

A Review of Sport Events Impact Evaluation Methods

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Abstract

“There is currently no internationally recognised method of analysing the benefits of hosting major sporting events. Every country and consultancy uses its own different methodology and there is no accepted standard that allows the comparison of major sporting events” (Global Sports Impact Survey, 2014, pp.3). Therefore this article has analysed to understand sport impact evaluation methods that have used researchers in the field of sport event for evaluate impact of sport events. This research has used purposive sampling method for select the relevant articles for examine the sport evaluation methods. This article mainly focuses on event impacts such as environmental, economic and social.

Keywords: Sport, economic, environment, social

Introduction

The event industry is one of the world’s largest employers and contributes major positive economic impact (Theocharis, 2008 cited in Huseyin, et al., 2014). The event is all about people-people coming together to create, operate, and participate in an experience (Silvers, 2004 cited in Robinson, et al., 2007a). It is an activity that gathers the target group in time and room, a meeting where a message is communicated and happening is created (Eckerstein, 2002 cited in Arcodia, et al., 2005). The term event is used for describing different activities designed for different purposes. These activities can be art, sports, tourism and social activities, and can also be activities organized by giant organizers more professional and more formal (Argan, 2007). According to Getz and Goldblatt, events are ‘a unique moment in time’ and ‘aside from everyday occurrences’ (2005 cited in Argan, et al., 2007). Public or private, commercial or charitable, celebratory or commemorative-events bring people together to share an experience and produce a measurable outcome (Silvers, 2004 cited in Dorigo, et al., 2012). Civic events, conventions, expositions, fairs and festivals, hallmark events, hospitality, incentive travel, meetings and conferences, retail events, reunions, social life-cycle events, sport events, and tourism are the examples of subfields of events (Goldblatt, 2005 cited in Argan, et al., 2007). Every event has an organization behind it; managing activities, organizing funding, administering staff and voluntary personnel, undertaking marketing and public relations, organizing security, printing leaflets and tickets, hiring performers, arranging decorations, sorting out parking and many other activities (Tassiopoulos, 2005 cited in Stephanie, et al., 2011).

The way in which an organization deals with events is known as event management. It may include the organization’s objectives for managing events, assigned roles and responsibilities, ownership of tools and processes, critical success factors, standards, and event-handling procedures. The linkages between the various departments within the organization required handling events and the flow of this information between them is the focus of event management. (Argan, *et al.*, 2010). Event management and event marketing have emerged over the past decade as a vibrant sector of the tourism and recreation industries. The number, diversity and popularity of events have also grown throughout this period. As the number of events increase, there is a growing realization about the continuing need to develop event management professionals who are able to create, organize, and manage events (Arcodia and Reid, 2005).

Importance of Sport event evaluation

Sport event has importance impact and benefits for the host community in terms of international events. In the mainly, that have economic benefits, however it has other quantifiable benefits such as urban regeneration, physical legacy, cultural, social, environmental, tourism and sport development which may be long term and short term value (Masterman, 2009). Preuss (2006) pointed out that cities and countries are bidding for major sporting events which have main reason of economic benefits expected by decision maker and citizens. Thus key aim of the politicians is attract new investment to their own county and city in terms of development on infrastructure such as telecommunication, transport, housing sport and entertainment facilities as well as expecting intangible benefits such as national image, cultural, emotional commitment, and enhance identity. Furthermore, finally events can be improved general living condition as well as boosting the income of citizen and creating new job, increase demand of goods and services by attracting new business and tourism, where by increasing city, regional, and national level economy. Event’s economic impact has been respectively smaller by local area, state and national level as well as there has other benefits from events such as putting city in to the map, facilitating business, and civic pride (DWYER, PETER, & RAY, 2005). According Sport Canada, in this context governments have invested for sporting event to bidding, holding and conducting, for gaining certain benefits in terms of economic, social, environment, sport and cultural (1996, cited in CARLSEN, GETZ, et al., 2001). In addition, Collins, et al

(2009) mentioned that importance of sustainable development has understand public and private organization, where upon the attention of environment impact of mega sporting event has increased. Thus Olympic organization is got special attention to the environment impact in Olympic game's bidding process. Furthermore, Ohmann, et al (2007) and Fredline (2005a) argued social impact has the other important evaluation part in the sporting events, where by impacts have largely perceived by resident, especially in terms of urban regeneration, increased sense of security, positive fan behavior, and general surrounding the event as well as negative impacts, such as increased crime, prostitution, and displacement of location of local residents. Wherefore, Ma, et al (2011) pointed out that impact of sport event, in terms of sport mega events have focused on sustainability and their social, economic, and environmental dimensions. Thus, Olympic Game Impact project has encouraged event organizers for assessing their events impact in terms of social, economic and environment. Faulkner who noted, event impacts have been evaluated by the more rigorous evaluation methods, which are equally importance for the effectiveness of hallmark events and extensions of programs be demonstrated (1993, cited in Carlsen, et al., 2001).

