Economic Value of Sport – Local Model

User guidance

Version 1 - July 2014

Snapshot

Refined snapshot

Impact Assessment

Contents

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Quick Start Guide

Snapshot
Produces indicative results for a local authority, CSP or LEP area

Refined snapshot
Users can adjust variables and improve estimates

Impact Assessment
Allows users to test the marginal effect of changing variables

The Economic Value of Sport – Local Model uses national and published local data to provide an indicative, annual value for a range of different elements of the sports economy. These are presented in terms of Gross Value Added (GVA)[1] and employment at the local authority (LA), County Sports Partnership (CSP) and Local Enterprise Partnership (LEP) levels.

The model includes the same elements as the national study on the Economic Value of Sport (commissioned by Sport England in 2013) but also adds a value for the wider expenditure made by spectators and participants attending matches and events.

Elements	Describing the results
	Sports Participation
Sports services	▶ Employment and GVA supported by sports services such as fitness centres and classes, sports clubs, hire of facilities etc.
Sportswear and equipment	▶ Employment and GVA generated by businesses that manufacture and sell sports equipment and sportswear for *participating* in sport
Sport education	▶ An allocation of employment and GVA supported by sports education in the national study, based on the number of schoolchildren in the area.
	Non-Participation
Spectator sports	▶ Employment and GVA supported by sports clubs and facilities hosting sports events and spectators
Sportswear and equipment	▶ The proportion of employment and GVA generated by the manufacture and sale of sports equipment and sportswear that are not used for participating in sport.
Sports broadcasting and gambling	▶ A proportion of the national employment and GVA in sports broadcasting and gambling based on the overall number of broadcasting and gambling jobs in the area.
	Wider impacts
Health	▶ Physically active people are healthier, reducing the costs of treating diseases and increasing life expectancy, both of which can be given monetary values. This uses the total number of people aged 16+ participating in sport regularly (once a week) and estimates the value of participating (compared with being inactive)
Volunteering	▶ This is the amount of volunteering time given over a year, and uses a notional wage to provide an overall value of that time.
Wider spending (spectators & participants)	▶ Spectators and participants will spend money elsewhere in the economy during their trips to sports events (e.g. food, drink and transport).

[1] GVA is the wages and operating profits generated by businesses in the sports sector within the local area

Snapshot

The model starts with a simple screen where users are asked to enter whether they wish to look at a Local Authority (LA), Local Enterprise Partnership (LEP), County Sports Partnership area or England. These are selected from a drop down menu.

Clicking on the Snapshot model button produces a flowchart and a table of results. This is the quick and easy way to generate estimates. It shows an *indicative* estimate for each of the elements of the model. These estimates are described as indicative because they do not use any additional local information beyond employment and the Active People Survey data, which is contained within the model.

Clicking on the Flowchart button will produce the flowchart in a single page graphic of the results. The flowchart has been designed to replicate the main diagram in the national Economic Value of Sport study, but to show the figures at a local or sub-regional level.

Refined Snapshot

Clicking on the Refined Snapshot button brings up the same results screen described above, but next to each of the elements is a "Refine this input" button. Clicking on this takes the user to pages where more accurate, local information can be added. The more information the user can provide the better the estimates will be. For example:

- Add the number of sports students and staff to the sports education results.
- Add local information on attendance for clubs and events. This can use local surveys from events or information on club attendances.
- Adding information on the types of spectators will also impact on the wider expenditure of spectators and participants.
- Add the number of jobs in sports broadcasting and gambling if more local data is available.

Clicking on the Refined Snapshot button again will generate an updated table of results, and the Flowchart button will show the updated flowchart graphic.

Impact Assessment

From the Home screen, the third button allows the user to input the anticipated effects of specific changes and consider how these alter the values in the model.

Clicking on the Impact Assessment button brings up the results table set to zero. Click on the "Refine this input" buttons to look at the effect of making changes. For example:

- Adding an increase in participants will increase the health benefits (and the value of sports services).
- An investment in new buildings or equipment can be added through the "construction" box and this will show how many jobs would be associated with it.
- The number of sports spectators can be changed to show how, for example, a new event would generate new economic activity, both supporting on-site jobs and as a result of wider expenditure.

1. Introduction

This Guidance provides an overview of the Economic Value of Sport - Local Model. It offers a detailed explanation of how it works and how to get the most from it.

This Guidance provides an overview of the Local Economic Value of Sport Model. It offers a detailed explanation of how it works and how you can get the most from it.

The model was developed by Cambridge Econometrics and SQW as part of a project led by Sport England. In 2013, Sport England produced a national estimate of the value of sport[2]. This concluded that in 2010, sport and sport-related activity generated Gross Value Added (GVA) of £20.3 billion – 1.9% of the England total. Sport and sport-related activity supported over 400,000 full-time equivalent jobs (2.3% of all jobs in England) and contributed to better health and stronger communities.

The findings of the national study were important in demonstrating sport's contribution at a national level. We know sport makes a big contribution to the economy and the national study identified the ways in which it has an impact. But local authorities and other local and sub-regional organisations are also keen to understand more about how these figures can be used in a local context. The aim of this tool is to produce equivalent estimates for local authorities, Community Sports Partnerships (CSPs) and Local Enterprise Partnership (LEP) areas.

In fact, the model goes beyond the national study. Based on consultations with many of Sport England's partners, it has expanded to include the money spent by spectators and participants in the wider economy, one of the most important ways in which sport generates income and jobs in local communities.

In preparing the model, we have consulted with many of Sport England's partners both individually and through a workshop session. In particular, we would like to thank Stoke-on-Trent City Council, Walsall Council and Sheffield City Council that provided some of the examples used in the guidance.

