Determinants of visitor spending: an evaluation of participants and spectators at the Two Oceans Marathon

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This paper investigates the socio-demographic and behavioural determinants that influence visitor expenditure at the Two Oceans Marathon in South Africa, based on a participant and spectator survey conducted at the race in 2011. Regression analyses were applied and the results indicate that greater length of stay, paid accommodation, number of marathons participated in per year and higher level of education signficantly influence higher participant spending at the marathon, while a high-income occupation and paid accommodation are associated with higher levels of spectator expenditure. These findings not only generate strategic insights into the marketing of the event; knowledge of these determinants will also lead to a greater economic impact and competitive advantage.

Keywords: sport tourism; sporting events; marathon; regression analysis; Cape Town; South Africa

Travel related to sport and physical activity can be regarded as one of the fastest growing segments of the tourism industry. The phenomenal growth in sport tourism is not surprising considering the broad range of benefits that accrue both to the host country and the host city from the staging of sports events. If managed correctly, the potential benefits of sport tourism include the

following: attracting high-yield visitors, especially repeaters; generating a favourable image of the destination; developing new infrastructure; ensuring long-term economic benefits by stimulating spending in the host community; using the media to extend the normal communications reach; increasing the rate of tourism growth or a higher level of demand; spreading tourism geographically and seasonally; improving the organizational, marketing, and bidding capability of the community; securing a financial legacy for management of new sports facilities; maximizing the use of, and revenue from, existing facilities; and increasing community support for sports and sports events (Getz, 1998, p 9; Kotze, 2006, p 285; Hinch and Higham, 2004, p 88; Turco, 1998, p 3; Scott and Turco, 2009, p 41; Gratton et al, 2000, p 18; Saayman et al, 2005, p 212; Preuss et al, 2007, p 6).

With these benefits in mind, in South Africa, as in most countries, the hosting of sports events is regarded as part of a broader tourism strategy, aimed at enhancing the profile of both cities and the country as a whole. One such sports event is the the Old Mutual Two Oceans Marathon (hereinafter the Two Oceans). This race is one of the most well-known marathon events in South Africa and attracts over 21,000 participants each year, thereby providing a considerable economic injection for the economy of Cape Town (Kotze, 2006, p 291). Known as the most beautiful marathon in the world, this race takes place towards the end of the high tourist season of the Western Cape, during the Easter weekend. In 2010, the event generated approximately R223 million (approximately US$28 million) and 840 jobs were created by this race, contributing significantly to poverty alleviation (Kruger et al, 2010b, p 46). In addition, the event and its associated influx of visitors also contributed greatly to tourism in the province (Kotze, 2006, p 287).

Sports-based events, such as the Two Oceans, differ from other types of events, as they attract a wide range of tourists, spectators and participants, each seeking to satisfy their motivations for engagement in slightly different ways (Cassidy and Pegg, 2008). Based on this, and given the economic value of the race, an understanding of expenditure patterns and the determinants influencing the spending behaviour of visitors (including participants and spectators) is vital to the event marketers/organizers – especially from a sustainability point of view. Since the total economic impact of a sports event is a function of both the direct and indirect expenditures of participants and spectators (Lee et al, 2008, p 56), it is important to understand their spending behaviour at the race and the underlying determinants affecting such behaviour (Mok and Iverson, 2000, p 300). Saayman and Saayman (2012) indicate that understanding these determinants will give organizers a more comprehensive view of the variables that influence visitor spending and organizers can use the information for various purposes, including planning and marketing.

Minimal research has focused on the determinants of both participants' and spectators' spending at the same sports event. Research regarding spectators has mainly focused on major sports events that attract thousands of sports fans to support a team or athletes such as football events (Hill and Green, 2000; Tapp and Clowes, 2002; Boen et al, 2005; Giulianotti, 2002), ice hockey games (Bodet and Bernace-Assollant, 2009), basketball games (Pan et al, 1997; Boen et al, 2008), professional golf tours (Crosset, 1995; Robinson et al, 2004; McDonald et al, 2002) and athletics tournaments (Trail et al, 2003). The focus
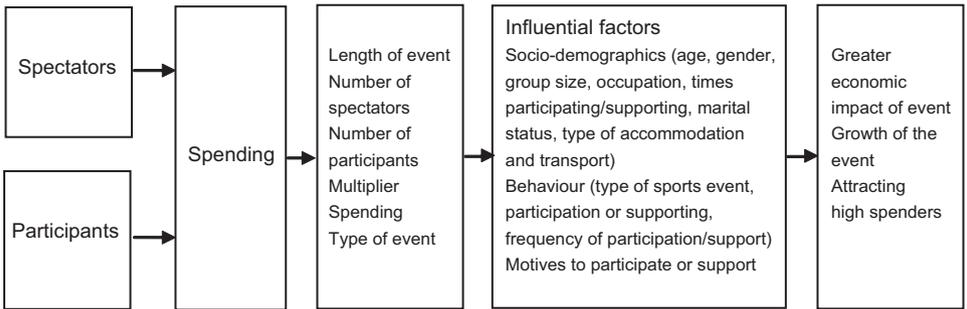
Figure 1. Factors influencing spending at sports events.
Source: Adapted from Craggs and Schofield (2009).

has not been on supporting an individual athlete such as a marathon runner. This article therefore investigates the socio-demographic and behavioural determinants that influence expenditure of both particpants and spectators at the Two Oceans. To achieve this, the article is structured as follows: a literature review is followed by a description of the survey and a discussion of the results and, finally, the implications and the conclusions.

Literature review

Saayman and Saayman (1997, p 162) indicated that the economic impact of spectators and participants at a sports event is influenced by the magnitude of spectator and participant spending, the number of spectators and participants attending the event, the number of days spent in the host city and the circulation (multiplier) of supporter and participant spending through the economy of the host city and community (Figure 1). The spending by spectators and participants at an event is furthermore the first input in the economic impact assessment and a true understanding of visitor spending and the factors that influence the amounts that certain visitors spend is therefore an essential input in any economic impact study (Saayman *et al*, 2005, p 212). The desire to understand the spending behaviour of visitors to sports events has thus been a long-standing goal for sports marketers (Stewart *et al*, 2003, p 206).

