

Economic Impact of the 11th Douro Valley Half Marathon

Authors' contribution:

- A) conception and design of the study
- B) acquisition of data
- C) analysis and interpretation of data
- D) manuscript preparation
- E) obtaining funding

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ABSTRACT

The aim of this study was to analyze the direct economic impact of the 11th Douro Valley Half Marathon held in Portugal in 2016. An ad-hoc questionnaire was designed for collecting data. It was composed of four dimensions: (i) sociodemographic data, (ii) expenses, (iii) sports practice, and (iv) satisfaction with the event (54 items in total). There were 375 questionnaires randomly collected in a total of 16,330 runners. The mean expense of local participants in this half marathon was €219, while non-resident participants expended about €320. Thus, the local participants' inflow was €1,036,965, while the non-resident participants' inflow was €3,709,760, resulting in a total participant inflow of €4,746,725. Regarding the participants' specific expenses, the following order was obtained: 1st, accommodation; 2nd, food; 3rd, travel costs; 4th, shopping. It was calculated that the total local economic impact of the 11th Douro Valley Half Marathon participants was almost five million euros (€4,746,725).

KEYWORDS

expenses, satisfaction, economic impact, sport events, running

Introduction

Events organization, specifically sport events organization, has largely increased in the past few decades in Europe. Indeed, sport has been utilized to promote potential tourism and stimulate local economic growth through the staging of sporting events (Dobson 2000, cit. Wilson 2006, p. 57). In fact, the literature has underlined several reasons for and benefits of hosting an event: the improvement of the image or perception of the country or city hosting the event (Dwyer et al. 2005, p. 351), economic regeneration, social and cultural benefits, poverty alleviation and job creation, marketing benefits, infrastructure development (Saayman & Rossouw 2008, pp. 11-12; Saayman & Saayman 2012, p. 220; Thomson et al. 2013, p. 118), and revitalization of declining urban areas (Davies 2010, p. 1438).

Likewise, hosting sport events improves the sense of unity among citizens (Dwyer et al. 2005, p. 351), promotes and increases sport practice levels, curbs seasonality, generates taxes and positive psychic income (Dwyer et al. 2005, p. 351), generates revenue, creates local entertainment, and increases tourist flow (Allmers & Maennig 2009, pp. 509-510; Saayman & Rossouw 2008, pp. 11-12). Thus, the organization of sport events is typically regarded as a major generator of economic activity (Dwyer et al. 2005, p. 351), acting as a "catalyst" for economic development and urban regeneration (Wilson 2006, p. 57).

The application of economic impact studies is a useful tool for tourism development, and this is extended to hosting special events (Saayman & Saayman 2014, p. 155). However, most studies on economic impact are aimed at gaining public support and subsidies to host mega-events rather than academic contributions (Dixon et al. 2013, p. 98).

For a better understanding of the object of the study, it is primarily important to define the economic impact of an event. As Lee (2001, p. 1) states, the economic impact of a sport event is a net economic change in a host community that results from spending attributed to the sport event. Thus, economic impact analysis seeks to estimate changes in regional spending, output, income, and/or employment associated with tourist policy, events, facilities, or destinations (Tyrrell & Johnston 2006, p. 3). Specifically, economic impact studies determine the profitability of an investment for a territory and its inhabitants (Barajas et al. 2016, p. 124) and are pointed to as an appropriate methodology for accessing what is essentially a major source of the benefits of a special event (Crompton 2006, p. 72). In this paper, we stay with the most commonly accepted definition of economic impact analysis, which was proposed by Tyrrell and Johnston (2006, p. 3).

In the field of sport, such studies are performed for sporting events, facilities (infrastructure), or sports associations (Barajas et al. 2016, p. 124). According Wilson (2006, p. 57), there are five key research themes regarding the economic impact of sport events: impact on urban regeneration, sporting legacy benefits, tourism and image benefits, celebration, social and cultural benefits, and wider economic benefits. Thus, estimating the economic impact of sport events justifies their implementation on an economic and social basis (Barajas et al. 2016, p. 124). However, the validity of economic impact results depends on a variety of methodological issues, including the type of competition and its geographic scope, duration, participants, federation, spectators, location, infrastructure needs, and schedule (Barajas et al. 2012, p. 457).

