Community participation in heritage tourism planning: Is it too much to ask?

Considering the complications of collecting empirical data on community participation, this study proposes a new methodological approach that departs from the current literature. For the first time, an experimental procedure is adopted to conduct a direct comparison between participatory and non-participatory decision-making in the context of heritage tourism planning. Contrary to previous work, this is the first *ex-ante* assessment of community participation at a destination with no such prior experience. The analysis relies on behavioural data on choices, deliberation, and conflict studied in the context of a controlled collaborative environment. The findings suggest that choices and deliberation between participatory and non-participatory groups exhibit no statistically significant differences although participatory groups were more susceptible to conflict. However, interestingly, conflict was constructive as it increased provisions for heritage goods. Furthermore, intra-group heterogeneity did not always affect collective decisions negatively whereas trust and institutional credibility played a major role in influencing both individual and collective preferences. These findings have important implications for research and policy, opening a novel avenue for the systematic study of participation dynamics to inform the instigation of participatory endeavours.

Keywords: Heritage tourism, community participation, voluntary contributions to public goods, experimental economics

Introduction

The concept of community participation was introduced to tourism studies more than three decades ago (Murphy, 1985), yet it remains topical in sustainable tourism research. Relevant scholarly work acknowledges community actors, such as destination residents and local

business owners, as stakeholders who deserve to participate not only in tourism trade but also in the planning and decision-making for tourism development (Cohen-Hattab, 2013; Reggers et al., 2016; Saufi et al., 2014). The advocates of participatory governance suggest that such approach can increase trust and public consensus, lead to tourism strategies that correspond to local needs and contribute to destination sustainability (Byrd et al., 2009; Currie et al., 2009; Ooi et al., 2015).

Community participation is also emphasised in the context of heritage management and by extension, heritage tourism planning (Den, 2014; Oevermann et al., 2016; Su & Wall, 2014). Heritage management theorists propose the involvement of the public in decision-making as a means of accommodating community-relevant values and interests, protecting cultural diversity, and promoting viable solutions that balance conservation and competing pressures from socio-economic activity (Landorf, 2009; Pacifico & Vogel, 2012). Likewise, world-leading organisations, such as UNESCO (2012), propose a heritage tourism paradigm where destination hosts are involved in the 'dialogue' of policy-shaping so that sustainability can be pursued through synergies between experts and communities (Waterton & Smith, 2010).

Despite growing consensus over community participation, top-down non-participatory approaches to decision-making still prevail in heritage tourism planning, where decisions are made exclusively by traditional 'power-holders', such as state elected and appointed officials (Su & Wall, 2014; Su et al., 2016). At the same time, destinations that embark on collaborative projects focus on establishing formal partnerships with major government and non-government institutions, rather than with informal groups of citizens (Landorf, 2009). Apart from few exemptions, efforts to engage with the broader public have not yielded meaningful results while creating several procedural difficulties that make the whole participation affair unpleasant for both policymakers and heritage managers (Izdiak et al., 2015). The most commonly reported barriers are time and monetary costs, unwillingness to share power, problems in reaching consensus and distrust in the quality of collective decisions (Irvin & Stansbury, 2004; Jordan et al., 2013; Marzuki et al., 2012). Consequently, citizen input tends to be marginalised and largely confined to informing and consultation, reflecting a type of

'minimal' involvement, where participants have little power to influence policy drastically (Marzuki et al., 2012; Spencer, 2010).

Existing literature provides some empirical insights based on *ex-post* assessments of participatory endeavours by employing primarily qualitative survey tools, such as interviews and focus groups (see *inter alia* Aas et al., 2005; Beaumont & Dredge, 2010; Byrd, 2007; Jordan et al., 2013; Nyaupane et al., 2006; Spencer, 2010; Wray, 2011). Nevertheless, the limited naturally occurring data make it difficult to observe the impact of community-inclusive decision-making in heritage tourism or compare and analyse the process of participatory governance with counterfactuals in destinations with no prior experience of pluralist approaches to planning. Admittedly, current scarcity of hands-on experiences in participatory decision-making and its resulting gap between theoretical discourses and empirical data act unfavourably to convincingly persuade policymakers to tackle the political, socio-cultural and practical complexities of pursuing the democratization of tourism planning (Lovan et al., 2017). Thus, more research is required into the feasibility and outcomes of participation to provide further evidence that the concept is not 'idealistic' but rather worthy of implementation.

To address these issues, the paper adopts a novel approach inspired by experimental economics in order to further our knowledge of community involvement in heritage tourism decision-making. In particular, we employ a quasi-field economic experiment to conduct, for the first time, an *ex-ante* evaluation of community participation by directly comparing its performance with non-participatory planning. The study field is Kastoria, an emerging rural destination in Greece that is challenged by economic restructuring and heritage vulnerability. Our methodology allows us to explore deliberation, conflict and investment outcomes of government-led, grass-roots, and mixed participatory groups consisting of both state officials and citizens. To do so, we expose subjects to collective decision-making during an endowment allocation task with the view to reveal behaviour and the interplay of different interests under realistic circumstances. We further explore conflict by examining group negotiations, comparing individual preferences with collective choices, and considering the effects of intra-group heterogeneity. This methodological approach opens a new avenue into

exploring participatory dynamics and processes that bear important policy implications for the instigation and viability of citizen involvement in sustainable tourism planning.

Therefore, this article makes three key contributions. Firstly, it introduces the use of experimental protocols similar to that of public goods for studying otherwise difficult to capture phenomena, such as collective decision-making and negotiation in a controlled social environment, appropriate for juxtaposing alternative governance structures and counterfactuals. Secondly, it explores how non-expert social actors perform in a joint decision-making context either autonomously or in collaboration with state officials, when assigned with real power over investment choices. Finally, it examines important elements of collaborative planning, such as conflict, trust, and their impact on decisions, in a destination with no previous participatory experiences.

Participatory planning for heritage tourism: theory and hypotheses

Heritage tourism is special-interest tourism driven by visitor engagement with elements of the past, such as archaeological sites, local architecture, folk arts, crafts, and traditions that witness the cultural legacy of destinations (Timothy & Boyd, 2006). The 'heritagisation' of tourism experiences is increasingly recognised as a means of enhancing destination attractiveness, especially in rural areas, while providing incentives for conservation (Antonakakis et al., 2015; Bessiere, 2013; Dragouni & Fouseki, 2017). Nonetheless, the sustainable development of heritage tourism destinations does not merely require substantial investment but also necessitates host community consent for its strategic direction. Especially in the heritage field, achieving a balance between economic growth, socio-cultural vitality and heritage viability presents additional complexity, since the conservation of the past is often seen as antagonistic to contemporary community needs (Aas et al., 2005; Landorf, 2009; Lowenthal, 2015; Pacifico & Vogel, 2012). Therefore, a key principle for sustainable heritage tourism is the active involvement of multiple stakeholders in its planning, such as citizens and community groups that (re)produce heritage and interact with it (Cohen-Hatttab, 2013; Marzuki et al., 2012; Reggers et al., 2016; Salazar, 2012). As it is widely held in the literature, the

participation of these stakeholders in the development of heritage tourism is vital for achieving equitability, compromising divergent interests, devising legitimate policies, improving heritage interpretation, enhancing visitor experiences, and maintaining long-term commitment to sustainability goals (see *inter alia* Byrd et al., 2009; Chirikure et al., 2010; Currie et al., 2009; Nunkoo & Ramkissoon, 2011; Oevermann et al., 2016; Okazaki, 2008; Ooi et al., 2015; Pacifico & Vogel, 2012; Reid, 2003). In this light, community participation can be described as a pluralist power structure (Jordan et al., 2013) or more dynamically, as a process of empowerment of the broader public through its inclusion in decision-making.

