Factors influencing the inspirational effect of major sports events on audience sport participation behaviour

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The purpose of this paper is to elucidate the factors that determine the extent to which spectators attending one-off sports events feel inspired to increase their own participation in sport. The research considers both the socio-demographic and sport participation profile of the audience as well as the characteristics of an event as predictors of inspiration. The methodological approach involved secondary analysis of data collected from audiences across ten events held in England since 2010. The findings are based on an aggregate sample of 7,458 respondents. The statistical method used to analyse the data was multinomial logistic regression. The results show that the majority of respondents were inspired by the event that they attended, but the strength of inspiration effect varied significantly according to their age; place of residence; ethnic origin; sport participation profile; and, whether or not they had been exposed to information about opportunities to undertake sport. Moreover, events featuring team sports, non-age restricted events, and elite events incorporating a mass participation component were also found to be positively related to inspiration. Several policy implications are identified for event organisers and public funders of both elite and community sport.

Keywords: inspiration; sport participation; major events, public policy; quantitative analysis; England

Introduction

This paper examines the results of secondary analysis of data collected from spectators at ten major sports events held in England. The research builds on a recent study by Ramchandani and Coleman (2012a) to examine whether these events generated a sense of inspiration among attendees to increase their participation in sport; and, more importantly, how this inspiration changes according to the type and organisation of a sport event, the socio-demographic characteristics of attendees as well as their incumbent participation behaviour and attitude towards sport. Although it is not possible on the basis of this dataset alone to postulate that these events actually affected sport participation, one can assert that a direct pre-requisite of encouraging participation via major sports events is to generate an inspirational effect amongst audiences. This perceived connection between inspiration and participation resonates with Funk and James' (2001) Psychological Continuum Model (PCM), which provides a conceptual framework to understand an individual's psychological connection to sport. In the context of the PCM, the concept of inspiration could be likened to increasing an individual's 'attraction' or 'attachment' to sport. This paper does not attempt to test the link between event attendance and increased participation in sport (or 'allegiance' in PCM terminology) but establishes the possibility of a desirable intermediate outcome (i.e. inspiration) as a result of attending an event. A significant question relates to the attributes of a sport event that can generate such an outcome and if this can be influenced by the actions of event organisers or shaped by sport policy. Often this question is addressed in terms of mass participation events and their relationship to physical activity and long-term health (Murphy and Bauman, 2007), but not in relation to actually attending and watching an event.

Government spending on sports events is often justified if there are significant associated legacy benefits to cities, regions or nations. Legacy in this context can be considered an umbrella term that incorporates monetary as well as non-monetary outcomes.

The latter may include, for instance, an increase in sport participation at grassroots level either in general or amongst certain population segments (e.g. young people). However, as pointed out by Ramchandani and Coleman (2012a), "in order for any mass participation legacy to occur, it would be reasonable to assume that audiences would in the first instance be inspired by the event in question" (p. 258). Hence, a question of interest to academics and policy makers is what can be done by organisers to increase the inspiration element and subsequently the legacy element associated with an event.

Four of the events included in this research were hosted in preparation for the 2012 Olympic and Paralympic Games as part of the *London Prepares Series* of Olympic test events and all ten took place between 2010 and 2012 leading up to *London 2012*. These included a mass participation event; an age group event; two team events; and, six other individual events of World or European sporting significance. All but two of these events were funded by UK Sport, which supports the bidding, financing and delivery of major sports events in the UK in order to: support and profile high performance success; create high-profile opportunities for people to engage with sport; and, drive positive economic and social impacts for the UK. With reference to these criteria, it is the 'engagement with sport' and 'social impact' dimensions that are of relevance to this research. Further details about the events, including the rationale for their selection, the data collection process and the sample sizes achieved are set out in the methodology section of the paper.