The literature on small-scale sport events is scarce. In fact, the majority of economic impact research to date has focused on the impact of mega-events such as the Olympic Games or the FIFA World Cup (e.g., Baade & Matheson 2004; Matheson 2006; Porter & Fletcher 2008; Preuss 2007; Tien et al. 2011). But recently the focus has shifted to smaller events (e.g., Coates & Depken 2011; Daniels & Norman 2003; Matheson 2006; Mondello & Riche 2004; Taks et al. 2013, 2011; Veltri et al. 2009; Wilson 2006). Nonetheless, there is still a lack of studies on small-scale events. This seems to be a consequence of the difficulties in carrying out this type of study (Matheson 2006, p. 194). For instance, crowding out is much less likely to occur during a small event than during a mega-event (Matheson 2006, p. 193). Thus, surveys conducted in open spaces, like at cycling and road racing events, are probably more difficult to implement than those at events confined to an indoor venue. It is possibly for this reason that economic impact studies of open-space events are not frequent in other sports (Barajas et al. 2016, p. 125).

Distance-running events have attracted global attention over the last decade as an opportunity for organized sport activities (Sato et al. 2016, p. 536). Specifically, in Portugal, running has exponentially gained fans and practitioners in the last few years. Since running events have become increasingly popular and the marketplace is becoming ever more crowded, event organizers must differentiate their offerings (Buning & Walker 2016, p. 47). Among the more novel approaches are specific events with special and historical courses, such as the Douro Valley Half Marathon. Events such as marathons and other road races maintain their competitive advantage without placing an excessive burden on public funds in economic terms (Coleman et al. 2010, p. 20). No infrastructure investments are required for the successful hosting of a marathon since the event organizers only use the existing infrastructure (Kotze 2006, p. 291). Therefore, it seems clear that not only large-scale but also small-scale sport events might positively impact their host communities (Higham 1999, p. 88), justifying analyses of the economic impact of smaller sport events. In fact, while smaller events may generate limited economic activity, their outcomes and net benefits for the local community might actually be more positive (Matheson 2006, p. 194).

The first step in estimating the economic impact of a sport event is to identify the agents that are going to bring or draw money to the selected area (Barajas et al. 2016, p. 125). Thus, this naturally leads to the question of what spending should be included in an economic impact analysis.

Economic impact stems from spending that takes place in the economy that would otherwise not have taken place (Saayman & Saayaman 2014, p. 157). To estimate economic impacts, the additional “new money” generated from tourism for the local economy is normally considered (Gelan 2003, p. 411) since the key input for economic impact assessment is the amount of expenditure by non-resident visitors, among others (Dwyer et al. 2005, p. 352). Usually, one of the main sources of cash flow consists of the competitors’ or event

participants' expenses (Barajas et al. 2016, p. 125), whose accounting is essential (Saayman & Saayaman 2014, p. 157). Thus, it was expected that their main expenditures would be accommodation, food and drink, registration fees, travel costs, visits to museums, and other purchases related to the event (Barajas et al. 2016, p. 126). For smaller events, it is sometimes acceptable to simply use the direct expenditure itself as an indicator of impact (Li & Jago 2013, p. 593). For that reason, the aim of the presented study was to analyze the economic impact of the 11th Douro Valley Half Marathon that was held in Portugal in 2016.

Methodology

The sport event analyzed was the 11th Douro Valley Half Marathon, which took place in the Régua Region and was part of the Running Wonders® circuit (a circuit of half marathons that take place annually in regions considered to be World Heritage Sites by the United Nations Educational, Scientific and Cultural Organization - UNESCO). Thus, this sport event fits the type D category of major competitor events generating limited economic activity that are part of an annual cycle of sport events (Gratton et al. 2000, p. 26). This classification of the 11th Douro Valley Half Marathon is justified since it provides information on its positive aspects, what to focus on to generate profits, and the facets that are not as beneficial and can improve or change.

