
ARTICLE

The Sports Development Potential of Sports Event Volunteering: Insights from the XVII Manchester Commonwealth Games

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ABSTRACT The sports development implications of investment in major sports events are not well researched, in contrast to an examination of the economic impacts of events. A sample of volunteers at the XVII Manchester Commonwealth is explored to identify how experience of volunteering at a major sports event affects interest, participation and subsequent volunteering in sport, and also volunteering in non-sport contexts. Factor analysis is employed to summarize volunteer experiences, and then regression analysis, which controls for differences in the sports and socio-economic characteristics. While there is some evidence that volunteering at a major event can raise interest, participation and volunteering in sport generally, capitalizing upon this will require focusing efforts on particular triggers for change. There appears to be much stronger potential opportunity to generate wider social capital than necessarily produce changes associated with sport.

Public investment in sports facilities and events is a widely debated topic in sports management and economics. Debate concerns the use of sports investment as an economic policy intervention that yields potential benefits to a community following the use of public funds to construct stadia and facilities and/or to host sports events. Consequently, the literature focuses on the purported direct and indirect economic benefits and costs. Less is written about the intangible economic impacts, and even less on the ‘human legacy’. This paper attempts to contribute to filling this gap in the literature by exploring the sports development impacts upon the interest in sport, sports

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participation and sports volunteering, as well impacts upon more general volunteering that follow from the experience of volunteering at a major sporting event, the XVII Manchester Commonwealth Games. This implies viewing the investment in a major event as a sports development and social policy tool as much as an economic intervention *per se*.

The next section of the paper briefly reviews some of the main themes in the literature examining the tangible and intangible economic impacts of investment in sport. A brief review of the literature on sports volunteering is then undertaken, to highlight the differential nature of sports-events volunteers and the potential links between event and more regular sports volunteering and participation as a form of sports 'career' progression. The data employed in the research are then presented. Subsequently, both descriptive and inferential statistical analyses are presented to explore how experiences of volunteering at a major event affects sports development and non-sport volunteering. Conclusions and policy discussion then follow.

The Economic Impact of Sports Investment

Most of the literature evaluating investment in sports has focused upon the economic case for justifying public subsidy of sports infrastructure and events rather than the impact upon human resources. In particular, there is a burgeoning literature that addresses stadium redevelopment in US professional team sports (Baade, 2003). The valuation of the beneficial impacts has been repeatedly stated in a variety of *ex-ante* multiplier studies, typically undertaken by consultancy firms for pro-stadium lobbyists. However, the academic literature assessing these claims *ex post* has cast doubt upon the reliability of the calculations in the literature and also the economic case for the public subsidy of sport investment (Baade, 1996; Baade & Dye, 1990; Baade & Matheson, 2004; Coates & Humphreys, 1999; Crompton, 1995; Hudson, 2001; Siegfried & Zimbalist, 2000). Although the literature is less developed in the UK, and does not address professional team sports, in a review of 16 sports events Gratton *et al.* (2005) argue that, despite there being obvious economic benefits to the host communities, the key issue concerns the source of funding of these investments. Consequently, net transfers into a community appear worth it from a local perspective, but are not necessarily so from a national perspective as the *best* use of public funds. Consequently it is also argued that despite these event-specific evaluations, there is little evidence about the medium- to long-term economic effects of such sports event-led economic regeneration strategies.

In such an environment it is not surprising that Crompton (2004) has argued that there is a need to shift away from the conventional economic assessment of the impact of sports investment and instead to focus upon the "psychic income" generated. Crompton (2004) argues that psychic income stems from the emotional and psychological benefits received by host communities from their being associated with a sports event. This contrasts with the literal income generated by the increased spending associated with, for example, visitors to the event.

Environmental valuation measures, such as contingent valuation, can be used to evaluate psychic income to identify the “willingness to pay” for the existence of (or the option of attending) the sports event (see, for example, Downward, 2004). Theoretically speaking this involves an attempt to value the consumer surplus associated with a non-priced resource. It is clear that Crompton’s strategy offers an alternative potential policy option for those seeking to explore the wider economic effects of sports event or facility investment.

However, it is clear that in exploring the sports development impact of investment in facilities or events, matters are more complicated. In the discussion above, the traditional emphasis is primarily associated with exploring the impacts of potential spectators spending money at the events, or measuring the community’s psychic income that follows from a latent demand for sports investment. There is a presumption that the underlying structure of demand is unchanged. Yet, if a sports event is being used as a policy intervention to change behaviour then this assumption is not realistically met. A change in the motivation and expectations of individuals, that is their preferences, say, for subsequent sports participation, is indicative of this.

