



Evidence Review 3

Sports and Culture

Updated June 2016



what works centre for
local economic growth



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Preface

This report presents findings from a systematic review of evaluations of the impact of major sporting and cultural events and facilities.

It is the third of a series of reviews that will be produced by the [What Works Centre for Local Economic Growth](#). The What Works Centre is a collaboration between the [London School of Economics and Political Science](#), [Centre for Cities](#) and [Arup](#) and is funded by the [Economic & Social Research Council](#), [The Department for Communities and Local Government](#) and [The Department for Business Innovation & Skills](#).

These reviews consider a specific type of evidence – impact evaluation – that seeks to understand the causal effect of policy interventions and to establish their cost-effectiveness. To put it another way they ask ‘did the policy work’ and ‘did it represent good value for money’? With this review we are particularly interested in demonstrating that facilities and events can be rigorously evaluated and in drawing out the wider lessons for policy.

Evidence on impact and effectiveness is clearly a crucial input to good policy making. In the case of sports and culture policies, of course, the main aims are not economic. But policymakers often claim economic benefits for these interventions, and so economic impact evaluation is important to do. Other ways of considering the impact of facilities and events (e.g. case studies) provide a valuable complement to impact evaluation, but we deliberately do not focus on these.

However, we see these impact-focused reviews as an essential part of more effective policy making. We often simply do not know the answers to many of the questions that might reasonably be asked when implementing a new policy – not least, does it work? Figuring out what we do know allows us to make better decisions and to start filling the gaps in our knowledge. **This also helps us to have more informed discussions and to improve policy making.**

These reviews therefore represent a first step in improving our understanding of what works for local economic growth. In the months ahead, we will be working with local decision makers and practitioners, using these findings to help them generate better policy.

Henry Overman

Director, What Works Centre for Local Economic Growth



Executive Summary

Sports and culture have intrinsic value to people and places as well as promoting health and well-being, cultural enrichment, and prestige and branding. In more recent decades, there has been an increasing tendency for promoters of investment in major sport and cultural events or facilities to claim that undertaking such projects will have demonstrable direct and indirect economic benefits as well.

This report presents findings from a systematic review of evaluations of the **economic** impact of major sporting and cultural events and facilities (hereinafter referred to as ‘projects’). It is the third of a series of reviews that will be produced by the What Works Centre for Local Economic Growth.

The review considered over **550** policy evaluations and evidence reviews from the UK and other OECD countries. It found **36** impact evaluations that met the Centre’s minimum standards.

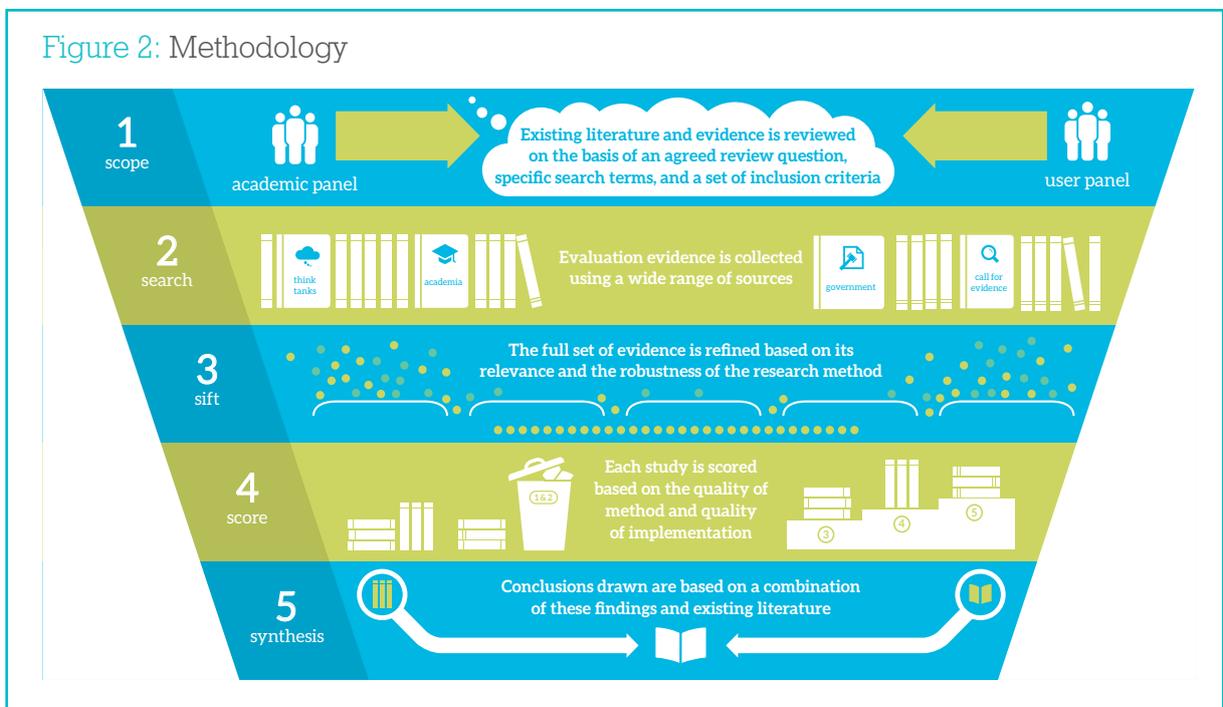
We initially focused the review on evaluations of sporting or cultural events and facilities of any size. However, we found no evaluations of small-scale events that met our minimum standards. Our findings are therefore based upon evaluations of major projects – but we believe they offer useful guidance for policymakers considering projects on any scale. We encourage local policymakers to build evaluation into their projects to contribute to the evidence base.

Overall, the evidence suggests that the measurable economic effects on local economies tend not to have been large and are often zero. Facilities, however, can have a small positive impact on property prices nearby.

This should not overshadow the other real if difficult-to-measure benefits of hosting sport and cultural activities.

Approach

The Centre seeks to establish causal impact – an estimate of the difference that can be expected between the outcome for areas or cities undertaking a project and the average outcome they would have experienced without the project (see Figure 1). Our methodology for producing our reviews is outlined in Figure 2.



Findings

What the evidence shows

- The overall measurable effects of projects on a local economy tend not to be large and are more often zero. Any wage and income effects are usually small and limited to the immediate locality or particular types of workers.
- Facilities are likely to have a positive impact on very local property prices. Policymakers should consider the distributional effects of these property market changes (who are the likely winners and losers).
- Projects may have been associated with increased trade imports and exports, including tourism, although these effects may be short lived (and are only considered in a small number of studies).

