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## Working Paper

# Self-interest and support of climate-related transport policy measures: An empirical analysis for citizens in Germany and Sweden

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# DISCUSSION

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# DISCUSSION PAPER

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## Self-Interest and Support of Climate-Related Transport Policy Measures: An Empirical Analysis for Citizens in Germany and Sweden

# **Self-Interest and Support of Climate-Related Transport Policy Measures: An Empirical Analysis for Citizens in Germany and Sweden**

May 2024

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## **Abstract**

Based on data from broadly representative surveys among more than 1,400 citizens in Germany and Sweden, this paper empirically examines the support of different groups of climate-related (passenger) transport policy measures targeting vehicle use, public transport, air travel, and bicycle use. Our descriptive analysis reveals that pull policy measures (e.g. the financial support of public transport) are more strongly supported in both countries than push policy measures (e.g. the increase in taxes on flight tickets). Furthermore, bans (i.e. a sales ban on new gasoline- and diesel-powered vehicles and a ban on domestic flights) do not receive much support. Our econometric analysis with multivariate ordered and binary probit models points to the strong relevance of economic self-interest for the support of vehicle-, air travel-, and bicycle-related policy measures, i.e. citizens who are negatively affected by a certain measure are significantly more likely to disagree with it, while citizens who benefit from a certain measure are significantly more likely to support it. For example, owners of vehicles that run exclusively on conventional fuels are significantly less likely to agree with the introduction of road user charges on highways and especially the sales ban on new gasoline- and diesel-powered vehicles. Our econometric analysis also shows that environmental awareness and political identification play an important role for the agreement with most of the policy measures considered. Finally, we discuss our empirical results in the context of current policy debates in Germany and Sweden and some implications for policymakers.

**Keywords:** Climate change, transport policy measures, individual support, multivariate probit models, simulated maximum likelihood estimation

**JEL:** Q54, R48, L98, Q48, Q58

## 1. Introduction

The transport sector is one of the main sources of greenhouse gas (GHG) emissions and thus one of the major contributors to climate change, particularly due to its heavy reliance on the combustion of fossil fuels (e.g. Achtnicht, 2012; Jansson et al., 2017). For example, about 25% of all GHG emissions in the European Union (EU) stem from transport (e.g. European Environment Agency, 2024). In Germany and Sweden, the countries of focus in this study, the annual GHG emissions in the transport sector in 2022 accounted for about 20% and 30% of the total emissions, respectively (e.g. Umweltbundesamt, 2023; Statistical Database, 2023). To mitigate climate change, substantial reductions in GHG emissions, particularly in the transport sector, are therefore necessary. While voluntary activities to mitigate climate change in transport by firms and individuals are beneficial, effective climate-related transport policy measures are undoubtedly equally, if not more, important. However, it is widely recognized that the successful implementation of climate policy measures requires the support of large sections of the population (e.g. Attari et al., 2009; Lee et al., 2015; Wicki et al., 2020). Understanding the factors driving this support is therefore highly relevant for policymakers.

This paper provides new empirical evidence for the individual support of several climate-related (passenger) transport policy measures in a cross-country analysis of Germany and Sweden. We consider these two countries because of their different climate policy ambitions in the past, with Sweden having been more ambitious than Germany. In this study, we particularly examine different factors for the support of policy measures. However, it should be noted that empirical analyses of the agreement with general climate policy measures (partly including some transport measures) (e.g. Hammar and Jagers, 2006; Shwom et al., 2010; Carattini et al., 2017; Harring et al., 2019; Ziegler, 2019; Davidovic and Harring, 2020; Engler et al., 2021; Dechezleprêtre et al., 2022; Goerg et al., 2023) and specific climate-related transport policy measures (e.g. Hammar and Jagers, 2007; Kim et al., 2013; Börjesson et al., 2015; Wicki et al., 2019; Larsson et al., 2020; Huber and Wicki, 2021) are not new. Previous studies commonly show that the support of climate policy measures strongly depends on the design of these measures. In particular, pull policy measures, which are characterized by a lower level of coerciveness, such as subsidies (e.g. tax rebates for the purchase of climate-friendly products or the financial support of renewable energies) tend to receive higher support than push policy measures, which are typically more coercive, such as taxes, especially carbon taxes (see also e.g. Drews and van den Bergh, 2016; Rhodes et al., 2017).

In addition, the recent meta-analysis of Bergquist et al. (2022) reveals that perceived fairness and effectiveness are among the most important factors that explain the support of climate policy measures (see also e.g. Kim et al., 2013). Bergquist et al. (2022) also show that socio-economic factors only play a minor role. With respect to further individual characteristics, previous empirical studies find a strong relevance of trust in scientists and politicians (e.g. Hammar and Jagers, 2006; Jagers et al., 2010; Kim et al., 2014; Rhodes et al., 2017; Huber and Wicki, 2021). Similarly, environmental attitudes and political identification are also important factors for the support of climate policy measures (e.g. Attari et al., 2009; Harring and Jagers, 2013; Xenias and Whitmarsh, 2013; Unsworth and Fielding, 2014; Kachi et al., 2015; Carattini et al., 2017; Jagers et al., 2018; Jansson and Rezvani, 2019; Ziegler, 2019; Dechezleprêtre et al., 2022; Ejelöv et al., 2022). These results are in line with other studies revealing that environmental attitudes and political identification strongly affect individual climate protection activities (e.g. Andre et al., 2022; Engler et al., 2022). Similarly, economic preferences, i.e. social, risk, and time preferences, are also important explanatory factors for individual climate protection activities (e.g. Ziegler, 2020; 2021; Fischbacher et al., 2021; Andre et al., 2022). A first empirical analysis of the effects of economic preferences on the support of climate policy measures can be found in Goerg et al. (2023).

Climate policy measures, including transport measures (e.g. taxes), often lead to individual costs. In line with individual utility maximization, it can therefore be expected that economic factors are relevant for the support of climate policy measures. In previous empirical analyses, income is commonly considered, but other economic factors also find consideration. For example, Kachi et al. (2015) and Engler et al. (2021) find that a perceived negative development of the general economic situation leads to a lower support of climate policy measures in the USA and Germany, respectively. In a more individual consideration, Umit and Schaffer (2020) show that individual energy dependence has a negative effect on the support of carbon taxes. Furthermore, perceived financial costs of climate policy measures lead to less support of these measures (e.g. Shwom et al., 2010; Brännlund and Persson, 2012; Bechtel and Scheve, 2013; Lam, 2015; Dechezleprêtre et al., 2022). These findings suggest that (economic) self-interest significantly influences the support of climate policy measures. Kallbekken and Sælen (2011) and Kantenbacher et al. (2018) specifically examine the effect of self-interest on the support of climate-related transport policy measures. While Kallbekken and Sælen (2011) show that fuel consumption has a negative effect on the support of fuel taxes, the empirical analysis of Kantenbacher et al. (2018) reveals that air travelers less frequently support restrictive aviation policy measures.

Against this background, this paper examines the importance of several groups of factors, including self-interest, for the support of 13 (in Sweden 12) climate-related (passenger) transport policy measures. Our empirical analysis is based on data from broadly representative surveys among more than 1,400 citizens in Germany and Sweden. The descriptive statistics confirm previous results that pull policy measures (e.g. the financial support of public transport) receive more support than push policy measures (e.g. the increase in taxes on flight tickets). In particular, bans (i.e. the sales ban on new gasoline- and diesel-powered vehicles and the ban on domestic flights) receive notably less support in both countries. In addition, our econometric analysis confirms previous estimation results that environmental awareness and political identification (especially identification with ecologically oriented politics) play an important role, whereas economic preferences and socio-economic factors are less relevant. Our main result is that self-interest significantly influences the support of transport policy measures in both countries, i.e. citizens who are negatively affected by a certain measure are significantly more likely to disagree with it, while citizens who benefit from a specific measure are significantly more likely to support it. The estimated effect of self-interest is particularly strong for policy measures related to vehicle use, air travel, and bicycle use. These estimation results are not only in line with the previously discussed studies, but also with studies considering the importance of individual preferences for the allocation of climate policy costs (e.g. Lange et al., 2007; 2010; Carlsson et al., 2013; Groh and Ziegler, 2018; Kanberger and Ziegler, 2023).

The main contribution of our empirical analysis is two-fold: First, we contribute to the literature on the support of climate policy measures by considering different climate-related transport policy measures. In contrast to previous studies, which mostly focus on a few policy measures (e.g. Hammar and Jagers, 2006; 2007; Kallbekken and Sælen, 2011), we examine a large number of climate-related transport policy measures targeting four modes of passenger transport, i.e. vehicle use, air travel, public transport, and bicycle use through financial incentives, financial levies, and bans. In addition, our cross-country analysis of Germany and Sweden allows us to compare two countries with different past climate policy ambitions. Second, our study contributes to the understanding of how self-interest influences the support of policy measures. Specifically, we examine self-interest variables for each of the four passenger transport modes considered to analyze their effects on the support of climate-related transport policy measures, such as the influence of previous air travel on the support of the increase in taxes on flight tickets or the ban on domestic flights. Furthermore, we simultaneously consider a large number of additional individual characteristics, which

allows us to disentangle the relevance of self-interest variables and other variables such as environmental awareness and political identification.

The remainder of this paper is organized as follows: Section 2 presents the data and the variables in our empirical analysis. Section 3 reports some descriptive statistics as well as the main estimation results of the econometric analysis. Finally, Section 4 concludes and discusses some implications for policymakers.

## **2. Data and variables**

The data for our empirical analysis were collected using large-scale computer-assisted web interviews with citizens in Germany and Sweden. The survey was conducted between November 2021 and March 2022 in cooperation with the German market research company Psyma. The samples were stratified in terms of age groups, gender, education levels, regions, and region types so that they are almost representative for the adult populations in Germany and Sweden for these criteria.<sup>1</sup> The first part of the questionnaire comprised some socio-economic and screening questions to identify the target group of adults and to ensure a proper stratification of the samples. The second part contained questions about individual preferences and attitudes, while the third and fourth parts included questions on attitudes towards the environment and climate as well as on mobility behavior. The fifth part contained a stated choice experiment on the design of future transport systems, and the sixth part consisted of questions about the climate-related transport policy measures. While the seventh part included questions about the COVID-19 pandemic, the respondents were asked about their household income in the eighth part. In this study, we explicitly focus on the answers to the questions in the sixth part, which are aimed at climate-related transport policy measures. Of course, we also used the data on individual characteristics for our econometric analysis. In contrast, we leave a more detailed analysis of the data from the fifth and seventh parts of the questionnaire to future complementary studies.

The survey comprised quality checks that were included in some questions to ensure that the respondents were attentive and had read the instructions carefully (i.e. respondents were asked to select certain options in some questions). Respondents who did not pass these quality checks were excluded. For our empirical analysis, we used the data from 1,452 respondents, i.e. 708 respondents in Germany and 744 respondents in Sweden. Of the 5,056 citizens originally surveyed (2,826 in Germany and 2,230 in Sweden), we excluded respondents who

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<sup>1</sup> However, it should be noted that this sampling strategy can lead to deviations between the distributions in the samples and the adult population for other criteria.



were experimentally manipulated in the stated choice experiment on the design of future transport systems. Although these interventions (e.g. information treatments concerning local pollutants in the transport sector) did not target the agreement with climate-related transport policy measures, their support could be influenced by these treatments. Therefore, we only included those 1,452 respondents in our empirical analysis who were not manipulated in the previous stated choice experiment. As already mentioned above, the data from the experiment including the corresponding experimental interventions will be examined in future complementary studies.

### ***2.1. Dependent variables***

The dependent variables in our econometric analysis refer to the climate-related transport policy measures. Both respondents in Germany and Sweden were asked to what extent they agree with the following 12 publicly discussed climate-related transport policy measures, namely four *measures only or primarily related to vehicle use* (i.e. “financial support of alternative fuels for vehicles”, “financial support of expanding charging infrastructure”, “introduction of road user charges on highways”, “sales ban on new gasoline- and diesel-powered vehicles”), three *measures only related to public transport* (i.e. “introduction of free public transport”, “financial support of public transport”, “reduction in taxes on tickets for public transport”), two *measures related to vehicle use and public transport* (i.e. “financial support of purchasing hydrogen vehicles and buses”, “financial support of purchasing electric vehicles and buses”), two *measures related to air travel* (i.e. “increase in taxes on flight tickets”, “ban on domestic flights”), and one *bicycle use measure* (i.e. “financial support of bicycle traffic”). The German respondents were additionally asked to what extent they agree with the following policy measure: “Introduction of a speed limit on highways”. Since a speed limit on highways is already implemented in Sweden, the respondents in this country did not receive this question. The five symmetrically scaled ordered response categories for all 13 (in Sweden 12) measures were “totally disagree”, “rather disagree”, “undecided”, “rather agree”, and “totally agree”.<sup>2</sup>

Due to the ordered structure of our dependent variables, we mainly used ordered probit models for our econometric analysis. Similar to, for example, Andor et al. (2016) or Engler et al. (2021), we combined the two highest and the two lowest support categories into a single category for agreement and a single category for disagreement, respectively. This leads to

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<sup>2</sup> The questions and the corresponding response categories for all variables in this paper can be found in the (translated) questionnaires in Online Appendices A and B.

three-alternative ordered probit models.<sup>3</sup> In line with, for example, Ziegler (2019) or Engler et al. (2021), we used multivariate ordered probit models for the joint analysis of all 13 (in Sweden 12) climate-related transport policy measures, which allows for potential correlations between the error terms of the underlying latent variables. These models were estimated by the simulated maximum likelihood (SML) method. We used the Stata command “cmp”, which was developed by Roodman (2011), with 200 random draws in the underlying Geweke-Hajivassiliou-Keane (GHK) simulator.

## ***2.2. Explanatory variables***

Our main explanatory variables refer to mobility behavior, particularly in terms of vehicle ownership, ownership of permanent tickets for public transport, and the use of different modes of transport. With respect to vehicle ownership, the respondents were asked about the total number of vehicles in their household. If there was at least one vehicle in the household, the respondents were asked to indicate the fuel type or propulsion method of the first and possibly second most often used vehicle. The response categories included “gasoline”, “diesel”, “natural gas”, “liquified petroleum gas (LPG)”, “biodiesel/ethanol”, “electricity, i.e. pure battery electric vehicle”, “combination of electricity and gasoline or diesel, i.e. hybrid vehicle”, and “other fuel”. Respondents who indicated to own three or more household vehicles were additionally asked whether the third vehicle or at least one of the additional household vehicles is a pure battery electric vehicle or a hybrid vehicle. The dummy variable ‘ownership of exclusively conventional fuel vehicles’ takes the value of one if each household vehicle of the respondent runs exclusively on conventional fuel (i.e. gasoline, diesel, natural gas). In contrast, the dummy variable ‘ownership of alternative fuel vehicles’ takes the value of one if at least one vehicle in the household runs on LPG, biodiesel/ethanol, electricity (including hybrid vehicles), or another non-conventional fuel. Finally, the dummy variable ‘no ownership of vehicles’ takes the value of one if a respondent lives in a household without a vehicle. This variable is used as the base category in the econometric analysis.

Regarding tickets for public transport, the dummy variable ‘ownership of season ticket for public transport’ takes the value of one if a respondent or another person living in the household of the respondent owns monthly or annual tickets or other commutation tickets for local public transport (e.g. bus, tram, subway, suburban train) or long-distance public transport (e.g. train, coach). With respect to the use of different modes of transport, the respondents

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<sup>3</sup> However, in a robustness check as discussed below, we also consider the estimation results from five-alternative ordered probit models in addition to binary probit models for the two highest support categories.

were asked to indicate which modes they have used since the beginning of the COVID-19 pandemic (i.e. since March 2020) as well as in the two years before the COVID-19 pandemic (i.e. in the years 2018 and 2019). The respondents had to consider eight different modes of transport, i.e. “vehicle”, “motorcycle”, “electric bike/pedelec”, “bicycle”, “local public transport”, “long-distance public transport”, “plane”, and “ship”, or a completely different transport mode that was not one of these eight modes. The two dummy variables ‘use of bicycle’ and ‘use of plane’<sup>4</sup> take the value of one if a respondent had used the bicycle or the plane as a mode of transport, respectively, in at least one of the above time periods (i.e. since or in the two years before the COVID-19 pandemic).

Our first and main group of control variables refers to environmental attitudes and political identification. Our indicator for environmental awareness is based on a New Ecological Paradigm (NEP) scale according to Dunlap et al. (2000). NEP scales are now a standard instrument in social and behavioral sciences, including economics (e.g. Kanberger and Ziegler, 2024). In line with Whitmarsh (2008; 2011), our NEP scale is based on six statements, i.e. “humans have the right to modify the natural environment to suit their needs”, “humans are severely abusing the planet”, “plants and animals have the same right to exist as humans”, “nature is strong enough to cope with the impacts of modern industrial nations”, “humans were meant to rule over the rest of nature”, and “the balance of nature is very delicate and easily upset”. The respondents were asked to what extent they agree with these statements on a symmetric scale with the five ordered response categories “totally disagree”, “rather disagree”, “undecided”, “rather agree”, and “totally agree”. In line with, for example, Groh and Ziegler (2018) or Ziegler (2020), we assigned integers in ascending order from one to five to the three positively worded statements and integers in descending order from five to one to the three negatively worded statements. The variable ‘environmental awareness’ is the sum of these integers and can thus vary between six and 30, whereby higher values indicate a higher level of environmental awareness.