Sport Event Assessment Methods

According to the Carlsen, et al (2001) in event management sector has often ignored measuring social, cultural and environment impact. Nevertheless full cost benefit evaluations are often undertaken. In addition, Ritchie pointed out that was introduced importance dimensions of events evaluations such as economic, tourism, commercial, socio cultural, psychological and political, using Delphi technique which is used to systematically combined expert knowledge and opinion to arrive at an informed group consensus about the evaluation of events. These opinions were identified through successive rounds of consultation and surveys of the expert group (1984, cited in Carlsen, et al., 2001). Carlsen, et al (2001) argued that per event impact evaluation modal, it should be definitely considered certain criteria for better evaluation such as Potential risk exposure, Probability of success, Compatibility with existing venues; Event manager's capability; Potential community benefits, Potential environmental impacts, Forecast number of tourists, and Fit with destination image or brand. On the other hand, post event evaluation modal should be considered certain criteria such as Economic impact at the state level, Economic impact at the city/ community level, Number of international visitors, Direct visitor expenditure, Value media coverage, Positive community attitudes, Financial results (profit/loss), Problem-free operations, Sponsor satisfaction, Employment creation, Cost-benefit analysis, Environmental impacts, Community (sociocultural) impacts; Yield per visitor; Infrastructure improvement; Urban redevelopment/renewal, Higher voluntarism and event expertise, and Future use of purpose-built facilities (legacy). Fredline noted that "triple bottom line" concept for the sustainable event management, which can either create or destroyed values of economic, social and environment. It is linked to assessment of sustainable development, similarly sport events, in terms of mega event can be bring sustainable positive and negative impact for the host community, in that sense, triple bottom line concept is importance method for evaluation impact of sport events (2006 cited in Ma, et al., 2011). In addition, Ma (2011) illustrated that International Academy of Sport Sciences and Technology (IAST) has introduced toolkit aiming to practice of domestic and international sporting event as well as National, International Federation and national Olympic committees to making their sporting event more sustainable in the ways of environmental, inclusive and economically smart. This toolkit is illustrated at the Kaohsiung 2009 World Games during its planning stage which is used to qualitative approach to document analysis as well as used to identify the objective of the event and these were then developed into specific criteria to evaluation event, then this was supplemented by observation of what was actually in place on city. In turn these criteria were used to identify the question of interview process with key stockholders. Thereafter, the data were then analyzed against these specific criteria in order to decide whether or not the World Games were on a sustainable path.

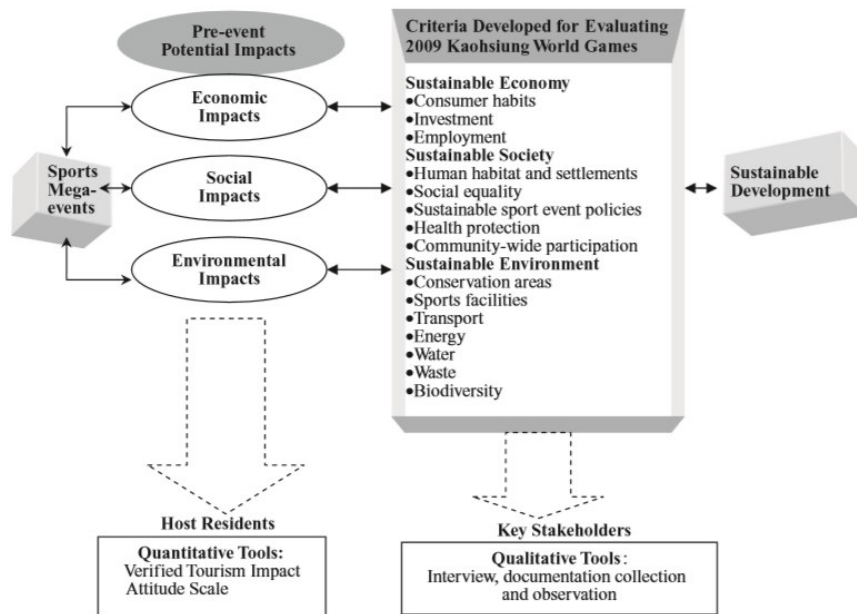


Figure 1. Framework for monitoring during the planning stage for the 2009 Kaohsiung World Games.

