The Economic Impact of the
London 2012
Olympic & Paralympic Games

A report by
Oxford Economics
commissioned by
Lloyds Banking Group
# Contents

Foreword................................................................................................... 1

Executive Summary.................................................................................. 2

1 Introduction ..................................................................................... 7

2 Construction .................................................................................... 8

2.1 The economic impact from construction of the 2012 Games and its legacy ........................................................................... 8

2.2 Estimates of the deadweight and displacement ................................................................. 12

3 Tourism impacts............................................................................ 14

3.1 Lessons from previous major events ....................................................... 14

3.2 Estimating the tourism impact of London 2012 ....................................................................... 15

3.2.1 Before London 2012 ........................................................................ 15

3.2.2 2012 Games time ............................................................................. 16

3.2.3 Legacy.............................................................................................. 18

3.3 Calculating the economic impact from the additional tourist spending due to London 2012 ........................................................................... 18

4 The expenditure on staging the London 2012 Games ................ 21

5 Happiness from hosting the 2012 Games.................................... 23

5.1 Happiness benefits of hosting the 2012 Games ............................................. 23

5.1.1 Mitigating negative effects ...................................................................... 25

5.2 Happiness and its economic impacts....................................................... 27

5.3 Happiness and economic benefits from the 2012 Games ....................... 27

5.3.1 Consumer confidence ...................................................................... 27

5.3.2 Household consumption .................................................................. 29

6 Legacy: labour market .................................................................. 30

6.1 Training to improve skill levels ................................................................. 30

6.2 Employment of previously unemployed local people ............................... 32

7 Legacy: physical environment ..................................................... 34

7.1 What benefits flow from the housing legacy? ............................................. 35

7.2 How can these housing benefits be measured?............................................. 36

7.3 How big are the benefits? ........................................................................ 38

7.4 Parkland brings benefits too ................................................................. 39

8 Conclusion..................................................................................... 40

8.1 Much is still to come................................................................................. 40

8.2 Not just a London story ............................................................................ 41
Foreword

There have been several attempts to measure the economic impact of London 2012. Some have focused on a specific segment of the economy, such as consumer spending, while others have been limited to a narrow timeframe.

Our objective in this report has been a much broader assessment of the impact. We have looked at the period from July 2005, when the IOC awarded the Games to London, through to 2017 – five years after the closing ceremony – although it is clear that the economic legacy will last far beyond that point. We have also examined the impact across construction and tourism, as well as on the labour market and housing.

For the sake of rigour, the report concentrates on aspects of the economic impact where most data were available. As such, some more speculative issues including changes in sporting participation are not addressed.

As much as possible, the calculation of the economic impact takes into account any activity that would have happened in spite of the Games, or that has been lost because Games-related projects have taken precedence over alternative developments. However, the report does not look at how the resources used for the London 2012 Games and to build its legacy might have been otherwise deployed.

We've commissioned this independent report, with the aim of producing the most comprehensive analysis possible of the economic impact of the Games, although we realise that it could be several years before the true scale of this impact is understood.

This report is provided for information only and should not be relied on as offering advice for any set of circumstances and specific advice should always be sought in each instance. While all reasonable care has been taken to ensure that the information in this report is accurate, no liability is accepted by Lloyds Banking Group or any of its subsidiaries for any loss or damage caused to any person relying on any statement or omission in this report.
Executive Summary

This study investigates the economic impact of the London 2012 Olympic and Paralympic Games on the UK economy and its nations and regions between July 2005 and July 2017.

The total economic impact of the Games on the UK is significant...

- It is estimated that the 2012 Games will support a £16.5 billion (2012 prices) contribution to UK GDP spread over 12 years. Of this, 82% is expected to result from the pre-Games and legacy construction activity, 12% from tourism and 6% from the expenditure required to stage the Games.

- Of the GDP supported by the 2012 Games, 70% is estimated to be generated prior to and during the Games, with the remaining 30% expected to occur as part of its legacy.

- Of the total GDP supported, 41% is expected to occur in London; 9% in the South East; 7% in the North West; 6% in the East of England, Scotland, West Midlands, Yorkshire & the Humber and the South West; and 5% in the East Midlands.

- Between the award and five years after the closing ceremony, it is estimated that the 2012 Games will support the equivalent of 354,000 years of employment. Of which, construction work will support 78% and tourism 15%.

- Of the additional expenditure associated with the construction of the 2012 Games and its legacy, LOCOG’s budget for hosting all the events and the extra tourist spend, 52% is estimated to be received by Small and Medium-Sized Enterprises (SMEs) (once sub-contracting is taken into consideration).

Games-related construction activity makes a significant contribution, with impacts spread broadly across the UK’s 12 nations and regions...

- In total, it is estimated that £11.9 billion (2012 prices) will be spent on 2012 Games-related construction between 2005 and 2017.

- London 2012 Games-related construction activity will support an estimated £13.5 billion (2012 prices) contribution to UK GDP between 2005 and 2017. Nine of the UK’s 12 nations and regions experience 5% or more of this impact.

- The construction activity is expected to support the equivalent of 267,000 years of employment in the UK economy during the 2005 to 2017 period, 78,000 of which are in the construction sector itself.

- In terms of timing, 70% of the GDP impact occurs prior to the Games – a period in which the construction sector experienced a sharp contraction in output – but with a legacy impact of £4 billion still to come in the five years to 2017.
...with substantial tourism impacts, which are distributed widely among the UK’s 12 nations and regions, too...

- The 2012 Games will attract 16,500 athletes, 4,000 technical officials, 4,000 Olympic movement officials and 21,000 accredited members of the media. Most of these will come from abroad. Foreign residents are estimated to have 1.2 million tickets.

- The 2012 Games are estimated to generate a net increase in tourist visits of 10.8 million between 2005 and 2017. There is estimated to be a significant boost in foreign tourist visits in the years after the Games.

- This extra tourist expenditure will generate a £2 billion (2012 prices) contribution to GDP and support the equivalent of over 61,000 additional years of employment between 2005 and 2017.

- While London will receive the majority of these benefits, all of the UK’s nations and regions gain with the equivalent of 41,000 years of employment supported outside of the capital.

- Just under half of the GDP impact of £2 billion from tourism will occur in the years after the Games have closed.

...the contribution from staging the 2012 Games itself is significant and particularly important for the UK’s SMEs.

- LOCOG’s spend to stage the 2012 Games is estimated to generate a total contribution of £1 billion to UK GDP.

- This contribution is made up of £497 million directly from LOCOG’s spending, with multiplier impacts in the supply chain and through staff’s consumer spending supporting another £547 million contribution elsewhere in the economy.

- The spend required to stage the 2012 Games is estimated to support the equivalent of 26,000 years of employment. The numbers of people employed will be significantly greater as some of these jobs will be temporary and only for the duration of the 2012 Games.

- Small firms have been successful winning LOCOG contracts. Analysis of LOCOG’s UK-resident contractors by size suggests that 72% are SMEs and 28% are large firms.

A feelgood factor in the UK from hosting the 2012 Games...

- A number of studies suggest that holding major events may increase the host country’s residents’ happiness. A temporary feelgood factor may arise from the enjoyment of attending the sporting or associated cultural events, volunteering, proximity of the events, or national pride. This may translate into increases in consumer confidence and spending, though the evidence for these effects is mixed.

- The 1996 UEFA Football Championships (Euro 1996) are estimated to have increased UK-residents’ happiness by the equivalent of a gift of £165 to every
man, woman, and child in the UK. Given its scale, it is likely the London 2012 Olympic and Paralympic Games will boost happiness by at least as much.

Local residents’ labour market outcomes will also improve, with lasting effects...

- The training undertaken as part of the construction activity for the 2012 Games and its legacy is estimated to earn a net present value of £504 million over the working lives of the recipients.

