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Direct Economic Short-Term Impact of Public Spending in Sporting Events: The Case of the Elite and Senior Badminton World Championships

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Abstract: Sporting events are drivers of urban life and have the potential to bring substantial short-term economic benefits to the host region by attracting visitor spending. This study has analyzed the impact generated by the 2021 Senior and Elite Badminton World Championships that took place in Huelva, Spain. The objectives are (i) determine the economic impact and determining factors; and (ii) the impact on the development of badminton in the region. For this purpose, the study used the Cost-Benefit Analysis approach to estimate the cashflows through a survey applied to both events. The results reflect a direct positive impact on the region's economy, although the results are not as satisfactory at the sporting level. The article contributes to the few mid-range event studies on a minority sport in a city with a highly developed tourism sector.

Keywords: economic impact; sports events; sport legacy; badminton; cashflow analysis

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1. Introduction

Few activities today are as far-reaching as the sports movement. As proof of this, the Olympic Games and the Football World Cup are events of unquestionable importance. The benefits of sport as a cultural manifestation, its social potential as an instrument to improve the health and education of the people, its political importance, and its growing economic impact demand more and more attention every day [1].

In Spain, the sports sector has undergone a very important evolution in recent years. Participation in sporting events has become one of the most popular active leisure activities among the population [2]. This fact has contributed to the significant increase in the number of sporting events held at local, regional, national, and international levels, especially at the non-professional level [3].

Therefore, the economic importance that the events have achieved also requires the evaluation of the socio-economic impact that they produce in the area [2]. In this sense, the impact generated by sporting events can be both positive and negative, especially in the case of smaller events, since, although they do not generate as much social or media interest, they can produce benefits [4].

In addition, and beyond the profit or loss it generates in economic terms, the social return on investment in sports is unquestionable [5]. From this perspective, the organisation of events has proven to be a strategic option for the promotion and development of many sports [6], especially those that are less visible due to their amateur practice and little or no professionalisation, and which are additionally overshadowed by other sports that are culturally most popular and more visible and promoted.

Such is the case of badminton, whose popularity in Asia is unquestionable, but in Spain it lives in the shadow of the media coverage of professional tennis [7] or the growing popularity of padel tennis [8], whose federative licenses have doubled in the last decade, amounting to 96,561 licenses by 2022, which has surpassed tennis and represents almost ten times the 9719 licenses of badminton [9].

Faced with this complex scenario, the Spanish Badminton Federation (FESBA), taking advantage of its Olympic status, was able to integrate a long-term strategic training and development plan far from the traditional "spontaneous generation", boosting the internal social projection of badminton and focusing on the binomial organisational performance vs. sporting performance [10]. The implementation of this plan utilised the strategy of acting as the host of international sporting events and the development of national competitions, which grew exponentially, from 8 in 2000 to 68 in 2018 [11]. The results were not long in coming, generating great references and positioning Spain at a global level [12].

Therefore, the ideal scenario is that of a virtuous circle capable of generating a social benefit from and for sport, along with a positive economic impact that contributes to the development of the host region.

The economic impact of an event refers to the total amount of additional money injected into a region because of holding the event [13]. In this sense, this study attempts to account for and understand the economic impact of sporting events on the host region. Specifically, the Senior and Elite Badminton World Championships were held in Huelva during November and December 2021.

In this regard, the existing literature primarily focuses on the impact of major multi-sport events (such as the Olympic Games, Pan American Games, etc.) or heavily attended sports events (such as the FIFA World Cup), considering political dedication associated with the significant investment of public and private resources destined for such events, and the social cost that their organization and celebration generates for local inhabitants in terms of quality of life [14–16]. Therefore, the present study is proposed as a contribution to the few studies on medium-sized events [17], and more especially the reference of an amateur sport that is not very popular in the host country. Additionally, the study provides a vision of what the simultaneous organization of two medium-scale events entails, the economies of scale that can derive from it, and the comparative analysis that allows us to observe the differences in income behaviour between one event or another.

The article is divided into the following sections: Section 1: the introduction; Section 2: the literature review on the economic impact of sporting events and a description of the events under study, the contextualisation of Huelva as a location, and badminton as a sport; Section 3: the methodology used; Section 4: the results of the research; Section 5: the discussion and conclusions with the limitations of the study and future lines of development.

