of an increase in the CO_2 tax (p=.01) (Appendix D2: Table 1). High corruption perceptions reduce acceptance of increasing the CO_2 tax among those who care for nature. A significant interaction effect between climate change worry and corruption perceptions on support for the existing carbon tax is also found. Those who are worried about climate change appear less supportive of the tax when corruption perceptions are high (Figure 3).[27]

Moreover, ordered logit models display significant interactions between care for nature and corruption perceptions on acceptance of the carbon tax (p=.05), and an increase in it (p=.01) (Appendix D2: Table 3). Those who care for nature are on average less accepting of carbon taxes when the level of corruption in their country is perceived to be high.

FIGURE 3, MARGINAL EFFECTS OF CLIMATE CHANGE WORRY AND LEFT-RIGHT ORIENTATION AT DIFFERENT LEVELS OF CORRUPTION PERCEPTIONS, MEXICO



Note: The graphs were produced after fitting linear regression models with robust standard errors. The left plot with support for the existing CO_2 tax and the right plot with acceptance of the existing CO_2 tax as the dependent variable. Interaction terms between corruption perception index (corruption worry and corruption perception) and left-right orientation (0=Right, 1=Left/Middle) and climate change worry (1=Not at all worried, 5=Extremely worried). Models including controls for age, education, gender, living area of residence, and personal income.

No statistically significant interaction effects between corruption perception and political left-right orientations are found when employing either ordered logit models or OLS regression, but attitudes of both leftists and rightists appear to be adversely impacted by corruption (Figure 3).

[27] Corruption perceptions appear to have a stronger effect on individuals with strong environmental values than those with weak values. Looking at all four value groups, rightists and those with strong climate change concern appear to be more affected by corruption perceptions (Appendix D3: Figure 4).

Examining the main effect of left-right orientation on policy attitudes, rightists and those in the middle appear to have a higher WTP for climate taxes (p=.03) than leftists, but this effect becomes insignificant when controls are added.[28] Hence, H3 is only partially supported by the data in the Mexican sample since there is no evidence of a significant interaction effect between leftist political ideological value orientation and corruption perception in the expected direction.

Exploratory analyses: trust and PSBs as individual-level mechanisms

The exploratory analysis examines the more specific mediating trust mechanisms and probes the theorized individual-level mechanisms (outlined in Figure 1) using original trust measures and measures of policy-specific beliefs. Mediation analyses are conducted employing structural equation models built in Stata's SEM-builder. The exploratory analysis is observational and, therefore, corruption perception is employed as the main independent variable in this analysis.

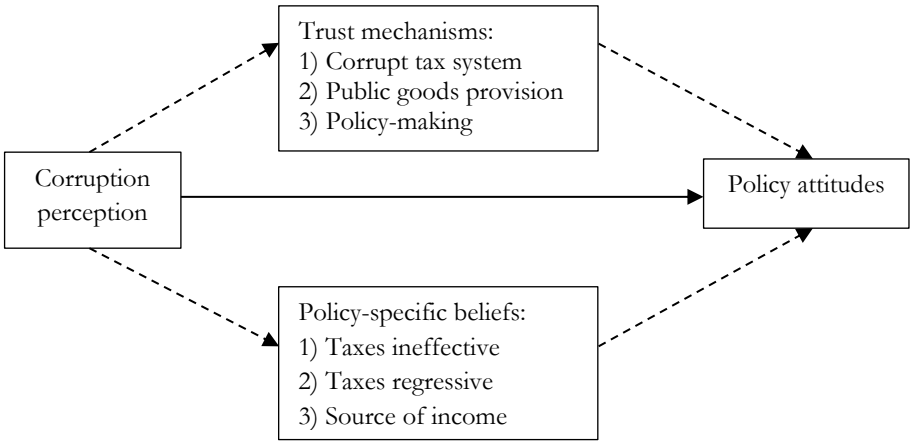
Data preparation for the exploratory analysis

The dependent variable in the exploratory analysis is policy attitudes, which consists of a mean-based index of all four outcome variables. Principal component analyses suggest that the four policy attitudes load on three different components in both the Swedish and Mexican sample (see Appendix C1). However, the index of all four measures is theoretically interesting as it captures various facets of policy attitudes and is here therefore employed as dependent variable.

To probe the indirect pathways from corruption perception to policy attitudes, three measures capturing trust-mechanisms and three measures capturing policy-specific beliefs are employed (Figure 4). PCA informed the creation of the measures, consisting of 11 items in total (see Appendix C2 for a discussion of the PCA on trust mechanisms and policy-specific beliefs.

[28] Left-right orientation is also mainly insignificant in regressions with the other three policy attitudes.

FIGURE 4. SIMPLIFIED ILLUSTRATION OF THE STRUCTURAL EQUATION MODEL OF MEDIATING EFFECTS



Note: The figure shows the direct effect of corruption perception on policy attitudes (full arrow) and the indirect effect of corruption perception through trust and policy-specific beliefs (dashed).

The indirect pathways from corruption perceptions to policy attitudes: trust and PSBs

Corruption perceptions are linked with all six theorized mediators in the SEM model (see Figure 1, Appendix E1 for an illustration of the full model), and the relationships are in the expected direction. Higher corruption perceptions are associated with increased beliefs that tax revenues will disappear in the hands of corrupt politicians, that the tax will not be properly, effectively, and equally enforced by government officials and the revenues used for public goods provision, and that fellow citizens will attempt to evade the tax, which all indicate lacking trust. Higher corruption perceptions are also correlated with PSBs; stronger beliefs that taxes are ineffective and cost-inefficient, regressive, and just another source of income (Table 1 and 2: Appendix E).

In the Swedish sample, four indirect pathways are statistically significant (Table 4A). Beliefs that revenues will be used for public goods provision appear to partly mediate the link between corruption perceptions and policy attitudes. Moreover, trust in political decisions and enforcement by civil servants ('policy-making') also appear as mediating mechanisms. Beliefs that carbon taxes are cost-inefficient and ineffective, and just another source of income also appear statistically significant. Tax evasion and revenues disappearing in the hands of corrupt politicians ('corrupt tax system'), do not appear as a statistically significant indirect pathway.

TABLE 4A. CORRUPTION PERCEPTION ON POLICY ATTITUDES VIA TRUST MECHANISMS AND POLICY-SPECIFIC BELIEFS, SWEDEN

Swedish sample	Trust mechanisms			Policy-specific beliefs		
Mediator:	Corrupt tax system	Policy making	Public goods provision	Taxes ineffective	Taxes regressive	Source of income
Indirect effect	.005 [.009]	-.039* [.007]	-.046*** [.007]	-.028*** [.005]	-.002 [.002]	-.055*** [.007]
Direct effect	-.171*** [.016]			-.171*** [.016]		
Total effect	-.261*** [.015]			-.256*** [.017]		
N	1932			1932		

Note: Calculated indirect, direct, and total effects from the SEM model in Table 1, Appendix E1. Standard errors in brackets. Direct effect denotes the effect of corruption perception (corruption perception and corruption worry), and total affect denotes the direct effect and added effect of trust mechanisms and policy-specific beliefs. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

In the Mexican sample, all six measures of trust and PSBs appear as statistically significant indirect pathways (Table 4B). Beliefs that tax revenues will be used for public goods provision, and trust in policy makers decisions and proper enforcement appear to mediate the association between corruption perceptions and policy attitudes, similar to the Swedish sample.

In addition, beliefs that tax revenues will disappear into the hands of corrupt politicians and that other people will attempt to evade the tax appear as statistically significant mediators. All three PSBs also appear as indirect pathways. Surprisingly, beliefs about corrupt tax system and taxes as regressive appear to be positively associated with policy attitudes in the Mexican sample (see Table 2, Appendix E). Although both of these estimates are rather small.

TABLE 4B. CORRUPTION PERCEPTION ON POLICY ATTITUDES VIA TRUST MECHANISMS AND POLICY-SPECIFIC BELIEFS, MEXICO

Mexican sample	Trust mechanisms			Policy-specific beliefs		
Mediator:	Corrupt tax system	Policy making	Public goods provision	Taxes ineffective	Taxes regressive	Source of income
Indirect effect	.011** [.004]	-.029*** [.006]	-.004* [.002]	-.022*** [.005]	.009** [.004]	-.010* [.005]
Direct effect	-.128*** [.023]			-.128*** [.023]		
Total effect	-.150*** [.023]			-.150*** [.024]		
N	2013			2013		

Note: Calculated indirect, direct, and total effects from the SEM model in Table 1, Appendix E1. Standard errors in brackets. Direct effect denotes the effect of corruption perception (corruption perception and corruption worry), and total affect denotes the direct effect and added effect of trust mechanisms and policy-specific beliefs. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

The analysis provides initial evidence of potential individual-level mechanisms behind the link between corruption perceptions and public attitudes towards climate taxes. From the analysis, we can infer that corruption appears to affect climate policy attitudes via multiple pathways. However, further examinations of the

pathways are needed. The indirect effects are quite small, but statistically significant, reflecting the challenges of conducting mediation analyses. While the observed pathways cannot be interpreted as evidence of causal effects, theoretically it can be argued that corruption perceptions are more likely to impact trust and PSBs than the other way around. In other words, corruption perceptions may be antecedent to trust and PSBs.

Corruption perceptions appear to be negatively associated with citizens trust in political actors and institutions in charge of implementing the tax and beliefs about climate taxes. The higher the perceived corruption in a country, the more likely citizens are to believe that climate taxes are ineffective, cost-inefficient, regressive, and merely another source of state income. Beliefs about revenue use and enforcement of taxes appear to matter in both countries, while concerns about tax evasion and revenues being lost to corrupt politicians appear to be of concern mainly in high-corrupt settings. More research is needed, however, and in other countries, to confirm the observed pathways and to further corroborate the individual-level mechanisms, preferably in stepwise analyses of each link and indirect pathway in the theorized causal chain.

Concluding discussion

Summary of main findings and suggestions for future research

This experimental study shows that increased corruption perceptions impact both levels of trust and climate policy attitudes negatively. Individuals who perceive the level of corruption in their country to be high, exhibit lower levels of political and institutional trust. They are also less accepting and supportive of climate taxes. This holds true both in the Swedish and the Mexican sample. The treatment effect on policy attitudes in the Mexican sample is weaker, however, which can likely be attributed to higher prior corruption perceptions than in the Swedish sample.

While corruption perceptions generate negative policy attitudes across the board, greens and leftists in particular seem to be most affected, at least in Sweden. In Mexico, rightists appear to be more affected, which may be attributed to differing meaning of the left-right dimension in Mexico (Zechmeister & Corall, 2010).[29] Environmentally concerned individuals become less supportive of taxes, while less environmentally concerned and pro-market oriented individuals display similar negative attitudes towards climate taxes when corruption is higher, at least in Sweden. In Mexico, policy attitudes of less environmentally concerned individuals appear to be unaffected by corruption perceptions as their attitudes remain constant (see Figure 3). The results should be interpreted with caution since interaction effects typically require larger sample sizes.

Left-right orientation appears to explain WTP climate taxes in particular. However, the study indicates that the general pattern of leftists being more positive towards such taxes does not appear to hold in all settings. The typical left-right scale applied in cross-sectional studies misses potential variation in the meaning of left-right in certain countries, like for example in Mexico where rightists display a higher general WTP higher climate change taxes than leftists. This may in turn impact the interpretation of results.

[29] In Mexico, individuals who hold favorable attitudes towards market-oriented policy solutions have a tendency to place themselves towards the left rather than right on the left-right scale. Similar 'opposite' understandings of the left-right political scale have been found in other Latin American countries (Zechmeister & Corall, 2010).

The study confirms that corruption is an institutional factor that may explain citizens' negative attitudes towards climate taxes, adversely impacting the policy attitudes even of those holding pro-environmental values and concern and favorable attitudes towards state regulation. Corruption reduces acceptance, support, and willingness to pay climate taxes, but also impacts perceptions of carbon taxes. Individuals with high corruption perceptions are likely to believe that climate taxes are ineffective, cost-inefficient, regressive, and just another source of income. Given that these patterns emerge also in a less corrupt setting (Sweden), the role of corruption in determining climate policy attitudes needs more attention. Policy-design may be particularly important when contemplating implementation of climate taxes in corrupt settings.

Various individual-level mechanisms emerge as potentially mediating factors. Lack of trust in politicians to decide on the most effective and fair mitigation policies, and beliefs that taxes will not be properly and equally enforced and revenues used for public goods provision, generates negative attitudes towards taxes in both samples. Moreover, beliefs that tax revenues will disappear in the hands of corrupt politicians, and that others will attempt to evade taxes generates positive attitudes to climate taxes in the Mexican sample. This goes in line with research showing that citizens in countries with malfunctioning government demand more regulations (e.g. Aghion et al., 2010). The results should, however, be interpreted with caution.