- The opportunity to work for the 3,000 formerly jobless people who were employed in the construction activity is likely to have a positive impact on their future careers. It is estimated to earn those people an additional £121 million in wages over their lifetime, an average of about £40,000 each.

The physical legacy of the 2012 Games will persist into the future and benefit some of the least well-off wards in the UK...

- The provision of 3,850 new affordable homes as a physical legacy of the 2012 Games is likely to deliver benefits in relation to better health, fewer lost working days, lower NHS costs and reduced costs of crime in the range of £50 to £130 million per annum.

- The proposed parkland elements of the 2012 Games’ legacy are estimated to have a capital value of nearly £500 million in current money terms.
Box 1: A brief guide to economic impact analysis and key terms

The first three chapters of this report undertake a standard economic impact analysis of the construction, tourism and staging of London 2012. As such they focus on three channels of expenditure:

**Direct impacts** – The economic activity that results from the expenditure on the subject of interest itself. In the case of the construction, this is economic activity created in building the infrastructure, athletic venues, and private sector development projects related to the 2012 Games and its legacy.

**Indirect impacts** – The economic activity generated by the procurement of inputs of goods and services. In the case of the building work, this occurs in the construction industry’s supply chain.

**Induced impacts** – The economic activity supported in the economy by staff and those employed in the subject of interest’s direct supply chain spending their wage income, for example at retail and leisure outlets.

This impact analysis uses two metrics to measure the benefits estimated to accrue to the UK economy as a result of hosting the 2012 Games:

**The gross value added (GVA) contribution to UK GDP** – this is the contribution to the economy of an individual producer, industry or sector in the UK. It is probably most easily understood as the value of a producer’s output (goods or services) less the value of inputs used in that output’s production process.¹ The figures are all presented at 2012 prices.

**Employment** – the number of full-time equivalent employment years created. Employment is presented in this way as the economic impact of London 2012 is measured between 2005 and 2017 and some jobs are temporary, for example only for the duration of the Games themselves, or part-time.

The results of this report are presented net of any deadweight and displacement. These are:

**Deadweight** outcomes represent what would have happened anyway if London had not won the right to host the 2012 Games. So in the case of construction, for example, this is the building to regenerate the host boroughs that would have occurred even in the absence of the London 2012 Games.

**Displacement** measures the economic activity reduced elsewhere as a result of the 2012 Games taking place. This may occur for example if the demand for construction workers to build the stadia increased construction wages to the extent that it reduced construction employment elsewhere.

¹ GDP is the main summary indicator of economic activity in the UK. References to whether the UK economy is in recession or its general growth rate are typically made using GDP.
The results do not consider the opportunity cost of public funds, which could be used to finance other projects or lower the tax burden. Whilst this is a common criticism of economic impact analysis, speculating on what the funds could have been used for involves conjecture.

**Other key terms**

**Employment scarring** – a period of unemployment tends to increase the likelihood that an individual will be unemployed in the future, and also reduce the wage the person will earn. The effect is referred to as employment scarring.

**Legacy** – The economic impact of the 2012 Games on the UK following the staging of the actual event. This includes legacy construction projects and legacy tourism effects, which begin post-Games in 2012 and are accounted for until 2017.

**LOCOG** – London Organising Committee of the Olympic and Paralympic Games

**NPV** – a present value is the value of future revenues or benefits as if they were all received today, taking into account inflation and opportunity cost of money (borrowing costs). A net present value subtracts the costs required either in the present or in the future in order to achieve those benefits.

**SMEs** – Small and medium sized enterprises refers to businesses in the UK with fewer than 250 employees.
1 Introduction

This study seeks to measure the economic contribution of the London 2012 Olympic and Paralympic Games on the UK economy and its nations and regions. It focuses on the period from the International Olympic Committee’s (IOC) awarding of the 2012 Games to London in 2005 to five years after the Games in 2017, though where effects are longer-lasting these have been identified too.

It investigates six channels through which the Games impact the UK economy:

- Chapter 2 looks at the impacts of the construction activity to build the stadia in the Olympic Park and the Athletes’ Village in advance of the 2012 Games and estimates the effects of the legacy construction work.

- Chapter 3 investigates the impact of the 2012 Games on tourism. It explores the impact of the Games on tourist expenditure in the UK and its nations and regions, net of any displacement from potential visitors deterred from coming to the UK. The analysis looks at the scale of economic activity and employment in the tourism sector, in its supply chain and through impacts from the spending of wages that the additional tourist expenditure generates.

- Chapter 4 assesses the impact of the London Organising Committee of the Olympic Games and Paralympic Games Ltd (LOCOG) procurement from UK suppliers to stage the 2012 Games. As with the previous two chapters, it looks at the direct, supply chain and consumption impacts.

- Chapter 5 investigates the possible impact of hosting the London 2012 Olympic and Paralympic Games on national wellbeing through a ‘feelgood’ factor. It explores whether potential increases in happiness from holding major sporting events positively impact host countries’ economies. The analysis focuses on impacts on consumer confidence and consumers’ expenditure.

- Chapter 6 looks at the legacy impacts of the training activity and employment of previously unemployed local residents in pre-Games and legacy construction. It analyses the scale of more positive labour market outcomes these people may achieve as a result of these interventions.

- Lastly, Chapter 7 looks at two aspects of the physical legacy of London 2012. First, the impact of new social housing. It investigates how this may impact future residents’ health and fear of, and experience of crime. Second, the impact of the parkland.
2 Construction

Main points


- The construction activity is expected to support the equivalent of 267,000 years of employment in the UK economy during the 2005 to 2017 period, 78,000 of which are in the construction sector itself.

This chapter estimates the economic impact of the construction activity undertaken to host the London 2012 Games and build its legacy. The analysis covers the period from 2005 to 2017. The cut-off date of 2017 has been chosen as a significant proportion of legacy projects, such as new housing will have been completed by then, and because potential effects become more uncertain the further they are projected into the future.

2.1 The economic impact from construction of the 2012 Games and its legacy

To calculate the contribution to GDP and employment created by the construction activity undertaken to host the 2012 Games and its legacy impacts it is necessary to estimate the building costs. The Olympic Delivery Authority (ODA) publishes information on their expenditure on the Olympic Park projects that have been or are scheduled to be completed prior to the 2012 Games (such as the Athletes’ Village, the International Broadcast Centre, and the competition venues). For other Games-related construction (such as Westfield shopping centre and the ArcelorMittal Orbit observation tower) published data have been used where available. For the legacy building and construction where no public information is available, information on the building type and size have been combined with standard construction cost schedules for the UK.

In total, spend on Games-related construction between 2005 and 2017 is estimated at £11.9 billion (2012 prices). The expenditure undertaken so far has benefited firms in all the UK’s nations and regions. The ODA awarded contracts to just over 800 firms. Firms in seven out of the UK’s twelve nations and regions received at least 5% of the contracts (Chart 2.1).

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3 LegacyNow, (2012), ‘Gains beyond the Games’.
It is estimated that the pre- and post-Games construction will contribute £4.5 billion to GDP (Chart 2.2). Of this, 70% occurs before the 2012 Games, with the remainder forming part of the legacy build.

Chart 2.1: ODA contracts awarded to each of the UK’s nations and regions

Source: ODA

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5 Total spend is converted to direct GVA by applying the ratio of GVA to gross output for the construction sector sourced from ONS, (2011), ‘Input output analytical tables - 2005’, 2 August.
Analysis of the multiplier effects from the construction work suggests a GDP contribution of £5.8 billion (in 2012 prices) from the procurement of inputs of goods and services from the construction firms’ supply chains. It is estimated that staff employed on Games-related construction projects and in their direct supply chain will support a further £3.3 billion contribution to GDP through their spending. In total therefore, the construction activity for London 2012 and its legacy will support an estimated £13.5 billion (in 2012 prices) contribution to GDP.