In addition to environmental awareness, we also consider another dimension of environmental attitudes, i.e. identification with ecological politics. However, unlike previous studies that measure political identification with a simple one-dimensional index, for example, for left/right-wing (e.g. McCright et al., 2016), conservative/liberal (e.g. Hamilton, 2008), or Republican/Democrat (e.g. Andre et al., 2022) orientation, we consider four variables for political identification to account for any possible interconnections between them (e.g. Groh

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<sup>4</sup> We do not consider variables for the other modes of transport (e.g. motorcycle or ship) since the climate-related transport policies considered in our econometric analysis do not address these transport modes.

and Ziegler, 2022; Kanberger and Ziegler, 2024). The variables are based on the four statements “I identify myself with ecologically oriented politics”, “I identify myself with socially oriented politics”, “I identify myself with liberally oriented politics”, and “I identify myself with conservatively oriented politics”. The respondents were asked to what extent they agree with these statements on the same symmetric scale as for the NEP scale statements. The four corresponding dummy variables ‘identification with ecologically oriented politics’, ‘identification with socially oriented politics’, ‘identification with liberally oriented politics’, and ‘identification with conservatively oriented politics’ each take the value of one if a respondent agreed with the corresponding statement rather or totally, respectively.

Our second group of control variables refers to economic preferences (e.g. Falk et al., 2018; 2023), which are shown to be important when environmental attitudes (especially according to the NEP) are considered as explanatory variables (e.g. Ziegler, 2021). Our variable for risk preferences is based on a survey question in line with the German Socio-Economic Panel (SOEP), which was validated by several studies (e.g. Dohmen et al., 2011; Vieider et al., 2015; Falk et al., 2018; 2023). Accordingly, the respondents were asked to indicate how willing they are to take risks on a symmetric scale with the five ordered response categories “not at all willing to take risks”, “rather not willing to take risks”, “undecided”, “rather willing to take risks”, and “very willing to take risks”. The dummy variable ‘risk-taking preferences’ takes the value of one if a respondent stated to be rather or very willing to take risks. Our variable for time preferences aligns with a survey question according to Falk et al. (2023). The respondents were asked to indicate how willing they are to give up something beneficial for them today to benefit more from that in the future. The five symmetrically scaled ordered response categories were “not at all willing”, “rather not willing”, “undecided”, “rather willing”, and “very willing”. The dummy variable ‘patience’ takes the value of one if a respondent stated to be rather or very willing.

Our variable for altruism is in line with, for example, Andre et al. (2022) or Falk et al. (2023). The respondents were asked to indicate how willing they are to give to good causes without expecting anything in return, again on a symmetric scale with five ordered response categories ranging from “not at all willing” to “very willing”. The dummy variable ‘altruism’ takes the value of one if a respondent stated to be rather or very willing. In line with, for example, Dohmen et al. (2012), our variable for trust relies on the following three statements from the SOEP which were experimentally validated by Fehr et al. (2003): “In general, one can trust people”, “these days, you cannot rely on anyone”, and “when dealing with strangers, it is better to be careful before you trust them”. Again, the respondents were asked to what extent

they agree with these statements on a symmetric scale with five ordered response categories ranging from “totally disagree” to “totally agree”. In line with, for example, Ziegler (2020; 2021) or Groh and Ziegler (2022), we assigned integers in ascending order from one to five to the first (positively-worded) statement and in descending order from five to one to the other two (negatively-worded) statements. The variable ‘trust’ is the sum of these integers and can thus vary between three and 15, whereby higher values correspond to higher levels of trust.

Our variables for positive and negative reciprocity rely on survey questions from the SOEP that were designed by Perugini et al. (2003) and are in line with, for example, Dohmen et al. (2008; 2009), Caliendo et al. (2012), or Kanberger and Ziegler (2023). While positive reciprocity is based on the three statements “when someone does me a favor, I am willing to return it”, “I am particularly trying to help someone who has helped me before”, and “to help someone who has helped me before, I would even be willing to pay costs”, negative reciprocity is based on the three statements “when I am faced with a great injustice, I will avenge myself at the next opportunity”, “when someone puts me in a difficult position, I will do the same with that person”, and “when someone insults me, I will also be offensive to that person”. Again, the respondents were asked to what extent they agree with these statements on a symmetric scale with five ordered response categories ranging from “totally disagree” to “totally agree”. In line with, for example, Groh and Ziegler (2022), we assigned ascending integers from one to five to all statements. The variables ‘positive reciprocity’ and ‘negative reciprocity’ are the sums of the integers for the first and last three statements, respectively. Hence, both variables can take values between three and 15, whereby higher values correspond to higher levels of positive and negative reciprocity, respectively.

Our final group of control variables refers to some common socio-economic variables. With respect to income, the respondents in Germany (Sweden) were asked to indicate their monthly household net income in Euros (Swedish Krone, SEK) from a total of 21 income classes ranging between “under 500 Euros” and “10,000 Euros and more” (“under 6,000 SEK” and “120,000 SEK and more”), whereby we consider the midpoints for each income class. In line with, for example, Feldman (2010), we consider one and a half times the lower bound for the last income class and therefore assign 15,000 Euros (180,000 SEK) to the respondents who indicated this income class. Following, for example, Groh and Ziegler (2022) or Kanberger and Ziegler (2024), we applied the concept of equivalized income to account for possible scale effects in the household. Our approach is in line with a modified OECD equivalence scale (e.g. Horsfield, 2015), which assigns a factor of one to the first

adult in the household, a factor of 0.3 to children up to the age of 13 years, and a factor of 0.5 to the other older household members. The corresponding variable based on these values is termed ‘equivalized income’. For the econometric analysis, however, we modified the unit of this variable and divided it by 1,000. The corresponding variable is termed ‘equivalized income in 1,000 Euros’.<sup>5</sup>

In addition, the dummy variable ‘university degree’ takes the value of one if a respondent holds at least a university degree, the variable ‘age’ indicates the age of a respondent in years, and the dummy variable ‘female’ takes the value of one if a respondent is a woman. The variable ‘household size’ refers to the total number of persons living in the household of a respondent, while the dummy variable ‘children’ takes the value of one if at least one child under the age of 14 years lives in the household. We additionally asked the respondents for the postal code of their first place of residence to obtain information about the type of region they live. We distinguish between urban areas (with a population share in rural areas of less than 20%), peri-urban areas (with a population share in rural areas of between 20% and 50%), and rural areas (with a population share in rural areas of more than 50%). In our econometric analysis, we include the dummy variable ‘living in urban area’ that takes the value of one if a respondent lives in an urban area.

### **3. Empirical analysis**

#### ***3.1. Descriptive statistics***

Figures 1 and 2 report the relative frequencies (in %) of the agreement with the 13 and 12 climate-related transport policy measures among all 708 and 744 respondents in Germany and Sweden, respectively.<sup>6</sup> The figures reveal that climate-related transport policy measures entailing any kind of financial support (e.g. the financial support of public transport) receive strongly more support than those entailing an increase in costs (e.g. increase in taxes on flight tickets). This result is in line with previous findings as discussed above, which show

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<sup>5</sup> For the respondents in Sweden, the income classes were shown in SEK. To directly compare the income variables for Germany and Sweden, we took the purchasing power parities for 2021 into account, i.e. the rates of currency conversion that attempt to equalize the purchasing power of different currencies by equalizing the differences in price levels between countries. The rates were based on OECD data, accessed from <https://data.oecd.org/conversion/purchasing-power-parities-ppp.htm> in November 2021 (i.e. at the beginning of the survey), where one SEK was equal to 0.085111238 Euros (however, the rates on this OECD website were later slightly changed). Accordingly, we first generated the variable ‘equivalized income’ in SEK and multiplied it by 0.085111238 to convert the currency to Euros. Then we divided the converted ‘equivalized income’ by 1,000 to generate the variable ‘equivalized income in 1,000 Euros’ for the Swedish sample.

<sup>6</sup> The policy measures in both countries are ranked according to the strength of support, whereby the two highest support categories (“rather agree”, “totally agree”) are considered for this ranking. The exact values in addition to the absolute frequencies can be found in Tables C1 and C2 in Online Appendix C.

that pull policy measures are generally preferred over push policy measures. Figure 1 also reveals that the respondents in Germany support the introduction of road user charges on highways and the sales ban on new gasoline- and diesel-powered vehicles very similarly. Both policy measures receive the identical lowest level of support of about 29% in terms of rather or totally agreeing with these policy measures. In contrast, Figure 2 shows that the ban on domestic flights is least supported among respondents in Sweden (about 21%). This result can be explained by the large geographical area of Sweden, which implies, for example, that citizens in the northern part of Sweden who intend to travel to the south rely more on domestic flights than citizens in Germany. As in Germany, the introduction of road user charges on highways is the second least supported policy measure in Sweden, albeit with a lower share of respondents agreeing with this policy rather or totally (about 24% compared to 29% in Germany).

Furthermore, Figures 1 and 2 show that the reduction in taxes on tickets for public transport and the financial support of public transport are the two transport policy measures with the highest support among the respondents in both countries. Interestingly, the two policy measures receive very similar levels of support in Germany. Figure 1 reveals that about 72% of all respondents in Germany rather or totally agree with these two policy measures. In contrast, there is a slight ranking of these two policy measures in Sweden. Figure 2 shows that about three quarters of all respondents in Sweden rather or totally agree with a reduction in taxes on tickets for public transport, while about 72% of the respondents rather or totally agree with the financial support of public transport. With respect to the introduction of a speed limit on highways in Germany, Figure 1 reveals that slightly less than half of all respondents (about 49%) rather or totally agree with this policy measure. This result is relatively close to a previous finding of Engler et al. (2021), who report that about 54% of their respondents in Germany rather or totally agree with the introduction of a speed limit on highways. Interestingly, however, Figure 1 also shows that the share of agreement with the introduction of a speed limit on highways is much higher than the share of disagreement (about 34%).

It is striking that the majority of policy measures in Germany (nine out of 13) are supported by more than 50% of the respondents. Only the policy measures related to bans and the vehicle-related policy measures for highways receive less than 50% support, and only the sales ban on gasoline- and diesel-powered vehicles is opposed by more than 50% of the respondents. The picture for Sweden is very similar, with the exception that the financial support of alternative fuels for vehicles and the increase in taxes on flight tickets are also not

supported by a majority of respondents. Overall, our descriptive analysis of both countries suggests that policy measures related to financial support are the most politically feasible, whereas bans and policy measures aimed at increasing the costs of vehicle-related mobility (i.e. through the introduction of road user charges on highways) are the least promising policy measures in terms of political feasibility. Furthermore, about 17% to 27% of the respondents in Germany and about 15% to 34% of the respondents in Sweden are undecided about certain policy measures. These relatively high numbers suggest that there is still scope for influencing citizens and thus voters in a certain direction, for example, through information campaigns.

Tables 1 and 2 report some descriptive statistics of the explanatory variables in the German and Swedish samples, respectively. With respect to the self-interest variables, Table 1 reveals that only about 5% of all respondents in Germany own at least one household vehicle that runs on alternative fuel, while almost three quarters of them own household vehicles that run exclusively on conventional fuels. Furthermore, about a third of the respondents in Germany have a season ticket for either local or long-distance public transport in their household. In addition, about 33% and 56% of the respondents in Germany have used a plane and a bicycle as a mode of transport, respectively, since 2018. In comparison, Table 2 shows that more than twice as many respondents in Sweden have at least one household vehicle that runs on alternative fuels (about 12%) than the respondents in Germany. Regarding conventional vehicles, Table 2 shows that about two thirds of all respondents in Sweden own household vehicles that run only on conventional fuels. Similar to the German sample, also about a third of the respondents in Sweden own a season ticket for local or long-distance public transport. Furthermore, about 38% and 51% of the respondents in Sweden have used a plane and a bicycle as a mode of transport, respectively, since 2018.

### ***3.2. Econometric analysis***

#### *Main estimation results*

Tables 3 and 4 report the SML estimation results in two multivariate three-alternative ordered probit models for Germany and Sweden, respectively, that refer to the support of climate-related transport policy measures. While Table 4 reports the estimation results for 12 grouped policy measures in the 12 columns (with the column numbers from one to 12), Table 3 contains an additional column with the estimation results for the agreement with the introduction of a speed limit on highways, which is only considered in Germany. The main estimation results refer to the strong importance of self-interest for the support of vehicle-, air



travel-, and bicycle-related policy measures in both countries. The upper parts of Tables 3 and 4 reveal that owners of vehicles that run exclusively on conventional fuels are significantly less likely to support the introduction of road user charges on highways and the sales ban on new gasoline- and diesel-powered vehicles. Furthermore, users of planes in Germany and Sweden are significantly less likely to support the increase in taxes on flight tickets and the ban on domestic flights, while bicycle users are strongly significantly more likely to agree with the financial support of bicycle traffic. Also in line with self-interest, owners of alternative fuel vehicles in Sweden (see Table 4) are significantly more likely to agree with the financial support of purchasing hydrogen vehicles and buses, the financial support of expanding charging infrastructure, the financial support of purchasing electric vehicles and buses, and the financial support of alternative fuels for vehicles. These citizens are also significantly less likely to support the introduction of road user charges on highways.<sup>7</sup>

Interestingly, vehicle owners (i.e. both owners of vehicles that run exclusively on conventional fuels and owners of alternative fuel vehicles) in both countries are significantly less likely to agree with the reduction in taxes on tickets for public transport and are at least weakly significantly less likely to support the financial support of public transport. These results suggest that these groups of citizens tend to oppose subsidizing the mode of transport that mainly competes with the mode of transport they own in their household. Similarly, the upper parts of Tables 3 and 4 show that owners of vehicles that run exclusively on conventional fuels are significantly less likely to agree with the financial support of bicycle traffic, owners of a season ticket for public transport are significantly more likely to support the ban on domestic flights, and bicycle users are significantly more likely to agree with the increase in taxes on flight tickets. Furthermore, owners of a season ticket for public transport in Sweden (see Table 4) are significantly more likely to support the sales ban on new gasoline- and diesel-powered vehicles. These results suggest the strong competition between the different modes of transport, i.e. citizens who actively use a particular mode of transport are more likely to support the restriction of a competing mode of transport. These results thus underline the relevance of self-interest for the agreement with climate-related transport policy measures.

With respect to the relevance of environmental attitudes and political identification, the second parts of Tables 3 and 4 show, as expected, that environmental awareness is significantly positively correlated with the support of all 12 climate-related transport policy measures in

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<sup>7</sup> Interestingly, however, the estimation results provide no evidence that vehicle owners in Germany are less likely to support the introduction of a speed limit on highways (see Table 3).

Sweden as well as with the agreement with ten out of the 12 policy measures and with the introduction of a speed limit on highways in Germany.<sup>8</sup> Also in line with previous studies as discussed above, the second parts of Tables 3 and 4 reveal that identification with ecologically oriented politics is strongly significantly positively correlated with the support of nine and eight policy measures in Germany and Sweden, respectively. It is also strongly significantly positively correlated with the agreement with the introduction of a speed limit on highways in Germany. However, environmental awareness and identification with ecologically oriented politics are not the only relevant factors. The second parts of Tables 3 and 4 also reveal, for example, that citizens who identify themselves with socially oriented politics are significantly more likely to agree with the introduction of free public transport as well as with four financial support measures, i.e. the financial support of public transport, expanding charging infrastructure, purchasing electric vehicles and buses, and alternative fuels for vehicles.

In contrast, the estimation results in the third parts of Tables 3 and 4 show that most economic preferences play a rather minor role in the support of climate-related transport policy measures. For example, Table 3 shows that risk-taking preferences are not significantly correlated with any of the 13 transport policy measures in Germany. Furthermore, patience, altruism, and trust often are only weakly significantly correlated with some of the 13 transport policy measures. According to Table 3, positive reciprocity is significantly positively correlated with the agreement with the financial support of public transport and of bicycle traffic as well as significantly negatively correlated with the support of the two ban policy measures in Germany. In contrast, negative reciprocity is significantly positively correlated with the support of the two ban policy measures. Table 4 reports similar estimation results for Sweden regarding the rather minor role of economic preferences for the support of the climate-related transport policy measures, although the number of significant correlations is slightly higher than in Germany. Interestingly, the significant correlations between risk-taking preference and some policy measures are negative, whereas the significant correlations for patience, altruism, and trust are positive.

With respect to our last group of control variables, the lower part of Table 3 shows that socio-economic variables mostly have no significant effect on the agreement with the climate-related transport policy measures in Germany. The direction of the estimated effects of age

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<sup>8</sup> In Germany, environmental awareness is not significantly correlated with the support of the introduction of road user charges on highways and the sales ban on new gasoline- and diesel-powered vehicles (see Table 3). In Sweden, environmental awareness is only weakly significantly positively correlated with the support of these two policy measures (see Table 4).

is even divergent since it has a significantly negative effect on two policy measures and a (partly weakly) significantly positive effect on three policy measures. For Sweden, the lower part of Table 4 reveals that younger citizens are significantly more likely to support three climate-related transport policy measures, whereas the picture for gender is unclear since females are significantly more likely to agree with two policy measures, but also significantly less likely to agree with two other policy measures. The most interesting results for the socio-economic variables refer to equivalized income in Sweden, which has a significantly negative effect on six out of all 12 climate-related transport policy measures, whereby this only applies to measures that directly lead to higher costs to the public such as financial support measures.<sup>9</sup> Assuming that high-income citizens have to contribute disproportionately to covering these public costs, or at least fear having to do so, these estimation results are also in line with (economic) self-interest.