2. Literature Review

2.1. The Economic Impact of Sports Events

Sporting events are major energisers of urban life, having the potential to bring substantial short-term economic benefits to the host region by attracting visitor spending [18] and improving the quality of life of residents, as well as long-term benefits by enhancing the image of the region as a sports tourism destination [17]. In addition, sporting events can generate regional economic benefits by stimulating business activity, creating jobs in the region [19], and promoting the creation and improvement of infrastructure [20].

Impact is the short-term benefits, which in the long term are referred to as legacies [21]. Thus, the impact is caused by a short-term impulse and can be positive or negative [22]. For events of all sizes, objectives are typically distributed into areas of economic, image, social, and environmental impact, with the challenge for both event owners and investment partners being to demonstrate the value of the event against these objectives in a meaningful and cost-effective way [23].

Spectators and participants in sports events are crucial to the tourism strategies of many cities and regions, which are willing to invest significant public funds into their

organisation. While these events have the potential to generate new revenues and stimulate economic activity, the additional benefits are complex. The necessary subsidies are often financed through cuts in public spending or tax increases, which could affect economic activity in other areas. To justify these investments, host communities must conduct economic impact assessments, but these studies are sometimes based on unwarranted assumptions, which can lead to questionable results [24].

The economic impact of an event refers to the total amount of additional money injected into a defined area because of holding the event. Studies of this seek to establish the net change in a host economy. To determine the net economic exchange, it is essential to consider both (positive) cash inflows and (negative) outflows. Key factors influencing the calculation of economic impact include visitor outlays, which include additional expenditures in a specific geographic region linked to the sports event, such as spectator and attendee participation, as well as expenditures generated by the organiser [13].

Consequently, both the economic impacts of specific events and types of events, as well as the methodological issues of the analyses, have attracted considerable scholarly attention [24]. In this respect, the assessment of the socio-economic impact of sports events started with the study of macro-events such as the Olympic Games, World Championships, and Universities [14–16]. Gradually, this interest has been extended to smaller events; however, there are only a small number of studies on medium-sized or small events [13]. Even so, several studies in Spain have recently evaluated the economic impact of some sports events: the Winter Universities in Granada [25], Spanish Masters Swimming Championships in Pontevedra [4], the Motorcycle Grand Prix of Jerez de la Frontera [20], the Valencia Tennis Open 500 [26,27], the Spanish Cycling Championship in Cáceres in 2015, the Descenso del Alagón in 2013 [27], and the World Padel Tour in Cáceres [28].

Regarding the type of sporting event, it seems clear that small and medium-sized events cannot generate the same economic impact as large-scale events [17]. However, these types of events can generate proportionally more economic benefits if they are held in small or medium-sized localities than if they take place in large cities [29]. In this sense, in Spain there are an increasing number of smaller sporting events, and a significant number of these are held in small and medium-sized towns and cities [2].

This study assesses the economic impact of two sporting events in the same modality, using the same methodology. The analysis addresses two main aspects: firstly, it examines intangible variables to measure and identify the influence of the organisation; secondly, it focuses on the determinants of spending, assessing the direct economic impact by identifying spending patterns and the variables that most influence them.

The study has two clear objectives: firstly, to understand how sporting events impact economically on the host region; secondly, to consider previous experiences [13] to identify the sporting impact on the development of badminton in the region. Both objectives are crucial for decision-making in the organisation of medium-sized sporting events. Although these events do not generate revenues comparable to large events, their efficient organisation can represent a considerable economic and development potential for the regions involved.

According to the criteria in Figure 1, the sports events analysed in this study are classified in category C1. They are characterised by being irregular and unique, changing locations, being attended by spectators and international competitors, and from an economic perspective they present some uncertainty in terms of economic impact, as they generate limited economic activity.