Chart 2.2: Direct, indirect, and induced contribution to GDP by Games-related construction projects

Another way this information can be presented is to show the total GDP (including direct, indirect and induced effects) supported by each part of the construction work for the 2012 Games and its legacy (Chart 2.3). Site preparation and required infrastructure, for example, is estimated to have contributed over £2.3 billion to UK GDP, while construction of the competition venues contributed £1.3 billion. The conversion of the Athletes’ Village into residential space, other commitments to build retail, office, and residential space, and alterations to Stratford station to accommodate Crossrail are expected to contribute an additional £4.0 billion in legacy construction impacts.6

London 2012 related construction activity will also support jobs, including within the construction sector itself, in the construction sector’s supply chain, and in the wider UK economy.

In terms of direct impacts, it is estimated that the 2012 Games-related build will support the equivalent of 78,000 years of employment\(^7\) within the construction sector itself, 54,000 of which are expected to arise in the 2005-2012 period. ODA data indicate that at the peak, in April 2011, 12,300 people were employed building the Olympic Park and Olympic village. The equivalent of 115,000 years of employment are estimated to be supported by the construction sector’s purchases from its supply chain, while the spending of employee wages (those working on Games construction projects and its supply chain) will help to support the equivalent of an additional 74,000 years of employment across all UK sectors.

Of the 267,000 years of employment supported by the 2012 Games and its legacy construction work, 70% of the employment will occur prior to the 2012 Games being held with the remainder attributed to legacy construction (Chart 2.4).

\(^7\) The number of jobs is estimated by dividing the GDP contribution of an economic activity by the average productivity of employees in the sector where the economic activity takes place. Productivity data acquired from ONS, (2011), ‘Annual Business Survey’.
2.2 Estimates of the deadweight and displacement

The results presented above are net of deadweight.

Residential housing deadweight

Some housing would have been built in the host boroughs in the absence of the 2012 Games. This has been estimated on the basis of the five year average of 139 residential dwellings built by housing associations and local authorities per year in each London borough prior to the 2012 Games. This figure is used as the deadweight each year from 2012 to 2015 in each of the two boroughs – Newham and Hackney – scheduled to receive Legacy residential build.

Shopping centre, hotels, and other private sector construction

Determining whether private sector retail (Westfield shopping centre), hotel, and office space would have been built around the Olympic Park in the absence of the London 2012 Games requires a subjective judgment. One possibility is that investors in such projects would have gone ahead in any event, although this outcome is assigned a low probability. A second possibility is that because the investors in such projects tend to be international in scope, the business case for these projects could have been made for another location had London not won the Games.

In particular, it is likely that the development in the Olympic boroughs of a new shopping centre and hotels aimed at an affluent market would have been far less attractive in the absence of the urban-renewal plans that are scheduled as part of the London 2012 Legacy. For example, the English Indices of

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Deprivation (EID)\(^9\) show that Newham and Hackney contain some of the least well-off wards in England, including wards that are ranked among the worst 2% of all 32,000 wards.

Another possibility is that the London 2012 Games brought forward the building of these projects in time.

We therefore judge that the private sector shopping and hotel developments would not have materialised between 2005 and 2017 in the absence of the 2012 Games.

**Displacement impacts**

The analysis is based on a view that the construction activity that has taken place prior to the 2012 Games did not displace any other economic activity. This view is based on the timing of the Olympic construction spend: 96% of the expenditure occurred between 2007 and 2012 when the construction sector and wider economy experienced falling output or slow growth (Chart 2.5).

**Chart 2.5: Annual percentage change in employment and gross value added in the UK construction sector, 2000-2010**

Displacement may also take place in the labour market. Blake (2005)\(^10\) notes that: “…construction costs may be increased during the construction phase because of the increased demand for construction services.” But this seems unlikely to have actually occurred as ONS ASHE\(^11\) data show construction workers’ wages have not increased during the build.

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3 Tourism impacts
3 Tourism impacts

Main points
- A total of 10 million international and UK residents are expected to attend London 2012 events. Anticipatory and legacy impacts mean the 2012 Games and associated events are estimated to result in a net increase in tourist visits of 10.8 million between 2005 and 2017.
- This extra tourist expenditure will generate a £2 billion (2012 prices) contribution to GDP and support the equivalent of over 61,000 additional years of employment between 2005 and 2017.
- While London will receive the majority of these benefits, all of the UK’s nations and regions benefit with the equivalent of 41,000 years of employment supported outside of the capital.

3.1 Lessons from previous major events

The UK has limited recent experience of hosting major sporting events (before Euro 1996 there was a 30 year gap from the FIFA World Cup in 1966). To get a view of how the tourist and day-visitor economy is likely to change, this analysis looks at the lessons from the literature on the economic impact of hosting major events (Olympic Games, FIFA World Cups and UEFA European Championships). This suggests:

Pre-event
- There is a moderate increase in the level of domestic business tourism in the build up to the event as companies seek to win and undertake contracts to deliver the 2012 Games, peaking in the year of the event.
- International tourist arrivals decline in the year prior to the event as people postpone visits to coincide with the event, or avoid the host city due to perceptions about disruption caused by the construction of the major infrastructure projects.

During the event
- At the Sydney 2000 Olympic Games, the Athens 2004 Olympic Games and the Beijing 2008 Olympic Games, visitors spent less than other tourists on non-Games related tourism. Therefore, the average spend per night during the Olympic period is lower than at other times.

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12 OECD, (2012), ‘Local development benefits from staging global events: achieving the local development legacy from 2012’.
There is mixed evidence of an increase in the number of domestic residents travelling abroad during the event: residents of France and Germany reduced their outbound travel during their World Cup years, while residents of Spain and Greece increased travel abroad during their Olympic years. The average impact across the major events has been found to be a 1 percentage point increase in outbound travel.\textsuperscript{14}

Avoidance of the host city by locals and residents from other regions of the host country increases domestic tourism in other parts of the country. Foreign tourists also visit non-host regions in order to avoid perceived congestion and high prices (including flights).

**Post-event/Legacy**

Although evidence from most major events sampled indicates there is only a small, or no, legacy impact from hosting a major event, the experiences of Australia and Germany both show a positive impact post-event. The FIFA World Cup in Germany, in particular, has been argued to have “opened up Germany to new groups of customers”.\textsuperscript{15}

### 3.2 Estimating the tourism impact of London 2012

#### 3.2.1 Before London 2012

There are five main ways the 2012 Games are expected to impact tourism in the years preceding the event:

- Domestic business travel volumes increase by about 2 percentage points per annum prior to the 2012 Games, peaking in the year of the event.

- By May 2012, LOCOG estimate over 18 million visitors\textsuperscript{16} had attended an event which forms part of the Cultural Olympiad to commemorate London 2012. It is open to question how many of these events would have been run anyway (deadweight).\textsuperscript{17}

- The Olympic Torch Relay (19 May to 27 July) is not estimated to generate any additional expenditure from people lining the torch route, due to its goal of travelling to within 10 miles of 95% of the UK population. However, some of the 66 evening celebrations are likely to attract large crowds who will purchase transport tickets, food, beverages, and souvenirs.

\textsuperscript{14} Oxford Economics, (2007), ‘The value of the Olympic and Paralympic Games to UK tourism’.

\textsuperscript{15} Germany National Tourist Board, (2007), ‘The 2006 FIFA World Cup and its effect on the image and economy of Germany’.

\textsuperscript{16} http://festival.london2012.com/about/index.php

\textsuperscript{17} There is no way of accurately answering this question, so we have estimated deadweight at 90% on the basis of the share of funding coming from LOCOG rather than institutions that funds arts activity (for example, the Arts Council) which presumably would have used the funds to run other events.
There are 200 Pre-Games Training Camps where visiting athletes complete their preparations for the Games. This will bring additional expenditure into the UK.  