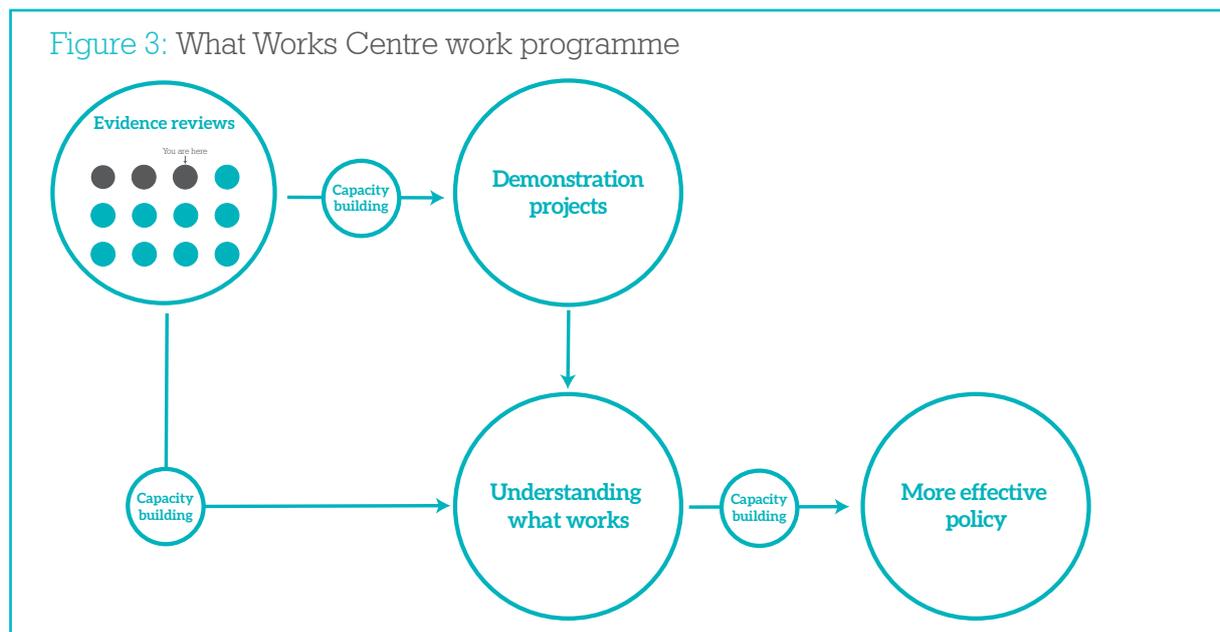
Where there is a lack of evidence

- We found no impact evaluations that considered visitor numbers. Far more should be done to assess the extent to which projects lead to net increases in visitor numbers for the area as a whole. Visitor numbers for the project alone and surveys of attendees may not provide strong evidence on the impact of projects on net visitor numbers.
- There was a paucity of evidence regarding cultural projects overall. This is an issue for understanding the likely impact of such projects and also leaves a gap in our ability to compare the economic effects of sport projects and cultural projects.
- We found no robust evidence on the economic impacts of smaller projects (such as arts centres or small-scale festivals) – although based on what we found for large projects, we can assume that the economic impact of such projects would be even smaller.
- We found no robust evidence for the impact of recurring sport and cultural events, such as annual festivals or tournaments.

How to use these reviews

To determine policy priorities

The Centre's reviews consider a specific type of evidence – impact evaluation – that seeks to understand the causal effect of policy interventions and to establish their cost-effectiveness. In the longer term, the Centre will produce a range of evidence reviews that will help local decision makers decide the broad policy areas on which to spend limited resources. Figure 3 illustrates how the reviews relate to the other work streams of the Centre.



To inform the design of programmes

The evidence review sets out a number of ‘Best Bets’ – based on the best available impact evaluations. In particular it identifies what kind of effects events and facilities might have on the local economy, as well as whether these effects differ by the type of project.

However, the ‘Best Bets’ do not address the specifics of ‘what works where’ or ‘what will work for a particular locality’. Detailed local knowledge and context remain crucial.

‘Best Bets’ also raise a note of caution for policymakers if they decide to undertake a project on the basis of anticipated effects that have not generally materialised elsewhere.

Almost all of the evaluations that we found to be rigorous are focused on projects at the grand end of the scale. However, we are confident that there are lessons for everyone facing this type of spending decision from the evidence we have looked at regarding these very large projects.

For example:

- Facilities may be more likely to produce economic benefits than events, probably due to the longevity of their impact.
- Indirect employment effects are unlikely to be large, and focus should be on the direct employment effects generated by an event or facility. Reflecting this, time and expense can be saved by forgoing complex multiplier-based appraisal systems in lieu of solid ‘narrow’ evaluations.
- As the benefits of new facilities tend to be very localised and related to property prices and regeneration, they should be part of a broader strategy rather than seen as stand-alone projects. They should not be relied upon as the major component of a job creation strategy.
- Considered together the findings raise interesting questions about who should pay for sport and cultural events and facilities in any given locality.

To Fill the Evidence Gaps

As should be clear from this review, there are many things that we do not know about the impact of sport and cultural projects. Most of the evidence is focused at the very large end of the scale, and on professional sport franchises.

There needs to be more experimentation in measuring the economic impact of smaller projects. In particular, evaluations should make greater use of suitable comparison groups when looking at both wider economic impacts and the overall impact on visitor numbers. At a minimum, some larger scale impact evaluation studies could provide us with some idea on the extent to which techniques that are currently widely applied (such as user surveys) actually identify net policy impacts.

To work with the Centre

The Centre's longer term objectives are to ensure that robust evidence is embedded in the development of policy, that these policies are effectively evaluated and that feedback is used to improve them. To achieve these objectives we want to:

- work with local decision makers to improve evaluation standards so that we can learn more about what policies work, where.
- set up a series of 'demonstration projects' to show how effective evaluation can work in practice.

Interested policymakers please get in touch.



Introduction

In recent decades a great deal of attention has been paid to cities' sport and cultural offerings. The prestige of hosting an international sporting event or building an architecturally stunning art gallery is naturally attractive to city leaders. Great public spectacles like the 2012 Olympics are often hugely popular – at the time.

On the other hand, the cost and delivery challenges for such mega-events and major facilities often make these projects complex, expensive and controversial.¹ For example, London 2012's budget famously doubled from the initial bid.²

A variety of economic and social gains are claimed by proponents of sports and culture. For example, The British Olympic Association's evidence to Parliament supporting London's 2012 Olympics set out a huge range of potential benefits:

“... a feel good factor across the nation as a whole; increased elite sporting performance, grassroots participation and facilities; the reduction of youth crime; the promotion of education; a new culture of volunteerism [sic]; social inclusion; regeneration in the form of new housing and better transport infrastructure; employment (with about 9,000 new jobs, of which 3,000 would be in the local economy); tourism and the convention industry; UK investment and exports; and all British cities through the preparation and training camps for overseas teams as well as the football and sailing competitions.”³

Some of these claims (such as the 'feel good factor') are beyond the advisory remit of the What Works Centre for Local Economic Growth. We have, however, been able to find evidence to address some of the more tangible claims made for major sporting and cultural interventions, such as for job creation and for regeneration. Such 'legacy' arguments are frequently an important part of the case for such events and facilities.

