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Economic and Social Yield of Investing in a Sporting Event: Sustainable Value Creation in a Territory

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Abstract: Sporting events are a stimulant for the economy and for improving social benefits. This paper aims to estimate a sporting event's economic and social impact through input–output tables and cost-benefit analysis methodologies. Tangible and non-tangible impacts, such as health benefits and the value of the host city's tourism image are investigated. Using data collected from the MedSailing event in 2019, the results show a positive return from every euro invested in the sporting event both economically and socially. Additionally, the results related to the media impact of the sporting event are shown. A single figure of net returns to society enables policymakers to assess the social value of the investment itself and make decisions that improve the economic development of the territory.

Keywords: sustainable value creation; sporting event; input–output model; cost-benefit analysis; economic impact; social benefit; tourist image



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1. Introduction

Currently, sports are becoming a growing trend in society and a lifestyle for many people. Sports practice positively impacts society and is frequently related to health, values and better quality of life. It is well known that the effects of sports practice are also related to economic aspects. More recently, the emphasis has been placed on relating the effects of sports to social aspects.

From the perspective of tourism, the literature has addressed the economic effects of sporting events. Sporting events promote tourism destinations [1,2] and destination branding. In this sense, researchers have focused on the relationship between tourism and sport. From this perspective, new terms have been born, such as sports tourism [3–5].

The sports industry has a great impact on both global and local economies [6]. According to the Spanish Survey on Tourism Expense (EGATUR), in 2019, more than 10 million foreign tourists came to Spain for sports-related reasons. Data from the National Institute of Statistics of Spain (INE) for 2019 show that sports tourism generated more than EUR 12,000 million annually. Therefore, sports have ceased to be just recreational activities or for entertainment. They are now a good, whose production, consumption, financing and management respond to the guidelines of economic rationality [7–10].

Data from the Ministry of Culture and Sports corroborate that the sports industry is constantly growing. This is demonstrated by the increase in Spanish companies whose main activity is sports, growing from 33,071 companies in 2017 to 34,203 in 2018, and then 34,529 by 2019. According to Bosch et al. [8], the sports industry generates 1.44% of GDP and 1.5% of employment.

Sporting events have the capacity to generate economic and social impacts insofar as they bring together different agents in the same space: participants, fans, the media, organisational entities, collaborators and sponsors [5,8]. Large sporting events are clearly a stimulator of the economy in those destinations where they occur; however, smaller events also contribute to economic growth [10–13]. In this line of research, Carreño [14] analyses

the economic impact of the Ironman sporting event on the island of Lanzarote's tourist activity, showing that more than 300 people stayed on the island for the competition. The results show that these tourists' average daily expenditure was EUR 23, an expense higher than the usual island tourist's average daily expense.

The host communities of sporting events receive economic benefits [14–17]. Economic impact studies have focused on determining the profitability of these events based on the investment required, the economic activity generated, and the creation of new jobs. The economic impact of a sporting event refers to the set of effects that the event has on the economic system of a geographical area derived from a sporting action [18,19]. In more detail, Sanz and Insúa [17] use two perspectives of analysis to classify the economic impact of a sporting event, namely, the macroeconomic (the importance of sport in the total economy) and the microeconomic (which analyses the behaviour and the decisions of each individual and their relationships).

The analysis of the economic impact of sporting events has come from methodologies related to general equilibrium models and the input–output method [7,9,20]. Various authors have studied the positive economic repercussions of sporting events. For example, Selva and Puertas [21] analyze the Moto GP championship in Valencia and show that there are total tax revenues of EUR 256,000, accompanied by an increase in GDP of EUR 27 million. Research conducted by Gratton et al. [22] analysed ten sporting events based in the United Kingdom. Their research shows that five of the ten events had positive effects on the economy. Guerrero et al. [23], in their analysis of the Copa América de Vela, obtained results that showed that the event acted as a stimulator of economic activity, generating 6938 jobs in Valencia and increasing the GDP by 1.06% in 2007, with a total impact of EUR 430,700 thousand.

Even though sporting events are a stimulant for the economy because they promote destinations for sports-based tourism, they also generate social effects that have an impact on the well-being of society and the territory where they take place [22,24,25]. Jiménez-Naranjo et al. [5] analysis of the World Padel Tour finds that the cost-benefit ratio is EUR 13.85; that is, for every euro invested in a World Padel Tour event, EUR 13.85 is recovered. However, evidence for sporting events' social benefits is scarce, especially for periodic events with limited economic impacts. This article has a twofold objective: to estimate the impact of the MedSailing'19 nautical event in economic and social terms, and more specifically, to investigate the benefits that society and the territory obtained from holding a sports competition.

