Willingness to accept a wind power plant: a survey study in the South of Italy

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ABSTRACT

Public opposition to wind power plants has led to the abandonment of numerous proposed projects. Focusing on a recently proposed project, we test some of the most relevant determinants of community acceptance found in the literature, as well as propose new ones. In 2022, shortly after the public announcement of a new off-shore wind farm installation in a tourist region of Southern Italy, we conducted an in-the-field survey. The survey targeted nearly 1,000 individuals at the region's most prominent mass-gathering festival, which attracts both residents and tourists. Our questionnaire is unique in its inclusion of three temporal questions (past, present, future), allowing us to assess how interviewees perceive the seriousness of climate change and how this perception evolves over time. Our findings contradict the NIMBY hypothesis and support the importance of place attachment among both residents and tourists. Additionally, we identify a positive impact of environmental attitudes. Most notably, we highlight the role of climate change perception in the medium term: individuals who express greater concern about climate change in the future compared to the past and present are more likely to accept the project. These findings are validated by another survey that we conducted under similar conditions in 2023.

1. Introduction

Governments and electricity supply companies are currently working to better integrate renewable energy sources into grids and microgrids, which will decrease carbon emissions and improve social welfare (Gerbaulet, von Hirschhausen, Kemfert, Lorenz and Oei, 2019; Pye, Li, Keppo and O'Gallachoir, 2019). Electricity networks are currently undergoing a shift towards decentralized power grids where – in order to contribute to this goal –, the penetration of distributed energy resources will be increased (Malik and Lehtonen, 2016; Kakran and Chanana, 2018). More precisely, in Italy wind energy underwent a fast development, providing 18% of the overall electricity production at the end of 2021 (GSE, 2021).

This study is about the community acceptance of renewable farms. Community acceptance is a dimension of social acceptance which refers to the acceptance of specific projects at the local level, including potentially affected populations, key local stakeholders, and the local authorities.[1] Our study aims to explain community acceptance of installing an off-shore wind power plant through the evolution of temporal perception of the climate change problem. In the case of the feasibility of a wind farm project in a specific area, acceptance at a local level is a key determinant for its implementation (see Strazzera, Mura and Contu, 2012; Caporale and De Lucia, 2015).

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[1]The "local" attribute distinguishes community acceptance from socio-political acceptance, which refers to the acceptance of the same projects at the most general (e.g., national) level (see, e.g., Wüstenhagen, Wolsink and Bürer, 2007; IEA, 2009; Devine-Wright, Batel, Aas, Sovacool, Labelle and Ruud, 2017; Devine-Wright and Wiersma, 2020). Social acceptance is a multi-dimensional concept that also embeds market acceptance, which refers to the process by which market parties adopt and support energy innovation. Our research does not include the latter dimension.

In this arena, the NIMBY ("not in my backyard") phenomenon unfolds: people have positive attitudes toward a project implementation until they are actually confronted with it, at which point they oppose it for selfish reasons (O'hare, 1977; Wüstenhagen et al., 2007), although the concept has been proven to be invalid and its use discouraged (Devine-Wright, 2005; Wolsink, 2006; Petrova, 2013; Rand and Hoen, 2017). In particular, when the area of implementation is a tourist region, one may expect a different reaction from the residents vs. the tourist population. In fact, although the transformation of the physical environment caused by wind turbines is objectively undeniable, their perceived impact on the physical environment depends on how the costs and benefits are assessed. This especially applies to tourists, since – not living in the area – they mainly experience their visual impact: off-shore wind turbines can even be considered attractive when perceived as a novel sight by tourists (see Westerberg, Jacobsen and Lifran, 2013), while other effects (e.g., impact on business interests and tourism, accommodation price, aquatic marine life) matter more for residents. The logical consequence of these findings is that the reference sample of a study of community acceptance of wind power projects should disentangle residents vs. tourists.

With the aim of measuring the community acceptance of an off-shore wind plant, we conducted an in-the-field survey during the 2022 edition of "La Notte della Taranta" festival in the Province of Lecce, the southernmost area of the Apulia region, South of Italy. The new plant will be located between the Ionian and the Adriatic coasts of the Province of Lecce. Project proposers claim that they have chosen this location because of deep waters and ease of connection to the National Transmission Grid (RTN), which should minimize or even eliminate environmental interference (OdraEnergia, 2021).

As for community acceptance, it is worth focusing on Apulia region since it is an area with a huge presence of wind turbines inland near very small villages, due to its favourable climatic conditions for wind power. In fact, it has 10.4% of total installed power in Italy with 1,209 wind turbines (GSE, 2021). Therefore, Apulia residents are used to dealing with the issue and they have already assessed the benefits and costs of previously installed on-shore wind plants. In particular, the subset of Apulia residents on which our study focuses, i.e., those living closer to the siting of the new plant (residents of the Province of Lecce), are particularly used to wind plants due to three recent installations at the moment of the survey.

Focusing the field study on the "La Notte della Taranta" festival is worthwhile for four reasons. First, the cultural event is held in the same area (Province of Lecce) where the off-shore wind plant will be installed. Second, the cultural event is a mass-gathering one, thereby guaranteeing a high population size. In fact, it is a 3-week itinerant folk music festival – across 20 small villages of the Province of Lecce – based on a traditional anthropological phenomenon called "Tarantism" (Attanasi, 2007), with about 450,000 attendees estimated in the 2022 edition, 350,000 of them being Apulia residents, and 300,000 of them residents in the Province of Lecce. Third, the event guarantees good heterogeneity as for the attendees' place of residence, since the remaining 100,000 are tourists coming from every other (Southern and Northern) Italian regions (see Attanasi, Bucciol, Cicognani and Montinari, 2024). Fourth, from a methodological point of view, the itinerant structure of the festival allows for interviewing different subjects in the same environment. A similar choreography, tight space, and time distance among subsequent concerts strengthen this feature. We randomly selected interviewees from the population of participants to the last five of the twenty concerts of the festival, thereby achieving around 1,000 interviews in five days, with less than 10 km physical distance, within the same environment (in terms of both concert and hosting village), with the same group of (relatively few) interviewers. This allowed a convenience sample in terms of similar environment over the five days of the survey, a small interviewers' impact, and a low refusal rate to undertake the guided interview.

As for the content of our survey, we juxtapose items assessing the individual's willingness to accept a new wind power plant in the area of the festival with items evaluating the degree to which the individual thinks that the global climate is changing. As for the latter, we use three questions that we call "temporal questions," and we apply a non-homogeneous Markov model to obtain transition probabilities that give us information about how people perceive climate change in three different time steps: past, present, and future. Each temporal question elicits individual perception of climate change in each of these three time steps. With this, the Markov model is useful to capture the dependency among answers to the three temporal questions and, more importantly, how this dependency changes over time. Non-homogeneity allows for different probabilities from past-to-present vs. from present-to-future transition, i.e., a different dependency in the two transitions.

With this, we aim to understand whether and how individual acceptance of a new wind power plant depends on the temporal evolution of the perception of the climate change problem. This gives the possibility to understand its future direction and to propose social and economic policies aiming at improving it. We see this as a feature of consistency between the content of our survey and our sub-sample of residents, mainly belonging to a region where wind power plants have been implemented in the past and are more likely to be implemented again in the future.

To the best of our knowledge, this study is the first application of a discrete-time stochastic model in an in-situ survey aimed at describing people's temporal perception of pros and cons of an environmental action. Our contribution, therefore, is twofold. We provide a methodology capable of developing interviewees' temporal projection of the climate change problem perception, and we analyze if such temporal projection, crossed with demographic characteristics such as age, education, and residence, influence their viewpoints about a specific proposed renewable energy project.

The rest of the paper is organized as follows. Section 2 reviews the literature related to our research questions. In Section 3 we first detail our sampling strategy and the content of the survey. Then, we explain our empirical strategy, which involves two complementary methods. In Section 4 we first show the summary statistics of our sample. Then, we separately present and discuss the results under each method. Section 6 concludes with policy implications and limitations of our study.

2. Background and literature

In the literature on community acceptance of a wind power plant, particular attention has been devoted to the NIMBY phenomenon, a concept widely studied in the past decades in the context of hazardous facilities that usually receive opposition from citizens nearby (nuclear plants, prisons, etc.) (Wolsink, 2000; Rand and Hoen, 2017). Several studies (see, e.g., Devine-Wright, 2005; Wolsink, 2006, 2012; Petrova, 2013; Rand and Hoen, 2017) have rejected NIMBY hypothesis since it provides a simplified motivation to wind energy opposition and is unable to deepen into the real and complex reasons behind it.[2] In particular, research has shown that NIMBY phenomenon is only one of many factors influencing attitudes towards wind energy (Wolsink, 2000; Bell, Gray and Haggett, 2005; Jones and Eiser, 2009, 2010; Swofford and Slattery, 2010). Some authors even claim for abandoning the concept of NIMBY as a possible explanation for wind energy opposition (e.g., Devine-Wright, 2011; Petrova, 2013).[3]

In response to the shortcomings of NIMBY hypothesis, Ellis, Barry and Robinson (2007) suggests a more in-depth exploration of the differences between supporters and objectors of wind power plant projects. Moving beyond the simplistic NIMBY hypothesis, Devine-Wright (2005) proposes a multi-dimensional framework for wind energy acceptance, which includes physical, contextual, political, socio-economic, environmental, local, and personal dimensions.[4] To illustrate the complex motivations behind the acceptance of wind energy, even when focusing solely on economic aspects, several dimensions with opposing impacts come into play. On the positive side, wind energy can lead to job creation (Firestone, Kempton and Krueger, 2009; Otto and Leibenath, 2014) and reduced electricity rates (Soares-Ramos, de Oliveira-Assis, Sarrias-Mena and Fernández-Ramírez, 2020). Conversely, there are negative impacts such as decreased tourism (Firestone et al., 2009; Landry, Allen, Cherry and Whitehead, 2012; Scherhaufer, Höltinger, Salak, Schauppenlehner and Schmidt, 2017), potentially due to visual annoyance (Oh, Nam and Kim, 2023), and, particularly for off-shore wind plants, the loss of fishing access (Smythe, Bidwell and Tyler, 2021).[5]

[2]In its simplicity, the NIMBY hypothesis has been operationalized through the proximity hypothesis, which suggests that the closer residents are to an unwanted facility, the more likely they are to oppose it (Swofford and Slattery, 2010). The literature provides empirical evidence that sometimes supports this hypothesis (Ladenburg and Möller, 2011), but more often contradicts it (see, e.g., Kempton, Firestone, Lilley, Rouleau and Whitaker, 2005; Warren, Lumsden, O'Dowd and Birnie, 2005; Jones and Eiser, 2009; Waldo, 2012; Westerberg et al., 2013; Kontogianni, Tourkolias, Skourtos and Damigos, 2014). However, Rand and Hoen (2017) note that confounding variables may affect proximity results.

[3]Devine-Wright (2011) refers to NIMBY as a "destructive, self-fulfilling way of thinking that risks undermining the fragile, qualified social consent that exists to increase renewable energy use" (p. 19). Similarly, Petrova (2013) proposes a call to convince policymakers not to use the NIMBY term and instead encourages research on how to make siting successful.

[4]In addition to the proximity (NIMBY) dimension, Rand and Hoen (2017) identifies several specific dimensions that contribute to wind energy acceptance: socioeconomic factors; perceptions of sound annoyance and health risks; visual/landscape considerations and place attachment; environmental concerns and attitudes; perceptions of the planning process, fairness, and trust.

[5]Caporale and De Lucia (2015) investigate the acceptance and trade-offs posed on the landscape of on-shore wind energy in the Apulia Region through a choice experiment approach. They find that job creation, socio-economic benefits, and aesthetic impact are the main factors influencing the community acceptance of wind farms.

Three predominant dimensions have proven to be much more potent and valid explanations for support or opposition to wind energy projects compared to the NIMBY concept. The first dimension is procedural justice, which involves the participation of local residents in wind energy planning and the conditions of that participation. Local opposition to new projects can hinder future wind energy development, and procedural justice has been theoretically proposed and empirically validated as a necessary condition to resolve local issues and ensure the timely siting of wind facilities (Ottinger, Hargrave and Hopson, 2014; Simcock, 2016; Walker and Baxter, 2017; Frate, Brannstrom, de Morais and de Azevedo Caldeira-Pires, 2019).[6] The second dimension is distributive justice, which concerns the distribution of costs and benefits of wind energy developments. The extent to which these benefits remain local can significantly influence project support or opposition (Groth and Vogt, 2014), as directing some of the benefits to the local population can help gain their support (Devine-Wright, 2005). More generally, addressing the distribution of economic revenues is crucial to prevent local protests (Rand and Hoen, 2017; Ruddat, 2022). Both procedural and distributive justice are related to fairness and trust between the local community and the project planners and developers (Wüstenhagen et al., 2007; Gross, 2007).

Our study does not address these two dimensions, which have received strong empirical support from several studies on community acceptance of wind energy. Instead, we focus on the third predominant dimension: place attachment, which refers to the emotional bonds between individuals and the locations they inhabit or visit (Devine-Wright, 2005, 2009; Bidwell, Firestone and Ferguson, 2022). The relationship individuals have with the location has been shown to play a significant role in community acceptance of wind energy (Westerberg et al., 2013; Caporale and De Lucia, 2015; Hoen, Firestone, Rand, Elliot, Hübner, Pohl, Wiser, Lantz, Haac and Kaliski, 2019). This strand of literature aligns with our definition of residents, which primarily relies on a shared identity with the area where the wind farm is sited. This literature reports that tourists also care about wind farm projects in the area, depending on their connection to it.[7] As for the specific case of off-shore wind farms, some studies report lower acceptance for tourists than for residents, regardless of their environmental attitude. In fact, Oh et al. (2023) show that tourists with a biospheric attitude (i.e., with pro-environmental preferences)[8] reduce their visits to the area when an off-shore wind farm is installed. A similar behavior is found for tourists with an anthropocentric attitude (i.e., who accept human domination over nature and support the development of nature for human needs): they are more likely to choose the beach destination without off-shore wind farms nearby.[9] This relates to both our residents vs. tourists comparison and to our environmental attitude index, that we use as control variable in our analysis. In this regard, great emphasis is placed in the literature on demographic characteristics, as we also do by interacting them with resident vs. tourist status.[10]

Finally, as for our main research question, the mitigation of climate change is often cited as a reason in favor of wind power plants (Strazzera et al., 2012), although not always (see Firestone, Kempton, Lilley and Samoteskul, 2012; Olson-Hazboun, Krannich and Robertson, 2016, among others). Some studies makes use of survey methods to directly relate climate change concerns to the acceptance of wind energy projects, as we also do. For instance, Strazzera et al. (2012) use focus groups to discuss issues in different areas, among which environmental concerns as climate change. They discover that individuals opposing wind energy development projects perceive socio-economic problems in the area as more pressing than environmental concerns related

[6]Public engagement plays a crucial role in shaping community acceptance, particularly during the planning and development phases (Devine-Wright, 2011; Groth and Vogt, 2014; Kontogianni et al., 2014). A well-structured planning process can mitigate uncertainty and bolster support (Warren et al., 2005). Failure to involve local stakeholders may result in rejection or conflict and foster perceptions of injustice (Lindvall, 2023).

