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Economic, sport development and elite performance consequences of sports events

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**Economic, Sport Development and Elite Performance Consequences of
Sports Events**

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*Published works submitted in partial fulfilment of the requirements of
Sheffield Hallam University for the degree of Doctor of Philosophy
on the basis of published work.*

January 2014

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List of Published Works

1. Coleman, R., & Ramchandani, G. (2010). The hidden benefits of non-elite mass participation sports events: an economic perspective. *International Journal of Sports Marketing and Sponsorship*, 12, 24-36.
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Acknowledgements

My sincere thanks go to all co-contributors and colleagues who have helped to shape my research over the years. I would also like to express my gratitude to Professor Simon Shibli for his guidance and encouragement during my time at SIRC. On a personal front, it would not have been possible for me to undertake this journey without the support and understanding of my wife – Pearl. No one will be more pleased or proud of my achievement than my mother, to whom this PhD is dedicated.

Abstract

The hosting of major sports events is commonly assumed to generate positive outcomes and impacts for different beneficiaries, which often is the premise for public investment in them. Set against a backdrop of increased competition for elite sporting success and the desire to host events globally in recent years, the author's published research investigates some of these consequences. One aspect of the research critically analyses the consequences generated by event attendees for non-attendees in economic impact terms. It also addresses the issue of attendance measurement, which is of particular relevance to event economic impact analysis, in the context of events that are free-to-view. Furthermore, the research evaluates non-monetary consequences for event attendees from the perspective of spectators and competitors. In terms of spectators, it focuses on potential sport development effects (attitudinal changes towards sport participation) arising from event attendance. For competitors, it concentrates on elite performance issues including the home advantage phenomenon. The research was quantitatively driven and utilised a combination of primary data collection via surveys (for the economic impact and sport development aspects) and secondary data analysis (for the elite performance aspect). This paper identifies the main gaps in knowledge that are addressed by the research and teases out the contribution of the published works to contemporary academic thinking and industry practice. In doing so, it reveals the capacity of sports events to deliver monetary and non-monetary outcomes and impacts, technical issues and practical challenges associated with their assessment, and the nature of relationships between the work themes. The practical implications of the research programme for event organisers, national governing bodies and public funding agencies are discussed and general direction for future research is proposed.

Introduction

This paper synthesises a portfolio of the author's published works. These include seven peer reviewed original research articles published in four academic journals, plus three published research reports. The purpose of this paper and its structure is outlined in Figure 1 below. These points are considered in sequence thereafter.

Figure 1: Paper Overview

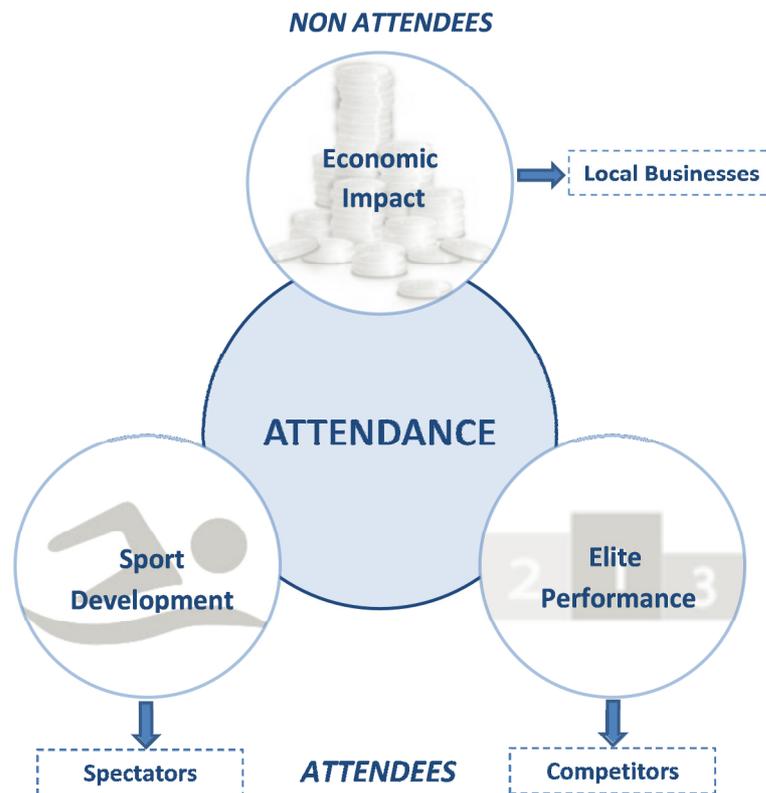


Research Aim and Agenda

The evolution and direction of the published works is shaped by the author's research interests and experience of undertaking commissioned event evaluations. The named outputs are a direct or indirect result of research commissioned by stakeholders including event organisers, funders and national governing bodies of sport. While each output addresses a specific question, the overarching purpose of the programme of research undertaken was to investigate some of the consequences that are associated with attendance at sports events. An event attendee in this context represents individuals in a range of capacities, but typically includes spectators and accredited personnel (e.g. competitors, officials, volunteers and the media).