Previous studies, employing rather blunt traditional measures of trust, have generated somewhat conflicting and inconclusive findings as to the mediating or moderating role of trust in explaining climate policy attitudes (Smith & Mayer, 2018; Tam & Chan, 2018; Fairbrother et al., 2019; Davidovic & Harring, 2020). This study adopted 'behavior-specific' trust measures, i.e. trust in politicians, civil servants, and other people *to do what* (Bauer & Freitag, 2018), in order to capture underlying individual-level mechanisms. Future research can evaluate whether adopting similar behavior-specific measures of trust may be advantageous to facilitate interpretation of results and to arrive at the mechanisms underpinning relationships under study.

Future research may want to further examine the causal pathways in the outlined model, collecting evidence of each pathway in separate studies. The relation between PSBs and trust in particular and how and in what order they impact policy attitudes needs further investigation. Moreover, interactions between pro-environmental and political value orientations as well as interactions with other factors such as income and education may be further explored. Studies have found that the effect of left-right varies depending on whether the environment is contrasted against economic growth, for example (Harring & Sohlberg, 2016). Some people, particularly in countries where economic development is highly salient (Li & Yao, 2020), may believe that climate change mitigation comes at the cost of loss in economic development.

The role of left-right orientation in explaining climate policy attitudes warrants further investigation. Here, correlations with policy attitudes appear to be weak at best and nonexistent at worst. The current analyses indicate that left-right orientation seems to be more important in Sweden than in Mexico. Differences in meaning of 'left' and 'right' across countries, and the possibility that climate change may be a right-left issue in some countries, less of a left-right issue, or not a left-right issue at all in some countries kept in mind (see e.g. Fairbrother, 2016; McCright et al., 2016; Andersen, 2019).

Policy implications

Greater corruption perceptions have previously been found to be associated with lax market-based policies (Rafaty, 2018), including carbon taxes that are not stringent enough to generate the carbon emission reductions needed to mitigate climate change. This study brings forward another dimension, namely how citizens perceptions of corruption may impact policy attitudes.

Corruption perceptions may impact both the political feasibility and perceived fairness, efficiency, and effectiveness of CO_2 taxes. This may be particularly detrimental to possibilities for implementing carbon taxes in highly corrupt institutional settings. However, there are also ways to increase levels of trust in proper implementation. Closing loopholes that allow for tax evasion is crucial for the state to be able to sustain carbon taxation (Green, 2021). This may increase levels of trust in political and impartial institutions to credibly enforce climate taxes.

Policies that promote equality, government institutions that are impartial, effective and transparent, and a state apparatus that punishes or sanctions free riders, are ways to gradually increase both social and political trust (Jorge et al., 2020). Ignoring low levels of institutional trust, has been shown to be detrimental for WTP for public goods, particularly in settings where the impartial institutions of the state are perceived to be endemically corrupt (Kassahun et al., 2021). While taxes have been shown to be more effective than regulations in lowering pollution, even where the enforcement ability of state authorities is weak (Damania et al., 2020), climate taxes may be much more difficult to implement in high-corrupt institutional settings.

Policy makers may stand before a trade-off between which policy is the most efficient in decreasing CO_2 emissions and which policy that is the most acceptable to citizens. However, paying close attention to policy-design and providing citizens with information (Baranzini et al., 2021; Axsen & Wolinetz, 2020) may help alleviate concerns about distributional effects and ineffectiveness among different segments of the population, at least in less corrupt settings. In high-corrupt settings, 'pockets of effectiveness' may help promote effective climate change policy solutions (McDonnell & Vilaça, 2021). Competent government agencies may help make carbon taxes work by setting up the needed institutional structures, despite otherwise lacking administrative capacities and corrupt national government (Steinebach & Limberg, 2022).

Satisfaction with government provided information about climate policy instruments has been found to improve acceptability (Maestre-Andrés et al., 2019). Carbon taxes need to be accompanied with information about their goals and objective effects. Correcting perceptions that carbon taxes are unfair and ineffective is crucial, but ultimately may depend on the design. Policies that are perceived as fair, are typically also more acceptable to citizens. The public may also prefer use of tax revenues for environmental projects rather than to compensate them for inequitable outcomes (Maestre-Andrés et al., 2019), which is the aim of revenue recycling. However, the use of revenues for climate change mitigation purposes may not be a significant predictor of support for carbon taxes in all countries (see Uyduranoglu & Ozturk, 2020).

This paper offers initial insights in what way corruption perceptions may impact beliefs about climate taxes and policy attitudes. Further research efforts are needed to provide more specific recommendations for policy makers on how to successfully implement carbon taxes in diverse institutional settings. Thus far, too little attention has been paid both in research and in lessons learned from countries that have adopted such taxes to the role of institutional context. Expanding the scope beyond European and Western countries is important to generate informed and relevant policy implications for policy makers in various institutional contexts.

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Appendix

Supplementary materials

Corruption, Trust, and Attitudes Towards Carbon Taxes: Survey experimental evidence from Sweden and Mexico

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April 18, 2023

Contents

Appendix A. The survey, treatments, and data quality checks

A1. The survey (English master text)

Introduction
Welcome
In this study, we are interested in people's perceptions of climate policy and the public administration.

The study is conducted by researchers at the University of Gothenburg, and is part of a project that investigates attitudes towards climate policy instruments. The survey takes about 10 minutes to complete. Your responses will be handled anonymously and used exclusively for academic research purposes. Answering the survey questions is voluntary.

If you have any questions about the study, contact the responsible researcher Dragana Davidovic (dragana.davidovic@gu.se).

Do you want to take part in this survey?
Yes, No

Background questions
First, we want to know a little more about you.

1. How old are you?
Under 18
18-29
30-45
46-60
Over 60

2. What gender do you identify with?
Female
Male
Other

3. What is the highest level of education that you have completed?
Primary education
Secondary education (High school)
Post-secondary vocational education
Tertiary education (University)
Other

4. What is the approximate total annual income of your household in Mexican pesos (MXN)/ Swedish Krona (SEK) before taxes?
Less than 50 000
50 000 – 99 000
100 000 – 149 000
150 000 – 199 000
200 000 – 250 000
More than 250 000

5. What is your own approximate monthly income in Mexican pesos (MXN)/Swedish Krona (SEK) before taxes?
Less than 5 000
5 000 – 7 999
8 000 – 10 999
1 100 – 14 999
15 000 – 19 999
More than 20 000

6. Where did you mainly grow up?
In Mexico/Sweden
Other country in North America/Other country in the Nordic region
Other country in Latin America/ Other country in Europe
Country outside Latin America/Country outside Europe

7. In which of the following environments do you currently reside?
Country side
Smaller urban area
City or urban area
Big city

Value orientations
8. Now, we want to get an idea of your environmental attitudes and political views.
How worried are you about climate change?
Not at all worried
Not very worried
Somewhat worried
Very worried
Extremely worried

9. Tell us how much this person is or is not like you. She/he firmly believes that people should take care of nature. Caring for the environment is important to her/him. On a scale, how similar would you say this person is to you?

Very much like me
Like me
Somewhat like me
A little like me
Not like me
Not like me at all

10. In politics, it is sometimes said that political views can be placed on a left-right scale. Where would you place yourself on the following scale?
Left
Right

11. If you look at the situation today, how worrying do you perceive the following for the future?
Economic crisis
Restrictions on individual freedom
Increasing social cleavages
Environmental pollution
Deteriorating welfare
Increased immigration

Not at all worrying
Not very worrying
Somewhat worrying
Very worrying
Extremely worrying

Data quality check 1
12. Now, we want to see if our respondents are paying attention and reading the questions. We want you to answer not very worrying for data quality purposes.
Not at all worrying
Not very worrying
Somewhat worrying
Very worrying
Extremely worrying

Treatments *[see Appendix A2]*

Introductory text climate taxes
Now, we want to know what you think about climate policy instruments.
According to the UN climate panel, IPCC, the primary cause of climate change is human combustion of fossil fuels and emissions of carbon dioxide and other greenhouse gases. One way to reduce emissions and

thereby prevent further global warming is to implement a carbon tax. Mexico/Sweden already has a carbon tax.

- The carbon tax in Mexico/Sweden was implemented in 2014/1991.
- The tax is levied on fossil fuels, mainly for engine operation and heating.
- Each fossil fuel is assigned a tax rate based on its carbon dioxide content.
- The carbon tax on gasoline, for example, is around MXN$ 10.8/SEK 2.64 per liter.
- The aim of the tax is to reduce the use of fossil fuels.

Outcome questions

13. How acceptable do you find the carbon tax in Mexico/Sweden?
Completely unacceptable
Somewhat unacceptable
Neither acceptable nor unacceptable
Somewhat acceptable
Completely acceptable

14. How supportive or opposed to are you of the carbon tax in Mexico/Sweden?
Completely opposed
Somewhat opposed
Neither supportive nor opposed
Somewhat supportive
Completely supportive

15. To what extent are you in favor or against an increase in the carbon tax in Mexico/Sweden?
Strongly against
Somewhat against
Neither in favor nor against
Somewhat in favor
Strongly in favor

16. How willing would you be to pay higher taxes to reduce climate change?
Very unwilling
Somewhat unwilling
Neither willing nor unwilling
Somewhat willing
Very willing

Policy preference

17. To what extent do you agree or disagree with the following statement?
I accept the implementation of climate taxes, but would prefer other types of policy instruments, e.g. subsidies, bans or information.

Strongly disagree
Disagree
Neither agree nor disagree
Agree
Strongly agree

Follow-up questions (trust mechanisms)
18. Indicate to what extent you agree or disagree with the following statements.
The tax revenues will most likely disappear into the hands of corrupt politicians rather than be used for climate purposes.

The tax revenues will be used for something good, e.g. in green investments to reduce emissions or provide citizens with better public services.

The tax will be enforced properly, effectively, and with integrity, by fair and competent government officials.

Some people will find a way to avoid paying the tax, e.g. by bribing tax officials or officials of other government authorities.

Other people will pay the tax if they are obliged to pay it (through the use of fossil fuels).

Strongly disagree
Disagree
Neither agree nor disagree
Agree
Strongly agree

Complementing explanations (policy-specific beliefs)
19. Indicate to what extent you agree or disagree with the following statements.
The carbon tax is not the most effective way to get people to change their behavior to reduce emissions. Carbon taxes are ineffective.

The main reason for increasing the carbon tax is not to cut emissions, but to earn more money to the government budget. The tax is just another source of income.

The carbon tax is not the most cost-efficient way to reduce emissions and involves large welfare sacrifices. Carbon taxes are cost-inefficient.

The carbon tax impacts certain parts of the population more than others, in a way that is or can be perceived as unfair. Carbon taxes are regressive.

An increase in the carbon tax is not feasible, as there is a lack of sufficient political and public support. There is too much resistance to the tax.

Strongly disagree
Disagree
Neither agree nor disagree
Agree
Strongly agree

Manipulation checks (corruption perceptions)
20. Now, we want to know more about your perceptions of the public administration in Mexico/Sweden. How worrying do you perceive the level of corruption in Mexico?
Not at all worrying
Not very worrying
Somewhat worrying
Very worrying
Extremely worrying

21. How widespread do you think corruption is in Mexico/Sweden?
Not widespread at all
Very widespread

Data quality check 2
22. How much corruption do you think occurs in the following state institutions?
The justice system
Government
Please answer "Quite a lot"
The education system
Public health care
[Main tax authority in Mexico/Sweden]
None at all
A little
Quite a lot
A lot
A great deal
No perception

Trust (general and situation-specific)
23. Give us an idea about your general trust in people, politicians and state institutions.
Generally speaking, would you say that most people can be trusted, or that you have to be very careful when dealing with people?
You have to be very careful

Most people can be trusted

24. Generally speaking, how much do you personally trust each of the following institutions?
Politicians
Political parties
Government
The legal system
The civil service
The police
No trust at all
Complete trust

25. Generally speaking, how much confidence do you have in the work of the following authorities?
[main tax authority in Mexico/Sweden]
[main environmental in agency Mexico/Sweden]
[main energy agency in Mexico/Sweden]
[main transport agency in Mexico/Sweden]
Very little confidence
A little confidence
Neither great nor little confidence
Quite a lot of confidence
A great deal of confidence
Don't know/No perception

26. Finally, give us an idea of your confidence in environmental and climate policy.
Indicate to what extent you agree or disagree with the following statements.

Politicians decide on the most effective and fair policy instruments to reduce greenhouse gas emissions.

Public servants execute climate policy decisions effectively and fairly, according to the principle that everyone is equal before the law.

People would rather profit from the efforts of others than change their own behavior to reduce emissions.
Strongly disagree
Disagree
Neither agree nor disagree
Agree
Strongly agree

If you have any comments on the survey, feel free to write them down here.

Thank you for your participation!

A2. Treatment information (Mexico and Sweden)

Treatment information Mexico
In the following sections, we ask questions about what you think about climate policy and the public administration in Sweden. But first some background information on the public sector.