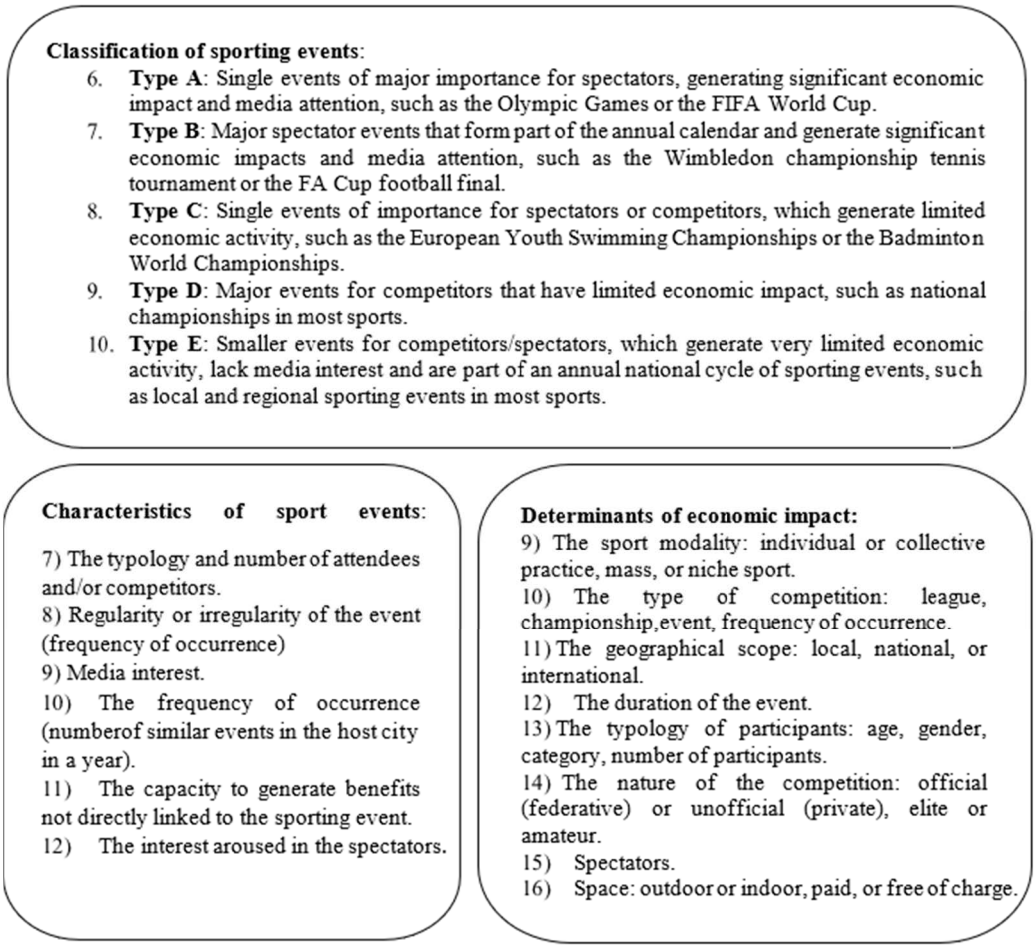

Figure 1. Criteria for determining the classification, characteristics, and determinants of the sports events analysed [14,30–35].

Considering the characteristics listed above, the sporting events under study in this study are characterised in Table 1.

Table 1. Typology and characteristics of the events under study.

	Badminton Senior World Championships	**Badminton Elite World Championships**
Typology	C1	C1
Sporting Modality	Badminton	Badminton
Sports Discipline	Men's and Women's Singles, Men's and Women's Doubles, and Mixed	Men's and Women's Singles, Men's and Women's Doubles, and Mixed
Competition	International	International
Category	Senior	Elite
Duration	7 days	7 days
Place	Huelva, Spain	Huelva, Spain
Type of competition	Official (Federation)	Official (Federation)
Organisation	Badminton World Federation	Badminton World Federation
Place	Sports pavilion	Sports pavilion
No. of athletes	201	200
Total Spectators	Free	Ticketing
Delay	Live Streaming	Live Streaming
Accredited Press	90	90

It can be observed that the events under study share characteristics in terms of type, modality, and sports discipline; both are international in scope. They have an identical

duration and are held in the same year and in the same city. Both have official status, the FESBA and the Badminton World Federation being the entities in charge of their organisation. They take place in the same sports facilities and are broadcast live on the internet. However, they differ in the category of the competition, the dates, as well as in the number of participants and the presence (Elite Championship) or absence (Senior Championship) of ticket sales.

