

# Dataset of 1503 Tourists' Survey Concerning their Attitudes Towards Sports, Economy and Sustainability

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**Abstract:** Sports tourism has emerged as a significant dimension of alternative and sustainable tourism, attracting growing academic interest due to its economic, social, and environmental implications. This study investigates the relationship between sports and tourism and examines how sports activities influence tourists' behavior, reasons for additional spending and perceptions of sustainable regional development. A structured questionnaire was created that was addressed to tourists in Greece, with the aim of identifying their attitudes, their will and general opinions concerning money spent, length of stay, other actions related to tourism and potential correlations between several variables. 1503 replies were received in 2024, which highlighted the great relationship between sports and tourism as well as the multilateral impact of sports on tourism according to the perspective of tourists in Greece. The analysis demonstrates a strong association between engagement in sports activities and key tourism outcomes, including extended length of stay, increased daily expenditure, and enhanced overall travel experience. Demographic differences were also identified, with younger and higher educated visitors expressing stronger beliefs in the developmental benefits of sports, while older and less educated groups showed skepticism. Access to sports activities appears to motivate higher expenditures, influence destination choice. Machine learning algorithms applied to the dataset, demonstrated high accuracy in predicting daily expenditure behavior in sports activities. Overall, the study highlights the multifaceted economic, social, and environmental impact of sports on tourism and underscores the significance of sports towards sustainable tourism strategies.

**Keywords:** Sports, tourism, spending, survey, economy, tourist behavior, sustainability.

## 1. Background and Summary

Tourism is a very important sector concerning society, the economy and nature, especially for countries like Greece where it represents nearly 20% of its GDP. A reduction in income per tourist has been observed that pinpoints the need to explore other ways of boosting tourism to contribute to income increase. However, this contribution has to be implemented within the framework of sustainability and also have a positive impact on society as well as the environment so that it is in line with the requirements of sustainability (Panagiotopoulos *et al.*, 2022a; Panagiotopoulos *et al.*, 2022b). Sports during tourism as well as the field of sport tourism in general has concerned the academic community for several decades (Gammon and Robinson, 1997; Standeven and DeKnop, 1999; Cave, 2003; Wise and Peric, 2017; Panagiotopoulos *et al.*, 2022a) mainly due to the fact that it is a major sector of alternative sustainable tourism (Weaver, 2007; Mindrinos and Panagiotopoulos, 2023; Oriade and Evans, 2011) which seems to offer increased revenue in relation to traditional forms of tourism or mass tourism. Under this scope, the main questions arising seek answers such as the relationship between sports and tourism, the form of contribution of sports to the development of a place, and the potential impact of sports tourism on culture and society. Also, in order to fully comprehend the impact on tourism and economy that sports may have in a place, it is mandatory to understand the needs and the attitude of the tourists themselves. In this way the interests of tourists are of paramount importance, such as the parallel actions of tourists during their holidays, their potential relation to sports,

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tourists' involvement in sports during their vacation, their tendencies and preferences for spending money, destination preferences as well as demographic characteristics towards tourism, sports activities during tourism and other parallel actions such as local cultural and social events. Their sincere opinion whether sports through tourism contribute to the development of a place or not and whether sports and tourism can be a lever for sustainable development in a place would also be interesting. These questions, along with the existing literature (Weed, 2009; Hardy *et al.*, 2002; Dodds and Butler, 2019; Laborde *et al.*, 2014; Sheng and Chen, 2013), led to the creation of some research hypotheses, such as:

- The relationship between sports and tourism shows a significant correlation in the perception of young tourists, as well as in groups with a higher educational level.
- Older groups with a lower educational level believe that sports do not contribute to the development of a place.
- Sports or exercise are a significant factor in choosing a tourist destination, when combined with their other activities, for those who are willing to spend extra money in order to have access to sports activities as well as for those who travel more frequently.
- Those who spend more than 7 days on tourism in Greece are more interested in participating in sports activities to the destination they visit.
- Sports activities access push tourists to spend more money per day.
- The older age groups over 50 are more interested in contact with the environment and visiting monuments and museums, while the younger ages are more interested in souvenir shopping and sports activities.

These hypotheses led to the creation of a questionnaire and the collection of 1503 respondents' replies, the main objective of which was to research the potential impact of the inclusion of sports events within the touristic package on the overall tourism footprint of a region. Also, the close relationship between sports and tourism is highlighted as well as the significant economic impact it has on regions in which sports tourism takes place.