The Local Model

The Model is about valuing sports goods and services that are produced by the economy annually

Like the national estimates, the main elements of the model are about valuing sports goods and services that are produced by the economy (private and public sectors).

It values *the output of sports-related businesses and organisations (what they produce) not what people spend on sport.* In addition, it also includes wider values for health, volunteering and the wider expenditure of participants and spectators.

The results are presented as an *annual* estimate. A model that seeks to produce estimates for all local authorities, LEPs and CSPs has to be based on some broad assumptions and therefore the basic results can only be considered as "indicative".

[2] The Economic Value of Sport (2013), AMION for Sport England

Some elements of the model are based on allocating the results of the national study "per head" or "per active person" and will not reflect specific local conditions.

However, the strength of the model is that the user can refine some of the results by using local information to improve the accuracy of the estimates. The more local information that is used, the stronger the results will be.

The model is divided into three categories:

- **Participation** - the sports goods and services produced to meet demand from people participating in sports. This includes the manufacture of for example tennis racquets, footballs, golf clubs, that are used for sport; the "added value" of the shops that sell these goods, and of the services and facilities that people use to participate in sports.

- **Non-participation** – this includes the manufacture and retail of sports equipment and clothes that are not for sports use. It also includes the added value generated by sports clubs that generate income from selling tickets to spectators, TV income or sponsorship, the value added of sports gambling services and of businesses that produce sports television services.

The assumptions and calculations that have been used to develop the model follow a logical and evidence-based approach and have been developed in collaboration with Public Health England

- **Wider benefits** – the principal wider benefit of participating in sport is the contribution that it can make to health. This is reflected in a reduction in the costs of treating diseases and improvements to quality of life, both of which can be given monetary values. It also includes the value of the time spent by volunteers in supporting sports activities. Finally, spectators and participants attending matches and events also spend money in addition to the price of tickets (for example on accommodation, food, drink and transport). Because this is value added and employment outside what would normally be considered the "sports industry" this is included as a wider benefit.

What is value?

In most cases, the value of activity is reported as the Gross Value Added (GVA) of the sports-related activity. GVA is the sum of wages paid to employees and profits generated by businesses operating in the sports sector within the local area.

The model uses Gross Value Added (GVA) and employment as the main measures of economic activity.

A second measure used is the number of jobs that are supported. Employment is an important part of economic activity and presenting the jobs that are supported through the demand for sports goods provides another indication of its scale.

The value of the health benefits are measured in a different way. The estimates are based on research carried out for DCMS and combine two monetary values for improving health; an estimate of the savings that health services will make because people who participate in sport are less likely to suffer from diseases and are also likely to live longer.

Finally, the value of volunteering is based on the time that volunteers contribute. Volunteering does create added value, but because it is not paid, it is difficult to know how much this is worth. Like the national study, the model uses a notional wage per hour to calculate the value

The wider expenditure of spectators and participants (with non-sports businesses such as bars, restaurants, transport etc.) is also valued slightly differently. This figure is shown just as the total value of their spending (or sales by businesses). This is not the same as GVA which would subtract the cost of raw materials and other inputs which are used in production.

Purpose

The model provides a snapshot of the value of sport, but also a tool for assessing the impact of changes in levels of participation

The model is designed to do two things:

- provide a "snapshot" of the value of sports activities in the last year, and
- work as a tool for assessing the impact changes in the level of participation or increasing the number of sports spectators.

These are subtly different. The snapshot is useful because it can present the overall value of sport, using the same approach as the national model. It sets the context. It reports the total GVA and employment associated with the production of sports goods and services, alongside the contribution to health, volunteering and wider spending of spectators and participants.

The second purpose is to assess the "impact" of changes. It shows the *marginal* effect of increasing or reducing the number of participants in sports. The impact is the change in value. This is useful for assessing scenarios where the number of participants might increase (for example if new facilities are built or more marketing is done) or where you might want to consider the effects of decreasing numbers (for example if existing facilities gradually deteriorate).

The aim of the model is to help quantify and articulate the value of sport to local areas. This can be used to demonstrate the benefits of sport, but also to better inform discussions about the "costs" of reducing investment, and participation in sport in the longer term.

Using the model

The model is essentially a spreadsheet that uses information provided by the user to calculate estimates of employment and GVA. The more information the user can provide the better the estimates will be.