Displacement of some international arrivals due to the time switching of visits to coincide with the 2012 Games or avoidance of the city due to perceptions about infrastructure construction activity.

### 3.2.2 2012 Games time

London Business Network (2012) and LOCOG estimate that there will be 16,500 athletes, 4,000 technical officials, 4,000 Olympic movement officials and 21,000 members of the accredited media attending the 2012 Games. Over 95% of these are estimated to be visiting from abroad.  

The 2012 Games is attracting spectators from within the UK and abroad. The distinction is important as foreign residents bring additional expenditure into the UK, whilst domestic residents’ expenditure may be additional, or may just redistribute existing expenditure (through time or across regions).

Hitherto, LOCOG have published very little data on ticket sales by customer-type. But it is known one million tickets were allocated to foreign residents through national Olympic Committees. A proportion of the tickets allocated to sponsors and corporate hospitality will also be given to foreign residents. This suggests in excess of 1.2 million (or 12%) of the people attending the 2012 Olympic and Paralympic Games will be from overseas, whilst 8.8 million will be UK residents (Chart 3.1).

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18 This has been estimated to amount to £19 million on the basis of combining past squad sizes from the 2008 Beijing Olympics and the agreed training camp locations.


20 It is likely unaccredited members of the media will also attend.

21 Using the size of squads at the 2008 Olympics as a guide.

The amount that UK residents spend attending the 2012 Games will partly depend on whether they make a day trip or have to pay for overnight accommodation (and are therefore classified as a tourist). To investigate this and likely regional impacts, data have been used from Lloyds Banking Group on their customers’ purchases of London 2012 Olympic and Paralympic tickets. This shows customers located in London and the South East bought 27% and 24% respectively of tickets purchased by Lloyds account holders (Chart 3.2). Whether UK residents are day-trippers or stay overnight on their visits to the London stadia is assumed to be determined by the distance they travel. Spectators at events outside London are assumed to be day-trippers.
These ticket sales provide the basis for estimating the gross number of visits and their duration to the UK’s nations and regions. This is then multiplied by data on different visitors’ average daily spend to get a total expenditure figure. For UK residents crossing regional boundaries the expenditure is switched from one region to another.

There is also likely to be considerable displacement of visitors during the 2012 Games. Inbound foreign visitors’ avoidance of London and UK-residents travelling to other regions in the UK and abroad is modelled on the basis of previous host cities’ experience, adjusted for the size of London’s tourism market.

### 3.2.3 Legacy

The tourism impact of London 2012 is likely to stretch into the future as the 2012 Games provide worldwide media exposure and marketing opportunities.

### 3.3 Calculating the economic impact from the additional tourist spending due to London 2012

It is estimated that the 2012 Games will generate a net total of 10.8 million additional visitors between 2005 and 2017. These people will spend an additional £1.7 billion, of which over £1 billion is generated as a part of the 2012 Games legacy (Table 3.1).

<table>
<thead>
<tr>
<th>Table 3.1: Net Additional Visitor Spending 2005-2017 (2012 prices)</th>
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<tbody>
<tr>
<td><strong>London</strong></td>
</tr>
<tr>
<td>Domestic (business)</td>
</tr>
<tr>
<td>Deferred inbound</td>
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<tr>
<td>Foreign Tourists</td>
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<tr>
<td>Domestic Tourists</td>
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<tr>
<td>Day visits</td>
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<tr>
<td>Games Ticket Holders</td>
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<tr>
<td>Inbound</td>
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<tr>
<td>Domestic</td>
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<tr>
<td>Day visits</td>
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<tr>
<td>Games Displacements</td>
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<td>Inbound</td>
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<tr>
<td>Domestic</td>
</tr>
<tr>
<td>Total Net Impact</td>
</tr>
</tbody>
</table>

Source: Oxford Economics

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24 Average daily spend data are taken from the International Passenger Survey for foreign residents, and Great Britain Day Visits Survey and UK Tourist for UK residents depending on whether they are day trippers or tourists.

25 Previous studies suggest 10% of foreign inbound visitors will be displaced during the year of the major event, while there is a 1% increase in the numbers of domestic residents travelling abroad.

26 As some of the pre-Games impacts will already be found in official statistics, the analysis uses Oxford Economics’ forecast for UK tourism made just prior to the IOC’s awarding of the Games to London in 2005. Updating these forecasts using the most recent macroeconomic data provides a counterfactual as to how the UK tourism market would have would have developed without the Games. By translating the findings from similar major events into percentage point differences from the counterfactual it is possible to estimate the additional UK tourism impact owing to the Games.
The additional spending that occurs due to the 2012 Games generates economic activity in the UK’s nations and regions. In total, the additional tourism the 2012 Games attracts is estimated to contribute £2 billion to UK GDP. Of this approximately 17% occurs in the lead up to London 2012, 35% during the 2012 Games and 48% in the post-Games period (Chart 3.3).

Chart 3.3: Estimated increase in GDP as a result of the London 2012 Olympic and Paralympic tourism effect (2005 to 2017)

The extra expenditure will have a disparate impact on different industries’ output levels. The largest beneficiary is the hotels’ and restaurants’ sector, which is estimated to contribute almost a quarter of the tourism-related GDP (Chart 3.4). Given this impact is concentrated in London, the stimulus associated with the Games will benefit the 22,000 small- and medium-sized enterprises in London’s hotels and restaurants sector. The other industries directly receiving visitor spending (retail, transport, and other services (including entertainment)) are also expected to increase their GDP contribution. The business services sector is estimated to increase its output, largely as a result of the supply chain effects.

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27 Using data on the type of goods and services international and domestic tourists, and day-trippers purchase, this spend has been translated into additional expenditure for different industrial sectors. The ratio of gross output to gross value added for each industry is used to calculate each industry’s contribution to GDP. Using UK and regional input-output tables enables the indirect and induced impact of this spending to be calculated.
The additional value added created in the UK economy is estimated to support the equivalent of over 61,000 years of employment between 2005 and 2017. Of these, 20,000 are likely to be supported in London (Chart 3.5). Four other regions are predicted to gain the equivalent of over 5,000 years of employment (North West, South West, South East and Scotland).

Chart 3.5: Estimated increase in employment due to the tourism impact of the 2012 Games (2005 to 2017)

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28 The term ‘equivalent years of employment’ is defined as the number of full-time positions supported for one year. Hence, a single person employed for 4 years is the equivalent of 4 years of employment, and 4 people employed for 1 year is equivalent to one year of employment.
The expenditure on staging the London 2012 Games
4 The expenditure on staging the London 2012 Games

Main points

- LOCOG’s spend to stage the 2012 Games will support an estimated total contribution of £1 billion to UK GDP.

- This contribution is made up of £497 million directly from LOCOG’s spending, with multiplier impacts in the supply chain and through staff’s consumer spending supporting another £547 million contribution elsewhere in the economy.

- The spend required to stage the 2012 Games is estimated to support the equivalent of 26,000 years of employment. The number of people employed will be significantly greater as some of these jobs will be temporary and only for the duration of the 2012 Games.

LOCOG will stage London 2012. To fulfil this task it is procuring £1 billion of goods and services across eight sectors: artists, performance and events; security; services; soft facilities management and catering; sports; technology; transport and logistics; and venues and hard facilities management.

Analysis of LOCOG’s UK-resident contractors as at March 2012 suggests that 72% are SMEs and 28% are large firms. This is consistent with the BIS business population data which show SMEs are responsible for a large proportion of the employment and turnover in these industries (Chart 4.1).