As Downward *et al.* (2005) argue, the same would be true following changes to the social structure within which choices were made. This is particularly important for volunteers for, as Moreno *et al.* (2000) argue, volunteering is linked to the formation of social structures because they harness collective motivation and action. It is clear, thus, that in investigating the human legacy of sports events such potential changes in behaviour need to be investigated. Prior to discussing this issue, however, it is important to understand something of the current structure of volunteering decisions. As well as illustrating the potential for using sports events as sports policy interventions it helps in assessing the reliability of the current research.

Sports Volunteering

Burgham and Downward (2005), Downward *et al.* (2005) and Ralston *et al.* (2004) review sports volunteering profiles in the UK, with sports volunteering here defined by Gratton *et al.* (1997) as:

... individual volunteers helping others in sport, in a formal organization such as clubs or governing bodies, and receiving either no remuneration or only expenses. (p. i)

The general literature on volunteering reveals that 26% of all volunteers were formally involved in sport. The time that they spent volunteering had, moreover, risen from 2.7 hours in 1991 to an average of 4.05 hours a week in 1997 (Davis-Smith, 1998). Yet, as discussed by Nichols (2004, 2005), older cohorts are sustaining volunteer activity in the UK. For example, those aged 45–54 volunteered the most, followed by retired people aged 65–74.

The national surveys also tend to reveal that males and females volunteer equally but are much more likely to be drawn from the White British ethnic group and from higher socioeconomic groupings. Volunteers are also likely to have higher education levels, to be married or cohabiting, and have children and access to a car and a community network. As far as sports volunteering is concerned, the research reveals that this is more likely to be undertaken by male and younger volunteers.

The specific literature on sport volunteering refines these insights in the context of both individual sports and sports events. Sport England (2003), confirms that in regular individual sports, approximately two-thirds of volunteers are male as opposed to female. So too, more formal activities are typically carried out by older volunteers, with most having no dependent children. Whilst four hours is identified as the average weekly duration of volunteering, moreover, these increase in volunteering activity for National Governing Bodies and clubs. The increased formalities associated with volunteering is also suggestive of a male orientation of sports volunteering, as males are much more likely to be the chairperson, or treasurer of clubs, as well as holding senior coaching positions.

Likewise in regular festivals and events, the research suggests that volunteers tend to reflect the gender and age profile of the participants in the sports involved (see, for example, Harrington *et al.*, 2000) but the larger and more unique the event, the broader the volunteer profiles (see Chalip, 2000; MacAloon, 2000; Moreno *et al.* 2000 in the context of the Olympics). This implies that the increased regularity of events could be linked to the development of a body of volunteers that develops core competences in running the event thus ensuring its sustainability (Coyne & Coyne, 2001; Farrell *et al.*, 1998).

One important implication of this is that it suggests a potential career profile of sports volunteering, and/or participation in line with Stebbins' (1982) concept of serious leisure. Accordingly, casual involvement in a particular event may then lead the individual to progress to regular volunteering or participation in a specific sport. Clearly this is of extreme importance to policy makers seeking to use sports events as sports development policy instruments. The relevance of the concept cannot be presumed, however, particularly given that the evidence reviewed above tends to show that there is a historic distinction from mixed cohorts of volunteers at particular events to male domination in specific sports.

There is also no straightforward relationship between participation and volunteering. Indeed, often sports with wide participation require less formal organization and age can prevent participation (Coleman, 2002; Gratton *et al.* 1997). The dynamics of change are thus likely to be complex. It is with these issues in mind, therefore, that the current research is offered. A large-scale mega-event, such as the Commonwealth Games, offers the opportunity to explore the potential for sports events to raise interest, participation and volunteering in sport as a human legacy of sports investment.

Figure 1 provides an indication of the empirical relationships investigated in this research. Drawing upon Burgham & Downward (2005), and

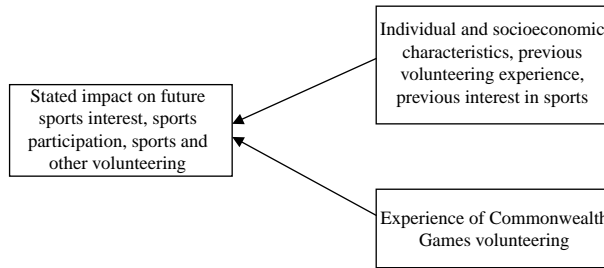


Figure 1. Determinants of Sports Development

Downward (forthcoming) it is postulated that volunteering in sport, or participating in sport, emerges from a set of individual, economic, social and sports characteristics. These characteristics may refer to a number of different theoretical concepts, such as the income–time constraints of economics, or sports literacy facilitated by previous involvement in sport (see Green *et al.*, 2005). However, these characteristics are now augmented by the experiences of volunteering, as discussed above in connection with the concept of serious leisure.