According to Craggs and Schofield (2009), a wide range of socio-demographic and behavioural determinants influence visitor expenditure and the latter can be used to identify the important determinants affecting visitor spending as shown in Figure 1. However, not all of these factors are applicable or significant for both spectators and participants. This emphasizes the need to understand and seperately determine the most influential factors for spectator and participant spending.

With this in mind, Spotts and Mahoney (1991, p 24) and Legohérel and Wong (2006, p 16) indicate that visitor expenditure is an important factor for comprehensive tourism segmentation and can be used to determine the high spenders in addition to the determinants that positively influence higher spending. This is because travel (sports) marketers seek visitors who will spend money, and not just time, on their tourism products (in this case, sports events)

(Mok and Iverson, 2000, p 299). Bouchet *et al* (2010, p 2) add that this specific knowledge is crucial for sports managers and organizers, as it would help them to categorize their demand accurately that, in turn, would allow them to target and satisfy the appropriate market segments. Tourist/visitor spending is furthermore one of the most critical variables of analysis for tourist destinations (sports events) since it directly determines the tourism (sports event) sector's profitability (Frechtling, 2006, p 1). It is therefore important to determine which visitors spend most at a sports event and which variables are most influential in determining their expenditure levels (Kastenholz, 2005, p 557). Previous research on individual visitor expenditure levels are summarized in Table 1.

Based on the findings reflected in Table 1, it is clear that previous research on individual visitor expenditure levels has been seen as being dependent on socio-demographics. It is furthermore evident that different socio-demographic and behavioural determinants influence visitor spending on different tourism products, attractions and events. Miminal research has, however, focused on both the participants and spectators at the same sporting event, and the determinants of their spending have been identified seperately.

Concerning the spending behaviour of spectators, Wann and Branscombe (1993) indicate that spectators express identification by the attachment they show to teams or athletes and the money and time they spend following them. Standeven and DeKnop (1999) postulated that sports spectators can be characterized as individuals that are more likely to travel long haul, stay more days, stay in costlier accommodation and spend more per day. Irwin and Sandler (1998), on the other hand, found that spectators spent the most on lodging and retail shopping and spectators with a particular team affiliation spent more time and money at the destination. Generally, the key factors that have been identified as having a relationship with sports spectator expenditures have included age, gender, family structure and values, household income, visitor origin, party size, trip activities and trip duration, friendship groups, the social milieu in which sports consumers run their daily lives, the class or subculture to which they belong, their sensitivity to price, and the cost of sports activities (Robinson and Trail, 2005; Fort, 2003; Hunt *et al*, 1999; Wann *et al*, 2001; Wicker *et al*, 2009, p 2; Cannon and Ford, 2002; Dietz-Uhler *et al*, 2000; Lera-López and Rapún-Gárate, 2005).

With regard to participants, both Cook *et al* (2010, p 52) and Brotherton and Himmetoglu (1997, p 12) classify sports participants as special interest groups of travellers, since they are motivated to travel to a sports event for a distinct and specific reason or interest – that is, to participate. The profile of sports participants is male, physically active, college educated, relatively affluent and young (18–44 years), willing to travel long distances to participate, likely to engage in active sport tourism well into retirement, tending to participate in more than one activity and engaging in repeat activity (Cook *et al*, 2010, p 53; Gibson, 1998, p 56; Streicher and Saayman, 2009). The type of event also determines and influences the profile of the participants. Variables such as gender, age or occupation have been identified as significant determinants of sports paticipation (Lera-López and Rapún-Gárate, 2005); however determinants of participant spending have not been extensively examined. Certain tendencies were derived that showed a positive influence on

participant expenditure: participants with a high income, a high level of education, a high level of participation and a high time investment or seniority in sport (years of participation) tend to have a higher level of sports-related expenditure. Additionally, men and younger people tend to spend more money on sport participation than women and older people (Davies, 2002; Bloom *et al*, 2005; Wicker *et al*, 2009).

These types of studies have also been applied in limited ways to sports events in South Africa. Streicher and Saayman (2009) identified the determinants of spending by cyclists participating in the Pick n Pay Cape Argus Cycle Tour and found that province of origin, marital status, length of stay and type of accommodation significantly influence higher spending. In their focus on the spectators at the Old Mutual Two Oceans Marathon, Kruger *et al* (2012) revealed that group size, gender, home language and province of origin had a positive influence on higher spending. Saayman and Saayman (2012), on the other hand, examined the determinants of spending at three major sports events in South Africa, including the aforementioned two events as well as the Telkom Midmar Mile, which is a swimming event. Their research confirmed that socio-demographic variables such as gender, age and province of residence are the dominant determinants of spending. Significant behavioural determinants included length of stay and group size. Although all the events under investigation are endurance events, the respective results confirmed that each event has its own unique set of determinants of spending and that sports organizers cannot assume that what works for one event will work for another. With the exception of the study by Kruger *et al* (2012), the focus has also been predominantly on the participants and not on the spectators.

Gibson (1998) emphasizes that for any sporting event to be successful and profitable it not only needs sports participants but also spectators or attendees. According to Bouchet *et al* (2010, p 2), it is important to analyse and understand the heterogeneity and complexity of the behaviours and attitudes of both sport participants and spectators at various sporting events. Gokovali *et al* (2007, p 737) explain that, once the factors that affect visitor expenditure are determined, policy development will be possible to strengthen the spending so as to maximize the economic benefits of an event. Organizers can thus effectively apply the determinants when doing market segmentation to focus their marketing efforts on those visitors who spend the most at the event (Kruger, 2009, p 16). Scott and Turco (2009, p 42). Cannon and Ford (2002, p 400) furthermore emphasize that distinguishing sports event tourists (spectators and participants) by their spending behaviours will lead to more accurate economic impact estimations as well as increased intended revisits. This is especially important because sporting events may experience significant fluctuations in attendance, spectator and particpant market segment proportionality and spending from year to year (Scott and Turco, 2009, p 52).