Source: (Ma, et al., 2011 pp.81)

Mathieson and Wall defined social impacts as “the changes of quality of Life of residents of tourist destinations” (1982, cited in Ohmann, et al., 2007, pp.03). Furthermore, Olsen and Merwin defines social impact as “changes in the structure and functioning of patterned social ordering that occur in conjunction with an environmental, technological or social innovation or alteration” (1977, cited in Ohmann, et al., 2007, pp.03). However sport events on host communities focused measuring the economic effect rather than social effects (Fredline and Faulkner, 2000; Barker et al., 2002; Twynam and Johnston, 2004). Ohmann, et al., (2007) analyzed the resident perception of 2006 FIFA world Cup in Germany which was suggested that two social impacts measurement approaches such as Contingent valuation method or Social impact Assessment, however that was used most common social impact approach of face to face structured interview in addition to used open ended questionnaires according to the thematic base. In addition Waitt (2003) measured social impact of Sydney Olympic 2000 using social exchange theory which is illustrated as follows:

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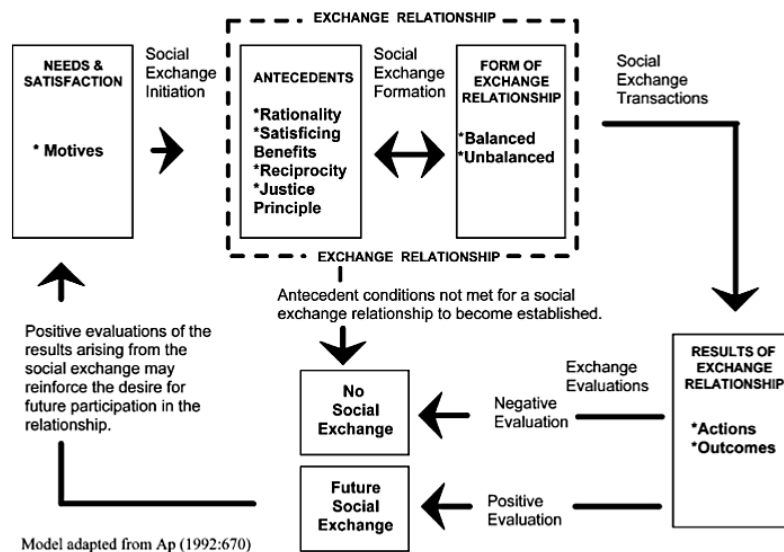


Figure 1. A Model of the Social Exchange Process

Source: (Waitt, 2003, pp.197)

The researcher was prepared research questions referring social exchange model and used 5-points Likert Scale to measuring the respondent answers as well as questionnaires were prepared under three themes such as enthusiasm, economic impact and environmental implication. Thus it was used considerable portion of literature and Cronbach's coefficient alpha for testing reliability and validity of data, then research was used factor analysis for final finding and conclusion.

Collons, et al., (2009) mentioned that environmental effect of events are difficult to assess quantitatively and complex. However, researcher was pointed ecological foot print analysis and environment input and output methods for measuring environmental impact. "The Ecological Footprint is an additive model. The basic approach adds together the uses of bio-productive land, for example, in terms of pasture, arable land, woodland (which produces timber but is also an important conduit for carbon sequestration), brownfield land and sea. Clearly the process hinges on an estimate of the world's bio-capacity which can effectively aggregate the bio-productivity of land and sea areas with vastly different qualities. Here areas of different quality are normalized by multiplying the land areas by equivalence factors linked to the different land bio-productivities. For example, these factors work to highlight the land category's relative yield in comparison to a global average space having a factor of one. This allows for the fact that a hectare of best quality farmland will be many times more productive than a global average hectare. "The equivalent areas are reported in terms of a standardized area unit" (Collons, et al., 2009, pp. 831). That method was used in FA cup final 2004 for measuring global ecological impact which was calculated by base on visitor's physical consumption in terms of travel to and from the event, food and drink consumed at the event, infrastructure of the event, venue and waste generated at the event. In terms of these areas of consumption was estimated event footprint comparing little over 3000 global hectares. In addition, a complete environment input-output approach would aim to explore a series transaction between the economy and environment that complete accounting would be represented by a partition matrix as follows

A1 A4

A2 A3

A1: A matrix of coefficients representing economy–economy interactions.