The consequences of event attendance are examined from two angles. First, in monetary terms, those that occur because of event attendees for non-attendees. Second, in non-monetary terms, those of being part of an event on attendees themselves and which may, in part, be influenced by other attendees. Figure 2 illustrates this twin agenda and specifies the broad nature of outcomes, impacts and beneficiaries considered in the author's research. Non-attendees here denote businesses operating in the event locale (e.g. hotels, restaurants, transport providers etc.) who stand to benefit from the initial direct expenditure generated by attendees, both spectators and accredited personnel. To this end, some of the author's published works contribute to the study of the economic impact of sports events (see Coleman & Ramchandani, 2010; Coleman *et al.*, 2010; Davies, Ramchandani, & Coleman, 2010; Davies, Coleman, & Ramchandani, 2013; Ramchandani & Coleman, 2012a).

Figure 2: Consequences and beneficiaries of event attendance



The non-monetary consequences for event attendees are examined specifically for spectators and competitors. In terms of the audience, the focus is on exploring any potential sport development effects arising from their attendance at an event. This is examined primarily in terms of the nature of any attitudinal changes to participation in sport that might occur during an event (see Ramchandani & Coleman, 2012b; Ramchandani, Kokolakis, & Coleman, 2014).

From the perspective of athletes and teams, the research involves analysis of performance in elite sport including an investigation of home advantage and its contributory factors (see Ramchandani, Shibli, & Wilson, 2011a, 2011b; Ramchandani & Wilson, 2012). Even beyond their core linkage to event attendance, these non-monetary consequences for competitors and spectators are not disconnected issues. By way of example, there is a general sense of optimism amongst politicians and agencies in charge of community sport development that elite success can contribute to greater participation at grassroots level, beyond those who attend events. Indeed, one of the legacy promises of the London 2012 Olympic Games was to harness the United Kingdom's passion for sport to increase grassroots participation, particularly by young people – and to encourage the whole population to be more physically active (DCMS, 2010). The following quote by the Director of Sport at Sport England in the lead up to Wimbledon 2013 provides another example of the political will for a direct association between elite performance and community sport:

We think they [success in elite sport and grassroots participation] can be both achieved at the same time. I want the LTA to have a big summer, winning as much as they possibly can with British players. I want the knock-on effect of that to be more people on tennis courts. (BBC, 2013, para. 6)

To summarise, the research aims to contribute to a better understanding of the outcomes and impacts linked to hosting and attending major sports events in order to advance academic knowledge and inform industry practice and policy decisions. The broad objectives of the research are outlined below.

- To critically analyse the consequences caused by event attendees (spectators and accredited personnel) for non-attendees (local businesses) in economic impact terms.
- To evaluate the consequences for event attendees in terms of sport development (spectators) and elite performance (competitors).

The next section of the paper presents an overview of the relevant academic literature and highlights some gaps that are addressed by the author's research programme. The discussion that follows is not intended to reproduce the findings, rather to indicate the 'fit' of the published works with contemporary academic thinking and industry practice. The detailed findings of the research programme can be found in the publications that are cited. Their contribution to knowledge is discussed later in this paper.

Research in Context / Literature Overview

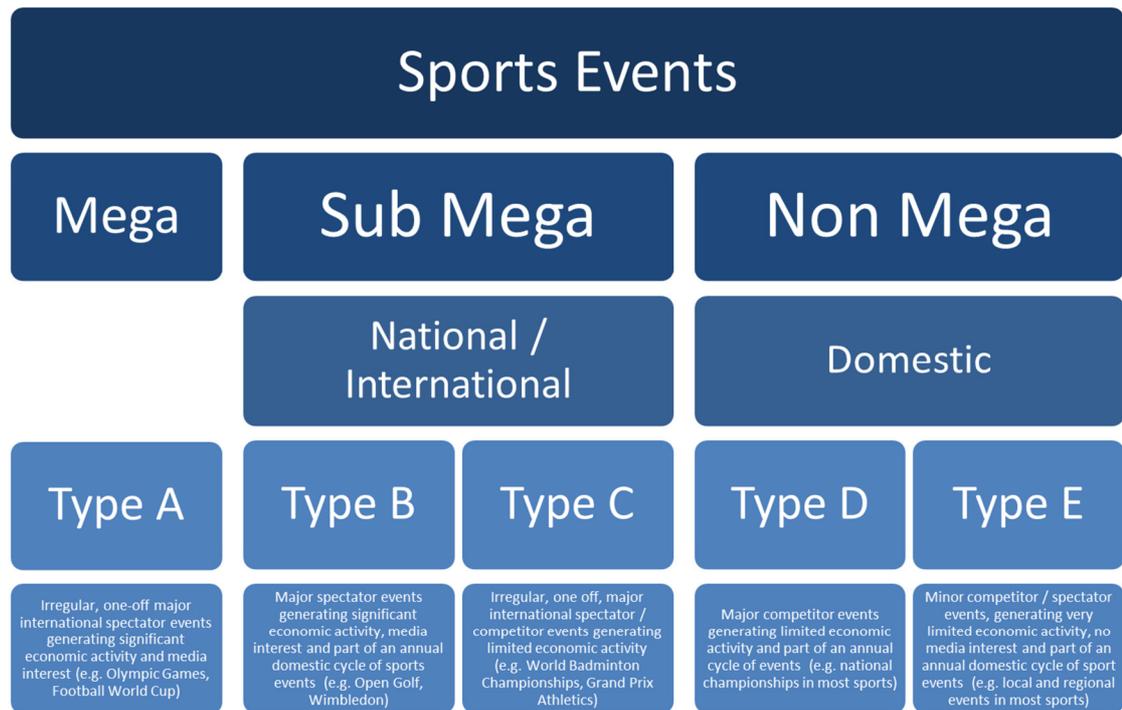
Sports events come in different shapes and sizes. While there is no universal consensus on their definition and types, some events have been categorised by academics as being 'hallmark' or 'mega' in both sport and non-sport settings due to their peculiar features. These expressions, however, are not always synonymous. Hallmark events incorporate a wide range of 'major one-time or recurring events of limited duration' (Ritchie, 1984, p. 2) but are not confined to mega events that have 'dramatic character, mass popular appeal and international significance' (Roche, 2000, p. 1) such as the Olympic Games and FIFA World Cup. In this context, a mega event can be viewed as one type of hallmark event. However, the definition of a mega event is not always clear-cut. An event of the calibre of the Tour de France, for example, might be regarded as being routine in comparison with (say) the Olympic Games, but its status could well be upgraded to mega relative to other cycling events in the world sporting calendar (e.g. the Tour of Britain).