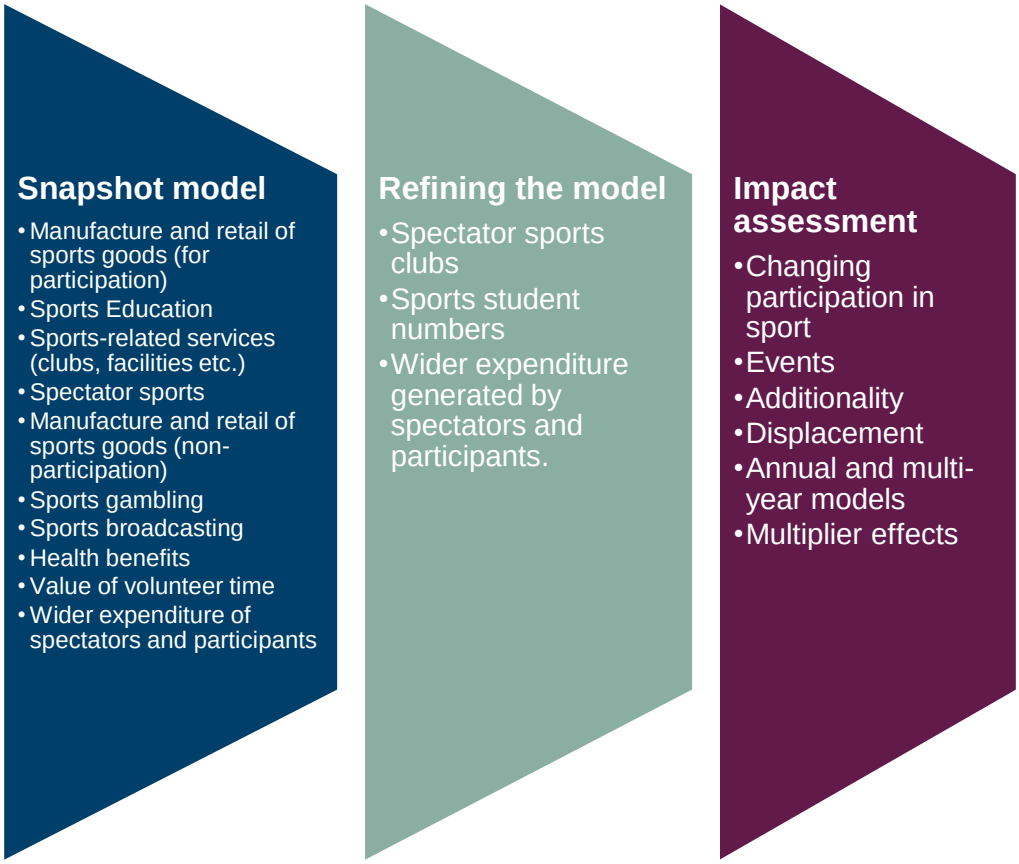
The model is set up to provide a "snapshot" estimate of the value of sport using data for each local authority drawn from national employment surveys, the Active People Survey and data from the national study.

The rest of the guidance discusses in more detail how the model can be used. It explains the derivation of the snapshot model estimates, it explains how users can

make adjustments to refine the model and it also describes how users can then consider different scenarios – changing the number of participants in order to see how this affects the results.

These three elements of the model (and the guidance) are shown in Figure 1.1 along with the areas that each section covers.

Figure 1-1: The three elements of the model



Source: SQW/CE

What it is and what it isn't…

What it is

- The model brings together a range of elements that contribute to the "value of sport". It presents this as the number of jobs that are sports-related and the value of wages and profits that these jobs create (the Gross Value Added).
- It provides a base that highlights the importance of sport and the role it plays in local economies, but it will usually need further work to produce more accurate local results.
- It presents the number of jobs and GVA supported in businesses that make sports goods or provide sports services (for example, making equipment that is sold around the world, the fitness instructors and reception staff in gyms). It also includes the proportion of gambling and broadcasting jobs that can be attributed to sports.

- The wider effects include a value associated with the benefits to health (described later), the notional value (wages) of volunteers supporting sports and a value for all the expenditure made outside sports venues by spectators and participants in matches and events.

- The figures are *indicative estimates* based on a combination of local employment data and in some cases allocating results of the overall English value of sport study to local areas on the basis of, for example, the number of active people in the area.

- Each of the elements is estimated in a different way, which makes it important to read the descriptions. However, many of the estimates are based on local data that presents employment under a number of different headings. For example, employment in sports services is based on the employment in businesses and organisations where their *main activity* is operating sports or fitness facilities or running sport clubs. Therefore not all the staff will be directly sports-related (admin, accountants, etc.), and equally some income and employment may not be sports related (sports centres hosting weddings, cat shows, conferences etc.). Hence, without a local audit, these should be considered indicative estimates.

- The figures presented are for one year but the data in the model can be updated.

- Employment estimates are simply the total number of jobs. It is not possible to disaggregate this into full and part-time posts.

What it isn't

- It is not about the amount of money that people spend on sport – it is primarily about the "output" of sports businesses based in the area, for example, jobs in a factory making sports equipment can be supported by consumers from anywhere in the world. The jobs in gyms or fitness centres can also be supported by non-sports spending - for example from renting out facilities for social functions – but are counted as being related to sports.

- It is not a substitute for more detailed local work (although it does provide a good structure for identifying the areas that users might be interested in).

- It does not take account of the knock-on or "multiplier" effects of sports activity, for example the use of local supply chains, or the knock-on effects resulting from staff spending wages in the local economy– this would need local data on the links between businesses (although we describe this further later in the Guidance).

- The wider impacts cannot be added to the jobs and GVA estimates – while they are also presented as £s, they are not the same as GVA.

2. Understanding the sources

This section describes the sources used to calculate the results. It is important to understand these in order to explain the model to others.

This section goes through the main sources used in the model. It is important to understand these in order to explain and interpret the results. For example, many of the elements of the model are based on employment figures that are presented using Standard Industrial Classifications (SIC) codes. Knowing how they work makes it easier to use the model.

The model uses publicly available data from lots of sources, but the quality of this will vary, particularly for smaller areas. The model cannot factor in all the local characteristics for every area and therefore should be seen as providing "indicative" results. It is a start to understanding the different elements in the economic contribution and should be used in that context.

Using Standard Industrial Classifications (SIC) codes

The most robust source of local employment *by industry* is gathered by the Office of National Statistics as part of its Business Register Employment Survey (BRES). The most recent data for this model is 2012, and this is published annually.

Employment data can be accessed for specific types of business activity using the Standard Industrial classification (2007). In valuing sport there are only a small number of these SIC codes that are relevant. These are:

- 32.70: Manufacture of sports goods
- 47.64: Retail sale of sporting equipment in specialised stores
- 93.11: Operation of sports facilities
- 93.12: Activities of sport clubs
- 93.13: Fitness facilities
- 93.19: Other sports activities.