A2: A matrix of coefficients representing economy–environment transactions (showing the output of environmental good per unit of economic good).

A3: A matrix of coefficients representing environment–environment interactions. This reveals the effects of the input of environmental goods on the production of other environmental goods. For example, the effects of sulphur dioxide emissions on Water quality.

A4: A matrix of coefficients representing environment–economy transactions (showing the output of economic good per unit of environmental good). This reveals the impacts of environmental goods inputs on economic activity, for example, showing how climate change impacts farming output. (McNicoll & Blackmore, 1993 cited in Collons, et al., 2009). As an example Sydney Olympic was used environmental input-output method to testing environment impact following economic activities. Furthermore, A University of Plymouth Centre of Expertise (2010) mentioned that carbon footprint method has used to measuring the event environmental impact. An initial assessment of the Blue Mile environmental impact carried out, based upon an estimate of the greenhouse gases emissions (carbon footprint) as a result of visitors travelling to the event, for that calculated transport conversion factors to the number of miles respondents to the street survey had travelled by car, bus, train, taxi or ferry to attend the event, it was estimated Blue Mile visitors emission Co2.

The economic impacts are often measured factor of any event. Turco & Kelsey sport economic impact is defined as "the net economic change in a host community that results from spending attributed to a sport event or facility" (1992, cited in Crompton, et al., 1995). Thus, Crompton (1995) argued that the purpose of economic analysis is to measure the economic benefits that add to a community. In general context of economic studies on major sporting events have analyzed event output based on circle theory that model has used the expenditure approach by considering all direct and indirect spending linked with an event and its significant induced effects. Thus, the Dutch economist Elmer Sterken has presented approach about event economic impacts; it was presented ex-post cross-national event results for Summer Olympic Games and FIFA world cup. The researcher was able to shows that the intensive investments into infrastructure in the years prior to the Olympic Games have at least induced economic growth (Hefner, 1990). Furthermore, Dwyer, el al (2005), (Hefner, 1990) and (Crompton, 1995) pointed out that input output method for analysing economic impacts which is uested as inputs key expenditur by visitors, accompanying person, organizers delegtes sponsors, other and injection of new money as well as considering estimated changers, value added and employment results as out put. The input-output analysis based on four basic assumptions. These are as follows: (Briassoulis, 1991, Fletcher,1992 cited in Dwyer, et al., 2005)

1. All inputs and resources are supplied freely, and no resource constraints exist.
2. There are constant proportions between inputs and output, between labor and output, and between value added and output.
3. All price effects and financial effects are treated as being neutral when in fact there maybe capacity constraints in the economy that cause prices and costs taste in an expansion of economic activity. If the prices of inputs

and wages increase due to an increase in demand, the net impact of output and jobs from the increase in demand is much less than the initial injection of spending. These price rises will limit the extent of the expansion and may even lead to contractions in economic activity in some sectors.

4. The behavior of the government budget sector is treated as being neutral in I-O analysis. However, tax revenue will increase as a result of an economic expansion, enabling the government to increase spending, reduce other taxes, reduce borrowings from the public, or some combination of these, with further effects on activity.

The researchers have estimated economic impact using input-output method at the Games of Atlanta Olympic 1996, Football world cup in Africa, and 1 grand priix in Australia (Dwyer, et al., 2005) Thus, on one hand Hefner (1990) shows that the model of I-O which is used equation for calculating economic benefits. It is as follows: $M=1/(1-c)$, the illustration of the equation $M=$ the multiplier and $C=$ the marginal propensity to consumer. That modified model has used another variable through the other survey such as labor-intensive and more budget conscious. These survey's questionnaires have used for determine the amount of spent and consumer pattern of visitors and local residence in terms of attributable to the event. (Kasimati & Dawson, 2009a) Presented that micro econometric model for the measuring to Athens 2004 Olympic game's economic impacts, from this model has estimated long run and short run equation which was used time serious data of relating to Greece economy. Furthermore, researcher has used Dicky-Fuller and Phillips-person test for verifying data of stationary. Thereafter, researcher was used Johansen cointegration test only for the endogenous variable of the results. Then researcher was developed the regression model for estimation of economic impacts.