Developing an understanding of who sports participants and spectators are, and the factors that influence their consumption behaviour, are critical to achieving this (McDonald *et al*, 2002, p 100; Stewart *et al*, 2003, p 206). A better understanding of participants and spectators at sports events will enable organizers and policy makers to formulate more effective, consumer-centric, marketing strategies (for example destination advertising and demand forecasting), leading to larger event attendance and resulting in greater

Table 1. Socio-demographic determinants of visitor spending.

Spending determinant	Finding(s)	Author(s)
Income	Spending behaviour is positively associated with higher household income.	Fish and Waggle (1996, p 70), Cannon and Ford (2002, p 264), Crouch (1994, p 12), Legohérel (1998, p 22), Mak et al (1977, p 6), Mehmetoglu (2007, p 213), Taylor et al (1993, p 33), Thrane (2002, p 281), Kruger (2009, p 31), Kruger et al (2010)
Place of residence	Spending by visitors increases for visitors from out-of-state.	Cannon and Ford (2002, p 263)
	Province of origin (location) plays an important role in the spending of visitors at arts festivals, national parks and sports events in South Africa with visitors travelling from richer provinces such as Gauteng and Western Cape Province spending the most.	Saayman and Saayman (2008), Saayman et al (2007, p 18), Slabbert et al (2008, p 11), Kruger (2009, p 28), Streicher and Saayman (2009)
	Spectators originating from Western Cape Province spend less than those travelling from other provinces.	Kruger et al (2012)
	Athletes competing in the Old Mutual Two Oceans Marathon in South Africa originating from Gauteng Province spend more per person compared to those travelling from Western Cape Province.	Saayman and Saayman (2011)
	Swimmers participating in the Telkom Midmar Mile in South Africa originating from Gauteng Province spend more than participants travelling from other provinces.	Saayman and Saayman (2011)
	The distance travelled to visit tourist attractions affects expenditures positively.	Lee (2001, p 663), Long and Perdue (1990, p 12), Saayman et al (2007, p 185)
Marital status	The effect of marital status on expenditure is inconclusive.	Saayman et al (2007, p 190)
	Married visitors stay fewer days and spend significantly less per person per day than non-marrieds.	Mak et al (1977, p 6), Saayman and Saayman (2011)
	Married swimmers participating in the Telkom Midmar Mile in South Africa also tend to spend less per person than non-marrieds.	
	Married cyclists at the Pick n Pay Cape Argus Cycle Tour in South Africa spend more on average than those not married.	Streicher and Saayman (2009)

Determinant	Finding	Source
Level of education	Visitors with a higher education level do not stay significantly longer, and spend less per day on average than less educated visitors.	Gokovali *et al* (2007, p 743), Mak *et al* (1977, p 6)
	Cyclists at the Pick n Pay Cape Argus Cycle Tour and swimmers participating in the Telkom Midmar Mile in South Africa with post-graduate and professional education spend significantly more than people with only school education.	Saayman and Saayman (2011)
Children in travel party	The inclusion of children in the travel party results in decreased spending per day.	Cannon and Ford (2002, p 263), Cai *et al* (1995, p 36), Saayman and Saayman (2006, p 217)
	The presence of children has no significant effect on expenditure.	Lee (2001, p 663)
Age	The role of age is inconclusive.	Cai *et al* (1995, p 36), Lee (2001, p 663) and Streicher and Saayman (2009)
	A positive correlation between age and total expenditure levels.	Mak *et al* (1977, p 6), Perez and Sampol (2000), Saayman and Saayman (2006, p 217), Kastenholz (2005, p 563), Thrane (2002, p 284), Saayman and Saayman (2011)
	Older visitors tend to spend less than younger visitors.	Mudambi and Baum (1997), Mehmetoglu (2007, p 213), Pouta *et al* (2006, p 131), Kruger *et al* (2010a,b)
Gender	Male visitors spend more than females.	Thrane (2002:284), Kruger *et al* (2012), Saayman and Saayman (2011)
	Female visitors tend to spend more.	Craggs and Schofield (2006), Letho *et al* (2004:293), Saayman and Saayman (2011)
Travel purpose	Business travellers exhibit the highest spending patterns and the most expensive travel style.	Mok and Iverson (2000, p 302), Letho *et al* (2004, p 320)
Travel behaviour	Visitors who mainly travel to attend a festival to enjoy the arts in South Africa spend more money than those who attend the festival for other reasons.	Thrane (2002, p 284), Kruger (2009, p 28), Kruger (2009)
	Visitors who have attended other festivals in South Africa are more inclined to fall into the 'high-spender' category.	Saayman and Saayman (2006), Kruger (2009, p 28)

Table 1 continued.