2.2. Badminton as a Case Study

Badminton is an individual and pairs competitive racket sport which, unlike other racket sports, is played with a shuttlecock instead of a ball. Since the 1992 Barcelona Olympic Games it has been an Olympic sport in five forms: men's and women's singles, men's and women's doubles, and mixed doubles. In the latter, the pair consists of a man and a woman. It is a sport largely dominated by Asian athletes. Nevertheless, Spanish badminton has managed to make its way onto the international scene in recent years, breaking with Asian hegemony and positioning the country at the top of the international sporting list of winners [11]. An example of this is the Olympic gold medal won at the Rio de Janeiro Olympics in 2006 by the athlete Carolina Marín. This reputation has made it possible to attract sportsmen and women to Spain, and the country is considered a venue for international events, within the framework of the traditional "trickle-down effect" that can generate the sporting success of a country at a given moment, such as that observed by the victory of the French team in the 2018 Men's Football World Cup [36].

This paper analyses two sporting events held in the city of Huelva: The Badminton Senior World Championship 2021, held between 4 November and 28 December, and the Badminton Elite World Championship 2021, held between 12 and 19 December.

3. Methodology

3.1. Questionnaire

When selecting the methodology for conducting an economic impact study of a sports event, it is essential to consider the availability of data, the appropriate approach according to the nature of the event, the specific objectives, the advantages and disadvantages of each method, and the clarity and accuracy of the results depending on the instrument applied.

To achieve the objectives, the present study consulted the attendees of both events. Data collection was carried out using a questionnaire (see Table 2). The questionnaire consisted of 2 dimensions divided into 8 questions: 4 on socio-demographic issues and 4 on economic issues. A total of 549 questionnaires were collected.

Table 2. Structure of the survey.

Respondent profile	(Q1) Gender	Male. Female. Other
	(Q2) Age	Number
	(Q3) Educational Level	Basic studies (Primary and Secondary). Intermediate studies (Vocational Training and/or Baccalaureate). Higher studies (University)
	(Q4) Place of residence	Huelva. Spain. Other.
Economic characteristics	(Q5) Household Income	EUR 0–1000; EUR 1001–2499; EUR 2500–4999; More than EUR 5000.
	(Q6) Accompanying persons	Number
	(Q7) Days in Huelva	Number
	(Q8) Amount of money spent	Person/Day: Accommodation; food/drink; transport; Other.

In addition, it is important to stress that the various methods available are not mutually exclusive, but rather complementary. Methods such as Satellite Accounts or Input–Output Tables provide valuable data for calculations based on Cost-Benefit Analysis or Sector-Regional Analysis. On the other hand, Contingent Valuation provides measures of consumer benefit and cost, as well as data such as non-use value, enriching and extending the scope of other methods [31].

For the present study, the Cost-Benefit Analysis (CBA) approach has proven to be the most appropriate to estimate the cashflow of both events. Not only because of its suitability when analysing the economic impact of sports events in general but specifically for C1 type events such as the Badminton 2021 Senior and Elite World Championships, as it allows comparing the benefit of the event, which is reflected in the increase in the value of consumption of the local population, with the costs of the production factors necessary to organise it. The CBA, a broad and flexible methodology, allows the socio-economic impacts of large public projects to be assessed by estimating the Net Present Value (NPV) of the costs and benefits, i.e., the quantitative and qualitative, positive, and negative impacts generated by the event [37,38].

Calculating the economic impact of a sports event should start with direct spending. This includes spending by non-local spectators, non-local competitors, and the organiser as the main generators of economic impact [39,40]. However, a comparative study of CBA could be calculated based on opportunity cost and consumer surplus [41] this analysis focuses exclusively on the tangible direct economic effects related to the inflows and outflows of the main actors involved in the two badminton World Championships, in the senior and veteran categories, without attempting to calculate the opportunity cost and consumer surplus attributed to the event.

3.2. Sources of Cashflow

The first step in calculating the economic impact of badminton World Championships involves the identification of the actors who will incur expenditure or generate revenue in the respective host city [42,43]. In the context of this study, the main cashflow generators are spectators, competitors, and the organising committee (common for both events). All these groups have been properly identified, and detailed information has been collected on each of them.

3.3. Estimated Expenditure of the Different Actors

3.3.1. Identification of the Actors Involved

Spectator expenditure: To assess the economic impact of the event, it is essential to have information not only on the number of spectators but also on the length of their stay and the average expenditure per person. For events such as the Elite World Championships, which involve ticket sales, it is possible to determine the total number of spectators and to distinguish between those who are local and those who are not. On the other hand, in events without ticket sales, such as the Senior Badminton World Championships, this information must be obtained through questionnaires.