#### *Robustness checks*

In a first robustness check, we varied the number of random draws in the GHK simulator (i.e. we used 50 and 500 random draws) for the SML estimation of the multivariate three-alternative ordered probit models. Furthermore, we also estimated 13 (in Sweden 12) separate univariate three-alternative ordered probit models with the maximum likelihood (ML) method. While these two robustness checks refer to the inclusion of the same explanatory variables as in the previous main analysis, we also included other groups of explanatory variables, especially with respect to the self-interest variables. For example, we replaced the aggregated variables ‘use of plane’ and ‘use of bicycle’ with separate dummy variables that refer to the specific time periods in which the respondents used the plane or the bicycle as a mode of transport. We additionally included separate dummy variables for the ownership of a season ticket for public transport, i.e. a dummy variable for owning a local public transport ticket and another dummy variable for owning a ticket for long-distance public transport. The estimation results from these robustness checks (which are not reported here due to brevity but are available upon request) are qualitatively very similar to the estimation results in Tables 3 and 4, not only for these alternative explanatory variables, but also for all other explanatory variables including the self-interest variables.

Another robustness check refers to the estimation of multivariate binary probit models and multivariate five-alternative ordered probit models. While the multivariate binary probit models combine the two highest support categories and the remaining three lower support

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<sup>9</sup> The estimated effect on the ban on domestic flights is only weakly significant.

categories, respectively, the multivariate five-alternative ordered probit models include all five support categories individually. Consequently, the interpretation of the estimation results in the latter models refers to the two extreme support categories “totally disagree” and “totally agree”.<sup>10</sup> Overall, the estimation results in these alternative models are slightly different for a few parameters, which is not very surprising due to the different structures of the aggregated categories. However, several findings remain qualitatively very robust. For example, the estimation results in the multivariate binary and five-alternative ordered probit models reveal that the two indicators of environmental attitudes, i.e. environmental awareness and identification with ecologically oriented politics, continue to be significantly positively correlated with the support of many climate-related transport policy measures in both Germany and Sweden. In particular, the estimation results clearly confirm the strong importance of self-interest for the support of vehicle-, air travel-, and bicycle-related policy measures in both countries.

Finally, we additionally controlled for the family-wise error rate (FWER), which can occur when testing multiple hypotheses (e.g. Jones et al., 2019).<sup>11</sup> Specifically, we calculated family-wise adjusted p-values based on the ML estimation of 13 (in Sweden 12) univariate three-alternative ordered probit models for the support of climate-related transport policy measures including the same explanatory variables as in the previous main analysis.<sup>12</sup> In total, we calculated 65 (in Sweden 60) adjusted p-values, which corresponds to the number of hypotheses about the parameters of the main explanatory variables.<sup>13</sup> Accordingly, users of planes in Germany and Sweden remain significantly less likely to support the increase in taxes on flight tickets. Similarly, the effects of exclusively owning conventional fuel vehicles on the agreement with the introduction of road user charges on highways and with the sales ban on new gasoline- and diesel-powered vehicles remain robustly significantly negative in both countries. In addition, the effects of bicycle use on the agreement with the financial support

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<sup>10</sup> The corresponding estimation results are reported in Online Appendix C in Tables C3 and C4 for the multivariate binary probit models and in Tables C5 and C6 for the multivariate five-alternative ordered probit models for Germany and Sweden, respectively.

<sup>11</sup> When testing several different null hypotheses, the family-wise error rate (FWER) is the probability of an incorrect rejection of at least one true null hypothesis (e.g. Jones et al., 2019).

<sup>12</sup> The corresponding estimation results are reported in Tables C7 and C8 in Online Appendix C. We applied the Stata command “wyoung”, written by Jones et al. (2019), and used 10,000 bootstraps for the calculation of the family-wise adjusted p-values using the free step-down resampling method of Westfall and Young (1993).

<sup>13</sup> We conducted the FWER correction only for the five self-interest variables since they are the main focus of our study. Accordingly, we calculated 65 and 60 adjusted p-values for the 13 and 12 dependent variables in Germany and Sweden, respectively.

of bicycle traffic also remain significantly positive. These results strongly confirm the importance of self-interest for the support of vehicle-, air travel-, and bicycle-related policy measures in both countries.

#### **4. Discussion and policy conclusions**

Based on data from broadly representative surveys among 1,452 citizens in Germany and Sweden, this paper empirically examined the support of different groups of climate-related (passenger) transport policy measures targeting vehicle use, air travel, public transport, and bicycle use through financial incentives, financial levies, and bans. Our descriptive analysis confirms previous findings that pull policy measures (e.g. the financial support of public transport) are more strongly supported than push policy measures (e.g. the increase in taxes on flight tickets) in both countries. In addition, the ban on domestic flights and the sales ban on new gasoline- and diesel-powered vehicles do not receive much support in both countries. In line with previous findings, our econometric analysis with multivariate ordered and binary probit models reveals that environmental awareness and identification with ecologically oriented politics are positively correlated with the agreement with most of the 13 (in Sweden 12) policy measures. In contrast, economic preferences and socio-economic factors play only a minor role in the support of the various climate-related transport policy measures. An exception, at least in Sweden, is the significantly negative correlation between equivalized income and the support of policy measures that directly lead to higher costs to the public.

The latter finding points to the main estimation results that refer to the effects of (economic) self-interest variables on the support of vehicle-, air travel-, and bicycle-related policy measures. We find that citizens who are negatively affected by a certain measure are significantly more likely to disagree with it, while citizens who benefit from a certain measure are significantly more likely to support it. For example, our econometric analysis shows that citizens who have traveled by air in the past (and are thus more likely to fly in the future) are significantly less likely to agree with the increase in taxes on flight tickets and the ban on domestic flights. Similarly, bicycle users are strongly significantly more likely to agree with the financial support of bicycle traffic, and owners of vehicles that run exclusively on conventional fuels are significantly less likely to agree with the introduction of road user charges on highways and the sales ban on new gasoline- and diesel-powered vehicles. Interestingly, these vehicle owners (but also owners of alternative fuel vehicles) are significantly less likely to agree with the reduction in taxes on tickets for public support and the financial support of public transport. These results suggest a strong competition between the different

modes of transport, i.e. citizens who actively use a certain mode of transport are more likely to support the restriction of a competing mode of transport. In sum, our estimation results suggest that the general opposition to specific climate-related transport policy measures among certain population groups is not only based on pronounced political and ideological divisions, but often also on strategic motivations to reject policy measures that are economically unfavorable to these population groups.

The results of our empirical analysis can be embedded in current debates about climate-related transport policy measures. One example is the currently very active debate on subsidies for public transport in Germany. During the energy crisis in summer 2022, the German federal government introduced a subsidy for the monthly so-called 9-Euros ticket for all local and regional trains. While this ticket offer was limited to a period of three months, a large proportion of the population in Germany had a positive perception about this specific measure and supported its extension, which is in line with our results. Against this background, the so-called 49-Euros ticket (or “Deutschlandticket”) was introduced in May 2023 as a follow-up measure. While this subsidized ticket has attracted additional users and significantly shifted motorized private transport with vehicles to the more climate-friendly public transport (e.g. [www.vdv.de/deutschlandticket.aspx](http://www.vdv.de/deutschlandticket.aspx)), it is still very cost-intensive, and the long-term financial support of this measure is not secured. To date, the federal and state governments in Germany have provided three billion Euros per year for the 49-Euros ticket. According to our results, the sustainable long-term financial support of this ticket would be supported by a large majority of citizens in Germany.

Interestingly, the German 49-Euros ticket was also discussed in the Citizens' Council “Joint transport transition in urban and rural areas” (Bürgerrat “Gemeinsame Verkehrswende in Stadt und Land”), which was funded by the Federal Ministry of Education and Research as part of the accompanying research on sustainable mobility. At the beginning of 2024, 50 randomly selected citizens from Germany discussed the overarching question of “How can the transport transition in rural and urban areas succeed together?” and developed joint recommendations. One of these recommendations (see <https://www.zukunft-nachhaltige-mobilitaet.de/wp-content/uploads/2024/02/Empfehlungen-des-Buergerats-Gemeinsame-Verkehrswende-in-Stadt-und-Land.pdf>) is that public transport should be tax-privileged and, in particular, that the 49-Euros ticket should be retained permanently. Similarly, the Citizens' Climate Assembly 2021, under the patronage of the former German President Horst Köhler, discussed possible transport policy measures for dealing with the climate crisis with a total of 160 randomly selected citizens from Germany. It recommended (by a large majority of

the assembly) less expensive local public transport, for example, through nationwide tickets, flat-rate tickets, and annual or monthly tickets (see [https://buergerrat-klima.de/content/pdfs/BK\\_211213\\_Gutachten\\_Digital\\_English.pdf](https://buergerrat-klima.de/content/pdfs/BK_211213_Gutachten_Digital_English.pdf)).

The two assemblies, which were supported by scientists, also recommended, for example, education and awareness campaigns for the mobility transition to change behavior, promoting bicycle travel by expanding the cycling infrastructure, subsidizing the purchase of electric bikes and electric vehicles, and increasing taxes on flights and aviation fuel. These recommendations are largely in line with the results of our descriptive analysis and in some cases even more ambitious, for example, in terms of phasing out registrations of combustion engine vehicles by 2027 or 2030 at the latest (see also the discussion below). This difference can either be due to the selection into the assemblies (although they should be representative of the German population) or to higher levels of information through discussions and scientific input. In the latter case, information campaigns could indeed be a successful way to increase the support of climate-related transport policy measures. One of the recommendations of the Citizens' Climate Assembly was also a general speed limit of 120 km/h on federal highways (in addition to speed limits of 80 km/h on rural roads and 30 km/h in city areas). This is also in line with our empirical results since the share of agreement with the introduction of a speed limit on highways in Germany is much higher than the share of disagreement. Therefore, the speed limit on highways is not seen as critically as often claimed. Nevertheless, Germany is still the only European country without such a speed limit. However, a frequently used argument by opponents of this speed limit, i.e. an apparent lack of support in the population, can in any case be refuted by our empirical analysis.

While the speed limit on highways, which can be interpreted as a very specific “ban”, tends to be supported in Germany, other bans and especially the sales ban on new gasoline- and diesel-powered vehicles do not receive much support in Germany and Sweden. Against this background, it is interesting to consider the current plan of the EU to set the CO<sub>2</sub> emissions standard for newly registered vehicles to zero in 2035, which implicitly means that gasoline- and diesel-powered vehicles can no longer be newly registered after 2035 (although there is an ongoing debate about combustion engine vehicles exclusively running on e-fuels). Our result that the sales ban on new gasoline- and diesel-powered vehicles is one of the least supported policy measures reflects the still ongoing controversial public debate between political parties on this plan (for Germany, see e.g. <https://www.bundestag.de/dokumente/textarchiv/2023/kw48-de-verbrennungsmotoren-979646>). An interesting case study for the other very strongly opposed ban in our analysis for Germany and Sweden, i.e. the ban on

domestic flights, can be found in France, where domestic short-haul flights on routes that can be traveled via train in 2.5 hours or less were prohibited in 2023. Interestingly, for the only three connections affected by the ban, only about 4% of the trips on this route were actually conducted by plane before the ban (e.g. Bonilla and Ivaldi, 2023). Despite the small number of citizens affected, the policy measure was strongly criticized by the population, which is in line with our results.

As discussed above, our empirical analysis clearly suggests that pull policy measures such as the financial support of public transport are more strongly supported than push policy measures such as the increase in taxes on flight tickets or bans and are thus certainly easier to implement politically. In general, for successful climate-related transport policy measures, but also for other climate policy measures, the question arises for European countries whether the general climate policy approach in the USA of financially supporting climate-friendly investments would not be more effective. The so-called Inflation Reduction Act was introduced in 2022 and also refers to policy measures to reduce the CO<sub>2</sub> emissions in the transport sector. Although this approach seems to be effective in terms of climate protection and is also supported by a majority of citizens in the USA, it is seen very skeptically outside the USA and especially by many European policymakers, mainly due to concerns about competition, protectionism, and public costs. However, our empirical results do not confirm this skepticism, for example, against subsidies, among large segments of the population.

Our empirical analysis also shows that for all 13 (in Sweden 12) climate-related transport policy measures, a non-negligible share of citizens (between about 15% and about 34%) are undecided in their support of the measures. This result suggests a good basis for policymakers to persuade these undecided citizens to support the policy measures by addressing their concerns. Also in light of these results, the provision of targeted information through appropriate campaigns is certainly an important tool. The main finding of our econometric analysis, i.e. the strong relevance of (economic) self-interest for the support of policy measures, underlines the importance of implementing social cushioning measures to support population groups that are disproportionately financially affected by certain policy measures, such as low-income citizens in rural communities affected by bans on gasoline- and diesel-powered vehicles. For example, policymakers could increase the support of especially individually costly policy measures through financial compensations, such as a lump-sum amount for each citizen. In Germany, such an approach, the so-called “climate money”



(“Klimageld”), was laid down in the coalition agreement of the current German federal government in 2021 to offset the costs of the CO<sub>2</sub> tax on gasoline, heating oil, and gas, but this measure has not been introduced so far.

Of course, the support of various climate-related transport policy measures is not a one-way street, but is itself dependent on the measures implemented. In some cases, for example, the support of certain policy measures has increased after their introduction. An interesting case study in this respect is the introduction of congestion charges in Stockholm and Gothenburg in 2006 and 2013, respectively (e.g. Börjesson et al., 2016). Immediately before the introduction, the support decreased in both cities, but increased significantly afterwards (see <https://www.itf-oecd.org/sites/default/files/docs/swedish-congestion-charges.pdf>). Based on our result that the support of transport policy measures is strongly influenced by (economic) self-interest, it is possible that a modal shift induced by certain policy measures also affect the support of these measures and other available policy measures. The analysis of the complex and reciprocal relationship between the support of climate-related transport policy measures and mobility patterns is therefore an interesting direction for future research.

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## Tables

Table 1: Descriptive statistics of explanatory variables among the 708 respondents in Germany

Variables	Mean	Standard deviation	Minimum	Maximum
Ownership of exclusively conventional fuel vehicles	0.74	0.44	0	1
Ownership of alternative fuel vehicles	0.05	0.23	0	1
No ownership of vehicles	0.20	0.40	0	1
Ownership of season ticket for public transport	0.33	0.47	0	1
Use of plane	0.33	0.47	0	1
Use of bicycle	0.56	0.50	0	1
Environmental awareness	24.04	4.26	8	30
Identification with ecologically oriented politics	0.44	0.50	0	1
Identification with socially oriented politics	0.57	0.49	0	1
Identification with liberally oriented politics	0.35	0.48	0	1
Identification with conservatively oriented politics	0.24	0.43	0	1
Risk-taking preferences	0.33	0.47	0	1
Patience	0.59	0.49	0	1
Altruism	0.68	0.47	0	1
Trust	8.03	2.39	3	15
Positive reciprocity	12.35	1.98	3	15
Negative reciprocity	7.75	2.97	3	15
Equivalentized income in Euros	1,932.53	1,317.38	119.05	15,000
University degree	0.23	0.42	0	1
Age	48.58	15.27	18	80
Female	0.50	0.50	0	1
Household size	2.15	1.06	1	6
Number of children	0.23	0.57	0	4
Living in urban area	0.45	0.50	0	1



Table 2: Descriptive statistics of explanatory variables among the 744 respondents in Sweden

Variables	Mean	Standard deviation	Minimum	Maximum
Ownership of exclusively conventional fuel vehicles	0.67	0.47	0	1
Ownership of alternative fuel vehicles	0.12	0.33	0	1
No ownership of vehicles	0.21	0.41	0	1
Ownership of season ticket for public transport	0.33	0.47	0	1
Use of plane	0.38	0.48	0	1
Use of bicycle	0.51	0.50	0	1
Environmental awareness	24.15	4.28	6	30
Identification with ecologically oriented politics	0.32	0.47	0	1
Identification with socially oriented politics	0.44	0.50	0	1
Identification with liberally oriented politics	0.30	0.46	0	1
Identification with conservatively oriented politics	0.26	0.44	0	1
Risk-taking preferences	0.46	0.50	0	1
Patience	0.62	0.49	0	1
Altruism	0.76	0.43	0	1
Trust	8.83	2.72	3	15
Positive reciprocity	12.87	1.75	3	15
Negative reciprocity	7.63	2.97	3	15
Equivalentized income in Euros	2,124.48	1,364.65	102.13	10,213.35
University degree	0.34	0.48	0	1
Age	50.68	17.52	18	94
Female	0.48	0.50	0	1
Household size	2.21	1.21	1	12
Number of children	0.29	0.72	0	5
Living in urban area	0.37	0.48	0	1

Table 3: SML estimates (robust z-statistics) in a multivariate three-alternative ordered probit model among the 708 respondents in Germany, 200 random draws in the GHK simulator