[7]Ladenburg (2010) emphasizes that the acceptance of wind farms also depends on the frequency and the type of beach use, as those individuals with a stronger connection to the coast disagree more with the off-shore wind farm project. Westerberg et al. (2013) highlight that tourists' loyalty to the destination plays a role in experiencing a positive utility from the presence of an off-shore wind farm. In particular, the time spent on the beach compared to time engaged in other activities influences this (dis)utility.

[8]Ellis et al. (2007) classify individuals with a biospheric attitude as more likely to accept local wind farm developments, not only to protect the environment but also because wind farms may produce local economic benefits and create novel esthetic value.

[9]Westerberg et al. (2013) elicit tourists' willingness to pay and to accept compensation for wind turbines at different distances from the shore using a tourist population. They show that the impact of wind-farm disamenity costs on tourism revenues tends to be zero, somewhere between 8 and 12 km. Applying this result to our case study, according to the filed project, the off-shore wind farm should be siting at a distance ranging from 12.8 to 24 km far from the coast of the Province of Lecce, so at a no-NIMBY distance.

[10]Westerberg, Jacobsen and Lifran (2015) and Devine-Wright and Wiersma (2020) report that education has a positive effect on acceptance. Langer, Decker, Roosen and Menrad (2018) find that older people are less likely to accept wind energy, while Devine-Wright (2007) finds an opposite result.

to climate change. Additionally, Westerberg et al. (2015) directly elicit climate change concern[11] finding that this concern mitigates the disutility experienced when a wind farm is sited too close to the coast. Lastly, Scherhaufer et al. (2017) show that individuals who strongly oppose wind energy are those who are unaware of environmental threats such as climate change. In each of these three studies, when climate change is introduced in focus groups or surveys, vague references are made to its anticipated adverse impacts, a feature that our study aims to assess more precisely.

3. Methodology

3.1. Sampling Strategy

A paper-based questionnaire was designed and distributed in August 23-27 2022 to know how much individuals were concerned about climate change, and which is the community acceptance of a new off-shore wind power plant in Salento, the summer tourist area of the Province of Lecce, the most southeastern province of Apulia Region, South of Italy. At the time of our survey, it was known that the wind power plant should consist of 90 floating turbines located at a distance ranging from 12.8 to 24 km, between Porto Badisco and Santa Maria di Leuca coast, i.e., where the Adriatic Sea meets the Ionian Sea. The declared maximum capacity of the wind plant was about 1.3 GW with an estimated annual production of around 4 TWh (OdraEnergia, 2021). The left panel of Figure 1 shows the Apulia Region in Italy highlighted in red, within it the Province of Lecce highlighted in green, and the location of the future off-shore wind plant through a purple point. “Salento" mostly coincides with the Province of Lecce, the southernmost province of the Apulia region, with a population of around 770,000 in 2022-2023, with almost 40% of them attending the mass-gathering event under analysis, which is the most important identity feature of that province. Residents of the Province of Lecce are our target population, i.e., “residents" throughout the paper. The right panel of Figure 1 presents the Province of Lecce with the villages where the survey was carried out and their distances from the coast in front of the off-shore wind power plant. Specifically, the farthest village in the province has a distance of 76 km from the coast in front of the off-shore wind power plant. Furthermore, since the northern border separates the Province of Lecce from the rest of Apulia from sea to sea, no other Apulian village outside the Province of Lecce is less distant from the wind farm than the most distant village in the Province of Lecce.[12]

The survey was performed during the largest mass-gathering event in Italy and one of the most significant events on popular culture and traditional music in Europe hosting about 450,000 participants per year, “La Notte della Taranta" festival (see Attanasi et al., 2013). Our survey counted a total of 1,000 interviewees and was held in August 2022 during the concerts in Soleto, Sternatia, and Martano which are the villages of the last three itinerant concerts of the festival (the 23rd, 24th, and 25th, respectively), and during the rehearsal of the Final Concert (the 26th) and the Final Concert (the 27th). We consider the first four concerts together and we call this group “Minor Concerts" (MC henceforth), since the estimated number of concert attendees was between 5,000 and 50,000. The second group (half of the sample) consists of those interviewed during the Final Concert (FC henceforth). This separation builds on Attanasi et al. (2013), which provides indirect evidence that the FC environment is perceived by festival attendees as “riskier” than the one characterizing MC.[13] Given the scope of our survey – which focuses on community acceptance of the “risky” choice of wind power plant installation –, we thought that slightly different environmental conditions might influence survey responses; thus, we control for them by disentangling MC and FC.

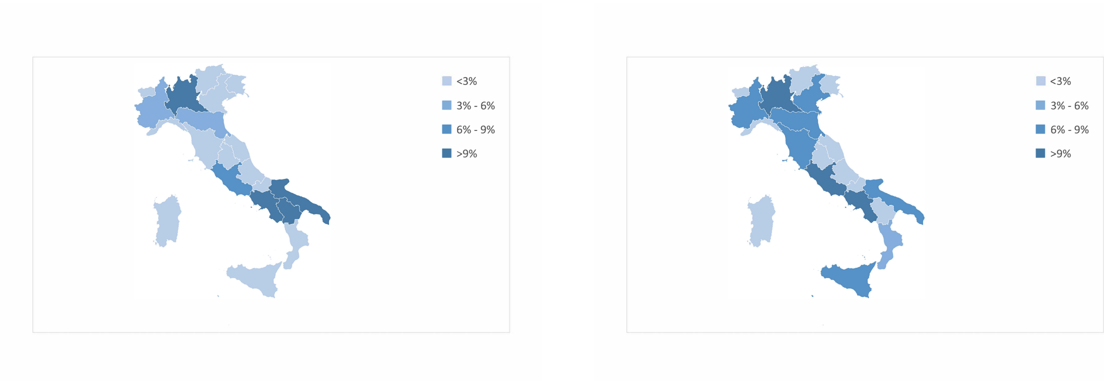
[11] They ask their interviewees: “Do you consider that climate change is a problem which should be taken seriously?"

[12] Bidwell et al. (2022) use a criterion similar to ours when classifying New Hampshire’s residents in their survey study on the support for the use of off-shore wind energy. They include in the residents’ sub-sample only those interviewees who state they traveled 10 or fewer miles to the New Hampshire coast, i.e., less than our allowed maximum distance. However, the New Hampshire seacoast being only 18-mile long, allowing a higher maximum distance would have meant increasing the likelihood of including interviewees from Maine or Massachusetts inside the New Hampshire’s residents. In this regard, although allowing a much higher maximum distance from the wind power plant, our sample of residents only includes interviewees formally residing in the same province of the wind farm, interviewed at the event which better represents this province elsewhere, hence boosting residents’ identity features (see, e.g., Attanasi, Casoria, Centorrino and Urso, 2013).

[13] Attanasi et al. (2013) show that while MC better preserves the aspects of tradition and familiarity typical of “village feasts,” this traditional connotation is weaker in FC, due to the more heterogeneous attendees’ geographic origins: one of the villages of the area is transformed into a one-night, huge dance floor with a prevalence of tourist participants. The rehearsal of FC is included in the group of minor ones since it is traditionally attended by (families of) residents who prefer a “safer” environment compared with that of the following day, historically characterized by lower average age, and a prevalent fraction of tourists coming to the area from all other Italian regions.

Figure 1: Left panel: Apulia region in red, Province of Lecce in green, and location of the off-shore wind plant project in the stretch of sea approximately between Porto Badisco (Adriatic sea) and Santa Maria di Leuca (Ionian sea) indicated by the purple point. Right panel: the Province of Lecce with the villages where the survey was carried out and their distances from the coast in front of the off-shore wind power plant.

Hence, our survey is based on a convenience sample, aimed at minimizing bias regarding the heterogeneity of time, location, and environment where the interviews take place. Given that the surveyed concerts are located close to the site of the wind farm, local residents are naturally over-represented in our survey. However, we managed to achieve a well-rounded regional representation of interviewed tourists. Figure 2 compares the geographic distribution of tourist interviewees (2a) vs. Italian population (2b) in year 2022. Excluding residents, the distribution of the place of residence of the interviewees across Italian regions mimics the geographical distribution of Italian regions' residents (see also Attanasi et al., 2013; Attanasi, Passarelli, Urso and Cosic, 2019; Attanasi et al., 2024). In the scope of our study, this is crucial for the comparison of the NIMBY phenomenon between residents and tourists: the latter category represents Italians not residing in the Province of Lecce according to their actual distribution across Italian regions, including Apulia.



(a) (b)

Figure 2: Geographical distribution of tourist interviewees vs. Italian population (ISTAT, 2023). Tourist interviewees (a), and Italian population in the year 2022 (b), by region of residence.

The survey was conducted through guided interviews, with interviewees being requested to give truthful answers in order to reduce hypothetical bias. The same eighteen interviewers per concert, both males and females, approached festival attendees in random and independent order. Interviewers were distributed uniformly over the event duration to better capture population heterogeneity, spending seven minutes per survey on average. Festival attendees had only one option to answer the survey during all the concerts of the festival (between-subject survey).

The questionnaire contains a preliminary part asking for demographics, such as age, education, gender, and place of residence. The main part of the questionnaire follows and it is made of 29 items – see Table A.1 in Appendix A. Out of questions 19-21 on the willingness to accept the off-shore wind power plant (which we first introduce in this study) and the three temporal questions 16-18 (which we adapted from Musall and Kuik, 2011), all other questionnaire items come from Musall and Kuik (2011), Eurobarometer (2019), Kantar (2021) and Kantar (2022). Henceforth, we refer to *the willingness to accept the off-shore wind power project* as WTA_P. We elicit environmental attitudes and opinions on renewable energy, in general, and on wind energy, in particular, through questions 1-14. We elicit opinions on climate change through questions 15-18.[14] In particular, questions 16-18, are, what we call "temporal questions;" they provide us with information that allows us to apply a non-homogeneous Markov model in order to check how interviewees feel about the seriousness of the climate change problem and how this perception changes over the time thanks to the obtained transition probability matrices (see sub-section 3.2).

Question 17 is extracted from the Special Eurobarometer 490 Climate Change Report (Eurobarometer, 2019): *"How serious a problem do you think climate change is at this moment? Please use a scale from 0 to 10, with '0' meaning it is "not at all a serious problem" and '10' meaning it is "an extremely serious problem."* The framing of items 16-18 as temporal questions is ours: we use question 17 for the present time and we get questions 16 and 18 through a time shift of 5 years back and 5 years forward, respectively. More precisely, referring to question 17 (present time), question 16 (past time) replaces "at this moment" with "five years ago," while question 18 (future time) replaces it with "in five years."

The last part of the questionnaire explicitly focuses on the above-mentioned new off-shore wind power plant. In questions 19, 20 and 21 we ask, respectively, if the interviewee is aware of the off-shore wind farm project, what the interviewee knows about it, and WTA_P near the coast of Salento.

3.2. Empirical strategy

In this section, we explain our empirical strategy, which is constituted by two complementary methods: (i) regression analyses and (ii) transition probability matrices.

The regression analysis comprises two parts. First, we study how interviewees' project awareness and demographic characteristics influence WTA_P. Second, we run Tobit regressions with WTA_P as the explanatory variable and each of the three temporal questions as the dependent variable to see the extent to which they are related to each other.

In the first part of the analysis, we generate a regression model for each sample (MC, FC, All data), and we examine if demographics play a role in WTA_P and if their effects are different depending on the sample (MC vs. FC). We also control for interviewees' project awareness to see whether knowing about the project influences WTA_P. Additionally, we capture the environmental attitudes of the interviewees by generating an index with values between 0 and 1 based on the answers to several questionnaire items eliciting these attitudes. Let $x_q \in (x_1, x_2, \ldots, x_n)$ be a variable that takes the value of 1 if the answer to a question indicates a pro-environmental attitude, 0 otherwise. Referring to Table A.1, the questions considered to capture pro-environmental attitudes as dummy variables are 1.1, 2.1, 2.2, 3-4, 5.1-4, 6-15, i.e., $n = 19$ items. Let $EA \in [0, 1]$ be the Environmental Attitude index such that:

$$EA = \frac{\sum_{q=1}^{n} x_q}{n}. \tag{1}$$

[14] A more detailed categorization of the questionnaire items, which relies on Musall and Kuik (2011) disentangles them between those concerning socio-political acceptance (climate change and environmental concerns: questions 1.1, 2.1–2.2, 15-18; wind energy: 3-4, 5.1-5.4) and community acceptance (opinion on local wind farms: 6-7, 9; environmental attitudes: 8, 10-14, off-shore wind farm project: 19-21).

Therefore, EA takes values from 0 to 1, where higher values represent more pro-environmental attitudes. We enrich our regression analyses by introducing EA to examine how it influences WTA_P.

Next, we use the temporal questions as dependent variables to compare the coefficients of WTA_P (explanatory variable from question 21) over time. We control for demographic characteristics (age, education, gender and resident) and environmental attitudes through the index EA in (1). This is a preliminary analysis before deepening into the transition probability analysis between the three temporal questions using a non-homogeneous Markov model, which allows us to check how interviewees' perception of the seriousness of the climate change problem changes over time, with or without conditioning on WTA_P.

The second method of analysis consists in *transition probability matrices* obtained relying on a discrete-time non-homogeneous Markov chain with the random variable J_t that indicates the state of the system at the t^{th} transition. Applied to the "temporal questions" 16-18, the random variable J_t indicates interviewees' perceptions (state) about climate change seriousness at time t, namely in the past (question 16: five years ago), in the present (question 17: now), and in the future (question 18: in five years).

J_t can have values in the three-state set $E = \{1, 2, 3\}$. The states identified with numbers 1, 2, and 3 are associated with a range of values in the answer scale from 0 to 10, this scale corresponding to one of the related questions in the survey (all questions 16, 17 and 18 having the same answer scale). We assign states to answer values as in (2):

$$\overbrace{0 \quad 1 \quad 2 \quad 3}^{\text{State 1 =}} \; ; \; \overbrace{4 \quad 5 \quad 6}^{\text{State 2 =}} \; ; \; \overbrace{7 \quad 8 \quad 9 \quad 10}^{\text{State 3 =}} . \tag{2}$$

For example, a subject giving the following answer vector (0, 10, 5) respectively to questions (16, 17, 18) is in state 1 at time 1 (past), in state 3 at time 2 (present), and in state 2 at time 3 (future).