Competitor expenditure: The second group of individuals who will contribute to expenditure in the host city are the competitors, which include players, coaches, and other assistants. As the number of competitors is limited and they must register prior to the event, accurate information on their total amount can be obtained, usually through the team delegation or by personal email. The questionnaire addressed aspects such as the length of their stays and the expenditure generated in the host city.

Organising committee income and expenditure: The organising committee comprises the staff employed, officials or judges, representatives of each participating team, volunteers, and others involved in the coordination of the sporting event. The direct economic impact generated by the organising committee is derived from the difference between the revenue it attracts from outside the host city and the expenditure with suppliers. To calculate this impact accurately, it is essential to know and quantify in detail, broken down by source, the different items that make up the budget and its execution. It is sometimes challenging to determine whether the source of expenditure is linked to elements external or internal to the city, as they may cover a wider area that includes the local sphere. For example, if the autonomous government provides financial support, the city is considered part of the autonomous community. In this context, a proportional distribution must be carried out to

determine the part of the revenue that comes from outside the host city. In any case, the collection of all data should be carried out through the organising committee [44].

3.3.2. Estimated Expenditure of Visitors: Spectators, Competitors, Media, and the Organisation

The regional economic benefits of an event originate mainly from (1) the consumption of participants and (2) the increase in tourism after the event [16]. Regarding the latter, participation in an event has been found to have a positive effect on participants' intention to return to visit the region and on the likelihood of spreading positive comments about the region [45]. However, the positive impact of the event on subsequent tourism may be limited if the region is already highly developed in terms of tourism (Kurtzman, 2005). The fact that economic impact assessments are conducted during or immediately after the event, the downstream effects cannot be directly estimated or quantified, leading to a focus on participants' spending during the event [24].

The calculation of visitor expenditure estimates [46] is divided into two fundamental phases:

1. Determine the number of eligible people in each group. This involves calculating the total number of people present at the sporting event and excluding residents and occasional visitors (those attending the event by chance).
2. Applying spending patterns to visitors, which requires obtaining spending information through questionnaires and applying it to the number of eligible visitors.

To calculate the number of eligible visiting persons, which include spectators, competitors, and organising staff, the following procedure should be followed:

1. Identify the total number of admissions to the event.
2. Exclude repeat attendees, i.e., those who attend more than once or on several days during the duration of the event.
3. Discounting residents.
4. Subtract occasional visitors, in the case of spectators.
5. Repeat this process for each category of visiting participant: spectators, competitors, media, and organising staff.

Sports events involve a variety of participants, such as spectators, competitors, and organisational staff, which can be classified according to the nature of their economic participation into the following: (a) commercial stays, which include visitors who use paid accommodation services in the host economy; (b) non-commercial stays, which include those who stay overnight in the host economy but in unpaid accommodation, such as with friends, relatives, or caravans; and (c) day visitors, which are those who do not stay overnight in the host economy and may include persons who stay outside the host economy, whether paid or unpaid.

3.3.3. Identification of Expenditure for Each Group

Spectators and competitors incur expenses related to accommodation, meals, entertainment, merchandising, and others. The organisers, on the other hand, derive their main income from entrance fees, merchandising, sponsorship, transport, and public support. Their expenses are usually linked to staff fees, prizes, suppliers, television, advertising, promotion, official staff clothing, communication, competition material, transport, catering, meeting organisation, and others [47].

3.4. Estimated Direct Economic Impact

Having assessed the direct economic impact of the various participants in the sports event, it is possible to determine the total economic impact by adding up the individual contributions of each participant. The different elements of the direct economic impact are detailed in Table 3.

Table 3. Estimating the direct short-term economic impact of a sporting event.

