



Updated Review of the Evidence of Legacy of Major Sporting Events: July 2015

Commonwealth Games



**UPDATED REVIEW OF THE EVIDENCE OF LEGACY OF
MAJOR SPORTING EVENTS: JULY 2015**

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1. INTRODUCTION

- 1.1 The aim of this evidence review is to establish whether major international multi-sport events can leave a legacy, and if so, what factors are important for making that happen. This edition of the original Kemlo and Owe (2014) review provides addendums to each legacy theme based on literature from 1st October 2013 to the end of September 2014.
- 1.2 The research questions that guided this review were as following:
 - Do major international multi-sports events leave a positive legacy, if so what types of legacy?
 - Do major international multi-sports events lead to temporary effects but not necessarily a lasting legacy, if so what types of temporary effects?
 - Do major international multi-sports events lead to unintended consequences that lead to negative legacy, if so what types of negative legacy?

Context of the literature review

- 1.3 Glasgow hosted the 2014 Commonwealth Games from 23 July to 3 August 2014. More than 6,500 athletes and team officials from 71 nations and territories took part in 17 sports.
- 1.4 In addition to the 11 days of sport, the Games provided the platform to promote lasting economic, social and cultural legacy. In 2009, the Scottish Government and national partners developed a Scotland-wide Games legacy plan setting out their collective ambitions for achieving a lasting legacy for Scotland, covering a ten-year period to 2019 and set around four national themes:
 - **Flourishing** – using the Games to contribute to the growth of the Scottish economy.

- **Active** – using the Games to help Scots be more physically active.
 - **Connected** – using the Games to strengthen connections at home and internationally through culture and learning.
 - **Sustainable** – using the Games to demonstrate environmental responsibility and help communities live more sustainably.
- 1.5 The Scottish Government and partners are leading the national evaluation of the Glasgow 2014 Commonwealth Games Legacy, with the support of the Games Legacy Evaluation Working Group (GLEWG). As part of this evaluation, we are committed to understanding the lessons learned in relation to previous Games. The evidence review has also helped us focus our evaluation questions and guided our research design.

Structure of the review

- 1.6 The review is structured around the four national themes and discusses evidence in relation to the outcomes that the Games hope to achieve (see Review Protocol in the Appendix). An update addendum covering more recent literature accompanies each theme with details of the method for this update also added as an addendum to the methods section.
- 1.7 Since our original review in 2012, a significant volume of academic and policy literature on the London 2012 Olympics has been published. Although it is still too early to draw any firm conclusions about the long term legacy of London 2012, we discuss the evidence that currently exists.

2. METHOD

2.1 The aim of this review was to establish whether major international multi-sport events can leave a legacy. We have developed and conducted a comprehensive search to identify relevant research to supplement the review carried out in 2012. We have synthesised the evidence from included studies to produce a summary of the type and scale of legacies produced. Where possible we have assessed the quality of relevant studies, as well as the potential for bias. Finally, we also aimed to identify knowledge gaps in the available research.

Search strategy

2.2 Firstly, we reassessed the initial literature search results from our 2012 review with our new inclusion criteria. This literature search had generated 84 sources (see Review Protocol in the Appendix for search terms). Of these, 26 were chosen for consideration based on their title, abstract and subject descriptors.

2.3 Secondly, we updated this previous literature search using a search undertaken on our behalf by IDOX. This search covered articles published between 2010-2013 using search terms set out in the Review Protocol (see the appendix). This search generated 739 sources. Based on titles, abstracts and subject descriptions 137 were selected.

2.4 From both sets of searches, the articles selected were acquired and we then assessed their full-length version. As a result, 107 articles initially qualified for the review. Additional articles were later identified by searching through their reference lists and bibliographies.

2.5 The findings from articles which fulfilled the criteria set out in our literature review protocol were then synthesized to produce a summary of the type and scale of legacies produced around the four themes of flourishing, sustainable, active and connected, and to identify gaps in the knowledge.

Inclusion criteria

- 2.6 In order to maximise comparability with the Glasgow 2014 Commonwealth Games, we decided to include evidence referring to events that were multi-sport; international (rather than regional or national); occurred between 1970 and 2013; that repeat at least on 4 yearly basis; and move between different host countries/cities. The list of events included can be found in the Review protocol in the Appendix.
- 2.7 We included both published and unpublished English language materials from peer reviewed journals and grey sources (such as from Games Federations, Organising Committees and Governments). The decision to also include grey sources was based on the realisation that the evidence base was very limited in many areas. In particular, the findings from London tend to be heavily weighted towards grey sources at the time of writing with the academic literature yet to be published.

2015 Update Review Method

- 2.8 The aim of the updated review is to establish whether further evidence has emerged since our earlier review (Kemlo and Owe, 2014) on whether major international multi-sport events have left a legacy and whether the key messages that emerged from the earlier review have changed or new messages have emerged in light of new evidence.
- 2.9 A similar review protocol was adopted to that of the 2014 review. The search for the updated review covered articles published between 1st October 2013 to the end of September 2014. A limitation of this update is that article bibliographies and reference cross-checking was not conducted and hence there may be some articles that were not captured through the keyword search alone.
- 2.10 The keyword search generated 108 sources. Sources were selected on the basis of titles, abstracts and subject descriptions and assessment of full-length versions of the selected articles resulted in a total of 15 full texts which qualified for the review. An

additional three were included which were encountered, but did not come up in the keyword search.

2.11 The findings from articles which fulfilled the criteria set out in the literature review protocol were synthesized and compared to the messages that came out of the earlier review to produce a summary of any additional evidence for legacies produced around the four themes of Flourishing, Sustainable, Active and Connected, and to identify if there were any changes to messages or new messages emerging.

3. OVERVIEW OF AVAILABLE EVIDENCE

Legacy as a 'concept' and goal

- 3.1 Legacy is a relatively recent concept in the history of major sporting events, particularly legacy that is broader than economic impact. A focus on legacy was something that evolved around and after the Sydney Olympics (Garcia, 2014). Since then it has been increasingly central to the rationale behind hosting major events, including the London 2012 Olympics and the Glasgow 2014 Commonwealth Games.
- 3.2 The 1984 Los Angeles Olympic Games, was the first to make an explicit assessment of the economic impact of the Games (Kasimati, 2003). In the years following this, major sporting multi-sports events have increasingly recognised the economic contribution such events can make, and increasingly made explicit plans to maximise the benefit of this. This economic focus has generally grown to comprise a broader approach which tries to ensure that the benefits of the Games reach as wide a range of people as possible. Given this long history of investigating the economic effects, the evidence base in our flourishing theme is much more substantial than other areas.
- 3.3 Alongside the economic focus, there has been a growing focus on increasing physical activity and sport participation for the wider population. The Sydney 2000 Olympics sparked research into this area. However, high quality empirical research is still very limited.
- 3.4 The link between major sporting events and regeneration has received a lot of focus over the past two decades. This interest was sparked by the regeneration of Barcelona surrounding the 1992 Olympics. There is a substantial and growing evidence base in this area.
- 3.5 It is only more recently that legacy goals related to cultural engagement and learning have become high on Games-organisers' agendas. As a result, the evidence in this area is very limited.

- 3.6 Overall, across each of our themes, the evidence is weighted towards Summer Olympic events. There is a smaller body of evidence on 'second tier' events, including previous Commonwealth Games.
- 3.7 Nonetheless, it's important to note that the lack of evidence does not mean that these outcomes are unachievable, it simply means that there have not been enough studies conducted in these areas to make an assessment.

London focus

- 3.8 This review does pay special attention to the evidence emerging from the London Olympics. This is partly because of the timing of our review, when a large amount of evidence is becoming available on those Games, but also because legacy planning for the London 2012 Olympics was similar in breadth and purposefulness to that being implemented at the Glasgow 2014 Commonwealth Games.
- 3.9 The jury is still out on the legacy benefits from London. There is a wide range of short-term evidence available, mainly from public bodies and organisations. On the whole, this suggests a positive message so far from the London 2012 Olympics across a wide range of legacy objectives. It will, however, take years to fully understand the long-term, comprehensive effects of the Games. In particular, there is currently very little academic evidence available, possibly due to publication timescales.
- 3.10 The 2014 review will be updated over the period of our overall evaluation programme of the Commonwealth Games which spans from 2008-2019. This presents the first update.

4. FLOURISHING

- 4.1 This chapter looks at the economic effects from major sporting events, with particular emphasis on business, the labour market and tourism. It considers how these events can affect the economy in the period of the event and considers whether there are long-term changes to the economy as a result of major events.

Increase Growth of Businesses

Short-term effects

- 4.2 A wide range of studies have found evidence of a boost to the economy of the host of major events in the immediate period of the event. In reviewing the evidence available, McCartney et al. (2010) find that most studies showed evidence of increased economic growth, but these were using mostly estimated data, and had a short-term, post-event collection period.
- 4.3 The evidence also suggests that there is a clear pattern in terms of which sectors of the economy see growth in activity and at what time. While analysing the effects of the Sydney Olympics, Giesecke and Madden (2007) find that the most significant effect was in the construction industry in the lead up to the event. A range of other studies also find that there is a strong boost associated with the construction of the venues but that falls away sharply in the year of the event (Spilling, 1996; CREA, 1999). This is true across the wide range of major sporting events, including the Commonwealth Games (KPMG, 2006). The same studies find that the other sectors which are most heavily affected are hospitality and tourism. These are most strongly affected in the year of the event with the effects driven by high numbers of visitors to the event itself.
- 4.4 These increases in economic activity in the short-term can provide significant opportunities for a wide range of businesses, including SMEs (Small and Medium sized Enterprises). The evidence from London 2012 shows that the portal through which businesses competed for Olympic related contracts, *CompeteFor*, provided over 12,000 business opportunities, with a significant proportion of

these being won by SMEs (Michael, 2013). There is also evidence of an initial boost of around £2.5 billion to foreign direct investment as a result of the Games (Michael, 2013).

- 4.5 Nonetheless, the short-term effects in London itself were not wholly positive. One study on the London Olympics found that some businesses suffered significantly from local travel disruption and saw a 34% decrease in sales (London Chambers of Commerce, 2012). This meant that while some businesses did realise the boost from the Games which had been expected, many businesses suffered significantly from displacement of their usual customer base during the period of the event (Vlachos, 2013).
- 4.6 These problems are to some extent unavoidable, but the literature suggests that consultation and clear advance planning and communication of disruptions can help to allow businesses to plan more effectively for these issues. Nevertheless as noted in the *Areas for Future Research* section below, this remains a significantly under-researched area.