Previous evidence of 'trickle down' and inspirational effects

The process by which major sports events are normally assumed to engage non-participants in physical activity and sport is a 'trickle-down' effect, whereby the achievement of top athletes inspires non-participants to get involved in sport. Hindson, Gidlow and Peebles (1994) recognise potentially dual models of the dynamics, suggesting that, on the one hand,

elite sports people can be inspirational as role models, but on the other, they may deter participation because of the perceived competence gap. Furthermore, Coalter (2007) argues that patterns of behaviour change are complex and the relationship of these processes to role models may partly depend on a range of factors including how role models are seen, how accessible or 'normal' their profile is and also on individual or community self-efficacy. These views are also reflected in evidence emerging from recent systematic reviews conducted by Weed *et al.* (2009) and McCartney *et al.* (2010), both of which returned mixed evidence of the sport development or participation legacy of elite sport events. For example, McCartney et al. (2010) found that there was an upward trend in sports participation from the early 1980s until 1994 in association with the 1992 Olympic Games in Barcelona, Spain; however, commenting on the findings from another study the authors indicated that overall sports participation in the Manchester area of the UK decreased by two per cent after the 2002 Commonwealth Games. An inherent weakness of previous research on the subject is that, even where there have been measurable changes in participation levels following an event, it has not been possible to attribute a direct cause and effect relationship. Moreover, the longevity of any legacy of increased participation also needs to be established. Despite the distinct lack of hard evidence in support of sport and physical activity legacies associated with major sports events, their use as a policy tool to foster participation has been documented in a number of countries for more than a decade (see Hogan and Norton, 2000).

Another strand of emerging literature has examined the impact of participation in sports events on physical activity commitment and behaviour. For example, by examining before and after responses in a cycling mass participation event, Bowles, Rissel and Bauman (2006) concluded that novice riders significantly increased their participation one month after the event. The reach and effectiveness of mass participation events is evidenced further by an evaluation of a women's mini-marathon in Dublin undertaken by Lane, Murphy and Bauman

(2008). Their analysis showed that the mini marathon engaged far more than just the already converted active women within the Irish population and that training for the event was an important stimulus to action for most participants, which is highly positive from a public health perspective. Another more recent study by Crofts, Schofield and Dickson (2012) examined the physical activity patterns of participants in a women-only triathlon mass participation event. Samples were taken before and three months after the race; the key finding revealed that 50% of women who were considered 'insufficiently' active before the event remained 'sufficiently' active three months after the race.

There is, however, a paucity of academic literature that examines the link between attending an event in a non-participant capacity and sport participation in terms of gained inspiration. Contemporary research undertaken with spectators at three major sports events in the UK in 2010 revealed that around two-thirds of respondents had been inspired by their event experience to increase their participation in sport or physical activity, primarily as a result of the quality of the competition and the skill and ability of the athletes / teams (Ramchandani and Coleman, 2012a). The data pertaining to these three events is incorporated within the amalgamated and more advanced ten-event analysis presented in this paper. The above study also highlighted that "…the audience drawn to these events was primarily active in sport and that the inspiration effect was significantly higher amongst more physically active spectators" (Ramchandani and Coleman, 2012a, p. 268). The main implication of these findings is that engaging with these events was more likely to result in an increase in the participation frequency of those respondents who were already active in sport, as opposed to an increase in the number of participants.

In the current study, the authors combine the evidence collated from different events to shed light on the factors that determine the extent to which major sports events can inspire audiences to be more active themselves. Specifically, the investigation considers the socio-

demographic and sport participation profile of the audience as well as the characteristics of an event as predictors of inspiration.

Methodology

Event selection and characteristics

Pertinent information about the events included in the research is presented in Table 1. The selection of these events was made by UK Sport in order to evaluate the prevalence of the wider benefits of its investment in elite sport, which have historically been evaluated in economic terms. In particular, the central objective which led to the initial primary data collection at all ten events was to explore whether and how attending one of these events had altered the perception of spectators towards sport. To this end, respondents were asked to indicate their level of agreement ('strongly agree' - 'agree' - 'disagree' - 'strongly disagree') with the following statement: 'as a result of attending this event, I am inspired to do sport more frequently than I normally do'. The inspiration could be in relation to participation in the particular sport featured at the event at which they were surveyed or in relation to other sports. Additional questions posed to spectators related to their demographic information and their existing predisposition to sport. Those who reported being inspired were also questioned about the attitudinal changes brought about by the event and the interventions that could facilitate participation, albeit these are not the focus of this paper.

Eight out of the ten events, excluding athletics and BMX, were awarded UK Sport funding via its World Class Events Programme (WCEP). While there is a high significance attached to these events in their respective sport calendars, they are fairly routine (albeit still 'major') competitions in world sporting terms in comparison with so-called 'mega' events like the Olympic Games or the Football World Cup that are discontinuous. Some specific features about the events that are of relevance to the research are outlined below.

- The hockey and rugby events were the only team competitions in the events' sample.
- The triathlon involved elite athletes as well as a programme of races for non-elite participants.
- The rowing was a junior competition involving elite rowers up to the age of 18 years.
- Four events – badminton, BMX, rowing and track cycling – were Olympic test events.