Spending determinant	Finding(s)	Author(s)
Travel motives	Specific leisure travel motives (nature, culture, sun and beach tourism, and so on) or benefits sought have rarely been studied in this context and, generally, no relevant impact on expenditure levels has been found.	Downward and Lumsdon (2003), Uysal et al (1994), Beh and Bruyere (2007), Saayman and Saayman (2008), Schneider and Backman (1996), De Guzman et al (2006, pp. 864–865), Kruger (2009)
	Athletes competing in the Old Mutual Two Oceans Marathon in South Africa motivated to explore the area tend to be higher spenders.	Saayman and Saayman (2011)
	Cyclists at the Pick n Pay Cape Argus Cycle Tour in South Africa who attend the event as a family outing or an opportunity to visit and tour the area tend to spend more per person.	Saayman and Saayman (2011)
	Swimmers participating in the Telkom Midmar Mile in South Africa who are motivated more by personal motives such as achievement tend to be higher spenders.	Saayman and Saayman (2011)
Group size	A larger group size is positively correlated with overall expenditure levels.	Seiler et al (2002, p 56), Lee (2001, p 663)
	An increase in the number of people in the travel party leads to a decrease in spending per person.	Saayman and Saayman (2008), Saayman et al (2009), Kruger et al (2012), Saayman and Saayman (2011)
Length of stay	A longer duration of stay is positively correlated with overall expenditure levels.	Saayman et al (2007, p 191), Streicher and Saayman (2009), Seiler et al (2002, p 47), Saayman and Saayman (2011)
	Decreased spending per day is related to longer duration of stay.	Downward and Lumsdon (2004), Cannon and Ford (2002, p 263), Sun and Stynes (2006, p 721), Mehmetoglu (2007, p 213)
Preferred accommodation	Visitors with more elaborate catering needs and who prefer a combination of self-catering and other types of catering tend to spend more.	Saayman et al (2007, p 18)
	Cyclists making use of paid accommodation (for example hotels, bed and breakfasts and guesthouses) spend more.	Streicher and Saayman (2009)

Number of visits	Repeat visitors tend to spend more than first time visitors.	Gyte and Phelps (1989), Long and Perdue (1990, p 12)
	Repeat visitors stay longer than first time visitors, but do not spend significantly more or less.	Mak *et al* (1977, p 7)
	First time visitors spend more than repeat visitors despite their shorter length of stay.	Jang *et al* (2004, p 332), Opperman (1997, p 178), Alegre and Juaneda (2006, p 698), Petrick (2004, p 463), Pouta *et al* (2006, p 132)
Language	English-speaking spectators to the Old Mutual Two Oceans Marathon and Pick n Pay Cage Argus Cycle Tour tend to spend more than Afrikaans-speaking visitors.	Kruger *et al* (2012), Saayman and Saayman (2012)
Financial responsibility (number of people paid for)	Visitors who pay for fewer people at the Aardklop National Arts Festival in South Africa tend to spend more per person.	Kruger *et al* (2010a)

economic activity (Regan *et al*, 2009, p 6). This is vital for the sustainability of a sporting event such as the Two Oceans.

Methodology

As this was quantitative research, a structured questionnaire was used to collect the data. This section describes the questionnaire, the sampling method, the survey and the statistical analysis.

The questionnaire

The questionnaire used to survey the participants at the Two Oceans was based on the work of McDonald *et al* (2002), Ogles and Masters (2003), LaChausse (2006) as well as Kruger *et al* (2012) and was subdivided into three sections. Section A captured demographic details (gender, home language, age, occupation, home province, marital status and preferred accommodation) as well as spending behaviour (number of people paid for, length of stay and expenditure), while section B focused on specific information concerning the race (categories participated in, initiator of participation and information sources regarding the event). Section C measured the motivational factors and the participants' preference for competing in the race. In the motivation section, 24 items were measured on a five-point Likert scale. Respondents were asked to indicate how important they considered each item to be on the scale where 1 = not at all important; 2 = less important; 3 = neither important nor unimportant; 4 = very important and 5 = extremely important.

The spectator questionnaire was based on the work of Hunt *et al* (1999), Stewart *et al* (2003) and McDonald *et al* (2002) and consisted of three sections. Sections A and B captured demographic details (gender, home language, age, occupation, home province, marital status and preferred accommodation) as well as spending behaviour (number of people paid for, length of stay and expenditure) while Section C measured the motivational factors for supporting the race. Fifteen items were measured in the motivation section on a five-point Likert scale and respondents were asked to indicate how important they considered each item on the scale (1 = not at all important; 2 = less important; 3 = neither important nor unimportant; 4 = very important and 5 = extremely important). For the purpose of this article, the information obtained from sections A, B and C of both questionnaires were predominantly used.

Sampling method

In the case of the participants, 520 questionnaires were distributed over a period of three days (20–22 April 2011) and 507 completed questionnaires were included in the analysis. A total of 207 completed spectator questionnaires were included in the analysis. According to Israel (2009, p 6), from a population of 25,000 (*N*), 204 respondents (*n*) are seen as representative. Since approximately 12,000 spectators supported the race and approximately 23,000 athletes participated in the race the number of completed questionnaires is greater than the number required.

Survey

For both the participants and the spectators, a destination-based survey was undertaken, with questionnaires being handed out on-site at the Good Hope Centre during the registration period (30 March–2 April 2010) and at the University of Cape Town (UCT) Sports Grounds on the day of the race (23 April 2011). Participants were selected after they had completed their registration and spectators were approached while they were watching the athletes enter the sports grounds. The field workers were trained to ensure that they understood the aim of the study as well as the questionnaire. Respondents were briefed about the purpose of the research beforehand to ensure that they participated willingly and responded openly and honestly.

Statistical analysis

Microsoft® Excel® was used to capture data and SPSS (SPSS Inc, 2009) to analyse it. The analysis was done in five stages. First, general profiles of the participants and spectators at the Two Oceans were compiled. Second, principal axis factor analyses, using an Oblimin rotation with Kaiser normalization, were performed on the 24 motivation items of the participants and the 15 motivational items of the spectators, respectively, to explain the variance-covariance structure of a set of variables through a few linear combinations of these variables. The Kaiser–Meyer–Olkin measure of sampling adequacy was also used to determine whether the covariance matrix was suitable for factor analysis. Kaiser's criteria for the extraction of all factors with eigenvalues larger than unity were used because they were considered to explain a significant amount of variation in the data. In addition, all items with a factor loading above 0.3 were considered as contributing to a factor, and all with loadings lower than 0.3 as not correlating significantly with this factor (Steyn, 2000). In addition, any item that cross-loaded on two factors with factor loadings greater than 0.3 was categorized in the factor where interpretability was best. A reliability coefficient (Cronbach's alpha) was computed to estimate the internal consistency of each factor. All factors with a reliability coefficient above 0.6 were considered as acceptable in this study. The average inter-item correlations were also computed as another measure of reliability – these, according to Clark and Watson (1995), should lie between 0.15 and 0.55.