Long-term effects

- 4.7 Despite the relatively strong overall evidence of a short-term boost to businesses, the evidence for a long-term increase in activity is limited in quality and quantity.
- 4.8 Some of the most encouraging evidence around the potential for long-term economic benefits comes from the Barcelona 1992 Olympic Games. Brunet (2005:5) argues that Barcelona has been 'highly successful in harnessing the legacy of the Games'. He finds that the Games succeeded in maintaining growth on a scale never seen before and provided a 'soft mattress, breaking the fall in a time of general depression' in Spain (Brunet, 2005 pp9). However, as with other major events, it is very difficult to separate out these effects from the wider regeneration of Barcelona.
- 4.9 Another study of major events argued that a fundamental concept of the Games is their 'temporariness', and that there are limited long-term effects from major sporting (Spilling, 1996). Looking at the 1994 Lillehammer Winter Olympics, as well as reviewing the

existing evidence, Spilling found that with the possible exception of tourism, most economic impacts were temporary. He found that long-term activity generated by the Games tended to be more important for the local area, rather than the national economy' (Spilling, 1996).

- 4.10 Looking at the effects as a whole, some authors conclude that there has been a tendency to over-estimate the benefits of major events. In reviews of research done to date, both Kasimati (2003) and McCartney et al. (2010) find that studies were over-reliant on estimated data and failed to take into account some of the negative factors associated with the Games. Nonetheless in their review of the evidence, Andersson et al. (2008) have suggested that although the initial investment can lead to inefficiency in the short-term, it can be a good investment in the long-term if it leads to the development of specific sectors of the economy.
- 4.11 These findings are supported by the forecasts made about the long-term effects of the London Olympics. The most comprehensive economic analysis was published by the Department of Culture, Media and Sport (DCMS) as part of their meta-evaluation. Their economic modelling work forecasts that Games related activity will generate between £28 billion to £41 billion in Gross Value Added (GVA) to the economy between 2004 and 2020. This activity is estimated to strongly peak in 2012 before falling away sharply over the years to 2015.
- 4.12 In addition, two other impact assessments by Oxford Economics (2012) and the Lloyds Banking Group (2012) present similar analyses. They predict a significant long-term impact of the Games, but with the vast majority of effects centred on 2012 and the years immediately surrounding it. Inevitably however, these studies can only estimate the long-term effects of the Games. Only by continuing to analyse the effects of the Olympics over the next decade will the long-term impacts on the London and the rest of the UK economy be fully understood.
- 4.13 There have also been concerns raised that the effects of the London Olympics are limited in geographical scope. After considering wide-ranging evidence, the select Committee on Olympic and Paralympic

Legacy (2013) found that the benefits of the Games were ‘disproportionately weighted towards Southern England’. They recommend that it is essential to assess why the size of this disparity is so large, and find that there has been a lack of investment resulting from the Games in the wider UK economy.

Reasons for increase in business

- 4.14 Over the longer-term, the economic literature finds that there are three broad ways to increase economic activity as a result of hosting major sporting events. These are to increase economic participation, productivity, or the perception of the host, either for business or tourism. The labour market section of this review will consider the limited evidence for an increase in labour market participation. After that the tourism section will consider the evidence for a long-term increase in visitors and visitor spending. This section assesses the potential increases to business productivity or the perception of the host as a place to do business.
- 4.15 In terms of reputation, hosting major sporting events can result in significant international exposure for the business profile of a city. PWC (2001) found that the Sydney 2000 Olympic Games resulted in extra business exposure for the city. This helped boost the city’s brand and delivered one of the strongest impacts of the Games, the reputational enhancement of the businesses involved in the delivery of the Games (OECD, 2010). In turn this helped lead to increases in Foreign Direct Investment which can boost business capacity and productivity within the economy. There is also evidence from Barcelona that the city increased its position substantially in international rankings as a place to do business over the decade surrounding their hosting of the Olympics (Brunet, 2005).
- 4.16 The early evidence emerging from the London Olympics also suggests a positive message. One survey conducted shortly after the Games found that 92% of businesses perceived that the Games would help promote London internationally (KPMG, 2012). Nevertheless, it will be important to track whether this translates into long-term results before firm conclusions can be drawn.

- 4.17 In terms of boosting productivity, there is also some evidence that the increased infrastructure resulting from the Games can help to improve opportunities for businesses and increase their ability to operate on a wider scale more quickly. However, the evidence also suggests that although some infrastructure projects can become under-utilised and can be of little use to the wider population after the event, transport improvements in particular can help businesses to develop (Smith, 2012).
- 4.18 The evidence from the Barcelona Olympics suggests that infrastructural improvements can be one of the longest lasting impacts of major sporting events. Brunet (2005) finds that by focusing a large proportion of investment on infrastructure, Barcelona was able to develop the basis for lasting improvements to the city. More information on this can be found in the 'sustainable' section of this review.
- 4.19 In addition to infrastructural improvements, there is some evidence that the way in which organisations work together can be strengthened as a result of hosting major sporting events (Smith, 2012). The event often involves collaborations between the public and private sectors, as well as opportunities for organisations to expand their networks. This can mean that organisations in both the public and private sectors have better communication links and working relationships with a wider range of partners, and in turn can help to secure new activities for local businesses.
- 4.20 This was the case for regional partnerships in the North-West of England following the Manchester 2002 Commonwealth Games (Smith and Fox, 2007). More recently, the early evidence from London suggests an 'unprecedented' level of partnerships (Centre for Sport Physical Education and Activity Research, 2013:32). It is argued that hosting London 2012 resulted in more joined-up working and better communication links between partners and between the private and public sectors.
- 4.21 However, the impact is not always positive. In the Sydney 2000 Olympics, strained relations between the public and private sectors affected the ability to find a use for venues after the Games (Searle, 2002). From studying partnership-building around pre-Games

training initiatives in three cities close geographically to the Games in Sydney, O'Brien and Gardiner (2006) conclude that partnerships need to be carefully planned for. The city of the three (Hunter Valley) that used networking as a strategic activity and organised a range of formal and informal networking events was able to most successfully build and extend partnerships and thereby benefit the local business community. Those cities that did not consider this a strategic activity did not see these benefits.

Factors which make a positive long-term effect more likely

4.22 When embedded into existing projects, major sporting events appear to act as a coalescing force for a number of aims (Smith, 2012). In previous events, particularly in the Manchester 2002 Commonwealth Games and the London 2012 Olympics, evidence suggests that the events helped catalyse and accelerate a number of existing schemes to regenerate more deprived areas of the cities. The evidence suggests this is most likely to happen where the host has a very clear strategy which builds on the existing strengths of a city (Smith, 2012).

4.23 There is also limited evidence to suggest that a certain type of city or region benefits most from hosting major sporting events. In particular, they are often post-industrial cities which have the basis for significant growth, but where the economy has struggled to recover from the loss of major industries. Important examples of this in the literature include Manchester 2002 and the Turin 2006 Winter Olympics (OECD, 2010).

Increase Movement into Employment and Training

4.24 In line with the wider economic effects, the evidence suggests that there is a pattern in terms of the general effects on the labour market. The most consistent finding is that employment increases in the construction sector in the run up to the event (Smith, 2012). This is also found in the literature reviews conducted by Kasimati (2003) and Gratton et al. (2005) and in a number of individual studies on a variety of major events.

4.25 Inevitably, the employment boosts are highly linked to activity in the wider economy. Therefore this construction boost will generally fall away in the year of the event but other sectors of the economy consistently receive a boost at the time of the Games, most notably tourism and hospitality (Spilling, 1996). Similarly in their meta-evaluation, DCMS find that the construction and events sectors have been the most affected by the London 2012 Olympics so far (2013). As noted in the business section, these sectors see a significant increase in activity and this leads to increased employment opportunities over the short-term.

4.26 In terms of the proportions of these effects, Oxford Economics study of the London 2012 Olympics projects that 78% of the job hours created would be in the construction sector, 15% in tourism and the remaining 7% were elsewhere (2012). Other studies including those by the Centre for Regional Economic Analysis (1999) and Giesecke and Madden (2007) show similar effects. The method of analysis used to estimate short-term effects on employment has been criticised however, for providing over-estimates of the impacts of major events and for relying on estimated data in doing so (Kasitmati, 2003).

Long-term effects

4.27 Overall, the evidence for a long term boost to employment is weaker. Many studies suggest that there is little or no employment boost after the event. Nonetheless, there is some limited evidence for a boost from the most successful events.

4.28 A study into the Manchester 2002 Commonwealth Games found that 6,300 full-time equivalent jobs would be created over the ten years surrounding the Games, while KPMG (2006) estimated that 13,600 full-time equivalent jobs would be created over the 20 year period surrounding the Melbourne 2006 Commonwealth Games. In addition, DCMS (2013) and Oxford Economics (2012) predict a strong increase in employment as a result of the 2012 London Olympics. This is supported by evidence from major sporting events in Barcelona, Turin and Manchester, where there was a boost to employment associated with increased skills which allowed

previously unemployed former industrial workers to gain the skills needed for the knowledge economy (Murtagh, 2007: OECD, 2010).

4.29 Nonetheless, these studies exhibit two distinct problems which make it hard to fully understand the long term effect of hosting major sporting events. In the case of Melbourne and London, the studies are reliant on modelling estimates of the long term effects. On the other hand, the studies on Barcelona, Turin and Manchester use available real data, but inevitably cannot separate out the effects of the event from the wider factors affecting the labour market over a long period.

4.30 Moreover, Brunet (2009) finds that even in Barcelona, where the event was deemed to be a wide-ranging success, employment began to decline again after the event. This was in part caused by the recession which was impacting on Barcelona at the time, but nonetheless undermines the argument made by some that the Games provide a 'soft mattress' in times of recession.

4.31 Early evidence from London suggests that the Games have helped the host boroughs in achieving convergence on a number of criteria. Convergence refers to the process of closing the gap in performance and prospects between the wealthiest and poorest communities across London. Raising these outcome levels is likely to affect long term employability in these areas (Geoghegan, 2013). This is however, part of a long-term regeneration strategy in East London, rather than being simply an effect of the Games themselves.

Who benefits?

4.32 On the whole, any employment increases are specific to the geographical area of the event and may not have a significant impact at the national level (Spilling, 1996). As Giesecke and Madden (2007) note, it is very difficult to assess the effect on the wider economy. Nonetheless they argue that it is far better to assume no impact on the national economy, where none can be clearly observed.