Despite the widespread theoretical consensus for community participation in tourism strategies, in practice, destination hosts have seldom genuine control over relevant decisions (Jordan et al., 2013; Su et al., 2016; Su & Wall, 2014). Rather, community input is mostly confined to public consultation with limited impact on the actual shaping of policies (Marzuki et al., 2012; Spencer, 2010). Traditional 'power-holders', such as government agents and appointed officials, are accustomed to expert-led planning and resist sharing their power with less formal stakeholders (Jordan et al., 2013; Landorf, 2009). At the same time, heritage professionals, who hold authority over the management of antiquities and other resources that shape the cultural fabric of destinations, are often reluctant to interact on terms of parity with non-experts in heritage matters (Waterton & Smith, 2010).

While scholars have proposed compelling participatory models (e.g. Kimbu & Nhoasong, 2013; Oevermann et al., 2016; Okazaki, 2008), and have used case-study research to assess how citizen participation might work in a particular context (see, for instance, Aas et al., 2005; Beaumont & Dredge, 2010; Byrd, 2007; Izdiak et al., 2015; Jordan et al., 2013; Marzuki et al., 2012; Nyaupane et al., 2006; Spencer, 2010; Wray, 2011), we still have fragmentary evidence on the effectiveness of community involvement and its impact on decision-making when citizens are assigned with direct power to influence policy. Since natural observations of participation occur rather infrequently in the planning field, *ex-post* analyses are limited while there is a research gap in exploring destinations prior to promoting participatory processes, as a means to inform their instigation in destinations which are unfamiliar with the process and

where there is low pre-existing agency of non-expert communities. This is vital as despite the inherent qualities and ideals of a democratic planning system, pursuing participation as an end in itself might not be convincing as a standalone position considering the barriers and costs involved. Moreover, it is suggested that in the eyes of policymakers, a failed participatory attempt is worse than none, leading to avoidance of community involvement (Lovan et al., 2017). Thus, more evidence would be valuable for increasing our knowledge of the process and outcomes of host community participation at Arnstein's (1969) citizen power levels.

Based on the literature, moving beyond mere consultation to pluralist structures of decision-making can be particularly complex. First and foremost, the participation of more interest groups in the shaping of tourism development is likely to tone up the expression of opposing policy preferences (Ebdon & Franklin, 2008; Ostrom, 1990). As it is suggested, disparity and often incompatibility of concerns across stakeholders can complicate collaboration and decrease effectiveness (Byrd et al., 2009; Izdiak et al., 2015; Waligo et al., 2013). Furthermore, trust issues are extremely relevant at higher levels of participation, given that tourism development policies feature capital investment decisions that need to be reached collaboratively (Jordan et al., 2013). From this standpoint, the credibility of community becomes essential and needs to be further established as power distribution necessitates trust on behalf of both state and civic stakeholders (Kimbu & Ngoasong, 2013; Nunkoo et al., 2012; Nunkoo & Gursoy, 2016; Nunkoo & Ramkissoon, 2012).

Moreover, heritage goods can be seen as liabilities in the eyes of non-expert communities as they pose and receive pressures from competing economic activities (Chirikure et al., 2010). Especially in emergent destinations, where heritage tourism benefits have not been felt yet, policy and resource allocation preferences of non-expert citizens may depart from expert opinions and thus, planning decisions may end up having counter-effects on heritage sustainability. Moreover, although theoretically, participation is believed to form a step towards a more equitable share of tourism benefits, it is feared that the practical application of community-inclusiveness could serve as an opportunity to ratify decisions in favour of the personal gains of its most persuasive and powerful participants (Irvin & Stansbury, 2004).

These concerns imply an inherent ‘risk’ in participatory planning, as to whether decisions reached collaboratively would be more effective in promoting commonly-beneficial and sustainable heritage tourism action.

Based on this premise, it is interesting to explore whether decisions made by participatory groups with wider stakeholder representation (e.g. non-exert residents) lead to less ‘pro-heritage’ investment decisions as compared to conventional top-down decision-making, where investment choices are made exclusively by state officials and appointed heritage experts. Thus, our first hypothesis (H1) is formulated as follows:

H1. *Participatory decision-making leads to lower pro-heritage investments compared to non-participatory investment choices.*

As implied earlier, commonly-reported obstacles in pursuing participation are difficulties in reaching consensus, lengthy decision-making times, and the existence of multiple and often incompatible interests (Byrd et al., 2009; Izdiak et al., 2015; Marzuki et al., 2012). In particular, it is maintained that longer deliberation exposes decision-making to diverse values that may exist across a community and that contested opinions give rise to conflict (Lo et al., 2013). Although the essence of participation is the opportunity of social actors and local agents to communicate and reach a compromise, conflict is generally regarded as a destructive force in decision-making (Byrd et al., 2009; Marzuki et al., 2012). Based on these narratives, it would be interesting to explore the degree to which community involvement entails a trade-off between inclusiveness and efficiency by testing the performance of participatory against non-participatory groups within the same context. Having more evidence on this issue or knowing what to expect would be valuable as extensive decision-making procedures or failure to co-operate during conflictual deliberation can be particularly costly. This leads us to our second hypothesis (H2):

H2. *Participatory decision-making is less effective that non-participatory decision-making, in terms of being more time-consuming and conflictual.*

In addition, given that divergent interests are normally treated as problematic when it comes to decision-making, governance effectiveness and participants' heterogeneity are believed to be negatively correlated (Ostrom, 1990). This implies that the interests of traditional power-holders may differ considerably from citizen drivers whereas a disparity of beliefs across participants could complicate collaborations considerably (Byrd et al., 2009; Jordan et al., 2013; Waligo et al., 2013). Particularly in heritage tourism, dissimilarity of perceptions and preferences are further perplexed as both what is collectively valued as heritage and how heritage is collectively valued presuppose shared judgements on its importance and potential for tourism development (Bessiere, 2013). Furthermore, policy choices can be heavily affected by perceptions of trust and shared agreement over participants' credibility (Lo et al., 2013; Nunkoo, 2015; Nunkoo & Ramkissoon, 2012). Thus, consistency of the internal and external legitimacy of the parties involved have a central role in tourism partnerships (Beaumont & Dredge, 2010). In turn, incompatibility between valuations of heritage or between participants' subjective judgments are parameters that deserve attention. Gaining a better understanding of the influence of these factors on heritage tourism decisions, and more critically, investigating the degree to which ideological disparity impacts on co-operation can offer additional insight into the dynamics of decision-making. Therefore, our third testable hypothesis (H3) is the following:

H3. *Group heterogeneity exerts significant negative influences on heritage tourism investment decisions.*

Although testing these hypotheses is interesting for informing planning policy, the limited natural data on participatory projects renders it particularly difficult to observe the effects of community involvement in heritage tourism planning or assess the counterfactuals of

participatory decision-making at a practical level. Existing empirical work engages in case-study enquiries of participatory processes and outcomes in destinations where some form of community involvement has been pursued (see *inter alia* Aas et al., 2005; Beaumont & Dredge, 2010; Byrd, 2007; Jamal and McDonald, 2011; Reggers et al., 2016; Spencer, 2010; Waligo et al., 2013). Most commonly, these studies employ survey tools such as interviews, focus groups or ethnographic approaches. Although these methods are valuable for *ex-post* assessments of collaborative planning, they do not allow for a direct comparison between participatory processes to counterfactuals, or the testing of whether and how participatory governance arrangements could work in destinations that have not yet embarked on collaborative projects.

Contrary to previous work, this study focuses its attention on an *ex-ante* comparative evaluation across different decision-making structures for heritage tourism planning in order to explore its hypotheses. For the first time, an experimental approach is adopted, designed to elicit the micro-level dynamics of collaborative policy decisions across government-led, citizen-led and participatory mixed groups, in a controlled way. Based on our design, government-led non-participatory groups reflect conventional planning, where decisions are made exclusively by government authorities and state appointed heritage professionals. At the same time, citizen-led groups comprising local residents, community associations and business owners reflect grass-roots decision-making. Most crucially, groups of mixed composition (i.e. both state- and citizen-inclusive) represent a participatory pluralist structure of decision-making. Such experimental examination facilitates the identification and comparative analysis of community involvement impacts on tourism planning as opposed to non-inclusive planning procedures, by 'simulating' a collaborative environment prior to an actual participatory venture.