The social benefit is that which helps increase the well-being of the people who live in a territory. Therefore, the expression of social benefit is not measured in monetary terms. The calculations of the social impact use, among others, cost-benefit analysis and social accounting sustainability tools [26,27]. These tools are useful for the assessment of socioeconomic impacts that come from sporting events.

Measures of the social impact of sporting events are related to the perception that individuals have about an event [24,28–30]. In this sense, Parra-Camacho [25] argues that each individual reacts or perceives the celebration of a sporting event differently. According to these authors, citizens who receive more direct benefit from an event subsequently value it better than those who do not obtain any direct benefit.

The social impact of a sporting event also entails a media impact. Gratton et al. [22] analyse the social success of a sporting event relating it to the image that is projected of the event's host city. The improvement of the image can be interpreted as a social benefit for the residents of the city [31,32]; in this same line of research, Sanz et al. [33] analyse the social impact of the Formula 1 European Grand Prix, obtaining as a result that 57% of residents agree that the event improves the city's image. Therefore, it is of special interest to analyse the effect of a sporting event not only from its economic perspective but also from the effects it has on social welfare. Moreover, this paper includes in the analysis the mediatic impact value. According to the methodology of equivalent publicity value used

by various authors [34–37], this work explores the activity generated by the event on mass media and social media platforms.

The paper is organised as follows. The following subsection presents the context for the empirical analysis carried out; in Section 2 describes data and methodology. The results and discussion are presented in Section 3. Finally, Section 4 concludes the analysis and provides some policy-relevant recommendations.

Context

Sailing is the sport that has given the most Olympic medals to Spain. In 2012, there were more than 52,000 registrations for sports licences in the Spanish Sailing Federation. However, the number of federated sailors in 2019 in the country fell below 20,000. Although nautical sports can be practised professionally, they are also activities that allow for recreational practice. The marina managers of various associations in collaboration with the Barcelona Nautical Cluster have pointed out that sporting events and nautical sports practice favour tourism, with the possibility of utilising several destinations in the same holiday period. Thus, the region is known as a tourist destination. Both of these aspects create positive economic and social impacts in the territory [8,33].

The analysis presented in this article focuses on the sporting event organised by Club Nàutic el Balís, located in Sant Andreu de Llavaneres, in the province of Barcelona, Comarca del Maresme (Catalonia, Spain). Founded in 1966, the yacht club was born with the aim of being a place dedicated specifically to sailing sports. In the eighties, it was consolidated as a sports commission and began a growth stage with the port's expansion in Sant Andreu de Llavaneres. In 1981, the yacht club organised the first regatta, and in 1986, the club became known internationally when Xavi García Muret, a club member, became world champion. Shortly after, Jose Maria Van der Ploeg García, another club member, won the gold medal in one of the sailing categories at the 1992 Olympic Games. In 2003, the club reached a membership record with 1341 members.

In 2012, the club made considerable modifications concerning the environment, which helped it achieve its first blue flag in 2012 and ISO 9001 and ISO 14001 in 2013. Today, the club collects major state, national and international nautical championships, such as MedSailing.

The MedSailing European Sailing Championship is a sailing sporting event wherein regattas are held over two weekends in February with participants from all over Spain and Europe. MedSailing is a high-performance sports competition consisting of two rounds. The first one takes place at the national level, with participants coming from different Spanish towns (the greatest numbers from Catalonia). Approximately 120 participants and approximately 60 boats register for each competition. The first round of the regatta takes place on 8 and 9 February. The second stage is international; the participants come from different European countries, registering approximately 160 participants and 80 boats. This regatta takes place over 3 days, from 14 to 16 February of each year.

Not all sporting events have the same category, with each event having a series of specifications for its classifications [15,22]. This classification can be of four types. Type A comprises irregular and unique events of international scope, which generate great economic activity and media coverage. Type B events are those with a large number of spectators that occur periodically at the national level, generate significant economic activity and are of great interest to the media. Type C includes events that occur sporadically, with national and international spectators with limited economic impact. Finally, Type D events are periodic and well-attended national events with limited economic impacts.

According to the typologies of events proposed by Gratton et al. [22] and Barajas et al. [15], MedSailing is classified as Type D since it is a small nautical event. Large sporting events have attracted researchers' attention, especially due to their economic repercussions [38].