- 4.33 Minnaert (2012) makes the argument that employment opportunities are not evenly distributed, and that it may be challenging to target those who would benefit most. Increasingly, major events have included programmes which target socially disadvantaged groups. However, even where there is an explicit aim, as in the Sydney 2000 Olympics, it appears difficult for employment programmes to reach those who would benefit most (Minnaert, 2012).
- 4.34 The opportunities tend to go to those who already have skills, rather than the long-term unemployed, or those who need most help getting back into the job market (Minnaert, 2012). This is particularly problematic if organisers adopt an overly cautious approach, and only hire those who are strongly qualified for the event. Therefore Minnaert (2012) concludes that general programmes are not sufficient, instead programmes must be carefully targeted at specific groups.
- 4.35 In addition, as with the wider economy, there are likely to be leakages from the spending as a result of multi-national companies being employed to manage the largest projects (Smith, 2012). This means that local people may miss out on employment opportunities, as overseas applicants with specific skill sets may gain the available jobs.
- 4.36 Overall, studies, and in particular economic modelling, have tended to focus on aggregate effects and are therefore unable to capture the distribution of job opportunities. Examples of this include the economic analysis produced on the Sydney 2000 Olympics by the Centre for Regional Economic Analysis (1999) and Giesecke and Madden (2007), which provide gross estimates of employment levels.
- 4.37 More recently, in line with shifting policy focus, government led work on the London 2012 Olympics included a focus on unemployed people living close to the event venue. The London 2012 Meta-Evaluation provides evidence of over 30,000 jobs being directly created in the run up to, and during the Olympic events (DCMS, 2012). In addition, an Olympics Jobs Evaluation by the Greater London Authority finds that an average estimate of 68,900

workless Londoners were helped into employment either directly or indirectly through the Games (SQW, 2013). It remains unclear however, how many of these people were long-term unemployed. It also remains unclear how many of these jobs are long term, and once again, it is difficult to fully separate out an Olympic effect from wider regeneration in East London.

Are there any factors which make a long-term effect more likely?

4.38 Overall the evidence remains inconclusive on how wider economic effects from major sporting events translate into labour market effects. However, post-industrial areas appear to experience the strongest effects. An OECD (2010) study into the staging of global events finds that there were marked improvements to the employment rates in Turin and Barcelona in conjunction with hosting the Olympics Games. In addition Murtagh (2007) finds evidence that unemployment fell from 14.2% to 5.7% in New East Manchester over the period of the 2002 Commonwealth Games.

4.39 As with all work on major sporting events, it is hard to separate out this impact from other factors affecting the economy. However, the evidence suggests a correlation between cities which have suffered from post-industrial decline and a clear reduction in unemployment. This may in part be due to help given to enable workers to gain skills which make them more competitive in a modern 'knowledge economy'.

Volunteering

4.40 Looking at evidence from the Manchester 2002 Commonwealth Games, Ralston et al. (2005) find that major events can act as a catalyst to recruit and develop community orientated volunteering and to build skills in the volunteering sector. They found that around 42% of volunteers surveyed felt more inclined to volunteer again because of their experience.

4.41 Similar evidence on an increased desire to volunteer is emerging at an early stage from London. Dickson and Benson (2013) and DCMS (2013) find that 45% of volunteers who responded to the survey indicated that they would increase their volunteering in future as a

result. Similarly, McInnes (2012) found that 40% of Olympic volunteers were inspired to volunteer for the first time because of London 2012.

- 4.42 Despite the evidence of increased interest in volunteering because of these events however, it should be noted that most of these studies were conducted immediately after the event. There is no clear evidence of how this enthusiasm translates into long-term behavioural change. This is important since it is essential for event volunteers to become regular volunteers if long-term community benefits are to be achieved (Smith, 2012).
- 4.43 Over the longer term, McCartney et al. (2010) found a mixed picture on volunteering from the Manchester 2002 Commonwealth Games. They found no lasting desire to volunteer again but did find that volunteers perceived their involvement to have increased their skills.
- 4.44 There is also a mixed picture beginning to emerge on skills from volunteers at the London 2012 Olympics (Schneider et al., 2013). Overall, as with the wider picture on skills and training benefits from major events, there is a lack of long-term evidence on how event time volunteers benefit in terms of skills, and how this affects their employability in the wider economy.
- 4.45 Moreover, Minnaert (2012) finds that even where the Games do have success, it is hard to get socially excluded groups to become involved and stay involved in the process. She finds that people already in employment are far more likely to fit the model of what Games organisers are looking for in volunteers. Therefore those from disadvantaged backgrounds require more training in order to become involved in the process.
- 4.46 In line with this, Smith (2012) notes that it is important that volunteering projects are designed with extra training, associated qualifications and disadvantaged groups in mind. By doing so, these projects can contribute to long-term social regeneration goals, rather than simply providing cost-effective labour for the duration of the event.

4.47 Eiser (2011) presents a similar argument, and finds that the Manchester Pre-Volunteering Programme was an example of the sort of programme which can help to get disadvantaged people volunteering. The programme was successful in providing extra training to those who had fewer skills, and in setting a minimum quota to ensure that at least 10% of the participants came from disadvantaged backgrounds. This led to 862 people from disadvantaged backgrounds coming through the Pre-Volunteer Programme being employed or becoming an accredited volunteer at the Manchester 2002 Commonwealth Games (Cambridge Policy Consultants 2002).

Long term boosts as a direct consequence of labour market activity?

4.48 Overall, the evidence for a long-term boost to productivity in the labour market is limited. Volunteering and employability programmes can help to increase skills and experience, but there is little evidence that this will have a long-term impact on employability. The evidence suggests that it is extremely difficult to target those most in need and as a result, those out of the labour market are unlikely to achieve the new skills required. On the whole there remains a lack of clear evidence of a direct impact on employability or labour market participation as a result of major events.

Tourism Section

Short-term effects

4.49 Fourie and Santana-Gallego (2011) find consistent evidence of a short term increase in tourists as a result of major sporting events. They use econometric modelling to assess the impact of major sporting events across a wide range of sporting events, including both the Summer and Winter Olympics, and the World Cup (169 events in total). They find that on average tourist visits increase by roughly 8% in the year of the event but that the effect varies widely according to the type of event taking place.

4.50 This is echoed by Gratton et al (2005), who find that overseas tourism increased by 7.4% in Greater Manchester in the year of the

Commonwealth Games (2002) compared to 2000. Kang and Perdue (1994) also found that amongst an overall positive outlook for tourism as a result of the 1988 Seoul Olympics, the most positive effects were in the year of the event before declining over time.

- 4.51 The boost in tourism in the period of the event occurs not just because of increased visitor numbers, but also because of increased spending per person during the period (Chalip, 2004). This is important because visitor numbers do not always rise in the period of the event due to displacement. In London, the actual number of visits fell in quarter 3 by 4.2% compared to the same period in 2011.
- 4.52 In their meta-evaluation, DCMS (2013) find that this suggests substantial displacement of regular tourists who were deterred by overcrowding, disruption and price rises. Crucially however, DCMS found that the average spend of Games visitors was around double that of an average tourist. This meant that tourist spending actually rose by £235 million (excluding ticket sales) in the 3rd quarter of 2012.
- 4.53 Moreover, looking at the year as a whole, Visit Britain (2013) found that there was a 1% increase in visitor numbers to the UK in 2012 compared to the previous year, and a 4% increase in visitor spending over the same period.
- 4.54 Despite consistent predictions and findings of increased tourism numbers however, the European Tour Operators Association (2010) find that cities consistently over-estimate the effect. This is in large part due to the displacement of tourists who are put off visiting the city during the period of the event because of perceptions of overcrowding or increased prices. They find this led to lower hotel occupancy rates than expected in three of the most recent Summer Olympic host cities. In addition, there is evidence from China over the year of the Beijing 2008 Olympics, that contrary to predictions, tourism numbers and expenditure actually decreased in the year of the event (Li et al, 2011).
- 4.55 Problems with displacement are not uniform however. Instead the scale of displacement is highly dependent on the nature and size of

the city, and the time of year in which the event is being held. Unlike the evidence of substantial displacement in London, KPMG (2006) found that the displacement effect in Melbourne was relatively low because the event was held in winter, meaning that there were fewer tourists visiting the city anyway. In addition, hotel occupancy in the month of the 2002 Commonwealth Games in Manchester was the highest it had ever been (Cambridge Policy Consultants 2002).

4.56 There is also evidence that tourism campaigns related to major sporting events can have significant effects. The most high profile of these was the GREAT campaign which highlighted positive aspects of Great Britain to a worldwide audience in an attempt to boost the increased profile of the UK in the run up to the Olympics. UKTI (2013) analysis suggests that this campaign will deliver around £600 million in extra revenue for the UK.

Long-term effects

4.57 The evidence for a long-term tourism boost is not consistent (Kasimati, 2003). Some studies have found no discernible boost to employment in the years following the event (Spilling, 1996; Giesecke and Madden, 2007). On the other hand, many studies predict a tourism boost, and others have concluded that there was a strong tourism boost after the event (Brunet, 1996).

4.58 There have been forecasts made of tourism impacts from recent major multi-sports events in the UK. In both the Manchester 2002 Commonwealth Games and the London 2012 Olympics, the impact is estimated to be positive in the years surrounding the event. Cambridge Policy Consultants (2002) forecasted that the 2002 Commonwealth Games would attract 300,000 additional visitors to Manchester per annum, generating additional spending of £18 million.

4.59 In the case of London, inevitably at this stage there is very limited evidence on the long-term tourism impacts. Oxford Economics (2012) assessment of the economic impact of the Games, estimates that the Games will be responsible for an increase of 10.8 million tourist visits between 2005 and 2017. They estimate that this will

support a net tourism gain of £1.24 billion over the period between 2007 and 2017 and that 61,000 additional job years will be supported by the additional expenditure. Oxford Economics estimate that most of these improvements will take effect after the Games, with 79% of the impact expected from 2013 onwards.

- 4.60 Smith (2012) notes that there can be a positive long-term tourism impact from hosting major sporting events. However, this is not guaranteed. He finds that longer-term tourism effects relate to altered post-event demand, the supply of tourism facilities and the provision of new capacity.
- 4.61 In terms of altering post-event demand, cities use major events as a prime opportunity to re-brand their perception in the eyes of tourists. This is not straightforward, and requires a careful long-term strategy (Anholt, 2007). Major sporting events are therefore not a branding opportunity in themselves, but rather a media opportunity. In order to capitalise on this, it is essential that the host has a clear message which they can demonstrate in the short window when the global media focus is switched on.
- 4.62 Looking at the case of the Beijing Olympics, Zhang and Zao (2009) agree that major sporting events can promote certain aspects of the city. They will however, have limited long-term effects unless followed by a longer-term strategy that links the city to its current social and economic environment, and to its own core values; and perhaps most importantly, such events must be embraced by the people of the city themselves.
- 4.63 Westerbeek and Linley (2011) agree that a long-term approach is vital if a city branding approach is going to have a long-term effect. They find that cities which consistently hold a wide range of events are more likely to see a positive impact on city perceptions in the longer term than those that tend to focus on single-purpose events. They quote the example of Melbourne, which has re-branded itself as one of the major sports events destinations in the world. They have built on hosting events like the Commonwealth Games, Australian Open Tennis and the Melbourne Grand Prix to develop a lasting image as a place where major events are happening. In doing so, they have helped to create an events industry in the city

which employs large numbers of people and generates significant direct and indirect expenditure (Westerbeek and Linley, 2011).