Context, Data and Variables

The current research focuses on the Crew 2002 volunteers of the XVII Manchester Commonwealth Games and draws upon a broader research project, which was a collaborative venture with UK Sport and the Manchester 2002 Volunteer Programme (M2002), sponsored by Adecco, a major recruitment company. As part of a quantitative investigation of issues associated with volunteering, the research involved the use of a questionnaire to elicit information on volunteer socioeconomic background, their current volunteering experience, experiences of the Games and also the stated likely impacts of their experience on their interest in sport, and future likely participation and volunteering behaviour.¹ The sample frame selected comprised the database of 9,000 volunteers. Every seventh person was selected from the database giving a sample of 1,300 volunteers. A judgement was made that the approach would not be easily biased as the database was not organized by any particular volunteer characteristic other than alphabetical order of name. Following the Games, the questionnaire was issued in May 2003 and 407 replies were obtained.

As the main aim of the research was to identify the sports development implications associated with experience of volunteering at the Commonwealth Games it is important to note that, in line with the research strategy above, data were collected according to the categories of the conceptual model detailed in Figure 1. To reiterate, this postulates that the experiences of the Games in the light of the individual and socioeconomic characteristics of respondents would affect the stated future behaviour of volunteers with respect to their interest in sport, sports participation, and volunteering and subsequent volunteering.

Most variables were measured as a series of nominal values including sex, age ethnicity, health and employment status, and previous experience as a volunteer. Previous interest and participation in sport was measured on a five-point Likert scale with 5 indicating *strongly agree* and 1 indicating *strongly disagree* measuring the strength of agreement, or disagreement, with a statement concerning these issues. The same was the case with the large number of dimensions of the experience of the Games that were investigated. Each of these statements sought to explore potential dimensions of experience that were associated with changes to personal or social capital, enjoyment and social satisfaction, task satisfaction, as well as specific experiences of the work tasks that were undertaken.

Finally, Table 1 indicates the statements that were used to investigate the sports development and other implications of experience as a volunteer. They can be treated as the dependent variables in the subsequent analysis. The dependent variables are numbered in the first column from '1' to '16', which are used to indicate the relevant regression results in Table 1. Once again, respondents were asked to indicate their agreement or disagreement on a five-point Likert scale, anchored as above, with 5 indicating *strongly agree* and 1 indicating *strongly disagree*.

Results

The remaining columns of Table 1 present some initial descriptive results on the variables measuring the development implications of volunteering at the Games. They can be viewed as unconditional statements of the impacts of volunteering.

The results reveal that while there is evidence of some increase in interest in sport and particularly a wider range of sports, as a result of the respondents' experience of volunteering at the Games, there is no strong evidence that this will translate into more participation or volunteering in specific sports. For example, only between about 6–14% of the sample may increase participation, or 12–21% of the sample actually volunteer for more sports and 8–17% of the sample intend to increase their hours of volunteering.

Similar patterns apply for non-sports volunteering. Approximately 14% of the sample suggest that they intend to volunteer in new contexts and 23% that they actually volunteer in new contexts. However, approximately 43% of the sample indicate greater interest in volunteering generally and approximately 57% greater awareness of volunteering opportunities, with approximately 46% of the sample indicating more likelihood of their approaching organizations in order to volunteer. Finally, there is strong evidence of willingness to volunteer for another major sports event, or another major event.

There are a number of implications of these results. The first is that they suggest that mechanical notions that investment in sports events will simply raise sports interest, participation and volunteering, as human legacies, are misplaced. Relatively small proportions of the sample suggest this possibi-