Although the literature has made extensive contributions on the economic and social effect of large sporting events, in this paper we want to pay special attention to those small sporting events that also have a positive impact on the territory, not only from a

socioeconomic perspective but also media. To fill the research gap, this study analyses a small sailing sporting event and its impact on the territory. Recently, some authors have begun to draw lines of research referring to the essence of sporting events in promoting regional tourism [39–41] and the perception of citizens of the economic, social, cultural and environmental consequences of tourism for the city [42]. The relevance of our analysis is to provide new empirical evidence on the positive effects of a small sporting event for economic and social agents and at the same time measure the media impact. In our best knowledge, it is the first paper that analyses the impacts in several aspects of a sailing sporting event in Spain and Catalonia has a special interest in tourism related to nautical sports due to its location on the Mediterranean coastline.

2. Data and Methodology

The analysis of the economic impact of the MedSailing'19 event includes direct economic benefits and indirect effects, which are computed using the input–output model (IO) with the social accounting matrix (SAM) for the indirect economic effects [43]. The survey administered to participants is used to calculate the direct economic impact. Social benefits and costs are included in the cost-benefit analysis (CBA) subsection. One of the aims is to determine the characteristics of the assistants, participants and companions to see if common characteristics exist concerning expenses or other considerations.

The survey was conducted on 9, 13 and 16 February 2019, in the Club Nàutic el Balís. Days 9 and 13 were the days that the participants registered. The surveys were conducted on day 9 from 9:00 to 11:00 and on day 13 from 10:00 to 18:00, with a break between 13:00 and 15:00. During the morning of 16 February, between 9:00 and 10:30, surveys were conducted before the boat race. The schedule for completing the surveys was established as a function of the event's registration period. The survey was divided into the following sections: socioeconomic data (age, gender, level of studies, and labour situation); profile of respondent (how frequently they practice the sport, how many times they come to the region and with who, their motivations, and the number of companions); profile of the visit (the type of accommodation, number of nights, and diet during accommodation); level of expense (expenses for accommodations, food, shopping, culture, sport, and the willingness to pay).

In this way, 162 valid responses were collected from the total population of 190 ships that participated in the competition. The sample size calculated was 164, considering the typical deviation, such as the variation coefficient. The sample was taken in situ while the participants were registering, it is for this reason that the sample covered almost the entire population. After the survey, to analyse the hypotheses related to the economic impact, we used the Catalan Statistic Bureau's input–output tables (IDESCAT) from 2011 for 10 sectors to analyse the hypotheses related to the economic impact. Calculations done using the input–output tables have an advantage: the capacity to measure the productive interdependence between the different sectors and distinguish the direct impacts of the indirect. On the one hand, direct impact measures how sectors suffer when adjusting their production to new demand levels. On the other hand, the indirect impact measures necessary production adjustments in all sectors for the final increase in demand produced in just one sector. Additionally, the input–output tables allow us to calculate the induced effect. This measures the effect of new income generation on the population. These produce an increase in the acquisitive capacity of consumers. When they consume, they create an economic effect on the different sectors of the economy and increase the final demand.

This methodology allows us to know the total production X in a territory that is produced by a final demand $A \times X$ and an intermediate demand D .

$$X = A \times X + D$$

After conducting the survey, we obtained D . Matrix A comes provided from the input–output tables published by the Generalitat de Catalunya. To find the total production, we have to isolate X (Total Production).

$$X = (I - A)^{-1} \times D$$

X : Represents the total effect,

$(I - A)^{-1}$: Indirect effect,

D : Direct effect.

Therefore, once D is obtained, this allows us to obtain the indirect impact. With it, we will finally be able to obtain the results of the impact/total economic effect.

Following Crompton [44], some mischievous economic impact analyses can be found to legitimise a political position. One of these practices is to avoid social costs, especially nonmonetary costs. To verify the hypothesis related to the social impact, we use cost-benefit analysis. This method consists of comparing the costs and the profits produced [45] to obtain a cost-profit ratio that shows what money is recovered for each euro invested in the sporting event. The CBA has two very clear-cut purposes. First, it helps to determine the feasibility of a project and determine if it is profitable, more or less, for society. Second, it is a very good tool for comparing different projects. Kesenne [11] shows the advantages of CBA analysis with respect to the economic impacts of sporting events.