The relationship governing this type of stochastic process is the following:

$$\mathbb{P}[J_{t+1} = j \mid J_t = i_t, J_{t-1} = i_{t-1}, ..., J_1 = i_1, J_0 = i_0] = \mathbb{P}[J_{t+1} = j \mid J_t = i_t] = p_{i_t j}(t+1). \tag{3}$$

In relation (3), $p_{i_t j}(t+1)$ is the probability of being in state j at time $t+1$, given the fact that the system was in state i_t at time t. This probability depends on the time because the process is non-homogeneous and, therefore, the transition probability matrices change over time. With this, we define with $\phi(s,t) = (\phi_{ij}(s,t))_{i,j \in E}$, $s, t \in \mathbb{N}$, a matrix function with the elements obtained by $\phi_{ij}(s,t) = \mathbb{P}[J_t = j \mid J_s = i]$. $\phi_{ij}(s,t)$ denotes the probability of having an answer included in state j at time t, given that at time s, the answer was in state i. Therefore, the transition probability function can be obtained according to the following equation:

$$\prod_{k=s+1}^{t} \mathbf{A}(k) = \phi(s,t), \quad s, t \in \mathbb{N}, \quad 0 \le s \le t, \tag{4}$$

where $\mathbf{A}(k)$ in (4) is the non-homogeneous transition probability matrix from time k to time $k+1$.

To clarify the application, we introduce the transition probability matrix (5). For instance, $p_{21}(t+1)$ denotes the probability of switching to state 1 at the time step $t+1$, given the fact that the system was in state 2 at time step t.

$$\mathbf{A} = \quad - - -\!> \begin{matrix} \\ 1 \\ 2 \\ 3 \end{matrix} \begin{matrix} \quad 1 \qquad\qquad 2 \qquad\qquad 3 \\ \begin{pmatrix} p_{11}(t+1) & p_{12}(t+1) & p_{13}(t+1) \\ p_{21}(t+1) & p_{22}(t+1) & p_{23}(t+1) \\ p_{31}(t+1) & p_{32}(t+1) & p_{33}(t+1) \end{pmatrix} \end{matrix} \tag{5}$$

We will use this Markov model on questions 16-18 both unconditionally and conditionally to WTA_P (answers to question 21), which is the object of this study. A key assumption of a Markov model is that the evolution of the process depends only on the current state and not on how it was achieved. Such an assumption allows for either independence or dependence of the answers to questions 16-18. In the former case, the probability of being in state j at time step $t+1$ would not depend on the current state occupied by the random variable, thus we would get the same probability values in each row of the transition probability matrix. In the latter case, that probability would depend on the current state. The Markov model is useful for analyzing the dependency that exists between the distributions of the same variable between two consecutive time steps. Furthermore, and more importantly for the research question of our study, it captures how this dependency changes over time.

4. Results

4.1. Summary statistics

Table 1 reports the statistics of the data collected from MC, FC, and jointly (see Table A.1, Appendix A, for a complete description of the demographics).[15] The sample of 1,000 individuals consisted of 585 interviewees at MC, and 415 at FC, with only 43 individuals refusing or not finalizing the guided interview (4.3% of the sample), with similar refusal rates between MC and FC (4.8% vs. 3.6%).[16] With this, we turned out to have 957 interviewees that we use in our analysis (557 in MC and 400 in FC).

We controlled for the sample representativeness of our 957 interviewees as for the population of festival attendees through the Marbach test (Marbach, 2000).[17] The sample probabilities being respectively 96% and 95%, the two samples proved to be representative of the population of participants to MC and FC.

As for interviewees' demographics, the modal age category is 26-30 years, with a slightly younger audience at FC ($p = 0.0000$, Mann–Whitney test). Interviewees hold, on average, a secondary certificate degree ($p = 0.0473$, Mann–Whitney test). The sample is gender balanced (49.5% of female interviewees in MC, 46% in FC; $p = 0.1573$, Chi-squared test). Most interviewees are residents of the Province of Lecce, significantly more in MC than in FC (83.1% vs. 57.3%, $p = 0.000$, Chi-squared test), due to a higher fraction of tourists in FC, thereby confirming previous studies on the tourism impact of the same event (e.g., Attanasi et al., 2013).

This further motivates our interest in disentangling MC and FC sub-samples: we control whether a different resident/tourist ratio interferes with WTA_P. The two samples of MC and FC interviewees are comparable, as non-parametric tests in Table A.1 confirm no difference in the distribution of answers to the questionnaire.[18]

Figure 3 shows the mean answer (with standard deviation) for the temporal questions – *"how serious a problem do you think climate change was 5 years ago* (q16 - left bars), *is at this moment* (q17 - central bars), and *will be in 5 years* (q18 - right bars)" – considering MC, FC, and all data. Mean answers for the past in each of the samples (MC: 6.59, FC: 7.18, All: 6.84) are significantly lower compared to the present (MC: 7.84, FC: 8.19, All: 7.98) and the future (MC: 8.50, FC: 8.83, All: 8.64), and similar between MC and FC (minimum $p = 0.3865$ for q16, Chi-squared test). Thus, climate change was perceived as a less serious problem in the past with respect to the present and the future.

[15] Table A.1 includes the demographics and the twenty-one questions (three of them with sub-questions) that compose the questionnaire. It provides information regarding the scale of the answers, the number of observations, the mean and the standard deviation value for each sample: MC, FC, and considering all the data together (All data). Note that the information regarding question 20 is not included due to its open-answer nature.

[16] While recording a slightly higher average age among subjects refusing the interview, we find no statistically significant difference between subjects accepting vs. those refusing the interview regarding gender and place of residence.

[17] We calculated the margin of error by associating the pair of variables N (size of the target population) and n (sample size) with a parameter x that specifies the tolerated margin of error occurring when the sample of size n is taken as representative of the whole population N: $x = \sqrt{\frac{N}{(N-1)n} - \frac{1}{N-1}}$. We considered both MC with $N = 250,000$ and $n = 557$ and FC with $N = 200,000$ and $n = 400$. In order to estimate the number of participants in each concert within the 2022 edition of the festival, we relied on the data provided by the Local Police or the Traffic Officer Commands of the 23 municipalities where the 22 MC, the FC's rehearsal and the FC took place. We obtained a margin of error of 0.04 for MC and 0.05 for FC, which are both within the tolerance limit of 0.10.

[18] In the last column of Table A.1, we included the results of a Chi-squared two-sample test for each survey question. They show no significant difference (at the 5% level) between MC and FC for all questions except for question 6 (appraisal of increased wind energy development). Indeed, since this question explicitly refers to the town of residence, such difference may be explained by a more heterogeneous place of residence of attendees at FC.

Table 1
Sample demographics, with number of observations (Obs.), mean (Mean), standard deviation (SD), minimum (Min) and maximum (Max) answer scale values.

	All data				
	Obs.	Mean	SD	Min	Max
Female	957	0.484	0.500	0	1
Age	957	2.558	1.346	1	5
Education	956	3.328	0.860	1	5
Resident	957	0.723	0.448	0	1
	Minor Concerts (MC)				
	Obs.	Mean	SD	Min	Max
Female	557	0.495	0.500	0	1
Age	557	2.804	1.371	1	5
Education	557	3.273	0.924	1	5
Resident	557	0.831	0.375	0	1
	Final Concert (FC)				
	Obs.	Mean	SD	Min	Max
Female	400	0.468	0.499	0	1
Age	400	2.215	1.232	1	5
Education	399	3.406	0.757	1	5
Resident	400	0.573	0.495	0	1

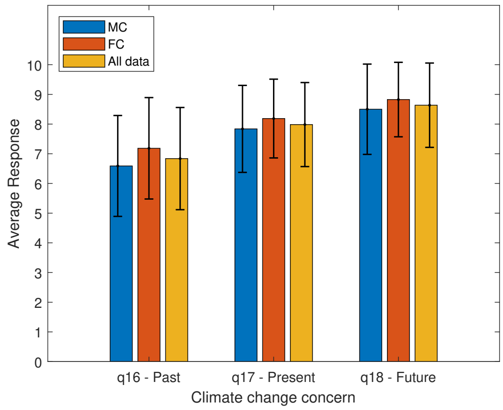


Figure 3: Mean answer (with standard deviation) to questions 16, 17 and 18, considering MC, FC, and all data. Note: Response options on the y-axis range from 0 (“it is not at all a serious problem") to 10 (“it is an extremely serious problem") and indicate how serious interviewees think climate change was 5 years ago (q16), is at this moment (q17), and will be in 5 years (q18).

The correlation analysis in Tables B.1-B.3 in Appendix B highlights that answers to temporal questions 16-18 are reliable proxies of both environmental concerns and sensitivity to renewable energy increase. All this holds regardless of the sample (MC, FC or All).[19]

[19]Tables B.1, B.2, and B.3 in Appendix B report pairwise correlation analyses among all the questions, respectively for MC, FC, and all data. If we look at the correlation of each temporal question (16, 17 and 18) with the remaining questions of the survey, we find significant correlations in all three samples (FC, MC, and all data) with questions 8 (use of conventional fuels being harmful to the environment), 9 (use of renewable energy in one’s own community providing a future for children), 10 (more renewable energies should be used in Italy), 11 (more wind energy should be used in Italy), 15 (feeling that the global climate is currently changing), and 19 (being aware that a project has been currently proposed for the installation of a new floating off-shore wind farm in the region of the festival). Furthermore, questions 1.3 (relevance of the issues “poverty, hunger, and lack of drinking water” worldwide) and 7 (appraisal of the visual impact of the wind power plant on the landscape or on the coast), correlate in all three samples with questions 17 and 18 and in all but one sample with question 16.

4.2. Regression analysis

We study community acceptance of the off-shore wind farm plant through three questions, two controls and the main question eliciting WTA_P. The first control (question 19) asks interviewees whether they know about the project: 37% of them in MC and 29% in FC answer positively, with no significant difference ($p = 0.1573$, Chi-squared test). This is captured by the explanatory variable "*P-awareness*" (1 if the interviewees know about the project, 0 otherwise). The second control (question 20) asks interviewees what they know about the project: 92% of them indicate information such as the coast on which it will be situated, the number of turbines, etc. For those answering "No" to this question, the following information is provided: *"The floating off-shore wind farm would be composed of 90 wind turbines between Porto Badisco and Santa Maria di Leuca, located at a distance ranging from 12.8 to 24 km far from the coast of Salento."*[20]

The last questionnaire item (question 21) is the main question of our study: *How much do you agree with the idea of installing a floating off-shore wind farm in Salento?* (i.e., WTA_P), with an answer scale from 0 ("totally disagree") to 10 ("totally agree.")[21] Figures 4a-4b display the relative frequency distribution expressed as percentages to question 21 for MC and FC, respectively. Mean answers to question 21 between sub-samples were similar (MC: 6.77, FC: 6.74; $p = 0.1573$, Chi-squared test).

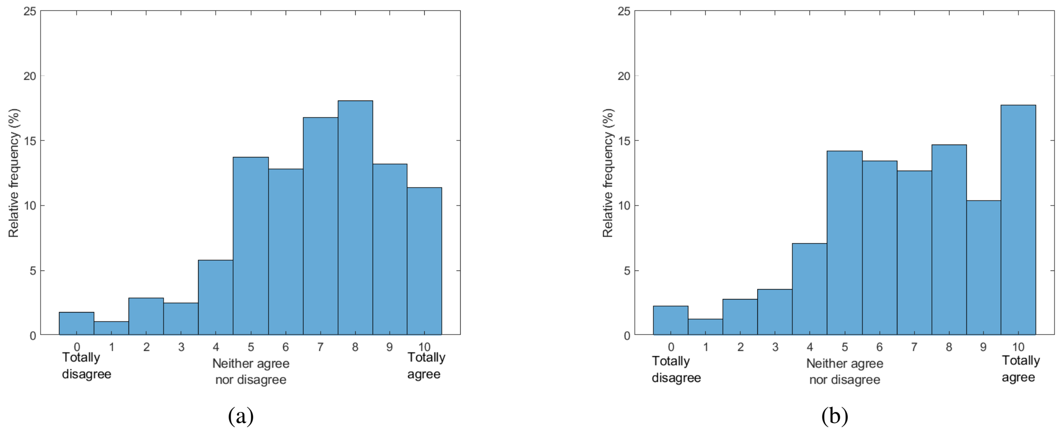


Figure 4: Relative frequency distribution expressed as percentages of answers to question 21 *"How much do you agree with the idea of installing a floating off-shore wind farm in Salento?"* for MC (a) and FC (b).

With this, Table 2 reports the results of the regression analysis of WTA_P (question 21) on interviewees' demographics and *P-awareness*. The seven Tobit regression models in Table 2 differ as for: the sample (MC, FC, All data), whether or not we include the control for pro-environmental attitudes EA, and, for All data, whether or not we include interaction terms among the explanatory variables.[22]

Table 2 shows that the only two variables that matter for WTA_P are those related to the project (*P-awareness*) and to the environmental perception (EA): both have a significant positive impact regardless of the sample and the regression model. None of the demographic variables – gender, age, education and resident dummy – has a significant effect on WTA_P under any model. Also the resident-tourist distinction has no effect on WTA_P, which is first proof of absence of NIMBY phenomenon. Indeed, recalling from Table 1 that FC is characterized by a significantly higher fraction of tourists, the FC dummy is a proxy of the likelihood that the interviewee is a tourist rather than a resident. With this, Table 2 shows that the FC dummy coefficient is significant in no model, even when interacted with any other explanatory variable in column $All\,int._{EA}$.[23]

[20] Question 20 works as control for "Yes" answers to question 19 and is not included in the analysis due to its open-answer nature.

[21] Question 20 providing information about the project (off-shore wind farm), the location (Salento), and the scale of agreement, including extremes, makes the interviewees aware that the new off-shore wind farm is something that is concretely going to be installed, and that the meaning of "idea" of installation in question 21 is "eventuality, possibility, prospect."

[22] Table B.4 in Appendix B shows the corresponding regression analysis for each other question 1.1-19 as dependent variable with demographics as explanatory variables.

[23] The only interaction coefficient that is significant (but only at the 10% level) is $FC\#Education$. However, its negative sign might be due to the slight positive effect of education ($p < 0.10$) at MC (column MC).