Chart 4.1: SMEs share of turnover and employment in the industrial sectors likely to supply LOCOG in 2011

Source: BIS (2011)
The £1 billion of expenditure is estimated to produce a £497 million contribution to UK GDP.\(^3\) The figure is high because employee compensation and corporate profitability are a large percentage of turnover in these industrial sectors relative to the rest of the economy. The indirect impacts will support an estimated £304 million contribution to GDP in these sectors’ supply chains. The induced impacts add an additional £243 million. In total, LOCOG expenditure to stage the Games will support an estimated £1,044 million contribution to GDP.

Chart 4.2: The contribution to GDP supported by LOCOG’s spend on contractors

It is estimated this size of total GDP contribution will support the equivalent of 26,000 years of employment. A proportion of these are likely to be temporary and occur just for the duration of the 2012 Games, so the numbers of people actually employed will be substantially larger. Of the employment supported, 52% is due to the direct impacts, 26% in the supply chain and 23% due to induced impacts.

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\(^3\) The £1 billion spend is split according to sector where known (for example, security and bus and coach transport). In the absence of a breakdown of the remainder, the spend has been divided equally across the six industry sectors. This spend is then scaled by the gross value added to gross output ratio for the relevant sector. The multiplier impacts are calculated using ONS (2005), ‘Input output analytical tables - 2005’, 2 August.
Happiness from hosting the 2012 Games
5 Happiness from hosting the 2012 Games

Main points

- A number of studies suggest that holding major events may increase the host country’s residents’ happiness. A temporary feelgood factor may arise from the enjoyment of attending the sporting or associated cultural events, volunteering, proximity of the events, or national pride.

- Euro 1996 has been estimated to have boosted the nation’s happiness by the equivalent of £165 per man, woman and child.

- The evidence on whether a temporary feelgood factor from hosting major events impacts consumer confidence and spending is mixed.

5.1 Happiness benefits of hosting the 2012 Games

A number of studies have found evidence of ‘well-being’, ‘feelgood’ or ‘happiness’ benefits from hosting major sporting events. This effect may be explained by residents gaining happiness from:

- The enjoyment of attending events;

- Being involved as a volunteer;

- Enjoyment of the proximity of the events;

- Attending cultural showcases; and,

- National pride.

Kavetos and Szymanski (2008) find strong evidence of such ‘feelgood’ factors from hosting events. Their analysis covered the major sporting events (Olympic Games, FIFA World Cup and UEFA European Championships) over a 24-year period. The results suggest hosting the football World Cup or European Championships has a statistically significant and positive impact on happiness in the host country. This was true for wide sections of society (over 50 years old, under 50 years old, employed, no higher education, earning high or low incomes).

The Kavetos and Szymanski (2008) results do not suggest any systematically significant and positive anticipatory or legacy effects on the happiness of the population in the country which hosted the two football tournaments. This leads them to conclude that hosting creates a short term feelgood factor. This is not however to suggest that it is not sizeable. Kavetos and Szymanski (2008) provide an indication of the scale of benefits by using the 1996 UEFA European Championships in England as an example. The increase in reported happiness

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for the host population was estimated to be equivalent to 60% of the increase in happiness that individual households tend to experience when moving from the second to third-highest household income quartiles. This suggests that the happiness gain from hosting Euro 96 was equivalent to a monetary gift of £165 for every man, woman, and child.

The analysis of the one Olympic Games included in the Kavetos and Szymanski (2008) study found a negative impact on happiness for males and those in the upper part of the income distribution. This result is based on Barcelona 1992 and the authors note there may be unique reasons in relation to Spanish regional politics for the result. However, it also suggests that the happiness effect might not be equally shared across the nations and regions of the UK.

In a separate study for the Department of Culture, Media and Sport (2005) people in London, Manchester and Glasgow were asked about the importance of various intangible benefits of hosting the 2012 Games. The most important benefits included:

- Uniting people;
- Feelgood factor;
- National pride;
- Motivating/inspiring children;
- Legacy of sports facilities; and,
- Improving awareness of disability.

The study finds the willingness to pay to host the 2012 Games was around £22 per household per year in London and £12 per household per year in Manchester and Glasgow (over a period of 10 years). Of the people surveyed, a higher proportion felt that intangible benefits were more important than tangible effects (e.g. increased tourism spending). This was particularly the case in Manchester and Glasgow relative to London, with 48% versus 42% feeling the intangible benefits were most important (Chart 5.1).

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33 The authors note that the results should be interpreted with caution, as not everyone in the country is in the second quintile of earnings, and, even if they were, moving everyone from the second to the third quintile may not have the same effect on happiness as some smaller number of households moving from the second to the third quintile due to perceptions of relative well-being.

34 It is hypothesised that since the Games were used by Catalans to promote Catalan independence it led to reduced happiness for the Castilian majority in Spain.

5.1.1 Mitigating negative effects

Studies looking at happiness benefits from hosting major sporting events acknowledge the existence of negative impacts on the resident population due to factors such as increased traffic congestion, security concerns, environmental degradation, disruption of residents’ lifestyles and the cost of investment. Maennig and Porsche (2008) use the example of the 2006 football World Cup to highlight measures that can be taken to successfully limit these negative outcomes/perceptions. For example:

- A significant security force consisting of police officers, armed forces and other security personnel was deployed, but a restrained image of operations was presented. In addition the domestic security force worked with relevant operatives in other countries to minimize potential negative impacts from fans.
- There was extensive investment in transport infrastructure and environmental targets were set as an integral part of the tournament.
- Projects were initiated to motivate the population to get involved in sporting activities and voluntary work in connection with the tournament.

The paper found that these efforts helped organisers to succeed “in taking the football World Cup beyond a first and foremost sporting concern and to stage an event at which a country and its people, through their abilities, culture and temperament, strove to give the guests, the TV viewers abroad, and themselves a good time.”

Box 2: Will Team GB win enough medals to keep us happy?

Home advantage is a much discussed topic among sports’ pundits and fans. Ask any sports’ fan for examples, and he or she will regale you with stories of a favourite team falling foul of dodgy-refereeing decisions when on the cusp of a famous away victory. But there is also academic evidence\(^{37}\) of home advantage in sports, such as boxing, football and basketball, where subjective judgments from referees impact the result. Will home advantage push Team GB on to high achievement at London 2012, and if so how much happier will it make us feel?

Researchers\(^{38}\) have examined whether the success of national teams relative to initial expectations at major events produces an increase in the reported happiness across the population. Their results for the Olympic Games suggest that happiness is usually boosted when performance is better than expected, but the effect is seldom statistically significant.

What then is the burden of expectation on the shoulders of the Great British and Northern Ireland team? If the benchmark is the Beijing 2008 Games they need to deliver 47 medals to create a feelgood factor.

But, what if we all expect more because of home advantage? Academics\(^{39-40}\) can help here too with models of expected medal success based on, among other things, population size and GDP per head. These models predict a positive home team effect, but the bad news is that even with this the expected medal haul is somewhere between 42 and 47. While this may confirm that Team GB outperformed magnificently in Beijing, it opens up the prospect of a dent to our national happiness if the team fails to beat the high-water mark of the last Games – something that happened at the 1948 Games.

However, before you start feeling downbeat you might want to reflect on what the bookies are saying, where real money rather than academic prestige is involved. One prominent online betting site is pitching the expected Team GB medal tally at 62.5, with the odds balanced for an over- or under-achievement of this total. That maybe sets up another bet – the bookies against the dismal scientists. Meanwhile we hope Team GB will not be distracted by their need to keep us all happy.

\(^{37}\) See, for example, Unkelbach, C, and Memmert, D, (2010), ‘Crowd noise as a cue to referee decisions contributes to the home advantage’, Journal of Sport & Exercise Psychology.