The next sections provide a detailed account of our methodological framework and findings.

Methodology

Conceptual framework

The distinction of experimental research as opposed to other methodological approaches, such as observational tools, is the random assignment of human subjects to various conditions (i.e. treatments) and the comparison of their behaviour against control or other treatments (Druckman et al., 2011). Hence, the experimental approach renders it possible to observe stakeholders' behaviour and test the efficiency of participatory planning in any destination by staging policy-making procedures and exposing communities to them. Economic experiments are well-established tools for examining social behaviour and exploring policy issues (Croson, 2002; Exadaktylos et al., 2013). Our enquiry adopts and adapts their mechanics with the view to extend their scope to the challenging topic of participatory tourism.

Our theoretical premise for applying an experimental methodology to the context of participatory heritage tourism planning is on the one hand, the public good qualities of heritage and on the other, the relevance of social preferences to policy investment decisions. As heritage bears the non-excludable and non-rival features of public goods, heritage assets are defined as public or quasi-public goods (Navrud & Ready, 2002), as even in cases where access to them is restricted (e.g. listed buildings used as private residencies) or conditional (i.e. admission charges) there are still consumption elements that cannot be controlled, such as aesthetic pleasure.

Public heritage goods can be enjoyed by all society and provide communal and tourism benefits. Investments in such goods affect positively anyone that uses them in the present or future. Thus, the public good nature of heritage resources suggests that any contribution to their preservation or promotion is independent from their consumption (Ostrom, 1990). Especially in tourism development, public investments in heritage could create communal benefits, however the most 'visible' gains may be enjoyed by visitors and tourism stakeholders. For those not involved in tourism trade, the benefits could seem too indirect (e.g. economic gains from the injection of tourism income into the local economy) or too

intangible (e.g. scientific value or sense of identity and pride), particularly at initial stages of tourism growth.

According to economic theory, the separation between investments and returns creates social dilemmas, where non-cooperative behaviour for the provision of heritage goods is seemingly the best course of action, promising the highest individual gains, which are nonetheless subject to others' altruism or ephemeral non-cooperation. The temptation to free-ride or to refuse provisions on the basis on no personal consumption can eventually minimise collective benefits and lead to heritage degradation or depletion, leaving everyone worse-off. Thus, a key condition to resolve social dilemmas and safeguard sustainability is participants' willingness to contribute to collective benefits (Ostrom, 1990).

We hold that such dilemmas are highly relevant to the context of participatory heritage tourism planning in the context of sustainable development. The expansion of heritage tourism requires substantial financial (public) investments and the support of both policymakers and destination hosts for its long-term viability. Community participation in this context would assign to citizens the power to negotiate with traditional stakeholders and jointly decide on how to allocate their available resources (Arnstein, 1969). In today's fiscal stress and especially in destinations that suffer from economic depression, such enquiry is critical given the opportunity costs of conserving the past and pursuing small-scale sustainable tourism activity (Lowenthal, 2015; Redclift, 2005).

Study context

Even though the vast majority of economic experiments are laboratory-based (Exadaktylos et al., 2013), there are several examples of experiments conducted in a natural field (see for instance Cardenas, 2004; Cardenas & Ostrom, 2004; Cardenas & Carpenter, 2008). Similar to the latter, this study applies a quasi-field experimental methodology to a real destination. The quasi-field design allows for maintaining some control over subjects' exposure to treatments, which is necessary for testing participatory against non-participatory behaviour by controlling experimental groups' composition (i.e. distinguishing subjects based on their

capacity as state agents and non-state agents, such as residents). Following the case-study approach, our enquiry employs a destination which was unfamiliar with participatory policy at the time of the study and where the development of heritage tourism was highly relevant for stimulating tourism-led growth while increasing incentives for heritage protection.

More specifically, the context of our study is Kastoria, a peripheral area in the northern peninsular mainland of Greece. Kastoria fitted well with our criteria as it had a heavily depressed economy, reflected by its 30.8% unemployment rate (Hellenic Statistical Authority, 2016), and a rich but fragile heritage capital, manifested by the inclusion of its historic centre in Europa Nostra's list of the '7 Most Endangered Heritage Sites in Europe' (de Leon, 2015). As a destination, Kastoria had a relatively small tourism sector of approximately 2,000-bed capacity, which was peripheral to its economy (Hellenic Chamber of Hotels, 2016). Following the prevailing model of mass-organised non-specialised tourism in Greece, Kastoria developed a standardised tourism offer, which was mainly consumed domestically. However, as recent years witnessed a decline of its local manufacturing and a national on-going economic crisis, opportunities emerged for developing its tourism further. Considering Greece's homogeneity and shortfall in special interest tourism (Tsartas et al., 2014), Kastoria could develop differentiated heritage tourism experiences to increase its attractiveness and competitiveness. Based on its diverse heritage collection of prehistoric, classical, medieval and modern sites of interest, it could capitalise on heritage tourism to stimulate its rural economy and encourage investment in its local heritage fabric.

Nevertheless, investing in heritage is costly, whereas opportunity costs, coupled with the economic predicament of the region during the study period, rendered the issue of sharing decision-making control with multiple non-expert stakeholders even more dubious. In terms of prior knowledge, the local community had no formal experience of collaborative decision-making. The Archaeological Service and its local branches had been traditionally the leading agents for the formulation and execution of heritage planning, often in collaboration with other government authorities (e.g. city councils) but autonomously from non-governmental bodies and the wider public. Overall, considering its economic structure, heritage stature and policy

culture, Kastoria presented several challenges in which participation in heritage tourism planning was worth exploring.

Experimental design

In social-dilemma experimental settings, social welfare renders its dependency on subjects' decisions. Economic experiments feature tasks with monetary payments in order to establish a direct link between desired and decided choices while ensuring internal validity (Zizzo, 2010). Similar to other economic experiments, we employed a voluntary contributions mechanism, where participants were provided with an endowment and undertook a simple allocation task between two accounts; one for public good contributions and one for private provisions (Arifovic & Ledyard, 2012; Brandts & Fatas, 2012). Monetary units allocated to the private account were secured but fixed (i.e. no additional returns), whereas endowments spent on the public good were expected to create collective benefits. The voluntary contributions mechanism is a standard tool for exploring intrinsic incentives determined by subjects' beliefs, interests and feelings to act against 'rational' profit maximisation (Brandts & Schram, 2008; van Winden et al., 2008).

Subjects and treatments

Commonly to other laboratory studies which employ voluntary contributions in public good games (e.g. Andreoni & Gee, 2012; Nikiforakis et al., 2012), we organised our subjects into small groups that normally consisted of 4 individuals. The experiment involved the running of four treatments with a between-subjects design, exposing each subject (and group) to a single treatment. Treatments 1 and 2 (thenceforth T1, T2, respectively) aimed primarily to validate our methodology with respect to the incentive compatible mechanism, whereas treatments 3 and 4 (thenceforth T3, T4, respectively) were used to test participatory against non-participatory decision-making. All treatments were applied to six groups, providing a set of 24 observations.

More specifically, given that this methodological technique was employed in participatory tourism studies for the first time, we considered purposeful to test whether monetary incentives altered subjects' behaviour. To do so, we employed T1 and T2, where groups comprising local citizens were exposed to either hypothetical pay-offs (T1) or incentive-compatible monetary endowments (T2). By comparing data generated when hypothetical and real rewards were effective, we established that the voluntary contributions mechanism was a valid methodological tool given that incentive-compatible endowments altered subjects' behaviour considerably (i.e. deliberation and conflict were significantly higher in groups with actual monetary payments). For brevity, we do not report these results here but are available upon request.

Furthermore, treatments T3 and T4 were both incentive-compatible but differed in their composition of stakeholders. More specifically, T3 groups consisted exclusively of state-appointed heritage experts working locally and/or representatives from the local municipal and regional governments. We refer to these groups as 'non-participatory' given that they reflect conventional top-down structures of decision-making for heritage tourism. In contrast, T4 groups comprised a mix (normally a 2+2 combination) of government agents (as in T3) and citizens with no previous authority or direct power to influence heritage tourism planning (as in T2). We define T4 groups as 'participatory' given that their composition reflects a pluralist community-inclusive structure for heritage tourism planning.