For each local authority area, BRES provides employment estimates for these categories. These form the basis of many of the estimates in the basic snapshot model.

Robustness of the underlying data

The data used for the snapshot model comes from a number of sources with varying levels of robustness locally. These are:

- BRES survey (ONS)
- Active People Survey (Sport England)

- The Economic Value of Sport estimates (Sport England)
- Domestic and Day visit tourism and expenditure (VisitEngland)
- Population data
- The Culture and Sport Evidence (CASE) estimates produced by the Department for Culture, Media and Sport.

Business Register Employment Survey (BRES) data and employment

BRES is an Office of National Statistics (ONS) survey regarded as the definitive source of official government employee and employment statistics by industry. It should be noted BRES is a sample survey, which produces good quality estimates at higher levels of geography (for example region). The quality of the estimates deteriorates as the geographies get smaller and this should be taken into account when considering the quality of sub-national estimates. However, **the BRES outputs are regarded as the best estimates at a detailed sub-regional and industrial level.**

The employment for each local authority is presented for each standard industrial classification (SIC) code (see above). Businesses are classified by the type of economic activity in which they are mainly engaged. This could mean that where the provision of sports goods or services is not the main activity of a business' employment would not be included.

Employment numbers derived from BRES data must be rounded to the nearest 100. Where the number of jobs is less than 50, for any specific SIC code, they must not be disclosed, while figures between 50 and 100 are rounded up to 100[3]. Where several codes are merged, this rounding is not necessary.

The estimates of employment (but not GVA) are available for each local authority for each of the sport-related SIC codes described earlier. This provides the best source of data for the manufacture and retail of sports goods.

Active People Survey

The Active People Survey is carried out on behalf of Sport England and continuously measures the number of people taking part in sport across England and local communities. The key measure is the '1 x 30' indicator. This is defined as the percentage of the adult population participating in sport, at moderate intensity, for at least 30 minutes on at least four days out of the last four weeks (equivalent to 30 minutes on one or more day a week). This provides up to date information for each local authority on the number of people participating in sport each year and the

[3] Guidance from NOMIS - users of Nomis in any publication derived from the BRES outputs must also apply the general rule that any employment value in a data-cell must be rounded to the nearest 100. Therefore figures of less than 50 should not appear. Any publication derived from BRES outputs should thus be subject to hard suppression, followed by soft suppression followed by rounding to the nearest hundred.

number of people volunteering**. It is the most reliable source of data for these measures and is used as the basis for several of the elements of the model**.

The National Economic Value of Sport Study

The National Economic Value of Sport Study (2013) was carried out for Sport England by Amion. This used a large number of sources to assemble national estimates. We have used the national study as the basis for many of the calculations for two reasons:

- it ensures that this work is consistent with the findings and approach used
- there are no other national (or local) sources for many of the estimates that it makes.

Where this national data is used, it is described below for each of the elements. It is important to understand that these figures will be less robust than those derived from local sources. For example, the sports education figure uses the national estimate of sports education and divides it by the number of school age children to get a per child estimate, and this is applied to the number of school children in the local area. In practice there could be reasons why some local authorities spend more (or less) than this average.

Similarly, the division of the jobs and GVA between participation and non-participation, for the manufacture and retail of sportswear and sports equipment, uses the split calculated in the national study. In practice, this will vary across different parts of the country.

Finally, the "spectator sports" figures also rely on the national model. This is one element of the model where using local information is very important. The model uses the total number of jobs reported as being part of sports services (SIC 93.1) and then allocates a proportion of these jobs to "spectator sports" based on the results of the national study. Given the very different numbers of sports clubs and events in each area, the use of a national average is unlikely to provide accurate results.

However, the use of the National Model is important because it provides values and ratios that cannot easily be calculated otherwise; however, **where it is applied users must be aware that individual areas may differ significantly.**

Wider spending (domestic and day visit tourism)

The two surveys; the **Great Britain Travel Survey (GBTS)** and the **GB Day Visit survey (UKDVS)** provide the basis for estimates of sports related tourism visits and expenditure. These are both commissioned by VisitEngland and are large scale surveys of GB households that ask about trips that have been taken in the UK. The GBTS covers the number and value of domestic overnight trips. The GBDVS reports on day trips within the UK. **The model uses leisure trips, which involve being away from home for three or more hours**. The snapshot model does not include overseas visitors. However, these can be important in relation to major events, and where this is the case they can be added as an adjustment to the model.

These surveys are the most robust national sources of tourism data, although some local areas may have conducted their own tourism work, which could be used in the refining stage of the model by the user.

Both surveys include questions about the purpose of the trips including whether visitors have participated in, or watched sport. At a local level, there are estimates of both the number of domestic tourists and day trips. However, the number engaged in sport becomes too low to provide a unique estimate for each of the local authorities.

The model therefore provides GB-wide proportions of day and overnight trips that involve participating or watching sport. These figures are applied to the local authority estimate of the number of visitors (presented in the GBTS and GBDVS). The surveys also provide data on the average expenditure per trip (at a GB level) and the model uses this to calculate tourism-related expenditure and employment.

The Day Visit Survey in particular includes expenditure on day trips of more than three hours that involve the spectating or participating in sports. These figures are used in calculating the wider expenditure of sports related activity.

At a basic level, these figures should therefore be considered as only indicative of the contribution of sports tourism. The national level proportions of trips dependent on sport will in some cases underestimate activity and in others over-estimate it. It is advisable to carry out additional work at a local level to provide estimates that are more specific where tourism is likely to be an important part of the sports economy.