Table 1. Unconditional Outcomes of Games Volunteering

	<i>Strongly agree %</i>	<i>Agree %</i>	<i>Neutral %</i>	<i>Disagree %</i>	<i>Strongly disagree %</i>	<i>n</i>
<i>Interest (model number)</i>						
I am now more interested in sport (1)	3.2	17.9	28	36.5	14.4	403
I am now more interested in a wider range of sport (2)	5.2	39.5	18.4	25.6	11.4	403
<i>Participation</i>						
I now participate in sport more (3)	1.2	5.5	26.6	45.9	20.8	403
I now participate in new sports (4)	1.5	4.5	19.4	51.6	23.1	403
I intend to participate more often in sport (5)	2.2	11.7	27.8	40	18.4	403
I intend to participate in a wider range of sports (6)	1	12.9	25.8	41.4	18.9	403
<i>Sport volunteering</i>						
I do more hours as a sports volunteer (7)	2.3	6	17.5	44.6	29.5	383
I intend to do more hours as a sports volunteer (8)	1.6	15.4	32	31	20	384
I now volunteer for new sports (9)	1.6	10.7	20.6	41.1	26	384
I intend to volunteer for new sports (10)	1.8	19.5	24.5	32.8	21.4	384
I am willing to volunteer for another major sports event (11)	46.6	39	10.8	2.2	1.5	408
<i>Non-sport volunteering</i>						
I actually volunteer in a wider range of activities/ organizations (12)	3.8	11.8	21.1	43.6	19.8	399
I now intend to volunteer in a wider range of activities organizations (13)	3.0	19.8	29.1	31.6	16.5	399
I am now more interested in voluntary work generally (14)	6.7	36.1	23.9	21.6	11.7	402
I am more aware of a wider range of opportunities (15)	7	49.5	19.9	17.4	6.2	402
I am willing to volunteer for another major event (16)	26.3	41.4	22.8	6.2	3.2	403

lity. This has implications for sports policy and management, which are discussed more fully later. The second, is that taken at face value these results might be expected as part of the serious leisure hypothesis of volunteer career progression as discussed earlier. That is, experience of irregular event volunteering consolidates any interest in sport and that this needs to be capitalized upon to promote specific sports participation and volunteering. One complication with this conclusion, however, is that Table 3 also reveals a stronger impact of experience of the Games upon non-sports volunteering that might be suggestive of the Games more likely impact upon wider social capital that does not reflect sport infrastructure. Consequently to explore these issues further, more probing empirical work is required.

To facilitate this, a factor analysis of the experiences of the Games was first undertaken to identify common, systematic aspects of the experience of volunteering at the Games. The data matrix proved amenable to a factor analysis as indicated by the Bartlett test for sphericity, which was significant at the .000 level. Factor loadings of 0.4 were treated as significant in keeping with the literature (see, for example, Hair *et al.*, 1990). A principal components analysis was used, such that extracted factors, as indicated by their eigenvalues, accounted for at least as much variance as the items measuring the experiences of volunteers as detailed in Table 2. These items, of course, can be thought of as potential individual variables in their own right. An orthogonal rotation was also used to minimise the collinearity between the factors because they were to be used in subsequent regression analysis. Initially 15 factors were identified. However, a number of the items measuring the experiences of volunteering was significant on more than one factor. These are detailed in Table 2. Consequently these items were dropped from the analysis. The subsequent factor analysis produced 13 factors accounting for 67.2% of the variance in the data. However, despite Cronbach's alpha statistics reporting that they were reliable scales, most of these comprised two items or less. Consequently, it was decided to focus on five main factors accounting for 48.1% of the total variance that comprised more items.

The first column presents the items measuring the experiences of volunteering that were included in the analysis. The subsequent columns present the five extracted factors and their significant factor loadings. The Cronbach alpha statistic, the eigenvalue and percentage of variance for each factor are reported at the bottom of each column. The five factors measure dimensions of experience associated with the organization of volunteering experienced, personal development, the assignments undertaken, helping the community surrounding the Games and the opportunity to see the event and meet celebrities.

Second, an ordered Logit regression analysis used the factors above and the variables measuring individual and socioeconomic characteristics of volunteers as regressors exploring the statements concerning interest in sport, participation and volunteering in sport, and non-sport volunteering as a result of volunteering at the Games.² Clearly, the latter characteristics affect the potential capacity that volunteers have to change their behaviour