To realise the CBA methodology, we first have to identify and quantify the costs and profits produced in society by the MedSailing'19 competition and celebration. At this point, one of the larger barriers in a CBA analysis arises: for many events, it is difficult to quantify all the profits and costs that the event produces monetarily. As mentioned previously, in the theoretical frame, a social profit increases society's welfare while a social cost diminishes social welfare. Therefore, not all social profits and costs represent a monetary gain or loss.

The majority of the CBA studies in back investigations coincide in defining the following profits and costs. In reference to the profits: the expense of not having local assistance, the entry of the organisers, the exceeding of local consumer assistance, the value as an intangible public good that uses no local public assistance, the profits received from the event if it encourages healthy habits, and the value the event has for the improvement of the image of the destination. Regarding the costs considered, there are investment and operations costs, local assistance and the economic costs that the event generates in terms of congestion, accidents, crime and the environment.

3. Results and Discussion

3.1. Direct Economic Impact

The following profiles of Medsailing'19 participants were obtained from the survey (Table 1). The average age of the assistants and the participants was approximately 21 years. The age group between 15 and 19 is where we find most respondents (men, 69%; women, 31%). This shows us that inequality exists between the sexes since the percentage of male respondents surpasses 50%.

Concerning the respondents' origin, we see that those who reside in Spain represent 44% and more than 50% of the respondents came from other countries (mainly from Europe). We can better concretise the origin of these percentages: we observe that those of international origin came from Germany (25%), Italy (16%) and Holland (12%). The remaining percentage is divided amongst United Kingdom Belgium, Denmark, France, Hungary, Russia and Switzerland. If we concretise in reference to those visitors who came from Catalonia, these mostly were from the Canary Islands (60%), Balearic Islands (20%), Valencia and Cantabria. Regarding the participants and assistants from Catalonia, 41% came from Barcelona, 14% from Tarragona and the remaining from Berga, Blanes, Maresme, Girona, L'Estartit, Rubí, Reus, Palamós, Sitges, and Port de la Selva.

Table 1. Summarised results from the survey, with participant profiles (%), habits and other relevant information.

Variable	Value
Age	21
Men	69%
Secondary studies	57%
Students	80%
Origin: Spain	44%
Frequency of sporadic visit	46%
Participants as main motivation	84%
Visitors accompanied by team	81%
Visit typology: spend night in the county (tourists)	62%
Type of accommodation: apartment	60%
Type of accommodation: itself	70%

With respect to socioeconomic data, we asked about the level of studies. We see that most of them are situated in secondary studies (57%), which is because the vast majority of the participants and assistants are in the 15 to 19 age range, 31% of these were studying or already had university studies, and 12% already had compulsory studies.

Another data point extracted from the survey was the labour situation, which we categorised as follows: students, unemployed, employed and retired. The observed results were consistent with the results obtained for the age and level of studies since they were young people shows us that 80% were students, with 20% remaining in the employed categorisation.

With regard to the frequency of assistants or participants in this type of competition in the territory, the results of this question show us that the large majority of them have already assisted more than once with this club for some competition but sporadically, that is to say, they practically assist in this competition. These represent 46% of the total. Otherwise, 39% were first-timers with the club in 2019. In this competition, 13% assisted on a weekly basis since it was their usual place for training or competition, with another 2% assisting monthly or quarterly.

In reference to the question related to the respondents' main motivation, it was for competition; a large majority of them were participants (84%), while 15% were accompanying a participant (these could be family or trainers). Only 1% came to the competition as fans and then assisted with the event. The results do not show any respondent that came for reasons not tied to the competition.

After knowing the respondents' main motivation, the survey analysed what type of companions attended the event. The results show that 81% were accompanied by the team, 16% with family, and 3% with friends. These results show that in this type of competition, most of the participants come accompanied by the team of the club from which they come. We also analysed the behaviour of the assistants and participants related to their habits of accommodation. First, we differentiate those who were single-day visitors since they slept in their residence and travelled to the competition each day (these represented 38%). Next, 30% slept in the place where the competition was celebrated, Sant Andreu de Llavaneres, while 29% lodged inside Maresme and 3% out of the Maresme.

Attending the behavioural results in more depth, the average number of nights lodged was 5.40 nights, except single-day visitors. On the other hand, regarding the type of accommodation chosen by the users, the main type was the apartment (60%), followed by the hotel* (12%) and then a pension or hostel (11%). This analysis accommodation typology is tied to the type of diet chosen. As many users were lodged in tourist apartments, those choosing pensions used their own accommodations (70%), while others used their accommodations only to sleep (17%).

We analyse the level of expense produced by the users' assistants and participants to the competition in the province where the competition was held (see Table 2). We

differentiate the expenses in accommodation between foods and drinks, shopping, culture and sport.