Third, the dependent (predicted) variable is spending per person, which was calculated by adding the spending of the respondent on the various components asked. This gave total spending, which was then divided by the number of people for whom the respondent was paying on the trip, to give spending per person. The dummy variables (socio-demographic and behavioural variables) were coded 1 and 0 to be included in the correlation as well as regression analysis. Fourth, correlation analysis and Spearman's Rank Order Correlation (rho) were used to explore the interrelationship between the independent variables and the dependent variable (spending per person). According to Pallant (2010, p 134), a correlation of 0 indicates no relationship, a correlation of 1.0 indicates a perfect positive correlation, and a value of –1.0 indicates a perfect negative correlation. Cohen (1988, pp 79–81) suggests the following guidelines to interpret the values between 0 and 1: small effect $r = 0.1$; medium effect $r = 0.3$; and a large effect $r = 0.5$. Fifth, based on the results of the correlation

Table 2. Profile of respondents (participants and spectators at the Two Oceans 2011).

Demographic profile	Participants 2011	Spectators 2011
Gender	Male (65%); Female (35%)	Female (56%); Male (44%)
Age	Average age: 39.5 years	Average age: 38.4 years
Language	English-speaking (58%)	English-speaking (58%)
Province of residence	Western Cape (42%), Gauteng (29%)	Western Cape (54%), Gauteng (25%)
Number of people in travelling group	Average of 2.2 people	Average of 4.7 people
Number of people paid for	Average of 1.8 people	Average of 1.9 people
Length of stay in Cape Town	Average of 5 nights	Average of 4.6 nights
Expenditure categories	Entry fee: R229.90 Accommodation: R1,161.69 Transport: R1,168.00 Running gear: R666.10 Food and restaurants: R630.71 Beverages: R159.93 Medicine: R65.38 Souvenirs: R75.64 Other: R132.24	Accommodation: R1,131.31 Transport: R934.65 Beverages: R765.63 Beverages: R326.67 Souvenirs: R88.16 Other: R83.64
Expenditure per group[a]	R4,157.28 (approximately US$509)	R3,300.00 (approximately US$404)
Times participated or supported	Average of 3.3 times	Average of 3.9 times

Note: [a] US$1 = R8

analysis, the best predictors for the dependent variable were selected and stepwise regression analyses were performed to identify the determinants of participant and spectator spending at the Two Oceans. In the regression analysis, R^2 gives the proportion of variance in spending that is explained by the predictors included in the model. An R^2 of 0.25 or larger can be considered as practically significant (Ellis and Steyn, 2003, p 53). The adjusted R^2 indicates how much variance in the outcome would be accounted for if the model had been derived from the population from which the sample was taken and also takes into account the number of explanatory variables in the model (Field, 2005, p 723). The adjusted R^2 therefore gives an idea of how well the regression model generalizes and, ideally, its value needs to be the same or very close to the value of R^2 (Field, 2005, p 188). The results from the statistical analysis are discussed in the next section.

Results

This section provides an overview of the profile of the respondents (participants and spectators at the Two Oceans), discusses the results of the factor analyses (travel motives) as well as the correlation analyses and presents the results of the stepwise regression analyses.

Profile of respondents

Table 2 shows that the participants at the Two Oceans were predominantly

male, on average 40 years old and English-speaking from the Western Cape Province. Participants travelled to the race in groups of two, were financially responsible for both people during the event and stayed an average of five nights in Cape Town. Respondents have participated in the Two Oceans three times before and spent an average of R4,157.80 per group, with the highest spending categories being transport and accommodation. The spectators at the race were mainly female, on average 38 years old, English-speaking and also originated from the Western Cape. These respondents travelled to the race in groups of five and were financially responsible for only two people. Similar to the participants, spectators stayed an average of five nights in Cape Town and have supported the race an average of four times. During the event, spectators spent an average of R3,300.00. Similar to the participants, the highest spending categories were accommodation, transport and beverages.

Results from the factor analyses

The pattern matrix of the principal axis factor analyses using an Oblimin rotation with Kaiser normalization identified four participant motivational factors and three spectator motives that were labelled according to similar characteristics (Table 3 and Table 4). These factors accounted for 59% and 69%, respectively, of the total variance. All had relatively high reliability coefficients, ranging from 0.73 (the lowest) to 0.86 (the highest) for the participants and 0.69 (the lowest) to 0.94 (the highest) for the spectators. The average inter-item correlation coefficients, with values between 0.40 and 0.57 for the participants and 0.42 and 0.72 for the spectators, also imply internal consistency for all factors. Moreover, all items loaded on a factor with a loading greater than 0.3 indicate a reasonably high correlation between the factors and their component items. The Kaiser–Meyer–Olkin measures of sampling adequacy of 0.90 and 0.93 also indicate that the patterns of correlation are relatively compact and yield distinct and reliable factors (Field, 2005, p 640). Barlett's test of sphericity also reached statistical significance ($p < 0.001$) in both cases, supporting the factorability of the correlation matrix (Pallant, 2007, p 197).

Factor scores were calculated as the average of all items contributing to a specific factor (mean value), in order to interpret them on the original five-point Likert scale of measurement. As Table 3 shows, the following motivations for the Two Oceans participants were identified: *Intrinsic achievement and competitiveness* (Factor 1), *Event novelty* (Factor 2), *Family togetherness and escape* (Factor 3) and *Group affiliation* (Factor 4). *Intrinsic achievement and competitiveness* (Factor 1) obtained the highest mean value (3.81), was considered the most important motive for participating in the race, and had a reliability coefficient of 0.86 and an average inter-item correlation of 0.40. *Family togetherness and escape* (Factor 3) had the second highest mean value (3.19), followed by *Group affiliation* (3.13). *Event novelty* (Factor 2) had the lowest mean value (2.87) and was rated as the least important motive to participate in the race. For the Two Oceans spectators, three motivational factors were identified. These were *Event attractiveness* (Factor 1), *Escape and relaxation* (Factor 2) and *Support and socialization* (Factor 3) (see Table 4). *Support and socialization* was considered as the most important motive to be a spectator at the event and obtained a mean value of

Table 3. Results of factor analysis of participants at the Two Oceans.