Population estimates

Population data is used in estimating the education value

Local population estimates are relatively straightforward and are drawn from the ONS Mid-Year Population Estimates for 2012, the most recent available year. Population figures (for school age children) are used in the education element of the model.

Culture and Sport Evidence (CASE) estimates

Health values use evidence from a DCMS study which values the costs avoided as a result of more physically active people and a value for longer lives

It is not possible to measure and monetise all health benefits of sport, however, work conducted under the Culture and Sport Evidence (CASE) research programme *Understanding the value of engagement in culture and sport* (DCMS, 2010) provides indicative health values for participation in different sports and for different age groups. The technical report *Understanding the value of engagement: technical report* provides detail on how the research was carried out.

Specifically we have used the results from the analysis on *measuring long-term value with decision modelling*. This is based on models built to estimate the value of the health gain associated with engaging in different sports and for different-aged cohorts. Separate models were built for the 10 most frequently engaged-in sports according to the Taking Part survey. The two elements included in the health value are:

- **the value of quality of life** improvements (measured using Quality Adjusted Life Years – QALYs). The QALY is a standardised measure of health "gain" widely used in health economics. It comprises two dimensions: time and quality of life. The latter is measured on a scale between 0 (death) and 1 (perfect health). For instance, 1 year of perfect health is measured as 1 QALY. QALYs gained as a result of engaging in sport were valued monetarily using the £20,000 lower bound of the values applied as part of NICE guideline development. By participating in sport (rather than being inactive), an individual reduces the relative risk of CHD, stroke, type-2 diabetes and colon cancer, this in turn means that life expectancy (and quality) is extended. This can be valued using QALYs at £20,000 for each additional year (in good health).

- **the long-term health costs saved** – the second element that can be included is the longer term saving in health service costs made as a result of active individuals avoiding four diseases (CHD, stroke, type-2 diabetes and colon cancer). Reducing inactivity (including through sport) reduces the longer term costs to the health service.

These are combined in the CASE research and the results are presented by age group and by type of sport. This means that a value can be attributed to each person participating in sport (rather than being inactive). The CASE research provides lifetime values that assume that individuals continue to be active for a sufficient time to achieve the long term benefits. The research says:

> *The economic value generated by doing sport is generated a number of years in the future. The exact timing of the gain depends on the age of doing sport, and the nature of the chronic disease avoided – stroke, diabetes, cancer, and CHD……From the data employed in the analysis, it is not possible to say how long a person needs to maintain the sporting activity to ensure these values are obtained.*

This means that, within a local area, where the profile of sports activity is known (as it is from the Active People Survey) it is possible to calculate the monetary value for each age group participating in sport.

Because this model (and the national model) presents annual figures, the lifetime health benefits must be adjusted in order to attribute just that one year's benefit rather than include the benefits for each entire lifetime. The national model does this by dividing the lifetime values by the average expected number of years of life remaining. For example it says that

> *The total economic value generated through sports participation within England is estimated to amount to £238.3 billion. If the improved health-related quality of life associated with sport is accounted for, along with health care costs saved, the total economic value generated through sports participation within England is estimated to amount to £11.2 billion per annum.*

For this model, we have assumed the same conversion to annual figures. However, we repeat the caveat given in the study, that:

> *it should be noted that the CASE research from which these estimates are derived is focused on lifetime, capitalised savings/value, from which per annum figures have been calculated for the purposes of this report. The estimates of annual value should therefore be treated as indicative.*

It is worth stressing that the health values produced are based on the number of people participating in sport (at least once a week) compared with if those people were inactive. **This should not be confused with the overall cost of inactivity *within a local population, which* has also been calculated as part of other Sport England work.**

It is important to understand what the health values mean and the limitations

Finally, some other points about these values are useful in explaining them to others:

- The model focuses on just four health outcomes: CHD, stroke, diabetes and colon cancer. This ignores the positive impact of sport on other health outcomes, such as mental health. There is other research that sets out some of these benefits, but at they remain difficult to value and currently cannot be included this model (see final chapter on wider benefits)
- The underlying CASE model does not consider the costs to the health service of increased longevity as a result of the intervention. While extending life expectancy is a benefit (and valued as such by the QALYs) there may be additional financial costs in providing services to an older population
- The effects of physical activity, such as injuries, are not considered in the model.

The assumptions and calculations that have been used to develop the model follow a logical and evidence-based approach and have been developed in collaboration with Public Health England.

2012 data and the Olympics

The BRES survey (ONS) data is from 2012 which is used to calculate employment and GVA in sports good manufacturing, retail and sports activities, may be influenced by the 2012 Olympics in London, although until subsequent years are available it is hard to distinguish this from the wider growth of the economy. The Day Visitor tourism data used is from the 2012 visitor report. However, it uses the numbers attending sports events *excluding* the Olympics. Overnight tourism details of activities is also from 2012, but also excludes the Olympics.