Explanatory variables	<i>Measures related only or primarily to vehicle use</i>				<i>Measures related only to public transport</i>			<i>Measures related to vehicle use and public transport</i>		<i>Measures related to air travel</i>		<i>Bicycle use measure</i>	<i>Speed limit measure</i>
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
<i>Self-interest variables</i>													
Ownership of exclusively conventional fuel vehicles	-0.006 (-0.05)	-0.126 (-1.00)	-0.467*** (-3.83)	-0.676*** (-5.48)	-0.249* (-1.78)	-0.354** (-2.37)	-0.358** (-2.43)	0.125 (0.96)	-0.105 (-0.85)	-0.032 (-0.25)	0.010 (0.08)	-0.521*** (-3.72)	-0.192 (-1.52)
Ownership of alternative fuel vehicles	0.305 (1.20)	0.481* (1.72)	-0.316 (-1.30)	-0.279 (-1.15)	-0.448* (-1.73)	-0.478* (-1.80)	-0.584** (-2.32)	0.329 (1.33)	0.408 (1.56)	-0.086 (-0.34)	0.090 (0.35)	-0.365 (-1.41)	-0.267 (-1.14)
Ownership of season ticket for public transport	-0.045 (-0.43)	-0.040 (-0.38)	0.088 (0.81)	0.168 (1.50)	0.165 (1.38)	0.144 (1.19)	0.178 (1.46)	0.166 (1.50)	-0.103 (-0.93)	-0.052 (-0.48)	0.212** (2.02)	0.107 (0.94)	0.128 (1.20)
Use of plane	0.093 (0.88)	0.160 (1.36)	-0.166 (-1.64)	-0.186* (-1.69)	-0.151 (-1.36)	0.099 (0.85)	0.219* (1.76)	0.088 (0.82)	0.095 (0.86)	-0.617*** (-5.68)	-0.321*** (-3.11)	-0.086 (-0.73)	-0.068 (-0.67)
Use of bicycle	-0.011 (-0.11)	-0.065 (-0.65)	0.138 (1.44)	0.187* (1.92)	0.096 (0.92)	-0.037 (-0.35)	0.098 (0.89)	0.077 (0.78)	-0.064 (-0.65)	0.213** (2.16)	0.051 (0.53)	0.482*** (4.71)	0.126 (1.28)
<i>Environmental attitudes and political identification</i>													
Environmental awareness	0.026* (1.94)	0.049*** (3.48)	-0.002 (-0.14)	0.020 (1.48)	0.031** (2.24)	0.061*** (4.31)	0.057*** (4.03)	0.036*** (2.76)	0.040*** (3.04)	0.067*** (5.05)	0.050*** (3.84)	0.060*** (4.42)	0.030** (2.40)
Identification with ecologically oriented politics	0.043 (0.37)	0.434*** (3.67)	0.556*** (4.94)	0.744*** (6.43)	0.341*** (2.67)	0.052 (0.40)	0.200 (1.60)	0.287** (2.42)	0.525*** (4.70)	0.653*** (5.54)	0.586*** (5.15)	0.423*** (3.51)	0.547*** (4.96)
Identification with socially oriented politics	0.443*** (4.03)	0.384*** (3.41)	0.045 (0.42)	0.030 (0.26)	0.280** (2.24)	0.465*** (3.68)	0.218* (1.83)	0.347*** (3.15)	0.295*** (2.68)	0.041 (0.37)	0.054 (0.49)	0.276** (2.40)	0.250** (2.31)
Identification with liberally oriented politics	0.265** (2.37)	0.117 (1.04)	0.067 (0.65)	-0.116 (-1.05)	0.004 (0.03)	0.365*** (2.89)	0.141 (1.13)	0.272** (2.38)	0.158 (1.43)	-0.104 (-0.97)	-0.116 (-1.08)	0.198* (1.72)	0.039 (0.37)
Identification with conservatively oriented politics	-0.000 (-0.00)	-0.033 (-0.26)	0.103 (0.86)	-0.084 (-0.69)	-0.015 (-0.12)	-0.317** (-2.49)	0.011 (0.09)	0.123 (0.94)	-0.260** (-2.19)	0.154 (1.22)	0.075 (0.63)	-0.118 (-0.95)	-0.100 (-0.85)

Table 3 (continued)

Explanatory variables	<i>Measures related only or primarily to vehicle use</i>				<i>Measures related only to public transport</i>			<i>Measures related to vehicle use and public transport</i>		<i>Measures related to air travel</i>		<i>Bicycle use measure</i>	<i>Speed limit measure</i>
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
<i>Economic preferences</i>													
Risk-taking preferences	-0.098 (-0.88)	-0.015 (-0.13)	0.071 (0.67)	0.161 (1.48)	0.162 (1.42)	0.027 (0.22)	0.072 (0.58)	-0.109 (-0.96)	-0.001 (-0.01)	-0.156 (-1.44)	-0.104 (-0.97)	0.169 (1.41)	-0.008 (-0.07)
Patience	0.206** (1.97)	0.122 (1.15)	0.071 (0.70)	0.210** (2.12)	0.094 (0.86)	-0.051 (-0.44)	0.131 (1.12)	0.116 (1.11)	0.092 (0.87)	0.158 (1.50)	0.096 (0.94)	0.066 (0.60)	0.018 (0.18)
Altruism	0.120 (1.10)	0.155 (1.43)	0.001 (0.01)	0.104 (0.95)	0.130 (1.12)	0.039 (0.33)	0.212* (1.75)	0.223** (2.06)	0.058 (0.53)	0.180 (1.64)	0.106 (1.00)	-0.015 (-0.13)	0.127 (1.19)
Trust	-0.027 (-1.25)	0.057** (2.43)	0.001 (0.03)	0.039* (1.74)	0.011 (0.47)	0.029 (1.28)	0.012 (0.54)	-0.035 (-1.58)	0.028 (1.33)	0.023 (1.06)	0.017 (0.78)	0.032 (1.35)	0.022 (1.05)
Positive reciprocity	0.027 (0.97)	-0.003 (-0.12)	-0.064** (-2.41)	-0.070*** (-2.61)	-0.002 (-0.07)	0.096*** (3.36)	0.039 (1.31)	0.042 (1.54)	0.013 (0.47)	-0.018 (-0.63)	-0.073*** (-2.65)	0.059** (2.04)	-0.048* (-1.84)
Negative reciprocity	0.003 (0.18)	0.016 (0.88)	0.021 (1.20)	0.034** (1.97)	-0.014 (-0.75)	0.001 (0.07)	0.031 (1.53)	0.003 (0.17)	-0.007 (-0.38)	0.022 (1.23)	0.044** (2.50)	0.005 (0.25)	0.017 (1.00)
<i>Socio-economic variables</i>													
Equivalentized income in 1,000 Euros	0.088** (2.15)	0.030 (0.71)	0.038 (1.11)	0.068* (1.79)	0.043 (0.93)	0.033 (0.76)	0.031 (0.62)	0.031 (0.74)	0.037 (0.88)	0.050 (1.18)	0.044 (1.16)	0.059 (1.39)	-0.055 (-1.38)
University degree	0.040 (0.34)	0.031 (0.24)	-0.136 (-1.18)	-0.073 (-0.59)	-0.196 (-1.60)	0.114 (0.89)	0.072 (0.54)	0.024 (0.19)	0.012 (0.10)	0.224* (1.82)	-0.004 (-0.03)	0.151 (1.15)	0.062 (0.51)
Age	-0.005 (-1.43)	-0.005 (-1.37)	-0.000 (-0.11)	-0.007** (-2.04)	0.003 (0.89)	0.004 (0.94)	0.005 (1.17)	0.008** (2.13)	-0.010*** (-2.80)	0.006* (1.68)	0.006* (1.74)	0.001 (0.30)	0.003 (0.96)
Female	-0.142 (-1.43)	-0.152 (-1.47)	-0.069 (-0.71)	-0.012 (-0.12)	0.141 (1.33)	-0.104 (-0.98)	0.065 (0.60)	-0.176* (-1.76)	-0.152 (-1.49)	-0.280*** (-2.86)	0.013 (0.13)	0.048 (0.45)	0.074 (0.73)
Household size	0.018 (0.31)	-0.029 (-0.52)	0.080 (1.39)	0.005 (0.08)	0.017 (0.26)	0.033 (0.53)	-0.041 (-0.67)	-0.043 (-0.81)	-0.078 (-1.43)	0.013 (0.24)	-0.007 (-0.13)	0.008 (0.14)	0.051 (0.91)
Children	-0.083 (-0.54)	0.098 (0.63)	0.097 (0.62)	0.006 (0.04)	-0.139 (-0.84)	-0.056 (-0.34)	-0.038 (-0.23)	-0.009 (-0.06)	0.309** (2.05)	-0.060 (-0.40)	0.050 (0.35)	0.057 (0.34)	-0.043 (-0.27)
Living in urban area	0.025 (0.27)	0.154 (1.58)	-0.064 (-0.68)	0.172* (1.77)	0.017 (0.16)	0.047 (0.45)	0.139 (1.32)	-0.025 (-0.25)	0.237** (2.38)	0.040 (0.41)	0.022 (0.23)	0.018 (0.17)	0.067 (0.70)

Notes: \* (\*\*, \*\*\*) means that the corresponding estimated parameter is different from zero at the 10% (5%, 1%) significance level, respectively. Dependent variables, i.e. climate-related transport policy measures, are defined as follows: (1) financial support of alternative fuels for vehicles, (2) financial support of expanding charging infrastructure, (3) introduction of road user charges on highways, (4) sales ban on new gasoline- and diesel-powered vehicles, (5) introduction of free public transport, (6) financial support of public transport, (7) reduction in taxes on tickets for public transport, (8) financial support of purchasing hydrogen vehicles and buses, (9) financial support of purchasing electric vehicles and buses, (10) increase in taxes on flight tickets, (11) ban on domestic flights, (12) financial support of bicycle traffic, (13) introduction of a speed limit on highways.

Table 4: SML estimates (robust z-statistics) in a multivariate three-alternative ordered probit model among the 744 respondents in Sweden, 200 random draws in the GHK simulator

Explanatory variables	<i>Measures related only or primarily to vehicle use</i>				<i>Measures related only to public transport</i>			<i>Measures related to vehicle use and public transport</i>		<i>Measures related to air travel</i>		<i>Bicycle use measure</i>
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
<i>Self-interest variables</i>												
Ownership of exclusively conventional fuel vehicles	0.164 (1.50)	-0.043 (-0.37)	-0.500*** (-4.36)	-0.569*** (-4.86)	-0.208 (-1.56)	-0.272** (-2.04)	-0.600*** (-3.83)	0.086 (0.77)	0.145 (1.31)	-0.021 (-0.17)	-0.047 (-0.40)	-0.431*** (-3.26)
Ownership of alternative fuel vehicles	0.713*** (3.95)	0.473*** (2.61)	-0.575*** (-3.44)	-0.278 (-1.55)	-0.172 (-0.93)	-0.336* (-1.67)	-0.591*** (-2.81)	0.596*** (3.35)	0.497*** (2.75)	0.170 (0.96)	0.146 (0.81)	-0.075 (-0.38)
Ownership of season ticket for public transport	0.065 (0.70)	0.014 (0.14)	0.132 (1.41)	0.319*** (3.21)	0.021 (0.20)	-0.059 (-0.54)	-0.064 (-0.58)	0.021 (0.22)	0.065 (0.69)	0.135 (1.40)	0.386*** (4.00)	-0.123 (-1.13)
Use of plane	0.142 (1.42)	0.018 (0.17)	-0.098 (-0.94)	0.006 (0.06)	0.276** (2.41)	0.240** (2.05)	0.088 (0.75)	0.082 (0.80)	0.219** (2.12)	-0.431*** (-4.21)	-0.186* (-1.74)	-0.170 (-1.51)
Use of bicycle	0.141 (1.56)	0.037 (0.39)	0.307*** (3.28)	0.105 (1.09)	-0.090 (-0.92)	0.300*** (2.91)	0.048 (0.47)	0.050 (0.55)	0.116 (1.29)	0.352*** (3.76)	0.226** (2.40)	0.687*** (6.60)
<i>Environmental attitudes and political identification</i>												
Environmental awareness	0.037*** (3.02)	0.054*** (4.49)	0.021* (1.67)	0.023* (1.81)	0.030** (2.38)	0.059*** (4.55)	0.041*** (3.07)	0.045*** (3.66)	0.033*** (2.75)	0.051*** (4.13)	0.030** (2.33)	0.040*** (3.01)
Identification with ecologically oriented politics	0.015 (0.14)	-0.041 (-0.35)	0.383*** (3.46)	0.459*** (4.00)	0.262** (2.23)	0.395*** (3.13)	0.352*** (2.68)	0.004 (0.04)	-0.017 (-0.15)	0.638*** (5.76)	0.383*** (3.42)	0.429*** (3.38)
Identification with socially oriented politics	0.220** (2.24)	0.221** (1.98)	0.165 (1.61)	0.191* (1.81)	0.241** (2.16)	0.334*** (2.82)	0.063 (0.53)	0.190* (1.85)	0.267*** (2.60)	0.133 (1.29)	0.011 (0.11)	-0.013 (-0.11)
Identification with liberally oriented politics	0.090 (0.82)	0.298*** (2.60)	0.009 (0.09)	0.036 (0.32)	-0.313*** (-2.80)	-0.193 (-1.53)	-0.116 (-0.96)	0.073 (0.69)	0.084 (0.78)	0.114 (1.03)	-0.020 (-0.18)	0.030 (0.26)
Identification with conservatively oriented politics	-0.035 (-0.30)	-0.048 (-0.39)	-0.067 (-0.58)	-0.363*** (-2.96)	-0.138 (-1.17)	-0.026 (-0.21)	-0.127 (-1.02)	-0.234** (-2.08)	-0.109 (-0.95)	-0.288** (-2.56)	-0.366*** (-3.04)	-0.220* (-1.87)

Table 4 (continued)

Explanatory variables	<i>Measures related only or primarily to vehicle use</i>				<i>Measures related only to public transport</i>			<i>Measures related to vehicle use and public transport</i>		<i>Measures related to air travel</i>		<i>Bicycle use measure</i>
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
<i>Economic preferences</i>												
Risk-taking preferences	-0.020 (-0.22)	-0.000 (-0.00)	0.103 (1.11)	-0.028 (-0.29)	0.070 (0.71)	-0.250** (-2.39)	-0.171* (-1.65)	-0.092 (-0.99)	0.057 (0.63)	-0.273*** (-2.92)	-0.085 (-0.88)	0.047 (0.47)
Patience	0.078 (0.84)	0.276*** (2.82)	0.088 (0.91)	0.204** (2.04)	-0.008 (-0.08)	0.312*** (2.95)	0.033 (0.31)	0.236** (2.54)	0.157* (1.72)	0.179* (1.82)	0.141 (1.45)	0.037 (0.35)
Altruism	0.201* (1.91)	0.074 (0.67)	0.062 (0.58)	0.051 (0.47)	0.244** (2.24)	0.158 (1.33)	0.253** (2.17)	0.029 (0.27)	0.072 (0.70)	0.024 (0.23)	-0.076 (-0.69)	0.220* (1.88)
Trust	0.022 (1.24)	0.061*** (3.10)	0.037* (1.91)	0.025 (1.31)	-0.016 (-0.77)	0.093*** (4.43)	0.000 (0.01)	0.038** (2.10)	0.055*** (2.94)	0.047** (2.38)	0.006 (0.30)	0.026 (1.21)
Positive reciprocity	-0.007 (-0.28)	0.010 (0.41)	-0.053** (-2.00)	-0.021 (-0.76)	-0.007 (-0.26)	0.055* (1.86)	0.009 (0.31)	-0.001 (-0.05)	-0.021 (-0.83)	-0.015 (-0.53)	0.008 (0.29)	0.007 (0.24)
Negative reciprocity	0.008 (0.50)	-0.023 (-1.32)	0.034** (2.00)	0.006 (0.33)	-0.001 (-0.09)	-0.003 (-0.17)	-0.027 (-1.43)	-0.003 (-0.18)	-0.023 (-1.35)	0.022 (1.27)	0.032* (1.94)	-0.020 (-1.13)
<i>Socio-economic variables</i>												
Equivalized income in 1,000 Euros	-0.149*** (-3.91)	-0.024 (-0.63)	-0.035 (-1.02)	0.024 (0.70)	-0.085** (-2.30)	-0.095** (-2.30)	-0.076** (-2.20)	-0.104*** (-2.65)	-0.083** (-2.23)	-0.008 (-0.22)	-0.079* (-1.88)	-0.003 (-0.08)
University degree	0.123 (1.25)	0.181* (1.69)	-0.016 (-0.15)	0.126 (1.19)	0.007 (0.07)	0.157 (1.35)	0.022 (0.19)	0.100 (1.00)	0.150 (1.48)	0.001 (0.01)	-0.086 (-0.82)	-0.088 (-0.82)
Age	-0.004 (-1.46)	-0.003 (-1.00)	0.002 (0.64)	-0.012*** (-3.89)	-0.003 (-0.79)	-0.001 (-0.25)	-0.004 (-1.32)	-0.004 (-1.44)	-0.009*** (-3.16)	0.000 (0.03)	-0.010*** (-3.19)	0.000 (0.15)
Female	-0.008 (-0.08)	-0.266*** (-2.70)	0.138 (1.46)	-0.280*** (-2.92)	0.224** (2.25)	-0.056 (-0.54)	0.267** (2.45)	0.090 (0.96)	0.021 (0.22)	-0.142 (-1.52)	-0.055 (-0.59)	0.074 (0.72)
Household size	-0.052 (-1.19)	-0.087** (-2.04)	0.057 (1.41)	-0.075 (-1.25)	-0.025 (-0.50)	-0.021 (-0.47)	-0.031 (-0.68)	-0.043 (-1.12)	-0.085** (-2.06)	-0.006 (-0.14)	-0.008 (-0.16)	0.111* (1.87)
Children	0.095 (0.63)	0.137 (0.90)	0.180 (1.20)	0.270 (1.56)	0.120 (0.73)	-0.009 (-0.06)	-0.052 (-0.32)	0.133 (0.96)	0.202 (1.36)	0.059 (0.39)	0.159 (1.05)	0.298* (1.69)
Living in urban area	-0.113 (-1.20)	-0.128 (-1.23)	-0.002 (-0.02)	0.014 (0.15)	-0.102 (-1.02)	0.049 (0.45)	0.017 (0.16)	-0.075 (-0.79)	-0.092 (-0.97)	-0.048 (-0.51)	-0.188* (-1.91)	-0.181* (-1.75)

Notes: \* (\*\*, \*\*\*) means that the corresponding estimated parameter is different from zero at the 10% (5%, 1%) significance level, respectively. Dependent variables, i.e. climate-related transport policy measures, are defined as follows: (1) financial support of alternative fuels for vehicles, (2) financial support of expanding charging infrastructure, (3) introduction of road user charges on highways, (4) sales ban on new gasoline- and diesel-powered vehicles, (5) introduction of free public transport, (6) financial support of public transport, (7) reduction in taxes on tickets for public transport, (8) financial support of purchasing hydrogen vehicles and buses, (9) financial support of purchasing electric vehicles and buses, (10) increase in taxes on flight tickets, (11) ban on domestic flights, (12) financial support of bicycle traffic.