Treatment group 1:
Mexico is, according to the latest world ranking by Transparency International, the seventh most corrupt country in Latin America. (Corruption Perception Index, 2021). Occupying 124th place out of 180 countries in the ranking, Mexico belongs to the more corrupt countries in the world.

In 2019, about 5.8 million cases of corruption were registered in Mexico. One of these cases revolved around a former CEO of a Mexican state-owned oil company, who is facing charges of corruption, money laundering and bribery related to 210.3 million pesos in bribes received between 2009-2012 from a construction company giant, in exchange for government contracts.

Despite numerous government officials facing charges of severely mishandling government finances, diverting public funds, accepting bribes and participating in money laundering, and of criminal association with drug cartels, few have been convicted and punished.

The high level of corruption in Mexico is also reflected in citizens' perceptions and experiences of corruption in the public sector. In a recent survey, 34% of Mexicans said that they have paid a bribe to gain access to public services such as schools, hospitals, courts and the police, while 44% said that they believe corruption has increased (Global Corruption Barometer, Latin America and the Caribbean, 2019).

While improvements have been made in Mexico's anti-corruption efforts in recent years, significant problems with corruption remain.

Treatment group 2:
While Mexico is among the more corrupt countries in the world, the level of corruption has significantly decreased in the past few years. Between 2017 and 2021, Mexico climbed no less than 10 positions in Transparency International's global ranking, currently ranking 124th out of 180 countries (Corruption Perceptions Index, 2021).

Despite challenges, Mexico has increased its efforts to combat corruption in recent years and there have been several positive developments. In 2016, the National Anti-corruption System (SNA), the main anti-corruption body in Mexico, was established. The body's mission is to prevent, detect and prosecute corruption offences.

Using federal and local anti-corruption legislation, the SNA punishes public officials and private entities for any form of bribery at the federal, state or municipal level. In 2020, the SNA approved the National Anti-

Corruption Policy, outlining strategic guidelines against corruption (The anti-bribery and anti-corruption review: Mexico, 2021).

Mexico is also performing well in other rankings. In the 2020 Capacity to Combat Corruption Index, Mexico ranked 8th out of 15 Latin American countries. According to the OECD, Mexico performs better in terms of public sector integrity measured as the quality of regulations against undue influence compared to the rest of Latin America.

In a recent survey, 21% of Mexicans said that corruption in Mexico has decreased. In addition, 61% said that the government is doing a good job in the fight against corruption (in 2017 only 24% said the same) (Global Corruption Barometer, Latin America and the Caribbean, 2019).

Overall, while corruption remains a problem in Mexico, significant improvements have been made in recent years.

Control group: [not treatment information]
In the following sections, we ask questions about what you think about climate policy and the public administration in Mexico. But first some background information on climate change.

Treatment information Sweden
In the following sections, we ask questions about what you think about climate policy and the public administration in Sweden. But first some background information on the public sector.

Treatment group 1:
Sweden is, according to Transparency International's latest global ranking (Corruption Perception Index for the year 2021), the fourth least corrupt country in the world. Despite Sweden's relatively high ranking in the corruption index, corruption occurs in the country.

Between 2017 and 2019, just over 120 cases of corruption in Sweden were dealt with by the judiciary. A corruption case that received particularly great attention in the media after a report by Uppdrag Granskning is the corruption scandal in Gothenburg, which led to the National Unit against Corruption bringing about ten charges for gross fraud, corruption and bribery.

An independent review showed that most politicians and government officials had sat on double chairs, allowed themselves to be bribed by construction companies, and more or less had the task of controlling themselves. To Expressen (2010) [Swedish evening paper], public prosecutor Nils-Eric Schultz made the statement that "This is how it is everywhere. I could find things like this in any municipality in the country."

That corruption is a problem in Sweden is also reflected in the public opinion. According to an opinion poll, every fifth Swedish citizen thinks that corruption in the national government is a fairly large problem, while 31% believe that corruption has increased in the past year. One in five Swedes say that they have used personal connections to gain access to public services (Global Corruption Barometer, EU, 2021).

Although Sweden is usually referred to as a relatively corruption-free country, there are significant problems with corruption in Sweden.

Treatment group 2:
In the following sections, we ask questions about what you think about climate policy and the public administration in Sweden. But first some background information on the public sector.

Sweden is, according to Transparency International's latest global ranking (Corruption Perception Index for the year 2021), the fourth least corrupt country in the world. Due to the high ranking, Sweden is considered a relatively corruption-free country.

An opinion poll shows that a majority of Swedes think that corruption in the national government is a fairly small problem. Few Swedes believe that politicians and government officials are involved in irregularities. Up to 95% say that few or no politicians, parliamentarians and officials at both the national and local level, as well as people in the judiciary are involved in corruption.

The low level of corruption is also reflected in citizens' own experiences in their contact with government agencies and officials. Less than 1% of Swedes in the survey say that they have paid a bribe to gain access to basic public services in the health care and education systems as well as help from the social insurance system, the judiciary, and the police (Global Corruption Barometer, EU, 2021).

In audits of the state's annual budget carried out by the National Audit Office and other independent audits of the state, any irregularities or cases of corruption involving politicians, government officials, courts or the police have seldom or never been noticed.

All in all, it can be said that Sweden is largely spared from corruption.

Control group: [not treatment information]
In the following sections, we ask questions about what you think about climate policy and the public administration in Sweden. But first some background information on climate change.

Appendix B. Data quality and manipulation checks

B1. Data quality checks

Data quality screeners

The survey contained two data quality screeners (see Data quality screener 1 and 2, in Appendix A1). The first data quality screener was placed as a separate question in the first block of the survey. The screener specifically told respondents that we are mapping respondents who are paying attention and reading the questions, asking them to answer 'not very worrying' among five response categories. The second data quality screener was placed later on in the survey, in relation to the manipulation checks. In contrast to the first data quality screener, that was placed as a separate survey question after a set of other items, the second data quality screener was placed among five other items in a matrix table, with response categories ranging from 'none at all' to 'a great deal'. Including a 'no perception' response, there were 6 response categories in total. On one of the items (the data quality screener), respondents were simply told to respond 'Quite a lot', without any reference to data quality checks (cf. Berinsky et al., 2019). The pilot study conducted in Sweden and Mexico revealed that both types of screeners worked in catching inattentive respondents at similar rates and were therefore used in the final surveys.

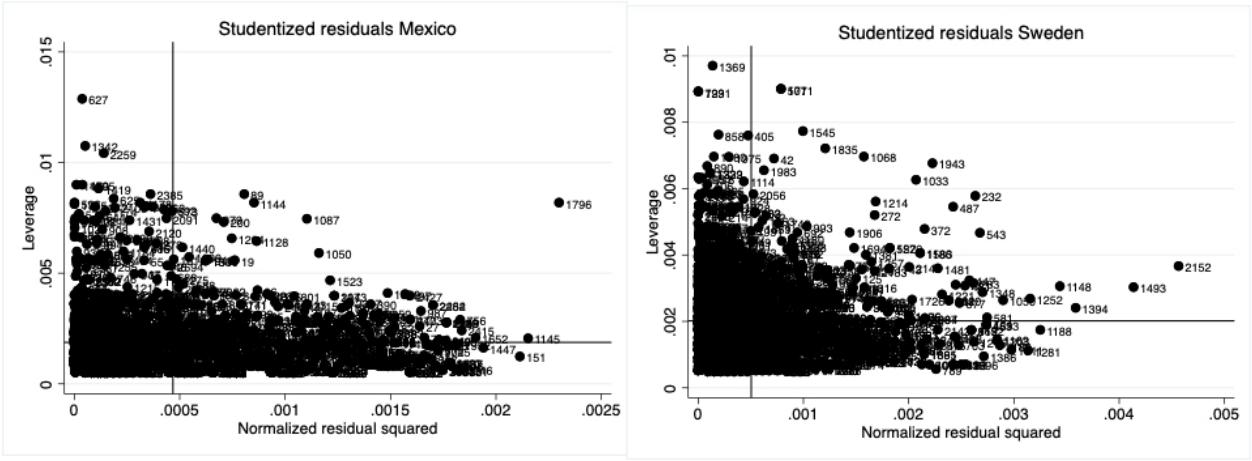
Timers

Respondents who did not pass any one of the data quality screeners in the survey, by failing to provide meaningful answers, were deemed as not having passed the lower bar of attentiveness and hence excluded from the analysis. In the Swedish survey, 654 respondents failed at least one of the data quality checks. In the Mexican sample, 301 respondents failed at least one of the data quality checks. In addition, timers were set in place in both surveys. The crucial timer was the one counting the duration of the survey. Respondents who spent less than 3 or 5 minutes on the survey were also excluded. Since the Mexican survey took a bit longer for respondents to complete, a higher bar was set for the Mexican sample. The average time it took the Swedish respondents to complete the survey was 10 minutes, for the Mexican respondents 15 minutes. 114 respondents that spent less than 3 minutes on the Swedish survey and 113 respondents who spent less than 5 minutes on the Mexican survey were excluded from the final analysis.

Outliers, data errors, influential observations

Before conducting any hypothesis testing analyses on the data using various tests, observations with problematic values on various diagnostic statistics were removed. Specifically, after fitting a linear model regressing corruption perception on policy attitudes, potentially influential observations on estimates for regression coefficients with dfbeta values bigger than .04 were removed. Moreover, observations breaking Cook's d rule, i.e., any observations with $d>4/N$, were removed. Finally, observations with studentized residuals (r) <-2 and >2 in the Swedish sample were removed. In the Mexican sample, many observations had values above 1.5 and close to 2, hence observations with studentized residuals above or below -/+1.5 were removed. The diagnostics help in identifying observations with strange values due to data errors. The final spread of studentized residuals for the observations after having removed all potentially problematic observations looks good (Studentized residual leverage plots).

Diagnostic statistics	Sweden	Mexico
Dfbeta	>.04 = 105	>.04 = 44
Cook's d	d>4/N = 43	d>4/N = 32
Studentized residuals r	r<-2 & r>2 = 45+48	r<-1.5 & r>1.5 = 182+198
Total observations drop	241	456



Note: The graphs were produced from a linear regression model, regressing corruption perception on climate policy attitudes, with controls for left-right self-placement and climate change worry. N=2137(MEX)/1983(SWE).

B2. Manipulation checks

Manipulation check (Mexico)

Group	Observations	Mean	Standard error	Standard deviation	95% confidence interval	
High-corrupt	741	5.39	.025	.68	5.34	5.44
Low-corrupt	658	5.27	.029	.77	5.21	5.33
Combined	1,462	5.33	.019	.73	5.29	5.37
diff		0.11	.038		.038	.190
Haf: diff<0 Pr(T<)=0.99		Ha: diff ! = 0 Pr(| T | >| t |) = 0.0032			Ha: diff > 0 Pr(T > t) = 0.0016	

Note: Two-sample t-test with equal variances. Differences in mean between high-corrupt and low-corrupt treatment group. t=2.95. Degrees of freedom=1424.

All groups combined	Mean	Standard deviation	Frequency
High-corrupt	5.39	.68	741
Low-corrupt	5.27	.77	685
Control	5.33	.73	718
Total	5.33	.73	2,144

Note: Summary of Corruption index. A mean-based index consisting of the variables 'corruption perception' and 'corruption worry' (see Appendix E).

Source	SS	df	MS	F	Prob > F
Between groups	4.67	2	2.33	4.36	0.0129
Within groups	1149.59	2141	.5369		
Total	1154.27	2143	.5386		
Bartlett's equal variances test:		chi2(2) = 10.6375		Prob>chi2 = 0.005	

Note: Analysis of variance.

Corruption index	Contrast	Standard error	Tukey t	Tukey P>| t |	Tukey 95% confidence intervals	
Low-corrupt vs. High-corrupt	-.114	.038	-2.95	0.009	-.2057	-.0235
Control vs. High-corrupt	-.057	.038	-1.49	0.297	-.1470	.0329
Control vs. Low-corrupt	.057	.039	1.47	0.305	-.0342	.1493

Note: Pairwise comparisons of means with equal variances. All groups combined. Number of comparisons: 3.

Manipulation check (Sweden)

Group	Observations	Mean	Standard error	Standard deviation	95% confidence interval	
High-corrupt	646	3.31	.041	1.06	3.23	3.39
Low-corrupt	685	2.95	.043	1.13	2.89	3.06
Combined	1,331	5.33	.019	1.11	3.07	5.37
diff		0.33	.060		.219	3.199
Haf: diff<0 Pr(T<)=1.00		Ha: diff ! = 0 Pr(| T | >| t |) = 0.0000			Ha: diff > 0 Pr(T > t) = 0.0000	

Note: Two-sample t-test with equal variances. Differences in mean between high-corrupt and low-corrupt treatment group. t=5.59. Degrees of freedom=1329.

All groups combined	Mean	Standard deviation	Frequency
High-corrupt	3.31	1.06	646
Low-corrupt	2.97	1.13	685
Control	3.25	1.13	661
Total	3.17	.73	1,992

Note: Summary of Corruption index. A mean-based index consisting of the variables 'corruption perception' and 'corruption worry' (see Appendix E).