Table 2. Factor Analysis of Volunteer Experiences

<i>Experience\factor</i>	1	2	3	4	5
I got clear instructions on what I am supposed to be doing	.690				
I was fully trained by the time the games started	.672				
Everything ran smoothly	.647				
The managers knew what they were doing	.771				
My team leader was well organized	.813				
My team leader had good people management skills	.790				
My efforts were always appreciated	.667				
Volunteers and paid staff were treated as equals	.584				
Rotas were well planned	.618				
Shifts were of the right length	.512				
Communication between volunteers and M2002 was good	.605				
Communication between volunteers and team leaders was good	.804				
It improved my chances of employment		.543			
It looks good on my CV and application forms		.570			
I have learned new skills and capabilities		.793			
I enhanced developed my skills		.773			
I have enhanced my personal development		.868			
I have increased my self-confidence		.846			
It has provided new challenges		.764			
It has changed my life		.654			
I was happy with my assigned location			.869		
I was happy with my assigned venue			.804		
I was happy with my assigned work area			.854		
I was happy with my assigned task			.819		
Overall, I was happy with the assignment			.842		
I met interesting people			.454		
I was part of a team			.410		
I did something interesting every day			.451		
I helped Manchester				.842	
I helped the north-west				.885	
I showed support for my country				.638	
I got the chance to see some of the main events					.562
I saw some of the celebrities and sports stars					.832
I saw a lot of famous people					.786
The spectators treated me with respect					.432
I was bored and it gave me something to do					
I did something different from my usual work					
I enjoyed wearing a uniform and having official status					
There were some perks or free gifts					
I supported sport					
It highlighted that we should be less money motivated and do something for society					
I set an example for my children/grandchildren					
It has been a great conversation piece					
Some days I was so tired I could have slept standing up					

Table 2 (Continued)

<i>Experience</i> \ <i>factor</i>	1	2	3	4	5
Some days I didn't know if I was coming or going					
There were times when I was really cross and bad tempered					
There were times when the other volunteers got on my nerves					
I wasn't left out of pocket					
If I didn't like what I saw I soon let them know					
They expected too much from me: I was only working on a voluntary basis					
It was a chance of a lifetime					
I made useful business contacts					
Volunteer meals were satisfactory					
Transport for volunteers was good					
<i>Cronbach's alpha</i>	0.912	0.902	0.905	0.856	0.774
<i>Eigenvalues</i>	13.356	5.261	2.848	2.502	1.992
<i>Percentage of variance</i>	24.734	9.743	5.274	4.634	3.689

Notes:

Factor names

1. Organization
2. Personal development
3. Assignment
4. Community
5. Celebrities

Deleted items

1. It was an exciting experience
2. I did something useful for the community
3. It gave me satisfaction to help others
4. I enjoyed every moment of it
5. I have memories to treasure for the rest of my life
6. I used my skills
7. The selection process matched my assigned role with my skills

and must be accounted for. Moreover, in the regression analyses robust (Huber–White) standard errors were employed to establish statistical significance to allow for any heteroscedasticity in the samples.³

Table 3 provides the regression results for each of the types of development explored: sports interest, sports participation, sports volunteering and non-sports volunteering. The dependent variable is implied at the top of columns 2 onwards in the table, with the stated number corresponding to the statement detailed in Table 1. The independent variables, or regressors, are detailed in the first column. At the bottom of each table the sample size of each regression is indicated as 'N'. The 'pseudo R²' is presented as appropriate to ordered logit analysis along with the corresponding Wald test statistic, which tests the null hypothesis that the pseudo

R^2 is equal to zero. In all but three cases this value is significant at the 5% level, suggesting that the broader model has some relevance.⁴ What appears as low values of the Pseudo R^2 compared to the equivalent R^2 for ordinary least squares regression should be viewed with caution. As Long and Freese (2003) indicate, in regression models for categorical dependent variables, a variety of pseudo R^2 are available, these tend to have low values, ranging between 0.2 and 0.4, and should be best viewed in relative comparison than absolute size. The values reported in this research, as lower than this range, suggest that more explanation is possible. However, because of the differential nature of pseudo R^2 , Stata (2003) argues that it is best to focus on the Wald statistic in assessing the model. Columns 2 onwards of each table indicate the estimated partial slope coefficients for each variable and, beneath it, in brackets, the asymptotic Z-value. For ease of interpretation, significant variables at the 5% level only are reported.⁵

Columns 1 and 2 reveal that relative to other ages, middle-aged volunteers are less likely to have developed more interest in a wider range of sports. However, the personal development elements of the event-volunteer experience, identified by the factor analysis, do raise interest in sport and a wider range of sports. Notably too, a wider range of interest is noted for those who previously attended sports events. This is evidence of volunteering at a major event exposing volunteers to new experiences as previous attendance at sports events is most likely to be with specific sports, as discussed earlier. Previous volunteering experience is insignificant.

Columns 3 to 6 explore the actual increases, or intention to increase, in sports participation in terms of current frequency of participation or participation in new sports. The evidence suggests that, relative to the young, this is less likely, particularly for those in middle-age. However, actual participation in new sports may rise for those in employment or are retired. This is perhaps indicative of the income or time needed to explore new pursuits as implied in the income leisure trade-off model (Burgham & Downward, 2005; Downward, 2004; Gratton & Taylor, 2000). On the one hand, rising incomes are often associated with financial access to sport, on the other hand, rising incomes can be associated with greater time commitments. The results also show that previously watching sports on TV can work against promoting participation. However, there is some evidence that those who attend sports events now have greater intentions to participate in sport more, or a wider range of sports.