Instance	Indicator	Description
Elite World Championship	$IE = AM_E \times GM_E$	*IE* = Elite Global Short-Term Direct Impact AM_E = Average Attendance (No. of visitors/Days of Accommodation) GM_E = Average Expenditure (accommodation, food, transport, other of spectators, competitors, and organisation)
Senior World Championship	$IS = AM_S \times GM_S$	*IS* = Senior Global Short-Term Direct Impact *AMs* = Average Attendance (No. of visitors/Days of Accommodation) *GMs* = Average Expenditure (accommodation, food, transport, other of spectators, competitors, and organisation)
Expenditure Organisation	$GO = HC + CTD$	*GO* = Total Public Expenditure contributed by the host city *HC* = Huelva City Council *CTD* = Consejería de Turismo y Deporte = Department of Tourism and Sport

The direct short-term impact rate is calculated using the following formula:

$$\text{ID}\ (\%)\ = \frac{IE + IS}{GO} * 100,$$

where ID = Direct Short-Term Impact.

3.5. Procedure

The following (see Table 4) is a detailed description of the procedure followed to carry out this study:

Table 4. Instrumental design of the study.

Step 1	Define Economy, Host City, Guest
Step 2	Classify by type of assistants ➢ Identify the number of eligible attendees. ➢ Determine the total number of attendees. ➢ Exclude repeat attendees. ➢ Subtract local residents. ➢ Discounting casual attendees ➢ Specify the type of assistant. ➢ Apply spending patterns. ➢ Calculate attendees' expenditure on accommodation. ➢ Calculate attendees' other expenditures. ➢ Eliminate non-direct costs.
Step 3	Evaluate participants' spending. ➢ Identify subgroups. ➢ Repeat the process of the assistants (according to the differences).
Step 4	Assess the expenditure of the event organiser. ➢ Calculate the total cost of the event. ➢ Subtract local income from the total cost of the event.
Step 5	Determine the economic impact

Note: Step 2 classifies and identifies the profiles of the people surveyed. Step 3, regarding the different typologies identified in step 2 (coaches, physiotherapists, delegates, etc.), asks about spending.

3.6. Sample and Data Collection Process

Both events followed the same data collection process and methodology.

During both championships, there were 4726 spectators, 401 athletes, 102 referees, 54 officials and delegates, 161 staff, and 218 volunteers, totalling 5662 people to be considered as the target population.

The technical justification for the calculation of the sample size was based on the following finite formula:

$$n = \frac{N \cdot Z^2 \cdot p \cdot (1-p)}{(N-1) \cdot e^2 + Z^2 \cdot p \cdot (1-p)},$$

where:

Z = z-value of the normal distribution corresponding to the desired confidence level (in this case, Z = 1.96 for a confidence level of 95%).

p = the proportion of the population that has the desired voting intention (estimated as 0.5 since it is unknown).

e = acceptable margin of error of 3.98% (in this case, e = 0.0398).

Substituting the values in the formula, we obtain n = 549.

Subsequently, we used proportional allocation to distribute the amounts in the different lines, i.e., 267 Spectators, 123 Athletes, 44 referees, 25 officials and delegates, 40 staff, and 50 volunteers. Table 5 offers a detail of the distribution:

Table 5. Sample size distribution.

	Elite World Championship	**Senior World Championship**	
Spectators	161	106	
Athletes	74	49	
Referees	26	18	
Officials/Delegates	15	10	
Staff	24	16	
Voluntaries	30	20	
TOTAL	330	219	549

Information on the costs of the organisation has been provided directly by the City Council and the Huelva Tourism Department.

3.7. Sport Impact Assessment

As an additional contribution, and to determine the repercussion of the event on a sporting level, the behaviour of demographic and structural variables in the Andalusian badminton federation was analysed, in expectation of a positive impact on the development of badminton in the region.

4. Results

4.1. Economic Impact of Public Spending in Sport

According to the proposed methodology, the measure of the economic impact is obtained by contrasting the contribution of the host city to the organisation (Table 6), with the expenditure perceived by competitors, spectators, and organisers (referees, officials and delegators, staff, and voluntaries) of the elite and senior championships, for accommodation, food and drink, transport, and others (Table 7).

Table 6. Contribution of the host city.

Organisational Expenditure	
Huelva City Council	EUR 1,400,000.00
Department of Tourism and Sport	EUR 600,000.00
TOTAL	EUR 2,000,000.00

Table 7. Revenues of the Different Agents.