1 Maennig, W. and A. Zimbalist, Eds. (2012). International Handbook On The Economics Of Mega Sporting Events. Cheltenham, Edward Elgar.

2 Nathan, M. and T. Kornblatt (2007). Paying for 2012: The Olympic Budget and Legacy. Briefing Paper 2. London, Centre for Cities.

3 House of Commons Culture, Media and Sport Committee, printed 21st January 2003.

Many local decision makers will be faced with a campaign to host a special event or open a crowd-drawing facility during their career. Although it may not be of the scale of the Olympics, the World Cup or the Sydney Opera House, organising a music festival, building a new museum or an arts centre can be expensive and disruptive to 'business as usual'. In economic terms, what can a locality reasonably expect to see in return for the investment?

Almost all of the evaluations that we found to be rigorous are focused on projects at the grand end of the scale. Unfortunately, there is very little robust impact evaluation information about the impact of smaller events and facilities on their host economies – we found a large number of studies but almost none passed our quality thresholds.

However, we are confident that there are lessons for everyone facing this type of spending decision from the evidence we have looked at regarding very large projects. Their size means that impact should be easier to identify. Also, in many cases substantial resources have been committed to rigorous impact evaluation before, during, and after the event. We also believe that local and national policymakers can learn valuable lessons about *how* to evaluate the economic impacts of sports and culture from the studies we review here.

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Impact evaluation

Governments around the world increasingly have strong systems to monitor policy inputs (such as spending on events and facilities) and outputs (such as the total number of visitors to a project). However, they are less good at identifying policy *outcomes* (such as the wider effect of a new football stadium or gallery on local employment, or the *net* increase in visitors to the city who wouldn't otherwise have come). In particular, many government-sponsored evaluations that look at outcomes do not use credible strategies to assess the **causal impact** of such events or facilities (henceforth, we refer to these as 'projects').

By causal impact, the evaluation literature means an estimate of the difference that can be expected between the outcome for areas or cities undertaking a project (in this case, hosting an event or building a facility) and the average outcome they would have experienced without the project. Pinning down causality is a crucially important part of impact evaluation. **Estimates of the benefits of a project are of limited use to policymakers unless those benefits can be attributed, with a reasonable degree of certainty, to that project.**

The credibility with which evaluations establish causality is the criterion on which this review assesses the literature.

Using Counterfactuals

Establishing causality requires the construction of a valid counterfactual – i.e. what would have happened to an area (or part of an area) if it had not hosted the event or built the facility. That outcome is fundamentally unobservable, so researchers spend a great deal of time trying to rebuild it. The way in which this counterfactual is (re)constructed is the key element of impact evaluation design.

A standard approach is to create a counterfactual group of similar places not undertaking the kind of project being evaluated. Changes in outcomes can then be compared between the 'treatment group' (locations affected by the event/facility) and the 'control group' (locations not affected). As we discuss below, in the case of major sporting or cultural investments, such treatment and control groups are not easy to identify.

A key issue in creating the counterfactual group is dealing with the ‘selection into treatment’ problem. Selection into treatment occurs when locations hosting an event or building a facility differ from those who do not do so.

An example of this problem for cultural and sports projects would be when a struggling city decides to host an event to boost the local economy. If this happens, estimates of policy impact may be biased downwards because we incorrectly attribute worse city outcomes to the project, rather than to the fact that the economy is struggling.

Selection problems may also lead to upward bias. For example, richer, more successful cities may host more events and such cities may be more likely to grow or succeed independent of any events they host. These factors are often unobservable to researchers.

So the challenge for good programme evaluation is to deal with these issues, and to demonstrate that the control group is plausible. If the construction of plausible counterfactuals is central to good policy evaluation, then the crucial question becomes: **how do we design counterfactuals?** Box 1 provides some examples.

Box 1: Impact evaluation techniques

One way to identify causal impacts of a project is to randomly assign participants to treatment and control groups. For researchers, such **Randomised Control Trials** (RCTs) are often considered the ‘gold standard’ of evaluation. Properly implemented, randomisation ensures that treatment and control groups are comparable both in terms of observed and unobserved attributes, thus identifying the causal impact of the project. However, **implementation of these ‘real world’ experiments is challenging and can be problematic.** RCTs may not always be feasible for local economic growth policies – for example, policymakers may be unwilling to randomise.⁴ And small-scale trials may have limited wider applicability.

Where randomised control trials are not an option, **‘quasi-experimental’** approaches of randomisation can help. These strategies can deal with selection on unobservables, by (say) exploiting institutional rules and processes that result in some locations quasi-randomly undertaking projects.

Even using these strategies, though, the treatment and control groups may not be fully comparable in terms of observables. Statistical techniques such as **Ordinary Least Squares** (OLS) and **matching** can be used to address this problem.

Note that higher quality impact evaluation first uses identification strategies to construct a control group and deal with selection on unobservables. Then it tries to control for remaining differences in observable characteristics. It is the combination that is particularly powerful: OLS or matching alone raise concerns about the extent to which unobservable characteristics determine both treatment and outcomes and thus bias the evaluation.

Evidence included in the review

We include any evaluation that compares outcomes for places hosting an event or building a new facility (the treated group) after the project with outcomes in the treated group before the project; relative to a comparison group used to provide a counterfactual of what would have happened to these outcomes in the absence of the project.

4 Gibbons, Nathan and Overman (2014).

This means we look at evaluations that do a reasonable job of estimating the impact of the project using either randomised control trials, quasi-random variation or statistical techniques (such as OLS and matching) that help make treatment and control groups comparable. We view these evaluations as providing credible impact evaluation in the sense that they identify effects which can be attributed, with a reasonable degree of certainty, to the project in question. A full list of shortlisted studies is given in Appendix A.