Given the results of T1 and T2 groups, T1 data was excluded from remaining analysis (for consistency, as hypothetical pay-offs affected behaviour significantly), whereas T2 data were further used to explore citizen-led or 'grass-roots' governance in heritage tourism investment decisions, where local residents and entrepreneurs acted autonomously. Hence, our analysis draws from three types of groups-treatments; namely, grass-roots/citizens (T2), expert-led/non-participatory (T3), and mixed/participatory (T4).

To collect behavioural data and observe participants' interactions in a real setting, we ran a series of seven sessions at Kastoria between September and November 2015, which accommodated a total of 96 human subjects. Apart from controlling group composition based

on participants' capacity, the recruitment of subjects and their allocation to treatment groups remained random. Our call for participants was publicly advertised in mainstream local and social media and was open to everyone living or working in the area (convenience/random sampling). Invitations were also disseminated to relevant government bodies and their representatives (quota sampling) and followed by phone or email correspondence to confirm attendance. Although these sampling techniques are susceptible to biases, in our case, a 'biased' self-selected sample was considered more realistic, as those interested in local heritage tourism were those who would volunteer to a real participatory initiative. Especially for policy testing, it is common for experimenters to recruit participants with relevant experience or biases as it contributes to external validity (Dyer & Kagel, 1996).

Scenarios and procedure

In consultation with the local branch of the Archaeological Service, we designed two realistic project scenarios. Scenario 1 proposed the development of digital heritage trails across the area, whereas Scenario 2 prescribed the development of a public engagement programme at the local state archaeological museum. Both scenarios were viewed as effective and affordable tools for promoting local heritage to visitors and interest groups. Our rationale behind using two scenarios was that heritage tourism decisions can be influenced by investment-specific goals or by how a particular course of action might satisfy subjects' beliefs (Dryzek & Niemeyer, 2010). For this reason, investment scenarios carried two distinct characteristics. Firstly, Scenario 1 combined a series of heritage sites at various locations whereas Scenario 2 focused on a single site at a particular location, to expose any spatial rivalries. Secondly, the heritage trails scenario was more tourism-oriented whereas the museum project emphasised education and identity values, to expose any clashing interests between different parties. We hold that observing behaviour in two different decision-making contexts enhances the robustness of our results as real-world heritage tourism planning involves decision-making on multiple matters. Overall, we draw our conclusions based on

aggregate data (i.e. behaviour as expressed in both scenarios) although we also analyse the performance of groups as per treatment by distinguishing between the two scenarios.

Based on our protocol, all sessions followed the same procedure where subjects were firstly assigned to a group and asked to complete an attitudinal questionnaire survey individually. The questionnaire aimed to provide us with some quantitative data of subjects' attitudinal and demographic profile. It comprised three sections of 5-point likert-style statements asking subjects about (i) their feelings for local heritage, government agents and community, (ii) their viewpoints of the legitimacy of various stakeholders to participate in heritage tourism planning, and (iii) their incentives to participate in heritage tourism planning. Demographic information included gender, age, location, education, occupation, and membership to community associations.

Once questionnaires were completed, each group was allocated to an endowment of 200 tokens and presented with the first scenario. Participants were then requested to decide collectively within their group how they wished to invest their endowment. The exact same process was followed for the second scenario after the allocation of an equal-value endowment. According to our experimental design, investments were made through a heritage/private-fund mechanism. In both scenarios, all tokens allocated to the heritage fund were in essence invested in the proposed project whereas tokens allocated to the private fund were equally shared amongst participants. Given that economic experiments avoid deception (Murnighan, 2015), the Archaeological Service was committed to undertake the projects' implementation, if financed by participants. In this way, a formal institution was employed to safeguard that pro-heritage decisions could lead to actual outcomes and provided the experiment with external validity (Croson, 2002).

As in public good experiments, the individually optimal choice was contributing zero sums to the heritage account whereas the heritage/social optimal was contributing full sums. Based on the latter, higher contributions to the heritage fund reflected pro-heritage cooperative behaviour, as tokens invested in the heritage project reduced the personal gains of decision-makers. These gains translated into real monetary rewards for all T2, T3 and T4 groups. In

contrast, higher contributions to the private fund expressed non-cooperative behaviour given that groups preferred to use their resources on own purposes. Decisions could range from social optimum (i.e. full amount to heritage fund) to individual optimum (i.e. full amount to private fund), with any in-between combinations possible. In sessions that featured treatments with real monetary incentives (T2, T3, T4), a lottery system was applied, where once all groups had finalised their decisions, one of them was randomly selected and real payments were made privately (at a 1:1 token-euro exchange rate). This random selection process was employed because it allowed all decisions to maintain equal chances of becoming effective, thus still eliciting subjects' true behaviour, while economising study costs (Garcia-Gallego et al., 2011; Georgantzis & Navarro-Martinez, 2010).

Throughout the session only intra-group interaction was allowed whereas contributions were noted on paper and not revealed to other groups. No time limit was imposed on groups for finalising their decisions. Rather, deliberation time, measured as the number of minutes passed for reaching a collective decision, was recorded and used as an indicator of group performance. This indicator was inspired by previous experimental studies that use time as a proxy to decision-making procedures (Rubinstein, 2007; 2014). The content of group discussions was also recorded with the view to gain a more complete picture of intra-group negotiations and inform the interpretation of quantitative data (Bosman et al., 2006; Kocher & Shutter, 2007). Recordings were particularly useful in the study of conflict as they were employed to extract the personal preferences of group members as expressed during deliberation (i.e. individually desired contributions as opposed to collective actual contributions) and quantify conflict. Our first conflict variable (Conflict1) was estimated as the difference between the average individual/desired contributions and the collective/actual decisions, reflecting what behaviour prevailed (i.e. co-operative/non-cooperative). The second variable (Conflict2) equalled the standard deviation of individual decisions, quantifying the level of intra-group disagreement. Furthermore, qualitative information provided by recorded discussions helped us analyse negotiation dynamics when conflict arose.

Questionnaire data

Although traditional economic theory oversimplifies individuals' behaviour as one purely dictated by self-interest, there are admittedly other motives that drive economic choices. Indeed, there is vast experimental work, which illustrates that when faced with economic decisions, subjects frequently exhibit social preferences by choosing options that do not maximize their own monetary payoffs (Brandts & Fatas, 2012). Given that in our case social preferences translated into contributions to the heritage fund, it was worth exploring whether there were specific drivers related to subjects' profile or ideological background that influenced individual preferences. Most importantly, based on H3, we were interested in investigating whether intra-group heterogeneity across subjects' beliefs affected collective decisions.

Towards this end, we combined questionnaire data with experimental results and performed a regression analysis, where individual contributions to heritage were set as the dependent variable and questionnaire items were used as predictors of subjects' behaviour during the experiment (Table 1).

[INSERT TABLE 1 ABOUT HERE]

The regression model is shown in Equation 1:

$$IC_j = a + \beta_i \boldsymbol{SEN}_j + \gamma_i \boldsymbol{LEG}_j + \delta_i \boldsymbol{MOT}_j + \zeta_i \boldsymbol{DEM}_j + e_j, \quad (1)$$

where, IC_j denotes the individual contributions of subject j to the heritage fund, $\boldsymbol{SEN}_j$, $\boldsymbol{LEG}_j$, $\boldsymbol{MOT}_j$ and $\boldsymbol{DEM}_j$ are the vectors of the attitudinal (sentimental, legitimacy, motivational) and demographic characteristics of subject j and β_i, γ_i, δ_i and ζ_i are coefficients to be estimated. Finally, e_j denotes the error term.