Table 2. Table summarising user spending.

Daily Expense per Person	EUR
Accommodation	45.97
Foods and Drinks	22.65
Culture	1.54
Sports	4.87
Shopping	6.59
Total daily expense per person and day	81.62

The average expense in total accommodation was EUR 248.38, with an average of 5.40 nights, removing from the analysis all those that did not realise an accommodation expense due to being single-day visitors. The mean daily expense of the users during the days of the competition was EUR 22.65 per person. The mean daily mean in shopping per person was EUR 4.87. The mean daily expense in culture per person of the users was EUR 1.54. The mean daily expense in shopping per person of the users was EUR 6.59.

We also analyse the consumer surplus of assistants/participants of MedSailing'19. In the survey, we asked four questions referring to whether they would pay more than EUR 100, more than EUR 200, more than EUR 300 or more than EUR 500. We want to know how many euros the participants or attendees would be willing to overpay. In the first question in which it proposes that the participant or attendee pay EUR 100 more than the price already paid to come to the event, more than half of them (54%) would have paid it, 32% would not be willing, and 14% did not know if they would pay it. The remaining percentage represents those who answered, "does not answer".

For the three following questions (where the willingness to pay increases up to EUR 500), the availability to pay reduces until finally, only 5% would have paid EUR 500 more to assist or participate. We can observe the evolution of this availability as the price increases, shown in Table 3.

Table 3. Summary of availability to pay.

Availability to Pay	Yes	No	It Does Not Know
EUR 100 more	54%	32%	14%
EUR 200 more	19%	57%	22%
EUR 300 more	8%	67%	23%
EUR 500 more	5%	69%	25%

Therefore, analysing Table 3, we can see that 54% would pay EUR 100 more, 19% would pay EUR 200 more, 8% would pay EUR 300 more, and 5% would pay EUR 500 more. Table 4 indicates the availability to pay of each person on average.

Table 4. Availability to pay.

Quantity of More × Percentage	Result
EUR 100 × 35%	EUR 35
EUR 200 × 11%	EUR 22
EUR 300 × 3%	EUR 9
EUR 500 × 5%	EUR 25
Total	EUR 91

To explore further, we multiply the total by the number of people who have affirmed that they would pay more (138) and divide it by the number of people to which completed the survey (164). The result obtained shows that users would have paid EUR 76.57 more to assist with the competition.

3.2. IO Analysis

For the IO analysis, we used the input–output tables that collected the flow of transactions between economic sectors in a determinate region or country by year.

To start the analysis, it is necessary to collect the data. In this case, the methodology used was the survey given to the competition’s assistants and participants. With this information, it is possible to detect the variations in the economic activity of the productive sectors as a function of the variations in demand. For this analysis, we used the IDESCAT input–output tables from 2011 for 10 sectors.

Tables 5–7 show the impact of the exploitation expenses and the visitors on total production. Each table shows the calculation of the direct, indirect and total impacts.

Table 5. Impacts of operating expenses on production (EUR).

	Direct	Indirect	Total
Agriculture, etc.	0	66	66
Industry, water and sanitation	0	2.157	2.157
Construction	0	747	747
Trade, transport and hospitality industry	3.639	1.917	5.556
Information and communications	1.165	545	1.710
Financial activities and insurances	0	955	955
Real estate activities	3.485	1.088	4.573
Professional activities and others	16.490	3.120	19.610
Public administration, education and health	0	93	93
Artistic activities, entertainment and others	1.877	228	2.105
Total	26.656	10.916	37.572

The operating expenses produced by MedSailing’19 have reached EUR 37,572. As we can observe in Table 5, the direct impact supposed a total of EUR 26.65, whereas the indirect impact supposed EUR 10,916. If we allocate these expenses to the different sectors shown in the input–output tables, we see that the sectors benefiting the most were: professional activities (38%); trade, transport and hospitality (21.7%); and real estate activities (13.9%).

Regarding the visitors’ expenses, companions and participants of MedSailing’19 have spent a total of EUR 200,416, of which 133,090 have been of direct form and 67,326 of indirect form. This expense is imputed only in two of the input–output tables’ sectors, in sector four (the trade, transport and hospitality industry (47.9%)), and in the remaining sectors (artistic activities, entertainment and others), reflected in Table 6.

The last calculation of the economic impact shows the total impact on the company’s production and the assistants/participants. As shown in Table 7, the direct impact was EUR 159,746, and the indirect impact was EUR 78,243, with a total impact on the production of EUR 232,010.