Source	SS	df	MS	F	Prob > F
Between groups	43.48	2	21.74	17.60	0.0000
Within groups	2457.66	1989	1.235		
Total	2501.15	1991	1.256		
Bartlett's equal variances test:		chi2(2) = 3.0441		Prob>chi2 = 0.218	

Note: Analysis of variance.

Corruption index	Contrast	Standard error	Tukey t	Tukey P>| t |	Tukey 95% confidence intervals	
Low-corrupt vs. High-corrupt	-.338	.060	-5.55	0.000	-.4812	-.1952
Control vs. High-corrupt	-.063	.061	-1.03	0.561	-.2073	.0811
Control vs. Low-corrupt	.275	.060	4.54	0.000	.1330	.4173

Note: Pairwise comparisons of means with equal variances. All groups combined. Number of comparisons: 3.

Appendix C. Principal component analyses

C1. Principal component analyses: outcome variables

Policy attitudes (Sweden)

	Acceptance CO_2 tax	Support CO_2 tax	CO_2 tax increase	WTP climate taxes
Acceptance CO_2 tax	1.0000			
Support CO_2 tax	0.7478	1.0000		
CO_2 tax increase	0.5692	0.6760	1.0000	
WTP climate taxes	0.5411	0.6189	0.6755	1.0000

Note: Correlations between the four measures of the dependent variable. N=2,228.

Component	Eigenvalue	Difference	Proportion	Cumulative
Comp 1	2.91673	2.389	0.7292	0.7292
Comp 2	.527722	.202323	0.1319	0.8611
Comp 3	.325399	.0952458	0.0813	0.9425
Comp 4	.230153	.	0.0575	1.0000

Note: Principal components/correlation. N=2,228. Number of components: 4. Trace=4. Rho=1.0000. Rotation: unrotated = principal.

Component	Comp 1	Comp 2	Comp 3	Comp 4
Acceptance CO_2 tax	0.4899	-0.6369	0.2129	0.5559
Support CO_2 tax	0.5241	-0.3193	-0.1264	-0.7794
CO_2 tax increase	0.5009	0.3994	-0.7115	0.2886
WTP climate taxes	0.4841	0.5770	0.6576	-0.0174

Note: Principal components (eigenvectors). Unexplained = 0.

Component	Variance	Difference	Proportion	Cumulative
Comp 1	1.75823	.0720106	0.4396	0.4396
Comp 2	1.68622	.	0.4216	0.8611

Note: Principal components/correlation. N= 2,228. Number of components: 2. Trace=4. Rho=0.8611. Rotation: orthogonal varimax (Kaiser off).

Variable	Comp 1	Comp 2	Unexplained
Acceptance CO_2 tax		0.7983	.08586
Support CO_2 tax		0.5941	.145
CO_2 tax increase	0.6376		.1839
WTP climate taxes	0.7492		.1408

Note: Rotated components (blanks are abs(loading)<.3).

	Comp 1	Comp 2
Comp 1	0.7177	
Comp 2	0.6964	-0.7177

Note: Component rotation matrix.

Policy attitudes (Mexico)

	Acceptance CO_2 tax	Support CO_2 tax	CO_2 tax increase	WTP climate taxes
Acceptance CO_2 tax	1.0000			
Support CO_2 tax	0.6649	1.0000		
CO_2 tax increase	0.5630	0.6796	1.0000	
WTP climate taxes	0.3418	0.4097	0.5014	1.0000

Note: Correlations between the four measures of the dependent variable. N=2,596.

Component	Eigenvalue	Difference	Proportion	Cumulative
Comp 1	2.60097	1.88988	0.6502	0.6502
Comp 2	.71108	.309426	0.1778	0.8280
Comp 3	.401654	.115354	0.1004	0.9284
Comp 4	.2863	.	0.0716	0.9284

Note: Principal components/correlation. N=2,596. Number of components: 4. Trace=4. Rho=1.0000. Rotation: unrotated = principal.

Component	Comp 1	Comp 2	Comp 3	Comp 4
Acceptance CO_2 tax	0.5009	-0.4431	0.6559	0.3501
Support CO_2 tax	0.5408	-0.2774	-0.1886	-0.7714
CO_2 tax increase	0.5350	0.0380	-0.6622	0.5233
WTP climate taxes	0.4129	0.8516	0.3093	-0.0925

Note: Principal components (eigenvectors). Unexplained = 0.

Component	Variance	Difference	Proportion	Cumulative
Comp 1	1.5302	.0720106	0.3825	0.3825
Comp 2	1.20207	.220634	0.3005	0.6831
Comp 3	.981435	.	0.2454	0.9284

Note: Principal components/correlation. N= 2,596. Number of components: 3. Trace=4. Rho=0.9284. Rotation: orthogonal varimax (Kaiser off).

Variable	Comp 1	Comp 2	Comp 3	Unexplained
Acceptance CO_2 tax		0.9345		.03509
Support CO_2 tax	0.5405	0.3257		.1704
CO_2 tax increase	0.8391			.0784
WTP climate taxes			0.9956	.002448

Note: Rotated components (blanks are abs(loading)<.3).

	Comp 1	Comp 2	Comp 3
Comp 1	0.7157	0.5736	0.3984
Comp 2	-0.0815	-0.4980	0.8633
Comp 3	0.6937	0.6503	0.3097

Note: Component rotation matrix.

C2. Principal component analysis: trust and policy-specific beliefs

The principal component analysis was conducted using the pca command in Stata, which per default uses orthogonal varimax rotation (Kaiser off). Four components were specified, and the analysis included 11 items measuring trust mechanisms and policy-specific beliefs (Table 1). Table 2 and 3 display the factor loadings of the items on the rotated components in both samples. Given the factor loadings of the rotated components in both samples, the four items measuring policy-specific beliefs (PSBs) appear to load on the same component. However, for a clearer presentation of results, which PSBs act as indirect pathways between corruption perceptions and policy attitudes, they are modelled separately in the mediation analysis. Beliefs that tax revenues will disappear in the hands of corrupt politicians, and that other people will attempt to evade and not comply with the tax appear to load on the same component, which in the mediation analysis is labeled 'Corrupt tax system'. Beliefs about use of tax revenues for public goods provision and proper enforcement appear to load on one component in the Mexican sample. For theoretical reasons, however, proper enforcement is combined with the two items trust in political decision-making and policy enforcement. In the Swedish sample, proper enforcement also appears to load on this component, which in the mediation analysis is labeled 'Policy making'. Tax compliance is grouped with tax evasion and revenues disappear, despite the seemingly different loading.

TABLE 1. THE INDIRECT PATHWAYS: 11 ITEMS COMBINED INTO 6 DIFFERENT COMPONENTS

Item	Survey question/statement	Component in analysis
Taxes inefficient	'The carbon tax is not the most cost-efficient way to reduce emissions and involves large welfare sacrifices. Carbon taxes are cost-inefficient.'	Taxes ineffective
Taxes ineffective	'The carbon tax is not the most effective way to get people to change their behavior to reduce emissions. Carbon taxes are ineffective.'	
Taxes regressive	'The carbon tax impacts certain parts of the population more than others, in a way that is or can be perceived as unfair. Carbon taxes are regressive.'	Taxes regressive
Tax revenues disappear	'The tax revenues will most likely disappear into the hands of corrupt politicians rather than be used for climate purposes.'	Corrupt tax system
Tax evasion	'Some people will find a way to avoid paying the tax, e.g. by bribing tax officials or officials of other government authorities.'	
Tax compliance	'Other people will pay the tax if they are obliged to pay it (through the use of fossil fuels).'	
Source of income	'The main reason for increasing the carbon tax is not to cut emissions, but to earn more money to the government budget. The tax is just another source of income.'	Source of income
Revenues public goods	'The tax revenues will be used for something good, e.g. in green investments to reduce emissions or provide citizens with better public services.'	Public goods provision
Proper enforcement	'The tax will be enforced properly, effectively, and with integrity, by fair and competent government officials.'	Policy making
Trust decisions	'Politicians decide on the most effective and fair policy instruments to reduce greenhouse gas emissions.'	
Trust enforcement	'Public servants execute climate policy decisions effectively and fairly, according to the principle that everyone is equal before the law.'	

TABLE 2. FACTOR LOADINGS: TRUST MECHANISMS AND POLICY-SPECIFIC BELIEFS, MEXICAN SAMPLE

Variable	Component 1	Component 2	Component 3	Component 4	Unexplained
Taxes ineffective	0.5689				.3484
Source of income	0.3842				.4625
Taxes inefficient	0.5764				.3455
Taxes regressive	0.4193				.5143
Tax revenues disappear		0.5221			.3419
Revenues public goods			0.6583		.2795
Proper enforcement			0.6398		.2778
Tax evasion		0.5449			.3129
Tax compliance		0.6082			.3142
Trust decisions				0.7194	.2187
Trust enforcement				0.6915	.2357

Note: Rotated components (blanks are abs(loading)<.3).

TABLE 3. FACTOR LOADINGS: TRUST MECHANISMS AND POLICY-SPECIFIC BELIEFS, SWEDISH SAMPLE

Variable	Component 1	Component 2	Component 3	Component 4	Unexplained
Taxes ineffective	0.5385				.3418
Source of income	0.3896				.4029
Taxes inefficient	0.5416				.3612
Taxes regressive	0.4890				.4351
Tax revenues disappear			0.5583		.3091
Revenues public goods				.3718	.3809
Proper enforcement		0.3300		0.3149	.3649
Tax evasion			0.7783		.2145
Tax compliance				0.8202	.1988
Trust decisions		0.6603			.2664
Trust enforcement		0.6000			.3018

Note: Rotated components (blanks are abs(loading)<.3).

Appendix D. Results: interaction effects

D1. OLS regressions and ordered logit models (Sweden)

TABLE 1. OLS. INTERACTION: CLIMATE CHANGE WORRY AND CORRUPTION PERCEPTION, SWEDEN

Swedish sample *Dependent variables:*	Acceptance CO_2 tax	Support CO_2 tax	CO_2 tax increase	WTP taxes
Age (baseline 18-30)				
30-45	-0.01	-0.06	0.00	-0.09
	(0.07)	(0.06)	(0.07)	(0.07)
46-60	-0.05	0.00	-0.11	-0.06
	(0.06)	(0.06)	(0.06)	(0.07)
Over 60	0.14*	-0.01	-0.16*	-0.11
	(0.07)	(0.06)	(0.07)	(0.07)
Education (baseline low)				
Middle	0.00	-0.03	-0.16*	-0.14
	(0.08)	(0.08)	(0.08)	(0.09)
High	0.10	0.09	-0.17	-0.09
	(0.09)	(0.09)	(0.09)	(0.10)
Gender (basline female)				
Male	0.02	-0.01	0.09	0.10*
	(0.05)	(0.04)	(0.05)	(0.05)
Other	0.24	0.37	0.36	0.06
	(0.53)	(0.57)	(0.48)	(0.55)
Area of residence (baseline countryside)				
Smaller urban area	0.02	0.11	0.08	0.04
	(0.07)	(0.06)	(0.07)	(0.07)
City or urban area	0.21***	0.22***	0.26***	0.14*
	(0.06)	(0.05)	(0.06)	(0.06)
Big city	0.16*	0.24***	0.32***	0.15*
	(0.07)	(0.06)	(0.07)	(0.07)
Personal income (baseline low)				
Middle	-0.04	-0.05	-0.06	-0.00
	(0.05)	(0.05)	(0.05)	(0.05)
High	-0.07	-0.08	-0.06	-0.01
	(0.09)	(0.07)	(0.08)	(0.09)
Left-right dummy (left)	0.23***	0.33***	0.42***	0.42***
	(0.05)	(0.05)	(0.05)	(0.05)
Climate change worry	0.29***	0.45***	0.42***	0.59***
	(0.07)	(0.06)	(0.07)	(0.07)
Corruption perception (index)	-0.39***	-0.29***	-0.14**	-0.14**
	(0.05)	(0.05)	(0.05)	(0.05)
Climatechangeworry*Corruption perception	-0.01	-0.04**	-0.03	-0.02
	(0.02)	(0.02)	(0.02)	(0.02)
Constant	3.14***	2.64***	1.70***	1.43***
	(0.23)	(0.20)	(0.22)	(0.24)
Observations	1940	1937	1940	1940
R-squared	0.30	0.37	0.24	0.31

Note: Models estimated on data from the Swedish sample, using OLS regression with robust standard errors. Robust standard errors in parentheses. Unstandardized coefficients. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