- 4.64 Some of the most positive long-term tourism effects were seen in post-industrial cities, in particular the Barcelona 1992 Summer Olympics and the Turin 2006 Winter Olympics (OECD, 2010). Both cities used the event to help develop the city's image and infrastructure as part of the wider re-development of the city and this helped to radically increase the perception as a place for tourism. Barcelona's Olympic Games in particular have been picked out as an example of where a city used an event to strongly re-brand its image to tourists. They did so by both highlighting the natural beauty and the culture of the city (as further discussed in the Connected section see page 47).
- 4.65 In addition, there is some limited evidence emerging that the Games have helped the perception of the UK abroad. The Nations Brands Index (2013) saw the UK move up from 4th to 3rd in overall international reputation (DCMS, 2013). Given the stable nature of this index, even a small increase near the top of the table such as this is seen as important. Nonetheless it is unclear how this will continue in the long-term, and how this will translate into quantifiable tourism numbers.
- 4.66 However, it is extremely difficult to disentangle this effect from the wider transformation of these cities which was happening at the time. Furthermore, the impact is not always positive. There is the potential for a negative impact on the image of a city, or region, if the event is not seen as a success, or if it highlights a perceived weakness in a country (Smith, 2012). This is particularly likely if the host adopts a branding approach which contradicts the underlying characteristics and assets (Herstein and Berger, 2013). It is also extremely difficult to control the brand of a city in the same way as product branding is controlled. Cities have a wide variety of objectives, and it is extremely difficult to demonstrate such a heterogeneous identity through a major sporting event.

Problems associated with games-time tourism

- 4.67 In his examination of the Lillehammer 1994 Winter Olympics, Spilling (1996) found that despite an initial tourism boost, tourism operators over-estimated the scale of the Olympic boost. In doing so, they created over-capacity in the tourism sector, leaving many hotel beds unfilled after the event. Looking at the same event, Teigland (1999) finds that the tourism boost was short-term and declined quickly after the Games. As a result, many businesses in the tourism industry in the Lillehammer region struggled from the lack of demand and many businesses closed down in the years following the event.
- 4.68 There is also a problem that effects may be asymmetric and as such the wider area surrounding the event venue may not benefit to the same extent as the city itself. The London East Research Institute found that while the immediate city saw an increase in tourist visits in Los Angeles and Sydney following their respective Olympics, there have been problems with the surrounding area recording a reduction in tourist numbers (London East Research Institute, 2007). Dansero (2010) also found that while there was a 21% increase in tourism in the Metropolitan Turin area in the year following the event, there was a 11% decrease in tourism numbers in the wider area over the same period.

Conclusion

- 4.69 This chapter has considered the effects on business, the labour market and tourism. Within the evidence, there are some core themes which repeat across the sectors.
- 4.70 It is clear from the evidence that the most important short-term impacts are likely to be felt in the construction, hospitality and tourism industries. If there are long-term impacts, the evidence is strongest for a positive impact in the tourism sector, where an improvement to the perception of the host can lead to more visitors to the area.
- 4.71 Nonetheless, there is also evidence that there can be unintended consequences of hosting major events. This is most consistently

seen where the event is seen as being unsuccessful or where the media coverage highlights some of the perceived negative aspects of the host area.

4.72 Overall therefore, more long-term research is needed on exactly which factors make positive long-term economic legacies more likely.

2015 Addendum to Flourishing Theme

4.73 Since 2013, new evidence has emerged to further support the boost to businesses in the host country of hosting a major multi-sports event. Economic modelling has found that approximately 1,500 new businesses were created in British Columbia between 2003 and 2010 as a result of hosting the 2010 Winter Olympics in Vancouver (University of British Columbia, 2013) . For London 2012, Games contracts and sub-contracts created a significant amount of business. The ODA (Olympic Delivery Authority) sub-contracted out £5.6 billion worth of business for the Games (House of Lords, 2013). Further, many of these business opportunities were obtained by SMEs (Calvo, 2014).

4.74 Businesses benefited from outside the London area, although the indications are that the South East of the UK benefited disproportionately (House of Lords, 2013). Concerns have also been raised that Ethnic Minority Businesses (EMBs) appear to have been disadvantaged with regards to business opportunities around major multi-sports events (Calvo, 2014). A systematic review by The What Works centre concluded that there were possible increased trade imports and exports as a result of major sporting and cultural events, although effects may be short-lived (What Works Centre, 2014).

4.75 There is some additional evidence that the Vancouver 2010 Winter Olympics appears to have positively impacted the regional employment rate between 2003 and 2010, although the precise magnitude of this effect has not been identified by researchers due to the difficulty in establishing a counterfactual and thus attributing changes in employment levels to the Games (University of British Columbia, 2013). A report on sport and culture from the What

Works centre concludes that impacts on the local economy tend to be either small or negligible and any wage and income effects are limited to the immediate locality or certain types of workers (What Works Centre for Local Economic Growth, 2014).

- 4.76 Further evidence in relation to the London Olympics supports the potential for positive impact on tourism (House of Lords, 2013). There was an increase of 1.3 million international visitors in London in 2013, making it one of the most popular visitor destinations in the world. International visits to the UK increased by 6% during 2013 and a 13% increase in visitor spend compared to 2012 (Cabinet Office, 2014).
- 4.77 One mechanism can be through increased awareness of the host city and an enhanced reputation via media coverage (Sant et al., 2013). However, the suggestion was made that this can be short-lived if further efforts to maintain momentum with hosting of other events is not maintained. Also, it was suggested that there can be negative impacts with respect to tourism such as host city avoidance relating to overcrowding and concerns about transport (Sant et al., 2013).
- 4.78 A study of international tourist numbers associated with mega sporting events in New Zealand included a look at the impact of the 1990 Commonwealth Games in Auckland. It indicates a positive short-term impact on international tourism. It examined like for like months from 1979 to 2009 and significant increase was found associated with the Games (Nishio, 2013). They also found no evidence of tourism displacement or 'crowding out'.

Summary

- 4.79 Short-term boost to businesses and tourism is supported by further evidence from the Vancouver Games, 1990 Auckland Commonwealth Games and London 2012 Olympics. Other messages remain unchanged. Impacts are likely to be short-term with limited evidence for long-term sustained impacts, such as on the economy, with a significant issue around attributing any contribution to the major multi-sports event. Also, long-term

activity generated by the Games tends to be more important for the local area, rather than the national economy.

4.80 The message from the earlier review that some of the benefits do not automatically go to traditionally disadvantaged groups without targeted action is supported by evidence of lower than expected benefit to Ethnic and Black minority businesses (EMBs).

5. SUSTAINABLE

5.1 This section looks at evidence in relation to improvement of the physical and social environment, impact on communities, as well as the use of multi-sport events to demonstrate and showcase sustainable design and practices.

Improving the physical and social environment

5.2 The impact on the physical and social environment varies from event to event. One crucial factor for successful event-related regeneration is for plans to be well integrated into existing long-term objectives (Smith, 2012). Multi-sport events therefore often extend and accelerate existing plans, rather than generating new regeneration strategies.

5.3 The Barcelona 1992 Olympics is often used as an example to demonstrate how a city can successfully use a major event to widen urban regeneration. As discussed in the flourishing section, the city used the Games to help develop the infrastructure which boosted economic growth in the city (Brunet, 2005). One of the key factors in Barcelona's success was that Games development plans were incorporated into long-term existing regeneration strategies. It has been argued however, that the success of Barcelona must be seen through its unique context, which included EU funding and a resurgence of Catalan identity (Smith, 2012). There are also some reports of problems associated with Barcelona's regeneration. For example, it is suggested that many small businesses were evicted from the Olympic site, and this had impacts on the local community (Raco, 2004).

5.4 There is also evidence from Manchester 2002 that the Commonwealth Games helped to support sustainable development opportunities in the city (Cambridge Policy Consultants, 2002). These included commercial developments in East Manchester including a regional retail centre, a four star hotel, offices and new housing developments supporting up to 3,800 jobs. There was also the development of the North Manchester Business Park which was

estimated to add a further 6,000 or more jobs in the city (Cambridge Policy Consultants, 2002).

- 5.5 Moreover the London 2012 Olympics are beginning to be cited as an example of successful regeneration, contributing to accelerated and expanded regeneration in East London (Centre for Sport Physical Education and Activity Research, 2013; DCMS, 2013). The improvements include remediation and the cleaning-up of a substantial amount of land, and the demolition of disused buildings. These improvements have made space for six permanent sport-venues, as well as new housing, 100 hectares of green space, business space, and a new shopping-centre development. Many of these changes would have occurred in absence of the Games but the process was accelerated and more integrated as a result of the Games (DCMS, 2013).
- 5.6 It appears the Sydney 2000 Olympics provide a contrasting example. Commentators have argued that many developments around these Games failed to meet the needs of the local community. The transport network developed for the Games was reportedly not in consistent use after the event, the very large commercial buildings were initially difficult to fill, and there was a distinct lack of social housing (Smith, 2012). With the development of a distinct legacy plan in the years following the event however, the situation improved.
- 5.7 A similar problem with transport designed for short-term use has been noted in relation to the Athens 2004 Olympics (Krohe, 2010). In the Vancouver 2010 Winter Games, the promise of social housing which played an important part in the bid does not appear to have come to fruition (Smith, 2012). Kassens-Noor (2012) analyses the role of the IOC in influencing cities' long-term urban regeneration and transport plans. He concludes that priority sometimes appears to be given to short-term demands that do not always benefit the local population and sometimes original regeneration plans have been abandoned.
- 5.8 There is also some evidence in the literature that major sporting events can have the unintended consequence of displacing the local population. Porter (2009) conducted in-depth interviews with

a small number of people affected by major sporting events, highlighting the difficulties experienced. The issue of displacement has also been highlighted in relation to the Beijing 2008 Olympics. Commentators argue that staging the event has involved mass relocation and displacement of poor residents. This in turn has contributed to increased social inequality, economic hardship, and breaking community networks (Broudehoux, 2007; Shin, 2009). Notably, some recent events have made use of vacant and derelict land and have involved the remediation of contaminated land. Rather than forcing existing communities to relocate, using land that is in disuse has been a way of helping to re-build on the local physical environment.

- 5.9 Nonetheless, it has been argued that more social housing should have been created, raising the question of who benefits (Ijeh, 2013). Interviews with people living locally in the East End of London also suggest an increasing divide between the redeveloped area and non-developed areas (Benton, 2013). Rising house prices are likely to contribute to this process (Kavetsos, 2012; Kontokosta, 2012). The effects of these changes will take years to be fully understood and longitudinal research is therefore needed in order to fully appreciate these developments.