A more diverse classification of sporting events was developed by Gratton, Dobson and Shibli (2000). Their four-tier event typology is based on the premise that not all events that are considered 'major' in world sporting terms are necessarily 'major' in terms of their ability to deliver economic benefits and generate media exposure for host communities. Wilson (2006) added to this typology by introducing 'minor' events of local or regional significance. An adapted version of the event typology is presented in Figure 3, which illustrates that it can be condensed into three broad categories: mega events (Type A); sub-mega events with both national and international appeal (Types B-C); and, non-mega events of domestic importance (Types D-E). The first two of these categories perhaps best meet the conventional criteria used to define hallmark events in international tourism literature, which differentiates such events from 'normal' attractions.

The author is cognisant that the proposed typology is not without its constraints. For instance, it concentrates on the monetary consequences for non-attendees but excludes softer, non-monetary, outcomes and impacts on attendees such as any sport development effects on audiences watching a live sporting event. It also does not consider any adverse consequences or costs associated with different event types. Neither does it distinguish explicitly between elite events and mass participation events. Depending on their scale and reach, the latter can fit under different event types. This distinction is relevant because sub-mega and non-mega events are not necessarily

restricted to the realm of elite competition. Even international marathons such as the London Marathon, which arguably qualifies as a Type B event, and other road running events typically feature a strong, non-elite, mass participation component. A characteristic of mass participation events is that they are often held in public places and are usually free-to-view. This characteristic necessitates the design and use of alternative techniques to derive estimates of attendance at such events.

Figure 3: A typology of sports events



Source: Adapted from Gratton *et al.* (2000); Wilson (2006)

Despite its limitations, and in the absence of other dominant taxonomies of sports events in academia, the typology above still provides a useful framework for the author's programme of research. In the context of this typology, the events considered in the author's research are of Types A-C, albeit some of the discussion that follows is also of relevance to the other two event categories. The next section concentrates on the monetary consequences of event attendance for non-attendees.

Monetary (non-attendee) consequences

Following the commercial success (budgetary surplus) of the 1984 Olympic Games in Los Angeles, there was renewed confidence among cities and nations to host such events. Consequently, the competition for them has intensified and there has been a proliferation of these events staged around the world. This development has captured the attention of academics and resulted in an increase in the amount of research being conducted on sports events since the latter part of the twentieth century.

One branch of the varied literature considers the capacity of events to deliver positive outcomes and impacts for different beneficiaries, which in turn has focussed mainly on monetary consequences. However, despite widespread research on this latter aspect, some important gaps still remain in the area of event economic impact assessment pertaining to: the methods that are used; specific methodological issues; forecasting; and, free-to-view / mass participation events. Six of the author's published works address these gaps, as discussed below.

Economic impact methods

Since Burns, Hatch and Mules' (1986) pioneering study of the Adelaide Grand Prix in Australia, there has been considerable growth in academic and policy-related literature evaluating the economic impact of events for host communities. Different methods have been, and are still, used to evaluate the economic impact of events. Traditional and emerging methods include input-output analysis (IOA) (e.g. Lee & Taylor, 2005), computable general equilibrium (CGE) modelling (e.g. Blake, 2005), social accounting matrix (SAM) (e.g. Saayman & Saayman, 2012) and the direct expenditure approach (DEA) (e.g. Gratton *et al.*, 2000). Different methods produce different results and event organisers and funders sometimes struggle to understand which method will best suit their needs. With this in mind, the author's research assesses the suitability of economic impact methods for evaluating different types of events (see Davies *et al.*, 2013).

Historically, IOA has been the favoured method for measuring the economic impact of major events. However, IOA has come under criticism for assuming erroneously that, in response to any external injection of expenditure because of an event, there are no resource constraints (Briassoulis, 1991; Dwyer & Forsyth, 2009; Fletcher, 1994) and that inputs are provided freely to the event and do not reduce economic activity anywhere else (Noll & Zimbalist, 1997). Dwyer, Forsyth and Spurr (2005) concluded that the widespread use of IOA should be replaced wherever possible by CGE modelling. However, this method has limitations for evaluating one-off events, and it is more suited to evaluating mega (Type A) sports events such as the Olympics, which are likely to have a longer term impact on national economies. Typical CGE models need significant adaptation to assess small and temporary demand shocks such as major event-type impacts (Abelson, 2011). Like CGE, SAM models are more complex than IOA and have more extensive data requirements, therefore they have been seen as more appropriate for the study of national economies or larger regions, rather than estimating the local effects of events (Bond, 2008).