The sectors with more weight on the total impact were trade, transport and hospitality (representing 67.65% of the total), and the professional activities and others sector (representing 13.67%).

In addition, it is worth pointing out that of the total impact, 83.6% was produced by assistants/participants.

Table 6. Impacts of visitor expenses on production (EUR).

	Direct	Indirect	Total
Agriculture, etc.	0	729	729
Industry, water and sanitation	0	14.621	14.621
Construction	0	4040	4040
Trade, transport and hospitality industry	130.029	21.387	151.416
Information and communications	0	815	815
Financial activities and insurances	0	3984	3984
Real estate activities	0	8.801	8.801
Professional activities and others	0	12.123	12.123
Public administration, education and health	0	249	249
Artistic activities, entertainment and others	3.061	577	3.638
Total	133.090	67.326	200.416

Table 7. Total Impacts on the production (EUR).

	Direct	Indirect	Total
Agriculture, etc.	0	795	795
Industry, water and sanitation	0	6.197	6.197
Construction	0	4.788	4788
Trade, transport and hospitality industry	133.668	23.304	156.972
Information and communications	3.639	2732	6.371
Financial activities and insurances	1165	4529	5694
Real estate activities	3.485	9.889	13.374
Professional activities and others	16.490	15.244	31.734
Public administration, education and health	0	342	342
Artistic activities, entertainment and others	4.938	805	5.743
Total	159.746	78.243	232.010

To finalise the event's economic impact, we calculate the multiplier with a simple formula that allows us to know how much money has been generated by the event for each euro that has been invested in it. Each euro that was invested in the sporting event recovered EUR 1.45. Considering the impact created, the total impact on the production would increase to EUR 332,547; therefore, if we reformulate the multiplier formula, we will obtain a multiplier of EUR 2.08 for every euro invested. In the research, the induced effect was not considered.

3.3. Net Social Value: Cost-Benefit Analysis of Investing in the MedSailing'19 Event in Maresme

A cost-benefit analysis considers the economic and other benefits of investing in the MedSailing'19 event, as well as economic and noneconomic costs. Therefore, it is a methodology that goes one step further by evaluating some social variables and effects that other methodologies (such as IO outcomes) do not.

3.4. Costs

The costs can be divided and classified with the aim of better defining their origin. In this case, the MedSailing'19 event produced two types of costs: costs for investments, operations and finance; and the expense of the local assistants in registrations. Costs for investments, operations, and finance come from the operating expenses, depreciation, and financial expenses produced by the competition organiser. These costs grew to EUR 26,656. The others reference the expenses produced by local participants in the MedSailing'19 registrations. These costs rose to EUR 9026.94.

3.5. Benefits

Income can also be classified and defined according to origin: no local expenses, the organisers' income, consumer surplus, the value of the tourist image, and direct health income. The no local expenses represent the income produced by those assistants with the main aim of visiting to assist or participate in the MedSailing'19 event. These expenses do not include registration expenses, as they will be taken into account later.

The expenses related to doing things without local assistance rises to EUR 22,602.58. This cost represents an expense for society. The expense from having no residents registering the competitors rises to EUR 21,170. When we talk about consumer surplus, we will identify the amount attendees would be willing to overpay for the competition. The result was that the assistants or participants had to pay EUR 76.57 per person. In total, this income would represent a quantity of EUR 12,940.33.

Other income to be valued is related to or obtained from advertising in communication channels or social networks. We want to value the income that helped to improve the tourist market for the population. Many authors have explored the value of a mediatic impact [46–48]. Those cases used the equivalent publicity value as the way to determine the economic value. This methodology focuses on the impacts generated by the event and its equivalent publicity cost. The event has three publications in digital media and one report on local television:

- Two publications in the digital newspaper ABC. These publications were one page for each. Following the publicity prices for this type of media, the equivalent publicity value is EUR 32 (EUR 16 × 2);
- One publication in the digital sports newspaper Sport, where the equivalent publicity value is EUR 21;
- One report on local television. In this case, the prices of publicity are not the same for all days. This report appeared on Thursday, 21 February at 14:27 p.m. At this hour, the equivalent publicity value was between EUR 3600 and EUR 5800. We will take EUR 6500 as an estimated value.

Nevertheless, we have to consider that the impact of MedSailing'19 has also produced some publicity on Twitter, one of the main social media platforms. Social media publications can provide value in many forms [36,37,49] and the value of its activity depends of several factors [35,50]. Authors such as Norte [51] and Afnan et al. [52] propose some models related to commercial actions and pricing social movements.