Table 2
Regression analysis for question 21 *"How much do you agree with the idea of installing a floating off-shore wind farm in Salento?"*

	MC	FC	All	MC_{EA}	FC_{EA}	All_{EA}	$All\ int._{EA}$
Female	-0.199	0.33	0.004	-0.239	0.305	-0.035	-0.247
Age	-0.007	0.046	0.009	-0.012	0.076	0.013	-0.012
Education	0.235*	-0.191	0.109	0.209	-0.24	0.075	0.207
Resident	0.029	0.138	0.102	0.100	0.229	0.181	0.100
P-awareness	0.622***	0.927**	0.744***	0.515**	0.659*	0.585***	0.521**
EA				1.686**	3.255***	2.278***	1.714**
FC			0.144			0.149	0.213
FC#Female							0.545
FC#Age							0.087
FC#Education							-0.445*
FC#Resident							0.122
FC#*P-awareness*							0.113
FC#EA							1.477
Constant	5.998***	7.066***	6.173***	5.141***	5.340***	4.994***	5.143***
F	2.413	1.852	2.743	2.987	2.847	3.993	2.704
r_p^2	0.005	0.006	0.004	0.007	0.011	0.007	0.009
N	554	393	947	554	393	947	947

Note: Tobit regression analysis with robust errors. Female: dummy equals 1 if female. Age: categorical variable with values from 1 (less than 25 years old) to 5 (more than 60 years). Education: categorical variable with values from 1 (primary education) to 5 (postgraduate education). Resident: dummy equals 1 if interviewees live in the Province of Lecce (area of the festival), 0 otherwise. Final Concert (FC): dummy equals 1 if interviewees were at the Final Concert (instead of the Minor Concerts). EA: pro-environmental attitude index. *P-awareness*: awareness about the off-shore wind farm project. MC: Minor Concerts data. FC: Final Concert data. All: all data. MC_{EA}: Minor Concerts data with EA control. FC_{EA}: Final Concert data with EA control. All_{EA}: all data with EA control. $All\ int._{EA}$: all data with EA control including interactions with Final Concert. F: Fisher test. r_p^2: R-squared adjusted. N: number of observations. ***$p < 0.01$; **$p < 0.05$; *$p < 0.1$.

Absence of NIMBY phenomenon is confirmed within the sub-sample of residents by focusing on the distance from their place of residence to the siting of the wind farm.[24] This distance is measured from each of the two siting ends of Porto Badisco (minimum distance = 7 km; maximum distance = 62 km) and Santa Maria di Leuca (min = 10 km; max = 73 km). The Spearman rank correlation indexes between answers to question 21 (WTA_P) and the distance from Porto Badisco, from Santa Maria di Leuca, and from the closer of the two ends is respectively −0.03, 0.05, and 0.01, max $p = 0.2525$. Therefore, WTA_P is not associated with the proximity of the wind farm siting to the place of residence.[25]

In Table 3 we analyze how WTA_P (q21) is related to the temporal questions, separately for the three samples of interviewees. We run Tobit regressions with WTA_P as the explanatory variable and each of the three temporal questions (q16: past, q17: present, q18: future) as the dependent variable, controlling for demographics, *P-awareness* and EA, in line with what we did in Table 2. All nine coefficients are positive and all but one is significant, highlighting a positive association between WTA_P and each of q16-q18.[26] This association is confirmed by the strong correlations among WTA_P and each of q16-q18 shown in Tables B.1-B.3.

Table 4 shows that the association is stronger for q18 than for q17, and for q17 than for q16. Table 4 compares the coefficients of the Tobit regressions of Table 3 by reporting the results of Chow pairwise tests

[24] Note that question D in Table A.1, asks "Where do usually live during the year?", allowing us to obtain information about the municipality of the interviewee. We also ask interviewees to indicate the name of their municipality.

[25] Notice that our sample of municipalities is highly representative since our interviewees from the Province of Lecce come from 49 out of the 96 municipalities (51%) that constitute the Province.

[26] Results, available upon request, also hold without controls, only controlling for demographics, only controlling for demographics and *P-awareness*, only controlling for demographics and EA.

Table 3
Regression analysis between the willingness to accept a wind farm (q21) and the three temporal questions (q16-q18).

	q21 - MC			q21 - FC			q21 - All data		
	q16	q17	q18	q16	q17	q18	q16	q17	q18
q21	0.102**			0.009			0.065*		
q21		0.197***			0.134***			0.173***	
q21			0.286***			0.194***			0.254***
Constant	6.228***	5.082***	4.673***	5.061***	4.671***	4.756***	5.777***	4.868***	4.847***
F	4.027	14.556	9.799	2.575	7.799	6.824	5.144	20.012	15.286
r_p^2	0.014	0.042	0.034	0.010	0.032	0.035	0.010	0.036	0.033
N	554	554	554	393	393	393	947	947	947

Note: Tobit regressions with robust errors. Dependent variables: answers to questions 16, 17, and 18 in columns (*"How serious a problem do you think climate change:" "was 5 years ago"* (q16), *"is at this moment"* (q17), *"will be in 5 years"* (q18)? Explanatory variable: answers to question 21 (agreement with the idea of installing a floating off-shore wind farm in Salento). It includes controls for demographics, pro-environmental attitudes (EA) and project awareness (*P-awareness*). F: Fisher test. r_p^2: R-squared adjusted. N: number of observations. ***$p < 0.01$; **$p < 0.05$; *$p < 0.1$.

Table 4
Chow tests of differences among samples (top panel) and among temporal questions (bottom panel) for coefficients of Table 3.

Test	q16	q17	q18
MC-FC	1.54	0.93	0.91
MC-All	1.16	0.70	0.51
FC-All	1.75	1.07	1.29
	MC	FC	All data
q16-q17	6.76***	5.76**	12.15***
q17-q18	3.69*	1.34	5.75**
q16-q18	7.67***	5.78**	14.33***

Note: Top table: Chow tests to compare the coefficients between MC, FC, and whole sample pairwise. Bottom table: Chow tests to compare the coefficients between the three temporal questions pairwise (q16 vs. q17; q17 vs. q18; q16 vs. q18). ***$p < 0.01$; **$p < 0.05$; *$p < 0.1$.

among samples (top panel) and among temporal questions (bottom panel). The top panel works as a control for the reliability of our sample: it shows that, for each of the three temporal questions, coefficients of q21 are not significantly different across the three samples of interviewees. The bottom panel shows that, regardless of the sample, the regression coefficients of Table 3 increase through the temporal questions, significantly so for all but one of the nine temporal comparisons.

4.3. Transition probability analysis

We present the results of the Markov model of the three temporal questions q16-q18 first regardless of interviewees' agreement to the project of the new wind farm (WTA_P) and then by conditioning on WTA_P.

Considering all data, relying on the state-value association of Figure 2, the transition probability matrices (6a) and (6b) apply function (4) respectively to the transition from past (q16) to present (q17), and from present to future (q18).

$$
\begin{array}{c} N_1 \\ 68 \\ 334 \\ 550 \end{array}
\qquad
A_{1-2} = [q16]\ \overset{[q17]}{\begin{array}{c} \\ 1 \\ 2 \\ 3 \end{array}\begin{array}{c} \begin{array}{ccc} 1 & 2 & 3 \end{array} \\ \begin{pmatrix} 0.25 & 0.51 & 0.24 \\ 0.01 & 0.29 & 0.70 \\ 0.01 & 0.05 & 0.94 \end{pmatrix} \end{array}}
\qquad
\begin{array}{c} \overline{N}_2 \\ 25.84 \\ 159.04 \\ 767.12 \end{array}
\qquad
A_{2-3} = [q17]\ \overset{[q18]}{\begin{array}{c} \\ 1 \\ 2 \\ 3 \end{array}\begin{array}{c} \begin{array}{ccc} 1 & 2 & 3 \end{array} \\ \begin{pmatrix} 0.54 & 0.23 & 0.23 \\ 0.06 & 0.39 & 0.55 \\ 0.01 & 0.03 & 0.96 \end{pmatrix} \end{array}}.
\qquad (6a)\ (6b)
$$

Vector $N_1 = (N_{1,1}, N_{1,2}, N_{1,3})$ in (6a) indicates how many interviewees – out of the 952 who completed q16-q18 – fall in each state according to their answer to q16. Vector $\overline{N}_2$ in (6b) indicates how many interviewees at each time are expected to indicate values in a specific state. The obtained expected distribution is close to the real one observed in the survey which consisted of $N_2 = (22, 163, 768)$.[27]

The product between the two matrices (6a) and (6b) leads to matrix (6), which directly links q16 (past) to q18 (future). The expected structure $\overline{N}_3$ of interviewees is close to the real one $N_3 = (25, 93, 835)$.

$$
\begin{array}{c} \overline{N}_3 \\ 31.17 \\ 90.98 \\ 829.85 \end{array}
\qquad
A_{1-3} = [q16]\ \overset{[q18]}{\begin{array}{c} \\ 1 \\ 2 \\ 3 \end{array}\begin{array}{c} \begin{array}{ccc} 1 & 2 & 3 \end{array} \\ \begin{pmatrix} 0.17 & 0.27 & 0.56 \\ 0.02 & 0.14 & 0.84 \\ 0.01 & 0.05 & 0.94 \end{pmatrix} \end{array}}. \qquad (6)
$$

We begin the analysis with a control for using different matrices for different time transitions (from the past to the present and from the present to the future): according to the test of homogeneity, the two matrices A_{1-2} in (6a) and A_{2-3} in (6b) are statistically different ($p < 0.05$). This explains why we use a non-homogeneous Markov model. Furthermore, matrix (6a) shows that in the transition from the past to the present: 75% of interviewees in state 1 move to a higher state; 70% of interviewees in state 2 move to state 3; only a negligible fraction of interviewees (7% as a whole) move from a higher to a lower state. Matrix (6b) show a similar picture in the transition from present to future.[28] The comparison of matrix (6) with matrix (6a) and (6b) confirms the above result. The first two rows of the last column (which indicate a switch to state 3 in the next time step) are significantly higher in matrix (6) than in either matrix (6a) or (6b), with $p < 0.05$.[29] Therefore, the perception of the seriousness of the climate change problem increases more if moving from past to future than from past to present and from present to future.

In C.2 we replicate the analysis for sub-samples MC and FC. We confirm within-concert the same result found for the whole sample.[30]

We now move to the main part of the analysis, by conditioning the Markov model to the answer to q21 as for WTA_P. We disentangle the three probability matrices (6a), (6b), and (6) considering subjects who answer q21 with a value between 0 and 6 vs. those with a value between 7 and 10.[31] We indicate with $q21_{low}$ the three matrices (8a)-(8c) that refer to the group of low-value q21 interviewees, and with $q21_{high}$ those that refer to the group of high-value ones, i.e. matrices (9a)-(9c).

[27] A thorough explanation of the construction of the transition probability matrices is presented in Appendix C.1.

[28] More precisely, matrix (6a) shows that 94% of interviewees who considered climate change as a serious problem 5 years ago (answer > 6 at q16, i.e., state 3 at time 1), currently have the same idea (state 3 at time 2, q17). Matrix (6b) shows that 96% of this 94% report they will have the same feeling about this problem in 5 years (state 3 at time 3, q18). Furthermore, among those who answered question 16 with a value lower than 4 (state 1 at time 1, q16: problem not serious in the past), 51% switches to state 2 (value between 4 and 6 at q17) and 24% completely change their assessment (value > 6 at q17, i.e., state 3 at time 2) in the present (matrix (6a)). In the second transition, between the present and the future (from time 2 to time 3, matrix (6b)), 23% of interviewees slightly change opinion switching from state 1 in q17 to state 2 in q18, and a similar fraction significantly change opinion switching from state 1 to state 3.

[29] This is also confirmed by the comparison between N_3 and respectively N_1 and N_2: the number of interviewees in state 3 significantly increases moving from time 1 (550) to time 2 (768) to time 3 (835) (Chi-squared two-sample test, highest $p < 0.001$).

[30] The homogeneity is also not verified when we compare the product matrices with component matrices belonging to the same event.

[31] Note that the separation between the two groups of interviewees is in line with the definition of the states of the Markov model, with values between 7 and 10 being state 3, and values between 0 and 6 pooling the two residual states.

$$q21_{low}\ A_{1-2} = \begin{matrix} & 1 & 2 & 3 \\ 1 & 0.17 & 0.58 & 0.25 \\ 2 & 0.03 & 0.44 & 0.53 \\ 3 & 0.01 & 0.08 & 0.91 \end{matrix},\ A_{2-3} = \begin{matrix} & 1 & 2 & 3 \\ 1 & 0.63 & 0.25 & 0.12 \\ 2 & 0.08 & 0.44 & 0.48 \\ 3 & 0.01 & 0.05 & 0.94 \end{matrix},\ A_{1-3} = \begin{matrix} & 1 & 2 & 3 \\ 1 & 0.14 & 0.31 & 0.55 \\ 2 & 0.05 & 0.22 & 0.73 \\ 3 & 0.01 & 0.08 & 0.91 \end{matrix}.$$

(8a) (8b) (8c)

$$q21_{high}\ A_{1-2} = \begin{matrix} & 1 & 2 & 3 \\ 1 & 0.26 & 0.50 & 0.24 \\ 2 & 0.01 & 0.20 & 0.79 \\ 3 & 0.01 & 0.05 & 0.94 \end{matrix},\ A_{2-3} = \begin{matrix} & 1 & 2 & 3 \\ 1 & 0.33 & 0.33 & 0.34 \\ 2 & 0.04 & 0.33 & 0.63 \\ 3 & 0.01 & 0.02 & 0.97 \end{matrix},\ A_{1-3} = \begin{matrix} & 1 & 2 & 3 \\ 1 & 0.10 & 0.26 & 0.64 \\ 2 & 0.01 & 0.08 & 0.91 \\ 3 & 0.01 & 0.03 & 0.96 \end{matrix}.$$

(9a) (9b) (9c)

The control of non-homogeneity holds in each of the two sub-samples.[32] The main result of Section 4.3 as for the increased perception of the seriousness of the climate change problem when increasing the time delay (from past to future rather than from past to present or from present to future) also holds.[33] Furthermore, and more importantly, subjects answering q21 with a considerably high value (from 7 to 10) present higher probabilities in the first two rows of the third column in each matrix comparison (8a) vs. (7a), (8b) vs. (7b), and (8c) vs. (7c). This column represents the transition probability to state 3 (answer from 7 to 10 respectively to q17 but not to q16, q18 but not to q17, and q18 but not to q16) in the subjective assessment of the seriousness of the climate change problem.[34]

5. Discussion

In Section 4 we disentangled the effects of demographics, project awareness, pro-environmental attitudes and climate change concern on the community acceptance of a new off-shore wind power plant (WTA_P) in August 2022.

We find that none of the demographics has a significant impact on WTA_P (Table 2, Section 4.1).[35] In particular, residents and tourists show similar WTA_P, which casts doubts on the NIMBY phenomenon. Its absence in our data is confirmed by the fact that WTA_P shows no correlation with the distance between residents' home village and the wind farm siting. Table 2 instead confirms that both pro-environmental attitudes and project awareness increase WTA_P. This is in line with previous literature on correlation between positive attitudes toward wind energy and both environmental concern and place attachment (Hoen et al., 2019).

More importantly, Figure 3 (Section 4.1) shows that concern about climate change increases from past to present and to future. Figure 4 (Section 4.2) reports that most interviewees disclose high WTA_P. We try to detect possible links between these two attitudes.