Complex procedures, though, have both time and cost implications. In practical terms, rarely are the resources available to create complex IOA, CGE or SAM models for local economies to evaluate sub-mega (Types B-C) and non-mega (Types D-E) events. In lieu of the above, the DEA is an increasingly used method for evaluating such events. Essentially, the DEA involves measuring the first-round expenditures associated with an event, which are injected into a host economy from external sources (i.e. direct economic impact). There is evidence that some government agencies around the world are interested primarily in direct economic impact as a measure of the return on their investment. In the UK, for example, UK Sport, Visit Britain and Event Scotland, amongst others, continue to endorse the use of the DEA for evaluating events supported by them. Abelson (2011) suggests that this is also the case to some extent in Australia.

The author's work on the economic strand of the *eventIMPACTS* Toolkit provides a step-by-step guide to the derivation of an event's direct economic impact on a defined geographical area (see Coleman *et al.*, 2010). In doing so, the Toolkit attempts to establish some common ground amongst those undertaking such assessments in the UK for producing a transparent audit trail that is based on central principles and facilitates comparison across events. In reality, the normal portfolio of events that take place in a given year do not require the same degree of complexity for economic impact assessment as a one-off mega event. Whilst the principles underpinning the DEA still apply to mega events, more advanced economic modelling (e.g. CGE) is required to judge the full scale of their impact, including indirect and induced effects.

Methodological issues

The DEA provides a baseline position from which to model the effects on economic variables such as GDP and employment. However, without appropriate measures of the direct expenditures related to events, even the most detailed, theoretically appropriate model will provide misleading results (Tyrrell & Johnston, 2001). Crompton's (1995) seminal paper highlighted the common sources of error that are observed in event economic impact studies. Three such issues – failure to accurately define the impacted area, including expenditure by local residents, and failure to exclude spending by 'time switchers' and 'casuals' – remain important to contemporary studies when utilising the DEA. Using empirical data from sub-mega (Types B-C) events, research undertaken by the author reveals several other methodological issues associated with event attendees and organisers that merit further consideration in economic impact studies to ensure that the estimates calculated are reliable (see Davies *et al.*, 2013).

Forecasting

Applications for public funding are often supported by bold claims by applicants about the wider impacts of their events and how such impacts are consistent with the goals of potential funders. However, rarely are such claims tested to establish the extent to which these impacts are subsequently realised. In particular, barring some rare occasions (e.g. Matheson, 2002; Matheson & Baade, 2006), claims of large economic impacts from events have been accepted almost without query. Kasimati (2003) analysed all impact studies of the summer Olympics from 1984 to 2004 and found, in each case, that the studies were done prior to the Games, were not based on primary data, and were, in general, commissioned by proponents of the Games. She concluded that the economic impacts were likely to be inflated since the studies did not take into account supply side constraints such as investment crowding out, price increases due to resource scarcity, and the displacement of tourists who would have been to the host city had the Olympics not been held there. There is a genuine gap in the literature regarding the extent to which *ex ante* impacts (i.e. pre-event forecasts) materialise in practice and the underlying factors that contribute to any variances between *ex ante* and *ex post* estimates. This exercise is undertaken by the author using data pertaining to six sub-mega (Type C) sports events (see Ramchandani & Coleman, 2012a).

Focus on free-to-view / mass participation events

Crowds at open access, free-to-view, events are fluid. For events that take place over an extended distance, such as running, cycling and triathlon events, it is common practice for people to move around the course. Indeed, many courses are designed to maximise viewing in this way. Often event organisers overstate spectator attendance for public relations purposes and a key challenge facing researchers is how to reconcile the differences between official figures and those derived as part of an independent evaluation. The methodological issue of measuring attendance at events that are free-to-view is given attention by the author's research (see Davies *et al.*, 2010), drawing on evidence from economic impact studies undertaken at two Type B events (a marathon and a cycle road race) and one Type C (motorsport) event. Continuing with the theme of free-view events, the author reviewed academic and grey literature gathered from around the USA, UK and Europe to examine the economic impacts of mass participation events, specifically marathons and other road running events, which have a large non-elite component, as well as their cost effectiveness relative to elite events (see Coleman & Ramchandani, 2010).

In comparison with their 'hard' monetary consequences, research into the 'softer' outcomes and impacts of events, focusing on their effect on the people and the communities around which they take place, is arguably less developed. These are considered in the next section together with another type of non-monetary consequence of sports events that relates to competitors (elite performance).

Non-monetary (attendee) consequences

Hosting sports events is widely believed to be inherently good because of the enjoyment and excitement that they bring to those who attend them and those who follow them in the media. One of the more commonly cited non-monetary impacts of sports events relates to the so-called 'feel-good factor' generated on the population by hosting such events and the success of national athletes / teams in elite sport. Indicators used in academia to examine this concept include life satisfaction, happiness and national pride (e.g. Hallman, Breuer, & Kuhnreich, 2012; Kavetsos & Szysmanski, 2010). Four of the author's published works contribute to this general line of enquiry, with a focus on spectators attending an event rather than individuals within the wider host community.

Methodologically, the work undertaken by the author on the social strand of the *eventIMPACTS* Toolkit identifies different areas for consideration and discusses routes to their measurement (see Coleman *et al.*, 2010). These are by no means exhaustive but they offer a framework that allows many aspects to be covered, depending on the intended aims and objectives of event stakeholders. Included among these are the perceptions of attendees about an event (e.g. satisfaction) and about the place which is hosting an event (e.g. civic pride). Another area of investigation considers the contribution of event attendance to desirable changes in attitudes and behaviour. Included in this area is the potential for increased sport participation by the audience.