Demonstrating sustainable design and environmental responsibility

- 5.10 After concerns were raised in relation to the Albertville 1992 Winter Olympics in France, the first Games to try to comprehensively address environmental issues was Lillehammer, Norway, in 1994. The same year the importance of the environment and sustainable development was added to the Olympic Charter. The International Olympic Committee (IOC) now regards the environment as the third dimension of Olympism, alongside sport and culture.
- 5.11 Since then, major sporting events, in particular the Olympic Games, have been used to showcase innovative design and high standards in sustainable practice. The Sydney 2000 Olympics was the first large sporting event to put sustainability and high environmental

standards at its core and to make them an important point in the bidding process. However, it has since been suggested that many contractors found it difficult to adhere to these practices and the standards had to be lowered in order not to lose private sector buy-in (Smith, 2011). This has led to some questioning of the green credentials of the event (Chen, 2013).

- 5.12 A decade later, the Vancouver 2010 Winter Olympics aimed for an unprecedented level of commitment to sustainability. The Olympic Village was labelled the most energy efficient neighbourhood in the world and the event was used to showcase cutting-edge technologies (Smith, 2012). The long-term learning from this however, does not appear to be captured in the literature thus far.
- 5.13 The London 2012 Olympics demonstrated a range of sustainable policies and practices, in seeking to become the ‘most sustainable Games ever’ (DCMS, 2013: 20). These initiatives included at least 90% of demolition waste being reused or recycled, venues being designed to reduce water consumption by 40%, nearly 80,000 tonnes of carbon emissions avoided by producing concrete on site using recycled content, and the Olympic Village achieving 25% more energy efficiency than current building regulations. Other large-scale UK projects, such as Cross-rail and High Speed 2, are now also using key features of this sustainability approach (DCMS, 2013). London also inspired the creation of ISO 20121, a new environmental standard management system which is now also used in Glasgow 2014 Commonwealth Games and Rio 2016 Olympics.
- 5.14 McCarthy (2013) suggests that there are signs of a marked change in sustainability ambitions as a result of the Games. Nonetheless, concerns have been raised about whether these standards are being adopted within small and medium size public sector projects and whether there is enough impetus behind their promotion within business, sport, culture and event sectors (Commission for Sustainable London, 2013).

Strengthening and empowering communities

- 5.15 The literature in relation to this outcome is much less developed than on improvements to the physical environment, but some evidence has emerged.
- 5.16 Large multi-sport events provide an opportunity to engage communities but it has been suggested that for this to succeed, people need to feel that they are part of the planning process from the very beginning (Smith, 2012). Barcelona has been highlighted as a successful example. Rather than only focusing on large prestige projects, regeneration also included many small scale neighbourhood interventions, such as the provision of public facilities to marginalised communities. Nonetheless, there has been some criticism that the process should have involved more participation from local neighbourhoods (Calavita and Ferrier, 2000).
- 5.17 Most Games have not explicitly planned for community engagement however. Based on her primary and secondary research into previous Olympics, Minnaert (2012) concludes that Athens 2004, Torino 2006, and Beijing 2008 all relied on 'trickle down' effects. This made it more difficult for benefits to reach the communities and few benefits were identified after these Games. On the other hand, Sydney 2000 appears to have left a lasting legacy for socially excluded groups in terms treatment of homeless people (Minnaert, 2012).
- 5.18 There is some early evidence from the London 2012 Olympics of positive community engagement. A survey of 1000 young people who had engaged in Games-related activities found that a large proportion felt more engaged with their community as a result and wanted to participate in further projects (Legacy Trust UK, 2013). Similarly, the evaluation of the Inspire programme reports that more than half of the participants surveyed see themselves as becoming more engaged with their local community as a result of being part of the programme (Hills, 2013). Nonetheless, questions remain as to whether these intentions will translate into actual behaviour change.

Conclusion

- 5.19 It is clear that event-related regeneration can leave a positive long-term legacy. In particular, evidence from past major events suggests that they can speed up and extend regeneration plans and thereby act as catalysts for accelerated socio-economic development. Nonetheless this will not happen automatically, and plans need to be well integrated into the existing policy landscape and must be formed early in the process (Pitts, 2009; PwC, 2011; Raco, 2004; Smith, 2012). The evidence shows that community engagement is also important.
- 5.20 Overall, the literature suggests two major problems which can limit the benefits of this regeneration effort. First, the infrastructure can be too focused on the Games-time period. This can mean that improvements may be of little use to the local population after the event and can be under-utilised. Second, there is evidence that unless careful planning is in place, the local community may not feel the benefits, and may even be displaced by the activities.
- 5.21 Major sporting events are now also commonly used to showcase sustainable innovative design and practices. The London 2012 Olympics is a recent successful example. Nonetheless, more evidence is needed on how these demonstrations of environmental practices translate into long term behavioural changes.

2015 Addendum to Sustainable Theme

- 5.22 Since 2013, new evidence has emerged which lends further support to the understanding that regeneration can be a positive legacy from major multi-sport events. However, regeneration can be slow (Yamawaki & Duarte, 2014). A report on the legacy from the London 2012 Games states that 2500 residents are now in the converted athletes village. There is evidence of bringing business into the area; BT Sport is already in place and broadcasting and 875 students are now attending the new Chobham Academy, which opened in September 2013 (Cabinet Office, 2014).
- 5.23 London Assembly reported in December 2013 on the work of the London Legacy Development Corporation (LLDC) which oversees

the public investment in regeneration work associated with the London Olympics. They found that, in addition to achievements highlighted in the Cabinet Office paper (2014), LLDC has secured operators for all venues; The Copper Box has exceeded its membership target at the new community gym; LLDC has exceeded its targets for employment in construction jobs associated with conversion of the park venues for post Games use (41% resident in the growth boroughs, 17% previously unemployed, 62% from BME background and 7% women).

5.24 Also, there were 59 apprenticeships across construction and non-construction jobs accounting for 5% of the workforce. Further, LLDC have been applying pressure on venue operators to pursue apprenticeship opportunities, for example GLL, the operator of aquatics centre and Copper Box, has committed to providing 36 apprenticeships over 10 years. However, other venues are still to be converted for post Games use and the report comments that medium to longer term regeneration is not a given with a funding shortfall a potential issue. Also, there is underperformance at present in respect of affordable percentage of housing putting achievement of the target of 35% at risk.

5.25 More evidence has come to light with respect to the issue of displacement. This has been shown to be the case for several areas around the Olympic Park developed for the Sydney Olympics where the houses are occupied by those on higher incomes (Yamawaki & Duarte, 2014). A study of the Beijing Olympics suggests that reports citing displacement as a result of the Beijing Olympics to be in the region of 1.5 million is likely to be an under-estimate. This is due to the lack of inclusion of migrants as they were not eligible for compensation and, therefore, not likely to appear in Government statistics.

5.26 Based on interviews with host community permanent residents and migrants, researchers found that in the lead up to the Games, factories were closed, migrants 'persuaded' to leave the city, beggars, street vendors and unlicensed businesses cleared from the streets (Shin and Li, 2013). A qualitative study of the East End of London in relation to the 2012 Olympics has also found some

evidence of displacement and gentrification (Bernstock, 2014). Other research has concluded that facilities are likely to have an impact on very local property prices with the need to be aware of who are the likely winners and losers (What Works Centre for Local Economic Growth, 2014).

- 5.27 Evidence was found indicating common traits in the transport legacy associated with hosting Olympic Games, based on an examination of International Olympic Committee (IOC) Transfer of Knowledge documents. The researchers argue that the evidence indicates there are six common transport legacies: improved airport to city centre connections; airport improvement; creation and revitalisation of parks with high capacity transport access; new high-capacity transport modes (if venue clusters not directly connected to existing modes); additional road capacity; and advanced intelligent transport systems (Kassens-Noor, 2013).
- 5.28 A report by the commissioner of the Transport for London (TFL) (Hendy, 2014) provides indications of a successful transport legacy for London post-Games, for example increased levels of accessibility to all buses in London (step free); new low floor and fully accessible underground trains; and the 'Strategic Coordination Unit' to ensure collaboration between local authorities, transport operators and event organisers has been used successfully several times since the Games.
- 5.29 Finally, an emerging message is that major multi-sport events can create what are initially temporary environments specifically for the Games that then become permanent but without full and proper environmental assessment procedures having been followed. The example given is in relation to the Sydney Games where a temporary marina is now being extended and becoming permanent which was originally intended only as a temporary development (Smith, 2014).

Summary

- 5.30 Further evidence supports the understanding that major multi-sports events can lead to regeneration in host communities, although some of that evidence suggests this can be slow to be

realised and medium and longer-term regeneration may be put at risk from waning commitment to legacy once the event has taken place.

- 5.31 Transport is a key infrastructure legacy from major multi-sports events and new evidence suggests there are common traits to transport legacies from major multi-sports events. These are improved airport to city centre connections; airport improvement; creation and revitalisation of parks with high capacity transport access; new high-capacity transport modes (if venue clusters not directly connected to existing modes); additional road capacity; and advanced intelligent transport systems.
- 5.32 More evidence has emerged from the London, Beijing and Sydney Olympics of issues with displacement and gentrification as potential pitfalls in regeneration legacy associated with major multi-sports events.

6. ACTIVE

6.1 This section looks at evidence of achieving legacy aims in relation to sport participation and physical activity. It also looks at legacy of physical sport infrastructure, specifically post-Games use of venues and capacity building of sports clubs at the grassroots level.

Physical activity and participation in sport

6.2 In order to identify changes to participation levels, Veal (2003) examined national leisure participation survey data in Australia between 1985 and 2002. Issues such as constant changes to survey design made tracking over time far from straightforward and he stresses the caution required in interpreting data.

6.3 Veal demonstrated that following the Sydney 2000 Olympics, seven Olympic sports showed an increase in participation, while nine showed a decline in participation. Comparison with non-Olympic sports shows a similar pattern of small rises and declines, providing a very mixed picture. He later updated this research looking also at the Rugby World Cup in 2003 and Melbourne in 2006 alongside the Sydney data (Veal, 2012). Sydney data suggested a small non-significant increase which followed a substantial decline, and thus Veal suggests the Games could have been mitigating further decline. Data in relation to Melbourne, on the other hand, showed a small decrease between 2006 and 2007. He concludes that the available evidence is still insufficient to draw any strong conclusions and more research is needed.

6.4 A number of studies have reviewed the existing research into whether hosting a large multi-sport event increases levels of physical activity and participation in sport. McCartney et al. (2010) conducted a systematic review looking at sources published between 1978 and 2008. Their study highlights the lack of robust evidence. In terms of sport participation, only two studies passed their inclusion criteria. One of these studies suggested a decrease in sport participation levels after Manchester 2002 Commonwealth Games while the other suggested an increase from the early 1980s to 1994 in relation to the Barcelona 1992 Olympic Games.

However, both studies were regarded as being of lower quality. McCartney et al. conclude that the evidence base is not sufficient to either confirm or refute the idea that sport participation will increase as a result of hosting such largest sport events.