Opinion Regarding evaluation methods

Dwyer, et al (2005) argued that assumptions of input-output method are unrealistic due to if relative price change and cause businesses to change the composition of their input or if resources must be drawn away from other parts of the economy. Getz argued that observations which are used to collecting data have invalid methods or measures as well as used irrelevant criteria for event impact evaluations (1997, cited in Carlsen, et al., 2001).

Conclusion

Event management is vibrant industry in present world. Authorities of the event industry are always concerning of the sustainable development, therefore they are tried to keep sustainability within their event. In present, governments have signed UN protocols of sustainable development, where upon government are maintained every aspect of their work. In present, governments are invested huge amount of money for sport sector in terms of event organizing, elite sport development and community sport. Furthermore event has positive and negative impact in terms of economically, environmentally and social. If event organizers have managed event on effective and efficiently, whereby they can be achieved positive impact, therefore Olympic game impact project has emphasized importance of event impact evaluation. Wherefore most of academic, organization and governments have evaluated by the event impact on host community. Event impact researchers are used different kinds of method for evaluating event impact in terms of economic, social, and environment, that methods have basically similar functions. However variables those are used for impact evaluation defer from research to research as well as created different types of model according their researchers. Those evaluation models could not be generalized due to those are case studies as well as it has effected to situational circumstances. In that sense, event impact researchers in all over the world have used common basic theories for build up their evaluation models. Nevertheless researchers do not use similar evaluation methods for evaluate event impact.

References

- Carlsen, J., Getz, D., & Soutar, G. (2001), 'Event Evaluation Resrach', *Event Management*, 6(4), pp. 247–257, [Online]. Available at: <http://www.tandfonline.com/loi/resm20/> (Accessed: 25 February 2015).
- Collins, A., Jones, C., & Munday, M. (2009) 'Assessing the environmental impacts of mega sporting events: Two options?', *Tourism Management*, 30(6), pp. 828-837, [Online]. Available at: <http://www.sciencedirect.com/science/article/pii/S026151770800215X/> (Accessed: 25 February 2015).
- Crompton, J. L. (1995) 'Economic Impact Analysis of Sports Facilities and Events: Eleven Sources of Misapplication', *Journal of Sport Management*, 9(1), pp. 14-35, [Online]. Available at: <http://journals.humankinetics.com/jsm-back-issues/jsmvolume9issue1january/economicimpactanalysisofsportsfacilitiesandeventselevensourcesofmisapplication/> (Accessed: 25 February 2015).
- DWYER, L., MELLOR , R., MISTILIS, N., & MULES, T. (2000) 'A FRAMEWORK FOR ASSESSING 'TANGIBLE' AND 'INTANGIBLE' IMPACTS OF EVENTS AND CONVENTIONS', *Event Management*, 6(3), pp. 175-191,[Online]. Available at: [file:///C:/Users/ranjan86/Downloads/EventManagement-1%20\(3\).pdf/](file:///C:/Users/ranjan86/Downloads/EventManagement-1%20(3).pdf/) (Accessed: 25 February 2015).
- Dwyer, L., Peter , F., & Ray , S. (2005) 'Estimating the Impacts of Special Events on an Economy', *Journal of Travel Research*, 43(4), pp. 351-359, [Online]. Available at: <http://>