Sport development effects

Sport encompasses 'all forms of physical activity which, through casual or organised participation, aim at expressing or improving physical fitness and mental well-being, forming social relationships or obtaining results in competition at all levels' (Council of Europe, 1992, Article 2, para. 1). Sport development then is fundamentally about encouraging more (physically inactive) people to do sport as well as getting (physically active) individuals to do more sport. Recent systematic reviews have all returned mixed evidence on the impact of mega sports events on grassroots participation (Mahtani *et al.*, 2013; McCartney *et al.*, 2010; Weed *et al.*, 2009). While studies have shown that engagement in mass participation events is associated with positive changes in activity

levels of participants (e.g. Bowles, Rissel, & Bauman 2006; Crofts, Schofield, & Dickson, 2012; Lane, Murphy, & Bauman, 2008), the link between event attendance in a non-participant capacity and increased sport participation is unknown.

To this end, the author's research sheds some light on the extent to which, and mechanisms by which, attending sub-mega sports events (of Type C) as a spectator can facilitate attitudinal changes towards sport participation (see Ramchandani & Coleman, 2012b). It also considers how the likelihood of increased participation in sport varies across different population segments and relative to event characteristics (see Ramchandani *et al.*, 2014). Collectively, this aspect of the author's research illustrates the benefits and limitations of sub-mega sports events to stimulate sport development effects on spectators.

Elite performance issues

As the competition to host sports events has intensified, so too has the competition between nations for success in elite sport. This desire for success is evidenced by the increasing sums of money being invested by some nations into elite sport development programmes in order to create a better environment for the identification and development of athletic talent that is competitive in international competition. De Bosscher, Bingham, Shibli, Bottenburg and De Knop (2008) describe this phenomenon as a 'global sporting arms race'. As a consequence of public investment in elite sport, there is increased scrutiny and accountability as to the efficiency and effectiveness of how those public funds are used. It is therefore fairly common for relevant agencies, such as national governing bodies of sport, to conduct a review of their athletes' performance in elite competitions in order to ascertain their performance against predetermined medals' targets, the effectiveness of elite athlete funding programmes and as a tool for target setting and decision-making (e.g. determining future funding allocations). The work undertaken by the author on behalf of **sportscotland** and Sport Northern Ireland provides a detailed investigation of the performance of athletes funded by these two agencies in the Commonwealth Games since 1950, using alternative indicators of 'success' and benchmarking their performance against other selected comparator nations (see Ramchandani *et al.*, 2011a, 2011b).

There is a well-developed body of elite sport literature around home advantage or host nation effects. The Olympic Games have traditionally been at the heart of such investigations in relation to multi-sport competitions (e.g. Balmer, Nevill, & Williams, 2001, 2003; Nevill, Balmer, & Winter, 2009; Shibli & Bingham, 2008; Shibli, Gratton,

& Bingham, 2012). The author expands the area of investigation to another mega (Type A) event – the Commonwealth Games (see Ramchandani & Wilson, 2012). This study examines the role of traditional factors known to affect performance in elite sport including crowd effects on officiating decisions, facility familiarity and travel-related factors. At the same time, it explores the extent to which any event-specific factors associated with competition rules together with strategic choices made by host nations influence home advantage.

The next section of the paper discusses the philosophical assumptions that underpin the author's programme of research, provides an overview of the data collection and analytical techniques employed and outlines some relevant practicalities for commissioned contract research in the field of study.

Methodological Considerations

Research paradigms

The term 'research' is defined differently by different authors and a variety of factors influence the nature of people's research. To paraphrase Long (2007), included among these are researchers' own beliefs about the world and how best to conduct investigations, what they can reasonably be expected to find out, the policy context, and sometimes, who is paying for the research. Research methods textbooks typically identify two broad traditional schools of thought or paradigms that exist in the social sciences – positivism and interpretivism (e.g. Finn, Elliot-White, & Walton, 2000; Gratton & Jones, 2004; Veal, 2006). There are different philosophies that operate between these two extremes. The positivist and interpretive paradigms have very different ontological and epistemological assumptions. In this context, ontology refers to the form and nature of reality (i.e. what is real?), whereas epistemology deals with what counts as knowledge (i.e. how can we know anything?).

Returning to the research paradigms, the ontological position of positivism acknowledges the existence of a single, objective, knowable reality. Interpretivism, on the other hand, suggests that different people experience what appears to be the same thing in different ways. In epistemological terms, the positivist paradigm advocates that human behaviour is observable and measurable objectively, using methods of the natural sciences, on the basis of which laws can be developed to explain or predict future behaviour. By contrast, the interpretive paradigm places more reliance on subjectivity and focuses on understanding and interpreting human actions through less tangible concepts such as feelings and emotions.

Each research paradigm has its relative merits and criticisms, however the philosophical stance taken within the 'positivist-interpretive' spectrum ultimately has a bearing on the overall research design, including the way in which data is collected and subsequently analysed and reported. While positivism is typically associated with a quantitative approach to data collection, involving the use of numerical measurement and analysis, the qualitative approach aims to capture non-numerical concepts associated with interpretivism. Nonetheless, the data collection approaches and analytical procedures do not belong exclusively to any one research paradigm.