In terms of specific experiences of volunteering at the Games, it is clear that enhancements to the personal development of volunteers promotes participation or its intention. However, there is some evidence that organizational, assignment and community experiences of volunteering, as identified in the factor analysis, may counter increases in participation. This is evidence of the complex effects of sports events. Each of these negative influences on participation is associated with positive experiences associated with the organization of their volunteering activity, the tasks undertaken and the sense of rewarding their community. Consequently, they are indicative of

some incentive facing the volunteers to shift away from active sports participation towards facilitating sports for others as volunteers.

Columns 7 to 11 report results associated with actual increases in, or intentions to increase, sports volunteering. Naturally, in the case of volunteering more actual hours, previous sports volunteering is significant. This suggests some encouragement to deepen involvement in sports. However, once again there is a negative influence identified for experiences of the event assignment. This is also the case for volunteering for new sports. As discussed below this is indicative of a degree of enhanced interest in non-sports volunteering for current sports volunteers.

The results also show that previously attending sports events coupled with experiences of the Games raising personal development, can raise intentions to volunteer more hours. Relative to those in part-time or full-time

Table 3. Regression Analysis

<i>Regressor/model</i>	1	2	3	4	5	6	7	8
Sex								
Age2				-1.152 (-2.75)				
Age3		-1.172 (-2.71)	-1.142 (-2.70)	-1.465 (-3.52)	-0.838 (-2.00)	-1.05 (-2.2)		
Age4				-1.614 (-2.63)				
Ethwb								
Health								
Emp2			0.813 (2.25)	1.057 (3.02)				0.888 (2.2)
Emp3				1.260 (2.57)				
Emp4								
Sportint								
Sportatt		0.286 (2.05)			0.338 (2.33)	0.294 (2.25)		
Sportwat			-0.356 (-2.56)	-0.395 (-2.50)	-0.361 (-2.66)	-0.279 (-1.96)		
Sportpar								
Volunt							0.709 (2.68)	
Organization			-0.003 (-2.44)					
Personal development Assignment	0.004 (3.32)	0.007 (4.90)	0.004 (3.43)	0.004 (2.74)	0.005 (3.95)	0.005 (3.55)		
Community			-0.003 (-2.79)	-0.004 (-3.00)		-0.003 (-2.21)	-0.003 (-2.28)	-0.002 (-2.09)
Celebrities								
n	311	311	311	311	311	311	295	296
Pseudo R-squared	0.04	0.0857	0.0767	0.0765	0.0956	0.1018	0.0426	0.0398
Wald Chi- squared (25)	32.14	75.21	47.79	46.86	81.77	77.40	27.51	31.79
P>Chi-squared	0.0301	0.000	0.000	0.000	0.000	0.000	0.09	0.033

Table 3. (Continued)

Regressor/model	9	10	11	12	13	14	15	16
Sex				0.569 (2.33)				
Age2								
Age3			-0.954 (-2.18)		-0.897 (-2.20)			-0.953 (-2.37)
Age4		-1.589 (-2.7)						
Ethwb						0.929 (1.98)		
Health							-0.728 (-2.43)	
Emp2								
Emp3								
Emp4	1.058 (1.99)							
Sportint								
Sportatt		0.315 (2.12)	0.343 (2.79)					0.341 (2.38)
Sportwat					-0.283 (-2.22)			
Sportpar								-0.212 (-2.06)
Volunt				1.100 (4.47)				
Organization			0.003 (2.15)					
Personal development Assignment Community Celebrities		0.003 (2.19)	0.003 (2.31)		0.003 (2.41)	0.004 (3.63)	0.003 (2.67)	0.003 (2.96)
n	296	310	296	311	311	311	304	311
Pseudo R-squared	0.0355	0.0733	0.0491	0.0456	0.0432	0.0451	0.0366	0.04
Wald Chi- squared (25)	30.55	53.55	41.74	43.41	49.78	40.46	28.88	51.56
P > Chi-squared	0.045	0.000	0.002	0.001	0.000	0.003	0.0679	0.000

Notes: Sex: Male or Female; Age: Age categories; Ethwb: White British or not. Health: Long-term health problem or not; Emp: Employment categories. Volunt: Current involvement in voluntary work; Sportint, Sportatt, Sportwat, Sportpar: interest in sport, attending sports events, watching sport on T.V., participating in sport.

education, moreover, those in part-time or full-time employment are more likely to volunteer for new sports. Again, this is indicative of the threshold effects of income on involvement in sports as discussed above.