Evidence excluded from the review

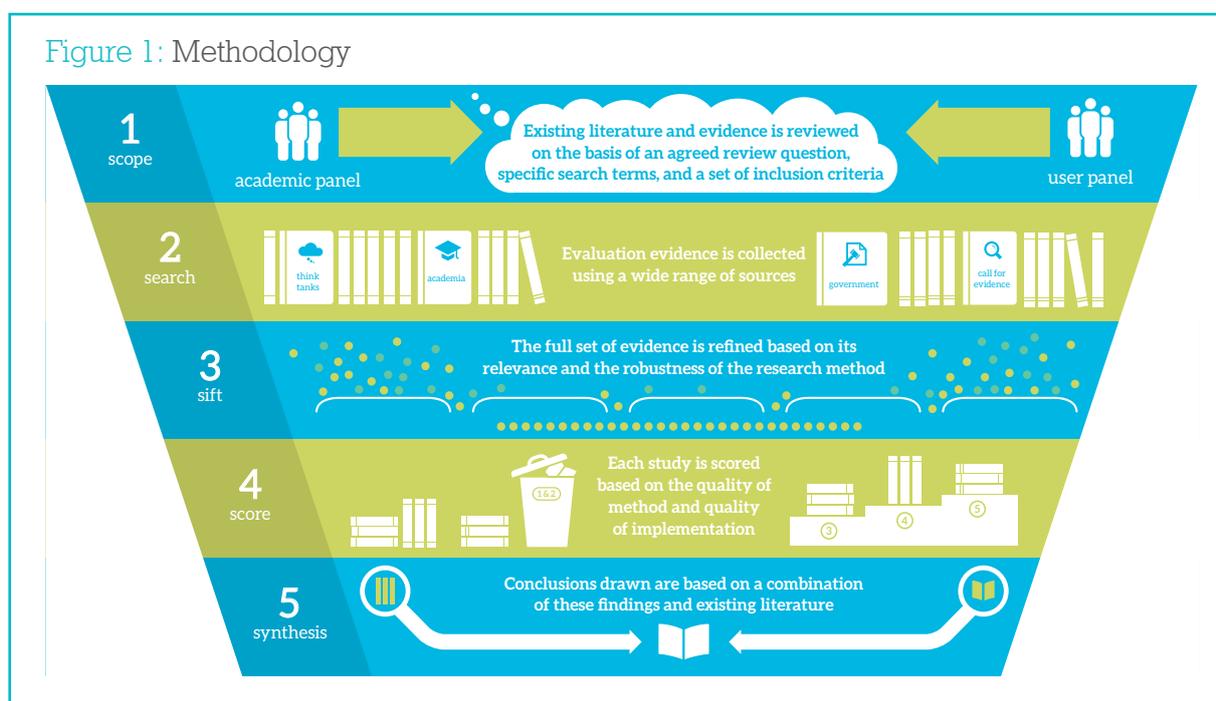
We exclude evaluations that provide a simple before and after comparison only for those places hosting events or building facilities because we cannot be reasonably sure that changes for the treated group can be attributed to the effect of the project.

We also exclude case studies or evaluations that focus on process (how the project is implemented) rather than impact (what was the effect of the project). Such studies have a role to play in helping formulate better policy but they are not the focus of our evidence reviews.

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Methodology

To identify robust evaluation evidence on the causal impact of hosting events or building facilities, we conducted a systematic review of the evidence from the UK and across the world. Our reviews followed a five-stage process: scope, search, sift, score and synthesise.



Stage 1: Scope of Review

Working with our User Panel and a member of our Academic Panel, we agreed the review question, key terms and inclusion criteria. We also used existing literature reviews and meta-analyses to inform our thinking.

Stage 2: Searching for Evaluations

We searched for evaluation evidence across a wide range of sources, from peer-reviewed academic research to government evaluations and think tank reports. Specifically, we looked at academic databases (such as EconLit, Web of Science and Google Scholar), specialist research institutes (such as CEPR and IZA), UK central and local government departments, and work done by think tanks (such as the OECD, ILO, IPPR and Policy Exchange). We also issued a call for evidence via our mailing list and social media. This search found just over 550 books, articles and reports. Appendix B provides a full list of sources and search terms.

Stage 3: Sifting Evaluations

We screened our long-list on relevance, geography, language and methods, keeping impact evaluations from the UK and other OECD countries, with no time restrictions on when the evaluation was done. We focused on English-language studies, but would consider key evidence if it was in other languages. We then screened the remaining evaluations on the robustness of their research methods, keeping only the more robust impact evaluations. We used the Maryland Scientific Methods Scale (SMS) to do this.⁵ The SMS is a five-point scale ranging from 1, for evaluations based on simple cross sectional correlations, to 5 for randomised control trials (see Box 2). We shortlisted all those impact evaluations that could potentially score three or above on the SMS⁶. In this case we found no evaluations scoring four or five: for examples of impact evaluations of events and facilities that score three on the SMS scale see www.whatworksgrowth.org.

Stage 4: Scoring Evaluations

We conducted a full appraisal of each evaluation on the shortlist, collecting key results and using the SMS to give a final score for evaluations that reflected both the quality of methods chosen and quality of implementation (which can be lower than claimed by some authors). Scoring and shortlisting decisions were cross-checked with the academic panel member and the core team at LSE. The final list of included studies and their reference numbers (used in the rest of this report) can be found in Appendix A.

Stage 5: Synthesising Evaluations

We drew together our findings, combining material from our evaluations and the existing literature.

⁵ Sherman, Gottfredson, MacKenzie, Eck, Reuter, and Bushway (1998).

⁶ Sherman et al. (1998) also suggest that level 3 is the minimum level required for a reasonable accuracy of results.

Box 2: Our robustness scores (based on adjusted Maryland Scientific Methods Scale)

Level 1: Either (a) a cross-sectional comparison of treated groups with untreated groups, or (b) a before-and-after comparison of treated group, without an untreated comparison group. No use of control variables in statistical analysis to adjust for differences between treated and untreated groups or periods.

Level 2: Use of adequate control variables and either (a) a cross-sectional comparison of treated groups with untreated groups, or (b) a before-and-after comparison of treated group, without an untreated comparison group. In (a), control variables or matching techniques used to account for cross-sectional differences between treated and controls groups. In (b), control variables are used to account for before-and-after changes in macro level factors.

Level 3: Comparison of outcomes in treated group after an intervention, with outcomes in the treated group before the intervention, and a comparison group used to provide a counterfactual (e.g. difference in difference). Justification given to choice of comparator group that is argued to be similar to the treatment group. Evidence presented on comparability of treatment and control groups. Techniques such as regression and (propensity score) matching may be used to adjust for difference between treated and untreated groups, but there are likely to be important unobserved differences remaining.

Level 4: Quasi-randomness in treatment is exploited, so that it can be credibly held that treatment and control groups differ only in their exposure to the random allocation of treatment. This often entails the use of an instrument or discontinuity in treatment, the suitability of which should be adequately demonstrated and defended.