The author's research is oriented towards positivism, which reflects the author's philosophical stance of what constitutes acceptable knowledge, the nature of the investigation and, to some extent, the requirements of the research funders. In short, the research programme was underpinned by the following key assumptions: the phenomena of interest (i.e. economic impact, sport participation and performance in elite sport) are well-suited to scientific measurement; the process of measurement can be conducted objectively and without personal bias or prejudice; and, the findings can be treated as facts and can be generalised (i.e. laws of behaviour can be developed). Moreover, the investigation itself is delimited to measurable facts, be it in monetary terms or using other quantities, and is not concerned with understanding, or getting 'under the skin' of, the deeper meanings attached to individuals' personal accounts and subjective judgements. The focus on the quantification of outcomes and impacts is also influenced by an inherent positivist slant of the research funders in order to produce standardised indicators (e.g. additional visitor expenditure, the proportion of spectators inspired to be more active in sport, or the proportionate change in medals won by competitors) that can be used to evaluate the return on their investment and enable them to make like-for-like comparisons across different events.

Methods

A suitable description of methods employed in the programme of research undertaken, the rationale for their selection and any limitations thereof are presented in the individual published works. Consistent with the underpinning positivist paradigm and the research agenda, the overall research design was quantitative and involved some combination of primary data collection from human subjects (i.e. event attendees) and secondary, desk-based, research of datasets and literature. The balance between primary and secondary methods adopted in each individual study varied depending on the nature of the research. For example, the investigation of issues pertaining to

monetary consequences on non-attendees (economic impact) and non-monetary consequences on spectators (sport development effect) was facilitated by large scale, 'at-event', surveys conducted with attendees. By contrast, secondary data analysis of official results' databases was the preferred approach for non-monetary issues related to competitors (elite performance). As with the approach to data collection, the subsequent analysis was also quantitatively driven. The analytical techniques ranged from descriptive analysis of primary and secondary data (e.g. averages, frequencies, percentages etc.) to the use of recognised inferential statistical tests and procedures (e.g. t-test, ANOVA, correlation, regression etc.), as deemed fit for purpose by the author.

Academic and ethical challenges

Event organisers and property rights holders often speculate about the wider consequences of their events for different beneficiaries (attendees and non-attendees). Moreover, there also tend to be preconceived notions on their part about the magnitude of any potential outcomes and impacts. While some perceived benefits may indeed occur, albeit not always to the scale envisaged, such inherently biased beliefs serve two purposes. They potentially create a bidding war among cities and nations interested in hosting sports events, thus driving up events' rights fees. They also provide the case for securing financial support from the public sector towards event bidding and staging costs. On the other hand, public funders are more likely to be interested in credible, at least, estimates of the likely outcomes and impacts that their investment in events can engender, so that the use of public funds to subsidise them can be justified.

Given these somewhat polar views, it becomes a difficult balancing act for independent researchers to manage the expectations of event organisers / owners, the credibility sought by public agencies and their own academic integrity. It also raises problems when comparing the findings from similar research (e.g. economic impact assessment) commissioned by different stakeholders at different events, because the robustness of the approach and the key assumptions applied in the measurement process can be inconsistent. For research that is conducted for commercial purposes, a challenge then for researchers is to resist any pressure from clients to produce findings that they deem to be desirable, not least because such practices may eventually promote ineffective policy decisions. Where differing opinions or tensions exist between researchers and clients on certain parameters that influence the results of the investigation (e.g. crowd estimates at free-to-view events in the case of economic impact research), employing techniques such as sensitivity analysis can facilitate a satisfactory compromise.

Another challenge facing researchers when undertaking contract research is that it can sometimes be problematic for them to publish findings that are considered to be confidential or commercially sensitive. The author was able to overcome this issue by anonymising the identities of events in certain instances. Approaching research in these ways, rather than simply producing convenient results to appease client expectations, enhances its quality and credibility, which are the cornerstones of good research.

Critical Contribution

Government spending on elite sport, and particularly to underwrite the hosting of sports events, is often justified by the wider consequences that they are assumed to deliver for different beneficiaries. As a whole, the programme of research undertaken by the author contributes to a better understanding of some of these consequences, in particular those that are associated with event attendance, for both attendee and non-attendee groups. The author's research advances academic and industry knowledge in relation to the routes to their measurement, the extent to which they occur and the underlying factors that affect their occurrence. In doing so, the research is closely aligned with the call made by some event experts for more research on the theme of 'event impacts and outcomes' (see Mair & Whitford, 2013). Within this theme, 'socio-cultural and community impacts' and 'economic impacts' were found to be the two most important topics for future research. The latter topic is well represented in the author's published works whereas the study of sport development effects on audiences can be regarded as being a narrowly defined socio-cultural impact on a sub-section of the wider community in which an event takes place. The author's research also investigates an alternative consequence of sports events, related to the performance of competitors in elite sport.

Overall, the research illustrates how event attendees (e.g. spectators) can be a beneficiary of attendance while, at the same time, acting as a catalyst for consequences that occur for other attendees (e.g. competitors) as well as non-attendees (e.g. local businesses). Ultimately it is the aims and objectives of public funders that will dictate which types of outcomes and impacts to pursue from their investment in sports events. However, the author's research highlights areas of overlap and divergence, which can assist them to make informed policy decisions. It points to potential synergies within *attendee* (sport development and elite performance) consequences. Home advantage in elite sport is driven by the audience, given their influence on officials / judges to give decisions in favour of host nation competitors in the case of sports that involve subjective scoring (e.g. diving, gymnastics etc.) or decisions (e.g. team sports) (see

Ramchandani & Wilson, 2012). The performance of athletes being supported is in turn a key driver of any attitudinal change towards sport participation among spectators (see Ramchandani & Coleman, 2012b). The research also reveals potential trade-offs between *attendee* and *non-attendee* consequences. Specifically, there may well be a compromise between the economic impact of an event on local businesses and its ability to deliver a sport development effect for spectators. It is generally accepted that greater attendance by non-local spectators is desirable for maximising an event's economic impact. But there are strong indications that inspiration to participate in sport is felt more strongly by members of the host community (see Ramchandani *et al.*, 2014).