	Population	Accommodation (EUR)	Food and Drink (EUR)	Transport (EUR)	Other (EUR)	TOTAL (EUR)
Spectators	4726	1,259,553	826,058	367,474	4859	2,457,944
Athletes	401	106,871	70,090	31,180	53,354	261,494
Referees	102	27,248	17,870	7950	13,603	66,671
Officials/Delegators	54	14,296	9376	4171	7137	34,979
Staff	161	42,791	28,064	12,484	21,363	104,702
Voluntaries	218	58,142	38,132	16,963	29,027	142,263
TOTAL	5662	1,508,901	989,589	440,221	129,342	3,068,053

Source: Own elaboration.

The event has left an estimated profit of EUR 1,068,053, generating a direct impact of 153% (see Table 8). Since this benefit is a consequence of distributing costs in a standardized manner, the estimate of income and benefits are expressed in the same proportion (see Figure 2). In this case, distributed in accommodation (49.18%), food and drink (32.25%), transport (14.35%), and other expenses (4.22%), which means that, for every euro invested by the organisation, there has been a return of 1.53 in the host city.

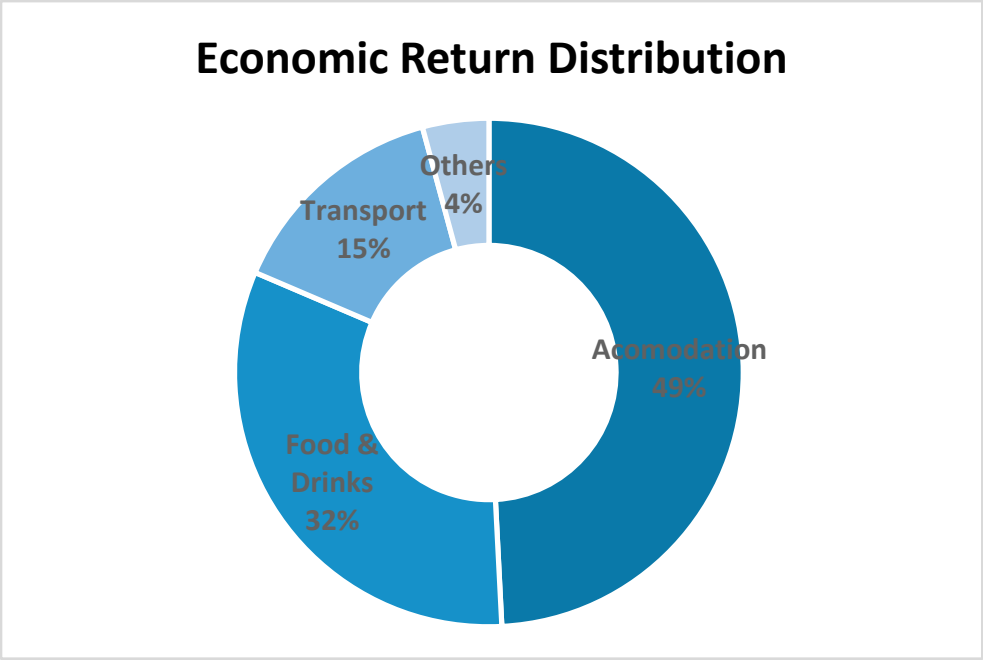

Figure 2. Distribution of the economic return. Source: Own elaboration.

Table 8. Economic impact.

Host city contribution (A)	2,000,000
Revenues of the Different Actors (B)	3,068,053
Benefit (A–B)	1,068,053
Direct Impact (B/A × 100)	153%

4.2. Distribution of Impact by Event

The Table 9 offers a breakdown of income per actor between both world championships:

Table 9. Elite and Senior World Championship total revenues of the different actors.

	Population		Accommodation		Food and Drink		Transport		Other	
	WC Elite	**WC Senior**	**WC Elite (EUR)**	**WC Senior (EUR)**	**WC Elite (EUR)**	**WC Senior (EUR)**	**WC Elite (EUR)**	**WC Senior (EUR)**	**WC Elite (EUR)**	**WC Senior (EUR)**
Spectators	3254	1473	758,251	501,302	328,771	497,287	221,219	146,255	1934	2925
Athletes	128	273	42,535	64,336	27,896	42,194	12,409	18,770	21,235	32,119
Referees	62	40	16,403	10,845	7112	10,758	4786	3164	5414	8189
Officials/ Delegators	33	20	8606	5690	3731	5644	2511	1660	2840	4296
Staff	97	63	25,760	17,031	11,169	16,894	7516	4969	8502	12,860
Voluntaries	132	87	35,002	23,141	15,176	22,955	10,212	6751	11,553	17,474
TOTAL	3706	1956	886,556	622,344	393,856	595,732	258,652	181,569	51,478	77,864

Source: Own elaboration.