<TABLE 1 HERE>

Data collection and sample sizes

The research was undertaken using a standard self-completion questionnaire at each event with spectators aged 16 and over. In order to achieve as representative a sample as reasonably possible within the window of opportunity available to survey at each event and the resources available for the research, the data collection was undertaken on all or most event days and at various times throughout the day. However, care was taken not to survey spectators too early in the day to ensure that they had watched at least some part of an event, informing their judgement about their experience. Overall, 7,458 responses were achieved across the ten events. As shown in Table 1, the size of the sample at event-specific level varied between 465 at the figure skating to 869 at the track cycling, and was influenced by the number of spectators attending each event. More importantly, the size of the aggregate sample achieved provides a sound basis for investigating in more detail the key factors affecting inspiration.

Key variables and sample profile

The main variable of interest is 'inspiration'. The survey tool asked respondents about the extent to which they had been inspired to participate in sport more frequently than they did

normally as a result of their event experience. For the purpose of this investigation, responses were coded on a three-point scale – 'not inspired' (those who either disagreed or strongly disagreed with the inspiration question), 'inspired' (agree) or 'strongly inspired' (strongly agree). All other variables were constructed as dummy variables. These are summarised in Table 2. The final column of the table shows the 'base' category to indicate the baseline comparison group for each variable, which facilitated the subsequent regression analysis (discussed below). It was possible to construct and populate additional variables in the dataset relating to the events rather than the respondents – these include: *sport type* (individual (n=5917) or team (n=1531)); *age group event* (yes (n=742) or no (n=6706)); *Olympic test event* (yes (n=3137) or no (n=4311)); and, *mass participation event* (yes (n=781) or no (n=6667)).

<TABLE 2 HERE>

Across the ten-event sample, there was a fairly even split between male (48.0%) and female respondents (52.0%). The age breakdown of respondents was as follows: 23.1% were aged between 16 and 24; 22.8% between 25 and 34, 19.9% between 35 and 44; 19.7% between 45 and 54; 10.2% between 55 and 64; and, 4.3% were 65 years or above. The vast majority of respondents did not consider themselves to have a disability that limited their daily activities (93.6%). Around one-third of the sample (33.1%) was 'local' to the city / area in which an event was held, 56.8% resided elsewhere in the UK, and the rest were from overseas (10.1%). The findings of the research have a potential bearing on public policy in the UK, given the extremely high incidence of domestic attendees. The ethnic profile of respondents was mainly UK white (82.3%) whereas 17.7% either belonged to a black or minority ethnic (BME) group in the UK or were resident overseas.

The sport participation profile of respondents illustrates that respondents were highly sensitised to sport – 89.2% considered doing sport to be important to them; 90.1% were active sport participants (defined for the purpose of this research as having undertaken any sport at moderate intensity for at least 30 minutes on one or more days in the four weeks prior to being interviewed); and, more than half (52.3%) took part in the specific sport that was featured at the event they had attended. Other relevant respondent data captured by the survey include the following: 50.9% of respondents were supporting an athlete or team at an event and around one in ten (9.7%) reported having received information at an event about opportunities for taking part in sport.

Analytical technique

The main statistical method used to analyse the data was multinomial logistic regression. This was constructed in order to take advantage of the survey detail on inspiration (not inspired, inspired or strongly inspired). In the regression model (presented later) three effects are analysed: first, the effect of being 'inspired' against 'not inspired' (Model I); second, the effect of being 'strongly inspired' against 'not inspired' (Model II); and, third; the effect of being 'strongly inspired' against 'inspired' (Model III). In other words, in the multinomial context, the base of the first two models is 'not inspired' and the base in the third model is 'inspired'. The underlying equations are as follows:

$$\ln\left(\frac{p(inspired)}{p(not\_inspired)}\right) = \beta X + \varepsilon \qquad (1)$$

$$\ln\left(\frac{p(strongly\_inspired)}{p(not\_inspired))}\right) = \gamma X + \varepsilon \qquad (2)$$

where p is the probability of inspiration (or not) while β, γ and X are vectors with 19 elements (including the independent variables and the constant, as shown in Table 4). The ratio of success over failure to inspire, as shown on the left hand side of (1) is the odds ratio to inspire:

$$\text{Odds ratio} = p/(1-p) = e^{\beta X} \qquad (3)$$

An equivalent relationship can be stated for strong inspiration. The third model is derivative of the two models above; its odds ratios are the ratios of the second model's odds ratios divided by those of the first model.