The regression analysis in Section 4.2 suggests positive dependency of WTA_P from the answers to each of the three temporal questions on climate change concern (Tables 3 and 4): the more one is concerned by climate change in the past and/or in the present and/or in the future, the higher his/her WTA_P. In Section 4.3, we go more deeply into this issue by using transition probability matrices to analyze to which extent the answers to the three temporal questions are related to each other. This is made in the light of the non-homogeneous Markov model of Section 3.2.

[32] The probability matrix between steps 1 and 2 is statistically different compared to the one between steps 2 and 3 with a significance level of 0.05, both for $q21_{low}$ and $q21_{high}$. This is also in line with what is obtained in the bottom panel of Table 4 of Section 4.2.

[33] We observe that the third column of matrices (8c) and (9c) present higher values against the same column of matrices (8a) and (8b), and (9a) and (9b), respectively. This especially holds for transition probabilities from state 1 and from state 2 to state 3 (in the future).

[34] This is confirmed by the three vectors of distribution of interviewees in the three states according to their answers to q16 (past, N_1), q17 (present, N_2) and q18 (future, N_3). Indeed, as for the past we find 86 vs. 75 out of 100 subjects in state 3 in group $q21_{high}$ vs. $q21_{low}$, although the difference is not significant according to a Chi-squared two-sample test ($p = 0.210$). This difference keeps constant but becomes significant in the present (92 vs. 83) and in the future (92 vs. 82), with the highest $p < 0.001$.

[35] Only education has a marginal impact and only in the concerts where the fraction of residents is significantly higher than that of tourists. Given that residents are all Southern Italians while many tourists come from Northern Italy, this might be due to the North-South Italian divide in education level (Attanasi et al., 2024; Bigoni, Bortolotti, Casari, Gambetta and Pancotto, 2016).

The first part of Section 4.3 illustrates how the perception of the seriousness of the climate change problem increases with time (from past to present and from present to future) and with the time delay (the increase is higher from past to future than from past to present or from present to future). The second part shows that this trend is more robust when we condition the model to (high) WTA_P. In fact, interviewees with high WTA_P reported a significantly higher perceived seriousness of the climate change problem regarding the present vs. the past and the future vs. the present or the past. We therefore find a possible *temporal perception bias* according to which individuals support wind farm projects not only because they are concerned about climate change in the future but especially because they are more concerned with respect to the past and to the present.

Two remarks are in order for the validity and reliability of our sample strategy. First, interviewees at MC and FC share few similarities (see Table 1). Despite these differences, we find the same positive relation between responses to the three temporal questions and WTA_P both in the regression analysis (see Table A.1 in Appendix A, Figure 3, Tables 2-4) and under the Markov model (see Appendix C.1). Given that the festival and the survey questions have no connections to each other, we cannot really infer anything vis-à-vis our sample population from their participation in the festival, nor we infer anything from their participation in MC or FC. Indeed, we claim that our main result is not influenced by the specific sample.

Second, and equally importantly, we replicated the two complementary (regression and Markov) analyses on survey data we gathered during the same festival in the subsequent edition (August 2023), using the same sampling strategy and questionnaire of August 2022 edition. We report this robustness check in an online appendix that summarizes the results of the replication analyses on the 2023 dataset.[36] The results of 2023 data are comparable to the one obtained in 2022. The sample demographics are quite similar, with the only exception of having more residents in FC of 2023. A difference consists in *P-awareness*, which is significant in the 2022 sample (meaning that knowing about the project has a positive relation with its acceptance), while it is not in the 2023 sample. This might be due to a much higher impact of the pro-environmental attitude index EA on WTA_P: considering the whole sample with all interactions, the regression coefficient in 2023 is three times as much as in 2022. *P-awareness* and EA capturing overlapping environmental attitudes, a substitution effect might have arisen.

More importantly for the scope of our study, the impact of climate change concerns on WTA_P is essentially confirmed in 2023: (i) the WTA_P is increasing in each of the three temporal questions, (ii) moving from past to present and from present to future, climate change concerns significantly increase, and (iii) such increase is significantly greater for interviewees with high WTA_P. With this, the results of 2023 survey essentially confirm the positive correlation between the evolution of the temporal perception of climate change concern and WTA_P, thereby generalizing the main result of our study.

6. Conclusion and Policy Implications

We studied the determinants of the willingness to accept the installation of a new off-shore wind farm, WTA_P, in an Italian region characterized by previously installed wind farms and by high tourist attractiveness. In order to elicit both residents and tourists' preferences on this green-energy action, we distributed a survey during the August 2022 edition at the most important mass-gathering and tourist-attracting event of the region, which also is one of the largest festivals in Europe, with almost 500,000 participants per year, already widely studied in the literature (see, e.g., Attanasi et al., 2013). This allowed us to obtain a convenience sample of area residents and Italian tourists, so that we could assess the NIMBY phenomenon of the former by taking the latter as a control. We find that neither the fact of living in the region nor coming there just for holidays is a reliable predictor of WTA_P. More importantly, among residents, distances between the place of residence and the wind farm siting play no role in accepting the wind farm. With this, our results provide very weak support for the NIMBY hypothesis for wind farms. Demographic characteristics do not seem to play a role either, apart

[36] The Online Appendix can be found at this link: (Online Appendix). It contains four sections. Section O.1 presents the robustness check and the methodology followed to obtain it, the replication of Figures 3 and 4 (respectively, Figures O.3 and O.4), and the main results. The Markov model applied to 2023 data is developed in Section O.2 by firstly considering all data, and secondly conditioning it to the answer to q21 as for WTA_P. Section O.3 presents the summary statistics on all survey items in Table O.A.1, the sample demographics in Table O.1, the replication of the regression analysis of Tables 2 and 3 respectively in Tables O.2 and O.3, with Table O.4 containing the Chow tests of differences among samples (top panel) and among temporal questions (bottom panel) for coefficients of Table O.3. The correlation matrices (Tables O.B.1, O.B.2, and O.B.3) and regression analysis for all questionnaire items (Tables O.B.4) are in Section O.4. Note that all figures and tables numbering reflects the corresponding one in Section 4 of the paper.

from a weak positive effect of education. However, we confirm that pro-environmental preferences and project awareness positively correlate with WTA_P.

Finally, we assess the significant role of climate change concern: the more serious people perceive climate change in the present and in the future as compared to the past, the higher WTA_P. We model this effect through a Markov chain delivering a higher time-increasing perception of the climate change problem for subjects with a higher WTA_P.

This is a novel contribution of our study: we elicit the perception of the climate change issue in the past, present and future, and relate its temporal evolution (from the past to the present and from the present to the future) to WTA_P in the area where one lives or visits. Although WTA_P and the anticipated increase in the adverse impact of climate change might be seen as two different phenomena, we provide new and stronger support to the recent literature that instead suggests a relation among an environmental action (wind farm) that does not directly concern that environmental problem (climate change).

Therefore, a high WTA_P can be found when the share of stakeholders perceives a significant increase in the relevance of the climate change problem from the past to the present, and especially from the present to the future. Our results show a positive correlation between these two phenomena.

A replication of our sampling and empirical strategy for the subsequent 2023 edition of the festival yields similar conclusions. Results show that interviewees in August 2023 share a similar pattern with interviewees in August 2022. We highlight this fact, since, in June 2023, the National Integrated Energy and Climate Plan (PNIEC) has been updated, a ten-year plan aimed at meeting the EU energy and climate targets for 2030. In this plan, Italy proposes to increase the share of renewables in gross energy consumption to 40% by 2030, among other policies. The huge advertisement of these policies might have influenced responses to our 2023 survey, while instead, our analysis provides results similar to those of 2022. These results add reliability and validity to our survey.

As supported by extensive literature, the NIMBY phenomenon is not the guiding factor in WTA_P, although it is still widely used by industry, policymakers, practitioners, and (increasingly less) researchers as the main motivation for opposing (wind) energy projects. One explanation for this could be that the NIMBY hypothesis is based on the physical distance between the facility and the concerned party, which is a very simplistic notion of proximity. Acting as a heuristic (Gilovich, Griffin and Kahneman, 2002), the NIMBY theory attempts to provide the easiest explanation for a phenomenon that is actually caused by more complex factors. The results of our work support the idea, stated by several previous studies (Rand and Hoen, 2017; Petrova, 2013; Wolsink, 2012), that this theory should be abandoned. Other, more relevant motivations behind community acceptance are more difficult to assess due to their multi-dimensional nature (e.g., socio-economic factors), measurement issues (e.g., visual annoyance), and heterogeneous views on setting measurement criteria (e.g., procedural and distributive justice) due to different policy positions and social norms. Therefore, designing and implementing more sophisticated in-the-field surveys is fundamental for providing more precise measurements and a more shared understanding of the actual explanations of WTA_P. Our survey study moves in this direction by demonstrating how to assess the impact of climate change perception on WTA_P in its two dimensions: time sequence (past, present, and future) and time trend (from past to present and present to future). In this regard, our questionnaire can be seen as a tool to disentangle the different dimensions of a relevant explanatory variable of WTA_P (climate change concern), complementing the three temporal questions with a set of other items (e.g., other environmental indexes) that serve as controls (through correlation checks).

As a general policy implication we put emphasis on the crucial role of surveys and their implementation in natural settings (e.g., a mass-gathering event) in eliciting the true citizens' perceptions of environmental issues and WTA_P of one of the facilities which supports the central objectives of environmental policies (i.e., promoting renewable energies), bringing expected benefits and costs to the community. More precisely, policymakers should use time-related questions in surveys as a way to assess citizens' awareness of the perception of an environmental problem over time because this could be the main driver of WTA_P. This may contribute to a better understanding of public awareness regarding the challenges posed by climate change and the advantages of implementing green solutions, such as renewable energy plants.

In this regard, our work can be considered a longitudinal data collection, even though it is not a panel survey, since it involves different participants over the two survey years, 2022 and 2023. Between the survey periods of August 2022 and August 2023, there were no official updates or new information in the news about the offshore wind farm project. This consistency aligns with the similar results we found in both datasets (as reported at the end of Section 5). However, in the first months of 2024, some news appeared on local TV and in newspapers regarding the opposition of seventy-two municipal councils, together with citizens and environmentalists, who have expressed unfavorable opinions about the project (Lecceprima, 2024; Teleramanews, 2024). Therefore, if this survey was replicated in August 2024, any differences in the results compared to the previous two years should be analyzed further, incorporating questionnaire items that address the above-mentioned information. Repeating such in-the-field surveys over the years while the firms are developing/implementing the project and other stakeholders are publicly expressing their support or opposition is crucial for understanding whether and how factors influencing people's perceptions vary over time. This approach requires an event-dependent questionnaire like ours, with items that can be updated and item lists that can be enriched accordingly.[37]

Furthermore, survey implementation can be itself a policy action: citizens may become more aware of a particular climate change concern with their participation, and including references to different time periods (past, present and future) among survey items may vanish the NIMBY phenomenon and flourish WTA_P, as our data seem to show. Additionally, this may also help align policies and infrastructure projects with public preferences, accelerating WTA_P and fostering innovation and development in the region, as exemplified by the potential benefits of an off-shore wind farm. We encourage institutions to include this as a mechanism to move towards a more environmentally friendly governance, in line with, for example, the European Green Deal program (Commission et al., 2019) or the Green New Deal in the US (Congress, 2019).

A limitation of our study is using a sample obtained at a free-entry mass-gathering festival, which might confine our dataset and findings to this specific group. Although in the statistical analysis we implemented several tests showing that it is not the case, we cannot rule out every sample selection bias. Nevertheless, the festival's deep roots in the region and the fact that it allowed us to include a relevant share of non-residents in the sample naturally suggest that our findings may not significantly differ from those obtained through a random sample. We suggest further implementations of our survey considering the particularities of the local context and with samples including other groups of stakeholders for further research (Llerena and Llerena, 1993).

Another limitation is that we assess the NIMBY phenomenon by focusing on the dichotomous variable resident vs. tourist, the former living in municipalities with a maximum distance of 76 km from the wind power plant. We acknowledge that this allows for high heterogeneity in the sub-sample of residents as for the actual distance of their home village from the plant. However, we show that this distance has no effect on the NIMBY phenomenon, and that our "resident" variable captures identity features of a province that, bordering only in the north with another province and being otherwise surrounded by the sea, has a long history of shared identity (Safran (2014)). We posit that interviewing residents at the most important traditional event of their area has boosted such identity features (Attanasi et al. (2013)). We are also aware that our questionnaire does not include items aimed at checking whether residents have personal stakes in the companies that will develop and work in the off-shore wind farm project. We encourage further research on this relevant issue.

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[37] Such methodology offers several other pros, including ensuring the validity of the study (Rindfleisch, Malter, Ganesan and Moorman, 2008).