## 2. Questionnaire Creation

The creation and structure of the questionnaire (Siomkos and Vasilikopoulou, 2005; Lietz, 2010; Martin, 2006; Roopa and Rani, 2012) was based on seven basic characteristics of tourists' perception of sports and tourism activities, which were: satisfaction with tourism services, the degree of connection between tourism activities and sports, tourist preferences concerning tourism products, the degree of satisfaction with the provision or non-provision of sports services, involvement in cultural events, the economic contribution of sports tourism, and the attention to physical and psychological health and well-being. Also, the questionnaire addressed all tourists in Greece whether they were Greeks or not and was designed to investigate the relationship between tourists' involvement with sports and the type of tourist.

Initially, the survey questionnaire was structured into 36 questions of which five were eventually adjusted, one was removed and one more was added. The question that was added was dichotomous and referred to whether or not the respondent had attended or participated in a sports event or match during their vacation in the last 3 years. This question was deemed necessary to be included in the questionnaire in order to clarify the correlation with the very next question in order to verify the validity of the answers. Another purpose of this specific question was to detect the practical involvement of tourists with sports during the tourist activity, beyond any theoretical involvement. Furthermore, the question "Do you attend sports matches?" was removed. The reason for its removal was the fact that its answer arose from the following question, with the result that it was considered unnecessary as such and was added as the option zero (0) to a single question "How often do you watch sports matches?" resulting in an 11-point Likert scale. Questions 18, 19 and 26 were adjusted in order to shorten the completion time and to group questions with similar content. Finally, some questions were reworded more clearly, by converting certain multiple-choice questions into five-point Likert scales, so that they were more comprehensible to the respondents and avoid tiring them with their length.

Finally, after the changes to the questionnaire were made and pre-testing on 30 respondents, the main survey was conducted with the help of a questionnaire consisting of 31 questions with 60 variables. The answers to the questions of the questionnaire were dichotomous, five-point Likert scale with ratings "never to always", "not at all to very much", "definitely not to definitely yes" and multiple-choice answers. Below is a detailed presentation of the structure and content of the questionnaire, as it was finally formulated with 26 main questions and 5 demographics.

The questionnaire began with an introductory paragraph that described the objectives of the research, the scientific purpose for which the answers will be used and gave a prologue on the content of the answers. The first two questions aim to investigate the degree of involvement of the respondent with tourism in general, the frequency and purpose of travel as well as to introduce him to the “spirit” of the questions. The next three questions concern the respondents’ involvement in sports in general. The frequency and type of sports the respondents attend was investigated in order to understand which sports they are involved in and to confirm the degree of their involvement. In the 6th and 7th questions, an attempt was made to determine the degree of involvement of the respondents in sports tourism as well as the degree of their interest. From question 8 onwards, the questionnaire becomes more specific to the problem that the survey focuses on. The next question explores the respondents’ interest in sports facilities and whether these constitute a criterion for choosing a tourist destination. The next three questions explore the respondents’ previous activity and involvement in sports events during their vacation, what they choose to visit at the same time, and whether a major sports event would attract them to travel to the location where it is being held. Questions 12 and 13 ask respondents to choose their preferred areas for tourism. Questions 14 and 15 explore whether sports are a motivation or main concern for tourism, as well as the time they tend to spend for vacations in Greece. In the next two questions, respondents are asked to respond according to their personal beliefs regarding whether sports provide a more attractive tourist package for choosing a country as a destination, as well as what they believe a destination should provide, using a five-point scale and a selection list, respectively. In questions 18 and 19, respondents are asked to indicate the frequency of visiting certain places, as well as to express their opinion regarding the changes that should be made in order to increase the attractiveness of Greece as a tourist destination using a five-point scale. In the next three questions, respondents are asked to respond using a five-point Likert scale regarding their interest in organized sports activities. The degree of satisfaction of the respondents’ needs for sports is also investigated and whether this satisfaction leads them to re-select a destination. Question 23 aims to identify the respondent’s willingness to spend more money per day at a certain hotel if it were located near a location, facility or organized activity that is suitable for a sports experience compared to one that does not offer such an opportunity. In questions 24 and 25, respondents are asked to answer according to their personal beliefs regarding the relationship between tourism and sports activities, as well as the extent to which sports contribute to the development of a destination. The final question constitutes a statement of the respondents’ behavior regarding parallel activities during their vacation. For these three final questions, a five-point scale, a dichotomous scale with the addition of a neutral option, and a five-point Likert scale across five different variables were respectively employed. Five demographic questions are asked at the end of the questionnaire which concern the place of residence, gender, age, annual family income and level of education of the respondents.