## Figures

Figure 1: Relative frequencies (in %) of the agreement with the 13 climate-related transport policy measures among the 708 respondents in Germany

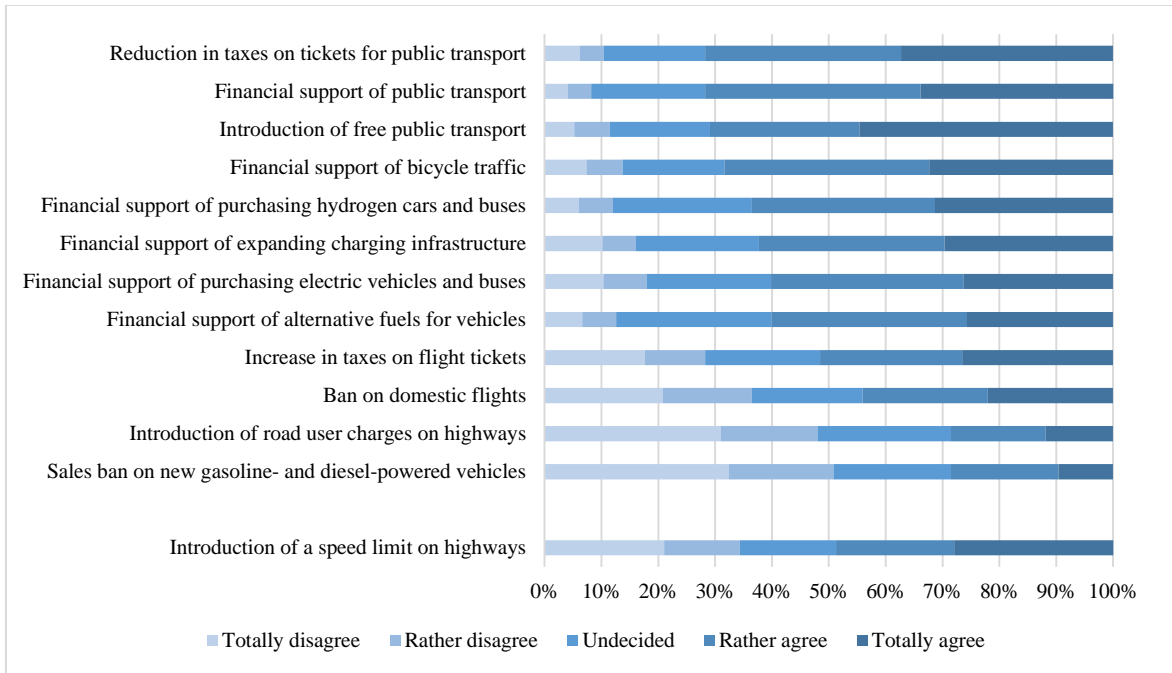
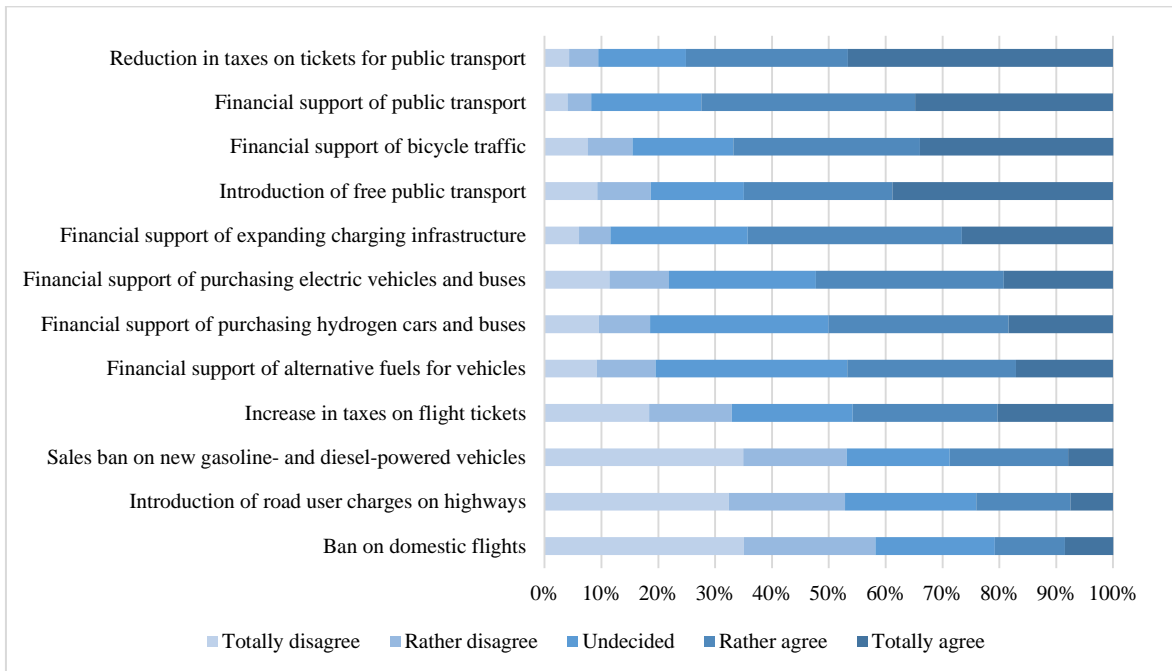


Figure 2: Relative frequencies (in %) of the agreement with the 12 climate-related transport policy measures among the 744 respondents in Sweden



**Online Appendix A:** Survey questions for the support of climate-related transport policy measures (dependent variables in the econometric analysis, translated into English)

**Variables:** ‘Financial support of alternative fuels for vehicles’, ‘financial support of expanding charging infrastructure’, ‘introduction of road user charges on highways’, ‘sales ban on new gasoline- and diesel-powered vehicles’, ‘introduction of free public transport’, ‘financial support of public transport’, ‘reduction in taxes on tickets for public transport’, ‘financial support of purchasing hydrogen vehicles and buses’, ‘financial support of purchasing electric vehicles and buses’, ‘increase in taxes on flight tickets’, ‘ban on domestic flights’, and ‘financial support of bicycle traffic’.

Please indicate to what extent you agree with the following policy measures:

	Totally disagree	Rather disagree	Undecided	Rather agree	Totally agree
Financial support of alternative fuels for vehicles (e.g. ethanol)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Financial support of expansion of charging infrastructure for electric vehicles and electric buses	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Introduction of road user charges on highways	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sales ban on new gasoline- and diesel-powered vehicles	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Introduction of free public transport	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Financial support of public transport (e.g. for expanding rail infrastructure)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Reduction in taxes on tickets for public transport	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Financial support of purchasing vehicles and buses run on hydrogen	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Financial support of purchasing electric vehicles and electric buses	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Increase in taxes on flight tickets	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Ban on domestic flights	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Financial support of bicycle traffic (e.g. for expansion of bicycle paths)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**Additional variable in the German sample:** ‘Introduction of a speed limit on highways’

Please indicate to what extent you agree with the following policy:

	Totally disagree	Rather disagree	Undecided	Rather agree	Totally agree
Introduction of a speed limit on highways	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>



**Online Appendix B:** Survey questions for the individual characteristics (explanatory variables in the econometric analysis, translated into English)

**Variables:** ‘Ownership of exclusively conventional fuel vehicles’, ‘Ownership of alternative fuel vehicles’

Please indicate the fuel type respectively the propulsion method of the vehicle in your household that is used most often:

Gasoline
Diesel
Natural gas
Liquified petroleum gas (LPG)
Biodiesel or ethanol
Electricity (pure battery electric vehicle)
Combination of electricity and gasoline or diesel (hybrid vehicle)
Other fuel:_____

Please indicate the fuel type or the propulsion method of the vehicle in your household that is used the second most:

Gasoline
Diesel
Natural gas
Liquified petroleum gas (LPG)
Biodiesel or ethanol
Electricity (pure battery electric vehicle)
Combination of electricity and gasoline or diesel (hybrid vehicle)
Other fuel:_____

Is the third vehicle in your household or at least one of the additional vehicles in your household electric (i.e. either a pure battery electric vehicle or a hybrid vehicle)?

No	<input type="checkbox"/>
Yes	<input type="checkbox"/>

**Variable:** ‘Ownership of season ticket for public transport’

Please indicate for which of the following modes of transport you or other members of your household have monthly or yearly tickets or other commutation tickets: *(multiple answers possible)*

For local public transport (e.g. bus, tram, subway, suburban train)
For long-distance public transport (e.g. train, coach)
For none of the above modes of transport

**Variables:** ‘Use of plane’, ‘Use of bicycle’

Please indicate which of the following modes of transport you have used since the beginning of the COVID-19 pandemic (March 2020) and which ones you used in the two years before the COVID-19 pandemic (i.e., in the years 2018 and 2019): *(multiple answers possible)*

	Use since the beginning of the COVID-19 pandemic (March 2020)	Use in the two years prior to the COVID-19 pandemic (2018 and 2019)
Vehicle	<input type="checkbox"/>	<input type="checkbox"/>
Motorcycle like motorbike, moped, or motor scooter	<input type="checkbox"/>	<input type="checkbox"/>
Electric bike or pedelec	<input type="checkbox"/>	<input type="checkbox"/>
Bicycle	<input type="checkbox"/>	<input type="checkbox"/>
Local public transport (e.g. bus, tram, subway, suburban train)	<input type="checkbox"/>	<input type="checkbox"/>
Long-distance public transport (e.g. train, coach)	<input type="checkbox"/>	<input type="checkbox"/>
Plane	<input type="checkbox"/>	<input type="checkbox"/>
Ship	<input type="checkbox"/>	<input type="checkbox"/>
I have not used any of the above modes of transport	<input type="checkbox"/>	<input type="checkbox"/>

**Variable:** ‘Environmental awareness’

Please indicate to what extent you agree with the following statements:

	Totally disagree	Rather disagree	Undecided	Rather agree	Totally agree
Humans have the right to modify the natural environment to suit their needs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Humans are severely abusing the planet	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Plants and animals have the same right to exist as humans	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Nature is strong enough to cope with the impacts of modern industrial nations	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Humans were meant to rule over the rest of nature	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The balance of nature is very delicate and easily upset	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**Variables:** ‘Identification with ecologically oriented politics’, ‘Identification with conservatively oriented politics’, ‘Identification with liberally oriented politics’, ‘Identification with socially oriented politics’

Please indicate to what extent you agree with the following statements:

	Totally disagree	Rather disagree	Undecided	Rather agree	Totally agree
I identify myself with ecologically oriented politics	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I identify myself with socially oriented politics	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I identify myself with liberally oriented politics	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I identify myself with conservatively oriented politics	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**Variable: ‘Risk-taking preferences’**

Please indicate how willing you are to take risks:

Not at all willing to take risks	Rather not willing to take risks	Undecided	Rather willing to take risks	Very willing to take risks
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**Variable: ‘Patience’**

Please indicate how willing you are to give up something that is beneficial for you today to benefit more from that in the future:

Not at all willing	Rather not willing	Undecided	Rather willing	Very willing
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**Variable: ‘Altruism’**

Please indicate how willing you are to give to good causes without expecting anything in return:

Not at all willing	Rather not willing	Undecided	Rather willing	Very willing
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**Variable: ‘Trust’**

Please indicate to what extent you agree with the following statements:

Statement	Totally disagree	Rather disagree	Undecided	Rather agree	Totally agree
In general, one can trust people	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
These days, you cannot rely on anyone	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
When dealing with strangers, it is better to be careful before you trust them	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**Variables:** ‘Positive reciprocity’, ‘Negative reciprocity’

Please indicate to what extent you agree with the following statements:

	Totally disagree	Rather disagree	Undecided	Rather agree	Totally agree
When someone does me a favor, I am willing to return it	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I am particularly trying to help someone who has helped me before	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
In order to help someone who has helped me before, I would even be willing to pay costs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
When I am faced with a great injustice, I will avenge myself at the next opportunity	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
When someone puts me in a difficult position, I will do the same with that person	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
When someone insults me, I will also be offensive to that person	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**Variable in the German sample: 'Equivalized income'**

How much is the monthly household income of all persons currently living in your household? Please refer here to the current monthly net income, i.e., after taxes, counting all wages, salaries, pensions, grants, benefits and other incomes. If you are uncertain, please make an estimate of the monthly amount:

Under 500 Euros	<input type="checkbox"/>
500 to under 1,000 Euros	<input type="checkbox"/>
1,000 to under 1,500 Euros	<input type="checkbox"/>
1,500 to under 2,000 Euros	<input type="checkbox"/>
2,000 to under 2,500 Euros	<input type="checkbox"/>
2,500 to under 3,000 Euros	<input type="checkbox"/>
3,000 to under 3,500 Euros	<input type="checkbox"/>
3,500 to under 4,000 Euros	<input type="checkbox"/>
4,000 to under 4,500 Euros	<input type="checkbox"/>
4,500 to under 5,000 Euros	<input type="checkbox"/>
5,000 to under 5,500 Euros	<input type="checkbox"/>
5,500 to under 6,000 Euros	<input type="checkbox"/>
6,000 to under 6,500 Euros	<input type="checkbox"/>
6,500 to under 7,000 Euros	<input type="checkbox"/>
7,000 to under 7,500 Euros	<input type="checkbox"/>
7,500 to under 8,000 Euros	<input type="checkbox"/>
8,000 to under 8,500 Euros	<input type="checkbox"/>
8,500 to under 9,000 Euros	<input type="checkbox"/>
9,000 to under 9,500 Euros	<input type="checkbox"/>
9,500 to under 10,000 Euros	<input type="checkbox"/>
10,000 Euros and more	<input type="checkbox"/>

**Variable in the Swedish sample: 'Equivalized income'**

How much is the monthly household income of all persons currently living in your household? Please refer here to the current monthly net income, i.e., after taxes, counting all wages, salaries, pensions, grants, benefits and other incomes. If you are uncertain, please make an estimate of the monthly amount:

Under 6,000 SEK	<input type="checkbox"/>
6,000 to under 12,000 SEK	<input type="checkbox"/>
12,000 to under 18,000 SEK	<input type="checkbox"/>
18,000 to under 24,000 SEK	<input type="checkbox"/>
24,000 to under 30,000 SEK	<input type="checkbox"/>
30,000 to under 36,000 SEK	<input type="checkbox"/>
36,000 to under 42,000 SEK	<input type="checkbox"/>
42,000 to under 48,000 SEK	<input type="checkbox"/>
48,000 to under 54,000 SEK	<input type="checkbox"/>
54,000 to under 60,000 SEK	<input type="checkbox"/>
60,000 to under 66,000 SEK	<input type="checkbox"/>
66,000 to under 72,000 SEK	<input type="checkbox"/>
72,000 to under 78,000 SEK	<input type="checkbox"/>
78,000 to under 84,000 SEK	<input type="checkbox"/>
84,000 to under 90,000 SEK	<input type="checkbox"/>
90,000 to under 96,000 SEK	<input type="checkbox"/>
96,000 to under 102,000 SEK	<input type="checkbox"/>
102,000 to under 108,000 SEK	<input type="checkbox"/>
108,000 to under 114,000 SEK	<input type="checkbox"/>
114,000 to under 120,000 SEK	<input type="checkbox"/>
120,000 SEK and more	<input type="checkbox"/>

**Variable in the German sample: 'University degree'**

Please indicate your highest completed school or academic degree:

No degree (so far)	<input type="checkbox"/>
Primary school diploma	<input type="checkbox"/>
Completion of a special education school (special school, auxiliary school)	<input type="checkbox"/>
Elementary or secondary school / polytechnic high school (8 <sup>th</sup> / 9 <sup>th</sup> grade)	<input type="checkbox"/>
School-leaving certificate, secondary school, polytechnic high school (10 <sup>th</sup> grade)	<input type="checkbox"/>
High school diploma, subject-specific university entrance qualification / extended high school (12 <sup>th</sup> grade)	<input type="checkbox"/>
Vocational qualification, vocational school / college (school-based vocational training)	<input type="checkbox"/>
Master craftsman / Technician / equivalent technical school qualification; VWA (Administrative and Business Academy); Technical academy (Bavaria)	<input type="checkbox"/>
University of Applied Sciences or professional academy degree	<input type="checkbox"/>
University or college degree	<input type="checkbox"/>
Doctorate or post-doctoral qualification	<input type="checkbox"/>

**Variable in the Swedish sample: 'University degree'**

Please indicate your highest completed school or academic degree:

Incomplete primary school	<input type="checkbox"/>
Primary education or lower	<input type="checkbox"/>
Preparatory upper secondary education program (3 years)	<input type="checkbox"/>
Vocational school (1963-1970) - 2-year high school program, 2-year vocational school	<input type="checkbox"/>
Old two-year high school programs	<input type="checkbox"/>
4-year high school program (before 1995) / Technical foundation year	<input type="checkbox"/>
Post-secondary education, non-university / college, 1 year (e.g. vocational education, military training)	<input type="checkbox"/>
Ongoing university education	<input type="checkbox"/>
University education shorter than three years	<input type="checkbox"/>
University education of at least three years	<input type="checkbox"/>
Research education (PhD/Doctoral studies)	<input type="checkbox"/>



**Variable: 'Age'**

Please indicate your age:

Age in years: \_\_\_\_\_

**Variable: 'Female'**

Please indicate your gender:

Male	<input type="checkbox"/>
Female	<input type="checkbox"/>
Third gender	<input type="checkbox"/>

**Variable: 'Household size'**

Please indicate the number of all persons currently and permanently living in your household (i.e. adults and children, including yourself):

Number of persons: \_\_\_\_\_

**Variable: 'Children'**

Please indicate the number of all persons currently living in your household in the following age classes. If there are no persons in a certain age category, please enter the number "0":

Number of persons aged less than 14 years: \_\_\_\_\_

**Variable: 'Living in urban area'**

Please indicate the postal code of your current place of residence:

Postal code: \_\_\_\_\_

## Online Appendix C: Further tables

Table C1: Absolute and relative frequencies (in %) of the agreement with the 13 climate-related transport policy measures among the 708 respondents in Germany

Climate-related transport policy measures	Agreement with climate-related transport policy measures				
	Totally disagree	Rather disagree	Undecided	Rather agree	Totally agree
Reduction in taxes on tickets for public transport	44 (6.21%)	30 (4.24%)	126 (17.80%)	244 (34.46%)	264 (37.29%)
Financial support of public transport	29 (4.10%)	29 (4.10%)	142 (20.06%)	268 (37.85%)	240 (33.90%)
Introduction of free public transport	37 (5.23%)	44 (6.21%)	125 (17.66%)	186 (26.27%)	316 (44.63%)
Financial support of bicycle traffic	52 (7.34%)	45 (6.36%)	127 (17.94%)	255 (36.02%)	229 (32.34%)
Financial support of purchasing hydrogen vehicles and buses	43 (6.07%)	42 (5.93%)	173 (24.44%)	228 (32.20%)	222 (31.36%)
Financial support of expanding charging infrastructure	72 (10.17%)	42 (5.93%)	153 (21.61%)	231 (32.63%)	210 (29.66%)
Financial support of purchasing electric vehicles and buses	73 (10.31%)	54 (7.63%)	155 (21.89%)	240 (33.90%)	186 (26.27%)
Financial support of alternative fuels for vehicles	47 (6.64%)	42 (5.93%)	194 (27.40%)	243 (34.32%)	182 (25.71%)
Increase in taxes on flight tickets	125 (17.66%)	75 (10.59%)	143 (20.20%)	177 (25.00%)	188 (26.55%)
Ban on domestic flights	147 (20.76%)	111 (15.68%)	138 (19.49%)	156 (22.03%)	156 (22.03%)
Introduction of road user charges on highways	219 (30.93%)	121 (17.09%)	166 (23.45%)	118 (16.67%)	84 (11.86%)
Sales ban on new gasoline- and diesel-powered vehicles	229 (32.34%)	131 (18.50%)	146 (20.62%)	134 (18.93%)	68 (9.60%)
Introduction of a speed limit on highways	149 (21.05%)	94 (13.28%)	120 (16.95%)	147 (20.76%)	198 (27.97%)

Table C2: Absolute and relative frequencies (in %) of the agreement with the 12 climate-related transport policy measures among the 744 respondents in Sweden

Climate-related transport policy measures	Agreement with climate-related transport policy measures				
	Totally disagree	Rather disagree	Undecided	Rather agree	Totally agree
Reduction in taxes on tickets for public transport	32 (4.30%)	38 (5.11%)	115 (15.46%)	212 (28.49%)	347 (46.64%)
Financial support of public transport	30 (4.03%)	31 (4.17%)	144 (19.35%)	280 (37.63%)	259 (34.81%)
Financial support of bicycle traffic	57 (7.66%)	58 (7.80%)	132 (17.74%)	244 (32.80%)	253 (34.01%)
Introduction of free public transport	69 (9.27%)	70 (9.41%)	122 (16.40%)	194 (26.08%)	289 (38.84%)
Financial support of expanding charging infrastructure	45 (6.05%)	41 (5.51%)	180 (24.19%)	280 (37.63%)	198 (26.61%)
Financial support of purchasing electric vehicles and buses	85 (11.42%)	78 (10.48%)	192 (25.81%)	246 (33.06%)	143 (19.22%)
Financial support of purchasing hydrogen vehicles and buses	71 (9.54%)	67 (9.01%)	234 (31.45%)	235 (31.59%)	137 (18.41%)
Financial support of alternative fuels for vehicles	68 (9.14%)	77 (10.35%)	251 (33.74%)	221 (29.70%)	127 (17.07%)
Increase in taxes on flight tickets	137 (18.41%)	108 (14.52%)	158 (21.24%)	190 (25.54%)	151 (20.30%)
Sales ban on new gasoline- and diesel-powered vehicles	260 (34.95%)	135 (18.15%)	135 (18.15%)	155 (20.83%)	59 (7.93%)
Introduction of road user charges on highways	241 (32.39%)	152 (20.43%)	172 (23.12%)	123 (16.53%)	56 (7.53%)
Ban on domestic flights	261 (35.08%)	172 (23.12%)	156 (20.97%)	92 (12.37%)	63 (8.47%)

Table C3: SML estimates (robust z-statistics) in a multivariate binary probit model among the 708 respondents in Germany, 200 random draws in the GHK simulator

Explanatory variables	<i>Measures related only or primarily to vehicle use</i>				<i>Measures related only to public transport</i>			<i>Measures related to vehicle use and public transport</i>		<i>Measures related to air travel</i>		<i>Bicycle use measure</i>	<i>Speed limit measure</i>
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
<i>Self-interest variables</i>													
Ownership of exclusively conventional fuel vehicles	-0.067 (-0.49)	-0.071 (-0.50)	-0.374*** (-2.62)	-0.627*** (-4.33)	-0.274* (-1.85)	-0.451*** (-2.77)	-0.376** (-2.44)	0.170 (1.22)	-0.013 (-0.09)	0.079 (0.55)	0.021 (0.15)	-0.518*** (-3.47)	-0.115 (-0.83)
Ownership of alternative fuel vehicles	0.275 (1.04)	0.629** (2.20)	-0.174 (-0.66)	-0.208 (-0.77)	-0.366 (-1.37)	-0.616** (-2.15)	-0.680** (-2.45)	0.257 (0.97)	0.377 (1.40)	0.018 (0.06)	0.177 (0.68)	-0.464* (-1.66)	-0.197 (-0.81)
Ownership of season ticket for public transport	-0.052 (-0.45)	-0.226* (-1.88)	0.057 (0.45)	0.228* (1.79)	0.203 (1.63)	0.101 (0.76)	0.168 (1.32)	0.168 (1.39)	-0.123 (-1.02)	-0.043 (-0.35)	0.171 (1.46)	0.030 (0.23)	0.144 (1.23)
Use of plane	0.134 (1.18)	0.253** (2.10)	-0.228* (-1.90)	-0.175 (-1.36)	-0.147 (-1.26)	0.146 (1.19)	0.270** (2.15)	0.119 (1.03)	0.156 (1.33)	-0.582*** (-4.85)	-0.280** (-2.48)	-0.110 (-0.91)	-0.105 (-0.95)
Use of bicycle	-0.036 (-0.34)	-0.082 (-0.74)	0.182* (1.65)	0.275** (2.36)	0.048 (0.45)	-0.117 (-1.00)	0.115 (1.01)	0.092 (0.85)	-0.059 (-0.55)	0.252** (2.34)	0.125 (1.18)	0.448*** (4.09)	0.150 (1.44)
<i>Environmental attitudes and political identification</i>													
Environmental awareness	0.027* (1.94)	0.052*** (3.71)	0.004 (0.26)	0.031** (2.02)	0.028** (2.00)	0.068*** (4.64)	0.059*** (3.92)	0.042*** (3.05)	0.052*** (3.76)	0.074*** (5.28)	0.058*** (4.25)	0.058*** (4.15)	0.039*** (2.90)
Identification with ecologically oriented politics	0.002 (0.01)	0.430*** (3.53)	0.516*** (4.09)	0.661*** (5.13)	0.327** (2.47)	0.068 (0.51)	0.179 (1.36)	0.364*** (2.94)	0.461*** (3.84)	0.541*** (4.30)	0.474*** (3.88)	0.403*** (3.21)	0.502*** (4.20)
Identification with socially oriented politics	0.405*** (3.42)	0.428*** (3.64)	0.162 (1.31)	0.134 (0.99)	0.287** (2.26)	0.446*** (3.54)	0.245** (1.99)	0.303** (2.53)	0.251** (2.16)	0.167 (1.39)	0.160 (1.35)	0.222* (1.83)	0.305*** (2.64)
Identification with liberally oriented politics	0.326*** (2.82)	0.131 (1.12)	0.146 (1.28)	0.031 (0.25)	0.036 (0.30)	0.340*** (2.64)	0.151 (1.20)	0.329*** (2.80)	0.217* (1.86)	-0.037 (-0.32)	-0.084 (-0.74)	0.217* (1.82)	0.063 (0.57)
Identification with conservatively oriented politics	0.045 (0.36)	0.004 (0.03)	0.271** (2.13)	0.047 (0.35)	-0.006 (-0.05)	-0.301** (-2.25)	0.015 (0.11)	0.172 (1.31)	-0.243** (-2.01)	0.230* (1.76)	0.140 (1.13)	-0.099 (-0.76)	-0.085 (-0.70)

Table C3 (continued)

Explanatory variables	<i>Measures related only or primarily to vehicle use</i>				<i>Measures related only to public transport</i>			<i>Measures related to vehicle use and public transport</i>		<i>Measures related to air travel</i>		<i>Bicycle use measure</i>	<i>Speed limit measure</i>
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
<i>Economic preferences</i>													
Risk-taking preferences	-0.103 (-0.89)	-0.108 (-0.89)	0.008 (0.06)	0.206* (1.67)	0.207* (1.72)	0.016 (0.13)	0.083 (0.66)	-0.086 (-0.72)	0.024 (0.20)	-0.245** (-2.06)	-0.103 (-0.89)	0.232* (1.91)	0.014 (0.12)
Patience	0.306*** (2.77)	0.269** (2.38)	0.179 (1.54)	0.259** (2.16)	0.152 (1.32)	0.054 (0.45)	0.202* (1.65)	0.205* (1.84)	0.170 (1.53)	0.174 (1.54)	0.065 (0.57)	0.122 (1.07)	0.077 (0.71)
Altruism	0.093 (0.80)	0.185 (1.57)	0.098 (0.82)	0.130 (0.99)	0.111 (0.93)	0.004 (0.03)	0.186 (1.52)	0.166 (1.40)	0.044 (0.37)	0.167 (1.40)	0.210* (1.79)	0.009 (0.07)	0.151 (1.30)
Trust	-0.022 (-0.94)	0.047* (1.93)	-0.008 (-0.32)	0.036 (1.43)	0.003 (0.11)	0.024 (0.99)	0.006 (0.26)	-0.058** (-2.39)	0.018 (0.78)	-0.001 (-0.04)	0.005 (0.22)	0.010 (0.41)	0.005 (0.22)
Positive reciprocity	0.022 (0.76)	0.009 (0.31)	-0.070** (-2.30)	-0.036 (-1.03)	0.009 (0.29)	0.108*** (3.41)	0.048 (1.62)	0.058* (1.95)	0.031 (1.03)	-0.012 (-0.41)	-0.082*** (-2.79)	0.077*** (2.65)	-0.038 (-1.33)
Negative reciprocity	0.008 (0.45)	0.023 (1.18)	0.027 (1.39)	0.044** (2.23)	-0.025 (-1.29)	-0.002 (-0.10)	0.027 (1.29)	0.004 (0.20)	-0.010 (-0.51)	0.024 (1.27)	0.039** (2.13)	-0.004 (-0.21)	0.008 (0.42)
<i>Socio-economic variables</i>													
Equivalentized income in 1,000 Euros	0.051 (1.22)	0.021 (0.46)	0.002 (0.06)	0.067 (1.60)	0.055 (1.21)	0.055 (1.02)	0.036 (0.72)	0.018 (0.38)	0.017 (0.41)	0.062 (1.35)	0.055 (1.32)	0.044 (0.91)	-0.061 (-1.47)
University degree	0.119 (0.94)	0.062 (0.46)	-0.140 (-1.07)	-0.024 (-0.17)	-0.225* (-1.71)	0.065 (0.47)	0.104 (0.73)	0.010 (0.07)	-0.003 (-0.03)	0.163 (1.19)	-0.042 (-0.32)	0.209 (1.54)	-0.003 (-0.03)
Age	-0.004 (-0.94)	-0.006 (-1.52)	0.000 (0.06)	-0.009** (-2.24)	0.005 (1.23)	0.005 (1.14)	0.005 (1.35)	0.010** (2.43)	-0.008** (-2.21)	0.005 (1.33)	0.006 (1.54)	-0.000 (-0.01)	0.006* (1.66)
Female	-0.197* (-1.83)	-0.253** (-2.26)	-0.128 (-1.15)	-0.144 (-1.25)	0.146 (1.32)	-0.166 (-1.46)	0.086 (0.74)	-0.252** (-2.29)	-0.220** (-2.03)	-0.380*** (-3.55)	-0.077 (-0.74)	-0.036 (-0.32)	0.011 (0.10)
Household size	0.039 (0.65)	-0.006 (-0.11)	0.122* (1.85)	-0.024 (-0.34)	0.027 (0.41)	0.055 (0.89)	-0.038 (-0.62)	-0.052 (-0.90)	-0.069 (-1.17)	-0.004 (-0.06)	-0.003 (-0.05)	-0.021 (-0.33)	0.059 (0.98)
Children	-0.188 (-1.12)	-0.133 (-0.78)	-0.032 (-0.18)	-0.136 (-0.73)	-0.226 (-1.27)	-0.163 (-0.93)	-0.050 (-0.28)	0.030 (0.17)	0.206 (1.21)	-0.206 (-1.23)	0.005 (0.03)	0.035 (0.19)	-0.036 (-0.21)
Living in urban area	-0.026 (-0.25)	0.237** (2.24)	0.006 (0.06)	0.210* (1.86)	0.043 (0.39)	0.028 (0.25)	0.124 (1.12)	-0.092 (-0.86)	0.260** (2.46)	0.069 (0.64)	0.028 (0.27)	0.059 (0.54)	0.062 (0.61)
Constant	-0.977* (-1.80)	-1.941*** (-3.37)	-0.538 (-0.96)	-1.652*** (-2.61)	-0.809 (-1.41)	-2.865*** (-5.18)	-2.437*** (-4.17)	-2.142*** (-3.83)	-1.421** (-2.49)	-2.489*** (-4.58)	-1.762*** (-3.43)	-2.255*** (-4.04)	-1.494*** (-2.94)

Notes: \* (\*\*, \*\*\*) means that the corresponding estimated parameter is different from zero at the 10% (5%, 1%) significance level, respectively. Dependent variables, i.e. climate-related transport policy measures, are defined as follows: (1) financial support of alternative fuels for vehicles, (2) financial support of expanding charging infrastructure, (3) introduction of road user charges on highways, (4) sales ban on new gasoline- and diesel-powered vehicles, (5) introduction of free public transport, (6) financial support of public transport, (7) reduction in taxes on tickets for public transport, (8) financial support of purchasing hydrogen vehicles and buses, (9) financial support of purchasing electric vehicles and buses, (10) increase in taxes on flight tickets, (11) ban on domestic flights, (12) financial support of bicycle traffic, (13) introduction of a speed limit on highways.