Next, similar to Miner (1984) and Pelled (1996) who examine group behaviour based on individuals' traits, we measured intra-group dissimilarity of the above factors by averaging the summed absolute differences among all subjects of a group, as shown in Equation 2.

$$Dis\_c_g = \frac{1}{n}\sum_{j=1}^{n}\left|c_j - c_k\right|, for\ j \neq k, \qquad (2)$$

where, Dis_c_g denotes the dissimilarity score of characteristic c and group g and c_j is the value of the individual characteristic of subject j and c_k is the value of the same characteristic for every other subject of the same group.

Again, we performed a regression analysis, where intra-group dissimilarity variables were set as predictors of collective contributions (Equation 3):

$$GC_g = c + \theta_i \boldsymbol{DisSEN}_g + \varphi_i \boldsymbol{DisLEG}_g + \omega_i \boldsymbol{DisMOT}_g + \xi_i \boldsymbol{DisDEM}_g + e_g, \qquad (3)$$

where, GC_g denotes the collective contributions of group g to the heritage fund and $\boldsymbol{DisSEN}_g$, $\boldsymbol{DisLEG}_g$, $\boldsymbol{DisMOT}_g$ and $\boldsymbol{DisDEM}_g$ are the vectors of the dissimilarity scores for each of the sentimental, legitimacy, motivational and demographic elements of group g, θ_i, φ_i, ω_i and ξ_i are coefficients to be estimated and e_g denotes the error term.

Results

Group synthesis and behaviour

Table 2 provides a general overview of group characteristics along with the mean values of contributions to the heritage fund, deliberation times to reach decisions, and intra-group conflict across treatments. Our preliminary results suggest that in Scenario 1, T3 (non-participatory) and T4 (participatory) groups exhibited similar pro-heritage behaviour whereas in Scenario 2, T4 groups were slightly more generous. In contrast, T2 (citizen) groups invested less in both heritage projects compared to other treatment groups. Furthermore, average

minutes spent to reach a collective decision and conflict values were generally higher in T2 and T4 treatments as opposed to T3 groups.

[INSERT TABLE 2 ABOUT HERE]

A series of non-parametric (Mann Whitney) tests allowed us to examine behaviour based on group composition in greater detail (see Table 3). Our results demonstrate that contributions to heritage did not in fact exhibit any significant differences between T3 and T4 (i.e. non-participatory and participatory groups), whereas significantly lower contributions were evident for T2 (citizen) groups in the first scenario. The latter suggests that citizens exhibited a less co-operative behaviour when acted autonomously, compared to citizens that collaborated with government agents to reach decisions jointly. However, in the second scenario similar differences were not observed (i.e. citizen groups were statistically equally co-operative to other groups). In short, our findings do not lend support to H1 as participatory groups made equal pro-heritage investment choices to non-participatory groups.

[INSERT TABLE 3 ABOUT HERE]

Turning our focus on deliberation and conflict, we find that T3 and T4 groups exhibited no statistically significant differences in terms of time, whereas, T4 groups showed a higher tendency to discord (the significance of Conflict1 was at $p=0.056$ for both scenarios whereas Conflict2 was significant with $p=0.092$ in Scenario 1). Thus, although government officials often claim time inefficiencies as barriers to broader community involvement (Marzuki et al., 2012; Izdiak et al., 2015), it appears that participation does not inherently lead to longer decision-making times compared to counterfactuals. However, pluralist structures of governance were indeed more susceptible to conflict and the expression of divergent policy preferences as opposed to less inclusive decision-making.

Similarly, the comparison between T2 and T3 groups illuminates significant differences across deliberation times and conflict, with citizen groups presenting higher deliberation times and higher level of disagreement. In addition, differences between groups that commonly consists of citizens, either exclusively (T2) or partially (T4) are mainly insignificant (apart from higher contributions to Scenario 1 on behalf of T4 groups). This is somewhat anticipated as the majority of participants in these groups (i.e. citizens) had not been exposed to collaborative planning prior to the experiment and had less experience in handling policy issues as compared to traditional power-holders. These results confirm H2 partly, given that we do not report differences in time efficiency between the two decision-making arrangements whereas conflict seems to be higher in participatory groups compared to conventional power structures.

However, interestingly, despite higher dispute, we observe that opposing viewpoints did not push participatory groups towards non-cooperative behaviour. We thus witness that pluralist community-inclusive decision-making were indeed more prone to conflict compared to traditional planning, but this did not translate into lower contributions to heritage. Hence, although participation does not eliminate the inherent disagreement in policy preferences, it builds on cooperative capacity towards consensual outcomes (Lo et al., 2013). This provides an indication that contrary to previous discourses (Byrd et al., 2009; Marzuki et al. 2012), conflict in participatory settings, where all parties share equal power, may act constructively rather than destructively.

Overall, these findings provide some new evidence that pro-heritage decisions are not a privilege of government/expert administration. Participatory groups comprising traditional power-holders and local citizens made equal contributions towards a commonly beneficial heritage tourism project, as did groups consisting merely of power-holders. Thus, communication between experts and community worked in favour of pro-heritage decisions, implying that social interaction in participatory contexts can activate people's altruism (Andreoni & Rao, 2011). This suggests that citizen input when balanced with expert knowledge and formal governance can create a fertile ground for fruitful outcomes. However, grass-roots decision-making structures based merely on citizens may be comparatively

weaker in prioritising heritage tourism investments in destinations with no prior civic agency over policy matters.

Given our observations, it is valuable to further disentangle conflict to explore its impact on decision-making. Table 4 deconstructs Conflict1 as presented in Table 3 and compares the average individual (desired) contributions against final collective (actual) decisions.

[INSERT TABLE 4 ABOUT HERE]

As suspected, in their vast majority, conflicting preferences regarding heritage tourism investments served against participants' own interests, as collective contributions were higher than average individually-desired choices. This holds for participatory (T4) and grass-roots (T2) groups, suggesting that community-inclusive governance could avoid serving personal interests and rather work towards communal outcomes (Irvin & Stansbury, 2004). For instance, in Scenario 1, we notice that arising conflict in participatory groups led them to increase their contributions at a level very close to the social optimal. These results witness the dominance of social rationality in participatory governance, as provisions for heritage were prioritised over personal benefits (Vatn, 2009).

We extend this analysis by investigating the correlations between contributions, deliberation and conflict, using the Spearman correlation test (see Table 5). We do so in order to provide further evidence on how decision-making time and conflict related to policy outcomes.

[INSERT TABLE 5 ABOUT HERE]

We observe that contrary to government-led (T3) groups, where both time-contributions and time-conflict were negatively correlated, in citizen (T2) and participatory (T4) groups longer deliberation increased investments to the heritage fund. The negative correlation between time and conflict in T3 decision-making is somewhat unanticipated and may indicate

internal power imbalances among state representatives. In contrast, dispute extended discussion length in T2 and T4 groups, indicating a greater level of negotiating capacity compared to T3 despite the deceleration of final choices. Most importantly, the positive correlation of time and contributions in groups with citizen representation (both T2, T4) indicates that more time-consuming decision-making, which is generally regarded as expensive and unpleasant (Izdiak et al., 2015; Marzuki et al. 2012), can be rewarding in terms of trading in effectiveness for consensual pro-heritage policies. In addition, the positive correlation between contributions and conflict across all treatments re-affirms our earlier finding of the prevalence of pro-heritage preferences in conflictual situations, illustrating dispute's constructive capacity.

Interestingly, previous experiments on individuals had associated lengthy decision times with pro-social choices, suggesting that decision-making involves a clash between one's personal and altruistic interests (Rubinstein, 2007). Yet, there is no experimental evidence on how conflict plays in a collaborative context or what occurs when some participants attempt to promote their own ends. To explore conflict negotiations, we employed recordings data of group discussions. Based on Rahim (2001) and Thomas (1992), we identified four negotiating approaches to conflict; (i) the *contending* approach, where subjects showed interest primarily for their own ends, (ii) the *accommodating* approach, where subjects were mostly concerned for communal benefits, (iii) the *collaborative* approach, where preferences were balanced between own and collective needs and (iv) the *avoiding* approach where subjects' concerns were equally low for both sides. Qualitative results are presented in Table 6.