The benefits of organizing an event can be measured using several methods (Davies et al. 2013, p. 31). However, to obtain participants' spending data, surveying them seems to be the most straightforward method (Wilton 2006, p. 17), while also being the best way to measure the impact of their spending in the local region (Lovejoy 2003, p. 8). Thus, the data were collected through an ad-hoc questionnaire composed of four dimensions:

1. Sociodemographic data,
2. Expenses,
3. Sports practice
4. Satisfaction with the event.

In the present study, only sociodemographic data and expense dimensions were analyzed. The expenses of travel costs, food, shopping, accommodation, and leisure have been analyzed as in other studies (e.g., Barajas et al. 2016; Hodur & Leistritz 2006), as expenses for sports equipment for running and supplementary training services. The non-resident participants' inflow was calculated through the sum of all mean expenses (travel costs, food, shopping, accommodation, and leisure), while local participants' expenses were calculated through the mean expenses of only food, shopping, and leisure. The questionnaire was submitted for review by a group of experts composed of four university professors specializing in Sports Management and by the organizing committee of the race, which has over ten years' experience in the development of this type of event. Then, a group of eight master's students in Sports Management who were previously trained distributed a total of 473 questionnaires before the beginning of the race to the participants who had already participated in the event in previous editions.

In the 473 questionnaires, with a margin of error of 5%, only 375 were considered valid. The data were analyzed using the Statistical Package for the Social Sciences (SPSS) version 20.0 for descriptive statistics.

Results

Through the data from the first dimension of the questionnaire, it was possible to delineate the profile of the 11th Douro Valley Half Marathon participants. The sociodemographic data are presented in Table 1.

Table 1. Mean profile of the participants of the 11th Douro Valley Half Marathon

Characteristics		N (375)	%
Age (Mean±SD)		38.25 ± 9.96	-
Gender	Male	232	61.7
	Female	143	38.0

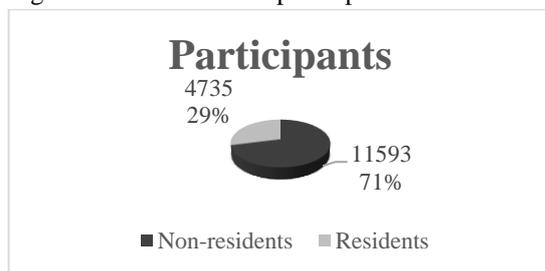
Level of education	Primary School	9	2.4
	High School	136	36.2
	Bachelor's degree	11	2.9
	Graduate degree	121	32.2
	Post-Graduate/Master's degree	84	22.3
	PhD degree	13	3.5
	Unanswered	1	0.5
Monthly income (€)	< 500	28	7.4
	500 - 999	103	27.4
	1000 - 1499	106	28.2
	1500 - 2249	67	17.8
	2250 - 2999	11	2.9
	3000 - 4499	14	3.7
	> 4500	9	2.4
	Unanswered	37	10.2
Nationality	Portuguese		>60%

Source: Own study.

Regarding the transportation mean, the results show that cars were the main form of transportation used to get to the event (>90%), followed by bicycle (6.5%) and train or airplane (3.5%).

The findings allow us to distinguish between two types of participants regarding accommodation: non-resident participants who spent the night in the host city, and local participants who did not. This can be observed in Figure 1.

Figure 1. Distribution of participants



Source: Own study.

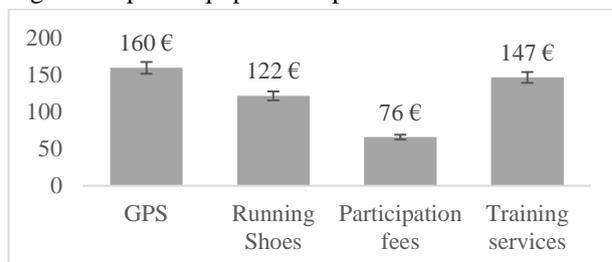
Our results indicate that 71% of the total participants were non-residents (corresponding to 11,593 participants), while only 29% were local participants (4,735 participants). From the non-resident participants, about 72% spent the night in a hotel, hostel, or similar type of accommodation, while 28% spent the night at the homes of family or friends. The cities where they stayed overnight included Régua, Vila Real, and Tabuaço.