3. Using the Snapshot model

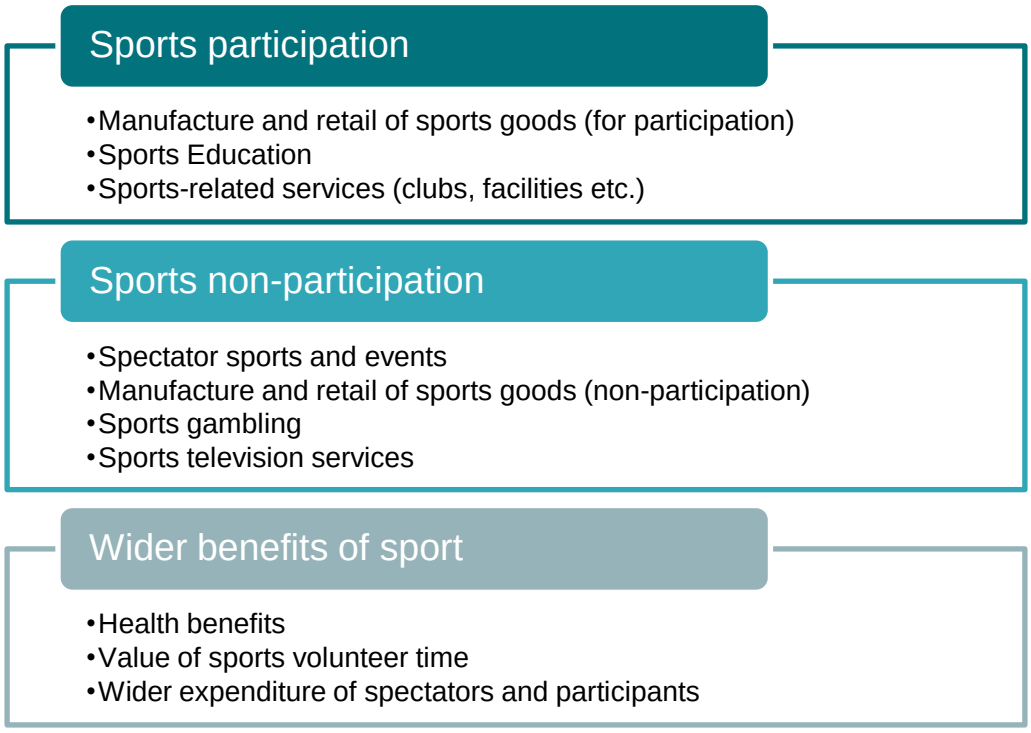
This section of the guidance considers how the model can be used to give a snapshot of the sports economy. It uses the national model as its base and presents estimates for local authority and LEP areas.

The snapshot model provides a starting point for the sports economy. It requires local information to produce more refined estimates.

The estimates for the model cannot easily allow for the variations in local conditions. Some areas will have more sports students than average, a more successful football club, or a programme of high profile events. The model should be considered as a starting point that can be refined with more accurate local information. The refinement of the model is described in more detail in the next chapter.

Figure 3-1 sets out the three headings used (sports participation, non-participation and wider benefits) and the indicators used for each of them. The remainder of this chapter goes through each of these indicators, describing why they are included, a description of calculation and other comments.

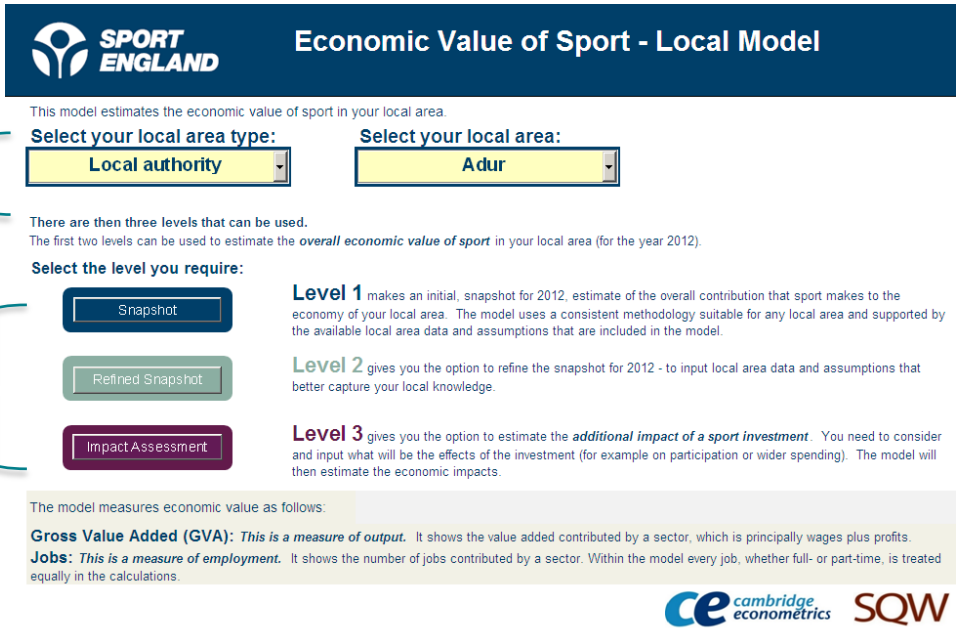
Figure 3-1: Sports economy elements



Getting started

The model starts with a simple screen where users are asked to enter whether they wish to look at a local authority (LA), Local Enterprise Partnership (LEP), Community Sports Partnership or England (Figure 3-2). These are selected from a drop down menu.

Figure 3-2: Starting page



These buttons brings up the descriptions and drop down menu of geographies

These buttons go to the three models, snapshot, refined and impact assessment

The starting page has three buttons that show the three ways to use the model:

- Snapshot estimates
- Refined Snapshot
- Impact assessment.

The next three sections look at the options for each.