Motivation factors and items	Factor loading	Mean value	Reliability coefficient	Average inter-item correlation
Factor 1: Intrinsic achievement and competitiveness		**3.81**	**0.86**	**0.40**
Two Oceans is a major challenge	0.77			
Because the event is well organized	0.73			
Because I enjoy running	0.71			
Two Oceans tests my level of fitness and endurance	0.69			
To feel proud of myself and to feel a sense of achievement	0.67			
To compete against myself, to improve my running speed and/or to beat a certain time	0.65			
It is a 'must do' event	0.56			
To improve my health	0.54			
The atmosphere of the Two Oceans	0.53			
I do it annually	0.34			
Factor 2: Event novelty		**2.87**	**0.84**	**0.46**
To explore a new area	0,76			
To compete against some of the best runners in the country	0.71			
It is an international event	0.64			
Reason to visit Cape Town	0.63			
To make my family and friends proud of me	0.56			
I am pursuing a personal goal of participating in a certain number of marathons	0.31			
Factor 3: Family togetherness and escape		**3.19**	**0.73**	**0.41**
To spend time with family	0.54			
To relax	0.53			
To get away from my normal routine and stress	0.46			
Because the whole family can participate	0.35			
Factor 4: Group affiliation		**3.13**	**0.84**	**0.57**
To socialize with other runners	0.83			
To meet new people	0.69			
To spend time with friends	0.56			
To share group identity with other runners	0.43			
Total variance explained	**59%**			

4.08, a reliability coefficient of 0.69 and an inter-item correlation of 0.42. *Event attractiveness* was the second most important motive (3.56) followed by *Escape and relaxation* (3.34).

Results from the correlation analysis and Spearman's rho

Most questions had multiple choice responses or were answered on a five-point Likert scale and the dummy variables were coded 1 and 0 according to Table 5.

Table 4. Results of factor analysis of spectators at the Two Oceans.

Motivation factors and items	Factor loading	Mean value	Reliability coefficient	Average inter-item correlation
Factor 1: Event attractiveness		3.56	0.94	0.61
To be part of the Two Oceans	0.97			
It is a well-known international event	0.90			
To see world-class athletes compete	0.83			
The atmosphere of the Two Oceans	0.77			
Because the event is well-organized	0.77			
I enjoy the camaraderie associated with marathon running	0.77			
Because I enjoy watching marathon running	0.62			
I support and attend it annually	0.62			
It is a sociable event	0.62			
To meet new people and to interact with other spectators	0.61			
Factor 2: Escape and relaxation		3.34	0.84	0.73
To get away from my routine	0.89			
To relax	0.78			
Factor 3: Support and socialization		4.08	0.69	0.42
To support a friend or family member	0.70			
To spend time with family	0.60			
To spend time with friends	0.35			
Total variance explained	**69%**			

These variables were included in the correlation analyses to determine the variables that had the greatest influence on spending per person for both the participants and spectators at the Two Oceans. The relationship between the variables indicated in Table 5 and spending per person was investigated by using Spearman's Rank Order Correlation (rho). The following variables had a small to medium relationship with spending per person of the participants at the Two Oceans:

- There was a small, positive correlation between occupation, level of education, group, nights, ultra, email, magazines, marathons completed, average per year and spending per person. This indicates that participants with a high income occupation, a higher level of education, a larger group size, who spend more nights in Cape Town, who participate in ultra marathons, have completed more marathons, participate on average in more marathons per year and who heard of the event through e-mails and magazines tend to have higher levels of expenditure.
- Western Cape Province and type of accommodation have a medium, negative correlation, indicating that participants from this province who made use of non-paid accommodation tend to be lower spenders at the Two Oceans. Other tourist attractions visited has a medium, positive correlation with

Table 5. Questions used and their descriptions, and correlation results for participants and spectators.

Category	Question description	Coding	Variable	Correlation results for participants[d]	Correlation results for spectators[d]
Socio-demographics	Home language	Afrikaans = 1; English = 0	LANGUAGE		
	Gender	Male = 1; Female = 0	GENDER	rho = 0.17, n = 462, p < 0.001	rho = 0.20, n = 138, p < 0.014
	Age	Open question	AGE		
	Occupation[a]	High income = 1; Other = 0	OCCUPATION	rho = −0.44, n = 329, p < 0.001	rho = −0.54, n = 117, p < 0.001
	Province:				
	Gauteng	Yes = 1; No = 0	GAUTENG	rho = 0.11, n = 441, p < 0.16	rho = 0.25, n = 154, p < 0.002
	Western Cape	Yes = 1; No = 0	WESTERN CAPE		
	Level of education[b]	High level = 1; Other = 0	LEVEL OF EDUCATION		
	Marital status	Married = 1; Not married = 0	MARITAL STATUS		
Behavioural	Group size	Open question	GROUP	rho = 0.10, n = 443, p < 0.035	rho = −0.38, n = 157, p < 0.001
	Number of people paid for	Open question	PEOPLE PAID FOR		
	Number of days	Open question	DAYS	rho = 0.19, n = 283, p < 0.002	rho = −0.64, n = 157, p < 0.001
	Number of nights	Open question	NIGHTS		
	Time participated/supported	Open question	TIMES	rho = −0.46, n = 416 p < 0.001	
	Mode of transport	Own = 1; Public = 0	TRANSPORT		
	Type of accommodation[c]	Non-paid = 1; Paid = 0	ACCOMMODATION	rho = 0.42, n = 403, p < 0.001	
	Tourist attractions visited	Yes = 1; No = 0	TOURIST ATTRACTIONS		
Media preferences	Television	Yes = 1; No = 0	TV	rho = 0.10, n = 470, p < 0.025	
	Radio	Yes = 1; No = 0	RADIO		
	Website	Yes = 1; No = 0	WEBSITE	rho = 0.15, n = 470, p < 0.001	
	E-mail	Yes = 1; No = 0	EMAIL		
	Newsletter	Yes = 1; No = 0	NEWSLETTER		
	Magazines	Yes = 1; No = 0	MAGAZINES		
	Newspapers	Yes = 1; No = 0	NEWSPAPERS		
	Word-of-mouth	Yes = 1; No = 0	WORD-OF-MOUTH		
	Club	Yes = 1; No = 0	CLUB		