[INSERT TABLE 6 ABOUT HERE]

In general, we observe that when collaborative behaviour prevailed, conflict resolution leaned towards pro-heritage decisions (e.g. T2G2, T4G6 on Scenario 1 and T2G1, T4G5 on Scenario 2). By contrast, when contending voices formed a majority, group contributions to the heritage fund were pushed down (e.g. T2G4, T3G1 in Scenario 2). Nevertheless, such

negotiation dynamics were observed merely in citizen (T2) and government-led (T3) groups. Rather, contending behaviour was expressed only by group minorities in participatory (T4) groups (either by power-holders or citizens), and pro-social preferences maintained their resilience. This suggests that in our experiment, participatory decision-making was rather resistant to favouring individual ends that antagonised collective benefits. Moreover, as conflict originated by both government agents and citizens alike, participatory decision-making was successful in balancing power between different stakeholders in favour of commonly beneficial choices. It is also worth noting that our recordings (although not shown here due to data sensitivity issues) illuminated occasions where refusal to co-operate expressed what Lowenthal (2015) defines as a clash between the benefits of the past (heritage) and the benefits of the present (socio-economic) as the safeguarding and promotion of cultural heritage was not prioritised by subjects' personal agendas. In addition, institutional distrust was also a common source of non-cooperation, especially in groups with no institutional representation (i.e. T2).

Subjects' idiosyncrasy and intra-group heterogeneity effects

We continue our analysis to investigate how group heterogeneity, as captured by the dissimilarity scores of Equation (2), impacted on collective decisions (see Equation 3). Although we are mostly interested in examining how dissimilarities among group members affected group contributions, we begin by briefly examining the drivers of individual preferences, given that recordings data unmasked some interesting information.

[INSERT TABLE 7 ABOUT HERE]

Based on Table 7, we observe that individual contributions, both in the full (IC) and in the citizen sample (ICC) estimation, were primarily influenced by feelings of trust and perceptions of legitimacy. In the full sample, community trust exerted a significant positive effect, as the higher the subject's trust in the local community, the higher their social preferences.

Interestingly, in the citizen sample that excluded state officials, community trust was converted into institutional trust as a driver that increased co-operative behaviour. Trust is considered a fundamental element of social exchange and one that promotes decisions for society's best interest (Nunkoo & Ramkissoon, 2011; Nunkoo & Gursoy, 2016). Likewise, legitimacy factors were particularly influential in subjects' choices. Particularly the credibility of the Archaeological Service affected contributions significantly positively. This is reasonable given that by experimental design, the Archaeological Service would lead the implementation of the proposed projects-scenarios. As Ostrom (1990) observes, collective decisions are considerably affected by participants' judgements of effectiveness regarding the administrative apparatus that is expected to undertake the application of approved policies. A reverse effect is observed for factors concerning the credibility of central governance and heritage freelancers, illuminating the competing roles of different parties (central/local, public/private) and subjects' acknowledgement of their legitimacy.

In terms of intra-group heterogeneity of opinions and its influence on collective decisions, Table 8 illustrates that similarly to individual preferences group contributions (GC) were also significantly impacted by intuitive divergence of stakeholders' legitimacy. These results are in line with Lo et al. (2013), who demonstrate that collective policy choices are heavily influenced by perceptions of trust and shared agreement over institutional reliability. Moreover, our experimental evidence lends support to Nunkoo (2015), Nunkoo and Gursoy (2016), and Nunkoo and Ramkissoon (2012), who find strong relationships between power, confidence in institutions and support for tourism policies.

[INSERT TABLE 8 ABOUT HERE]

In particular, dissimilarity of participants' views with regards to the credibility of the central and municipal government, tour operators, heritage freelancers and community associations in local tourism planning acted favourably for heritage investments. This contrasts with dissimilarity of trust towards the Archaeological Service, consultants and tourism

professionals, which played a negative role on collective choices as also did dissimilarity of subjects' engagement with community associations. Comparing these results, with the drivers of individual contributions, we conclude that in groups which exhibited high trust dissimilarity, collective decisions were mostly shaped by distrust. For example, those who supported a central administration of heritage tourism issues, were less willing to allocate resources to a locally managed initiative (see Table 6). However, when they deliberated with group members that had little trust to central government, the end result was higher contributions to the locally managed fund, suggesting that distrust eventually prevailed.

In addition, it is instructive to identify in which treatments were these dissimilarities more evident. Table 9 focuses on the variables that influenced groups contributions (GC) significantly, showing average dissimilarity scores across treatments. In seven of these variables, where the coefficient is positive, the treatment group with the highest average dissimilarity score is preferred, as higher dissimilarity favours contributions to heritage. By contrast in the four variables that have negative coefficients, the opposite is favoured.

[INSERT TABLE 9 ABOUT HERE]

Interestingly, we observe that participatory groups (T4) present the largest number of preferred dissimilarity scores. This especially holds for the variables that had a negative coefficient (i.e. heterogeneity of opinions with regards to the credibility of the Archaeological Service and the role of external consultants, along with profile divergence of association membership was lower in these groups). These scores also illuminate that heterogeneity is not inherent to participatory groups as ostensibly more 'uniform' groups (citizen-only, government-only) may exhibit higher ideological disparity in key matters.

Overall, the findings of Tables 7-9 suggest that our third hypothesis (H3) can be partially accepted, firstly because heterogeneity within a collaborative setting does not necessarily exert negative influences on investment decisions and secondly because participatory groups are not inherently more heterogeneous. The former is interesting as in the literature,

divergence of opinions between stakeholders is viewed as a factor that increases problems and complexity (Byrd et al. 2009; Jordan et al. 2013; Waligo et al., 2013). Yet, we find that participatory planning can provide a fertile ground for negotiating in favour of communal heritage benefits. Furthermore, the fact that participatory multi-stakeholder groups were not intrinsically more ideologically heterogeneous than groups consisting exclusively of either government or citizen representatives illustrates that supposedly homogeneous social actors should not be treated as uniform entities.

Concluding remarks

Assigning decision power to citizens and the broader public is subject to social dilemmas and the risk of sacrificing time and monetary resources to a process that fails to pay-off. Nevertheless, the implications of involving communities in policy decisions had never been directly compared to the implications of not involving them. In addition, *ex-ante* assessments of participatory approaches had not been previously employed as a means to inform the instigation of community-based planning.

Thus, a key contribution of this study is the direct comparison between different decision-making structures in a destination with no prior experience of pluralist policy-making. Exploring how well the generally accepted discourse of community participation resonates with the reality on the ground is important for emerging destinations where citizen intervention is entirely new and where tourism benefits and costs are not highly observable. A comparative exploration of how cooperation for the provision of heritage goods plays in action can be valuable in terms of shedding more light on the appropriateness and specificities of public involvement at the higher rungs of Arnstein's (1969) ladder, informing the design of participatory endeavours in a given destination. More importantly, the use of experimental methodologies can help us overcome the barrier of limited natural data and fill-in current gaps through more systematic research on the subject, exploring the drivers of collaboration and other dynamics that influence people's attitudes.

The social interaction space staged during our experiment exposed subjects to investment decisions concerning local heritage tourism development. The formulation of government-led, grass-roots and participatory (mixed) groups allowed us to observe, for the first time, their behavioural similarities and differences with emphasis on collective choices, deliberation, conflict, negotiation and heterogeneity. Our results provide an indication that direct comparisons between these decision-making arrangements could challenge common beliefs related to citizen involvement, such as significantly more lengthy processes, destructive conflict and intrinsic heterogeneity of perceptions. Our first hypothesis that participatory decision-making leads to lower pro-heritage investments compared to non-participatory processes is rejected as community-inclusive and government-led groups made equally high heritage provisions. Our second hypothesis that participatory decision-making is more time-consuming and more prone to conflict can be accepted only partly. Deliberation across groups of participatory and non-participatory compositions did not differ significantly but participatory multi-stakeholder groups were more susceptible to disagreement. However interestingly, time to reach decisions and the amount of contributions to the heritage fund were positively correlated for participatory groups and negatively correlated for non-participatory groups. Furthermore, conflict was positively correlated with contributions across all treatments. Moreover, our third hypothesis that group heterogeneity may affect final decisions negatively is also partly accepted, given that there were beliefs that affected choices both negatively and positively. Notably, subjects' social preferences were heavily impacted by their felt trust and credibility judgements concerning stakeholders. In collective settings where such judgements lacked consistency, feelings of distrust eventually prevailed.