Before, during and after the event, 98 publications on Twitter talked about Medsailing'19 from 1 January to 21 February 2019. Taking the worst scenario and counting the number of posts done, the minimum price established by a publication on a social media platform is EUR 0.50. Thus, the equivalent value could be EUR 49.

To calculate an accurate value of social media posts, more information is needed, such as the interactions of every publication, the posts made by users referring to an event and who interacts with them. Likewise, there are no consolidated methodologies to calculate it. In the case of social media, the publicity equivalent value is a variable that could change according to many factors. That is why, in this case, we have not included the value of social media activity in mediatic value calculation and assume that its value is EUR 6552. Table 8 gives a summary of the incomes.

Table 8. Publicity equivalent value.

Media	Publicity Equivalent Value
Digital Newspapers	52 EUR
Local TV report	6.500 EUR
Total	6.552 EUR

The lack of sedentarism produces an improvement in individuals' health. This improvement can translate in economic terms from the point of view of cost savings that this

produces for society and organisations, such as social security. To identify the cost savings that are produced both directly and indirectly by these individuals who practice sports, previous studies have been used that have already analysed these costs.

Janssen et al. [53] conducted an investigation of sedentarism in Ontario and Scarborough from the perspective of obesity in the United Kingdom. According to these two authors, the most important diseases that lead to a sedentary lifestyle and obesity are an ischaemic disease of the heart, ischaemic and cerebrovascular diseases, breast cancer, cancer of the rectum/colon, hypertension and type II diabetes.

In the current study, the costs extracted in Gutiérrez's [54] research will be used in reference to the social costs associated with sedentary life in the Canary Islands. We do not believe that obesity can be directly related to nautical sports. Gutiérrez's [54] research, from which all the cost data will be extracted, distinguishes direct and indirect costs. Within the direct differences between hospitalisation, primary attention and specialisations and drugs.

These direct costs rise to a total of EUR 155,035,997.76 (Table 9). However, we must also consider the indirect costs, which come from the loss of labour productivity due to absenteeism at work, EUR 142,277,781.39 (Table 10).

Table 9. Direct costs.

Illnesses	Hospitalisation	Primary Attention and Especialisations	Drugs
Cancer of straight/colon	532,947.67	1,134,735.67	912,017.06
Cancer of Breast	500,915.85	850,507.44	742,916.28
Diabetes Of type II	323,431.63	6,394,630.37	18,664,643.08
Hypertension	47,233.90	24,461,336.05	85,006,479.34
Ischemic and cerebrovascular diseases	5,140,689.86	2,077,093.56	8,246,420.00

Table 10. Indirect costs.

Illness	Total (EUR)
Cancer of straight/colon	20,001,943.18
Cancer of Breast	7,733,023.81
Diabetes of type II	36,949,933.49
Hypertension	7,802,053.07
Ischemic and cerebrovascular diseases	74,790,827.85
Total (EUR)	147,277,781.39

In total, the sum of the direct and indirect costs rises to EUR 302,313,779.15, of which 52% of the costs correspond to the direct costs of hospitalisation, primary care attention and drugs.

However, for this investigation, we have to extrapolate these expenses for the representative population. For this, we calculate the percentage based on the population of Sant Andreu de Llavaneres, the location where the event takes place. The population in 2018 of Sant Andreu de Llavaneres was 10,877 inhabitants.

We divide the total costs with Spain's population to determine the cost per inhabitant, resulting in EUR 6.27/inhabitant. We multiply the result by the population of inhabitants, and the result is EUR 70,382.43. Therefore, the total health income is EUR 70,382.43.

3.6. Cost-Benefit Ratio

Once we have identified all the costs and the profits produced, we have to identify the multiplier. Table 11 shows the costs and income identified previously and the cost-profit ratio.

Table 11. Analysis of cost-profit.

Profits	EUR	Costs	EUR
Expenses no local	22,602.58	Investement and operation	26.656
Organisers	21.170	Local assistants	9026.94
Exceedance of consumer	12,940.33		
Intangible value	70,382.43		
Publicity equivalent value	6.552		
Total	133,647.34	Total	35,680.94
Ratio Cost-Profit	3.74		

The result of the cost-profit ratio is 3.74, which means that for each euro that society invests in the MedSailing sporting event, it recovers EUR 3.74. The effect of the event on society has been positive and produces a profit and an increase in social welfare.