Participant categories and participation	Ultra marathon (56 km)	Yes = 1; No = 0	ULTRA	rho = 0.12, n = 470, p < 0,009
	Half marathon (21.1 km)	Yes = 1; No = 0	HALF	
	Marathons per year	Open question	AVERAGE PER YEAR MARATHONS	rho = 0.17, n = 315, p < 0.003
	Marathons completed	Open question	COMPLETED	rho = 0.13, n = 324, p < 0.021
Participant travel motives	Intrinsic achievement and competitiveness	5-point Likert scale	INTRINSIC ACHIEVEMENT AND COMPETITIVENESS	
	Event novelty	5-point Likert scale	EVENT NOVELTY	
	Family togetherness and escape	5-point Likert scale	FAMILY TOGETHERNESS AND ESCAPE	
	Group affiliation	5-point Likert scale	GROUP AFFILIATION	
Spectator travel motives	Event attractiveness	5-point Likert scale	EVENT ATTRACTIVENESS	rho = 0.30, n = 138, p < 0.001
	Escape and relaxation	5-point Likert scale	ESCAPE AND RELAXATION	
	Support and socialization	5-point Likert scale	SUPPORT AND SOCIALIZATION	

Note: [a]High-income = professional, management, self-employed; Other = technical, sales, farmer, mining, administrative, civil service, education, housewife, pensioner, student, unemployed. [b]High-level = diploma, degree, postgraduate, professional; Other = no school, matriculation. [c]Non-paid = local resident, family and friends; Paid = guest house or bed and breakfast, hotel, camping, rent full house. [d]Please note that only the variables that had a medium to a strong correlation with spending per person were included in these columns.

spending per person, showing that those participants who visited other tourist attractions during the race tend to be higher spenders.

The following variables had a small, medium to strong relationship with spending per person for the spectators at the Two Oceans:

- There was a small, positive correlation between occupation and level of education, indicating that spectators with a high income occupation and a high level of education tend to be higher spenders at the Two Oceans.
- The travel motive, *Escape and relaxation*, had a positive correlation with higher spending, showing that spectators who are motivated more by this factor spend more at the race. Transport had a medium, negative correlation, indicating that spectators who made use of their own transport spent less at the Two Oceans compared with those who made use of public transport, which is to be expected.
- Other tourist attractions visited have a positive, strong correlation with spending per person, indicating that those spectators who visited other tourist attractions during their stay in Cape Town tend to be higher spenders. Similar to the participants, there is a negative, strong correlation between Western Cape province as well as type of accommodation and spending per person, indicating that spectators from the Western Cape who make use of non-paid accommodation spent less at the race.

Results of the stepwise linear regression analyses

Stepwise linear regression was performed to assess the impact of a number of factors on the likelihood that the per-person spending of participants and spectators would increase. The model contained the independent variables indicated in Table 5 that were dummy coded as 1 and 0, which correlated most strongly with spending per person. The significant variables for the participants explained 30.4% of the total variance while the significant variables for the spectators explained 23.7% of the total variance. The significant results are discussed below.

Determinants of participant spending

In the case of the participants at the Two Oceans, nights in Cape Town, accommodation, average number of marathons participated in per year and level of education were the only significant variables, explaining, respectively 15%, 6%, 5% and 4% (contribution to R^2) of the variance in spending per person, $F(4, 88) = 9.593$, $p < 0.001$. The results in Table 6 indicate that participants who stay more nights in Cape Town (beta=0.35, $p = 0.001$), who have a higher level of education (beta = 0.20, $p = 0.033$) and who participate in more marathons per year (beta = 0.27, $p = 0.00$) are higher spenders at the race. The negative sign in the accommodation category (beta = –0.24, $p = 0.010$) indicates that participants who make use of non-paid accommodation, such as local residents and those staying with family and friends, are inclined to be lower spenders at the Two Oceans.

Table 6. Results from the stepwise linear regression: determinants of participant spending.

Model	Unstandardized coefficients		Standardized coefficients		
	B	Standard error	Beta	*t*	Significance
(Constant)	2,389.114	856.284		2.790	0.006
NIGHTS	143.349	37.361	0.345	3.837	0.000
ACCOMMODATION	−1,884.880	712.017	−0.242	−2.647	0.010
AVERAGE PER YEAR	123.684	41.976	0.269	2.947	0.004
LEVEL OF EDUCATION	1,784.976	821.856	0.201	2.172	0.033

Table 7. Results from the stepwise linear regression: determinants of spectators' spending.

Model	Unstandardized coefficients		Standardized coefficients		
	B	Standard error	Beta	*t*	Significance
(Constant)	2,800.108	935.674		2.993	0.006
OCCUPATION	2,245.056	1,110.909	0.344	2.021	0.053
ACCOMMODATION	−1,773.074	1,120.363	−0.270	−1.583	0.125

Determinants of spectator spending

With regard to the determinants of spectator spending, as indicated in Table 7, occupation and accommodation were the only significant variables and explained, respectively, 16% and 7% (contribution to R^2) of the total variance, $F(2, 28) = 4.343$, $p < 0.023$. Similar to the participants, spectators at the Two Oceans with a high income occupation (beta = 0.34, $p = 0.053$) spend more at the race while the negative sign of the coefficient in the accommodation category (beta = −0.27, $p = 0.125$) also indicates that spectators who made use of non-paid accommodation tend to spend less at the marathon.