Overall, our experimental findings suggest that deliberation and conflict do not necessarily indicate vulnerability or a need to trade in efficiency for inclusiveness, but rather a way towards a compromise that can serve heritage and communal gains. This fits well with the essence of democratic planning as improved and commonly beneficial policymaking (Aas et al., 2005; Saufi et al., 2014; Wray, 2011). Therefore, participatory design should seek to accommodate deliberation and participants' reflection upon planning choices. In addition, the dramatic

influence of trust and credibility on mobilizing social preferences suggests that commitment to sustainability goals can be pursued by investing in effective communication, the cultivation of good relationships amongst participants, and the promotion of accountability and reciprocity. Moreover, conflict, although may act constructively at initial stages, it can still become detrimental in the long-run if participants' collaborative and accommodating intentions are not sustained. Building on stakeholders' interdependence and promoting co-operation as the only avenue for realizing participants' goals might be crucial for the prevalence of social rationality.

This study is limited by being place and time-specific, whereas its focus on decision-making provides evidence on a single aspect of a multi-stage and multi-faceted planning process. Future research could employ experimental methodologies to examine community involvement in other destinations, study different participatory stages, or explore other dimensions of collective behaviour, such as the levels of democracy, deliberation mechanisms and issues of power within collaborative settings. The experimental methodology applied here introduces an important line of research to participatory tourism studies, which along with other empirical research could be particularly useful for extending our knowledge of the complex issue of community involvement within the context of sustainable tourism strategies. Another interesting avenue for further investigation would be the comparison of *ex-ante* experimental decision-making with *ex-post* actual planning procedures at a single destination to formalise how experimental evidence translates into practice.

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Table 1. List of variables

Name	Description	Measurement
Individual Contributions (IC)	*Pursued/desired contribution to the heritage fund*	Experimental Units (0-400)
Sentiment Factors (SEN)		
Attachment to heritage	*Sentimental attachment to local heritage*	Ratings from 1-5 where 1 expresses lowest and 5 highest agreement
Responsibility to protect heritage	*Personal feelings of heritage stewardship*	
Institutional Trust	*Trust in local authorities for handling heritage tourism issues*	
Community Trust	*Trust in citizen partnerships for delivering communal gains*	
Heritage as priority issue	*Belief that heritage protection-management should be policy priority*	
WTP1	*Willingness to pay for heritage through taxes*	
WTP2	*Willingness to pay for heritage through personal income*	
Legitimacy factors (LEG)		
Central government Regional government City councils Archaeological Service Consultants-specialists Tour operators Heritage freelancers Tourism professionals Community associations Local residents	*Acknowledging the legitimacy and credibility of each of these stakeholders to participate in local heritage tourism planning*	Ratings from 1-5 where 1 expresses lowest and 5 highest acceptance
Motivational factors (MOT)		
Monetary gains	*Opportunities to increase personal profits as driver to participate*	Ratings from 1-5 where 1 expresses lowest and 5 highest influence
Professional development	*Opportunities to develop professional skills/experience as driver to participate*	
Not time-demanding	*Investing relatively little time as driver to participate*	
Receiving special training	*Training as driver to participate*	
True collaborative spirit	*Collaborative behaviour of all parties involved as driver to participate*	
Demographic factors (DEM)		
Gender	*Males; Females*	Dummy 0 (Male), 1 (Female)
Age	*18-24, 25-34, 35-44, 45-54, 55-64, 65+*	Scores from 1 (18-24) to 6 (65+)

Location	*Most to least central locations of heritage tourism interest*	Scores from 1 (highest) to 3 (lowest) proximity
Education	*High school diploma or lower; university graduate degree, post-graduate degree*	Scores from 1 (lowest) to 3 (highest)
Relevant Occupation	*Profession relevant to heritage and/or tourism*	Dummy 0 (No), 1 (Yes)
Formal community involvement	*Membership to local community associations*	Dummy 0 (No), 1 (Yes)

Note: IC were elicited from experimental deliberation (recordings data). All other values were based on questionnaire data.

Table 2. Descriptive statistics of group syntheses and collected data.

	Treatment		
	T2	T3	T4
Groups *(N)*	6	6	6
Subjects *(N)*	24	20	28
Real endowments	Yes	Yes	Yes
Avg. officials per group *(%)*	0.00	1.00	0.45
Avg. Males per group *(%)*	0.63	0.33	0.41
Age[1] *(median)*	3.0	3.0	4.0
Education[2] *(median)*	2.0	2.0	2.0
Location[3] *(median)*	1.0	2.0	1.0
Avg. Contributions *(ExU)*			
Sc1	141.67	200.00	191.67
Sc2	125.00	125.00	176.67
Avg. Time *(Mins)*			
Sc1	20.00	8.67	13.83
Sc2	11.17	7.00	10.33
Avg. Conflict1[4]			
Sc1	16.67	0.00	20.00
Sc2	2.08	-11.11	13.33
Avg. Conflict2[5]			
Sc1	40.14	0.00	44.72
Sc2	12.5	19.25	44.72

Notes:
1: Age is coded as 1:18-24, 2:25-34, 3:35-44, 4:45-54, 5:55-64,6:65-74.
2: Education is coded as 1: High school graduate, 2: University graduate, 3: Post-graduate.
3: Location is coded 1-3 starting from Kastoria's city core and moving towards peripheral areas.
4: Conflict1 is estimated as the difference between individual *desired* contributions (mean values) and group *actual* contributions.
5: Conflict2 is the standard deviation of individual desired contributions of group members.
ExU: Experimental Units; Sc1: Scenario 1; Sc2: Scenario 2; Mins: Minutes

Table 3. Inter-treatment comparisons for scenarios 1, 2 and total.

Panel A: Scenarios 1 and 2

Treatment	Contributions		Time		Conflict1		Conflict2	
	Sc1	Sc2	Sc1	Sc2	Sc1	Sc2	Sc1	Sc2
T2vsT3	-2.309**	-0.252	-2.531**	-1.615	-1.897*	-0.631	-2.292**	-0.420
T3vsT4	-1.000	-1.378	-1.470	-0.890	-1.915*	-1.687*	-1.915*	-0.866
T2vsT4	-1.896*	-0.895	-0.723	-0.563	-0.259	-1.146	0.000	-1.081

Panel B: Total

Treatment	Tot_Contributions	Tot_Time	Tot_Conflict1	Tot_Conflict2
T2vsT3	-0.574	-2.096**	-2.326**	-1.250
T3vsT4	-1.199	-1.549	-2.006*	-1.614
T2vsT4	-1.459	-0.722	-0.333	-0.982

Notes: Values represent z-statistic of the Mann-Whitney test.
Conflict1 is estimated as the difference between individual *desired* contributions (mean values) and group *actual* contributions.
Conflict2 is the standard deviation of individual desired contributions of group members.
*, **, *** denote significance at 10%, 5%, and 1%, respectively.