- 6.5 Minnaert (2012) examined data from academic and non-academic research and conducted interviews with stakeholders from seven Olympic host cities (Atlanta, Nagano, Sydney, Salt Lake City, Athens, and Turin). She concludes that events tend to have the greatest impact on those who are already participating in sport and that there is little evidence of sustained changes in participation levels. Similarly, the East London Research Institute (2007) concludes that although there were signs of short-term increases in participation after the Sydney 2000 Olympics and the Barcelona 1992 Olympics, it is unclear whether these increases were in fact a result of the Olympics and there is no evidence of long-term effects (see also Campbell, 2012).
- 6.6 There has already been data published in relation to the London 2012 Olympics, but it is still too early to draw firm conclusions about the long-term impact on sport participation and physical activity.
- 6.7 The meta-evaluation of the London 2012 Olympics reports a small increase in the proportion of adults taking part in sport once a week between 2005/6 and 2012 (DCMS 2013). Sports participation data published since the meta-evaluation suggests some decline in England in 2013 (Sport England, 2013).
- 6.8 Wider physical activity levels were not specifically tracked in the meta-evaluation. The most recent data on physical activity in England was published in 2013, and shows no change in physical activity in recent years (Craig and Mitchell, 2013).
- 6.9 Surveys tracking sport participation levels over time suggest a significant, though small, increase in 2012 compared to 2005/2006¹

¹ Taking Part Survey recorded an increase of 3.5 percentage points in 2012 compared to 2005/2006 and Active People survey showed an increase of 1.8 percentage point over a similar time period.

(DCMS, 2013). There does however appear to be a small dip in the data in early 2013. The first major study to capture the wider effects on physical activity in England in the year of the Olympics has also been released (Health Survey for England, 2013). It also shows a mixed picture, but overall it shows no significant change to participation levels in the wider population.

- 6.10 Nonetheless, when asked explicitly, many people agree that London 2012 has inspired them get more active, in particular people who are already taking part in sport (Garside, 2013; Centre for Sport Physical Education and Activity Research, 2013; DCMS, 2013; TNS BMRB, 2012). Although it is still unclear whether these beliefs will translate into actual changes in behaviour, they do demonstrate positive perceptions of the event and a willingness to be inspired and take part. There are also indications that more people are taking up active travel, in particular cycling, during and after the Games (Grous, 2012; LOCOG, 2012), although the long-term trend is yet to be established.
- 6.11 Evaluations of legacy programmes such as the Inspire Programme (Millward, 2013) and Street Games (Hills, 2013) also suggest that some, in particular young people, have benefitted from ‘event-themed’ activities which aim to build on the momentum of the Games. The rigour of these evaluations varies and suggests mixed success. Moreover, the scale of these programmes is unlikely to be large enough to affect population levels of activity and participation.
- 6.12 Weed (2009) discusses the processes that may be involved in increased sport participation. He outlines the ‘demonstration effect’, which involves people being inspired to take up or do more sport as a result of watching elite athletes, and the ‘festival effect’ which involves people being inspired to participate in sport and culture activities by the excitement and the positive atmosphere around the event (see Smith, 2012). Weed concludes that there is mixed evidence for a ‘demonstration’ effect and that the effect is often short-term. If anything, these effects appear to work for people who are already participating in sport, and may do it more frequently or switch to another sport. The evidence for the

existence of a festival effect is also limited. Weed (2009) suggests that positive perceptions of, and attitudes towards, the events are important in this regard.

6.13 Weed (2009) also questions the direct link between elite sport events and community participation in physical activity, i.e. the 'trickle down' effect. He points out that hosting the event is not enough, there needs to be a plan for supplemental activities to leverage the main event. Smith and Fox (2007) make a similar argument when they describe 'event-themed' as opposed to 'event-led' regeneration in relation to the Manchester 2002 Commonwealth Games. Rather than being directly linked to the Games, the Manchester Legacy Programme used the Games as a hook to bring people in and create momentum. The programme included activities for young people to get involved in sport and art, activities which continued for some years after the event.

Factors which make an increase in participation more likely

6.14 There is little clear evidence for a specific mechanism by which major events increase physical activity. This is an area which would benefit from further long-term primary research. Nonetheless, the evidence does suggest that positive effects are more likely where there are long-term strategies which engage with local communities at a grass-root level.

Active infrastructure

Games Venues

6.15 Looking at previous Games, there is great variation in success in integrating venues into the local landscape and securing post-Games use. Successful examples include the Barcelona 1992 Olympics and the Los Angeles 1984 Olympics. These host cities made use of existing venues to a large extent and built new venues only when there appeared to be a long-term need for them (Smith, 2012).

6.16 On the other hand, many commentators have suggested that the Sydney 2000 Olympics did not have sufficient plans in place for

post-Games use. They argue that the main stadium was too big for local needs and ended up struggling in competition with other smaller venues (Searle, 2002; Biearch, 2011). The Athens 2004 Olympics faced even more difficulties with stadia being left unused for several years after the event and with a bill of \$100 million per year for their upkeep (Krohe, 2010). Smith (2012) suggests that a lack of public and private sector partnerships was a contributing factor to Athens difficulties. Without private sector engagement and buy-in, the public sector ended up solely responsible for a range of very expensive venues.

6.17 Important factors for successful use of Games venues are early planning, flexibility and good management. This approach was largely adopted by the Manchester 2002 Commonwealth Games (Branson, 2012). An agreement with Manchester City Football club was in place in advance. It involved them taking over the stadium after the event and the extra revenues resulting from having a larger venue would be handed over to the city (Smith, 2012).

6.18 London venues secured their post-Games use relatively early, though not without controversy. The main stadium was first planned to host mixed sports, mainly athletics, but its lease was later awarded to a football club and it included a conversion to a smaller number of seats. Balancing elite and community use in these venues is a long-term challenge, but it is still too early to know whether this will be achieved (The Select Committee on Olympic and Paralympic Legacy, 2013).

Grassroots active infrastructure

6.19 There is also limited evidence that there can be a tension between funding for elite-level sport, and providing the infrastructure for grassroots participation. A review of sport policy for the Australian Government finds that a clear focus on winning medals at major sporting events, including the 2000 Sydney Olympics has resulted in a 'neglect of the fundamental basis of sport' in the country (Crawford, 2009: 142). Therefore there was little focus on participation in the wider population.

6.20 A limited amount of evidence from London 2012 also suggests that legacy aspirations in this area may be undermined by wider government policies. Based on a survey of sport facility managers in England and their perceptions about the impact of the London 2012 Olympic Games, Kavetsos (2009) reports concerns about a diversion of funds away from local clubs as a result of the Olympics. Another survey among sports clubs raised concerns about difficulties in meeting demands following the event (Cox, 2013; Sport and Recreation Alliance, 2013). The Smith Institute (2013) also report concerns that changes to funding for schools sport will result in the Olympic legacy being lost.

Conclusion

6.21 In conclusion, the jury is still out with regards to the potential increase in physical activity and sport participation in relation to hosting large sporting events. The evidence base is small and limited. If anything, it seems to suggest the likelihood of increasing participation is highest for people already taking part in sport.

6.22 Moreover, the 'trickle down' effect is unlikely to work. Instead there needs to be early planning and engagement much wider than the event itself. Rather than being 'bolted-on extras', these plans need to be firmly grounded in existing long-term strategies for sport and physical activity in order to not lose momentum after the event.

6.23 Games venues need to be integrated into the existing community and designed for local needs, which is likely to involve public and private partnerships. However, in order to increase participation levels, building capacity at the grass-root level may be even more important. Using the Games for leverage, early plans need to be in place for supporting clubs and school sport.

6.24 The evidence also points to the importance of embedding legacy ambitions into long-term strategies and policies on health, sport and physical activity, and considering the effects of wider interventions to ensure policy alignment.

2015 Addendum to Active Theme

- 6.25 Since 2013, little further evidence has come to light and there is no change to any of the messages from the earlier review. A study that examined the impact on physical activity in a representative sample of more than 19,500 Canadian children and young people (age 5-19 years) from hosting the Vancouver Winter Olympics found no measurable impact on objectively measured physical activity (pedometers) or the prevalence of overall sports participation (Craig and Baumann, 2014).
- 6.26 No further empirical evidence was encountered that examined either the demonstration or festival effect in relation to hosting major multi-sports events. However, there is some evidence from a study of spectators at smaller single sports events in the UK suggesting a positive influence on intention to increase participation in sport with an impact on both those already active and those who were previously uninvolved in sport. Although, it is not known how well that intention translates into actual action (Ramchandania, 2014).
- 6.27 All eight venues for the London Olympics now have their futures secured, however there remain some concerns over access to these facilities by the surrounding communities, access for the disabled and those on low incomes (House of Lords, 2013).

Summary

- 6.28 Little further evidence was encountered and there was no change to the messages of the review in 2014 that while major sporting events commonly leave an infrastructure legacy, and there can be a boost to host nation sporting performance, the evidence for a relationship between hosting major sporting events and improving population sports participation and physical activity is mixed and inconclusive.

7. CONNECTED

- 7.1 This section looks at evidence in relation to increases in cultural engagement, impacts on creative sectors and civic pride, as well as Games-related educational programmes. Cultural engagement refers to participation in cultural activities or attending or visiting a cultural event or place. The section also considers the impact that events can have on the perception of cities as a place for cultural events.
- 7.2 Although the Cultural Programme has been part of the Olympics for about 100 years, the idea of creating a legacy from major sporting events by increasing cultural participation is still relatively new. As a result, the evidence-base on this topic is very limited with a distinct lack of empirical data (Garcia, 2014) and the evidence which is available is heavily weighted towards Olympic events.

Increase cultural engagement

- 7.3 The limited empirical evidence prior to the London 2012 Olympics means that there are very few conclusions that can be drawn about the success and effectiveness of cultural events. Nonetheless, there are arguments that major sporting events can help to promote local culture (Cho and Bairner, 2011). Using the example of the Seoul 1988 Olympic Games, they argue that major events should not be seen as an inevitable challenge to local culture but as an opportunity to strengthen the indigenous identity of the host.
- 7.4 There is evidence from Melbourne that the 2006 Commonwealth Games resulted in increased desire of residents to participate in community events (Insight Economics, 2006). The same study also found that 32% of people in the State (Victoria) reported a great or moderate increase in willingness to attend future arts and cultural events (Insight Economics, 2006). Nonetheless there is little evidence of whether these feelings affected long-term behavioural change.
- 7.5 The wider evidence for cultural engagement remains limited. Nonetheless, an OECD study found that Turin was able to harness

the momentum of the Winter Olympics to help in an ambitious programme of cultural development. As a result, museum visits in Turin went up by 170% after the 2006 Winter Olympics compared to the three previous years (OECD, 2010).