5.2 Happiness and its economic impacts

There are numerous studies in the literature on the impact of economic indicators (e.g. income, unemployment) on happiness\(^{41}\). However there is also evidence of causality running in the opposite direction - that is greater happiness leading to improved economic outcomes. A study by Graham, Eggers and Sukhtankar (2004) using panel data for Russia found that happiness had a statistically significant impact on future household income.\(^{42}\) That is levels of happiness in one period appeared to have an effect on observed household income in a later period. The authors state that this result:

“…supports the evidence from the psychology literature that happier people earn more income or, more broadly speaking, perform better economically. It is certainly plausible that the same positive cognitive biases such as self-esteem, control, and optimism that affect normal happiness levels may also have positive effects on people’s performance in the labour market.”

5.3 Happiness and economic benefits from the 2012 Games

The previous sections have highlighted evidence of two broad relationships:

- Hosting a major sporting event has happiness benefits for people in the host country; and,
- Happiness has an impact on a person’s economic outcomes (for example, their incomes).

This implies that hosting a major sporting event may lead to positive economic outcomes through the event’s effect on the happiness of the population. It is possible to directly investigate such a relationship by looking at two economic indicators which may be correlated with happiness – consumer confidence and household consumption – and whether hosting a major sports event has a positive impact on both. However, care should be taken in interpreting any relationships uncovered as boosts to confidence and consumption may be related to more standard, tangible economic impacts such as increased tourism and investment resulting from hosting a major event.

5.3.1 Consumer confidence

To investigate whether hosting a major event has any impact on consumer confidence, this analysis looks at how consumer confidence indicators have behaved in host countries in Europe since 1980. The measure of consumer confidence used is the EU harmonised 12-month forward looking indicator. The


analysis compares the change in the indicator in the host country in the month in which the major sporting event first enters the time frame covered by the survey, to the average of all of the other EU15 countries for which data was collected. Comparison is drawn with the other European countries to control for the state of the economic cycle, shocks and other factors.

The results suggest that hosting an event has a positive impact on consumer confidence (Chart 5.2). For each of the events, the change in consumer confidence is positive in the host country and by a larger amount than in the other EU15 countries. However, the significance of the size of the Olympic host bar relative to the two football competitions should be interpreted with caution, as it is based solely on the Athens 2004 Games.

**Chart 5.2: Change in consumer confidence in the month major sporting event in Europe enters the forward looking time frame since 1980**

![Chart showing change in consumer confidence](source: Oxford Economics/OECD)

Statistical techniques can be used to deepen the analysis of the impact on consumer confidence of hosting a major event. There is evidence that two other major sporting events - the 1996 European Championships (hosted by England) and the 1998 World Cup (hosted by France) - had positive and statistically significant impacts on consumer confidence in the 12 months leading up to the event due to specific host-country effects. However, we find a negative and statistically significant effect for the 2000 European Championships on Belgium (hosted by Belgium and the Netherlands), while other events are not statistically significant. Therefore, supporting evidence from statistical analysis appears to be mixed.

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43 Regression analysis was used to examine whether adding a variable to represent the forthcoming event can help explain the monthly change in consumer confidence beyond inferring the likely change from the previous month’s measure.
5.3.2 Household consumption

To test for a happiness effect from hosting a major event on consumer spending, an additional variable has been inserted into the equations that explain consumer spending in Oxford Economics’ Global Macroeconomic Model. The variable takes a value of one when the major event occurs and zero at all other times. If it is found to be positive and statistically significant for host countries it is consistent with the idea of there being a stimulus to consumption from the happiness effects associated with being host. However, while it may be consistent with this premise, it does not prove this is the case as the increase in foreign residents entering the country for the events is likely to boost consumer spending.

The analysis was carried out for the three types of major events in Europe since 1980. The results are decidedly mixed, being consistent with a happiness impact from hosting an event on consumer spending for some major events but not for others.

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44 In economic models household consumption is usually determined by a range of drivers including household disposable income (accounting for wages/salaries, pensions, interest income, investment income, taxation and government benefits), interest rates, household wealth and debt payments.
6 Legacy: Labour market
6 Legacy: labour market

Main points

- The training undertaken as part of the construction activity for the 2012 Games and its legacy is estimated to earn a net present value of £504 million over the working lives of the recipients.

- The removal of the unemployment ‘scar’ from the 3,000 formally unemployed people who gained a job in the construction activity is likely to earn those people an additional £121 million in wages over their working lives, the equivalent of about £40,000 each.

This chapter quantifies the legacy impacts of London 2012 on the local labour market through the provision of training and employment, which reduces the impact of previous spells of unemployment on the future employment outcomes individuals can achieve.

6.1 Training to improve skill levels

The Olympic Development Authority (ODA) has provided support for more than 4,000 training interventions as part of the construction work prior to the 2012 Games (Chart 6.1). These interventions will generate significant positive legacy impacts on the labour market due to the benefits associated with having a more highly-qualified workforce.

Chart 6.1: Training intervention in pre-Games construction activity

Persons trained

Source: Oxford Economics based on LOCOG data
There is a well developed academic literature setting out the economic benefits to the individual and society of being more qualified. For the individual the returns to training are increases in the likelihood of being employed and receiving higher wages. For society there are impacts on employers, work colleagues and other firms. For example, the individual’s higher productivity increases the profitability of their employer or the competitiveness of their products. Co-workers benefit from skill transfers or faster R&D and technology adoption that boosts their productivity and wages. Other firms gain from the ability to hire more highly qualified labour.

Drawing on information from two academic studies for the Department of Business, Innovation and Skills (BIS) and Commission for Employment and Skills, on the returns to skills training enables the calculation of the Net Present Value (NPV) associated with the ODA’s and legacy construction training interventions. The NPV is calculated by estimating the discounted benefits from achieving a qualification on the working life of the learner, and subtracting the costs associated with undertaking the qualification.

The results suggest that the 2012 Games construction training interventions will generate an average wage premium of 7.5% for the recipient workers who raised their highest qualification level. Moreover, these individuals will, on average, increase the probability of being in employment over the course of their working lifetime by 2.8%. In monetary terms, that translates into a net present value of £504 million.

Table 6.1: Training interventions, pre and post London 2012

<table>
<thead>
<tr>
<th>Interventions</th>
<th>Wage premium</th>
<th>Employment premium</th>
<th>NPV per achievement (£)</th>
<th>Total NPV £mn</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-employment</td>
<td>1,007</td>
<td>3.0%</td>
<td>1.4%</td>
<td>27,000</td>
</tr>
<tr>
<td>NVQ Basic skills</td>
<td>1,464</td>
<td>3.0%</td>
<td>1.4%</td>
<td>27,000</td>
</tr>
<tr>
<td>NVQ L1 &amp; L2</td>
<td>2,889</td>
<td>9.0%</td>
<td>2.7%</td>
<td>67,000</td>
</tr>
<tr>
<td>Bespoke training</td>
<td>1,995</td>
<td>7.5%</td>
<td>4.6%</td>
<td>67,000</td>
</tr>
<tr>
<td>Apprentices</td>
<td>773</td>
<td>16.0%</td>
<td>2.7%</td>
<td>136,000</td>
</tr>
<tr>
<td>NVQ 3</td>
<td>61</td>
<td>15.0%</td>
<td>1.1%</td>
<td>82,000</td>
</tr>
<tr>
<td>Total</td>
<td>8,189</td>
<td>7.5%</td>
<td>2.8%</td>
<td>61,551</td>
</tr>
</tbody>
</table>


48 See Garrett, Campbell and Mason (2010) referenced above.
49 The numbers undertaking training as part of the legacy construction have been scaled up from the ODA levels using the job-years estimates in Chapter 2 on a pro-rata basis.
50 The benefits to the economy consist of the wage and employment premiums to the individual, the spillover benefits to the wider economy, plus the associated benefits to the Exchequer from higher income tax and National Insurance Contributions (NICs) receipts and lower social benefits outgoings.
51 The costs to the economy consist of the direct costs of public funding, and fees paid by individuals and/or their employers, and the indirect costs of wages and profits (i.e. value added) and lower income tax and NICs which is forgone while learning takes place.
6.2 Employment of previously unemployed local people

The estimates of the number of people employed in the construction of the Olympic Park and Athletes’ Village are discussed in Chapter 2. But, long after they have stopped working on the project, the workers may still benefit. This is particularly the case for those who were formerly unemployed. The ODA and LOCOG published quarterly information in their ‘Employment and Skills Update’, on the number of the construction workers who were formerly unemployed. The data shows that around 3,000 of the contractor workforce were London residents who had previously been unemployed. Around 70% were residents of the host boroughs (Chart 6.2).