5. Discussion and Conclusions

In the context of the significant growth of smaller sporting events in Spain and the fact that many of them take place in small and medium-sized localities [2], the present study contributes to the scarce studies on the economic impact of small and medium-sized sports events [13]. To this end, the economic impact of two international sporting events (senior and elite World Championships) in badminton, both of which took place in 2021 in Huelva, Spain, and their determining factors have been determined. The study uses a Cost-Benefit Analysis approach to estimate the cashflows, based on a survey applied to both events.

Attendees of both events were consulted and data were collected through a questionnaire to establish an estimate of the average expenditure of spectators, competitors, and organisers on accommodation, meals, transport, and other expenses [47]. Subsequently, the average expenditure based on the total number of attendees has allowed us to estimate the amount spent by visitors in the city, which, contrasted with the contribution of the host city for the organisation of the event through the City Council and the Regional Ministry of Tourism and Sport of Huelva, has allowed us to estimate the direct economic short-term impact of public spending in both events.

As a result, the event has had a positive direct impact of 153%, which represents a return of EUR 0.53 for every euro contributed by the government of Huelva, with a consequent stimulus to local business activity [19], energizing urban life and providing a substantial economic benefit to the host region in the short term by attracting visitor spending [18]. Therefore, the regular holding of this type of event could be a legacy that raises the quality of life of residents and could generate and promote the creation and improvement of infrastructures [20], and improve the image of the region as a sports tourism destination [17].

In this respect, an important contribution of this study has been to analyse the results of holding two events with a common organisation. This has allowed for financial sustainability through the direct economic short-term impact of public spending on both events, because of taking advantage of economies of scale.

In addition, the results show that holding both events in the "low season" has allowed the economy to remain "alive" in the off season (November–December), which is a strategy to be considered by the organisers of events with similar characteristics. In this respect, and unlike traditional tourist occupations, events guarantee "safe accommodation", as people do not cancel their stay due to unforeseeable contingencies such as "bad weather".

In both events, the greatest income is derived from spectators; however, in the senior event the players' expenditure is much higher, as they tend to take advantage of longer stays and go sightseeing. In addition, and beyond the benefit generated in economic terms, the organisation of this type of competition has been a strategy for the promotion and development of many sports [6] and has been considered by the Spanish Badminton Federation for the promotion and development of the sport within the binomial of organisational performance and sporting performance [10]. Therefore, when organising such events the ideal scenario is a virtuous circle that complements the development of the host region through the perceived economic impact with a social benefit from and for sport. Since the present study has been limited to the economic impact, aspects such as the trickle-down

effect, which in sporting terms can derive from the experience of organizing medium events [48], remain to be studied.

A limitation to the scope of the present study has been the unwillingness of the event participants to fill in the questionnaire. However, this fact has highlighted the need to design multi-purpose instruments that allow a homogeneous measurement of the economic, social, environmental, and sporting impact in a way that is comparable between mid-range events of different sports. Such a tool would be very useful when designing policies aimed at the strategic support of this type of event in favour of the development of a region.

Additionally, the studio subscribes only to the direct economic short-term impact of public spending, so price fluctuations or increases in guests in the region with respect to previous periods are not analysed. The study also does not consider discussing the long-term result of what it would have meant to allocate government resources from the organized events to other areas (health or education, for example) and the possible return of these actions, so an important limitation of the work is the alternative costs of both events. Therefore, the study used the CBA approach only as a guide to estimate the cashflows through a survey applied to both events, with the limitation of not considering the monetization of aspects such as the number of people who start playing badminton, or improvements in the image of the region.

Since government resources are not necessarily fully consumed in the region of origin, an immediate multiplier effect is not expected. For this reason, this study refers to spending, and not to government investment.

Future studies could also incorporate a review of the social return on investment in sports [5]. Although it is an unquestionable fact, few instruments allow us to quantify what investment in sports represents in terms of savings in other areas such as health, education, and social integration, among others.

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