Finally, apart from the oldest volunteers, previous attendance at sports events, and the enhancement of personal development all suggest increased willingness to volunteer for another major sports event. This is suggestive that any trade-offs associated with event volunteering and previous sports participation and volunteering may be, at least, compensated by increased interest in volunteering for sports events.

Columns 12 to 16 review the impacts upon non-sport volunteering. There is some evidence that relative to the young, older age groups are less likely to; intend to volunteer in a wider range of activities or organizations or be more interested in voluntary work generally. These results suggest that there is broad evidence that younger volunteering is encouraged.

It is clear that in the case of actual volunteering in a wider range of activities or organizations, previous volunteering experience matters. Significantly too, males are more likely to volunteer in a wider range of activities. As males are more likely to be regular sports volunteers this is further evidence, as implied above, that sports event volunteering may develop non-sports volunteering interests more.

Further the personal development experience of volunteering at the Games is shown to promote intention to volunteer, interest in voluntary work, awareness of a wider range of opportunities for volunteering, and willingness to volunteer at another major event. Collectively, these are indications of the non-sport social capital enhancing potential of volunteer experiences developed through experience of sports events. In contrast, the results reveal that interest in watching sport on TV may reduce intentions to volunteer in a wider range of activities or organizations. Although, the latter is more likely for those who attend sports events. Finally, health problems reduce willingness to volunteer at another major event.

Summary and Policy Discussion

While there is clearly some variety and idiosyncrasy in the above results, and despite there being a need to increase the explanatory power of the research, nonetheless some clear patterns do emerge when one views the results across the dependent variables. The results suggest that interest in sport is raised for younger volunteers, those feeling personally developed by their experience of volunteering at the Games, and those who attend sports events. Likewise, actual increases in participation in, and intentions to participate more, both in existing and in a wider range of sports is enhanced for those experiencing personal development from volunteering at the Games. Again, this is more likely to be the case for younger volunteers, and those who previously attended sports events. In contrast, this is less likely for those with a passive interest in sports, through watching on TV. There is also some evidence that to the extent that volunteers felt that they enhanced the community through their volunteering activity, or enjoyed their assignment while volunteering, then this could reduce active participation and volunteering respectively. There is an element of a trade off between facilitating and participating in sport.

Specifically, as far as sports volunteering is concerned, volunteer hours can increase for those currently involved in volunteering, with the intention to increase hours for those feeling personally developed and with previous attendance at sports events. Again, however, there is some evidence that good experiences of event volunteering may help to attenuate these increases.

The likely beneficiaries of these potential reductions in participation and more regular sports volunteering appear to be event and non-sport volunteering. For example, the evidence points to sports-event volunteering increasing for younger volunteers and those previously attending sports events, but with personal development from the Games. Moreover, greater desire to be involved in non-sports events is also enhanced by evidence personal development from the Games. Finally, there is evidence that younger Games volunteers and those with prior experience of volunteering have their interest in non-sports volunteering enhanced. Significantly, as Table 1 reveals, it is these latter aspects of volunteering that appear to be more strongly influenced generally by experience of the Games than all of the other effects.

The policy implications of these findings seem to relatively clear. First, for both those with previous sports and other volunteering experience, volunteering at a major sports event is more likely to raise interest in non-sports volunteering than other potential sports development targets, although there is an effect on the latter. Second, it is for the younger volunteer that most pronounced effects are identified. In this regard investments in events are more likely to have wider social capital returns than enhanced sports development consequences. Third, and probably as a result, personal development appears to be a general ‘driver’ as far as both sports development and non-sports volunteering development are concerned.

Consequently this research suggests that in order to capitalize upon the sports development implications of volunteering at a major event, organizers need to focus, first of all, on promoting and harnessing the personal development of volunteers. As indicated in Table 2 this suggests ensuring the fulfilment of, and promoting the possibility that through volunteering:

- It improved my chances of employment
- It looks good on my CV and Application forms
- I have learned new skills and capabilities
- I enhanced and developed my skills
- I have enhanced my personal development
- I have increased my self-confidence
- It provided new challenges
- It changed my life.

However, as the research also indicates that non-sports related developments are more likely, then this suggests, second, a strong need to both emphasize and harness the sports development opportunities produced, if this is a policy priority. In essence this means overtly promoting a serious leisure career. It is clear that providing “structural” links between volunteering and, say, subsequent sports participation and volunteering opportunities are needed to communicate and promote the ongoing benefits and status of volunteering.