4. Conclusions

Sporting activities are a growing trend in society. It is well known that sports positively impact society, health levels, values, and citizens' better quality of life. The effects of sports are also related to economic aspects. More recently, an emphasis has been placed on relating their effects to social aspects and well-being.

From the tourism perspective, the literature has addressed the economic effects of sports and sporting events. Sporting events promote tourism and general well-being in the areas where they take place. Sports events have great potential for attracting visitors to coastal and natural destinations. In addition to publicising the city through the media, sporting events carry positive economic and social effects.

This paper aimed to estimate the impact of the MedSailing'19 nautical event in economic and social terms. This sporting event is a type D event, a periodic event with a limited economic impact. Including economic or monetary costs and benefits, as well as intangible effects such as health benefits and the value of the tourist image for the host city, the results show a positive return from every euro invested in the sporting event both economically and socially.

First, we could describe the participant's profile as a user who is between 15 and 19, mostly male (over 50% are men), in secondary education and with a work situation of "student". Their main motivation for attending the event was their participation as racers. At the level of average daily expenditure level, we can talk about accommodation (EUR 44.97), food and drink (EUR 22.65), and a total average daily expenditure per person (EUR 81.62).

Our results show that in monetary terms, the total direct impact was EUR 159,746, and the indirect impact amounted to EUR 78,243, adding to a total impact of EUR 232,010. In this case, we can verify one of the research hypotheses: the direct impact has been greater than the indirect impact. Furthermore, we can also observe in the IO tables of visitor spending on production that the most important economic benefit component has been the daily expenditure in shops, transport, accommodation, and restaurants.

Next, concerning the social impact, the social benefits reached EUR 4,583,433.91, and the associated social costs reached EUR 35,680. Again, we can verify the hypothesis that the social benefit will be greater than the social cost. This leads us to the conclusion that nautical sporting events with a scope of MedSailing'19 produce social benefits. More specifically, if we extract the result of the cost-benefit ratio, we observe that for every euro invested in a sports competition, it produces EUR 3.74 for society.

In the project's main hypothesis, we proposed that the event's economic impact would be greater than 2; in this case, the result was 1.45. Therefore, we have not positively confirmed the hypothesis.

Once the results have been shown, it should be noted that small-scale sporting events with little media coverage are also a stimulant for the economy and increase society's well-being in the areas where they occur. In particular, society almost multiplies its welfare by four times. The Maresme is an area with favourable weather conditions for this type of competition (which other areas of Spain do not have), allowing this type of nautical competition to be held at times of the year that are not possible in other countries or parts of the peninsula due to weather conditions. Although small-scale sporting events are already held in the area, they are unknown to the area's inhabitants due to scarce media coverage.

Therefore, inhabitants are not aware that these types of events produce social and economic benefits for them. In this sense, the public sector has to reinforce communication to inform us about the social benefits of the activity. This greater communication effort should be directed not only to the inhabitants but also to the visitors. In the former case, the effort will improve the inhabitants' satisfaction; in the latter case, it will improve the destination's brand. The message focuses on a promotion of the social value of this type of small events, valid for both organisers and the public sector. A public-private collaboration is necessary to generate social value and increase the well-being of citizens. Additionally, as a recommendation to Sant Andreu de Llavaneres, it is proposed that the city expand its accommodation capacity since many of the participants or attendees stayed outside the town, producing a large income drain.

Finally, further research on the social impact of small events is needed. This typology of events compared to others has great potential to generate social benefits. Thus, a new line of research is proposed to evaluate whether a strategy based on promoting various type D events is more efficient than investing all the potential capital in one type A or B event. This hypothesis can be evaluated for smaller towns with fewer resources. Another interesting point would be to carry out this same study while taking the environmental aspect more into account since large sporting events normally negatively impact it. On the other hand, nautical events and other small-scale events favour taking care of the environment and the competition space (the sea). Future research could also create a framework that allows us to calculate the digital media impact. As we have seen, social media has an increasing impact in terms of generating interest to new visitors through projecting an image of a destination, but there is not a consolidated framework to calculate their return in terms of value creation for a territory. As we have seen, the way that the primary social media platforms calculate their prices for a marketing action is not constant. Finding an accurate approach for calculating this digital media value could help complete the impact evaluation for future events. This fact is especially important to evaluate the impact of the event on the destination image. Otherwise, although this event was done before the COVID-19 lockdown, future lines of research could be related to the effects of the pandemic crisis on this type of event and its implications.

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