Level 5: Reserved for research designs that involve explicit randomisation into treatment and control groups, with Randomised Control Trials (RCTs) providing the definitive example. Extensive evidence provided on comparability of treatment and control groups, showing no significant differences in terms of levels or trends. Control variables may be used to adjust for treatment and control group differences, but this adjustment should not have a large impact on the main results. Attention paid to problems of selective attrition from randomly assigned groups, which is shown to be of negligible importance. There should be limited or, ideally, no occurrence of 'contamination' of the control group with the treatment.

Note: These levels are based on but not identical to the original Maryland SMS. The levels here are generally a little stricter than the original scale to help to clearly separate levels 3, 4 and 5 which form the basis for our evidence reviews.



Definition

We initially focused the review on evaluations of any sporting or cultural events (arts, music or heritage). As we discuss above, however, we found no evaluations of small-scale local events that met our minimum evidence standards. As a result, in practice, the evidence we consider largely covers ‘major’ events and facilities. ‘Major events’ tend to meet two of the three following criteria:

- resulting from a national and/or international competition;
- operating over at least 1 week, or shorter events on a frequently recurring basis;
- targeted at a national and/or international audience.

‘Major facilities’ meet the following criteria:

- permanent facility of regional or national scale;
- targeted at a regional, national or international clientele.

We excluded:

- Conferences and conference centres
- Trade events
- Expos.

Impact evaluation for events and facilities

It is often relatively easy to understand how we might construct control groups and undertake evaluation for policies targeted at individuals or firms. It is much harder to think about how we might do this for policies – such as events and facilities – that target *areas*. One of our motivations in considering major events and facilities is to help convince local decision makers that better evaluation of area based interventions is possible. This section provides a brief explanation of how the reports we considered have tried to do this. Further details on specific examples can be found at www.whatworksgrowth.org.

Evaluation of local economic growth effects of events and facilities in sports and culture poses a number of unique challenges. Firstly, mega-events such as the Olympics are rare, thus reducing

the number of observations for analysis. They also tend to be hosted in unique places, e.g. global cities such as London or Los Angeles, making it difficult to find similar control cities. Conversely for smaller local events that are more numerous, the effect size is potentially too small to easily detect. Secondly, events and facilities are not located randomly: policymakers may choose prestige locations, or locations which they hope have strong regeneration potential, in which case underlying factors for these areas need to be disentangled from any project effect. In any case, the criteria on which decisions are made about who hosts events or where facilities are built are not always transparent making it difficult to control for selection bias. Thirdly, the effects of events and facilities may exhibit complex patterns over time and space: a sports stadium may improve a neighbourhood nearby at the expense of a neighbourhood further away; a World Cup may be expected to have effects before (e.g. construction effects), during (visitor spending) or after (e.g. due to infrastructure improvements).

In order to overcome these challenges, studies of mega-events and facilities typically employ quasi-experimental approaches. This usually means comparing outcomes for 'treated' areas (e.g. host cities) to a group of 'control' areas (e.g. similar cities that did not host an event). Similarity is important to reduce the degree to which differences in outcomes could be driven by other factors. For example, it is not wise to compare outcomes of an Olympic host with that of an average city since they are not similar and would likely follow different paths even in the absence of the games. Approaches taken vary: study 360 gets around the problem by comparing winners with losers from the Olympic process, relying on the assumption that these are fairly similar types of city. Further differences between the treatment and control group are accounted for using control variables and by removing the long run growth trends. Very few studies scored higher than a level '3' in this review. This is because randomisation (level '5') is generally not feasible in these situations and because instruments, etc. (level '4') are particularly hard to find.

Studies of local events and facilities, as mentioned before, may struggle to detect much of an effect using a quasi-experimental approach. Therefore they typically use a category of methods that examines visitor numbers or expenditure data. These methods suffer from a number of problems. These problems include deadweight – visitors would have come anyway; displacement – visitors come during the event instead of some other time; leakage – spending in local area 'leaks' to other areas thus does not convert to local jobs/output; and multiplier effects – where spending circulates many times around the local economy (unknown and potentially exaggerated by many studies). Notably, studies of this type are most prevalent in the area of culture (rather than sport), perhaps because of the lack of mega-scale events and facilities. These studies do not pass our requirements for robustness and are not included in our review.

There is potential for smaller scale projects in sport and, in particular, culture to be evaluated more robustly. Techniques that have been applied for ex-post evaluations of Olympic and World Cup event could be applied at the local scale. While individual local authorities may have little incentive to undertake such evaluations (especially for one off investments or events) there would still be a large benefit for local decision makers as a whole in knowing the impact of these events and how that compares to appraisals done before the project is implemented. This would allow better decision making on future projects. We return to these issues below when we consider ways to help fill the evidence gaps on the wider economic impacts of events and facilities.



Findings

This section sets out the review's findings. We begin with a discussion of the evidence base, and then explore the overall pattern of positive and negative results. After this we consider specific economic outcomes in more detail.

Quantity and quality of the evidence base

From an initial long list of 556 studies, 36 evaluations met our minimum standards.⁷ This is a smaller evidence base than for our first review (on employment training), though larger than for our second (on business support). This may also still be larger than the evidence base for many other local economic growth policies. It is a small base relative to that available for some other policy areas (e.g. medicine, aspects of international development, education and social policy).

We found no studies that used randomised control trials or credible quasi-random sources of variation to identify policy impacts (i.e. scored 4 or 5 on the SMS). As we discussed in the previous section, this is not that surprising given the nature of these projects. All 36 studies scored 3 on the SMS, and use variations on OLS, difference in differences or matching techniques. The techniques applied in these studies mean that we can be reasonably confident that the evaluation has done a good job of controlling for all observable characteristics of areas (for example: labour market characteristics; economic strengths) which might explain differences in area outcomes. However, for these studies, it is likely that unobservable factors such as political commitment, market forces or other plans and policies for growth may still be affecting the results. This raises concerns that the evaluation incorrectly attributes beneficial outcomes to the event or facility rather than to these other area characteristics.

As RCTs are obviously not practically achievable in a policy area of this nature we cannot be fully confident that selection on these unobservables has been eradicated.

⁷ Many of the studies not included provided case studies or process evaluations which are often valuable, but are not the focus of our review. See methodology section for further discussion.

Type and focus of project

The majority of the evaluations (33 of 36) looked at sports interventions; only three looked at cultural events or facilities. The evaluations included a variety of types of sports and scales: from international (such as the Summer and Winter Olympic Games⁸ and FIFA World Cup);⁹ to national (such as the Super Bowl); and local (such as college American Football games.¹⁰ The three cultural events looked at European Capitals of Culture,¹¹ cultural districts¹² and art galleries.¹³

The paucity of evaluations on cultural projects is in part a result of the methodologies deployed in the studies evaluating them (often simply surveys of attendees, asking them about spend, motivation for visit etc.). In the absence of a suitable control group, studies focusing on tourist surveys alone, were not included in this review as none of them met the criteria for SMS3 or above.