TABLE 2. OLS. INTERACTION: CARE FOR NATURE AND CORRUPTION PERCEPTION, SWEDEN

Swedish sample *Dependent variables:*	Acceptance CO_2 tax	Support CO_2 tax	CO_2 tax increase	WTP taxes
Age (baseline 18-30)				
30-45	-0.06	-0.12	-0.03	-0.18*
	(0.07)	(0.06)	(0.07)	(0.07)
46-60	-0.10	-0.05	-0.13*	-0.14
	(0.06)	(0.06)	(0.07)	(0.07)
Over 60	0.04	-0.13*	-0.24***	-0.30***
	(0.07)	(0.07)	(0.07)	(0.08)
Education (baseline low)				
Middle	-0.03	-0.07	-0.18*	-0.20*
	(0.08)	(0.08)	(0.08)	(0.09)
High	-0.03	0.06	-0.16	-0.14
	(0.08)	(0.09)	(0.09)	(0.10)
Gender (basline female)				
Male	-0.01	-0.05	0.04	0.04
	(0.05)	(0.04)	(0.05)	(0.05)
Other	0.22	0.35	0.38	0.08
	(0.50)	(0.54)	(0.45)	(0.56)
Area of residence (baseline countryside)				
Smaller urban area	0.03	0.12	0.08	0.05
	(0.07)	(0.07)	(0.07)	(0.08)
City or urban area	0.22***	0.23***	0.27***	0.16*
	(0.06)	(0.06)	(0.06)	(0.07)
Big city	0.20**	0.29***	0.38***	0.23**
	(0.07)	(0.06)	(0.07)	(0.08)
Personal income (baseline low)				
Middle	-0.03	-0.04	-0.06	0.01
	(0.05)	(0.05)	(0.05)	(0.06)
High	-0.04	-0.04	-0.04	0.04
	(0.08)	(0.08)	(0.09)	(0.09)
Left-right dummy (left)	0.27***	0.37***	0.50***	0.52***
	(0.05)	(0.05)	(0.05)	(0.05)
Care for nature	0.33***	0.42***	0.21***	0.39***
	(0.05)	(0.05)	(0.06)	(0.06)
Corruption perception (index)	-0.18**	-0.13*	-0.12	-0.10
	(0.06)	(0.06)	(0.06)	(0.07)
Carefornature*Corruption perception	-0.06***	-0.07***	-0.03*	-0.04*
	(0.01)	(0.01)	(0.01)	(0.02)
Constant	2.68***	2.30***	2.16***	1.72***
	(0.25)	(0.22)	(0.26)	(0.27)
N	1940	1937	1940	1940
R-squared	0.29	0.36	0.19	0.24

Note: Models estimated on data from the Swedish sample, using OLS regression with robust standard errors. Robust standard errors in parentheses. Unstandardized coefficients. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

TABLE 3. OLS. INTERACTION: LEFT-RIGHT ORIENTATION AND CORRUPTION PERCEPTION, SWEDEN

Swedish sample *Dependent variables:*	Acceptance CO_2 tax	Support CO_2 tax	CO_2 tax increase	WTP taxes
Age (baseline 18-30)				
30-45	-0.02	-0.07	-0.00	-0.12
	(0.07)	(0.06)	(0.07)	(0.07)
46-60	-0.05	0.02	-0.09	-0.05
	(0.06)	(0.06)	(0.06)	(0.07)
Over 60	0.11	-0.03	-0.18**	-0.17*
	(0.07)	(0.06)	(0.07)	(0.07)
Education (baseline low)				
Middle	-0.00	-0.04	-0.17*	-0.16
	(0.09)	(0.08)	(0.08)	(0.09)
High	0.11	0.10	-0.16	-0.10
	(0.09)	(0.09)	(0.09)	(0.10)
Gender (basline female)				
Male	-0.00	-0.03	0.07	0.06
	(0.05)	(0.04)	(0.05)	(0.05)
Other	0.26	0.39	0.39	0.10
	(0.53)	(0.58)	(0.56)	(0.61)
Area of residence (baseline countryside)				
Smaller urban area	0.02	0.11	0.08	0.05
	(0.07)	(0.07)	(0.07)	(0.07)
City or urban area	0.22***	0.23***	0.27***	0.16*
	(0.06)	(0.06)	(0.06)	(0.06)
Big city	0.18*	0.26***	0.34***	0.19*
	(0.07)	(0.07)	(0.07)	(0.08)
Personal income (baseline low)				
Middle	-0.02	-0.02	-0.03	0.04
	(0.05)	(0.05)	(0.05)	(0.05)
High	-0.04	-0.03	-0.01	0.05
	(0.09)	(0.08)	(0.08)	(0.09)
Climate change worry (dummy)	0.33***	0.46***	0.46***	0.79***
	(0.05)	(0.05)	(0.06)	(0.06)
Left-right (right)	-0.07**	-0.10***	-0.12***	-0.14***
	(0.02)	(0.02)	(0.02)	(0.03)
Corruption perception (index)	-0.48***	-0.48***	-0.31***	-0.36***
	(0.05)	(0.04)	(0.05)	(0.05)
Left-right*Corruption perception	0.01	0.01	0.01	0.02*
	(0.01)	(0.01)	(0.01)	(0.01)
Constant	4.54***	4.66***	3.82***	4.18***
	(0.19)	(0.17)	(0.20)	(0.20)
N	1940	1937	1940	1940
R-squared	0.29	0.36	0.22	0.26

Note: Models estimated on data from the Swedish sample, using OLS regression with robust standard errors.
Robust standard errors in parentheses. Unstandardized coefficients. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

TABLE 4. OLOGIT. INTERACTION: CLIMATE CHANGE WORRY AND CORRUPTION PERCEPTION, SWEDEN

Swedish sample *Dependent variables:*	Acceptance CO_2 tax	Support CO_2 tax	CO_2 tax increase	WTP taxes
Age (baseline 18-29)				
30-45	0.95	0.85	0.91	0.82
	[0.74,1.22]	[0.66,1.09]	[0.71,1.17]	[0.64,1.05]
46-60	0.89	0.98	0.75*	0.86
	[0.70,1.13]	[0.77,1.25]	[0.59,0.96]	[0.68,1.10]
Over 60	1.18	0.89	0.64***	0.72*
	[0.91,1.53]	[0.68,1.16]	[0.49,0.83]	[0.55,0.93]
Education (baseline low)				
Middle	0.95	0.87	0.67*	0.71*
	[0.69,1.31]	[0.63,1.21]	[0.48,0.92]	[0.52,0.98]
High	1.16	1.10	0.67*	0.80
	[0.81,1.64]	[0.77,1.58]	[0.48,0.95]	[0.56,1.13]
Gender (baseline female)				
Male	0.94	0.88	1.06	1.02
	[0.79,1.12]	[0.74,1.05]	[0.89,1.27]	[0.86,1.21]
Other	1.96	3.22	2.03	1.21
	[0.30,12.73]	[0.46,22.43]	[0.32,12.73]	[0.19,7.60]
Area of residence (baseline countryside)				
Smaller urban area	1.08	1.29	1.22	1.09
	[0.83,1.41]	[0.99,1.68]	[0.94,1.60]	[0.84,1.42]
City or urban area	1.54***	1.63***	1.72***	1.29*
	[1.23,1.92]	[1.30,2.05]	[1.37,2.17]	[1.03,1.62]
Big city	1.47**	1.76***	1.99***	1.42**
	[1.14,1.91]	[1.35,2.29]	[1.53,2.59]	[1.10,1.84]
Personal income (baseline low)				
Middle	0.92	0.92	0.91	1.00
	[0.77,1.11]	[0.76,1.11]	[0.75,1.09]	[0.83,1.21]
High	0.93	0.91	0.93	0.99
	[0.68,1.27]	[0.66,1.24]	[0.68,1.27]	[0.73,1.35]
Left-right dummy (left)	1.70***	2.09***	2.31***	2.28***
	[1.42,2.03]	[1.74,2.50]	[1.93,2.76]	[1.91,2.72]
Climate change worry (dummy)	3.81***	6.41***	2.70***	4.60***
	[2.15,6.75]	[3.59,11.44]	[1.55,4.72]	[2.61,8.12]
Corruption perception (index)	0.45***	0.43***	0.61***	0.62***
	[0.41,0.50]	[0.39,0.48]	[0.56,0.67]	[0.56,0.68]
Climate change worry*Corruption perception	0.82*	0.77**	0.97	0.98
	[0.69,0.97]	[0.65,0.92]	[0.82,1.15]	[0.82,1.16]
Cut 1	0.01***	0.01***	0.09***	0.07***
	[0.01,0.02]	[0.01,0.02]	[0.05,0.15]	[0.04,0.12]
Cut 2	0.07***	0.07***	0.36***	0.30***
	[0.04,0.12]	[0.04,0.11]	[0.22,0.60]	[0.18,0.49]
Cut 3	0.36***	0.44**	2.03**	1.04
	[0.22,0.59]	[0.26,0.72]	[1.22,3.38]	[0.63,1.71]
Cut 4	2.39***	2.40**	13.13***	10.35***
	[1.43,4.01]	[1.42,4.07]	[7.52,22.93]	[6.05,17.72]
N	1940	1937	1940	1940
AIC	5279.90	5029.03	5168.07	5352.30
BIC	5391.31	5140.41	5279.48	5463.71

Note: Ordered logit models. Reported coefficients are odds ratios. An odds ratio above 1 indicates a positive effect; an odds ratio below 1 indicates a negative effect. Confidence intervals in brackets. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

TABLE 5. OLOGIT. INTERACTION: CARE FOR NATURE AND CORRUPTION PERCEPTION, SWEDEN

Swedish sample *Dependent variables:*	Acceptance CO_2 tax	Support CO_2 tax	CO_2 tax increase	WTP taxes
Age (baseline 18-29)				
30-45	0.94	0.84	0.81	0.91
	[0.73,1.20]	[0.65,1.08]	[0.63,1.03]	[0.71,1.17]
46-60	0.89	0.99	0.88	0.78*
	[0.70,1.13]	[0.78,1.26]	[0.69,1.12]	[0.61,0.99]
Over 60	1.13	0.84	0.66**	0.63***
	[0.87,1.47]	[0.64,1.09]	[0.51,0.86]	[0.49,0.82]
Education (baseline low)				
Middle	0.98	0.91	0.75	0.71*
	[0.71,1.35]	[0.66,1.27]	[0.55,1.04]	[0.51,0.97]
High	1.23	1.23	0.91	0.76
	[0.87,1.75]	[0.86,1.75]	[0.65,1.28]	[0.54,1.07]
Gender (baseline female)				
Male	0.90	0.82*	0.93	1.00
	[0.76,1.07]	[0.69,0.98]	[0.79,1.11]	[0.84,1.19]
Other	1.80	2.61	1.06	2.03
	[0.28,11.47]	[0.40,16.77]	[0.18,6.13]	[0.37,11.07]
Area of residence (baseline countryside)				
Smaller urban area	1.08	1.30	1.12	1.21
	[0.83,1.41]	[0.99,1.69]	[0.86,1.45]	[0.93,1.58]
City or urban area	1.56***	1.66***	1.36**	1.74***
	[1.25,1.95]	[1.32,2.08]	[1.08,1.70]	[1.39,2.19]
Big city	1.60***	1.97***	1.61***	2.13***
	[1.23,2.06]	[1.52,2.56]	[1.24,2.08]	[1.64,2.77]
Personal income (baseline low)				
Middle	0.92	0.91	0.99	0.89
	[0.76,1.10]	[0.75,1.09]	[0.82,1.19]	[0.74,1.07]
High	0.91	0.90	1.00	0.90
	[0.67,1.24]	[0.66,1.23]	[0.74,1.35]	[0.66,1.23]
Left-right dummy (left)	1.82***	2.31***	2.59***	2.50***
	[1.53,2.18]	[1.93,2.77]	[2.17,3.09]	[2.09,2.99]
Care for nature (dummy)	2.78***	3.98***	2.32**	1.47
	[1.54,5.01]	[2.19,7.21]	[1.28,4.21]	[0.81,2.67]
Corruption perception (index)	0.49***	0.48***	0.62***	0.61***
	[0.42,0.57]	[0.41,0.56]	[0.53,0.72]	[0.52,0.70]
Care for nature*Corruption perception	0.84*	0.82*	1.01	1.01
	[0.71,1.00]	[0.69,0.97]	[0.85,1.21]	[0.85,1.20]
Cut 1	0.02***	0.02***	0.12***	0.10***
	[0.01,0.04]	[0.01,0.04]	[0.06,0.22]	[0.05,0.20]
Cut 2	0.12***	0.13***	0.47*	0.42**
	[0.06,0.24]	[0.07,0.26]	[0.24,0.89]	[0.22,0.80]
Cut 3	0.59	0.87	1.51	2.22*
	[0.31,1.12]	[0.45,1.67]	[0.79,2.89]	[1.15,4.28]
Cut 4	3.73***	4.37***	12.79***	13.60***
	[1.92,7.23]	[2.24,8.52]	[6.50,25.13]	[6.79,27.26]
N	1940	1937	1940	1940
AIC	5310.77	5089.50	5480.60	5232.77
BIC	5422.18	5200.87	5592.01	5344.18