Given that the research focusses on the consequences of event attendance, the measurement of attendance is a cross-cutting issue of relevance, particularly when the findings from survey data are to be extrapolated to the event population, as tends to be the case with economic impact studies. This issue is given due attention by the author in Coleman *et al.* (2010) and Davies *et al.* (2012, 2013). These publications highlight a number of considerations in the context of events that are free-to-view, and which often take place in public areas, to inform the derivation of crowd sizes. They emphasise the importance of using an audience survey at such events to gather data about repeat and incidental viewing along the course in order to differentiate between total attendance (throughput) and event-specific attendees (different people). The consideration of these issues contributes to the development of a more robust framework for measuring spectator attendance in the future. Their consideration is equally important when forecasting consequences that rely on estimates of attendance, such as economic impact, because the likelihood of *ex ante* overestimates is higher in the case of free-to-view events than for ticketed events (see Ramchandani & Coleman, 2012a).

Another common thread that runs across some of the author's published works is that they involve, to some extent, an evaluation of elite events with a mass-participation component. Some of these events reportedly generate substantial economic impacts for host cities comparable to, and in some cases greater than, those associated with other elite-only sports events (see Coleman & Ramchandani, 2010). This finding may, in part, reflect the technical issues associated with attendance measurement at such events (see Coleman *et al.*, 2010; Davies *et al.*, 2012, 2013), but supports the notion that an event does not always need to be 'major' in world sporting terms, to be significant in economic terms (Gratton *et al.*, 2000).

Apart from being a catalyst for increased participation by those who take part in them (as evidenced by some of the literature sources cited previously), the author's research indicates that mass-participation events are also more likely to promote sport development effects among audiences. Notwithstanding this last point, the research challenges the received wisdom that simply hosting sub-mega sports events (of Type C) leads to any meaningful increase in sport participation at grassroots level by osmosis (see Ramchandani & Coleman, 2012b; Ramchandani *et al.*, 2014). This is because audiences who are drawn to these events are primarily those who are already active in sport. They also exhibit higher levels of positive attitudinal changes towards sport participation relative to sedentary audiences. At best, in policy terms, the evidence indicates that such events might be a tool for retention in sport, particularly among relatively younger audiences, who represent a priority group for agencies in charge of grassroots sport (e.g. Sport England). However, even where positive changes in participation behaviour might be observed post-event, attributing causality to a single event can prove problematic because sports events do not take place in a vacuum.

The previous discussion has focussed on the macro-level contribution to academic knowledge of the published works. There are also some notable implications for industry practice and for informing strategic decisions in the UK, as discussed below.

Practical applications

The author's publications provide event organisers with robust data about the wider value of their events, whilst simultaneously providing national governing bodies of sport and the public sector with a measure of the return on their investment. The research underpinning the author's published works has prompted a shift in the thinking of organisers and funders in the UK towards, and in their approach to, event evaluation. An example of this shift is the increasing acceptance and use of the DEA by organisers and contractors for economic impact assessment of sub-mega (Type B and C) events staged in the UK, as a theoretically sound, practical and cost-effective solution that provides a credible 'at least' estimate supported by an audit trail of evidence (see Coleman *et al.*, 2010; Davies *et al.*, 2013). This in turn ensures consistency of approach and comparability of data across events.

Following its public release as an online repository in 2010 (see Figure 4), it is common practice for evaluation contracts issued in the UK to specify that the methods and outputs must be compliant with the guidance contained in *eventIMPACTS* (see Coleman *et al.*, 2010). The *eventIMPACTS* website provides users with the choice to select basic,

intermediate or advanced level analysis, depending on their needs. In addition, it has a free, built-in, calculator which estimates the likely economic impact of an event, in direct expenditure terms, subject to users populating the calculator with key parameters about the scale of any event (e.g. group sizes, trip duration and expenditure patterns), which is a further testament to its practical relevance.

Figure 4: The *eventIMPACTS* website



Organisations seeking funding for their events from public sector agencies such as UK Sport and Event Scotland are referred to *eventIMPACTS* routinely and encouraged to use the forecasting tool to support their cases. This resource provides funders with a test of reasonableness as to what an appropriate scale of investment in an event might be. Even organisers of high-profile events such as the Ryder Cup and the Rugby League World Cup, not necessarily reliant on financial support from the public sector, are increasingly engaging with *eventIMPACTS* to develop multi-stranded evaluation studies of those events. The production of *eventIMPACTS* has also fast-tracked the development of a similar online toolkit in the cultural sector, since its principles are transferable to non-sport events. The economic strand of *eventIMPACTS* was used by

the West Midlands Cultural Observatory as the platform for its 'Economic Impact Toolkit' launched in 2011, as part of the Cultural Olympiad in the West Midlands, to help people from across the UK measure the impact of cultural events and activities (www.eitoolkit.org.uk).