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A. Questionnaire (data 2022)

No.		Scale	Minor Concerts (MC) Obs.	Mean	SD	Final Concert (FC) Obs.	Mean	SD	All data Obs.	Mean	SD	Chi-squared test
A	Gender	0 = Male; 1 = Female;	557	0.50	0.50	400	0.47	0.50	957	0.48	0.50	h=0 p=0.1573
B	Age	1 = less than 25; 2 = 26/30; 3 = 31/39; 4 = 40/60; 5 = Over 60;	557	2.80	1.37	400	2.21	1.23	957	2.56	1.35	h=0 p=0.0833
C	Educational qualification	1 = primary education; 2 = Middle school degree; 3 = High school diploma; 4 = Bachelor's degree; 5 = Postgraduate degree (Master's/PhD);	557	3.27	0.92	399	3.41	0.76	956	3.33	0.86	h=0 p=0.0833
D	Where do you usually live during the year? Indicate the name of the municipality.	Village in which the event takes place; Apulia, but outside province; Grecìa; Italy, but outside Region; Province of Lecce; Foreign country;	557	2.17	1.47	400	3.18	1.57	957	2.59	1.59	h=1 p=0.0000
1	Rank the following issues from most (1) to less important (4):(Eurobarometer, 2019)	1 = Most important; 4= least important;										
1.1	Climate change and deterioration of nature		554	2.68	1.21	387	2.68	1.26	941	2.68	1.23	h=0 p=0.1573
1.2	Health problems due to pollution		554	2.68	1.01	387	2.70	1.01	941	2.69	1.01	h=0 p=0.1573
1.3	Poverty, hunger, and lack of drinking water		555	2.25	1.08	387	2.25	0.94	942	2.25	1.03	h=0 p=0.2733
1.4	Spread of infectious diseases		555	2.45	1.10	387	2.36	1.16	942	2.42	1.12	h=0 p=0.5050
2	How concerned are you about the following issues?(Kantar, 2021)	Very concerned;										
2.1	Environmental protection	Somewhat concerned;	555	1.04	0.31	398	1.15	0.45	953	1.09	0.38	h=0 p=0.1573
2.2	The impacts of climate change	Not concerned at all;	555	1.08	0.31	398	1.11	0.37	953	1.09	0.34	h=0 p=0.1573
2.3	Your health		555	1.07	0.34	398	1.14	0.38	953	1.10	0.36	h=0 p=0.3865
3	How knowledgeable do you consider yourself on wind energy? (Musall and Kuik, 2011)	1= Not at all; 5 = Very;	553	2.63	1.17	396	2.74	1.25	949	2.68	1.20	h=0 p=0.1709
4	How often do you talk with your acquaintances about the wind farm?(Musall and Kuik, 2011)	1 = Never; 5 = Frequently;	553	2.11	1.10	397	2.46	1.22	950	2.25	1.16	h=0 p=0.5050
5	How much do you consider the following aspects of wind energy, in general, an advantage/disadvantage?(Musall and Kuik, 2011)	1 = Disadvantage; 5 = Advantage;										
5.1	Has an effect on the landscape		554	2.29	1.08	397	2.66	1.25	951	2.44	1.17	h=0 p=0.2482
5.2	It is a potential danger for birds		554	2.25	1.03	398	2.53	1.18	952	2.37	1.10	h=0 p=0.2482
5.3	It is a potential danger to fishing activity		554	2.32	1.10	397	2.64	1.14	951	2.46	1.13	h=0 p=0.1709

5.4	Might create noise		554	2.38	1.10	397	2.51	1.17	951	2.44	1.13	h=0 p=0.2482
6	How do you appraise the increased development of wind energy in your town?(Musall and Kuik, 2011)	1 = Negative; 5 = Positive;	552	2.57	1.07	397	2.90	1.25	949	2.71	1.16	h=1 p=0.0455
7	How do you appraise its visual impact on the landscape or on the coast?(Musall and Kuik, 2011)	1 = Negative; 5 = Positive;	552	3.59	1.13	398	3.68	1.15	950	3.63	1.14	h=0 p=0.1573
8	The use of conventional fuels is harmful to the environment(Musall and Kuik, 2011)	1 = Disagree; 5 = Agree;	555	3.96	1.11	396	4.20	0.98	951	4.06	1.06	h=0 p=0.1573
9	The use of renewable energy in my community provides a future for our children(Musall and Kuik, 2011)	1 = Disagree; 5 = Agree;	555	4.02	1.09	396	4.19	1.04	951	4.09	1.07	h=0 p=0.1573
10	We should use more renewable energies in Italy(Musall and Kuik, 2011)	1 = Disagree; 5 = Agree;	554	3.97	1.09	397	4.13	1.06	951	4.04	1.08	h=0 p=0.1573
11	We should use more wind energy in Italy(Musall and Kuik, 2011)	1 = Disagree; 5 = Agree;	555	4.03	1.15	397	4.06	1.14	952	4.04	1.14	h=0 p=0.1573
12	Would you be willing to pay 1 – 5% LESS to use energy from renewable resources?[38] (Musall and Kuik, 2011)	Yes/No;	554	0.90	0.30	396	0.89	0.31	950	0.90	0.30	h=0 p=0.1573
13	Would you be willing to pay THE SAME to use energy from renewable resources? (Musall and Kuik, 2011)	Yes/No;	553	0.86	0.35	393	0.82	0.38	946	0.84	0.36	h=0 p=0.1573
14	Would you be willing to pay 1 – 5% MORE to use energy from renewable resources? (Musall and Kuik, 2011)	Yes/No;	554	0.63	0.48	394	0.63	0.48	948	0.63	0.48	h=0 p=0.1573
15	You may have heard of the view that the earth's climate is changing because temperatures have risen over the last 100 years. What is your personal opinion on this? From 1 to 5, how do you think the global climate is currently changing, where 1 indicates "Clearly does not change" and 5 indicates "Clearly changes"? (Kantar, 2022)	1 = Clearly does not change; 5 = Clearly changes;	548	3.99	1.14	386	4.08	1.12	934	4.03	1.14	h=0 p=0.1573
16	How serious a problem do you think climate change was 5 years ago?	0 = it is not at all a serious problem; 10 = it is an extremely serious problem;	556	6.59	2.17	396	7.18	2.18	952	6.84	2.19	h=0 p=0.3865
17	How serious a problem do you think climate change is at this moment?(Eurobarometer, 2019)	0 = it is not at all a serious problem; 10 = it is an extremely serious problem;	556	7.84	1.93	397	8.19	1.80	953	7.98	1.89	h=0 p=0.4386
18	How serious a problem do you think climate change will be in 5 years?	0 = it is not at all a serious problem; 10 = it is an extremely serious problem;	556	8.50	1.99	397	8.83	1.72	953	8.64	1.89	h=0 p=0.4386
19	Do you know that a project has been proposed for the installation of a floating off-shore wind farm in Salento?	Yes/No;	556	0.37	0.48	394	0.29	0.46	950	0.34	0.47	h=0 p=0.1573
20	Do you know where they are proposing to install it? Along which coast? Adriatic or Ionian? Do you know something else?	Open answer;										
21	How much do you agree with the idea of installing a floating off-shore wind farm in Salento?	0 = Totally disagree; 10 = totally agree;	554	6.77	2.30	395	6.74	2.51	949	6.76	2.39	h=0 p=0.1573

[38] In the literature, there are two main ways of asking the willingness to pay more for renewable energy: using monetary amounts (see Dugstad et al. 2020, and the literature therein) or percentage variation of the electricity bill (Musall & Kuik 2011). We followed this second strand of the literature, since our questions 12-14 are an adaptation of the one in Musall and Kuik (2011), who asked for a willingness to pay for renewable energies of 2% more. With the volatility of electricity bills lately these years, we believe that asking about percentages makes these questions more reliable (and comparable across years) with respect to using specific monetary amounts.

Table A.1: Survey questions.

B. Correlation matrices and regression analysis

Table B.1
Correlation matrix for Minor Concerts (MC)

	1.1	1.2	1.3	1.4	2.1	2.2	2.3	3	4	5.1	5.2	5.3	5.4	6	7	8	9	10	11	12	13	14	15	16	17	18	19	21
1.1	1																											
1.2	-0.3018*	1																										
1.3	-0.4149*	-0.2360*	1																									
1.4	-0.3827*	-0.2951*	-0.2124*	1																								
2.1	0.0265	0.0093	0.0107	-0.0255	1																							
2.2	0.0077	0.0097	0.0338	0.0239	0.4261*	1																						
2.3	0.0118	0.0145	0.0101	-0.0104	0.3442*	0.6856*	1																					
3	-0.0435	0.0067	0.0890*	-0.0375	0.0564	0.0083	-0.0096	1																				
4	-0.0654	0.0145	0.1738*	-0.0478	0.1025*	0.1073*	0.0567	0.5759*	1																			
5.1	0.1477*	-0.1180*	0.0599	-0.0646	0.0591	0.0629	0.0028	0.2133*	0.2052*	1																		
5.2	0.1169*	-0.0512	0.017	-0.0317	0.0837*	0.0803	0.0832	0.1441*	0.1362*	0.6996*	1																	
5.3	0.0835*	-0.0897*	-0.0104	0.0565	0.0528	0.047	0.0093	0.1251*	0.1756*	0.5494*	0.5763*	1																
5.4	0.0454	-0.0624	0.076	0.0283	0.0768	0.1341*	0.0515	0.1993*	0.2385*	0.5422*	0.5817*	0.5798*	1															
6	-0.048	-0.0193	0.1048*	0.0247	0.1137*	0.072	0.035	0.1652*	0.1959*	0.3118*	0.3566*	0.3675*	0.3363*	1														
7	0.0427	0.0543	-0.1623*	0.0471	0.0448	0.0441	0.0253	0.0925*	0.0023	0.0125	0.0308	0.0675	0.0476	0.1134*	1													
8	0.0836*	0.0248	-0.2088*	0.0689	-0.0262	-0.028	-0.06	0.0051	-0.0554	-0.057	-0.0106	0.0247	-0.0132	0.0646	0.4250*	1												
9	0.1306*	0.0579	-0.2518*	0.0485	-0.0762	-0.0685	-0.0874*	-0.0034	-0.0952*	-0.0738	-0.0223	0.0157	-0.0591	-0.0011	0.4139*	0.8157*	1											
10	0.0357	0.1061*	-0.2265*	0.0930*	-0.0804	-0.0567	-0.0873*	0.0092	-0.0732	-0.0938*	-0.0576	-0.0153	-0.0561	0.0256	0.3895*	0.7627*	0.7735*	1										
11	0.0393	0.0832	-0.1939*	0.0832	-0.0583	-0.0363	-0.0564	-0.0026	-0.0841*	-0.1036*	-0.0654	-0.0222	-0.0593	-0.0354	0.3907*	0.6984*	0.7315*	0.7273*	1									
12	0.0569	-0.0171	-0.1946*	0.0129	-0.0707	-0.0939*	-0.0558	-0.0559	-0.1110*	-0.0257	-0.0382	-0.036	-0.1123*	-0.0728	0.1224*	0.1047*	0.1737*	0.1192*	0.1561*	1								
13	0.0758	-0.0187	-0.0735	-0.0751	-0.0956*	-0.0655	-0.0695	0.1099*	0.0024	0.04	0.0323	0.062	0.0288	0.0444	0.0469	0.0917*	0.0948*	0.1123*	0.0748	0.4443*	1							
14	-0.0385	0.0223	0.0279	-0.0179	0.0058	-0.0859*	-0.0292	0.1331*	0.1084*	0.0069	0.0377	0.0738	0.0701	0.0572	-0.0536	-0.0459	-0.0477	-0.0216	-0.0802	0.1904*	0.4331*	1						
15	0.0992*	-0.0268	-0.2608*	0.0765	-0.0848*	-0.1464*	-0.1869*	-0.0239	-0.0666	-0.0194	-0.0128	0.0058	-0.0547	-0.1173*	0.2002*	0.2712*	0.3049*	0.2492*	0.2836*	0.1762*	0.1353*	-0.0368	1					
16	-0.0241	0.0564	-0.0946*	0.0588	-0.0557	-0.0702	-0.1244*	0.0409	-0.0149	-0.0318	-0.0365	-0.0356	-0.0043	-0.0465	0.0487	0.1499*	0.1717*	0.1430*	0.1482*	-0.0377	-0.0598	-0.0296	0.1522*	1				
17	-0.0218	0.0787	-0.1455*	0.0561	-0.1038*	-0.1315*	-0.1641*	0.0499	-0.0224	-0.0718	-0.1021*	-0.0946*	-0.1039*	-0.0454	0.2228*	0.2786*	0.3131*	0.2866*	0.3162*	0.0571	-0.0291	-0.1078*	0.3817*	0.6828*	1			
18	-0.0557	0.0812	-0.1063*	0.0486	-0.0718	-0.1060*	-0.1071*	0.0869*	0.0514	0.0115	-0.0148	0.0055	-0.0419	-0.0218	0.2058*	0.2107*	0.2353*	0.2309*	0.2551*	0.0914*	-0.0009	-0.0947*	0.4118*	0.3180*	0.7603*	1		
19	0.0077	0.0414	-0.1322*	0.0916*	-0.0806	0.0033	-0.0403	0.1783*	0.0216	-0.0021	-0.0354	0.0149	-0.0091	-0.0228	0.1820*	0.1961*	0.2533*	0.2289*	0.2243*	0.0846*	0.0377	0.003	0.1395*	0.1297*	0.1988*	0.1531*	1	
21	0.0178	-0.0112	-0.1017*	0.0407	-0.0811	-0.1620*	-0.1509*	0.2185*	0.1305*	0.0764	0.0749	0.1053*	0.0397	0.0795	0.1999*	0.1755*	0.1225*	0.1349*	0.0544	0.0116	0.1418*	0.1265*	0.1793*	0.1214*	0.2446*	0.2315*	0.1158*	1

Table B.2
Correlation matrix for Final Concert (FC)