The Snapshot

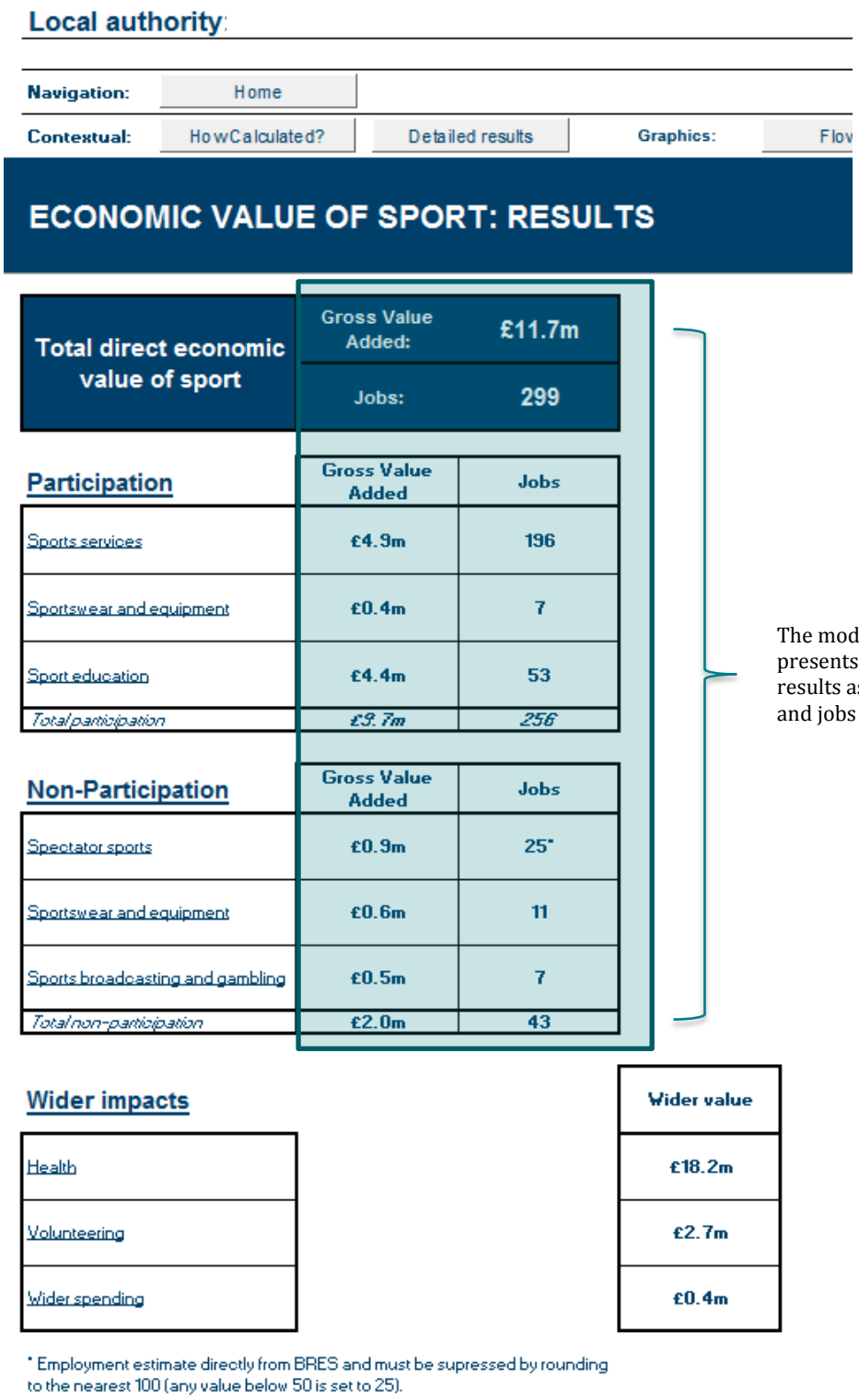
This is the quick and easy way to generate estimates of the value of sport for any local authority, LEP or CSP in England. Simply clicking the button will show an *indicative* estimate for each of the elements of the model.

These estimates are described as indicative because they do not use any additional local information beyond employment and the Active People Survey data that is contained within the model. For example, it cannot reflect whether or not there are big football clubs in the area or a programme of large events. This can only be adjusted through refining the model.

Selecting a geography brings up a series of estimates covering each of the elements described; Sports participation (manufacture and retail of sports goods, Sports

Education and Sports services), Sports recreation (Spectator sports, Manufacture and retail of sports goods, Sports gambling and Sports television services) and wider benefits of sport (health benefits, volunteer time and wider spending of spectators and participants). Figure 3-3 shows the results for each of these elements.

Figure 3-3: Snapshot model results



Local authority:

Navigation:	Home		
Contextual:	How Calculated?	Detailed results	Graphics: Flow

ECONOMIC VALUE OF SPORT: RESULTS

Total direct economic value of sport	Gross Value Added:	£11.7m
	Jobs:	299

Participation	Gross Value Added	Jobs
Sports services	£4.9m	196
Sportswear and equipment	£0.4m	7
Sport education	£4.4m	53
Total participation	*£9.7m*	*256*

Non-Participation	Gross Value Added	Jobs
Spectator sports	£0.9m	25*
Sportswear and equipment	£0.6m	11
Sports broadcasting and gambling	£0.5m	7
Total non-participation	£2.0m	43

The model presents the results as GVA and jobs

Wider impacts	Wider value
Health	£18.2m
Volunteering	£2.7m
Wider spending	£0.4m

* Employment estimate directly from BRES and must be supressed by rounding to the nearest 100 (any value below 50 is set to 25).

Descriptions of the elements of the model

Participation in sport

Sports services (subscriptions & fees)

The estimate of employment in sports services (subscriptions & participation fees) uses BRES data for the local area.

This part of the model provides an estimate of the GVA and employment supported through the *delivery of sports services*. This is the employment (and GVA) of, for example, gym memberships, fitness classes, memberships of sports clubs, ad hoc classes, hire of facilities etc.

The model combines what the national model called "participant sport payments" and "sport/leisure class subscriptions/fees". These are brought together as sports services in the snapshot model. However the two are calculated separately and then added together (looking at the Detailed Results sheet shows the results for each). The participant sport payments use the number of local participants and the average GVA per participant (from the national study), while the sport/leisure subscriptions/fees use ratios from the national study to arrive at the results.