As discussed in Burgham & Downward (2005), economic and social incentives could be developed and used. For example, collaboration with

sport, leisure and event-management examining bodies could be a way in which initial event experience and then enhanced more regular volunteering could be used to formalize the development of transferable skills making CV enhancement tangible, perhaps in the context of “lifelong learning”. In the UK, Sport England (2003) argue that this might be an important source of core funding for sports generally, through linkages to Learning and Skills policies being mediated through sports clubs. Likewise, tax incentives could be lobbied for from public authorities, for those who volunteer to reduce the extent of any income–leisure trade-off faced by individuals, which, as noted above, may be present in more regular sports participation and volunteering.⁶ By essentially producing payment in kind, this might allow event volunteers to access the patterns of higher income sports participation and sports volunteering that forms the key volunteer segment of the population. This would be of particular relevance to the young through, perhaps, concessions on student loans being offered.

This is important because the above research places emphasis on the potential of younger volunteers. Sport England (2003), moreover, identifies the younger volunteer generally with less formal and systematic involvement in volunteering and, while not lacking interest in sports, needing flexible-time options for getting involved with and experience of volunteering.⁷ Importantly tax and loan concessions are specific to the individual and could remain operative without funding sports clubs directly first. In this regard the only extra administrative duty would be some sort of audited record keeping.

It is also important to reiterate at this point, however, that the results above do point to investment in events yielding wider social capital enhancement through non-sports volunteering. This may mitigate against the need for any direct and indirect increase in funding to sports per se if this, in itself, is the desired policy outcome. Moreover, this might be attractive to policy makers particularly as it might be argued that traditional sports participation and volunteering patterns represent relatively closed networks implied in the profiles of volunteers discussed above. It is clear, thus, that the above research raises important issues for public policy choice and emphasis. This is particularly the case for those advocating the need to develop wider sports participation and volunteering profiles.

Conclusions

Most of the literature on evaluating public investment in sports has focused upon the construction or relocation of facilities and the hosting of events and their potential economic benefits to a community; either in tangible or intangible terms. Less is written about the intangible impacts, and, in particular, the human legacy. This research contributes to filling this gap in the literature by exploring the impact on the interest in sport, sports participation, sport and non-sport volunteering that follow from the experience of volunteering at the XVII Manchester Commonwealth Games.

The research reveals that events are complex sports related policy interventions that can change the structures of leisure demands, expressed as participation or volunteering. However, while the research reveals that experience of volunteering at a major event can raise interest, participation and volunteering in sport, this is less likely than promoting interest in wider societal volunteering, that is development of non-sport social capital. Thus, whereas the development impacts generally appear stronger for the younger volunteer, and when personal development is enhanced, the latter of which is clearly suggestive of a focus for volunteer recruitment strategy, nonetheless elements of a policy trade-off between sports and non-sport social capital improvements are evident. Clearly, further longitudinal research is required that explores these transitions to help to critically assess these findings and contribute to public policy debate.

Notes

1. This research was funded by UK Sport. The paper has benefited from feedback from presentations at the European Association of Sports Management Conference in Newcastle upon Tyne, UK, held in September 2005, a seminar to the Faculty of Sport, Health and Exercise at Staffordshire University in November 2005, discussion with colleagues at Loughborough, and comments from Holger Preuss and anonymous referees.
2. The research also investigated volunteer expectations in a questionnaire issued to the same respondents prior to the Games. More detail on the results concerning the expectations of volunteering are available in the papers Ralston *et al.* 2004; Downward and Ralston 2005, and Downward *et al.* 2005. A more general overview of other elements of the research project is obtainable from UK Sport at www.uk sport.gov.uk/
3. The dependent variables' scales were thus treated as essentially ordinal rather than interval magnitudes. The factor analysis was conducted on SPSS version 12, and the regression analysis on STATA SE version 8.
4. With the multiple categories implied in the series of nominal variables Age 1 to 4 and Emp 1 to 4, Age1 and Emp1 were excluded from the analysis to avoid the 'dummy variable trap'.
5. While statistical significance is always connected to sample size, comparisons across models on broadly the same number of observations is meaningful. Moreover, in applied research statistics can only have intrinsic meaning in connection to the variables used and implied theoretical motivation for using them.
6. A full set of results for the regressions and factor analysis are available from the author on request.
7. However, as Burgham and Downward (2005) note, this may involve some compromise with a traditional volunteering ethos.

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