Note: Ordered logit models. Reported coefficients are odds ratios. An odds ratio above 1 indicates a positive effect; an odds ratio below 1 indicates a negative effect. Confidence intervals in brackets. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

D2. OLS regressions and ordered logit models (Mexico)

TABLE 1. OLS. INTERACTION: CARE FOR NATURE AND CORRUPTION PERCEPTION, MEXICO

Mexican sample *Dependent variables:*	Acceptance CO_2 tax	Support CO_2 tax	CO_2 tax increase	WTP taxes
Age (baseline 18-30)				
30-45	0.06	0.05	0.00	-0.16*
	(0.06)	(0.06)	(0.06)	(0.07)
46-60	0.15*	0.16**	0.04	-0.14
	(0.06)	(0.06)	(0.06)	(0.07)
Over 60	0.38***	0.52***	0.39***	0.18
	(0.10)	(0.10)	(0.10)	(0.12)
Education (baseline low)				
Middle	0.57*	0.14	-0.15	0.08
	(0.29)	(0.28)	(0.28)	(0.29)
High	0.71*	0.24	-0.04	0.15
	(0.29)	(0.29)	(0.28)	(0.29)
Gender (basline female)				
Male	0.03	0.08	0.08	-0.03
	(0.04)	(0.05)	(0.05)	(0.06)
Other	0.93***	0.90***	-0.77	-0.88
	(0.14)	(0.14)	(0.54)	(0.55)
Area of residence (baseline countryside)				
Smaller urban area	0.16	-0.00	0.18	0.47*
	(0.14)	(0.16)	(0.15)	(0.20)
City or urban area	0.05	0.06	0.21	0.56**
	(0.13)	(0.15)	(0.14)	(0.18)
Big city	0.07	0.07	0.21	0.51**
	(0.13)	(0.16)	(0.15)	(0.19)
Personal income (baseline low)				
Middle	-0.05	-0.04	-0.10	0.12
	(0.05)	(0.06)	(0.06)	(0.07)
High	0.16*	0.10	0.01	0.28***
	(0.06)	(0.07)	(0.07)	(0.08)
Left-right dummy (left)	-0.03	-0.09*	-0.02	-0.11
	(0.05)	(0.05)	(0.05)	(0.06)
Care for nature	1.03	0.67	1.51**	1.23
	(0.57)	(0.58)	(0.57)	(0.66)
Corruption perception (index)	-0.01	-0.05	0.10	0.11
	(0.10)	(0.10)	(0.11)	(0.12)
Carefornature*Corruption perception	-0.19	-0.12	-0.29**	-0.21
	(0.11)	(0.11)	(0.11)	(0.12)
Constant	2.36***	3.11***	2.21***	1.81*
	(0.63)	(0.64)	(0.63)	(0.71)
N	1958	1959	1958	1958
R-squared	0.05	0.04	0.03	0.03

Note: Models estimated on data from the Mexican sample, using OLS regression with robust standard errors. Robust standard errors in parentheses. Unstandardized coefficients. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

TABLE 2. OLS. INTERACTION: CLIMATE CHANGE WORRY AND CORRUPTION PERCEPTION, MEXICO

Mexican sample *Dependent variables:*	Acceptance CO_2 tax	Support CO_2 tax	CO_2 tax increase	WTP taxes
Age (baseline 18-30)				
30-45	0.06	0.06	0.01	-0.14*
	(0.06)	(0.06)	(0.06)	(0.07)
46-60	0.15**	0.17**	0.05	-0.13
	(0.06)	(0.06)	(0.06)	(0.07)
Over 60	0.37***	0.52***	0.36***	0.15
	(0.10)	(0.10)	(0.10)	(0.12)
Education (baseline low)				
Middle	0.57	0.13	-0.17	0.05
	(0.30)	(0.28)	(0.28)	(0.29)
High	0.69*	0.21	-0.09	0.07
	(0.30)	(0.28)	(0.28)	(0.29)
Gender (basline female)				
Male	0.04	0.09	0.09*	-0.00
	(0.04)	(0.05)	(0.05)	(0.06)
Other	0.96***	0.92***	-0.76	-0.86
	(0.10)	(0.09)	(0.58)	(0.66)
Area of residence (baseline country side)				
Smaller urban area	0.16	-0.00	0.18	0.48*
	(0.14)	(0.16)	(0.15)	(0.19)
City or urban area	0.04	0.05	0.20	0.55**
	(0.12)	(0.15)	(0.14)	(0.18)
Big city	0.06	0.05	0.19	0.47*
	(0.13)	(0.15)	(0.14)	(0.19)
Personal income (baseline low)				
Middle	-0.06	-0.05	-0.11*	0.10
	(0.05)	(0.06)	(0.06)	(0.07)
High	0.15*	0.09	-0.00	0.25**
	(0.06)	(0.07)	(0.07)	(0.08)
Left-right (left)	-0.00	-0.01	-0.00	-0.02
	(0.01)	(0.01)	(0.01)	(0.01)
Climate change worry	0.33	0.63**	0.03	0.54*
	(0.19)	(0.20)	(0.21)	(0.25)
Corruption perception (index)	-0.03	0.16	-0.26	0.06
	(0.14)	(0.14)	(0.15)	(0.18)
Climate change worry*Corruption perception	-0.05	-0.09*	0.02	-0.05
	(0.04)	(0.04)	(0.04)	(0.05)
Constant	2.20**	1.56*	3.67***	1.31
	(0.80)	(0.79)	(0.87)	(0.99)
N	1958	1959	1958	1958
R-squared	0.05	0.05	0.05	0.05

Note: Models estimated on data from the Mexican sample, using OLS regression with robust standard errors. Robust standard errors in parentheses. Unstandardized coefficients. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

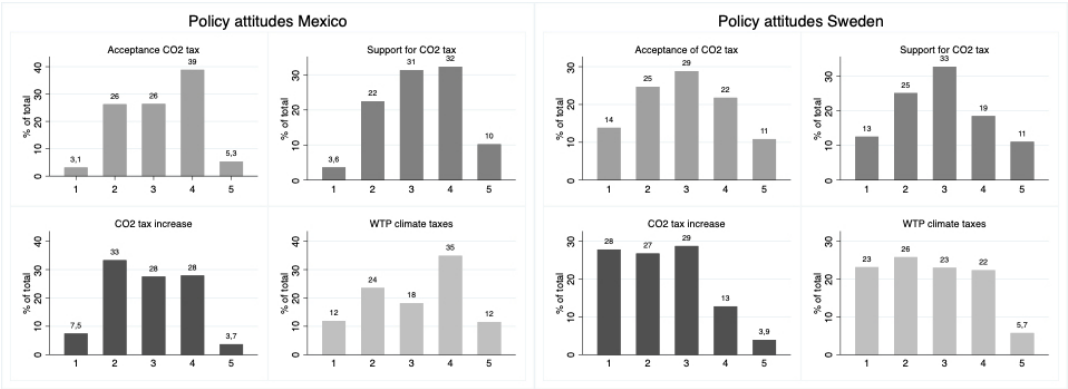
TABLE 3. OLOGIT. INTERACTION: CARE FOR NATURE AND CORRUPTION PERCEPTION, MEXICO

Mexican sample *Dependent variables:*	Acceptance CO_2 tax	Support CO_2 tax	CO_2 tax increase	WTP taxes
Age (baseline 18-29)				
30-45	1.13	1.09	1.01	0.79*
	[0.92,1.40]	[0.89,1.34]	[0.82,1.24]	[0.64,0.97]
46-60	1.35**	1.35**	1.11	0.81
	[1.09,1.67]	[1.10,1.67]	[0.90,1.37]	[0.66,1.00]
Over 60	2.24***	2.60***	2.03***	1.28
	[1.52,3.29]	[1.78,3.78]	[1.40,2.94]	[0.89,1.83]
Education (baseline low)				
Middle	3.06*	1.26	0.81	1.14
	[1.12,8.38]	[0.50,3.16]	[0.32,2.07]	[0.47,2.78]
High	3.90**	1.55	0.99	1.26
	[1.42,10.76]	[0.61,3.91]	[0.39,2.56]	[0.51,3.09]
Gender (baseline female)				
Male	1.05	1.16	1.16	0.97
	[0.89,1.25]	[0.98,1.37]	[0.98,1.37]	[0.82,1.14]
Other	6.09	4.57	0.22	0.26
	[0.52,71.13]	[0.49,42.41]	[0.02,3.12]	[0.02,3.22]
Area of residence (baseline countryside)				
Smaller urban area	1.35	0.93	1.33	2.03*
	[0.76,2.40]	[0.53,1.65]	[0.75,2.37]	[1.13,3.63]
City or urban area	1.09	1.06	1.39	2.32**
	[0.64,1.85]	[0.62,1.80]	[0.82,2.38]	[1.35,4.00]
Big city	1.14	1.08	1.43	2.14**
	[0.65,1.98]	[0.62,1.88]	[0.82,2.49]	[1.22,3.75]
Personal income (baseline low)				
Middle	0.91	0.93	0.80*	1.21
	[0.75,1.11]	[0.76,1.13]	[0.66,0.97]	[1.00,1.47]
High	1.38**	1.23	1.02	1.55***
	[1.09,1.75]	[0.97,1.55]	[0.81,1.29]	[1.22,1.95]
Left-right dummy (left)	0.93	0.83*	0.95	0.84*
	[0.79,1.11]	[0.70,0.98]	[0.80,1.13]	[0.72,1.00]
Care for nature (dummy)	7.93	3.02	14.07*	5.95
	[0.83,75.59]	[0.32,28.39]	[1.52,129.82]	[0.69,51.15]
Corruption perception (index)	1.01	0.91	1.19	1.20
	[0.68,1.51]	[0.61,1.36]	[0.80,1.77]	[0.82,1.76]
Care for nature*Corruption perception	0.69	0.83	0.60*	0.73
	[0.45,1.04]	[0.55,1.25]	[0.40,0.91]	[0.49,1.09]
Cut 1	0.17	0.04*	0.25	0.96
	[0.01,1.97]	[0.00,0.47]	[0.02,2.71]	[0.10,9.64]
Cut 2	2.28	0.40	2.20	3.99
	[0.20,26.17]	[0.04,4.41]	[0.20,23.87]	[0.40,40.09]
Cut 3	7.08	1.53	7.05	8.55
	[0.62,81.27]	[0.14,16.91]	[0.65,76.80]	[0.85,85.96]
Cut 4	108.52***	10.78	91.08***	57.31***
	[9.36,1257.63]	[0.97,119.42]	[8.26,1003.97]	[5.67,579.42]
N	1958	1959	1958	1958
AIC	5169.62	5520.29	5421.43	5948.09
BIC	5281.21	5631.89	5533.02	6059.68

Note: Ordered logit models. Reported coefficients are odds ratios. An odds ratio above 1 indicates a positive effect; an odds ratio below 1 indicates a negative effect. Confidence intervals in brackets. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

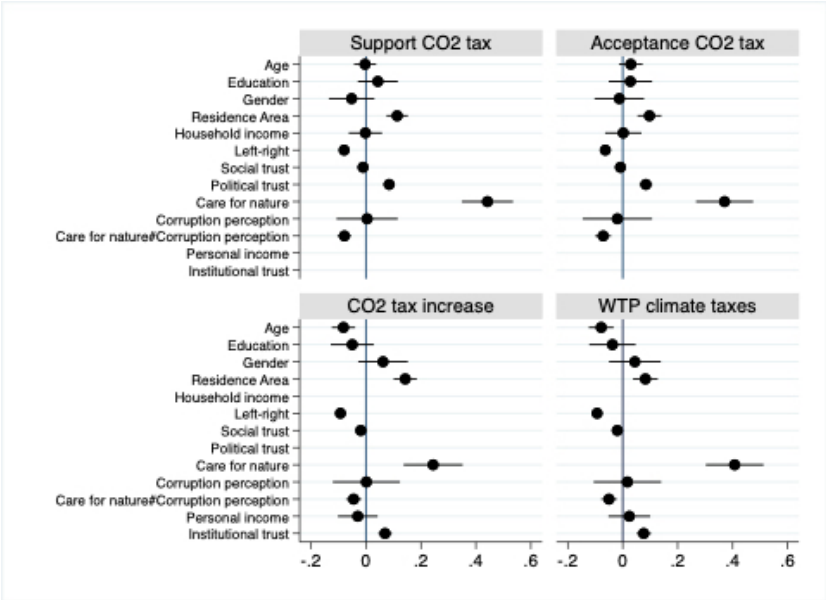
D3. Plotting results: interaction effects and policy attitudes

FIGURE 1. ATTITUDES TOWARDS CLIMATE TAXES, MEXICO AND SWEDEN



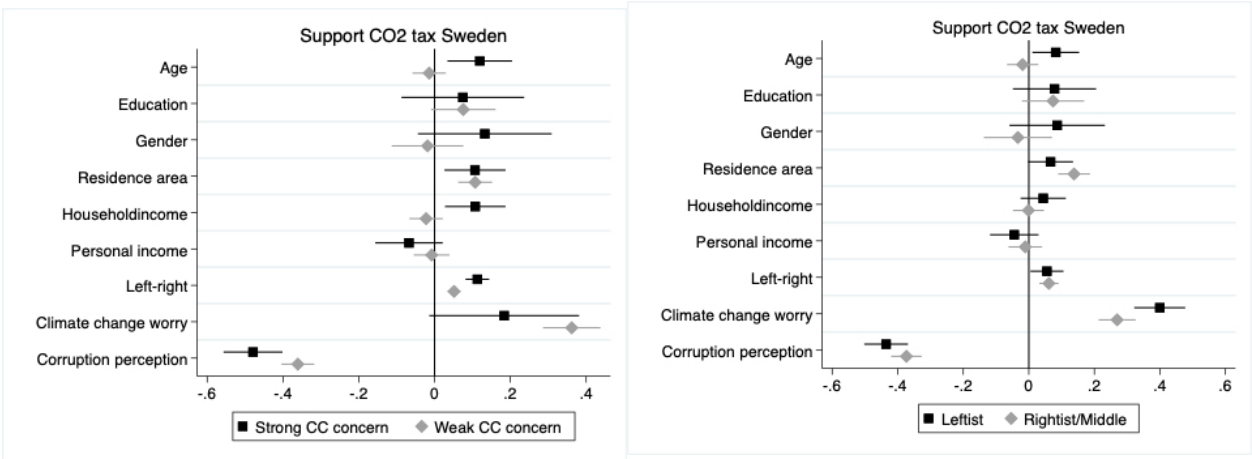
Note: The graphs show the shares of respondents in percentages in each response category of the four outcome variables (acceptance CO2 tax, Support CO2 tax, CO2 tax increase, and WTP climate taxes). The responses are measured on 5-point Likert-scales with response categories ranging from positive (1) to negative policy attitude (5). For a complete view of all 5 response categories of each of the four measures of the dependent variable, see the survey in Appendix A.