Traditionally there has been some disconnect between the agendas for elite sport and community sport in the UK. To this end, the sport development aspect of the author's research (Ramchandani & Coleman, 2012b; Ramchandani *et al.*, 2014) has contributed to a closer working relationship between UK Sport (the lead body for high performance sport and major sporting events in the UK) and Sport England (the arm's length agency responsible for grassroots sport in England). An estimated £27 million of National Lottery funding is being invested by UK Sport, as part of the Gold Event Series initiated in 2013, to help support the bidding and staging of major international sporting events up to 2019. Sport England is beginning to play a more prominent role than previously in encouraging sports development opportunities linked to these events, building on any sense of inspiration felt by spectators and signposting them to sporting opportunities in their local communities.

Finally, from an elite performance perspective, the author's research has provided **sportscotland** and Sport Northern Ireland with a 3-4 year horizon to put into place plans to manage the performance of their athletes at the 2014 Commonwealth Games in Glasgow and to address weaknesses within their high performance systems (Ramchandani *et al.*, 2011a, 2011b). Apart from being hosted by Scotland, Glasgow 2014 can, to a lesser extent, also be regarded as a home Games for other UK Home Nations (England, Wales and Northern Ireland). The potential sources of elite performance benefits associated with competing on home soil in the Commonwealth Games are illustrated by the author (Ramchandani & Wilson, 2012).

The concluding section of the paper provides some considered thoughts about how to progress the author's research. The agenda for research suggested is not exhaustive but reflects what the author deems to be important aspects to examine, in order to further enhance its value to academic knowledge, policy decisions and industry practice.

Next Steps / Future Research

The author's research has examined some monetary and non-monetary consequences that are concerned with event attendance. Specifically these relate to: the economic impact of attendees (spectators and accredited personnel) on local businesses; potential

sport development effects for spectators; and, elite performance benefits for host nation competitors. For tourism authorities and indeed many other public sector agencies in the UK, economic impact continues to be an important criterion to justify their financial support for sports (and non-sport) events. For consequences such as economic impact which are normally expressed in absolute or cumulative terms, it is crucial to have reliable attendance figures. In this context, the author's research has raised some conceptual issues associated with the measurement of attendance at free-to-view events. It is important that future research builds on this work and explores other relevant considerations / tests of reasonableness, with a view to refine current practices to attendance measurement at events that take place in public places.

Amongst other things, it would be a worthwhile exercise to test the reliability of any proxies that are based on survey responses, which are used (alongside a known quantity) to inform the derivation of crowd sizes. For example, if a survey of spectators at an event found that 10% had purchased an official event programme compared with actual programme sales of 1,000, then assuming that the sample of spectators achieved was representative of all spectators in attendance, the estimated total number of spectators would be 10,000. Trialling such proxy measures at ticketed events will ensure that the attendance figures derived can be validated against actual ticket sales, so as to gauge whether they are fit for purpose for estimating crowd sizes at free events.

Unlike event economic impact research, the investigation of the sport development potential of sports events is still in its early stages and represents a relatively new research agenda. The author's research provides some useful insights into the likelihood of increased participation by event attendees, but it concentrates on adults (those aged 16 and over). A natural extension therefore would be to expand the scope of the research to incorporate children and young people, who are a target group for the likes of Sport England. Similarly, future research will benefit from moving beyond attendees (spectators) to non-attendees residing in the host community in order to look into the wider societal impacts of sports events. This complements the academic viewpoint that more research is needed to uncover the full range of social benefits of sports events and the means by which to maximise these (Shipway & Kirkup, 2012).

Moreover, while they investigate the possibility of a desirable outcome as a result of attending an event, the author's published works do not examine the longevity of any positive attitudinal change towards doing sport experienced by spectators in attendance and whether this eventually translates to post-event behavioural changes in sport

participation. The next stage of progression, from inspiration (attitudinal change) to participation (behaviour change), is being investigated by the author (see Ramchandani, Davies, Coleman, & Bingham, 2013).¹ Future research into the sport development effect of sports events at audience and / or community level would also benefit from closer alignment with recognised theoretical frameworks such as the Transtheoretical Model (Prochaska, DiClemente, & Norcross, 1992), the Exercise Adoption Model (Brooks, Lindenfeld & Chovanec, 1996) and the Psychological Continuum Model (Funk & James, 2001).

The study of elite performance and particularly home advantage in sport to date, including the author's own work, has for the most part been approached using secondary analysis of results. The evidence emerging from this method should be triangulated by undertaking primary research with athletes, coaches and national governing bodies of sport, in order to make more authoritative assertions about the causal factors that influence performance when competing on home soil. Another pertinent avenue for future research in this area would be to investigate the relationship between the performances of athletes / teams representing any given nation in international competitions (be it at home or away from home) and national level changes in sport participation, in order to better understand whether elite success affects grassroots sport.

More generally, the author's research has focussed on the potential positives or benefits of event attendance for attendees and non-attendees. There are also potential negatives or costs that should be considered (e.g. environmental degradation, population displacement, corrupt practices etc.) in order to provide a more rounded view of the consequences associated with hosting sports events. The consideration of the research themes suggested above will serve to further advance academic knowledge in the field of event evaluation. More importantly, pursuing these lines of enquiry will also facilitate more effective, evidence-based, policy decisions for public investment in sports events going forward.

¹ This conference abstract has been subsequently developed into a full research article, which has been accepted for publication in a forthcoming issue of *European Sport Management Quarterly*.

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