Considering the first of the three models (Model I), the dependent variable is 'inspiration', a binary variable taking the value '1' if the respondent is inspired by the event and '0' if not inspired. The independent variables are a combination of the other respondent-related and event-related variables (also expressed in binary terms). Using multiple independent variables in the regression analysis allows us to take into account the inter-relationships between these variables in examining their effect on inspiration, which is not possible at the simple descriptive level. The base category is defined when the values of all explanatory (i.e. independent) variables equal '0', corresponding to the profile for the variables shown in the final column of Table 2 (e.g. female, 16-24 years and so on). In the case of the 'age' variable, the detail of the distribution into six categories (including the base of 16-24 years) allowed the inclusion of individual binary variables rather than an inflexible squared age term, in order to capture the maximum possible detail from the age variation.

Any comparisons of variables relative to their respective base category are based upon the coefficient values (B) or their odds ratios (Exp (B)). A positive relationship is indicated by odds greater than '1' (or a positive coefficient) and a negative relationship by odds smaller

than '1' (or a negative coefficient). The coefficients of the model, other than their positive or negative sign, are not easy to interpret, as they relate to a logarithm of odds. Instead we use the values of the odds ratios. For example, in the first model the odds ratio of the 25-34 age category (base 16-24) is 0.789, implying that as we switch from the 16-24 to the 25-34 age group, the odds of being inspired (against no inspiration) decline by 21%. Finally, to avoid the problem of multicollinearity, all independent variables included in the model had an absolute correlation of less than 0.7, which is below the suggested cut-off criteria of 0.9 (Tabachnick & Fidell, 2007) and consistent with contemporary research linked to sport participation (Kokolakakis *et al.* 2012). Further evidence against multicollinearity is provided by variance inflation factors (VIF) and tolerance statistics in the results of the regression analysis below.

Results and discussion

Descriptive analysis

Overall, 57.3% of all survey respondents were either 'inspired' or 'strongly inspired' to participate in sport more frequently than they did normally as a result of their event experience. This headline statistic is made up of those who felt inspired to participate more frequently in the sport featured at the event that they attended, in other sports and / or in general physical activity. The inspiration effect was highest at the triathlon (76.0%), a mass participation event, followed by the women's rugby (65.2%) and hockey (61.6%), both of which were team competitions. The figure skating and BMX events, arguably featuring rather niche sports, appear at the lower end of the inspiration spectrum, with less than half of the respondents at these events (43.5% and 45.2% respectively) reporting being inspired by them.

A breakdown of the inspiration rates by respondent and event-related variables is illustrated in Table 3. In terms of respondent demographics, at descriptive level it can be seen that inspiration is negatively correlated with age and higher amongst spectators without a limiting disability. Moreover, there are also some subtle variations in inspiration according to gender, place of residence and ethnicity. A worthwhile finding relates to the fact that respondents who were more active, together with those who tend to take part in the specific sport (featured at the event they had attended) and those who attach importance to doing sport, reported considerably higher inspiration than their respective comparator groups. Similarly, those who supported an athlete or team, and recipients of information about opportunities to take part in sport, at the event which they attended, exhibit higher than 'normal' levels of inspiration.

<TABLE 3 HERE>

At face value, the statistics indicate that inspiration is of a greater magnitude at open (non-age group) events; events featuring team sports; non Olympic test events; and, events incorporating a mass participation component. There also appears to be a link between the higher inspiration associated with 'team' events (63.4%) and amongst those 'supporting an athlete/team' at an event (65.7%), given that the latter group account for the majority (84.0%) of the audience at the two team events in the sample. By contrast, the proportion of supporters at 'individual' events is only 41.5%. The statistical strength of the descriptive data is now tested in the following section.

Regression results and interpretation

Table 4 summarises the output of the multinomial logistic regression analysis, which includes the variables used, the estimated coefficients (B), the standard error (S.E), the level of significance (p), the odds ratios (Exp(B)), as well as statistics on significance and multicollinearity.