FIGURE 2. THE INTERACTION BETWEEN CARE FOR NATURE AND CORRUPTION PERCEPTION, SWEDEN



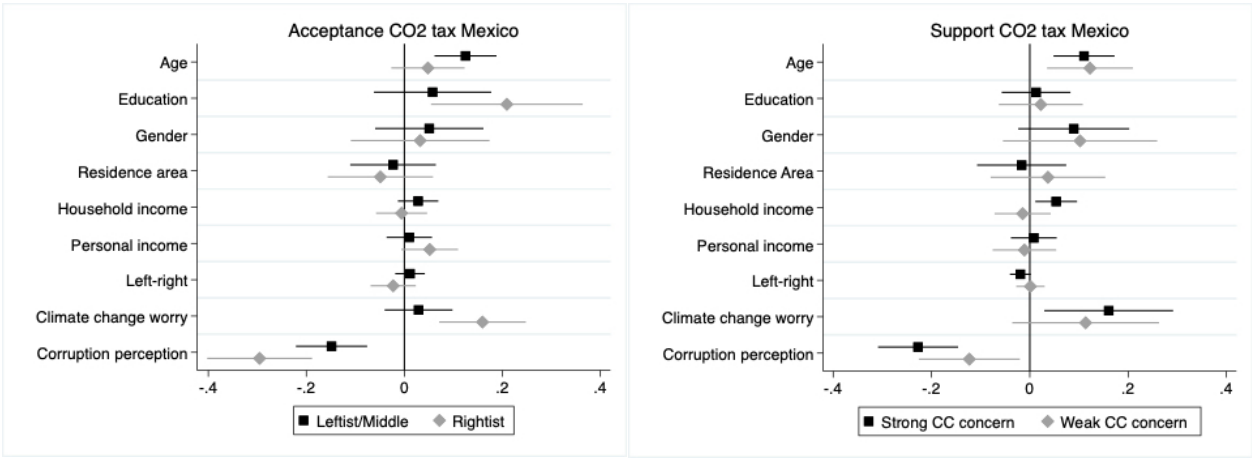
Note: Coefficient plots produced from the estimates of the OLS regressions in Table 2. The interaction term consists of a reversed care for nature variable: 'Tell us how much this person is or is not like you. She/he firmly believes that people should take care of nature. Caring for the environment is important to her/him. On a scale, how similar would you say this person is to you?' where 1='Not like me at all' and 6='Very much like me', and a corruption perception index consisting of two variables: corruption perception and corruption worry, where higher values indicate higher corruption perceptions.

FIGURE 3. SUPPORT FOR EXISTING CARBON TAXES ACROSS VALUE ORIENTATION SUBGROUPS OF CLIMATE CHANGE CONCERN AND LEFT-RIGHT ORIENTATION, SWEDEN



Note: Coefficient plots derived from linear regression models regressing dummy variables for climate change concern and left-right orientation on support for existing carbon tax as the dependent variable. Respondents who scored 1-3 on climate change worry (i.e. not at all worried-somewhat worried) were assigned 'weak climate change concern', and those who scored 4-5 (i.e. very worried-extremely worried) were assigned 'strong climate change concern'. Respondents who scored from 1-6 on the 1-11 left-right scale were assigned 'rightist/middle', and those who scored 7-11 'leftist'.

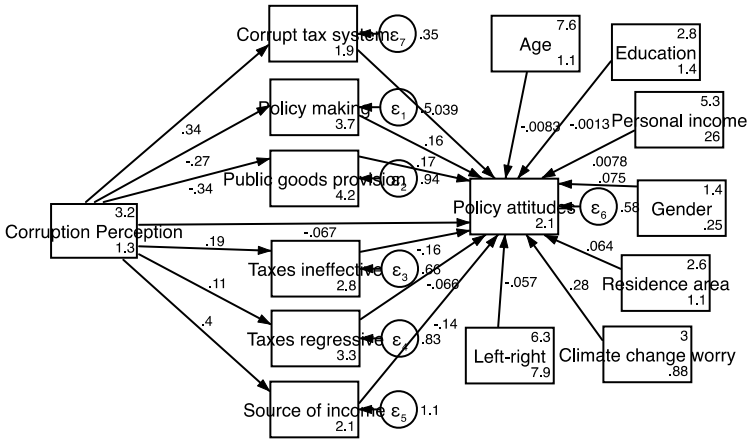
FIGURE 4. SUPPORT FOR AND ACCEPTANCE OF EXISTING CARBON TAXES ACROSS VALUE ORIENTATION SUBGROUPS OF CLIMATE CHANGE CONCERN AND LEFT-RIGHT ORIENTATION, MEXICO



Note: Coefficient plots derived from linear regression models regressing dummy variables for climate change concern and left-right orientation on support for existing carbon tax as the dependent variable. Respondents who scored 1-3 on climate change worry (i.e. not at all worried-somewhat worried) were assigned 'weak climate change concern', and those who scored 4-5 (i.e. very worried-extremely worried) were assigned 'strong climate change concern'. Respondents who scored from 1-6 on the 1-11 left-right scale were assigned 'rightist/middle', and those who scored 7-11 'leftist'.

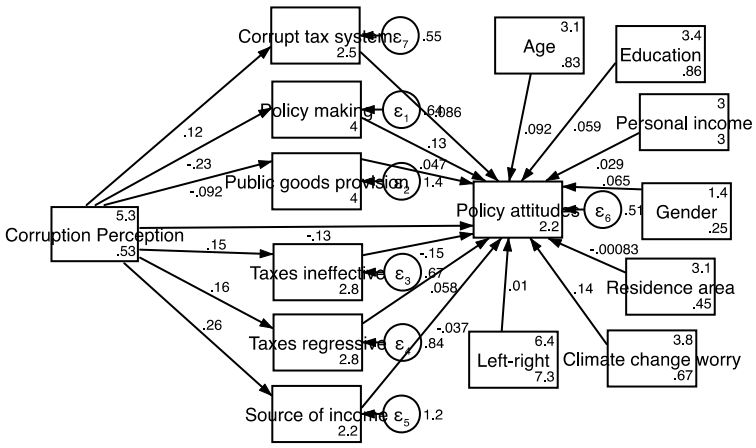
Appendix E. Exploratory analysis: trust and policy-specific beliefs

FIGURE 1. SEM MODEL ILLUSTRATION FROM STATA SEM-BUILDER, SWEDISH SAMPLE



Note: Graphical depiction of mediation model from SEM-builder in Stata. Structural equation model using maximum likelihood estimation, applied to data from the Swedish sample (N=1932). The graph shows the presumed causal pathways of corruption perception through three trust mechanisms and policy-specific beliefs respectively on attitudes towards climate taxes (all four outcome variables). Individual-level controls are included in the model. The results of the illustrated structural equation model are reported in Table 1, Appendix E.

FIGURE 2. SEM MODEL ILLUSTRATION FROM STATA SEM-BUILDER, MEXICAN SAMPLE



Note: Graphical depiction of mediation model from SEM-builder in Stata. Structural equation model using maximum likelihood estimation, applied to data from the Mexican sample (N=2013). The graph shows the presumed causal pathways of corruption perception through three trust mechanisms and policy-specific beliefs respectively on attitudes towards climate taxes (all four outcome variables). Individual-level controls are included in the model. The results of the illustrated structural equation model are reported in Table 2, Appendix E.

TABLE 1. SEM MODEL: TRUST MECHANISMS AND POLICY-SPECIFIC BELIEFS AS MEDIATORS, SWEDEN

Corruption perceptions on individual mechanisms		*Individual mechanisms on policy attitudes*	
Corrupt tax system		Policy attitudes	
Corruption perception (index)	0.34***	Corrupt tax system	-0.01
	[0.31,0.36]		[-0.07,0.04]
Constant	1.86***	Policy making	0.14***
	[1.78,1.94]		[0.09,0.19]
Policy making		Public goods provision	0.14***
Corruption perception (index)	-0.27***		[0.10,0.17]
	[-0.30,-0.25]	Taxes ineffective (index)	-0.15***
Constant	3.66***		[-0.19,-0.10]
	[3.57,3.76]	Taxes regressive	-0.02
Public goods provision			[-0.06,0.02]
Corruption perception (index)	-0.34***	Source of income	-0.14***
	[-0.38,-0.30]		[-0.17,-0.10]
Constant	4.16***	Corruption perception (index)	-0.17***
	[4.03,4.29]		[-0.20,-0.14]
Taxes ineffective (index)		Area of residence	0.07***
Corruption perception (index)	0.19***		[0.04,0.09]
	[0.16,0.22]	Education	0.01
Constant	2.85***		[-0.02,0.03]
	[2.74,2.96]	Climate change worry	0.23***
Taxes regressive			[0.19,0.26]
Corruption perception (index)	0.11***	Left-right	-0.05***
	[0.07,0.15]		[-0.06,-0.04]
Constant	3.33***	Personal income	0.01
	[3.21,3.45]		[-0.00,0.01]
Source of income		Gender	0.03
Corruption perception (index)	0.40***		[-0.03,0.09]
	[0.35,0.44]	Age	0.02
Constant	2.05***		[-0.01,0.04]
	[1.92,2.19]	Constant	2.74***
			[2.35,3.14]
var(Corrupt tax system)	0.35***	var(Corrupt tax system)	0.35***
	[0.33,0.37]		[0.33,0.37]
var(Policy making)	0.50***	var(Policy making)	0.50***
	[0.47,0.53]		[0.47,0.53]
var(Public goods provision)	0.94***	var(Public goods provision)	0.94***
	[0.88,1.00]		[0.88,1.00]
var(Taxes ineffective)	0.66***	var(Taxes ineffective)	0.66***
	[0.62,0.71]		[0.62,0.71]
var(Taxes regressive)	0.83***	var(Taxes regressive)	0.83***
	[0.77,0.88]		[0.77,0.88]
var(Source of income)	1.06***	var(Source of income)	1.06***
	[1.00,1.13]		[1.00,1.13]
var(Policy attitudes)	0.40***	var(Policy attitudes)	0.40***
	[0.38,0.43]		[0.38,0.43]
N	1932	*N*	1932

Note: Swedish sample. Structural equation model estimated with Stata's sem command. The model from Stata SEM builder is illustrated in Figure 1, Appendix E. 95% confidence intervals in brackets. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