- <http://jtr.sagepub.com/content/43/4/351/> (Accessed: 25 February 2015).
- E.Fredline. (2005a) 'Host and Guest Relations and Sport Tourism', *Sport in Society*, 8(2), pp. 263-279, [Online]. Available at: <http://www.tandfonline.com/doi/abs/10.1080/17430430500087328#.VPjoUvnF-x4/> (Accessed: 25 February 2015).
- Hefner, F. L. (1990) 'Using Economic Models to Measure the Impact of Sports on Local Economies', *Journal of sport and social issues*, 14(1), pp. 1-13, [Online]. Available at: <http://http://jss.sagepub.com/content/14/1/1.short/> (Accessed: 25 February 2015).
- Huseyin Kose , Mehpare Tokay, Metin Argan (2014) 'Special event management and event marketing: A case study of TKBL all-star 2011 in Turkey', *Journal of Management and Marketing Research*, 6(2), pp. 1-11, [Online]. Available at: <http://http://www.aabri.com/NC2011Manuscripts/NC11061.pdf/> (Accessed: 25 February 2015).
- Kasimati, E., & Dawson, P. (2009a) 'Assessing the impact of the 2004 Olympic Games on the Greek economy: A small macroeconomic model', *Economic Modelling*, 26(1), pp. 139-146, [Online]. Available at: <http://www.sciencedirect.com/science/article/pii/S0264999308000709/> (Accessed: 25 February 2015).
- Ma, S.C., Egan b, D., Rotherhamc , I., & Mad, S.M. (2011) 'A framework for monitoring during the planning stage for a sports mega-event ', *Journal of Sustainable Tourism* , 19(1), pp. 79-96, [Online]. Available at: <http://shura.shu.ac.uk/4810/> (Accessed: 25 February 2015).
- Masterman, G. (2009). *Strategic Sports Event Management* ,Oxford: Elsevier Ltd.
- Ohmann, S., Jones, I., & Wilkes , K. (2007) 'THE Perceived Social Impacts of the 2006 Football World Cup on Munich residents', 11(2), pp. 359-378, [Online]. Available at: http://eprints.bournemouth.ac.uk/843/ (Accessed: 25 February 2015).
- Plymouth Centre of Expertise, A. U. (2010) '*Blue Mile, Blue Sound and Stepping Stones to Nature: An Exploration of their Impact*', Devon, University of Plymouth, [Online]. Available at: <http://http://www.eventimpacts.com/pdfs/FinalReportBlueMile2010Impact.pdf> (Accessed: 25 February 2015).
- Preuss, H. (2006) 'Impact and Evaluation of Major sporting Events', *European Sport Mangement Quarterly*, 6(4), pp. 313-316, [Online]. Available at: <http://www.tandfonline.com/doi/abs/10.1080/16184740601154441#.VPjqYvnF-x4> (Accessed: 25 February 2015).
- Waite, G. (2003) 'Social Impacts of the Sydney Olympics', *Annals of Tourism Research*, 30(1), pp. 194-215, [Online]. Available at: <http://genc6003.unsw.wikispaces.net/file/view/Social+Impact+Sydney+Olympics.pdf> (Accessed: 25 February 2015).
- Arcodia, C. and Reid, S. (2005) 'Event Management Associations and the Provision of Services', *Journal of Convention & Event Tourism*, 6 (4), 6(0), pp. 5-25, [Online]. Available at: <http://research-hub.griffith.edu.au/display/n9a691f4f050c0975029debb3d59b5ba4> (Accessed: 25 February 2015).
- Argan, M, *Eglence Pazarlamasi*, Detay Yayincilik, Ankara, Berridge. G, (2007) *Events Design and Experience, Events Management Series* ". First Edition, Elsevier.
- Dorigo Sander, (2012), 'Security Information and Event Management: on the methodology, implementation challenges, security issues and privacy implications concerning SIEM environments in large retail organizations', *Master Thesis*, Radboud University of Nijmegen, [Online]. Available at: http://www.academia.edu/8019467/Radboud_University_Nijmegen_Security_Information_and_Event_Management_Master_Thesis (Accessed: 25 February 2015).
- Stephanie L. Stettler, (2011) 'Sustainable Event Management of Music Festivals: An Event Organizer Perspective', *Master of Science thesis in Education: Policy, Foundation and Administration*, Portland State University, Portland, [Online]. Available at: http://pdxscholar.library.pdx.edu/cgi/viewcontent.cgi?article=1256&context=open_access_etds (Accessed: 25 February 2015).
- Fredline, E. & Faulkner, B. (2000) 'Host Communities Reactions: A Cluster Analysis', *Annals of Tourism Research*, 27(3), 27(3), pp. 763-784, [Online]. Available at: <http://www.sciencedirect.com/science/article/pii/S0160738399001036> (Accessed: 25 February 2015).
- Barker, M. (2004) 'Crime and Sport Events Tourism: The 1999-2000 America's Cup', In B. Ritchie and D. Adair, (eds). *Sport Tourism: Interrelationships, Impacts and Issues*. Clevedon: Channel View Publications.
- Twynam, G. & Johnston, M. (2004) 'Changes in Host Community Reactions to a Special Sporting Event', *Current Issues in Tourism*, 7(3), pp. 242-261, [Online]. Available at: <https://www.researchgate.net/signup.SignUp.html> (Accessed: 25 February 2015).