Chart 6.2: Place of residence of the previously unemployed contractor workforce

By reducing worklessness, the 2012 Games will provide a positive legacy for the labour market. The academic literature suggests that periods of unemployment leave permanent scars on people by affecting the labour market outcomes they achieve in the future. In particular, a period of unemployment increases the likelihood the person will be unemployed in the future and weakens subsequent job tenure. It is also found to carry a wage penalty of around 10% on average on returning to work.

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But why does this scarring occur?

- The loss of a job results in the permanent loss of firm-specific skills. Moreover, while a person is unemployed they are not accumulating work-related skills.¹⁴

- Employers may use previous labour market history as a signal for labour productivity. As a result, lower wages may be offered to a formerly unemployed job candidate.¹⁵

- Unemployed workers accept lower quality jobs which have higher rates of turnover.

The academic studies of scarring effects provide a basis for estimating the cumulative loss of earnings caused by the period of worklessness experienced by the 3,000 previously unemployed London residents who found jobs as contractors on the Olympic Park and Athletes’ Village developments. The key assumptions in the analysis are.¹⁶

- The wage penalty is smaller for men aged less than 30 than those aged 30 or above (7.2% versus 14.5%).

- The wage penalty is eroded with time spent back in employment. The penalty to a man aged 30 disappears after 6 years back in work. For a man aged 30 or above the penalty disappears after 12 years back in work.

- The penalties apply to UK construction workers’ annual wage, by age, sourced from Annual Survey of Hours and Earning (ASHE)¹⁷, scaled to Greater London totals.

The results show that the mitigation of the wage scar for those 3,000 formerly unemployed contractors who gained employment on the Olympic Park and Athletes’ Village projects totals £121 million in wages over their working lives, which is the equivalent of about £40,000 each.

It should be noted that the impacts of the training and reduction in unemployment scarring will be reduced in local labour markets if some of these people are temporary workers from overseas.

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¹⁴ Unless the period of unemployment corresponds with un-paid, or voluntary work (or a return to education).

¹⁵ Men who experience an interruption because of redundancy are found to be less scarred than men who have an interruption due to other reasons (e.g. sacked, dismissed or voluntarily left their job).


¹⁷ ONS, (2011), ‘Annual survey on hours and earnings: SIC2007 Table 21.7a Annual pay - gross (£) - for all employee jobs’.
Legacy: Physical environment
7 Legacy: physical environment

Main points

- The provision of 3,850 new affordable homes as a physical legacy of the 2012 Games is likely to deliver benefits in relation to better health, fewer lost working days, lower NHS costs and reduced costs of crime in the range of £50 to £130 million per annum.

- The proposed parkland elements of the 2012 Games’ legacy are estimated to have a capital value of nearly £500 million in current money terms.

The host boroughs are among the most deprived in England, with deprivation contributing to shorter life expectancy among the resident population and higher rates of crime.

Hackney and Newham rank as the second and third most deprived boroughs in England according to the Indices of Multiple Deprivation 2010 ranking. Ill health associated with deprivation is one cause of lower life expectancy. For example, life expectancy for males in Newham is 76.2 years and 77.4 years in Hackney. This contrasts with over 85 years in Kensington and Chelsea.

In Newham there were 143 crimes per 1,000 of population in 2010/11, a rate more than double that in the boroughs of London least affected by crime.

The physical legacy will make a long-lasting contribution to the efforts to combat deprivation and its consequences in the host boroughs. As well as the 2012 Games’ stadia themselves, London 2012 will leave an important physical legacy in terms of 11,000 new houses, five new schools, new health facilities, six new community centres and 250 acres of new parkland. This will create six new neighbourhoods:

- Olympic Quarter
- Hackney Wick East
- Old Ford
- Stratford Village
- Pudding Mill Lane
- Stratford Waterfront

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58 Greater London Authority, Borough Profiles
59 Male Life Expectancy, (2008-10), Greater London Authority, Borough Profiles
60 Greater London Authority, borough Profiles
7.1 What benefits flow from the housing legacy?

Over a third of the new housing that is planned to be built will provide affordable homes to less-well off households that will provide benefits over a long period of time. Poor housing adversely affects both the individuals who live in substandard houses and the communities where inadequate houses are concentrated. These problems harm health, for example via higher rates of coronary heart disease, cancer, diabetes and accidents; foster crime; and reduce educational attainment.

There is clear evidence that housing conditions are a key determinant of health inequalities in Britain. A review of research evidence highlighted a number of linkages between poor housing and ill health. These included impacts from:

- Cold, damp and mouldy conditions leading to respiratory problems, diarrhoea, headaches and fever across all age groups, but particularly among children;
- Excess winter deaths caused by cold conditions; and,
- Depression from living in overcrowded conditions or high-rise flats.

Added to these conditions, poor-quality housing also increases the risk of harms to health from household accidents. For example, the Housing Health and Safety Rating System (HHSRS) identifies 11 out of a total of 29 housing hazards as linked to the potential for accidents, such as falling on inadequate stairs or falls associated with the arrangement of the bath.

Poor-quality housing, with no or limited security precautions, is linked to higher rates of intruder-related crime (burglary). And, as well as the costs of the crime itself, there are significant mental health issues associated with both the fear of crime and its aftermath.

The design and build-quality of modern housing developments can mitigate many of the risks associated with sub-standard housing. Replacing poor-quality housing is therefore likely to give a flow of benefits over a long period of time to individuals in terms of health and well being, and to society via savings to health and criminal justice budgets.

The remainder of this section examines how large some of these benefits might be for the social housing component of the 2012 Games’ legacy. This analysis is partial, as it has only been possible to include a sub-set of the health and safety risks identified by the HHSRS. In this sense it gives an indication of the lower bound of the health, well being and criminal justice system benefits rather

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64 Scottish Office Central Research Unit, (1999), ‘Poor housing and ill-health: a summary of research evidence’.
than a quantification of all the benefits that could conceivably flow from the provision of additional social housing in the Olympic boroughs.

The analysis only includes the social element of the housing legacy. It is assumed that the remainder of the new houses will be purchased by buyers who would have found other high-quality homes elsewhere in the Olympic boroughs or London if the 2012 Games and its legacy had not occurred. The extent that this segment of the population gains from better, cheaper, more convenient or more appropriate homes is not included in the calculation.

7.2 How can these housing benefits be measured?

To quantify the benefits from the development of affordable houses involves a number of steps. These include:

- Estimating the number of people who will be re-housed;
- The reduction in the exposure to a health, safety or crime risks that this delivers on average for each person; and,
- Assessing what the reduction in risk means in terms of better health outcomes, fewer working days lost, lower costs to the NHS and less crime.

To carry out the quantification we have assumed that the occupation levels in the 3,850 new affordable homes will be in line with that in Newham in general and that the population that is re-housed is moving from very poor-quality housing with elevated risks of hazards to health, safety and security with little hope of early re-housing in the absence of the 2012 Games. Against, this the new housing stock is assessed as having much lower than average risks from hazards, with both the pre and post re-housing risk factors taken from a number of previous studies of the impact of housing improvement.