TABLE 2. SEM MODEL: TRUST MECHANISMS AND POLICY-SPECIFIC BELIEFS AS MEDIATORS, MEXICO

Corruption perceptions on individual mechanisms		*Individual mechanisms on policy attitudes*	
Corrupt tax system		Policy attitudes	
Corruption perception (index)	0.12***	Corrupt tax system	0.09***
	[0.08,0.17]		[0.04,0.13]
Constant	2.51***	Policy making	0.13***
	[2.27,2.75]		[0.08,0.17]
Policy making		Public goods provision	0.05**
Corruption perception (index)	-0.23***		[0.02,0.08]
	[-0.28,-0.18]	Taxes ineffective (index)	-0.15***
Constant	4.04***		[-0.19,-0.10]
	[3.78,4.30]	Taxes regressive	0.06**
Public goods provision			[0.02,0.10]
Corruption perception (index)	-0.09**	Source of income	-0.04*
	[-0.16,-0.02]		[-0.07,-0.00]
Constant	3.96***	Corruption perception (index)	-0.13***
	[3.59,4.34]		[-0.17,-0.08]
Taxes ineffective (index)		Area of residence	-0.00
Corruption perception (index)	0.15***		[-0.05,0.05]
	[0.10,0.20]	Education	0.06**
Constant	2.79***		[0.02,0.10]
	[2.53,3.06]	Climate change worry	0.14***
Taxes regressive			[0.10,0.18]
Corruption perception (index)	0.16***	Left-right	0.01
	[0.11,0.22]		[-0.00,0.02]
Constant	2.84***	Personal income	0.03**
	[2.54,3.13]		[0.01,0.05]
Source of income		Gender	0.07*
Corruption perception (index)	0.26***		[0.00,0.13]
	[0.20,0.33]	Age	0.09***
Constant	2.16***		[0.06,0.13]
	[1.80,2.52]	Constant	2.17***
			[1.76,2.58]
var(Corrupt tax system)	0.55***	var(Corrupt tax system)	0.55***
	[0.52,0.58]		[0.52,0.58]
var(Policy making)	0.64***	var(Policy making)	0.64***
	[0.60,0.68]		[0.60,0.68]
var(Public goods provision)	1.37***	var(Public goods provision)	1.37***
	[1.28,1.45]		[1.28,1.45]
var(Taxes ineffective)	0.67***	var(Taxes ineffective)	0.67***
	[0.63,0.71]		[0.63,0.71]
var(Taxes regressive)	0.84***	var(Taxes regressive)	0.84***
	[0.79,0.90]		[0.79,0.90]
var(Source of income)	1.22***	var(Source of income)	1.22***
	[1.15,1.30]		[1.15,1.30]
var(Policy attitudes)	0.51***	var(Policy attitudes)	0.51***
	[0.48,0.54]		[0.48,0.54]
N	2013	*N*	2013

Note: Mexican sample. Structural equation model estimated with Stata's sem command. The model from Stata SEM builder is illustrated in Figure 2, Appendix E. 95% confidence intervals in brackets. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

Appendix F. Descriptive sample statistics and generalizability

The final survey was translated from English to Swedish and Spanish by the author herself. The Spanish survey was then reviewed and corrected by two independent native-speaking Mexican proofreaders. Survey participants were recruited by Lucid, an online marketplace for survey respondents, now a Cint Group Company (https://www.cint.com/). Different providers redirect participants to Lucid, which then redirects subjects to purchasers back to, for example, market research firms or academic researchers. Survey participants are compensated in cash, gift cards, or reward points. The data for the current study were collected using nationally representative quotas on age and gender, with region, household income and education on natural fallout. Descriptive statistics for the Swedish and Mexican samples are presented in Table 1 and 2.

TABLE 1. DESCRIPTIVE STATISTICS (SWEDEN)

Statistic	Mean	Std. Dev.	Min	Max	N
Control variables					
Age	2.604721	1.032613	1	4	1,991
Gender	1.434542	.500876	1	3	1,986
Education	2.812657	1.182604	1	5	1,991
Personal income	2.827167	1.317318	1	6	1,973
Household income	2.922189	1.330578	1	6	1,992
Living area of residence	2.626956	1.036535	1	4	1,981
Value orientations					
Left-right	6.350479	2.821052	1	11	1,983
Care for nature	2.686245	1.205817	1	6	1,992
Climate change concern	3.039157	.9393848	1	5	1,992
Dependent variables					
Acceptance CO_2 tax	2.908589	1.145093	1	5	1,991
Support CO_2 tax	2.919055	1.123189	1	5	1,989
CO_2 tax increase	2.385542	1.102461	1	5	1,992
WTP climate taxes	2.62249	1.201897	1	5	1,992
Trust (traditional items)					
Political trust (index)	4.909388	2.253199	1	11	1,992
Institutional trust (index)	6.250377	2.219714	1	11	1,991
Social trust	5.849246	2.67333	1	11	1,990
Trust (original items)					
Trust decisions	2.604324	.9359796	1	5	1,989
Trust enforcement	2.782696	.9486368	1	5	1,988
Distrust behavior	3.57733	.8828507	1	5	1,985
Trust mechanisms					
Tax revenues disappear	3.09598	1.098165	1	5	1,990
Revenues public goods	3.087569	1.044518	1	5	1,987

Proper enforcement	2.966298	.9862522	1	5	1,988
Tax evasion	3.001508	1.121793	1	5	1,990
Tax compliance	3.30367	.8659044	1	5	1,989
Policy-specific beliefs (PCBs)					
Taxes ineffective	3.515594	.9851736	1	5	1,988
Source of income	3.316583	1.120348	1	5	1,990
Taxes cost-inefficient	3.391742	.9408781	1	5	1,986
Taxes regressive	3.683972	.9140717	1	5	1,984
Corruption perceptions					
Corruption perception	3.723394	1.471748	1	7	1,992
Corruption worry	2.62883	.9201008	1	5	1,991
Corruption index	3.176205	1.120816	1	6	1,992

Note: Data collected from Sweden in 2022, in collaboration with the survey research company Lucid.

TABLE 2. DESCRIPTIVE STATISTICS (MEXICO)

Statistic	Mean	Std. Dev.	Min	Max	N
Age	2.116604	.9141519	1	4	2,144
Gender	1.422118	.4959157	1	3	2,125
Education	3.376988	.9339807	1	5	2,138
Personal income	3.036302	1.728311	1	6	2,066
Household income	3.118858	1.848652	1	6	2,137
Living area of residence	2.626956	1.036535	1	4	1,981
Value orientations					
Left-right	6.434722	2.72689	1	11	2,137
Care for nature	1.995802	1.104642	1	6	2,144
Climate change concern	3.777052	.8212731	1	5	2,144
Dependent variables					
Acceptance CO_2 tax	3.169855	.9802372	1	5	2,143
Support CO_2 tax	3.229944	1.024578	1	5	2,144
CO_2 tax increase	2.870742	1.021066	1	5	2,143
WTP climate taxes	3.105976	1.229207	1	5	2,142
Trust (traditional items)					
Political trust	3.234562	2.130195	1	11	2,143
Institutional trust	4.222741	2.149542	1	11	2,143
Social trust	3.215019	2.570143	1	11	2,144
Trust (original items)					
Trust decisions	2.640486	1.042711	1	5	2,139
Trust enforcement	2.538318	1.04052	1	5	2,140
Distrust behavior	3.522897	1.051697	1	5	2,140
Trust mechanisms					

Tax revenues disappear	3.668231	1.32694	1	5	2,131
Revenues public goods	3.467946	1.167212	1	5	2,137
Proper enforcement	3.265134	1.167478	1	5	2,131
Tax evasion	3.367902	1.369275	1	5	2,131
Tax compliance	3.55717	.9414469	1	5	2,134
Policy-specific beliefs (PCBs)					
Taxes ineffective	3.59691	.9576365	1	5	2,136
Source of income	3.555764	1.11942	1	5	2,134
Taxes cost-inefficient	3.580056	.9354608	1	5	2,136
Taxes regressive	3.705386	.9234242	1	5	2,135
Corruption perceptions					
Corruption perception	6.454503	.9149944	2	7	2,143
Corruption worry	4.220252	.7596381	1	5	2,143
Corruption index	5.336987	.7339119	2	6	2,144

Note: Data collected from Mexico in 2022, in collaboration with the survey research company Lucid.

The final samples deviate from the Swedish and Mexican target populations on observable characteristics such as income and education, which is typically the case with any surveys that employ online recruitment. As can be seen from the sample statistics in Table 3, a majority of respondents (58%) in the Mexican sample have completed some form of university education. About a third (29%) live in high income households, and mainly in big cities or urban areas (88%). The Mexican sample includes more educated, richer, and younger respondents than the average population and includes more female than male respondents than what is nationally representative (Instituto Nacional de Estadística y Geografía, 2020).

The Swedish sample is more balanced than the Mexican sample on observed characteristics. The majority has completed some form of higher post-secondary or university education (52%) and about three quarters (43-45%) are low- or middle-income respondents. The Swedish sample is approximately the same age as the national population, but includes more female than male respondents, and is slightly more educated and richer than the average population (OECD, 2019). Like the Mexican respondents, a majority of the Swedish respondents live in bigger cities or urban areas (61%). Both samples include mainly natives originating from the countries under study, and respondents who grew up in other countries are a minority (less than 3-8%).

While the deviations above on national observable characteristics in the samples may impact the generalizability of the results in the paper, they will likely not since rerunning the study on samples that are representative of Swedish and Mexican populations is unlikely to produce different results unless there are differences in effects of the variables presented in Table 1 and 2. Given that a majority of these variables do not show statistically significant effects on the outcome variables of interest (personal income and living area of residence are mainly the only two controls that have statistically significant effects in the models). The probability of finding heterogenous treatment effects in these samples is therefore small (see Agerberg, 2021). Thus, experimental results should readily generalize to the target populations of interest, because the effect will be the same in all samples, even if the experimental samples are unrepresentative of the target populations (Hartman, 2021; see also Coppock et al., 2018).

TABLE 3. SAMPLE STATISTICS

	Sweden	Mexico
Age		
18-29	17%	31%
30-45	26%	33%
46-60	31%	30%
Over 60	23%	6%
Education		
Primary	7%	0.8%
Secondary	40%	24%
Post-secondary vocational	18%	12%
Tertiary	34%	58%
Other	0.3%	3%
Gender		
Female	56%	57%
Male	43%	42%
Other	0,3%	0.1%
Personal income		
Low income	43%	39%
Middle income	45%	35%
High income	11%	25%
Household income		
Low income	43%	38%
Middle income	43%	32%
High income	13%	29%
Country of origin		
Sweden/Mexico	92%	97%
Other Nordic/North American country	1,5%	0.4%
Other country in Europe/Latin America	2,9%	1,%
Country outside Europe/Latin America	3,2%	0,4%
Living area of residence		
Countryside	20%	2%
Smaller urban area	18%	10%
City or urban area	39%	61%
Big city	22%	27%
Total respondents:	2,047	2,144

Note: Data collected from Sweden and Mexico in 2022, in collaboration with the survey research company Lucid.

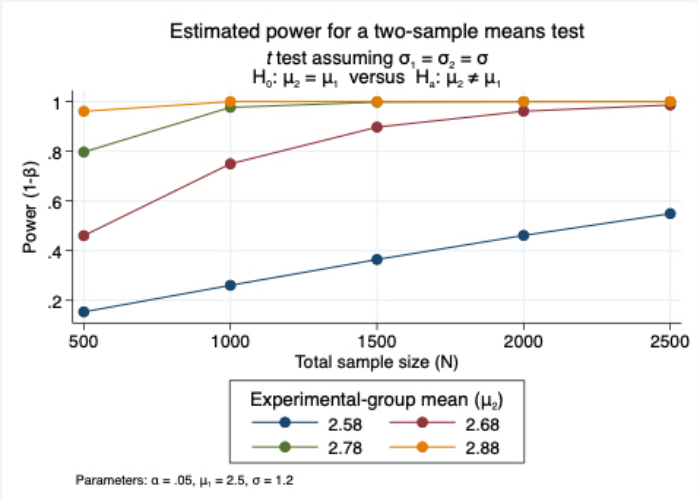
Appendix G. Power analyses

To decide on an appropriate sample size for the experiment in both countries, a power analysis was conducted. Since estimations of power based on statistics of pilot studies are generally prone to biases, the power analysis for the current study employs the mean values and standard deviations from previous cross-section analyses on quality of government and public attitudes towards environmental taxes. The following descriptive statistics, including means and standard deviations for the dependent variable, were retrieved from Davidovic et al. (2020) and Davidovic & Harring (2020):

Variable:	Mean	Standard deviation
Support for higher prices to protect the environment	2.60	1.12
Support for higher taxes to protect the environment	2.48	1.2
In favor of increasing taxes on fossil fuels to decrease climate change	2.86	1.23

Note: Descriptive statistics from Davidovic et al. (2020) and Davidovic & Harring (2020).

The power analysis uses the mean and standard deviation of support for higher taxes for protecting the environment, which is a similar question to one of the measures employed in the experiment. The power analysis is estimated for tests comparing two experimental groups, with an estimated mean of 2.48 and a standard deviation of 1.2. The graph shows that an effect size of 03./1.2=0.25 can be detected with 80% power and 250 observations per group (green line). However, this effect size may be too large to expect to find. To detect a smaller effect size of 0.2/1.2=0.16 with 80% power about 1250 respondents (that is, 525 per group) are needed (red line). With 85% power to detect the same effect size, about 1500 respondents (or 750 per group) are needed. The total sample size, with two treatment groups and one control group, should therefore amount to at least N=1575 or closer to N=2250 respondents.



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