<TABLE 4 HERE>

The variance inflation factors (VIF) and tolerance indicators show no indication of multicollinearity. The tolerance values are all above 0.48, well above the minimum threshold of 0.1 suggested by Menard (1995). Similarly, all VIF values are less than 2.1, well below the suggested 'ceiling' of 10 suggested by Myers (1990). The Likelihood Ratio test results reported in Table 4 show that the variables 'gender', 'disability', 'sport type' and 'Olympic test event' are insignificant ($0.58 < p < 0.85$). These results are also supported by the significance levels associated with the same variables within each model. At the 5% level the variables 'ethnicity' and 'general sports participation' also become insignificant; these, however, may have a significant effect at a specific grade of inspiration, as discussed below. Testing for the overall significance of the model (against a constant) the null hypothesis is rejected ($p < 0.001$). Finally, the model passes the Deviance goodness of fit test ($p = 0.40$), suggesting that the predicted values of the model are not significantly different than the observed ones.

As a general rule, negative coefficients always correspond to odds ratios less than one, while positive coefficients correspond to odds ratios greater than one. As discussed previously, it is preferable to use odds ratios, rather than coefficient values, because they have a precise interpretation. In Model I, as we switch from the 16-24 years age group to 25-34 years, the odds of inspiration decline by 21% (Exp(B) = 0.789); but, in Model II, there are

no significant variations between these age groups that can explain strong inspiration. However, this is not the case for the other age groups. In the case of 35-44 years old, the odds of being inspired compared with the base (16-24 years) decline by 32% (Model I). The odds of being strongly inspired also decline by 42% (Model II). All other age groups show a decline of both inspiration and strong inspiration compared with the base 16-24 age group. The progressive decline in the odds ratios as age increases indicates that the odds of inspiration decline with age. This is true for both those that are inspired and strongly inspired up to the 55-64 age group. In the case of the oldest (65+) group under consideration, the odds ratio of being inspired increases compared with the previous age group (55-64 years). Hence, most likely the point of retirement reverses a previous declining relationship. Overall, though, the results indicate that attracting a young audience is a positive factor influencing inspiration.

The odds of being 'strongly inspired' rather than 'not inspired' for respondents living locally (in the host city/area of an event) were almost 25% higher than those living elsewhere in the UK or overseas ($p = 0.02$). While local residency is important for achieving strong inspiration (Model II), it is less important in the 'inspired' scale (Model I, $p = 0.06$). Similarly, ethnicity emerges as a significant factor influencing strong inspiration only (Model II, $p = 0.20$). The findings suggest that the presence of the mainstream population (UK white) in the audience decreases the odds of strong inspiration (compared to none at all) by 23%.

Respondents who took part in sport generally were found to be associated with a 34% rise in the odds of being inspired (Model I, $p = 0.02$), although they had no significant effect on the higher 'strongly inspired' scale (Model II, $p = 0.51$). The self-evaluation of the importance of sport emerges as the most important factor associated with inspiration, based on the odds ratios. People who reported an appreciation for doing sport at the time of the survey were more likely to be 'inspired' (Model I) and 'strongly 'inspired' (Model II). As we

switch from the base ('not important') to a value of 'important', the odds of being 'inspired' increase by a factor of 2.22 (Model I, $p < 0.001$) and indeed further by a factor of 3.39 for those who are 'strongly inspired' (Model III, $p < 0.001$). Similar patterns emerge, albeit to a lesser magnitude, for respondents who took part in the sport featured at the event they attended, those who were 'supporting an athlete or team' and those who 'received information about doing sport' at an event compared with their respective base categories, as indicated by positive coefficients and odds ratios greater than one for these variables ($p < 0.001$). It is worth reiterating here that, in proportionate terms, the two 'team' events had twice as many attendees in a supporting role than the other events in the sample (84% v 41.5%). Thus, while the variable 'sport type' is not a significant factor affecting inspiration in its own right, it could be that team events tend to exhibit higher levels of inspiration (due to spectators being more supportive of teams) in comparison with events featuring individual sports such as athletics and cycling.

The 'age group event' variable has a negative coefficient for being 'inspired' rather than 'not inspired'. Hence, as we switch from a non-age restricted (open) event to a restricted (junior) one, the odds of being 'inspired' reduce by 22% (Model I, $p = 0.03$). The variable 'mass participation event' has a positive coefficient for being 'inspired' (Model I) and 'strongly inspired' (Model II) rather than 'not inspired'. This implies that the introduction of events that offer the audience the opportunity to participate increases the odds of being 'inspired' and 'strongly inspired' by factors of 1.93 and 3.95 respectively ($p < 0.001$).