Table C4: SML estimates (robust z-statistics) in a multivariate binary probit model among the 744 respondents in Sweden, 200 random draws in the GHK simulator

Explanatory variables	<i>Measures related only or primarily to vehicle use</i>				<i>Measures related only to public transport</i>			<i>Measures related to vehicle use and public transport</i>		<i>Measures related to air travel</i>		<i>Bicycle use measure</i>
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
<i>Self-interest variables</i>												
Ownership of exclusively conventional fuel vehicles	0.151 (1.19)	-0.057 (-0.45)	-0.488** (-3.55)	-0.509** (-3.77)	-0.316** (-2.31)	-0.232 (-1.59)	-0.610** (-3.98)	0.025 (0.20)	0.161 (1.29)	-0.154 (-1.14)	-0.089 (-0.63)	-0.415** (-3.00)
Ownership of alternative fuel vehicles	0.770** (4.13)	0.444** (2.38)	-0.618** (-3.10)	-0.192 (-0.96)	-0.215 (-1.13)	-0.344 (-1.61)	-0.578** (-2.77)	0.611** (3.39)	0.550** (2.90)	0.159 (0.83)	0.063 (0.30)	-0.034 (-0.16)
Ownership of season ticket for public transport	0.028 (0.26)	0.058 (0.52)	0.028 (0.25)	0.357** (3.08)	0.041 (0.37)	-0.050 (-0.43)	-0.040 (-0.34)	0.006 (0.06)	0.069 (0.65)	0.089 (0.81)	0.313** (2.62)	-0.123 (-1.05)
Use of plane	0.180* (1.68)	0.095 (0.83)	0.009 (0.07)	0.033 (0.28)	0.297** (2.57)	0.312** (2.60)	0.128 (1.06)	0.174 (1.62)	0.381** (3.53)	-0.405** (-3.65)	0.009 (0.07)	-0.096 (-0.82)
Use of bicycle	0.194* (1.96)	0.030 (0.29)	0.399** (3.56)	-0.004 (-0.04)	-0.065 (-0.63)	0.248** (2.26)	0.050 (0.46)	0.085 (0.85)	0.100 (1.00)	0.379** (3.66)	0.214* (1.88)	0.727** (6.72)
<i>Environmental attitudes and political identification</i>												
Environmental awareness	0.029** (2.27)	0.064** (4.80)	0.032** (2.08)	0.031** (2.19)	0.038** (2.87)	0.057** (4.38)	0.042** (3.05)	0.053** (4.01)	0.039** (3.14)	0.057** (4.17)	0.049** (3.11)	0.043** (3.06)
Identification with ecologically oriented politics	0.036 (0.31)	-0.104 (-0.87)	0.461** (3.69)	0.558** (4.54)	0.217* (1.78)	0.399** (3.01)	0.351** (2.65)	-0.047 (-0.40)	-0.018 (-0.15)	0.647** (5.45)	0.376** (2.97)	0.410** (3.18)
Identification with socially oriented politics	0.268** (2.50)	0.316** (2.85)	0.287** (2.42)	0.342** (2.94)	0.264** (2.35)	0.361** (2.95)	0.108 (0.89)	0.298** (2.71)	0.364** (3.31)	0.164 (1.47)	0.113 (0.93)	0.044 (0.38)
Identification with liberally oriented politics	0.128 (1.12)	0.264** (2.20)	0.050 (0.42)	0.071 (0.58)	-0.292** (-2.48)	-0.137 (-1.04)	-0.111 (-0.90)	0.105 (0.93)	0.048 (0.41)	0.098 (0.82)	0.002 (0.02)	0.071 (0.59)
Identification with conservatively oriented politics	0.077 (0.63)	0.018 (0.14)	0.085 (0.63)	-0.208 (-1.56)	-0.055 (-0.45)	0.076 (0.59)	-0.044 (-0.33)	-0.163 (-1.38)	0.024 (0.20)	-0.302** (-2.41)	-0.227 (-1.59)	-0.160 (-1.30)

Table C4 (continued)

Explanatory variables	<i>Measures related only or primarily to vehicle use</i>				<i>Measures related only to public transport</i>			<i>Measures related to vehicle use and public transport</i>		<i>Measures related to air travel</i>		<i>Bicycle use measure</i>
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
<i>Economic preferences</i>												
Risk-taking preferences	0.004 (0.04)	0.015 (0.14)	0.196* (1.81)	0.008 (0.07)	0.113 (1.10)	-0.298*** (-2.71)	-0.123 (-1.11)	-0.071 (-0.71)	0.035 (0.35)	-0.287*** (-2.78)	-0.064 (-0.55)	0.054 (0.50)
Patience	0.173 (1.64)	0.307*** (2.86)	0.232* (1.92)	0.314** (2.57)	-0.027 (-0.25)	0.420*** (3.67)	0.100 (0.86)	0.328*** (3.15)	0.337*** (3.19)	0.299*** (2.71)	0.250** (2.06)	0.091 (0.81)
Altruism	0.147 (1.26)	0.076 (0.62)	0.205 (1.43)	0.122 (0.91)	0.234* (1.96)	0.185 (1.44)	0.235* (1.86)	0.037 (0.30)	0.135 (1.14)	0.123 (0.98)	-0.071 (-0.53)	0.220* (1.78)
Trust	0.004 (0.22)	0.057*** (2.74)	0.008 (0.37)	0.025 (1.13)	-0.022 (-1.07)	0.076*** (3.48)	-0.026 (-1.16)	0.019 (0.97)	0.052*** (2.60)	0.047** (2.21)	0.005 (0.23)	0.005 (0.24)
Positive reciprocity	0.036 (1.17)	0.043 (1.44)	-0.032 (-0.98)	0.004 (0.11)	0.011 (0.37)	0.072** (2.20)	0.023 (0.72)	0.021 (0.70)	0.012 (0.41)	0.007 (0.22)	0.035 (0.98)	0.039 (1.12)
Negative reciprocity	-0.002 (-0.11)	-0.036** (-1.99)	0.013 (0.66)	0.005 (0.26)	-0.016 (-0.89)	-0.016 (-0.83)	-0.036** (-1.97)	0.001 (0.04)	-0.020 (-1.13)	0.033* (1.76)	0.037* (1.96)	-0.028 (-1.50)
<i>Socio-economic variables</i>												
Equivalentized income in 1,000 Euros	-0.113*** (-2.72)	-0.024 (-0.58)	-0.018 (-0.41)	0.007 (0.18)	-0.057 (-1.46)	-0.084* (-1.94)	-0.070* (-1.76)	-0.070* (-1.69)	-0.093** (-2.25)	0.012 (0.32)	-0.039 (-0.75)	0.011 (0.25)
University degree	0.040 (0.36)	0.116 (1.01)	0.008 (0.06)	0.200* (1.66)	-0.034 (-0.31)	0.135 (1.06)	0.037 (0.31)	0.083 (0.76)	0.074 (0.66)	0.020 (0.18)	-0.120 (-0.95)	-0.141 (-1.19)
Age	-0.000 (-0.05)	-0.001 (-0.39)	0.004 (1.07)	-0.012*** (-3.24)	-0.000 (-0.01)	0.001 (0.28)	-0.003 (-0.84)	-0.000 (-0.03)	-0.005 (-1.53)	0.002 (0.68)	-0.008** (-2.15)	0.001 (0.19)
Female	-0.009 (-0.09)	-0.323*** (-3.01)	0.015 (0.13)	-0.416*** (-3.65)	0.305*** (2.91)	-0.091 (-0.80)	0.265** (2.34)	0.083 (0.80)	0.002 (0.02)	-0.220** (-2.07)	-0.143 (-1.20)	0.136 (1.25)
Household size	-0.072 (-1.28)	-0.096* (-1.83)	0.081 (1.35)	-0.150** (-2.33)	0.003 (0.06)	-0.005 (-0.11)	-0.041 (-0.79)	-0.037 (-0.83)	-0.103* (-1.93)	0.010 (0.19)	-0.007 (-0.11)	0.098 (1.47)
Children	0.298* (1.76)	0.123 (0.72)	0.134 (0.72)	0.479** (2.48)	0.079 (0.45)	-0.076 (-0.44)	-0.093 (-0.53)	0.192 (1.25)	0.333** (1.99)	0.031 (0.18)	0.160 (0.88)	0.310 (1.62)
Living in urban area	-0.037 (-0.35)	-0.153 (-1.36)	0.130 (1.14)	-0.020 (-0.17)	-0.105 (-0.98)	0.036 (0.31)	0.029 (0.25)	-0.094 (-0.90)	-0.121 (-1.15)	-0.105 (-0.99)	-0.174 (-1.43)	-0.177 (-1.57)
Constant	-1.697*** (-3.13)	-1.942*** (-3.53)	-2.282*** (-3.80)	-1.149* (-1.84)	-0.464 (-0.85)	-2.543*** (-4.34)	0.343 (0.59)	-2.067*** (-3.83)	-1.583*** (-2.94)	-2.644*** (-4.33)	-2.540*** (-3.79)	-1.528** (-2.43)

Notes: \* (\*\*, \*\*\*) means that the corresponding estimated parameter is different from zero at the 10% (5%, 1%) significance level, respectively. Dependent variables, i.e. climate-related transport policy measures, are defined as follows: (1) financial support of alternative fuels for vehicles, (2) financial support of expanding charging infrastructure, (3) introduction of road user charges on highways, (4) sales ban on new gasoline- and diesel-powered vehicles, (5) introduction of free public transport, (6) financial support of public transport, (7) reduction in taxes on tickets for public transport, (8) financial support of purchasing hydrogen vehicles and buses, (9) financial support of purchasing electric vehicles and buses, (10) increase in taxes on flight tickets, (11) ban on domestic flights, (12) financial support of bicycle traffic.

Table C5: SML estimates (robust z-statistics) in a multivariate five-alternative ordered probit model among the 708 respondents in Germany, 200 random draws in the GHK simulator

Explanatory variables	<i>Measures related only or primarily to vehicle use</i>				<i>Measures related only to public transport</i>			<i>Measures related to vehicle use and public transport</i>		<i>Measures related to air travel</i>		<i>Bicycle use measure</i>	<i>Speed limit measure</i>
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
<i>Self-interest variables</i>													
Ownership of exclusively conventional fuel vehicles	0.144 (1.28)	-0.019 (-0.18)	-0.502*** (-4.72)	-0.660*** (-5.85)	-0.331*** (-2.65)	-0.233* (-1.91)	-0.309** (-2.54)	0.191* (1.71)	-0.114 (-1.05)	-0.070 (-0.60)	-0.123 (-1.09)	-0.285** (-2.49)	-0.187* (-1.67)
Ownership of alternative fuel vehicles	0.431** (2.02)	0.611*** (3.00)	-0.298 (-1.26)	-0.155 (-0.67)	-0.374 (-1.50)	-0.246 (-1.09)	-0.498** (-2.57)	0.343* (1.68)	0.317 (1.50)	0.051 (0.22)	0.118 (0.50)	-0.031 (-0.14)	-0.047 (-0.20)
Ownership of season ticket for public transport	-0.064 (-0.67)	-0.015 (-0.16)	0.092 (0.92)	0.203** (2.03)	0.083 (0.82)	0.159 (1.58)	0.220** (2.11)	0.091 (0.93)	-0.092 (-0.95)	-0.053 (-0.54)	0.127 (1.32)	0.033 (0.34)	0.083 (0.87)
Use of plane	0.034 (0.38)	0.088 (0.92)	-0.168* (-1.85)	-0.184* (-1.86)	-0.076 (-0.80)	0.122 (1.29)	0.156 (1.60)	0.092 (0.99)	0.113 (1.18)	-0.640*** (-6.95)	-0.360*** (-3.93)	-0.089 (-0.94)	-0.088 (-0.97)
Use of bicycle	-0.062 (-0.70)	-0.072 (-0.81)	0.181** (2.01)	0.174* (1.96)	0.099 (1.09)	-0.029 (-0.33)	0.082 (0.89)	0.015 (0.17)	-0.010 (-0.12)	0.221** (2.47)	0.091 (1.02)	0.485*** (5.60)	0.155* (1.75)
<i>Environmental attitudes and political identification</i>													
Environmental awareness	0.033*** (2.69)	0.055*** (4.58)	0.007 (0.60)	0.033*** (2.61)	0.035*** (2.80)	0.069*** (5.73)	0.070*** (5.54)	0.048*** (3.95)	0.055*** (4.62)	0.070*** (5.51)	0.050*** (4.05)	0.064*** (5.36)	0.032*** (2.73)
Identification with ecologically oriented politics	0.105 (1.05)	0.407*** (4.09)	0.444*** (4.45)	0.746*** (7.60)	0.181* (1.71)	0.228** (2.29)	0.138 (1.35)	0.269*** (2.66)	0.447*** (4.62)	0.534*** (5.12)	0.516*** (5.25)	0.292*** (2.94)	0.532*** (5.24)
Identification with socially oriented politics	0.280*** (2.82)	0.359*** (3.62)	0.025 (0.26)	0.027 (0.26)	0.251** (2.39)	0.254** (2.53)	0.219** (2.17)	0.234** (2.35)	0.289*** (2.98)	0.009 (0.09)	0.051 (0.51)	0.282*** (2.87)	0.209** (2.13)
Identification with liberally oriented politics	0.193** (2.10)	0.053 (0.56)	0.046 (0.49)	-0.057 (-0.61)	-0.037 (-0.38)	0.120 (1.32)	0.072 (0.73)	0.255*** (2.72)	0.098 (1.06)	-0.088 (-0.93)	-0.094 (-0.99)	0.171* (1.89)	-0.007 (-0.08)
Identification with conservatively oriented politics	-0.007 (-0.07)	-0.071 (-0.67)	0.046 (0.41)	-0.099 (-0.92)	-0.144 (-1.36)	-0.263** (-2.56)	-0.005 (-0.05)	0.093 (0.88)	-0.172 (-1.63)	0.081 (0.72)	-0.007 (-0.07)	-0.164 (-1.63)	-0.197* (-1.84)



Table C5 (continued)

Explanatory variables	<i>Measures related only or primarily to vehicle use</i>				<i>Measures related only to public transport</i>			<i>Measures related to vehicle use and public transport</i>		<i>Measures related to air travel</i>		<i>Bicycle use measure</i>	<i>Speed limit measure</i>
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
<i>Economic preferences</i>													
Risk-taking preferences	-0.077 (-0.81)	-0.045 (-0.46)	-0.031 (-0.32)	0.091 (0.92)	0.073 (0.76)	-0.020 (-0.21)	-0.042 (-0.42)	-0.063 (-0.66)	0.067 (0.68)	-0.239** (-2.53)	-0.138 (-1.48)	0.057 (0.58)	-0.033 (-0.35)
Patience	0.241** (2.56)	0.052 (0.56)	0.085 (0.89)	0.250*** (2.76)	-0.006 (-0.06)	-0.075 (-0.78)	0.036 (0.36)	0.078 (0.84)	0.045 (0.48)	0.158* (1.67)	0.094 (1.01)	-0.045 (-0.48)	0.083 (0.91)
Altruism	0.101 (1.01)	0.124 (1.27)	0.094 (0.97)	0.108 (1.08)	0.047 (0.45)	0.021 (0.22)	0.166 (1.61)	0.149 (1.52)	0.013 (0.13)	0.193* (1.93)	0.111 (1.16)	0.030 (0.30)	0.077 (0.80)
Trust	-0.032 (-1.61)	0.026 (1.24)	0.003 (0.16)	0.038* (1.82)	0.006 (0.32)	0.003 (0.15)	-0.012 (-0.61)	-0.031 (-1.50)	0.005 (0.28)	0.006 (0.29)	0.019 (0.92)	0.009 (0.45)	0.015 (0.72)
Positive reciprocity	0.051* (1.92)	0.046* (1.71)	-0.066*** (-2.61)	-0.080*** (-3.07)	0.055** (2.12)	0.108*** (4.06)	0.079*** (2.87)	0.075*** (2.90)	0.017 (0.64)	0.002 (0.09)	-0.049* (-1.91)	0.094*** (3.66)	-0.040 (-1.61)
Negative reciprocity	0.000 (0.03)	0.012 (0.71)	0.016 (0.97)	0.021 (1.26)	-0.007 (-0.41)	-0.010 (-0.58)	0.020 (1.09)	-0.005 (-0.32)	-0.004 (-0.24)	0.018 (1.03)	0.038** (2.26)	-0.007 (-0.44)	-0.004 (-0.25)
<i>Socio-economic variables</i>													
Equivalentized income in 1,000 Euros	0.076** (2.17)	0.027 (0.74)	0.022 (0.75)	0.035 (1.08)	0.006 (0.15)	0.038 (1.05)	0.026 (0.72)	0.010 (0.28)	0.035 (1.00)	0.027 (0.81)	0.025 (0.77)	0.026 (0.81)	-0.027 (-0.89)
University degree	-0.039 (-0.41)	0.110 (1.02)	-0.021 (-0.21)	-0.040 (-0.38)	-0.098 (-0.93)	0.103 (1.06)	0.078 (0.75)	-0.065 (-0.64)	0.000 (0.00)	0.278*** (2.63)	0.075 (0.70)	0.082 (0.82)	0.091 (0.86)
Age	-0.003 (-1.04)	-0.003 (-1.01)	0.000 (0.13)	-0.005 (-1.61)	0.004 (1.15)	0.004 (1.33)	0.003 (1.02)	0.007** (2.19)	-0.005* (-1.75)	0.006* (1.73)	0.006* (1.96)	-0.002 (-0.50)	0.002 (0.67)
Female	-0.178** (-2.00)	-0.142 (-1.58)	-0.089 (-1.01)	-0.047 (-0.53)	0.154* (1.72)	-0.172* (-1.92)	0.038 (0.42)	-0.211** (-2.40)	-0.036 (-0.41)	-0.225** (-2.54)	-0.011 (-0.13)	-0.030 (-0.34)	0.057 (0.62)
Household size	0.025 (0.47)	-0.023 (-0.45)	0.060 (1.13)	-0.020 (-0.40)	-0.027 (-0.49)	0.024 (0.44)	-0.024 (-0.46)	-0.023 (-0.48)	-0.084* (-1.72)	0.011 (0.22)	-0.023 (-0.48)	-0.007 (-0.14)	0.047 (0.93)
Children	-0.133 (-0.96)	0.066 (0.48)	0.084 (0.58)	0.041 (0.29)	-0.038 (-0.26)	-0.117 (-0.82)	-0.096 (-0.70)	-0.013 (-0.09)	0.330** (2.47)	-0.087 (-0.64)	0.105 (0.83)	0.114 (0.80)	-0.044 (-0.30)
Living in urban area	0.071 (0.82)	0.100 (1.17)	-0.002 (-0.03)	0.168** (1.98)	0.088 (0.97)	0.013 (0.15)	0.142 (1.61)	-0.023 (-0.26)	0.188** (2.23)	0.040 (0.45)	0.012 (0.14)	-0.062 (-0.70)	0.103 (1.17)

Notes: \* (\*\*, \*\*\*) means that the corresponding estimated parameter is different from zero at the 10% (5%, 1%) significance level, respectively. Dependent variables, i.e. climate-related transport policy measures, are defined as follows: (1) financial support of alternative fuels for vehicles, (2) financial support of expanding charging infrastructure, (3) introduction of road user charges on highways, (4) sales ban on new gasoline- and diesel-powered vehicles, (5) introduction of free public transport, (6) financial support of public transport, (7) reduction in taxes on tickets for public transport, (8) financial support of purchasing hydrogen vehicles and buses, (9) financial support of purchasing electric vehicles and buses, (10) increase in taxes on flight tickets, (11) ban on domestic flights, (12) financial support of bicycle traffic, (13) introduction of a speed limit on highways.