Overall, given we only have three studies on cultural projects, we do not have enough information to make a meaningful comparison of the difference between sport and cultural projects. We can, however, go further when comparing the type of project.

The 36 evaluations look at a range of different types of sports and cultural projects. Broadly, these may take the form of:

- **events**, which could be one-off,¹⁴ large-scale competitions such as the Super Bowl¹⁵ or Major League Baseball 'All-Star Games',¹⁶ or shorter, recurring events such as major league US sports fixtures;¹⁷
- **facilities**, both sports¹⁸ and cultural,¹⁹ which are not tied to specific events;
- **events and legacy facilities**, where high-profile, International events often occur alongside the development of associated physical infrastructure or facilities;²⁰
- **franchises**, specifically related to Major League sports teams in the USA; or
- **announcements**, where the evaluation focuses on the impacts of public announcement of events²¹ or the development of facilities²² prior to the intervention actually taking place.

In the case of *events*, most of the evaluations in our review do not explicitly state whether there is associated development of facilities, even when it is very likely that associated development would have taken place.²³ We have systematically reviewed the evidence and drawn out evaluations of events where physical development is implied but not stated by the authors.

8 Studies 302, 309, 321, 328, 330, 337, 349, 359, 360, 363, 369, 373 all consider Summer and/or Winter Olympic Games

9 Studies 320, 331, 333, 347, 367 all consider FIFA World Cups.

10 Study 441

11 Study 324

12 Study 327

13 Study 368

14 Although events such as these are not strictly 'one-off', they are in the sense that the host city/region is unlikely to host such a significant event twice in quick succession.

15 Study 372

16 Study 442

17 Study 342

18 Studies 309, 311, 326, 345 and 379 all consider the impacts of sports arenas or stadiums.

19 Study 368 focuses on an art gallery, whilst 327 looks at physical development associated with Cultural Districts.

20 Examples include the more recent Olympic Games, football World Cup and European Capital of Culture programmes.

21 Study 359

22 Study 357

23 For example, modern Olympic Games and large tournaments such as the World Cup.

Findings by outcome

This section of the report considers the impact of sports and culture projects on specific outcomes.

Employment

Employment effects tend not to be large and are more often zero.

16 evaluations specifically look at the effect on employment. The balance of evidence suggests that these projects tend not to have had positive impacts on employment. Only two studies find positive effects, while half (8 out of 16) find no effect on employment. The remaining five reported mixed results (sometimes positive, sometimes zero depending on the sector considered and other details of the evaluation).

Table 1: Employment

Broad study conclusions	No. of Studies	Evaluation Reference Numbers
Positive	2	327, 328,
Mixed	5	337, 369, 347, 355, 379
Zero	8	301, 302, 320, 321, 331, 333, 367, 441
Negative	1	442

The eight evaluations where the effect on employment was zero all assess the impact of sporting interventions. These vary in terms of both scale²⁴ and the scope of the intervention, though most consider events which are also likely to include the construction of new, permanent facilities.²⁵

Of the evaluations where positive employment effects were observed, one of the two considers the impact of a cultural intervention (specifically a cultural district project).²⁶ This could imply a link between the longevity of the intervention and employment effects; in a majority of cases where employment impacts are zero, development focuses on a set time period, culminating in a one-off sporting event,²⁷ whereas Cultural Districts involve much longer-term programmes to rejuvenate districts. However, it is not possible to say anything conclusive on the basis of a single study.

It is also interesting to note that we found several examples of events being evaluated multiple times but with the evaluation reaching different conclusions. For example, the 1996 Atlanta Olympic Games is evaluated twice, with one evaluation concluding that the event led to 17% higher employment in the surrounding counties, equating to 293,000 jobs,²⁸ whereas a later study found the effects to be zero.²⁹

24 To illustrate the range, study 441 looks at college football in the USA, whereas studies 321 and 302 look at different Olympic Games.

25 Since a sizeable number of studies do not explicitly describe the physical developments associated with events, we have developed systematic assumptions about whether or not facilities are likely to be included; for example, Olympics or World Cup tournaments are highly likely to include new or redeveloped facilities.

26 Study 327 considers the development of Cultural Districts in the USA.

27 Studies 302, 320, 321, 331, 333 and 367 (i.e. 6 of 8), look specifically at sports events (Olympics or football World Cups).

28 Study 328

29 Study 321

The latter study used a longer evaluation period and accounted for differences in long term trends, a stronger evaluation design which somewhat undermines the positive effects observed in the earlier evaluation.

The 2006 football World Cup was also evaluated multiple times (three studies). In this case, one evaluation found mixed results,³⁰ and two found no positive (statistically significant) impacts on employment.³¹ In the study with mixed results, the authors confirmed that the results were weak, with positive effects felt only in the hospitality industry (an additional 2,600 jobs were created in this sector), which might be expected of any large, public event. No more general short term effect was found. These caveats add to the weight of evidence which suggests that, overall, these sports and cultural events did not bring about significant or sustained uplifts in employment.

Wages & incomes

Effects on wages and incomes tend to be limited. Any positive effects were usually small and limited to particular areas or particular types of workers.

Eleven evaluations considered the impact of sport and cultural projects on wages and income level. The balance of evidence is that such interventions are unlikely to have positive effects on wages. Only two of the eleven studies report statistically significant, positive effects, with the majority reporting mixed results (six studies where results vary by sector or other evaluation details) or no increase in income or wage levels (three studies).

Table 2: Wages or incomes

Broad study conclusions	No. of Studies	Evaluation Reference Numbers
Positive	2	327, 372
Mixed	6	302, 316, 328, 345, 355, 379
Zero	3	301, 331, 441

Of the two evaluations which find positive impacts, the results are not particularly compelling. In one case, while it is found that Super Bowls create, on average, \$92m of income gains for host cities, the study notes that this is lower than might be expected due to 'crowding out effects'.³² In the other study, the income effects of a cultural district project are positive and significant, but reduced when controlling for long term trends.³³

In some studies, as for employment, while positive income or wage impacts are reported, the overall findings are judged to be mixed. For example, one finds that small positive impacts on the earnings of employees in the amusement and recreation sector were off-set by decreases in the earnings of employees in other sectors of the economy.³⁴ A further study finds that the win percentage (i.e. the

³⁰ Study 347

³¹ Studies 331 and 333

³² Study 372. In this case, the 'crowding out effect' refers to the decision of some people not to visit Superbowl host cities during the event due to "perceptions relating to limited hotel rooms and high hotel prices, rowdy behavior of football fans, and peak use of public goods such as highways and sidewalks".