Regarding participants' sport profiles, 73% of the total participants indicated that they were frequent runners, performing at least 10 km in three running events per year. From those, 47% practiced running more

than three times per week, and 45% usually practiced other modalities such as swimming, working out at the gym, or doing CrossFit. The average performance in the half marathon is about 1h 46min.

Concerning expenses for sports equipment for running, the mean expenses were obtained as follows: €160 for GPS and €122 for running shoes. It is important to note that the most commonly used shoe models are Asics Kayano, Nike Air Zoom Vomero, and Adidas Boost. The expenses for participation fees were €76, while the expenses for supplementary training services (medical services such as the doctor, physiotherapist, nutritionist, etc.) were €147. These results are presented in Figure 2.

Figure 2. Sports equipment expenses



Source: Own study.

In the event, the local participants had mean expenses of €219, while non-resident participants expended about €320. Thus, the local participants' inflow was €1,036,965, while the non-resident participants' inflow was €3,709,760, resulting in a total participant inflow of €4,746,725. Regarding the specific participant expenses, the following order was obtained: 1st, accommodation; 2nd, food; 3rd, travel costs; 4th, shopping; 5th, leisure. This can be observed in Figure 3.

Figure 3. Participants' specific expenses



Source: Own study.

Discussion

In December 2001, Régua was classified by UNESCO as a World Heritage Site, as was its landscape. From there, the Douro Valley region registered a sustained growth in tourism activity and international visibility

As the final result, we determined that the total local economic impact of the 11th Douro Valley Half Marathon participants was almost five million euros (€4,746,725).

Taking place since 2005, the Douro Valley Half Marathon is described as “The Most Beautiful Race in the World” by the EDP Running Wonders Organizing Committee, which highlights that all participants will enjoy the unique beauty of the Douro Valley region. This could explain the elevated percentage of non-resident participants in this half marathon, which is part of the Running Wonders® circuit (a circuit of half marathons that take place annually in regions considered to be World Heritage Sites by UNESCO).

The analysis conducted in this study was an economic impact analysis focusing on the economic activity that is stimulated due to participants' spending initiated by the event. Therefore, the focus is mainly on the positive aspects associated with the event. In this type of analysis, the structure of the economy influences the magnitude of the impact, and it is evident that a well-developed manufacturing sector increases the benefits that accrue in the local economy.

However, for smaller events it is acceptable to simply use the direct expenditure itself as an indicator of impact (Li & Jago 2013, p. 593). In fact, the key input to economic impact assessment is the amount of expenditure by non-resident participants, among others (Dwyer et al. 2005, p. 352). Thus, the expenditure of

the participants directly influences the profitability of the hosting communities (Hodur & Leistriz 2006, p. 66). For this reason, sport managers, merchandisers, television network producers, advertisers, and corporate sponsors need to attract sport consumers and increase the consumption of sport-related products (McDonald et al. 2002, p. 100; “O negócio da corrida vai em alta velocidade” 2017, p. 44).

During the 11th Douro Valley Half Marathon, the economic sectors that seem to have benefited most from participants’ spending were as follows: first, accommodation; second, food; and third, transport. The higher participant expense verified by accommodation seems to be explained by the fact that 71% of the participants were non-residents, and thus we believe that most of them needed to book at least one night in a local hotel or similar service. In fact, Daniels and Norman (2003, p. 218) pointed out that usually the participants of these types of sport events stay, on average, two days in the event place.

The same fact of a higher percentage of participants being from outside of the Douro Valley region also seems to explain the second highest expense of the participants: food and drink. Regarding the 29% who were local participants or daily participants, we believe that they arrived on the same day as the event, so they didn’t need accommodation. Additionally, we believe that they took their own food and drink, since they would be returning home at the end of the day, not requiring evening meals or breakfast. Therefore, the Douro Valley Half Marathon organizers should invest in attracting essentially non-resident participants due to their importance in the overall economic impact, that is, their higher spending rates. Regarding the order of the different types of participant expenses, our results seem to be in accordance with Wilson’s (2006, p. 61) findings on swimming events, which show accommodation and food, followed by shopping and leisure, to be the top expenses. In the World Paddle Tour, Jimenez-Naranjo et al. (2016) found a mean participant spending of at least three times lower than our results, and identified food as a higher specific expense. Similar to our results, Cobb and Olberding (2010, p. 273) found the participant mean expense to be around €320, including accommodation, food, and leisure, in a half marathon event.