Finally, considering Model III (base being 'inspired'), it is evident that the only significant factors ($p < 0.05$) that can account for a switch from being 'inspired' to being 'strongly inspired' include: self-evaluation of the importance of sport, participant in featured sport, supporting a competing athlete or team, and receiving information about taking part in sport.

Research limitations and policy implications

Previous research has suggested that major events have the power to inspire audiences to be more active in sport themselves (e.g. Ramchandani and Coleman, 2012a). The added value of this study to academia is that it identifies how the notion of inspiration varies across different population segments and across different types of events. In retrospect, the authors acknowledge that the research would have been more robust with a post-event survey of spectators, as this approach may have yielded more informed responses by spectators with respect to their feeling of inspiration. Employing a post-event survey would also facilitate spectators to be questioned about changes in actual participation rather than just inspiration as a result of their event experience. However, in the absence of contact details for spectators available from event organisers, and given the requirements of the event funders, surveying at the event was the preferred option. Another limitation of the research relates to the selection of variables included in the model, which was dependent on two factors: the respondent-related variables were restricted to the specific questions included on the spectator survey at each event; and, the event-related variables were restricted to events included in the research programme. The vast majority of respondents were already active to some extent in sport. If this is correct, then it raises an important question about the suitability of using events as a vehicle to promote wider participation in sport amongst those who are completely sedentary. Consequently, event organisers may need to consider how to attract inactive individuals to extend the overall reach of their work. Alternatively, it could also be that more active participants are more likely to engage with this type of research at events and thus active participants were over-represented in the aggregate spectator sample.

Despite these limitations, there are some distinct policy implications of the research. First, while spectators who have a predisposition to sport are statistically more inspired than those who do not, more than one in three inactive spectators reported a positive inspiration

effect. The latter finding indicates that hosting major events can, to some extent, be used to create a psychological shift in behaviour amongst those who were otherwise not inclined to undertake sport. Whether or not such a change in psychology is subsequently translated into actual behaviour change is debatable. Second, the finding that young people aged under 25 are more inspired than older age groups is noteworthy for community sport development agencies such as Sport England for whom retention of young people in sport is particularly important. This finding is consistent with the research by Kokolakakis *et al.* (2012), showing that young age is a major (positive) determinant of sport participation. This suggests a linkage between inspiration and (potential) participation amongst younger age groups, although further investigation is required.

Third, by virtue of attracting a large proportion of spectators who have an association with athletes/teams, events featuring team sports have a tendency to have a higher inspirational effect than individual sport events. This broadly corroborates the work of Downward and Rasciute (2011), who argued that subjective well-being associated with engagement in sport in a group and team context is much greater than as an individual. On the other hand, despite being the only event with a mass-participation element in the ten-event sample, the inspiration effect reported at triathlon is significantly higher than other events examined. The opposite is true for the rowing, which was an age-group competition. Consequently, if generating a sense of inspiration is important to event organisers or public agencies supporting major events, then team events, events involving both elite and non-elite participants and non-age restricted (open) events seem to provide the best returns. Although this paper concentrates on spectators, with respect to mass participation events, these typically attract large numbers of participants who are often less active and are driven by fun, social and non-fitness related motives of participation (see Lane *et al.*, 2008). Even in the most famous marathons, elite athletes only account for a small minority of the runners, with

the vast majority being 'fun runners' for whom the sporting outcome is of little significance. Amongst other things, these fun runners are happy to enjoy the camaraderie whilst raising money for charity (Coleman and Ramchandani, 2010). Importantly, Lane *et al.* (2008) highlight the potential to link physical activity participation to non-health or fitness-related outcomes which contribute to the greater good.

Fourth, exposure to information at events about opportunities to undertake sport was found to be a statistically significant factor affecting inspiration; however, less than one in ten respondents across the ten events reported having received such information. This backs up the inference of the Ramchandani and Coleman (2012a) study and it would seem that major sports events provide an ideal platform for 'sign posting' those who are inspired by them to activities that they can avail of locally (e.g. local clubs). Fifth, historically the 'legacy' of the investment of public money in major sports events has been evaluated, for the most part, in terms of the economic impact that it generates for the host destination. This point is particularly true in the UK context (see Ramchandani and Coleman, 2012b; Davies, Coleman and Ramchandani, 2013). Greater attendance by non-local attendees is desirable for maximising the economic impact of an event. However, this research demonstrates that spectators who reside in close proximity to the event venue are statistically more likely to be strongly inspired (rather than not inspired). In other words, there is a trade-off between the economic impact of an event and its inspirational effect. Therefore, if the rationale for public investment in elite sport is to generate economic impact then agencies such as UK Sport should target events that will appeal more to non-local residents. Conversely, if the objective is to maximise the inspirational effect amongst audiences, then public investment is best directed at events that promote attendance by members of the local community.