³³ Study 327

³⁴ Study 379

proportion of games in which a team wins) of local, professional American football teams was positively linked to income, but the overall effect of having a team appears to be negative and significant.³⁵

Property or land prices

Positive effects on property or land prices were slightly more likely than positive effects on wages (although property and land prices are considered in a smaller number of studies). Effects (both positive and negative) were more likely to be felt in close geographical proximity to the event or facility.

Nine evaluations looked at property values, land prices or rents, and the balance of evidence suggests that these projects had a positive impact (results are set out in Table 3). The reported uplift in prices or values varies across evaluations. The announcement of the London 2012 Olympics³⁶ was found to generate a 5% uplift for properties up to three miles away from the main Olympic stadium. In comparison, the one evaluation looking at the price effects of cultural districts³⁷ finds a property value growth rate of 10% when past trends are taken into account.

Table 3: Property or land prices

Broad study conclusions	No. of Studies	Evaluation Reference Numbers
Positive	4	311, 326, 327, 359
Mixed	3	309, 336, 363
Zero	1	371
Negative	1	357

The findings appear to be influenced partly by where the boundaries for measuring impacts are drawn; each evaluation chose different boundaries, which reduces comparability of results. The evaluation of the impact of London 2012 Olympics announcements³⁸ dealt with this issue by measuring impacts in concentric circles drawn around the main stadium. It found that the strongest impacts were found within three miles of the stadium, reducing with distance and with no statistically significant impacts beyond nine miles.

The nature of the facility provided also seems to influence the findings. The new Wembley Stadium included a distinctive iconic element visible from a considerable distance, which was found to cause a significant stadium effect at relatively more distant properties.³⁹

The effects may also vary over time. For example, while the evaluation of the Max-Schmeling Arena and Velodrom in Berlin⁴⁰ reported growth rates in property values of 1.3% and 2% (respectively) post-completion in the short term, no long term positive effects were recorded. This is attributed by the authors to congestion problems, which offset the positive effects observed immediately after opening.

35 Study 316

36 Study 359

37 Study 327

38 Study 359

39 Study 311

40 Study 309

It is worth noting that where evaluations have found zero or negative impacts (see Table 4) they do so in the context of the USA local taxation system. For example, in the case of the relocation of the Dallas Cowboys,⁴¹ the new stadium was funded through the levying of county-wide taxes, including an increase in sales tax rate, and it was found that the any gain which might have resulted from proximity to the stadium was more than offset by the anticipation of increased future tax liability that decreased property prices. This would not necessarily be experienced in the same way in the UK because of the structure of the UK local taxation system (i.e. a new stadium is less likely to be subsidised by a local authority and where it is, it is very unlikely to translate directly into local council tax increases), so this negative finding may not be transferrable to the UK unless specialist local financing mechanisms or levies were used.

Property prices tend to capture ('capitalise') benefits that come from improvements in a locality. So it is possible that these increases in property prices are capturing improvements to the local economy. However, given the findings on employment and wages it seems more likely that these property price changes are capturing improvements to local amenities rather than to the local economy. That said, further consideration of property price effects might provide a useful way of evaluating a larger range of projects. This, in turn, might allow for improved appraisal through the use of land value up-lift.

Trade imports and exports

Projects may have been associated with increased trade imports and exports, including tourism, although these effects may be short lived (and are only considered in a limited number of studies).

Only three evaluations measured the effect on trade imports and exports or tourism, and so it is difficult to draw strong conclusions. However, there is some evidence that sport interventions may have been associated with benefits to these outcomes.

Table 4: Trade imports and exports

Broad study conclusions	No. of Studies	Evaluation Reference Numbers
Positive	2	330, 373
Zero	1	349

Spiegel and Rose's evaluation of Olympic Games held between 1948 and 2008⁴² finds a significant positive effect on exports of 20%. However, unsuccessful bidders also displayed a similar positive effect, and so the impact is attributed to the 'signal effect' of bidding (thought to signify that a country is 'open for business' and trade). The evaluation is careful not to attribute a causal effect to the bidding process itself.

There is some indication that the effects on trade and tourism may be short-lived. One evaluation⁴³ found that positive effects on tourism numbers caused by the Olympic Games tend to last between

41 Study 357

42 Study 373

43 Study 330

four and twelve years, with the largest effects within the four years before and four years after the event. Following the Olympics, tourist visits decrease at a rate of 1.44% per year.

Findings by type of intervention

When evaluations are categorised by type of intervention, there is some evidence to suggest that facilities alone appear more likely to have had the most consistent, positive impacts, though it is notable these tend to be primarily in relation to property and land values (four out of seven studies specifically consider this, with three finding positive outcomes and the fourth identifying some positive short term effects).⁴⁴ Broadly, property prices are found to have increased in neighbourhoods around new sports stadiums, with the increase gradually fading as distance from the stadium increases, or in cultural districts. Increases range between 2% for the area within 1000m of the new Velodrome in Berlin,⁴⁵ to 15% for the area around the new Wembley Stadium in London.⁴⁶ This limited scope of evaluation may help to explain the correlation between standalone facilities and positive growth impacts; it may simply be that property values are easier to affect than outcomes such as employment. Indeed, when income/earnings, employment and neighborhood redevelopment outcomes are considered, the results are more mixed.

For studies which explicitly evaluate events which include associated facilities, or leave behind 'legacy' facilities, there is no evidence that these had a significant positive impact with respect to employment or income outcomes.⁴⁷ However this finding should be treated with caution as there are a number of other evaluations of events which do not explicitly mention associated legacy facilities but might reasonably be assumed to include them (for example, evaluations of the more recent Olympic Games hosts). When these studies are incorporated into the findings, the picture becomes more mixed.

The two studies which consider the impact of public announcements of forthcoming events and construction of facilities find that the impacts on economic growth were mixed. Both studies evaluate the effect on property prices. In one case, there was an uplift of 5% for properties up to three miles from the proposed Olympic Stadium in London following the announcement of the Games,⁴⁸ whilst the relocation of the Dallas Cowboys stadium caused property prices values to decrease by 1.5%.⁴⁹ In the latter case, this equated to the anticipated burden of a new sales tax levied to pay for the stadium. With such a small and conflicting evidence base, we cannot conclude that announcements had a significant positive effect on growth.

44 Studies 309, 311, 326, and 327.

45 Study 309

46 Study 311

47 Studies 301, 331 and 441 all find no impacts.

48 Study 359

49 Study 357



Summary of findings

These reviews consider the wider local economic impacts of sports & culture events and facilities in terms of the effects on, for example, employment, wages or property prices. It is important to note that sports and culture have intrinsic value, which many see as their primary value, and which is quite unrelated to local growth impacts. This intrinsic value is not disputed here, but neither is it the focus of the study. However it is the case that public sector investment or subsidy of sports & culture is sometimes justified on the grounds of stimulating local economic growth, and the evidence (or otherwise) to support that argument *is* the focus of this study.