	1.1	1.2	1.3	1.4	2.1	2.2	2.3	3	4	5.1	5.2	5.3	5.4	6	7	8	9	10	11	12	13	14	15	16	17	18	19	21
1.1	1																											
1.2	-0.2212*	1																										
1.3	-0.4029*	-0.3295*	1																									
1.4	-0.5511*	-0.3623*	-0.0577	1																								
2.1	-0.0426	0.0566	-0.0179	0.0295	1																							
2.2	-0.0001	-0.0123	0.1242*	-0.0519	0.1901*	1																						
2.3	0.0189	-0.0782	0.0897	-0.0044	0.3269*	0.6258*	1																					
3	0.0017	-0.0194	0.0962	-0.067	0.0806	-0.0804	-0.0039	1																				
4	0.0233	-0.0335	0.1085*	-0.0864	0.0899	-0.0566	0.0845	0.6231*	1																			
5.1	0.1071*	-0.1157*	0.096	-0.0961	0.0924	0.1562*	0.2411*	0.2565*	0.3796*	1																		
5.2	0.0932	-0.1633*	0.1451*	-0.0771	0.1311*	0.0735	0.1905*	0.3174*	0.3472*	0.6790*	1																	
5.3	-0.0088	-0.0844	0.1405*	-0.0302	0.1482*	0.0527	0.1781*	0.2802*	0.3349*	0.5478*	0.5655*	1																
5.4	-0.0037	-0.0761	0.1782*	-0.082	0.1498*	0.0369	0.1500*	0.3832*	0.3640*	0.4844*	0.6052*	0.5690*	1															
6	0.0228	-0.1303*	0.2077*	-0.0844	0.016	0.0605	0.1411*	0.2439*	0.2931*	0.4047*	0.3800*	0.4295*	0.3820*	1														
7	-0.0384	0.0566	-0.1237*	0.0906	-0.0667	-0.0591	-0.0481	-0.0231	0.0518	-0.0553	-0.0438	-0.0045	-0.0823	-0.1017*	1													
8	-0.0626	-0.0029	-0.1680*	0.1897*	0.0083	-0.1094*	-0.1249*	-0.0008	0.0604	-0.1157*	-0.1068*	-0.0539	-0.0714	-0.0311	0.4454*	1												
9	-0.1722*	0.0817	-0.2022*	0.2705*	-0.0425	-0.2228*	-0.2418*	-0.1174*	-0.0037	-0.2425*	-0.2002*	-0.1528*	-0.1758*	-0.1449*	0.3829*	0.6774*	1											
10	-0.1259*	0.0478	-0.1631*	0.2111*	-0.0723	-0.1645*	-0.1983*	-0.028	0.0159	-0.2411*	-0.2011*	-0.0896	-0.1215*	-0.1358*	0.4608*	0.6367*	0.6896*	1										
11	-0.1697*	0.0726	-0.1811*	0.2545*	-0.0624	-0.1348*	-0.1616*	-0.0234	0.0219	-0.1641*	-0.1054*	-0.0549	-0.0462	-0.1199*	0.4569*	0.6131*	0.6535*	0.6932*	1									
12	0.0439	0.068	-0.1747*	0.0093	-0.0308	-0.0048	-0.0845	0.06	-0.0013	0.0435	0.0255	0.0113	0.0218	-0.0254	0.0621	0.0965	0.1168*	0.0628	0.1079*	1								
13	0.0394	0.1190*	-0.0852	-0.0988	-0.1460*	-0.1121*	-0.2510*	-0.014	-0.0568	-0.0786	-0.0793	-0.0711	-0.0219	0.0429	0.1810*	0.1215*	0.1885*	0.1872*	0.1439*	0.3739*	1							
14	0.0722	0.0529	-0.0408	-0.1026*	-0.0663	-0.0114	-0.1031*	0.1312*	0.0555	-0.0011	0.0298	-0.0428	0.0652	0.0444	0.061	-0.0246	-0.037	-0.0077	-0.0317	0.1733*	0.3709*	1						
15	-0.0396	0.0685	-0.1990*	0.1163*	-0.2085*	-0.2611*	-0.3457*	-0.1597*	-0.2061*	-0.3589*	-0.2551*	-0.2365*	-0.2496*	-0.2212*	0.2560*	0.3745*	0.5430*	0.5091*	0.4272*	0.1365*	0.2608*	-0.0607	1					
16	-0.045	0.0298	-0.0853	0.0919	0.0293	-0.0781	-0.0041	0.0833	0.1088*	0.0081	0.0333	0.0433	0.0281	0.1253*	0.1817*	0.2400*	0.2139*	0.2026*	0.2521*	0.033	-0.0523	0.0315	0.1175*	1				
17	-0.0066	0.1153*	-0.1883*	0.0369	-0.0872	-0.2117*	-0.2481*	-0.0185	-0.0408	-0.1554*	-0.1325*	-0.0685	-0.1043*	-0.0444	0.2549*	0.2553*	0.3198*	0.2892*	0.3779*	0.0693	0.1007*	0.0825	0.3280*	0.5896*	1			
18	0.0302	0.1351*	-0.2061*	-0.0216	-0.0945	-0.2723*	-0.3124*	-0.0332	-0.0945	-0.1600*	-0.1344*	-0.1174*	-0.1037*	-0.1099*	0.1857*	0.1672*	0.2225*	0.1878*	0.3443*	0.1224*	0.1008*	0.0949	0.2627*	0.3442*	0.6896*	1		
19	-0.0619	-0.0721	-0.0317	0.1758*	-0.1125*	-0.044	-0.0958	0.1033*	0.0484	-0.1170*	-0.1115*	-0.0431	-0.0492	-0.0596	0.1387*	0.1841*	0.1763*	0.1798*	0.2205*	0.0731	0.0511	0.0252	0.1715*	0.1193*	0.1112*	0.1067*	1	
21	0.1465*	-0.0117	-0.1882*	-0.002	-0.0741	-0.1423*	-0.2051*	-0.0734	-0.1583*	-0.1806*	-0.1273*	-0.1568*	-0.1652*	-0.0934	0.1688*	0.1726*	0.0949	0.1641*	0.0662	0.1547*	0.2706*	0.2000*	0.2927*	0.0381	0.1761*	0.1910*	0.1233*	1

Table B.3
Correlation matrix for all data

	1.1	1.2	1.3	1.4	2.1	2.2	2.3	3	4	5.1	5.2	5.3	5.4	6	7	8	9	10	11	12	13	14	15	16	17	18	19	21
1.1	1																											
1.2	-0.2678*	1																										
1.3	-0.4087*	-0.2709*	1																									
1.4	-0.4557*	-0.3236*	-0.1508*	1																								
2.1	-0.0083	0.0333	-0.0025	-0.0029	1																							
2.2	0.004	0.0001	0.0712*	-0.014	0.2988*	1																						
2.3	0.0148	-0.0252	0.0419	-0.0116	0.3407*	0.6568*	1																					
3	-0.0238	-0.0042	0.0915*	-0.0521	0.0737*	-0.0318	-0.0027	1																				
4	-0.0258	-0.0054	0.1454*	-0.0706*	0.1132*	0.0342	0.0825*	0.5970*	1																			
5.1	0.1272*	-0.1139*	0.0731*	-0.0845*	0.0964*	0.1154*	0.1301*	0.2374*	0.3051*	1																		
5.2	0.1053*	-0.0991*	0.0684*	-0.057	0.1233*	0.0821*	0.1446*	0.2284*	0.2504*	0.6954*	1																	
5.3	0.0435	-0.0856*	0.0472	0.0131	0.1168*	0.0556	0.0973*	0.1976*	0.2625*	0.5577*	0.5778*	1																
5.4	0.0239	-0.0677*	0.1155*	-0.0227	0.1199*	0.0900*	0.1014*	0.2836*	0.3005*	0.5163*	0.5937*	0.5763*	1															
6	-0.0152	-0.0672*	0.1444*	-0.0313	0.0777*	0.0722*	0.0982*	0.2068*	0.2588*	0.3719*	0.3791*	0.4071*	0.3611*	1														
7	0.0084	0.0555	-0.1473*	0.0637	-0.0065	-0.0022	-0.0039	0.0434	0.03	-0.0113	0.0016	0.0421	-0.0068	0.0204	1													
8	0.0269	0.0153	-0.1938*	0.1099*	0.0052	-0.0564	-0.0746*	0.008	0.0089	-0.0616	-0.0362	0.0092	-0.03	0.0389	0.4334*	1												
9	0.007	0.0679*	-0.2329*	0.1359*	-0.0474	-0.1327*	-0.1451*	-0.0471	-0.0431	-0.1327*	-0.0894*	-0.0425	-0.1033*	-0.053	0.4027*	0.7648*	1											
10	-0.0304	0.0833*	-0.2026*	0.1379*	-0.0642*	-0.1013*	-0.1275*	-0.0032	-0.0224	-0.1434*	-0.1108*	-0.0348	-0.0791*	-0.0345	0.4206*	0.7165*	0.7417*	1										
11	-0.0481	0.0791*	-0.1887*	0.1544*	-0.0568	-0.0805*	-0.1009*	-0.0107	-0.0342	-0.1255*	-0.0806*	-0.0329	-0.0525	-0.0700*	0.4189*	0.6626*	0.6992*	0.7124*	1									
12	0.0514	0.0179	-0.1868*	0.0112	-0.0515	-0.0524	-0.0702*	-0.0052	-0.0631	0.0034	-0.0108	-0.0177	-0.0536	-0.0529	0.0952*	0.0984*	0.1479*	0.0937*	0.1351*	1								
13	0.0597	0.04	-0.0777*	-0.0839*	-0.1262*	-0.0900*	-0.1579*	0.0513	-0.0316	-0.0234	-0.0262	-0.0039	0.003	0.0361	0.1034*	0.0970*	0.1306*	0.1399*	0.1041*	0.4129*	1							
14	0.0079	0.0348	0.0021	-0.0539	-0.0297	-0.0512	-0.0616	0.1320*	0.0840*	0.0034	0.0337	0.0244	0.0679*	0.0505	-0.0055	-0.0373	-0.0159	-0.06	0.1829*	0.4049*	1							
15	0.0415	0.0114	-0.2370*	0.0917*	-0.1370*	-0.1951*	-0.2503*	-0.0794*	-0.1192*	-0.1611*	-0.1138*	-0.0889*	-0.1350*	-0.1561*	0.2243*	0.3117*	0.4005*	0.3543*	0.3424*	0.1585*	0.1869*	-0.0466	1					
16	-0.0326	0.0461	-0.0900*	0.0665*	0.0056	-0.0662*	-0.057	0.0647*	0.0589	0.0079	0.0115	0.0163	0.0172	0.0502	0.1093*	0.1958*	0.1965*	0.1755*	0.1919*	-0.0098	-0.0621	-0.004	0.1417*	1				
17	-0.0157	0.0931*	-0.1598*	0.0438	-0.0800*	-0.1604*	-0.1885*	0.0253	-0.0165	-0.0908*	-0.1023*	-0.0701*	-0.0980*	-0.0311	0.2378*	0.2771*	0.3203*	0.2922*	0.3404*	0.0599	0.0207	-0.032	0.3621*	0.6491*	1			
18	-0.0227	0.1012*	-0.1397*	0.0175	-0.0675*	-0.1695*	-0.1797*	0.0425	0.0042	-0.0441	-0.0527	-0.0295	-0.0607	-0.0452	0.1997*	0.2032*	0.2354*	0.2193*	0.2886*	0.1010*	0.0353	-0.0224	0.3568*	0.3347*	0.7362*	1		
19	-0.0206	-0.0044	-0.0952*	0.1287*	-0.1031*	-0.0214	-0.0706*	0.1426*	0.0213	-0.063	-0.0767*	-0.019	-0.03	-0.0485	0.1607*	0.1816*	0.2164*	0.2028*	0.2207*	0.0804*	0.0463	0.0114	0.1488*	0.1140*	0.1570*	0.1286*	1	
21	0.0747*	-0.0115	-0.1355*	0.0219	-0.0769*	-0.1524*	-0.1759*	0.0853*	-0.0048	-0.0455	-0.0213	-0.0121	-0.0535	-0.0035	0.1856*	0.1717*	0.1098*	0.1465*	0.0594	0.0754*	0.2005*	0.1584*	0.2266*	0.0834*	0.2137*	0.2125*	0.1186*	1

Table B.4

Regression analysis for questions 1.1 - 19 with only demographics as explanatory variables.

	1.1				1.2				1.3				1.4			
	MC	FC	All data	All int.	MC	FC	All data	All int.	MC	FC	All data	All int.	MC	FC	All data	All int.
Female	0.309	-0.747*	-0.078	0.328	0.172	0.125	0.154	0.172	-0.385**	0.148	-0.134	-0.352**	-0.095	0.195	0.010	-0.098
Age	-0.044	0.146	0.013	-0.047	-0.012	-0.014	-0.012	-0.012	0.071	-0.012	0.037	0.065	-0.052	-0.044	-0.052	-0.055
Education	-0.098	0.109	-0.064	-0.104	-0.044	0.007	-0.028	-0.044	-0.038	-0.054	-0.031	-0.036	0.120	-0.034	0.082	0.126
Resident	1.126***	0.197	0.633**	1.198***	-0.370*	-0.353**	-0.363***	-0.371*	-0.341	0.320**	0.068	-0.311	-0.098	-0.011	-0.045	-0.099
Final Concert			0.170	0.251			-0.058	-0.215			0.081	-0.384			-0.273*	0.030
Final Concert#Female				-0.999**				-0.048				0.513**				0.277
Final Concert#Age (1)				0.179				-0.002				-0.080				0.014
Final Concert#Education (1)				0.203				0.051				-0.020				-0.158
Final Concert#Resident (1)				-1.022**				0.018				0.664**				0.090
Constant	2.333***	2.584**	2.694***	2.320***	3.187***	2.974***	3.139***	3.188***	2.410***	2.084***	2.057***	2.423***	2.313***	2.308***	2.337***	2.302***
F	3.347	0.957	1.322	1.905	1.147	1.119	1.772	1.026	1.699	1.685	0.512	1.544	0.863	0.197	0.840	0.695
r_p^2	0.008	0.004	0.002	0.006	0.003	0.004	0.003	0.003	0.005	0.006	0.001	0.005	0.002	0.001	0.001	0.002
N	554	387	941	941	554	387	941	941	555	387	942	942	555	387	942	942

	2.1				2.2				2.3				3				4			
	MC	FC	All data	All int.	MC	FC	All data	All int.	MC	FC	All data	All int.	MC	FC	All data	All int.	MC	FC	All data	All int.
Female	-0.485	-0.577	-0.555	-0.485	-0.321	0.078	-0.158	-0.330	-0.064	-0.250	-0.183	-0.045	-0.323**	-0.386**	-0.350***	-0.328**	-0.193	-0.451**	-0.305**	-0.193
Age	-0.096	0.204	0.053	-0.096	-0.052	-0.309	-0.151	-0.054	-0.036	0.147	0.070	-0.027	0.049	0.209***	0.106***	0.050	0.096*	0.168**	0.122***	0.096*
Education	-0.570	0.025	-0.323	-0.571	-0.447*	-0.700**	-0.541***	-0.460*	-0.469	-0.199	-0.303*	-0.346	0.086	-0.049	0.052	0.087	0.067	-0.176	-0.012	0.067
Resident	0.217	-0.667	-0.393	0.217	0.527	0.603	0.572	0.544	1.063	0.288	0.482	0.782	-0.041	0.199	0.096	-0.044	-0.026	0.104	0.048	-0.026
Final Concert			1.637***	-0.381			0.581	1.634			1.111***	0.730			0.205*	0.137			0.611***	1.281*
Final Concert#Female				-0.091				0.405				-0.265				-0.052				-0.259
Final Concert#Age (1)				0.300				-0.246				0.206				0.155*				0.072
Final Concert#Education (1)				0.595				-0.218				0.098				-0.136				-0.243
Final Concert#Resident (1)				-0.884				0.041				-0.428				0.241				0.130
Constant	-3.186	-3.574*	-3.864***	-3.189	-1.830	-0.358	-1.526	-1.931	-3.597*	-0.921	-2.327**	-2.546	2.276***	2.391***	2.120***	2.267***	1.068**	2.594***	1.490***	1.312***
F	0.600	0.548	2.628	1.534	1.822	2.362	2.852	2.077	1.301	1.101	4.361	2.461	2.068	3.498	3.816	2.587	1.190	3.185	6.561	4.204
r_p^2	0.012	0.007	0.025	0.029	0.013	0.022	0.018	0.020	0.012	0.010	0.022	0.024	0.004	0.011	0.006	0.008	0.003	0.011	0.011	0.013
N	555	398	953	953	555	398	953	953	555	398	953	953	553	396	949	949	553	397	950	950

	5.1				5.2				5.3				5.4			
	MC	FC	All data	All int.	MC	FC	All data	All int.	MC	FC	All data	All int.	MC	FC	All data	All int.
Female	-0.328**	-0.409**	-0.365***	-0.338**	-0.260**	-0.439***	-0.334***	-0.268**	-0.260*	-0.245	-0.252**	-0.258*	-0.235*	-0.170	-0.204*	-0.239*
Age	-0.025	0.076	0.012	-0.026	-0.068	0.103	-0.004	-0.069	-0.122**	0.021	-0.068*	-0.122**	-0.054	0.074	-0.005	-0.054
Education	-0.203***	-0.247*	-0.214***	-0.208***	-0.220***	-0.147	-0.188***	-0.224***	-0.123	-0.003	-0.080	-0.122	-0.256***	-0.022	-0.175***	-0.259***
Resident	0.102	0.213	0.168	0.104	-0.019	0.264	0.144	-0.020	0.094	0.036	0.068	0.092	0.146	0.289*	0.231*	0.149
Final Concert			0.591***	0.409			0.406***	-0.409			0.433***	-0.283			0.256**	-0.982
Final Concert#Female				-0.060				-0.162				0.011				0.071
Final Concert#Age (1)				0.100				0.169**				0.142*				0.127
Final Concert#Education (1)				-0.032				0.082				0.119				0.237*
Final Concert#Resident (1)				0.102				0.278				-0.055				0.133
Constant	2.827***	3.240***	2.701***	2.827***	3.075***	2.662***	2.670***	3.078***	2.876***	2.596***	2.606***	2.877***	3.140***	2.141***	2.642***	3.140***
F	3.591	2.963	8.694	4.949	4.316	3.127	6.856	4.449	3.245	0.677	5.887	3.642	4.799	1.321	3.871	2.947
r_p^2	0.008	0.009	0.015	0.015	0.009	0.011	0.012	0.014	0.007	0.002	0.010	0.011	0.010	0.004	0.006	0.008
N	554	397	951	951	554	398	952	952	554	397	951	951	554	397	951	951