The authors recognise that the timescale of the events included in the research and the ensuing analysis limited any direct impact on the delivery of events related to *London 2012* in

order to facilitate increases in sport participation. However, the findings of this investigation have subsequently been communicated to UK Sport, who commissioned the programme of data collection at the ten events, so that the lessons learned can be cascaded down to, and shape the actions of, organisers of future sports events.

Concluding comments

In summary, this paper offers some 'food for thought' for event organisers and public funders of both elite sport (e.g. UK Sport) and community sport (e.g. Sport England) for promoting sport development through the medium of major sports events. Future research efforts should incorporate a longitudinal design to focus on the extent to which those who report being inspired by their event experience subsequently proceed to increase the frequency with which they undertake sport. Moreover, for those who demonstrate a sustained increase in frequency of participation post event, what is the relative influence of attending a particular event on the change in participation behaviour? Answers to such questions will provide a true assessment of the 'trickle-down' effect of major sports events at grassroots level.

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Table 1: The ten events

Event	Competition Days	WCEP Funded	Classification				Sample
			Sport	Age Restricted	Olympic Test	Mass Participation	
Women's Hockey	9	Yes	Team	No	No	No	781
Triathlon	2	Yes	Individual	No	No	Yes	781
Women's Rugby	5	Yes	Team	No	No	No	750
Junior Rowing	4	Yes	Individual	Yes	Yes	No	752
Athletics	2	No	Individual	No	No	No	793
Badminton	7	Yes	Individual	No	Yes	No	768
BMX	2	No	Individual	No	Yes	No	778
Trampoline & Tumbling	4	Yes	Individual	No	No	No	741
Figure Skating	7	Yes	Individual	No	No	No	465
Track Cycling	4	Yes	Individual	No	Yes	No	849

Table 2: Summary of key variables

Variable Type	Categories	Sample (%)	Base
Respondent demographics			
Gender	Male	48.0	Female
	Female	52.0	
Age group	16-24	23.1	16-24
	25-34	22.8	
	35-44	19.9	
	45-54	19.7	
	55-64	10.2	
	65+	4.3	
Disability	Disabled	6.4	Non-disabled
	Non-disabled	93.6	
Residence	Host city / area	33.1	Other UK / overseas
	Other UK / overseas	66.9	
Ethnicity	UK White	82.3	BME / overseas
	BME / overseas	17.7	
Respondent sport profile			
General sport participation	Active	90.1	Inactive
	Inactive	9.9	
Importance of sport	Important	89.2	Not important
	Not important	10.8	
Sport-specific participation	Participant	52.3	Non-participant
	Non-participant	47.7	
Other respondent information			
Supporting athlete / team	Yes	50.9	No
	No	49.1	
Received information about doing sport	Yes	9.7	No
	No	90.3	
Event profile			
Age group event	Yes	10.1	No
	No	89.9	
Sport type	Individual	79.5	Individual
	Team	20.5	
Olympic test event	Yes	42.2	No
	No	57.8	
Mass participation event	Yes	10.5	No
	No	89.5	

Table 3: Inspiration rates by respondent and event-related variables

Variable Type	Categories	Inspired (%)	Strongly Inspired (%)	Any Inspiration (%)
Respondent demographics				
Gender	Male	42.4	15.2	57.6
	Female	43.3	13.5	56.8
Age group	16-24	50.5	18.8	69.3
	25-34	45.9	17.6	63.6
	35-44	42.5	12.9	55.5
	45-54	39.3	10.9	46.8
	55-64	33.7	7.3	41.0
	65+	31.0	11.0	42.0
Disability	Disabled	39.7	11.1	50.7
	Non-disabled	43.7	14.8	58.4
Residence	Host city / area	43.1	15.6	58.7
	Other UK / overseas	42.8	13.8	56.6
Ethnicity	UK White	42.7	13.8	56.5
	BME / overseas	43.9	17.1	61.0
Respondent sport profile				
General sport participation	Active	44.3	15.3	59.6
	Inactive	29.8	6.7	36.5
Importance of sport	Important	45.4	16.1	61.6
	Not important	28.4	2.8	31.2
Sport-specific participation	Participant	47.0	19.0	66.0
	Non-participant	38.3	9.5	47.9
Other respondent information				
Supporting athlete / team	Yes	46.7	19.0	65.7
	No	40.5	10.4	50.9
Received information about doing sport	Yes	45.7	29.2	74.9
	No	42.6	13.0	55.6
Event profile				
Age group event	Yes	40.4	13.1	53.5
	No	43.1	14.6	57.7
Sport type	Individual	41.5	14.1	55.7
	Team	47.7	15.6	63.4
Olympic test event	Yes	41.2	12.5	53.6
	No	44.0	15.8	59.9
Mass participation event	Yes	46.7	29.3	76.1
	No	42.4	12.7	55.0