Table C6: SML estimates (robust z-statistics) in a multivariate five-alternative ordered probit model among the 744 respondents in Sweden, 200 random draws in the GHK simulator

Explanatory variables	<i>Measures related only or primarily to vehicle use</i>				<i>Measures related only to public transport</i>			<i>Measures related to vehicle use and public transport</i>		<i>Measures related to air travel</i>		<i>Bicycle use measure</i>
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
<i>Self-interest variables</i>												
Ownership of exclusively conventional fuel vehicles	0.189* (1.88)	-0.127 (-1.21)	-0.577*** (-5.24)	-0.628*** (-5.83)	-0.213* (-1.90)	-0.361*** (-3.27)	-0.531*** (-4.52)	0.054 (0.54)	0.028 (0.28)	-0.098 (-0.87)	-0.126 (-1.19)	-0.479*** (-4.16)
Ownership of alternative fuel vehicles	0.671*** (4.38)	0.298** (1.98)	-0.517*** (-3.72)	-0.243 (-1.56)	-0.296* (-1.95)	-0.466*** (-2.86)	-0.605*** (-3.85)	0.511*** (3.37)	0.353** (2.25)	0.099 (0.63)	0.099 (0.62)	-0.302* (-1.92)
Ownership of season ticket for public transport	0.064 (0.75)	-0.051 (-0.59)	0.127 (1.49)	0.333*** (3.74)	0.014 (0.15)	0.020 (0.21)	0.013 (0.14)	-0.032 (-0.38)	0.032 (0.38)	0.130 (1.51)	0.348*** (3.94)	-0.039 (-0.43)
Use of plane	0.140 (1.54)	0.053 (0.55)	-0.049 (-0.54)	0.068 (0.74)	0.232** (2.34)	0.184* (1.90)	0.146 (1.50)	0.114 (1.24)	0.215** (2.30)	-0.437*** (-4.91)	-0.208** (-2.26)	-0.114 (-1.24)
Use of bicycle	0.037 (0.44)	-0.087 (-1.04)	0.278*** (3.31)	0.134 (1.57)	-0.096 (-1.12)	0.156* (1.80)	-0.085 (-0.97)	-0.005 (-0.06)	0.037 (0.45)	0.344*** (4.10)	0.279*** (3.26)	0.540*** (6.16)
<i>Environmental attitudes and political identification</i>												
Environmental awareness	0.036*** (3.18)	0.062*** (5.22)	0.020* (1.66)	0.030** (2.42)	0.034*** (2.76)	0.065*** (5.37)	0.045*** (3.59)	0.049*** (4.22)	0.044*** (3.87)	0.057*** (4.86)	0.035*** (3.03)	0.048*** (3.92)
Identification with ecologically oriented politics	0.158 (1.64)	0.061 (0.63)	0.331*** (3.28)	0.433*** (4.25)	0.180* (1.84)	0.270*** (2.84)	0.141 (1.46)	0.120 (1.26)	0.029 (0.30)	0.520*** (5.39)	0.322*** (3.11)	0.433*** (4.17)
Identification with socially oriented politics	0.162* (1.79)	0.120 (1.27)	0.090 (0.96)	0.123 (1.32)	0.211** (2.16)	0.302*** (3.15)	0.178* (1.79)	0.156* (1.68)	0.173* (1.88)	0.103 (1.10)	-0.042 (-0.44)	0.066 (0.70)
Identification with liberally oriented politics	0.059 (0.60)	0.177* (1.79)	0.016 (0.17)	0.004 (0.04)	-0.218** (-2.19)	-0.050 (-0.48)	-0.051 (-0.51)	0.047 (0.48)	0.124 (1.28)	0.082 (0.83)	-0.060 (-0.61)	0.028 (0.28)
Identification with conservatively oriented politics	-0.054 (-0.51)	-0.030 (-0.28)	-0.113 (-1.09)	-0.316*** (-2.91)	-0.233** (-2.28)	-0.039 (-0.37)	-0.097 (-0.92)	-0.194* (-1.85)	-0.129 (-1.23)	-0.289*** (-2.78)	-0.411*** (-3.77)	-0.204** (-2.04)

Table C6 (continued)

Explanatory variables	<i>Measures related only or primarily to vehicle use</i>				<i>Measures related only to public transport</i>			<i>Measures related to vehicle use and public transport</i>		<i>Measures related to air travel</i>		<i>Bicycle use measure</i>
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
<i>Economic preferences</i>												
Risk-taking preferences	-0.099 (-1.19)	-0.039 (-0.46)	0.061 (0.73)	-0.072 (-0.83)	0.057 (0.67)	-0.252*** (-2.94)	-0.095 (-1.08)	-0.056 (-0.67)	0.055 (0.67)	-0.289*** (-3.48)	-0.170* (-1.96)	-0.028 (-0.32)
Patience	0.084 (0.98)	0.267*** (3.02)	0.114 (1.30)	0.204** (2.28)	0.037 (0.41)	0.297*** (3.28)	0.046 (0.50)	0.161* (1.84)	0.176** (2.07)	0.159* (1.83)	0.167* (1.91)	0.127 (1.39)
Altruism	0.138 (1.38)	0.021 (0.22)	0.022 (0.21)	0.068 (0.69)	0.206** (2.08)	0.167 (1.64)	0.187* (1.87)	0.007 (0.07)	0.069 (0.73)	0.058 (0.59)	-0.061 (-0.62)	0.092 (0.88)
Trust	0.026 (1.48)	0.061*** (3.36)	0.050*** (2.68)	0.022 (1.28)	-0.014 (-0.74)	0.072*** (3.95)	-0.010 (-0.53)	0.039** (2.25)	0.052*** (2.98)	0.039** (2.11)	-0.003 (-0.15)	0.026 (1.45)
Positive reciprocity	0.009 (0.37)	0.015 (0.64)	-0.054** (-2.24)	-0.028 (-1.11)	-0.014 (-0.57)	0.063** (2.44)	0.030 (1.15)	0.014 (0.62)	-0.013 (-0.58)	-0.022 (-0.87)	-0.013 (-0.53)	0.009 (0.31)
Negative reciprocity	-0.006 (-0.40)	-0.037** (-2.37)	0.020 (1.23)	-0.008 (-0.47)	-0.010 (-0.63)	-0.014 (-0.88)	-0.031** (-1.99)	-0.002 (-0.13)	-0.036** (-2.24)	0.012 (0.73)	0.014 (0.91)	-0.027* (-1.71)
<i>Socio-economic variables</i>												
Equivalentized income in 1,000 Euros	-0.131*** (-3.85)	-0.025 (-0.73)	-0.020 (-0.65)	-0.010 (-0.31)	-0.084*** (-2.65)	-0.073** (-2.03)	-0.074** (-2.26)	-0.090*** (-2.65)	-0.080** (-2.23)	-0.000 (-0.01)	-0.049 (-1.38)	-0.017 (-0.45)
University degree	0.142 (1.58)	0.229** (2.45)	0.031 (0.33)	0.098 (1.02)	0.024 (0.25)	0.181* (1.88)	0.107 (1.14)	0.095 (1.06)	0.125 (1.33)	0.016 (0.18)	-0.059 (-0.63)	-0.094 (-0.99)
Age	-0.006** (-2.39)	-0.003 (-1.14)	0.001 (0.29)	-0.008*** (-3.20)	-0.001 (-0.47)	-0.003 (-1.08)	-0.005 (-1.59)	-0.006** (-2.33)	-0.008*** (-3.31)	-0.000 (-0.03)	-0.009*** (-3.14)	-0.001 (-0.53)
Female	-0.024 (-0.29)	-0.235*** (-2.72)	0.199** (2.33)	-0.218** (-2.55)	0.142* (1.65)	-0.085 (-0.99)	0.281*** (3.08)	0.063 (0.77)	-0.053 (-0.62)	-0.107 (-1.26)	-0.070 (-0.81)	0.007 (0.07)
Household size	-0.079* (-1.85)	-0.051 (-1.30)	0.036 (0.92)	-0.068 (-1.35)	0.000 (0.00)	-0.014 (-0.34)	-0.011 (-0.26)	-0.052 (-1.48)	-0.037 (-0.96)	-0.007 (-0.15)	-0.010 (-0.24)	0.074* (1.76)
Children	0.134 (0.95)	0.091 (0.70)	0.202 (1.53)	0.265* (1.76)	0.110 (0.81)	-0.099 (-0.76)	-0.046 (-0.31)	0.108 (0.86)	0.081 (0.63)	0.074 (0.54)	0.186 (1.34)	0.200 (1.48)
Living in urban area	-0.187** (-2.18)	-0.163* (-1.81)	-0.082 (-0.96)	0.008 (0.09)	-0.046 (-0.53)	0.022 (0.24)	0.098 (1.04)	-0.061 (-0.70)	-0.105 (-1.21)	-0.091 (-1.08)	-0.203** (-2.32)	-0.097 (-1.08)

Notes: \* (\*\*, \*\*\*) means that the corresponding estimated parameter is different from zero at the 10% (5%, 1%) significance level, respectively. Dependent variables, i.e. climate-related transport policy measures, are defined as follows: (1) financial support of alternative fuels for vehicles, (2) financial support of expanding charging infrastructure, (3) introduction of road user charges on highways, (4) sales ban on new gasoline- and diesel-powered vehicles, (5) introduction of free public transport, (6) financial support of public transport, (7) reduction in taxes on tickets for public transport, (8) financial support of purchasing hydrogen vehicles and buses, (9) financial support of purchasing electric vehicles and buses, (10) increase in taxes on flight tickets, (11) ban on domestic flights, (12) financial support of bicycle traffic.

Table C7: ML estimates (family-wise adjusted p-values) in univariate three-alternative ordered probit models among the 708 respondents in Germany, 10,000 bootstraps

Explanatory variables	<i>Measures related only or primarily to vehicle use</i>				<i>Measures related only to public transport</i>			<i>Measures related to vehicle use and public transport</i>		<i>Measures related to air travel</i>		<i>Bicycle use measure</i>	<i>Speed limit measure</i>
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
<i>Self-interest variables</i>													
Ownership of exclusively conventional fuel vehicles	-0.018 (1.000)	-0.082 (1.000)	-0.461** (0.014)	-0.695*** (0.000)	-0.204 (0.999)	-0.313 (0.848)	-0.289 (0.931)	0.126 (1.000)	-0.081 (1.000)	0.031 (1.000)	0.026 (1.000)	-0.436 (0.183)	-0.174 (0.999)
Ownership of alternative fuel vehicles	0.265 (1.000)	0.572 (0.945)	-0.311 (0.999)	-0.283 (0.999)	-0.434 (0.984)	-0.458 (0.984)	-0.562 (0.795)	0.297 (0.999)	0.434 (0.990)	0.039 (1.000)	0.124 (1.000)	-0.324 (0.999)	-0.242 (1.000)
Ownership of season ticket for public transport	-0.064 (1.000)	-0.059 (1.000)	0.089 (1.000)	0.189 (0.984)	0.158 (0.999)	0.107 (1.000)	0.151 (0.999)	0.164 (0.999)	-0.103 (1.000)	-0.033 (1.000)	0.222 (0.895)	0.087 (1.000)	0.117 (1.000)
Use of plane	0.098 (1.000)	0.155 (0.999)	-0.165 (0.992)	-0.166 (0.995)	-0.140 (0.999)	0.136 (0.999)	0.223 (0.962)	0.085 (1.000)	0.095 (1.000)	-0.639*** (0.000)	-0.328 (0.111)	-0.094 (1.000)	-0.060 (1.000)
Use of bicycle	-0.005 (1.000)	-0.051 (1.000)	0.124 (0.999)	0.189 (0.947)	0.107 (1.000)	-0.035 (1.000)	0.107 (1.000)	0.083 (1.000)	-0.031 (1.000)	0.228 (0.749)	0.068 (1.000)	0.498*** (0.001)	0.125 (0.999)

Notes: \* (\*\*, \*\*\*) means that the corresponding estimated parameter is different from zero at the 10% (5%, 1%) significance level, respectively. Dependent variables, i.e. climate-related transport policy measures, are defined as follows: (1) financial support of alternative fuels for vehicles, (2) financial support of expanding charging infrastructure, (3) introduction of road user charges on highways, (4) sales ban on new gasoline- and diesel-powered vehicles, (5) introduction of free public transport, (6) financial support of public transport, (7) reduction in taxes on tickets for public transport, (8) financial support of purchasing hydrogen vehicles and buses, (9) financial support of purchasing electric vehicles and buses, (10) increase in taxes on flight tickets, (11) ban on domestic flights, (12) financial support of bicycle traffic, (13) introduction of a speed limit on highways.

Table C8: ML estimates (family-wise adjusted p-values) in univariate three-alternative ordered probit models among the 744 respondents in Sweden, 10,000 bootstraps

Explanatory variables	<i>Measures related only or primarily to vehicle use</i>				<i>Measures related only to public transport</i>			<i>Measures related to vehicle use and public transport</i>		<i>Measures related to air travel</i>		<i>Bicycle use measure</i>
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
<i>Self-interest variables</i>												
Ownership of exclusively conventional fuel vehicles	0.174 (0.986)	-0.084 (1.000)	-0.520*** (0.001)	-0.588*** (0.000)	-0.189 (0.993)	-0.239 (0.975)	-0.552* (0.051)	0.089 (1.000)	0.131 (1.000)	-0.002 (1.000)	-0.065 (1.000)	-0.417 (0.124)
Ownership of alternative fuel vehicles	0.728*** (0.002)	0.480 (0.529)	-0.586** (0.044)	-0.313 (0.938)	-0.153 (1.000)	-0.361 (0.942)	-0.570 (0.335)	0.634** (0.024)	0.495 (0.238)	0.143 (1.000)	0.148 (1.000)	-0.104 (1.000)
Ownership of season ticket for public transport	0.074 (1.000)	0.010 (1.000)	0.127 (0.998)	0.317* (0.090)	0.058 (1.000)	0.017 (1.000)	0.020 (1.000)	0.036 (1.000)	0.063 (1.000)	0.129 (0.998)	0.395*** (0.007)	-0.086 (1.000)
Use of plane	0.151 (0.986)	-0.008 (1.000)	-0.102 (1.000)	0.006 (1.000)	0.255 (0.563)	0.233 (0.895)	0.080 (1.000)	0.087 (1.000)	0.224 (0.688)	-0.450*** (0.001)	-0.157 (0.990)	-0.155 (0.996)
Use of bicycle	0.152 (0.964)	0.050 (1.000)	0.295* (0.090)	0.072 (1.000)	-0.058 (1.000)	0.325 (0.138)	0.089 (1.000)	0.062 (1.000)	0.114 (0.998)	0.351** (0.014)	0.201 (0.770)	0.690*** (0.000)

Notes: \* (\*\*, \*\*\*) means that the corresponding estimated parameter is different from zero at the 10% (5%, 1%) significance level, respectively. Dependent variables, i.e. climate-related transport policy measures, are defined as follows: (1) financial support of alternative fuels for vehicles, (2) financial support of expanding charging infrastructure, (3) introduction of road user charges on highways, (4) sales ban on new gasoline- and diesel-powered vehicles, (5) introduction of free public transport, (6) financial support of public transport, (7) reduction in taxes on tickets for public transport, (8) financial support of purchasing hydrogen vehicles and buses, (9) financial support of purchasing electric vehicles and buses, (10) increase in taxes on flight tickets, (11) ban on domestic flights, (12) financial support of bicycle traffic.



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