Table 4. Individual/group contributions per group

	Scenario 1		Scenario 2		Total	
	IC	GC	IC	GC	IC	GC
T2	150.00	150.00	175.00	200.00	325.00	350.00
	175.00	200.00	200.00	200.00	375.00	400.00
	150.00	200.00	200.00	200.00	350.00	400.00
	75.00	100.00	162.50	150.00	237.50	250.00
	100.00	100.00	0.00	0.00	100.00	100.00
	100.00	100.00	0.00	0.00	100.00	100.00
T2 Mean	*125.00*	*141.67*	*122.92*	*125.00*	*247.92*	*266.67*
T3	200.00	200.00	66.67	0.00	266.67	200.00
	200.00	200.00	200.00	200.00	400.00	400.00
	200.00	200.00	200.00	200.00	400.00	400.00
	200.00	200.00	100.00	100.00	300.00	300.00
	200.00	200.00	150.00	150.00	350.00	350.00
	200.00	200.00	100.00	100.00	300.00	300.00
T3 Mean	*200.00*	*200.00*	*136.11*	*125.00*	*336.11*	*325.00*
T4	160.00	200.00	160.00	200.00	320.00	400.00
	150.00	150.00	100.00	100.00	250.00	250.00
	160.00	200.00	160.00	200.00	320.00	400.00
	200.00	200.00	200.00	200.00	400.00	400.00
	200.00	200.00	160.00	160.00	360.00	360.00
	160.00	200.00	200.00	200.00	360.00	400.00
T4 Mean	*171.67*	*191.67*	*163.33*	*176.67*	*335.00*	*368.33*

Notes: Values reflect experimental units.
IC: Individual (desired) contributions (mean).
GC: Group (actual) contributions.

Table 5. Correlations between total contributions, time and conflict (Spearman's rho)

	Tot_Contributions	Tot_Time	Tot_Conflict1	Tot_Conflict2
		T2 Groups		
Tot_Contributions	1.000			
Tot_Time	0.471	1.000		
Tot_Conflict1	0.955	0.441	1.000	
Tot_Conflict2	0.746	0.406	0.896	1.000
		T3 Groups		
Tot_Contributions	1.000			
Tot_Time	-0.750	1.000		
Tot_Conflict1	0.674	-0.696	1.000	
Tot_Conflict2	0.696	-0.674	-1.000	1.000
		T4 Groups		
Tot_Contributions	1.000			
Tot_Time	0.439	1.000		
Tot_Conflict1	0.657	0.926	1.000	
Tot_Conflict2	0.495	0.956	0.904	1.000

Notes:
Tot_Conflict1 is estimated as the difference between individual *desired* contributions (mean values) and group *actual* contributions.
Tot_Conflict2 is the standard deviation of individual desired contributions of group members.

Table 6. Negotiating behaviour towards conflict

Treatment	Main source (as expressed)	Majority behaviour (Minority behaviour)	IC	GC
		Scenario 1		
T2	*Institutional trust*	Collaborative (Accommodating)	150.00	150.00
T2	*Institutional trust*	Collaborative (Collaborative)	175.00	200.00
T2	*Project quality*	Collaborative (Accommodating)	150.00	200.00
T2	*Local rivalry*	Collaborative (Contending)	75.00	100.00
T4	*Personal agendas*	Collaborative (Contending)	160.00	200.00
T4	*Project quality*	Collaborative (Accommodating)	160.00	200.00
T4	*Power clash*	Avoidance (Contending)	160.00	200.00
		Scenario 2		
T2	*Institutional trust*	Collaborative (Contending)	175.00	200.00
T2	*Personal agendas*	Contending (Collaborative)	162.50	150.00
T3	*Personal agendas*	Contending (Accommodating)	66.67	0.00
T4	*Power clash*	Avoidance (Contending)	160.00	200.00
T4	*Personal agendas*	Collaborative (Contending)	160.00	200.00
T4	*Power clash*	Collaborative (Contending)	160.00	160.00

Notes: Source of conflict and behaviour are based on the recordings of group deliberation.
IC: Individual (desired) contributions to heritage (mean)
GC: Group (actual) contributions to heritage

Table 7. Factors driving individual (desired) contributions. This table presents the results of Equation 1 ($IC_j = a + \beta_i \boldsymbol{SEN}_j + \gamma_i \boldsymbol{LEG}_j + \delta_i \boldsymbol{MOT}_j + \zeta_i \boldsymbol{DEM}_j + e_j$)

	Full sample	Citizens only
	IC	IC
Constant	133.367	331.849
Sentiment factors		
Attachment to heritage	24.954	-35.477
Responsibility to protect heritage	-1.181	-20.929
Institutional Trust	8.770	40.989**
Community Trust	53.087**	38.335
Heritage as priority issue	45.482**	82.956***
WTP1 (taxes)	37.751	66.736*
WTP2 (income)	-38.617*	-56.143***
Legitimacy factors		
Central government	-36.248*	-80.378***
Municipal government	19.162	-18.636
City councils	-6.387	-4.512
Local Archaeological Service	64.832**	100.753***
Consultants-specialists	-3.432	-16.645
Tour operators	0.551	62.152***
Heritage freelancers	-49.410**	-88.259**
Tourism professionals	7.043	19.325
Community associations	10.653	100.638***
Local residents	-1.733	-30.799
Motivational factors		
Monetary gains	-7.360	-48.900***
Professional development	-11.224	-21.074
Not time-demanding	-0.679	-26.189
Receiving special training	-71.937**	49.018
True collaborative spirit	28.127	-58.438**
Demographic factors		
Gender	-29.954	-81.334***
Age	-7.838	14.493
Location	-67.392*	-84.429***
Education	12.654	-70.809**
Relevant Occupation	-5.843	35.074
Current involvement	-14.320	100.552**
R-squared	0.458	0.796

Notes: Estimations are based on aggregate contributions based on both scenarios.
IC: Individual (desired) contributions to heritage.
* , **, *** denote significance at 10%, 5%, and 1%, respectively.

Table 8. Intra-group dissimilarity effects on collective (group) contributions. This table presents the results of Equation 3 ($GC_g = c + \theta_i \boldsymbol{DisSEN}_g + \varphi_i \boldsymbol{DisLEG}_g + \omega_i \boldsymbol{DisMOT}_g + \xi_i \boldsymbol{DisDEM}_g + e_g$)

	GC	GC	GC	GC
Constant	149.631	239.955***	250.590***	245.453**
Sentiment factors				
Attachment to heritage	61.040			
Responsibility to protect heritage	36.892			
Institutional Trust	97.406			
Community Trust	-38.645			
Heritage as priority issue	18.265			
WTP1 (taxes)	-58.792			
WTP2 (personal income)	52.047			
Legitimacy factors				
Central government		103.600*		
Municipal government		143.626*		
City councils		-30.238		
Local Archaeological Service		-153.179**		
Consultants-specialists		-134.633**		
Tour operators		141.566**		
Heritage freelancers		182.573**		
Tourism professionals		-222.141***		
Community associations		131.114***		
Local residents		-55.282		
Motivational factors				
Monetary gains			-32.151	
Professional development			-10.893	
Not time-demanding			45.507	
Receiving special training			27.374	
True collaborative spirit			139.707	
Demographic Factors				
Gender				219.140**
Age				-28.553
Location				-133.600
Education				26.381
Relevant Occupation				226.024*
Current involvement				-192.077**
IC				-0.608
Time				4.003
Group dummies	YES	YES	YES	YES
R-squared	0.554	0.907	0.312	0.623

Notes: Estimations are based on aggregate values based on both scenarios.
GC: Group (actual) contributions to heritage.
IC: Individual (desired) contributions to heritage.
* , **, *** denote significance at 10%, 5%, and 1%, respectively.

Table 9. Average dissimilarity scores for variables influencing GC significantly

Dissimilarity variable	**T2**	**T3**	**T4**
Positive coefficients			
Central government	0.973	**1.083**	0.667
Municipal government	**1.307**	0.517	0.623
Tour operators	1.167	**1.583**	1.123
Heritage freelancers	0.473	0.817	**1.212**
Local community organisations	**0.807**	0.550	0.623
Gender	0.250	0.317	**0.447**
Relevant Occupation	0.167	**0.513**	0.000
Negative coefficients			
Local Archaeological Service	1.028	0.500	**0.335**
Consultants-specialists	0.917	1.295	**0.312**
Tourism professionals	1.197	**0.895**	1.547
Current involvement	0.473	0.378	**0.223**

Note: Bold denotes best result. The best results for the variables with positive (negative) coefficients are those with the highest (lowest) average dissimilarity scores.