Table 4: Results of multinomial logistic regression analysis

Variable	**MODEL I Inspired v not inspired**				**MODEL II Strongly inspired v not inspired**				**MODEL III Strongly inspired v inspired**				***LR test Sig.***	***Tolerance***	***VIF***
	B	*S.E.*	*p*	*Exp(B)*	*B*	*S.E.*	*p*	*Exp(B)*	*B*	*S.E.*	*p*	*Exp(B)*			
Male (*base: female*)	-.063	.061	.300	.939	-.036	.089	.684	.965	.027	.085	.749	1.027	.585	.946	1.057
Age 25-34 (*base 16-24*)	-.237	.091	.009	.789	-.229	.123	.063	.796	.008	.113	.944	1.008	.026	.615	1.626
Age 35-44 (*base 16-24*)	-.379	.093	.000	.685	-.543	.133	.000	.581	-.164	.125	.190	.849	.000	.636	1.572
Age 45-54 (*base 16-24*)	-.457	.093	.000	.633	-.590	.137	.000	.554	-.134	.131	.309	.875	.000	.641	1.560
Age 55-64 (*base 16-24*)	-.706	.117	.000	.494	-.918	.190	.000	.399	-.212	.189	.261	.809	.000	.721	1.387
Age 65+ (*base 16-24*)	-.668	.174	.000	.513	-.591	.263	.025	.554	.077	.265	.772	1.080	.000	.857	1.166
Disabled (*base: non-disabled*)	.050	.126	.691	1.052	-.062	.200	.756	.940	-.112	.195	.564	.894	.821	.967	1.035
Living locally (*base: Other UK / overseas*)	.122	.066	.064	1.130	.221	.095	.020	1.247	.099	.091	.275	1.104	.042	.919	1.089
Ethnicity: UK white (*base: BME / overseas*)	-.069	.082	.396	.933	-.260	.113	.021	.771	-.190	.106	.074	.827	.072	.922	1.084
General Sport Participation: active (*base: inactive*)	.291	.120	.015	1.338	.139	.211	.511	1.149	-.152	.214	.477	.859	.051	.782	1.279
Doing sport is important (*base: not important*)	.795	.109	.000	2.216	2.017	.282	.000	7.513	1.221	.286	.000	3.391	.000	.775	1.291
Participant in featured sport (*base: non-participant*)	.378	.066	.000	1.460	.743	.097	.000	2.102	.365	.094	.000	1.440	.000	.802	1.247
Support athlete / team (*base: no*)	.332	.068	.000	1.394	.737	.097	.000	2.089	.405	.093	.000	1.499	.000	.771	1.297
Received information about doing sport (*base: no*)	.466	.118	.000	1.593	1.122	.138	.000	3.073	.657	.119	.000	1.929	.000	.964	1.037
Age group event (*base: no*)	-.250	.111	.025	.779	-.413	.166	.013	.662	-.163	.161	.313	.850	.016	.745	1.342
Sport type: Team (*base: individual*)	.083	.096	.384	1.087	-.019	.143	.896	.982	-.102	.137	.456	.903	.599	.532	1.879
Olympic test event (*base: no*)	-.042	.084	.619	.959	-.056	.133	.674	.946	-.014	.130	.915	.986	.854	.482	2.076
Mass participation event (*base: no*)	.657	.124	.000	1.929	1.375	.159	.000	3.954	.718	.142	.749	1.027	.000	.685	1.460
Intercept	-.970	.167	.000		-3.578	.341	.000		-2.608	.342	.000		.000		

Note: Likelihood ratio test: $p < 0.001$; Goodness of Fit (Deviance): $p = 0.399$