	6				7				8				9				10			
	MC	FC	All data	All int.	MC	FC	All data	All int.	MC	FC	All data	All int.	MC	FC	All data	All int.	MC	FC	All data	All int.
Female	-0.156	-0.173	-0.158	-0.161	-0.124	0.203	0.010	-0.126	0.091	0.285	0.175	0.090	0.117	0.079	0.112	0.119	0.172	0.010	0.114	0.175
Age	0.020	-0.028	0.007	0.022	0.090*	-0.097	0.020	0.090*	0.009	0.117	0.050	0.009	0.085	0.024	0.065	0.086	0.066	0.079	0.074	0.067
Education	-0.129**	-0.086	-0.109**	-0.132**	-0.031	0.009	-0.028	-0.031	-0.062	0.133	0.008	-0.061	0.070	0.381**	0.161**	0.071	0.024	0.354**	0.127	0.023
Resident	-0.205	0.321*	0.075	-0.214	-0.009	-0.321*	-0.186	-0.009	-0.320	-0.203	-0.249	-0.318	-0.349	-0.426*	-0.395**	-0.353	-0.306	-0.245	-0.274*	-0.312
Final Concert			0.421***	0.007			0.107	0.495			0.391***	-0.712			0.284*	-0.510			0.287**	-0.801
Final Concert#Female				-0.003				0.323				0.201				-0.041				-0.165
Final Concert#Age (1)				-0.050				-0.186**				0.111				-0.064				0.009
Final Concert#Education (1)				0.048				0.038				0.196				0.303*				0.325*
Final Concert#Resident (1)				0.522**				-0.303				0.111				-0.065				-0.072
Constant	3.097***	3.101***	2.825***	3.102***	3.731***	4.259***	4.008***	3.742***	4.931***	4.188***	4.475***	4.915***	4.393***	3.915***	4.215***	4.409***	4.414***	3.653***	4.076***	4.435***
F	1.886	1.370	4.109	2.929	1.120	1.696	0.766	1.358	0.595	1.544	3.056	2.006	1.276	2.977	4.154	2.723	1.113	2.146	3.262	2.290
r_p^2	0.004	0.004	0.007	0.008	0.002	0.005	0.001	0.004	0.001	0.006	0.006	0.007	0.003	0.011	0.007	0.009	0.003	0.008	0.006	0.007
N	552	397	949	949	552	398	950	950	555	396	951	951	555	396	951	951	554	397	951	951

	11				12				13				14			
	MC	FC	All data	All int.	MC	FC	All data	All int.	MC	FC	All data	All int.	MC	FC	All data	All int.
Female	0.479**	0.151	0.354**	0.484**	0.678**	-1.097***	-0.099	0.678**	0.314	-0.189	0.089	0.314	0.017	-0.140	-0.056	0.017
Age	0.027	0.111	0.059	0.027	-0.060	-0.092	-0.076	-0.060	-0.135	-0.198*	-0.159**	-0.135	-0.124*	-0.049	-0.098*	-0.124*
Education	0.069	0.338**	0.153	0.069	0.074	-0.430*	-0.107	0.074	-0.023	0.094	0.016	-0.023	0.160	-0.115	0.076	0.160
Resident	-0.205	-0.318	-0.264	-0.207	-0.012	0.251	0.120	-0.012	-0.413	0.075	-0.118	-0.413	-0.144	0.113	0.005	-0.144
Final Concert			0.078	-0.771			-0.123	2.439*			-0.386**	-0.736			-0.067	0.561
Final Concert#Female				-0.334				-1.776***				-0.503				-0.157
Final Concert#Age (1)				0.081				-0.032				-0.062				0.075
Final Concert#Education (1)				0.264				-0.504				0.117				-0.275
Final Concert#Resident (1)				-0.106				0.262				0.487				0.258
Constant	4.386***	3.642***	4.153***	4.401***	1.872**	4.311***	2.749***	1.872**	2.476***	1.739**	2.270***	2.476***	0.482	1.043*	0.590	0.482
F	1.838	2.057	2.557	1.815	6.039	16.279	1.804	23.336	5.774	4.824	8.665	12.712	8.245	1.791	5.348	10.048
r_p^2	0.005	0.007	0.005	0.006	0.016	0.058	0.004	0.035	0.011	0.013	0.010	0.014	0.011	0.003	0.004	0.008
N	555	397	952	952	554	396	950	950	553	393	946	946	554	394	948	948

	15				16				17				18				19			
	MC	FC	All data	All int.	MC	FC	All data	All int.	MC	FC	All data	All int.	MC	FC	All data	All int.	MC	FC	All data	All int.
Female	-0.101	0.099	-0.018	-0.101	0.062	0.155	0.103	0.063	0.206	0.408	0.292*	0.207	-0.067	0.330	0.095	-0.074	-0.423**	-0.263	-0.364**	-0.423**
Age	0.128*	-0.059	0.061	0.130*	-0.088	0.089	-0.019	0.090	0.011	0.034	0.024	0.011	-0.002	0.044	0.013	-0.002	0.152**	0.214**	0.171***	0.152**
Education	0.134	0.235	0.156*	0.136	0.055	0.045	0.078	0.055	0.217*	0.147	0.213**	0.217*	0.534***	0.189	0.430***	0.519***	0.131	0.022	0.099	0.131
Resident	-0.417	-0.723***	-0.590***	-0.426	-0.802***	0.249	-0.212	-0.808***	-0.828***	0.003	-0.363*	-0.829***	-0.336	0.123	-0.064	-0.328	0.987***	0.836***	0.907***	0.987***
Final Concert			0.090	0.340			0.679***	-0.515			0.361**	-0.151			0.349	0.779			-0.038	0.217
Final Concert#Female				0.199				0.087				0.198				0.413				0.160
Final Concert#Age (1)				-0.188				0.178				0.023				0.047				0.062
Final Concert#Education (1)				0.094				-0.012				-0.070				-0.319				-0.109
Final Concert#Resident (1)				-0.277				1.056***				0.827**				0.449				-0.151
Constant	4.222***	4.623***	4.467***	4.239***	7.390***	6.906***	6.616***	7.404***	7.989***	7.844***	7.538***	7.992***	8.346***	9.029***	8.264***	8.322***	-2.047***	-1.831***	-1.957***	-2.047***
F	1.997	3.119	3.888	2.560	2.406	0.427	4.351	3.675	3.882	0.834	4.109	2.894	2.977	0.462	2.936	2.018	19.552	19.110	42.541	43.762
r_p^2	0.005	0.011	0.007	0.009	0.005	0.001	0.006	0.008	0.007	0.002	0.006	0.007	0.006	0.002	0.004	0.005	0.032	0.040	0.038	0.039
N	548	386	934	934	556	396	952	952	556	397	953	953	556	397	953	953	556	394	950	950

Note: Female: dummy equals 1 if female. Age: categorical variable with values from 1 (less than 25 years old) to 5 (more than 60 years). Education: categorical variable with values from 1 (primary education) to 5 (postgraduate education). Resident: dummy equals 1 if interviewees live in the Province of Lecce. Final concert: dummy equals 1 if interviewees were at the Final Concert (instead of the Minor Concerts). MC: Minor Concerts data. FC: Final Concert data. All: all data. All int: regression including interactions with Final Concert. Tobit regression analysis with robust errors. F: Fisher test. r_p^2: R-squared adjusted. N: number of observations. Logit regression analysis with robust errors for questions 12, 13, 14 and 19. Chi-squared test for these questions. ***$p < 0.01$; **$p < 0.05$; *$p < 0.1$.

C. Markov model results

C.1. Construction of the transition probability matrix

Here we explain the construction of the transition probability matrices developed in Section 4.3.

The vector $N_1 = (N_{1,1}, N_{1,2}, N_{1,3})$ shows how many interviewees – out of the 952 who completed questions 16-18 – fall in the three different states according to their answer to question 16. For example, at time 1 (past) 68 interviewees indicated a value < 4 (state 1), 334 a value between 4 and 6 (state 2), the remaining 550 a value > 6 (state 3). Using N_1 and one column of matrix (6a) (e.g., the first one), we can calculate how many interviewees at a specific time (e.g., 2) are expected to indicate values in a specific state (e.g., 1), in the following way:

$$\overline{N}_{2,1} = N_{1,1} \cdot 0.25 + N_{1,2} \cdot 0.01 + N_{1,3} \cdot 0.01 = 68 \cdot 0.25 + 334 \cdot 0.01 + 550 \cdot 0.01 = 25.84. \tag{10}$$

The example in (10) shows that approximately 26 interviewees are expected to answer with a value between 1 and 3 (state 1) to question 17 (first column of matrix (6a), first row of matrix (6b)). In the same way, we can calculate $\overline{N}_{2,2}$ and $\overline{N}_{2,3}$, thereby completing the vector $\overline{N}_2$ showing the expected distribution of interviewees in the three states according to their answer to question 17. The obtained expected distribution is close to the real one observed in the survey which consisted of $N_2 = (22, 163, 768)$. Proceeding in this way, the vector $\overline{N}_3 = (\overline{N}_{3,1}, \overline{N}_{3,2}, \overline{N}_{3,3})$ can be calculated as in (10) by using $\overline{N}_2$ and matrix (6b) in order to present the distribution of the three states at time 3 (question 18). Finally, the product between the two matrices (6a) and (6b) leads to matrix (6), which directly links question 16 (past) to question 18 (future).

C.2. Transition probability matrices on the different samples

We extend the analysis of the transition probability matrices developed in Section 4.3. We analyze separately for MC and FC, in order to check that the same trend is found regardless of the sample, with FC including a significantly higher number of tourists.

$$MC \quad A_{1-2} = \begin{array}{c} \\ 1 \\ 2 \\ 3 \end{array} \begin{array}{c} \begin{array}{ccc} 1 & 2 & 3 \end{array} \\ \begin{pmatrix} 0.21 & 0.59 & 0.20 \\ 0.01 & 0.39 & 0.60 \\ 0.01 & 0.05 & 0.94 \end{pmatrix} \end{array} \tag{11a}$$

$$A_{2-3} = \begin{array}{c} \\ 1 \\ 2 \\ 3 \end{array} \begin{array}{c} \begin{array}{ccc} 1 & 2 & 3 \end{array} \\ \begin{pmatrix} 0.61 & 0.16 & 0.23 \\ 0.07 & 0.41 & 0.52 \\ 0.01 & 0.02 & 0.97 \end{pmatrix} \end{array}, \tag{11b}$$

$$A_{1-3} = \begin{array}{c} \\ 1 \\ 2 \\ 3 \end{array} \begin{array}{c} \begin{array}{ccc} 1 & 2 & 3 \end{array} \\ \begin{pmatrix} 0.17 & 0.28 & 0.55 \\ 0.04 & 0.18 & 0.78 \\ 0.01 & 0.05 & 0.94 \end{pmatrix} \end{array}. \tag{11c}$$

$$FC \quad A_{1-2} = \begin{array}{c} \\ 1 \\ 2 \\ 3 \end{array} \begin{array}{c} \begin{array}{ccc} 1 & 2 & 3 \end{array} \\ \begin{pmatrix} 0.32 & 0.36 & 0.32 \\ 0.01 & 0.12 & 0.87 \\ 0.01 & 0.05 & 0.94 \end{pmatrix} \end{array}, \tag{12a}$$

$$A_{2-3} = \begin{array}{c} \\ 1 \\ 2 \\ 3 \end{array} \begin{array}{c} \begin{array}{ccc} 1 & 2 & 3 \end{array} \\ \begin{pmatrix} 0.44 & 0.33 & 0.23 \\ 0.05 & 0.33 & 0.62 \\ 0.01 & 0.03 & 0.96 \end{pmatrix} \end{array}, \tag{12b}$$

$$A_{1-3} = \begin{array}{c} \\ 1 \\ 2 \\ 3 \end{array} \begin{array}{c} \begin{array}{ccc} 1 & 2 & 3 \end{array} \\ \begin{pmatrix} 0.16 & 0.24 & 0.60 \\ 0.01 & 0.07 & 0.92 \\ 0.01 & 0.05 & 0.94 \end{pmatrix} \end{array}. \tag{12c}$$

According to the test of homogeneity of these two different samples with six degrees of freedom (hypothesis $H_0 : A^{MC}_{1-2} = A^{FC}_{1-2}$ and $H_0 : A^{MC}_{2-3} = A^{FC}_{2-3}$), the matrices of MC and FC are not statistically different both for the transition between steps 1 and 2 and for the transition between steps 2 and 3 according to a significance level of 0.05, as also found through the Chi-squared two-sample test results shown in the last column of Table A.1.

Contrariwise, if we compare the two matrices referred to the same event (MC or FC) but to different transitions, namely from past to present vs. from present to future (hypothesis $H_0 : A_{1-2} = A_{2-3}$), we obtain that they are statistically different for both events with a significance level of 0.05. The same holds when we compare the product matrix (11c) for MC (resp., (12c) for FC) – linking the past to the future – to the component matrices (11a) (resp., (12a)) and (11b) (resp., (12b)). The transition probabilities from state 1 to state 3 and from state 2 to state 3 are significantly higher in A_{1-3} than in A_{1-2} or A_{2-3}, with a significance level of 0.05. This shows once more the increase in the perception of the seriousness of the climate change problem when comparing further time steps. These two are the same results found above with all data (pooling the two samples).

The only differences that we find between the two subsamples concern the size of the (similar) trend. First, as for product matrices (8a) vs. (7a), the fraction of subjects in state 2 at time 1 switching to state 3 at time 2 is higher in FC (87% against 60%); as for product matrices (8b) vs. (7b), a similar difference in size is found when looking at the same 2-3 state switch between time 2 and time 3 (62% against 52%). Correspondingly, the product matrices (12c) and (11c) present very similar transition probabilities except for the switch from state 2 at time 1 to state 3 at time 3 (92% in FC against 78% in MC).