- 7.6 The emerging evidence also suggests that attitudes towards London 2012 were generally favourable and a majority of people thought it would benefit the city. A large proportion of people surveyed in London rated the experience of the city hosting the Games very highly (Centre for Sport Physical Education and Activity Research, 2013). These findings suggest that during the Games and shortly afterwards, a 'feel-good' factor had developed, at least within London.
- 7.7 The London 2012 Cultural Olympiad took place over four years across the UK and involved an unprecedented number of activities and events across a range of different programmes and funding streams (Garcia, 2013). The available evidence on these programmes is by far the most comprehensive available to date, although given the timing of this review it remains relatively short-term in nature.
- 7.8 The events cut across all art forms and spanned the UK. Audience satisfaction surveys suggest that 80% thought the event exceeded their expectations and 58% said they are more likely to attend further cultural events (Garcia, 2013; see also Jackson, 2013). Other surveys show more modest numbers indicating they intend to engage more in culture (16% in March 2013 from GVA intelligence, 5.2% from Taking part survey, 12% State of the Nation Survey). Again however, it is not clear to what extent these perceptions of being inspired will translate into longer-term participation and attendance.
- 7.9 A study of young people's experiences of London 2012 found that 65% of respondents involved in the Games reported that they were more likely to join a local arts/ cultural group as a result of being involved and a slightly smaller proportion say they are interested in starting a new/sports culture group (Nielsen, 2013; Legacy Trust UK, 2013).

- 7.10 It is clear that the range of cultural programming significantly extended the geographic reach of opportunities to engage in the 2012 Olympics and related festivals. Evidence in relation to community engagement and major events cited above shows a mixed picture with some events relying on 'trickle down effects' and others explicitly planning to maximise community engagement.
- 7.11 According to surveys with artists involved, the London 2012 Cultural Olympiad has also benefitted the creative sector. Artists report improvement of skills and professional development, new partnerships, and an increased national profile (Duggan, 2013; Garcia, 2013; Jackson, 2013). It should be noted, however, that these surveys tend to have small sample sizes.
- 7.12 The Select Committee on Olympic and Paralympic Legacy (2013) remains unconvinced about the long-term impact of the Cultural Olympiad. Although it helped the Games to reach outside of London and created some temporary employment, it is unclear what distinct legacy the Cultural Olympiad will bring, they suggest.

Increase civic pride

- 7.13 Although much has been written about the link between major sporting events and civic pride, there are only a small number of studies which empirically address the question. Waitt (2003) conducted a longitudinal study two years before Sydney 2000 Olympics and in the year of the event. He found that support for the Games remained strong over the two years. Willingness to volunteer and sense of community showed substantial increases over the time period. Respondents who were most enthusiastic tended to be either families or people from non-English speaking backgrounds.
- 7.14 There is also some limited evidence that major sporting events can impact on intangible areas, such as providing a 'feel good factor'. Kavestos (2010) considered data from 12 European countries over 30 years. He found evidence of a small increase in life-satisfaction (the 'feel-good factor') in the period immediately following major sporting events. The Department for Culture Media and Sport (2005) also found evidence intangible factors can be important to

the host population. A survey they conducted to gauge support for the bid to host the London 2012 Olympics found people in the UK believed that the intangible benefits of hosting the Games would outweigh tangible ones (such as tourism spending). Nonetheless more long-term research is needed to fully understand the scale and effects of these intangible benefits.

7.15 As discussed above in relation to improvements to the physical and social environment, there are also arguments that mega-events such as the Olympics have a negative impact on community networks and exacerbate inequalities. Commentators have highlighted these issues in particular in relation to the Beijing 2008 Olympics (Broudehoux, 2007) but also in relation to London 2012 (Fussey, 2011; Watt, 2013).

Perception as a place for cultural activities

7.16 In addition to increases to the perception of hosts as a place to do business and for tourism discussed in the flourishing section, there is evidence to suggest that major events can help to change the perception of cities as a place for cultural events. As with wider evidence on city branding, a fundamental role is given to the importance of the media in shaping the way the event is perceived (Smith, 2012).

7.17 This media coverage is often substantial across a wide range of events, though the size and type of the audience varies. The evidence from Manchester 2002 suggests there is substantial media coverage generated from the Commonwealth Games. One study found an estimated 750 hours of TV media coverage reaching up to 1 billion people during the event (Cambridge Policy Consultants, 2002). Nonetheless the evidence suggests that by far the widest audience is reached by the Summer Olympics, with four billion people estimated to view some of the London 2012 Games across various platforms (DCMS, 2012).

7.18 The strongest evidence for a positive transformation of a city comes from the Barcelona 1992 Olympics. In particular studies highlight the importance of the 'Barcelona Model' for urban regeneration, which highlighted local culture, and in particular the architectural

legacy of artists like Gaudi (Degen and Garcia, 2011). Within this approach, the organisers of the Barcelona Games ensured that there was a long term focus on cultural legacy (Brunet, 2005). Nonetheless there are significant concerns about the applicability of the 'Barcelona Model' to other events (Herstein and Berger, 2013).

- 7.19 Beloso (2010) also argues that the 1992 Olympics Games played a key role in transforming the image of Barcelona. In particular he cites the positive transformation of the city as a place of artistic creativity. One example of this in practice was the 22@Barcelona Project that transformed little used industrial land into modern creative spaces for the knowledge economy. This helped to create a more modern and dynamic image of the city.
- 7.20 In addition, Boukas et al. (2011) find that the 2004 Olympic Games in Athens helped deliver a legacy of cultural tourism by reconstructing the city's identity and cultural heritage. They find that it is vital that Games should help to develop links between wider legacy plans and cultural heritage and tourism. As with Barcelona, the evidence suggests that in order to successfully improve the city's cultural brand, organisers must ensure that efforts are deeply rooted in the true nature of the cities culture.
- 7.21 On the other hand, there is some evidence that negative perceptions are possible where elements of events are not perceived to be a success. Some authors conclude this occurred in relation to the 2010 Commonwealth Games in Delhi where there were a number of media stories around preparedness for the Games (Wharton, 2010). Therefore rather than automatically highlighting positive aspects of a city's and country's culture, there is also the potential for negative effects on reputation if coverage highlights perceived weaknesses.
- 7.22 Perhaps more commonly, the cultural components of major sporting events can be overlooked by the media. Looking at the 2010 Vancouver Cultural Olympiad, Low and Hall (2012) found that there was very little impact outside of the host province. Given the often relatively low profile of cultural events, this can be a

significant problem for hosts in trying to showcase their cities culture.

Enhance learning

7.23 Although many Games tend to put emphasis on education and learning, and many have their own educational programmes linked to the event, these are generally not well evaluated and there is currently little evidence with regards to their effectiveness (Smith, 2012). The Curriculum Pack, the educational legacy programme in the Manchester 2002 Commonwealth Games, was among the least successful of the seven legacy programmes. It was not resourced sufficiently and it needed a clearer continuation strategy for after the Games and beyond (Smith and Fox, 2007).

7.24 Similarly, Get Set, the educational programme for London 2012, managed to get 85% of schools registered and reached a deeper level of engagement from about 66% of schools. However, teachers expressed concern about how sustainable the benefits are in the long-term (Bunt et. al., 2011).

Conclusion

7.25 The evidence-base for the 'Connected' theme is limited. Although a cultural programme has been an integral part of Olympic activities for some time, the idea of creating a distinct cultural legacy is relatively new. As a result, apart from some early evidence from the London 2012 Olympics, there is little empirical evidence available on this aspect of the Games.

7.26 Nonetheless, the one area in this theme which has received significant attention is city branding. This shows that there can be a significant change to the perception of the host as a place to do business. This has most often been positive, with particular success in Barcelona, but there is also a significant danger that the Games can have unintended negative effects, or that the cultural aspects of the host can be overlooked by the media.

7.27 The emerging evidence from the London 2012 Cultural Olympiad shows that there was an unprecedented scope and variety to the

projects. Thus far the evidence is mostly reliant on survey evidence, which has shown a broadly positive reaction to the events. Those who participated in cultural events have reported intentions to take part in future events, and surveys with artists also suggest benefits in terms of skills, new partnerships, and an increased national profile.

7.28 The educational outcome of using a major sporting event to enhance learning has not been sufficiently researched. It is therefore not possible to draw any firm conclusions in this area and more long-term research is needed.

2015 Addendum to Connected Theme

7.29 Since 2013, very little further evidence was encountered except for a couple of references providing additional support to the idea that hosting a major multi-sports event raises the profile of the host city and nation which can impact positively on business and political success provided the major multi-sports event is delivered successfully. Byrne (2014) argues that instant global visibility, as a result of the Games in Melbourne and Manchester and the positive image generated from their Games, helped support revival and regeneration in both cities. A House of Lords report (2013) cites evidence that London Olympics helped raise the profile of London.

Summary

7.30 Little further evidence was encountered and there was no change to the messages of the review in 2014. Major multi-sports events can raise the profile of the host city and nation, impacting positively on regeneration, business and political success; the creative sector can be positively impacted through skills and professional development, partnership creation and raised profile and intentions to engage in cultural activities can be enhanced. However, there is insufficient evidence to understand how this translates into actual behaviour and there is insufficient evidence to comment on learning programmes.

8. AREAS FOR FUTURE RESEARCH

- 8.1 There are some areas which would benefit from further research. On the whole, the evidence base would be improved by more research into the factors which make successful legacies more likely, and on the potential negative consequences of major events.
- 8.2 There remains a need for further **long-term research** across each of our themes. More research is required in order to understand the factors which make successful legacies more likely over the long term and to ascertain how transferable the findings are from one event to another.
- 8.3 There is a particular **lack of research into the cultural activities associated with major events**, and how these can impact on communities. The evidence base would be improved by further research into long-term impacts of major sporting events on cultural engagement, civic pride and enhanced learning.
- 8.4 The evidence base would also benefit from **longitudinal research** amongst host populations. To date there have been no long-term studies which track how the local population is affected over time. In order to capture as wide a range of effects as possible, the evidence suggests that it is important to begin these research projects early in the process, and to continue collecting evidence well after the event.
- 8.5 Moreover, a greater understanding of the **unintended consequences** of major sporting events would be valuable. There is significant scope for increasing our understanding of the disparate effects of major events that are not intended by event planners.
- 8.6 Lastly the evidence base requires more consideration of the effects from **'second tier' events**, or those smaller than the Olympics or World Cup. More research into the scale of the effects relative to the event size would help our understanding of the likely legacy of slightly smaller events such as the Winter Olympics and Commonwealth Games.

9. CONCLUSIONS

- 9.1 This review has discussed existing evidence of legacy of large multi-sport events. It is clear from this review that in many areas, the evidence-base is limited and of varying quality.
- 9.2 The inclusion of more recent evidence has not changed the messages from the earlier review and reinforces the understanding that robust evidence of legacies from major multi-sports events continues to be limited in both quantity and quality.
- 9.3 Some areas have received more attention than others, with much of the focus on economic impact, particularly business, employment, tourism, and regeneration. On the other hand, there is a significant lack of evidence in other areas, in particular environmental responsibility and cultural engagement and learning. A consistent finding is the need for further long-term research, with longer post event data collection periods.
- 9.4 In terms of the economic impact, studies suggest that hosting multi-sport events often have positive short-term impacts, but there is a paucity of evidence of long-term effects. The limited evidence that is available on long term effects varies considerably between different events. It ultimately remains very difficult to separate out the effects of hosting the Games from what is happening in the wider context.
- 9.5 It seems possible to create a positive regeneration legacy as part of hosting major sporting events. This will not happen automatically however. Regeneration plans need to be anchored into long-term existing objectives and must carefully consider the needs of the local community.
- 9.6 The area of physical activity and sport has received a lot of attention over recent years. However, the empirical evidence base assessing participation levels is small, as a number of review papers have noted. The evidence that exists is variable in quality and shows mixed results. It is therefore too early to say whether hosting multi-sport events can increase participation levels.