What the evidence shows

- Effects on the wider economy tend not to be large and are more often zero. Some projects, particularly facilities, have a positive impact on local property markets. Any wage and income effects tend to be small and limited to particular areas or particular types of workers.
- Facilities tend to have a positive impact on local property prices. Policymakers should consider the distributional effects of these property market changes (who are the likely winners and losers).
- Projects may have been associated with increased trade imports and exports, including tourism, although these effects may be short lived (and are only considered in a small number of studies).

Where there is a lack of evidence

- We found no high quality evaluations of the impact of events and facilities on visitor numbers. Far more should be done to assess the extent to which projects lead to *net* increases in visitor numbers for the area as a whole. Visitor numbers for the project alone and surveys of attendees, (asking them about spend, motivation for visit etc.) do not provide strong evidence on the impact of projects on net visitor numbers.
- There was a paucity of evidence regarding cultural projects overall. This is an issue for understanding the likely impact of such projects and also leaves a gap in our ability to compare the economic effects of sport projects and cultural projects.

- We found no robust evidence on the economic impacts of smaller projects (such as arts centres or small-scale festivals) – although based on what we found for large projects, it seems reasonable to assume that the wider economic impact of such projects would be even smaller.
- We found no robust evidence on the impact of recurring sport and cultural events, such as annual festivals or tournaments.

How to use this review

This review considers a specific type of evidence – impact evaluation. This type of evidence seeks to identify and understand the causal effect of policy interventions and to establish their cost-effectiveness. To put it another way they ask ‘did the policy work’?

The focus on impact reflects the fact that we often do not know the answers to basic questions that might reasonably be asked when hosting a new event or building a new facility. In particular what kind of effects events and facilities might have on the local economy, as well as whether these effects differ by the type of project? Being clearer about what *is* known will enable policymakers to make better decisions and undertake further evaluations to start filling the gaps in knowledge.

Supporting and complementing local knowledge

The evidence review sets out a number of ‘Best Bets’ – based on the best available impact evaluations. In particular it identifies what kind of effects events and facilities might have on the local economy, as well as whether these effects differ by the type of project.

However, the ‘Best Bets’ do not address the specifics of ‘what works where’ or ‘what will work for a particular locality’. Reflecting this, the overall findings from the evaluations should be regarded as a complement, not a substitute, for local knowledge. Detailed local knowledge and context remain crucial.

‘Best Bets’ also raise a note of caution for policymakers if they decide to undertake a project on the basis of anticipated effects that have not generally materialised elsewhere.

Specific recommendations

Almost all of the evaluations that we found to be rigorous are focused on projects at the grand end of the scale. However, we are confident that there are lessons for everyone facing this type of spending decision from the evidence we have looked at regarding these very large projects.

The evidence shows that it is important to have realistic expectations of what sports and cultural projects can achieve. For example:

- Facilities may be more likely to produce economic benefits than events, probably due to the longevity of their impact.
- Indirect employment effects are unlikely to be large, and focus should be on the direct employment effects generated by an event or facility. Reflecting this, time and expense can be saved by forgoing complex multiplier-based appraisal systems in lieu of solid ‘narrow’ evaluations.
- As the benefits of new facilities tend to be very localised and related to property prices and regeneration, they should be part of a broader strategy rather than seen as stand-alone projects. They should not be relied upon as the major component of a job creation strategy.

- Considered together the findings raise interesting questions about who should pay for sport and cultural events and facilities in any given locality.

None of this should overshadow the other real if difficult-to-measure benefits of hosting sport and cultural activities: throwing a good party is always appreciated.

Helping to fill the evidence gaps

As should be clear from this review, there are many things that we do not know about the impact of sport and cultural projects. Most of the evidence is focused at the very large end of the scale, and on professional sport franchises.

One promising study ORiEL – the Olympic Regeneration in East London (ORiEL) study – is rolling out at present.⁵⁰ The study will take a quasi-experimental approach to evaluate the urban regeneration impacts of the Olympics on young people and their families. Adolescents aged 11-12 years in 2012 have been selected from 6 schools in the London Borough of Newham (the key host borough for the London 2012 Olympics) with baseline data collected before the Olympics and up to 3 years' follow up data collection post-Olympics. The primary outcomes to be studied are socio-economic status, economic activity, mental health, wellbeing, and physical health with controls for contextual effects. Results are expected in 2015 or later.

The scale of the ORiEL study is commensurate with the scale of the Olympics and would be inappropriate for smaller projects, however it does demonstrate the type of quantitative research that is possible to support sports and culture impact evaluation.

There needs to be more experimentation in measuring the economic impact of smaller projects. This may require improvements in data collected on key variables (e.g. visitor numbers) as well as the use of improved evaluation techniques. In particular, evaluations should make greater use of suitable comparison groups when looking at both wider economic impacts and the overall impact on visitor numbers. While individual local authorities may have little incentive to undertake such evaluations (especially for one off investments or events) there would still be a large benefit for local decision makers as a whole in knowing the impact of these events and how that compares to appraisals done before the project is implemented. At a minimum, some larger scale impact evaluation studies could provide us with some idea on the extent to which techniques that are currently widely applied (such as user surveys) actually identify net policy impacts. This would allow better decision making on future projects.

The Centre's longer term objectives are to ensure that robust evidence is embedded in the development of policy, that these policies are effectively evaluated and that feedback is used to improve them. To achieve these objectives we want to:

- work with local decision makers to improve evaluation standards so that we can learn more about what policies work, where.
- set up a series of 'demonstration projects' to show how effective evaluation can work in practice.

Interested policymakers please get in touch.

50 Smith et al. (2012). The Olympic Regeneration in East London (ORiEL) study: protocol for a prospective controlled quasi-experiment to evaluate the impact of urban regeneration on young people and their families. *BMJ Open* 2012. Downloaded on April 24 2014.



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Appendix A: Findings by outcome

Outcome	Positive	Zero	Negative	Mixed	Share positive
Employment	327, 328	301, 302, 320, 321, 331, 333, 367, 441	442	337, 369, 347, 355, 379	2/16
Wages or incomes	327, 372	301, 331, 441		302, 316, 328, 345, 355, 379	2/11
Property or land prices	311, 326, 327, 359	371	357	309, 336, 363	4/9
Trade imports and exports	330, 373	349			2/3

Appendix B: Evidence Reviewed

Ref No.	Reference
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