Findings and implications

The purpose of this article was to establish the determinants of spending by participants and spectators at the Two Oceans Marathon. The results confirm the notion by Craggs and Schofield (2009) that a variety of socio-demographic and behavioural determinants influence visitor expenditure. Moreover, the results confirm the notion by Saayman and Saayman (2012) that not all factors are applicable or significant for both spectators and participants and therefore event organizers cannot approach participants and spectators in the same manner if the intention is to increase visitor spending. In the case of both participants and spectators, more behavioural determinants (length of stay, preferred

accommodation and average number of marathons participated in per year) were significant variables compared to socio-demographic determinants (level of education, occupation and province of origin).

The following socio-demographic variables were significant determinants:

- Corresponding with the research by Saayman and Saayman (2012), participants at the Two Oceans with a higher level of education spend more. This finding contradicts the results by Gokovali *et al* (2007) and Mak *et al* (1977).
- Spectators with a higher income occupation also spend more at the race and this result is consistent with research done by Fish and Waggle (1996); Kruger (2009); Cannon and Ford (2002); Crouch (1994); Legohérel (1998); Mak, Moncur and Yonamine (1977); Mehmetoglu (2007); Taylor *et al* (1993), Thrane (2002), Kruger (2009) and Kruger *et al* (2010a,b).
- Although province of origin correlated with spending per person, the results of the regression analysis indicated that it had no additional influence on higher spending and this contradicts findings by Kruger (2009); Saayman *et al* (2007); Slabbert *et al* (2008) and Saayman and Saayman (2008) who found significant results between province of origin (location) and spending in South Africa.

With regard to behavioural determinants, the following variables were significant determinants:

- Corresponding with the research conducted by Seiler *et al* (2002), Saayman *et al* (2007), Streicher and Saayman (2009) and Saayman and Saayman (2012), length of stay had a significant influence on participant spending. Participants who stayed more nights in Cape Town tend to be higher spenders at the race. This result contradicts the finding by Downward and Lumsdon (2004), Cannon and Ford (2002), Sun and Stynes (2006) and Mehmetoglu (2007) who found that decreasing spending per day is related to longer duration of stay.
- Concerning participation in other marathons, the results show that participants who also on average participate in more marathons per year, also spend more. This supports the findings by Saayman and Saayman (2006) and Kruger (2009), who revealed that festival visitors who also attend other festivals tend to be higher spenders.
- Unsurprisingly, both spectators and participants who made use of non-paid accommodation spend less at the marathon. This supports the research by Saayman *et al* (2007) and Streicher and Saayman (2009) who found that visitors who make use of paid accommodation (for example hotels, bed and breakfasts, and guesthouses) spend more.

Based on these findings, this research has the following implications. Firstly, marathon event organizers who want their event to have a greater economic impact need to take cognisance of this research. Event organizers can use these determinants to focus their marketing strategy and campaign. The results show that spectators also have a significant impact if one compares their spending per person with that of participants. Therefore it is not only spectators at team

sports events such as soccer, rugby, baseball and cricket that have the potential to make a significant economic contribution but also spectators at marathon events.

Secondly, destination marketers can use events of this nature to attract visitors to their shores and emphasis should be placed on both participants and spectators. Events such as these should become part of a destination's tourism offering. This research stresses the important role that the tourism industry can play since those who stayed in paid accommodation, as well as those who visit other attractions, spend more. This requires greater cooperation between event organizers and destination marketers as well as making more information available to influence decision taking, such as a list of possible accommodation establishments in the vicinity of the race and things to see and do in the area. Special packages for the event should also be considered. Another option is to give discount at restaurants, attractions, transport and accommodation establishments to those who are registered for the event.

Thirdly, it is interesting to note that even though marathon running is a sport for individuals, the travel motives indicate an important socialization and camaraderie motive that is key from an event organizer's perspective and should not be neglected in the marketing campaign. In terms of the participants, it is also important to stress the intrinsic values of the event, such as those captured in the factor analysis. For spectators, the travel motives are different and the focus is on the opportunity to be able to support the runners as well as the event itself. Therefore the event should be promoted as one of the attractions that Cape Town has to offer.

Fourthly, results revealed that those participants who participate more frequently are the higher spenders, and they participate at various marathons. For this reason, event organizers should market this marathon at similar events. Incentives for participating could also be used to attract these frequent runners such as a club for runners who have completed a specific number of marathons.

Lastly, results showed that participants in high income occupations spend more and it could be beneficial for event organizers to use this information to target this niche market, which will include professional organizations or bodies such as chartered accountants, the medical professions and business chambers.

Conclusion

Sports events are big business and they can make a significant contribution to the local economies where they are hosted. To maximize the impact of these events, it is of the utmost importance to know and understand the determinants of visitor spending, which include both spectators and participants. In this sense, this research confirms that events of this nature should not be hosted in isolation from the rest of the tourism industry. Involvement of the broader tourism industry could lead to participants and spectators staying longer, thereby spending more money in the region. Events such as these should also form part of the tourism offering of a city or region and need to be marketed as such. The research firstly shows that even though sports tourism research is done across the globe, few studies have been conducted that focus on both participants and spectators. Even fewer studies have been conducted on an event

such as the one under investigation. This despite the fact that most major cities or destinations host marathons. Secondly, it is clear that the spending of spectators plays a significant role in the economic value of these events and should therefore not be neglected, especially when it comes to marathons. Lastly, this research both confirmed and contradicted previous research and indicated that length of stay, preferred accommodation, average number of marathons participated in per year, level of education and occupation were the most important determinants of spending for both participants and spectators. It is thus recommended that this type of research is also done at similar marathon events in South Africa, such as the Comrades Marathon, to compare results.

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