9.7 There is a particular lack of evidence on other legacy areas such as cultural engagement and education. Where evidence exists it tends to be small scale. Again, there is a need for long-term, systematic research in these legacy areas.

9.8 However, we can draw some broad conclusions and lessons from the evidence.

- While a positive legacy can be created from major sporting events, this will not happen automatically.
- Across all themes, the evidence highlights the importance of incorporating and embedding Games-related plans into existing, long-term policy objectives.
- The importance of 'grass-roots', community engagement in planning and delivering a major sporting event comes through across the regeneration, public health and cultural literature.
- Further, generating public support and enthusiasm for major sporting events may help achieve legacy aims.

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APPENDIX

Literature Review Protocol

Background

In July 2014 Glasgow will host the 20th Commonwealth Games. In addition to 11 days of sport, the Games provides a once in a lifetime opportunity to create a lasting economic, social and cultural legacy. Lessons from past sporting events could potentially play an important role when aiming to realise these legacy ambitions. This review will provide an overview of the existing evidence of legacy and will build on the previous review: *'Legacy Lessons from Past Large-Scale Sporting Events: Review of Evidence'* which was conducted in the spring on 2012. Given the number of studies published since then in the run-up to, and after the London 2012 Olympics, this review needs to be updated in order to provide a more complete picture.

Aim of the review: To establish whether major international multi-sport events can leave a legacy.

Review questions: This review seeks to establish, through the available literature, whether major international multi-sports events leave a legacy. The specific review questions to be addressed are:

- A) Do major international multi-sports events leave a positive legacy, if so what types of legacy?
- B) Do major international multi-sports event lead to temporary effects but not necessarily a lasting legacy, if so what types of temporary effects?
- C) Do major international multi-sports events lead to unintended consequences that lead to negative legacy, if so what types of negative legacy?

Review objectives

1. To develop and conduct a comprehensive search to identify relevant research according to the review protocol which can be replicated in future years.
2. To synthesize the best available evidence from included studies to produce a summary of type and scale of legacies produced.
3. To assess where possible the quality of relevant studies with regard to key methodological characteristics and potential for bias.
4. To identify knowledge gaps in the available research.

Inclusion Criteria

The events which will be included must:

- Be multi-sport;
- Have occurred between January 1970 and January 2013;
- International (not regional or national);
- Repeat on an annual, biannual or 4 yearly basis; and
- Move between different host countries/cities.

Events which fall within the stated criteria are:

Title	How often	Scope	Group
Commonwealth Youth Games	4	International	Youth
CPLP Games		International	Youth
Deaflympics	4	International	Equality
Gay Games	4	International	Equality
Gymnasiade	4	International	
Jeux de la Francophonie	4	International	Language
Lusophony Games	4	International	Language
Military World Games		International	
Olympic Games	4	International	
Paralympic Games	4	International	Equality
SELL Student Games	1	International	Youth
Universiade	2	International	Youth
World Games	4	International	
World Masters Games	4	International	
World Mind Sports Games		International	
World OutGames		International	Equality
World Police and Fire Games	2	International	
World Transplant Games	2	International	Equality
World Wheelchair and Amputee Games	1	International	Equality
Youth Olympic Games	4	International	Youth
Commonwealth Games	4	International	

Studies will be includes which explore legacy as defined in the outcomes and intermediate outcomes set out in 'A Games Legacy for Scotland' under 4 national themes see:

<http://www.scotland.gov.uk/Resource/0042/00421780.pdf>. See attached criteria for selecting studies for review for more information.

Search strategy

The search strategy will be designed to access both published and unpublished English materials from peer reviewed journals and grey sources (such as from Games Federations, Organising Committees and Governments). The review will be undertaken in three stages:

(1) Reassess the initial literature search results from 2012 with our new inclusion criteria. This literature search was based on these search terms: *legacy, impact, evaluation, Olympics, Commonwealth Games*.

IDOX has undertaken a search of the title, abstract and subject descriptors of articles between 2010-2013 in all its current journal subscriptions and electronic sources using predetermined keywords. See list below:

```
((key:(sport* OR events OR olympic* OR paralympic*) AND (abs:(olympic* OR paralympic* OR "commonwealth games" OR "mega events" OR "mega event" OR megaevent* OR "major sports events" OR "major sporting events" OR "major sports event" OR "major sporting event") OR til:(olympic* OR paralympic* OR "commonwealth games" OR "mega events" OR "mega event" OR megaevent* OR "major sports events" OR "major sporting events" OR "major sports event" OR "major sporting event"))) OR til:(olympic* OR paralympic* OR "commonwealth games") OR (til:("mega event" OR "mega events" OR megaevent* OR "major events"~1 OR "major event"~1) AND key:sport*) OR (key:"major sports events" AND (sport* OR football OR cycling OR golf OR motorsports)))
```

(2) Additional relevant keywords contained in the title, abstract and subject descriptors of these articles will be identified. Terms identified in this way, and the synonyms used, will be used to extend the IDOX search of the literature.

(3) Reference lists and bibliographies of the articles collected from those identified in stages one and two above will also be searched.

Full copies of articles identified by the search, and considered to meet the inclusion criteria, based on their title, abstract and subject descriptors, will be obtained for data synthesis. During stage 2 articles identified through reference list and bibliographic searches will also be considered for data collection based on their title. Two reviewers will independently select articles against the inclusion criteria. Discrepancies in reviewer selections will be resolved at a meeting between reviewers prior to selected articles.

Criteria for selecting studies for the review

Outcomes

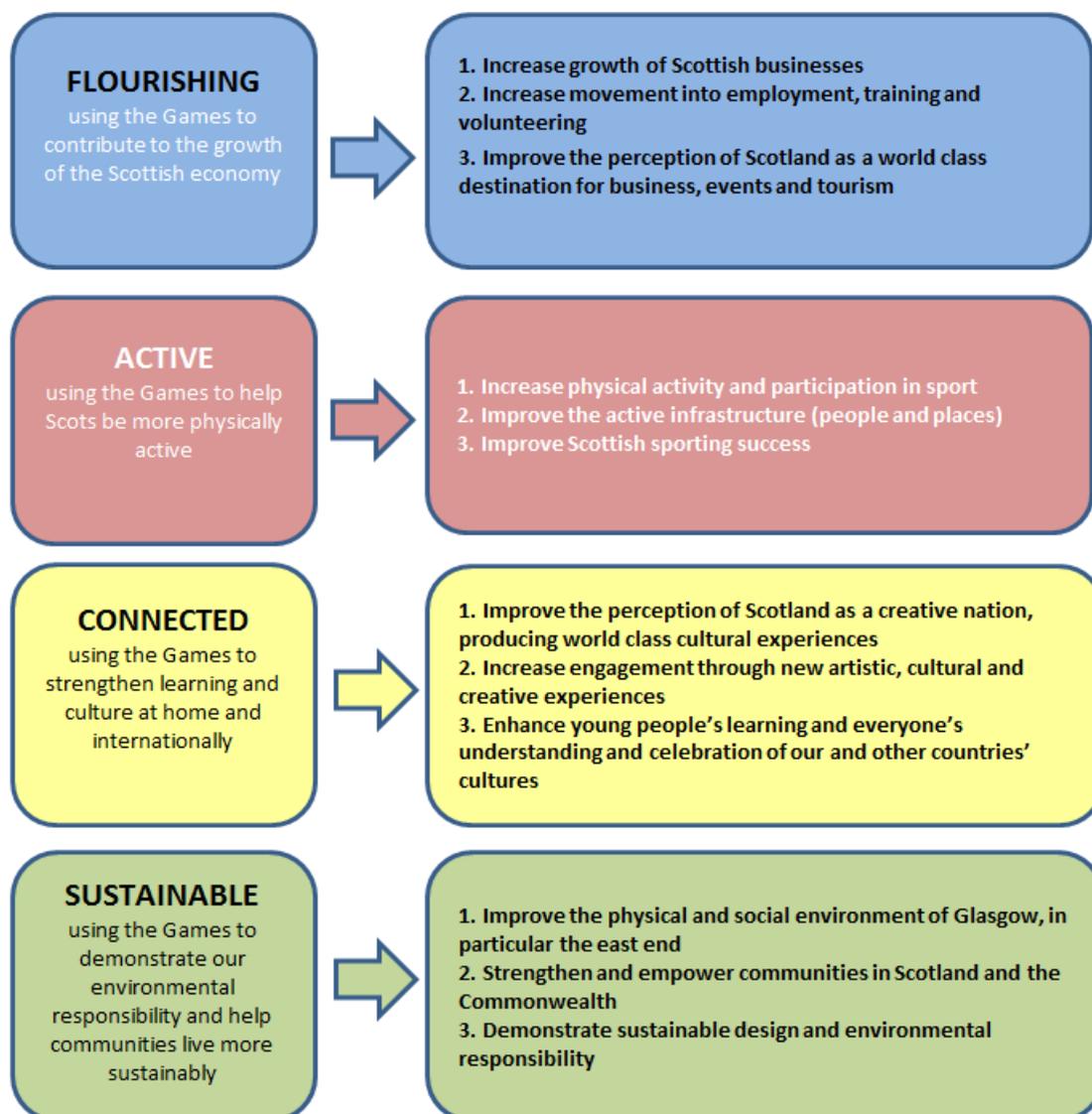
These are identified based on the intermediate outcomes and research questions

<i>Flourishing</i>	<ul style="list-style-type: none"> GVA Employment Business Tourism Spending International reputation Training Trade Foreign Direct Investment Labour Market Economic Impact Major Event Capability Upskilling/Skills Spend Modelling Opportunity Costs Capacity building
<i>Active</i>	<ul style="list-style-type: none"> Physical activity Participation in sport Sport infrastructure Sporting success Demonstration effect Festival effect
<i>Connected</i>	<ul style="list-style-type: none"> Creative industries Cultural engagement Civic pride Education Learning

<i>Sustainable</i>	Regeneration Housing Environmental responsibility Environmental design Communities engagement Communities empowerment Green spaces Displacement
<i>Cross-cutting</i>	Equality/inequality Partnership Volunteering

After Step 1 of the Search Strategy, additional search terms will be identified to target these outcomes using the terms identified in the literature.

Outcomes and intermediate outcomes





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