As well as average hazard risks for the housing stock in England, the HHSRS also gives estimates of the likelihood that these risks will lead to four categories of ill-health outcome, ranked from extreme (including death) to moderate.

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66 Past studies of the legacy from major sporting events have often been criticised for not taking account of this type of substitution or displacement effect. See for example, Matheson, V. (2006), ‘Major-events: The effect of the world’s biggest sporting events on local, regional, and national economies’, College of the Holy Cross, Department of Economics Faculty Research Series, Paper No 06-10.


68 Average waiting times for 3-bedroom social housing homes in Newham is in excess of 9 years, and in excess of 12 years for house or bungalow accommodation. [http://www.newham.gov.uk/Housing/HousingOptionsAndAdvice/ApplyingForCouncilHousingOrHousingAssociationProperty/AverageWaitingTimesforAllocatedHousing.htm](http://www.newham.gov.uk/Housing/HousingOptionsAndAdvice/ApplyingForCouncilHousingOrHousingAssociationProperty/AverageWaitingTimesforAllocatedHousing.htm)


impacts. These outcomes can be mapped on to both the impact on the individual involved and costs to the NHS.

For the individual, previous work\(^\text{72}\) has estimated the effect of different categories of health outcome and a measure of an individual’s health, taking account of both the quantity and quality of life – the so called ‘quality adjusted life-year’ or QALY. On this measure one year of perfect health scores one, reducing towards zero the greater the impact the cause of ill-health has on the individual’s life span and quality of life. It is a measure widely used in the evaluation of the health effects of treatments and investments in public health. An accepted monetary value for a year of perfect health is £30,000.\(^\text{73}\)

Estimates of the number of working days lost as result of each of the classes of health outcome are available from research carried out by the Home Office.\(^\text{74}\) Combining this with data on average working hours and median wages in Newham gives an estimate of the cost to the economy of working-days lost as a result of ill health caused by housing hazards.

The Chartered Institute of Environmental Health provides estimates of the costs to the NHS of handling different classes of health impact for a range of housing-related hazards.\(^\text{75,76}\)

Finally, the Home Office\(^\text{77}\) provides data on the costs of

- Anticipated crime, made up of defensive expenditure and insurance administration;
- The consequences of crime, including physical and emotional impacts, value of property stolen or damaged, victim services, lost output and NHS costs; and,
- Responding to crime by the criminal justice system.

Based on these building blocks we have quantified the monetary value of the health, safety and security benefits in relation to the reduction in risks to households moving into the new social housing from the following eight of the 29 hazards identified by the HHSRS:

- Damp & mould growth;
- Excess cold;
- Entry by intruders;

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\(^\text{74}\) Home Office, (2005), ‘The economic and social costs of crime against individuals and households’, Online Report 30/05.
\(^\text{75}\) The CIEH cost calculator sets out costs related to the four categories of health outcomes for stair falls, level falls, excess cold, damp, entry by intruders, crowding and spacing, as well as an average for all housing related hazards.
\(^\text{76}\) http://www.cieh.org/policy/good_housing_good_health.html
Falls associated with baths;
- Falling on level surfaces;
- Falling on stairs;
- Fire; and,
- Flames & hot surfaces.

### 7.3 How big are the benefits?

The provision of 3,850 new affordable homes as a physical legacy of London 2012 is likely to deliver benefits in relation to better health, fewer lost working days, lower NHS costs and reduced costs of crime in the range of £50 to £130 million per annum. Like the housing itself, these benefits will be long lasting. We estimate that over the next 20 years the year by year flow of continuing improved outcomes is worth in the range of £0.8 to £2.0 billion in current monetary terms.

Chart 7.1 shows how these benefits are spread across the different risks assessed. The reduction in intruder crime is particularly important in delivering these benefits. On the most conservative assumptions it could account for around three-quarters of the total flow of benefits, and still accounts for around 30% of the total benefit when the upper end of the likely range is used for the reduction of risks relating to the other health and safety hazards.

**Chart 7.1: Value of health, safety and security benefits**

The overall results are also sensitive to the impact of reducing risks from flames and hot surfaces. In the worst housing these risks are very substantial. If however the re-housed population comes from accommodation above this standard then the gain in terms of flames and hot surfaces is likely to reduce...
dramatically – from as much as a third of the benefits at the upper end of the range to as little as 1% at the bottom.

7.4 Parkland brings benefits too

The parks and green spaces in the physical legacy of the 2012 Games will provide a further range of diverse benefits\textsuperscript{78} to the local economy. For example:

- House and commercial property prices are often higher when there are green spaces nearby;
- Individuals gain from using parks for exercise, relaxation and as an educational resource for children;
- Society benefits from contributions to tourism, jobs creation and visual and physical amenity; and,
- The environment gains in terms of habitat for wildlife, carbon sequestration and air quality.

Recent studies by the Commission for Architecture and the Built Environment (CABE) have placed capital values on green spaces such as Highbury Fields in Islington. Pro-rating assessed value of £53 million for Highbury Fields 29 acres, would place a capital value of nearly £500 million in current money terms on the proposed parkland elements of the Games’ legacy.

\textsuperscript{78} CABE Space, (2009), ‘Making the invisible visible: the real value of park assets’.
Conclusion
8 Conclusion

London 2012 will make a substantial contribution to UK GDP of £16.5 billion, with the impacts occurring over an extended time period from the award of the Games to London, during the Games themselves and through much of the coming decade, and in some cases even beyond.

Most of the GDP effect linked to the Games (57%) stems from construction projects occurring before the Games, including the building of the Olympic Park and the development of other sites and venues across the UK. A further 24% of the impact is due to post-Games construction activities. In addition, a 12% contribution to GDP is anticipated from Games-related tourism across the UK during London 2012 and over the first five legacy years, while spending on the staging of the event itself is expected to contribute six per cent. At its peak effect the Games will also help support and create the equivalent of more than 62,200 jobs in London and across the UK.

8.1 Much is still to come

Most (70%) of the total GDP impact expected from London 2012 will come from the period in the run up to and including the Games, while their legacy could generate as much as £5 billion – nearly a third (30%) of the total economic effect expected - in the five years to 2017. In that sense the Olympic effect on the UK economy will not cease with the closing ceremonies.

The future benefits to be reaped by the UK economy from the Games include:

- £4 billion of construction related GDP generated by legacy projects, including new housing and infrastructure-related developments;
- £1 billion of tourism GDP from visitors who would not have visited London and the UK in the absence of the Games;
- Long-standing improvements in health and well-being and reductions in crime in the six new neighbourhoods and 3,850 affordable homes created in the Olympic boroughs, worth as much as £130 million per annum;
- Better job and earnings prospects for nearly 78,000 workers involved in the London 2012 construction project that generate a 7.5% increase in these workers’ lifetime earnings, worth an aggregate £504 million in current money terms;
- Reintegration into work for 3,000 formerly unemployed people, boosting their long-term employability and raising their total life time earnings by as much as £121 million, which equates to an average of £40,000 per worker; and,
- A valuable short-term boost to consumer confidence and happiness levels.
8.2 Not just a London story

While London is the focus of the Games, all UK regions have and will derive benefits from this year’s Olympics:

- Over 800 firms around the UK have gained ODA contracts to work on Games-related construction activities, with nearly half of these contracts going to regions outside of the south-eastern regions of the UK;

- Of the £1.7 billion of additional visitor spending that hosting the games will generate over 2005-17, nearly one third will flow into tourism-related businesses outside the south eastern corner of the UK, with the South West and Scotland, enjoying around the same level of additional spend as the South East;

- Each of the North West, South West and Scotland will enjoy gains of employment in excess of the equivalent of 5,000 years of employment from London 2012-related tourism effects, while even Northern Ireland, where the impact is weakest will gain 850 years of employment;

- Nine of the twelve countries and regions of the UK receive at least 5% of the additional GDP generated by London 2012.