### 3. Data Collection

The questionnaire was distributed to Greeks and foreigners of all ages. The questionnaire was posted in tourist groups on social media (Facebook and Instagram), in groups of students of Greek and foreign universities, as well as in general interest forums through an online link leading to the questionnaire in order to ensure that the sample was diverse, independent and as representative of the average tourist in Greece as possible. It was also sent to members of the University of Athens community, the Athens University of Economics, as well as to foreign universities in Russia and England. Questionnaires were also distributed and collected on-site at the Athens International Airport in order to obtain responses from tourists coming from various places. Consequently, the sample was random, which contributed to the diversity of responses with the participation of many different tourist profiles. The questionnaire structure provided the possibility of obtaining qualitative data (nominal data) and quantitative data (Likert scales). The data processing includes a descriptive and comparative inferential statistical analysis.

The questionnaire was created with the help of Google mail documents (see Supplementary Information).

A total of 1503 fully answered questionnaires were collected from Greeks (1163) and foreigners (340) of both genders and various educational levels. The collection of the responses was completed in 2024. The Cronbach’s Alpha reliability index is satisfactory and belongs to the very good reliability category,  $A > 0.80$  ( $0.7 < A < 0.9$ ), for the quantitative and quantified variables but not for the demographic and multiple-choice questions. The main concern of the survey was to determine the degree of active sports participation of tourists during their holidays and whether they include exercise in their tourism

habits or not, as well as the factors that shape an attractive tourist destination according to them. It also concerns the triptych sports–tourism–sustainable development and the correlation among them, particularly how travelers perceive and engage with sports activities while visiting destinations. Among other things, several questions concern economic trends, cultural aspects as parallel actions and environmental concerns in tourism. The dataset is available in Supplementary Information.

This dataset involves answers assessing tourists' travel motivations, participation in sports, and spending patterns. A researcher may identify significant correlations, shifts in preferences or shaping tourism consumer profiles. Also, one may uncover insights into how sports tourism contributes to economic growth, social well-being, environmental sustainability and other findings. The dataset consists of two worksheets. The first worksheet represents the coding that has been used in order to transform the qualitative values into quantitative ones. This procedure has been done in order for every researcher to be able to work on the data directly, freely and without the need to do any coding by themselves. Also, apart from being a time saver, it is a very helpful tool because it was created by the creator of the questionnaire and thus incorporates the initial intentions. Finally, the coding procedure allows the datasheet to be worked on directly through several tools. In addition, it is very helpful for a straightforward explanation procedure of the analysis made. However, the coding method was explained thoroughly so anyone that needs to transform the data back to a qualitative state should be able to with no restriction. It is of major importance to note that some questions, such as 10, 12, 13 and 17, that are qualitative have been divided into individual dichotomous ones in order that they can be analyzed individually per characteristic. Also, questions 18, 19 and 26 incorporate several other questions within them due to the fact that they question a state or an attitude or an opinion concerning several topics followed by five-point Likert scale; thus those questions have also been divided. In any case the coding mentioned above is easily reversible should a researcher need to do so. The coding method leads to the second worksheet consisting of the coded data or the numerical raw data. This worksheet is fully workable, consisting of 1503 rows and 60 columns. The first row explains the matching question of which the responses are in the same corresponding column. The data set has already been used in machine learning algorithms in order to predict daily expenditure behavior in sports activities showing great results.

#### 4. Impact and Value of Data

The sports tourism questionnaire and the dataset from its responses stands to make a significant impact across multiple domains of sports and tourism research, development and practice, not only in Greece but also to other regions with a similar touristic profile. Its structure and unique inclusion of sports, tourism, economic and sustainability aspects make it a valuable asset for developing tourism and local economies through intelligence from actual clients (tourists) leading to informed decisions and planning.

Both the sports tourism questionnaire as well as the dataset from its responses offer rich and structured data, given in a very useable and manageable way, meticulously curated to reflect the special nature of sports tourism and its impact on the economy, the environment and the society of a place or a region. It is valuable because it provides significant insights concerning the attitudes and beliefs of tourists in Greece. It also represents a tool for AI-powered decision support systems. Thus, it may assist in making data-driven policy decisions related to tourism planning, sports infrastructure and program allocation strategies. Finally, the questionnaire has already been used in published papers in peer-reviewed journals and presents a unique opportunity for it to be reused to generate additional data from other regions, ready to be compared to studies using the same questionnaire.

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