The results from this economic impact assessment seem to confirm the notion that a half marathon can be used as a tool to increase economic activity and create income and support employment in Régua during the event thanks to the obtainment of data concerning the expenses of local and non-resident participants. This seems to corroborate the benefits described in the literature about hosting an event (Saayman & Rossouw 2008, pp. 11-12; Li & Jago 2013, p. 591; Thomson et al. 2013, p. 118).

Additionally, this event also seems to contribute to the creation of local entertainment and increased tourist flow (Saayman & Rossouw 2008, p. 12; Allmers & Maennig 2009, p. 514), which seems to be reinforced by the results obtained in leisure and shopping expenses. Thus, the notion that events can be used to stimulate tourism activity and diminish the effects of seasonality seems to be supported by our results.

Given the rising popularity of distance-running events, the organizers recognize that these types of events could serve as a catalyst to improve participants’ health and well-being in the community (Sato et al. 2016, p. 546). Thus, sport event organizers should focus on attracting visitors to the destination (Hodur & Leistriz 2006, p. 64), aiming to convert them to participants of future events. In fact, these non-elite mass participation events can be used as valuable place marketing vehicles showcasing what an area has to offer along the route (Coleman et al. 2010, p. 20).

A well-organized half marathon, or any other smaller sport event that is well covered by the media, could generate much-needed income and contribute towards the re-imaging of the host city (Kotze 2006, p. 292). In this sense, the Douro Valley Half Marathon has media coverage through a Portuguese generalist television channel, and we believe that this favorable place marketing via the media can encourage people from around the world to visit Douro Valley as a local interest. Additionally, sport participants attach various meanings to the selection of events and also consider the communities hosting the events that they may participate in (McGehee et al. 2003). From the five meanings determined by Kaplanidou and Vogt (2007, p. 199), we highlight the organizational aspects as the event’s reputation and image (Aicher & Brenner 2015, p. 228; Kaplanidou & Vogt 2007, p. 199). In this regard, we suggest that Régua authorities should continue to work alongside host broadcasters to ensure the positive portrayal of the Douro Valley location.

It seems clear that the events that provide more than economic benefits would be more sustainable. In fact, Sato et al. (2016, p. 546) suggest that course design and event staging decisions should place a premium on creating pleasurable experiences to facilitate running engagement before, during, and after the event. Thus, the thousands of visitors attracted to the Douro Valley Half Marathon may be encouraged to make return visits to Régua based on their initial experiences. In fact, the entertainment, accommodation, community attributes, and physical environment offered by the destination attract participants to a new community (Hemmatinezhad et al. 2010, pp. 359-360; Shonk & Chelladurai 2008, p. 598) and could lead to repeat visitation (Coleman et al. 2010, p. 29).

We believe that the Douro Valley Half Marathon is an example of a successful small event that has a positive economic impact on the Régua region.

Conclusion

While the benefits or negative impact of major elite sport events are widely reported, the economic impact of small-scale events, such as running events, is less understood. For certain elite events, there is the likelihood that extensive capital investment (new facilities, etc.) will be necessary in order to achieve the benefits. Conversely, non-elite mass participation events, such as half marathons, provide an economically viable alternative with little outlay. This study illustrates that non-elite mass participation events, such as the Douro Valley Half Marathon, can generate substantial economic benefits for the host community.

The order of participants' expenses obtained were: 1st, accommodation; 2nd, food; 3rd, travel costs; 4th, shopping; 5th, leisure. Thus, the Douro Valley Half Marathon organizers should invest in attracting non-resident participants that need to spend on accommodation and food, since their local economic impact is higher. Additionally, the local tourism industry should use these types of sport events as part of their activities, attractions, and strategy to grow the regional economy, as well as to alleviate the seasonality of the tourism demand. Future research should continue to explore participant expenditure related to these events and seek to understand the potential differences in community impact relative to large-scale events.

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