The local employment data for SIC code (93.1 Sports Activity) remains the best overall source of employment for sports-related services generally. Allocating these local jobs between the categories of "participant sport payments" and "sport/leisure class subscriptions/fees" is very difficult as they are very likely to overlap (for example people working in a sports centre will partly be funded by subscription fees, ad-hoc participation and even through spectator fees.

To deal with this the model allocates the jobs and GVA using the proportions reported in the national model (described in the following box). Refining this allocation would require extensive local work.

Description – Sports services (subscriptions, fees, facilities hire etc.)

This figure combines two categories in the national model, "participant sport payments" and "sport/leisure class subscriptions/fees". This gives us one category of sports services.

For the participant element of the total, the model calculates the average GVA per participant from the national study (using the Active People Survey). This can be applied to the local APS data to get GVA. Employment is estimated by applying the productivity ratio (the ratio of GVA to employment) from the national results.

For the sport/leisure class subscriptions/fees part, the model uses the total number of jobs reported in BRES SIC code 93.1 in the area (all sports service jobs) as a base. These jobs are supported by participant sport payments, sport/leisure class subscriptions/fees and spectator sport activities. Nationally, the GVA derived from the sport/leisure class subscriptions/fees part is 66% of the total GVA generated by the three categories. The model assumes that employment follows this pattern and is 66% of the total jobs supported under SIC code 93.1 in the area. GVA is then calculated based on the productivity per employee (from the national study).

Production and retail of sports goods (for participation)

Production and retail of sports goods is based on local authority data from the Business Register Employment Survey.

The estimates of the value (GVA and employment) of the production and retail of sports goods for participation is relatively straightforward at a local level. It represents the tangible, business element of sport – the manufacture and selling of sports goods such as equipment and clothing, within the specific local authority area.

This is the GVA and employment of these businesses in the local area (although they will serve consumers nationally and internationally). Some areas will have large sports clothing or equipment manufacturers while others will have none. Most, however, will have some sports equipment, clothing retailers, and their employment will be included here.

The second important point is that the figure presented here is an estimate for the proportion that relates only to participation (rather than just leisurewear). This distinction was made in the national estimates and has been carried forward into these figures. The split between the sports goods for participation and non-participation (leisurewear) is based on the assumptions and evidence in the national study, which assumes that 44% of GVA is associated with participation in sport and 56% is non-participation. For sportswear, 20% was estimated as for participation in the national study.

The employment data by SIC code remains the best source of employment for these industry categories and it is unlikely that local authorities would have more detailed information. Equally, unless there is more local information about the proportions that use sports equipment and clothing for participating and non-participation, these figures will be the most reliable estimates.

Description – manufacture and retail of sports goods for participation

An estimate of the local employment in the manufacture and retail of sports goods is taken from the national Business Register Employment Survey (SIC codes 32.30 and 47.64).

To derive an estimate of GVA for this activity, a ratio of employment to GVA is calculated from the national study, and this can be applied to the number of local employees.

To get a value for *participation in sport* the model uses the proportions from the national study, which suggests that 44% of equipment is for participation and 20% of sportswear

Sports Education

Sports education values are based on the national study using a per schoolchild value for each area.

The third part of sports participation is the value of sports education. The majority of this is related to school education and is driven by the number of school children. In addition, the model can include estimates of the number of FE and HE students and their teachers which are added as part of the refinement section.

The national model uses the proportion of the school timetable devoted to sports to calculate the GVA as a proportion of the overall education budget. The figures therefore only cover expenditure for "in school" sports and do not include after school activities or other voluntary sports (which would be covered in the volunteer section of the model).

The model multiplies the number of schoolchildren in each local authority area by the average expenditure per child implied by the national study. GVA and employment are also calculated by using the ratios from the national study.

The model essentially assumes that the average expenditure per school child is the same across the country. While there will be variations, these are difficult to calculate without local input. The estimates here provide a simple, indicative value for sports education by local authority.

Description Sports education

This uses the total expenditure figure from the national study and divides it by the number of school age children in England (age 5-15 from annual population survey) to estimate the sports education spending per child.

This figure is then applied to the number of school age children in the local authority area (from the annual population survey data) to get a local area sports education expenditure consistent with the national estimate. GVA and employment are calculated by applying the same ratios (of GVA and employment) to consumer expenditure as calculated by the national study.

In other words, the national total is allocated to each area based on the number of number of school children in each area.

Sports non-participation

Sports spectators (on-site)

This is the GVA and employment supported within sports clubs and facilities. The wider expenditure of spectators is covered in the wider benefits section.

This is the GVA and employment associated with spectators attending sports matches and events. It covers only the "on-site" part of spectators' expenditure – expenditure elsewhere (for example on food and drink off-site, accommodation, transport etc.) is covered in the wider expenditure section. This element relates only to the GVA and jobs within the sports clubs and facilities that host matches and events.

GVA is produced by the sports clubs that host regular fixtures and this includes football, rugby, cricket, basketball, ice hockey and other sports that attract spectators. This also includes GVA and employment supported by one-off events and championships that use the local facilities.

These clubs and events can be extremely important to their local economies. The most obvious examples are major football clubs that can bring huge economic benefits to their area or major events that can sell thousands of tickets supporting jobs in the facilities they use.

The estimate of employment uses the local BRES data for sports services (SIC code 93.1). This covers all sports service jobs but the model then uses ratios from the national study to derive a local estimate.

This is an element of the model that can benefit a great deal from local input. The variations in the role of sports clubs and the number of other annual or one-off events can be very different from the average. While the model provides a starting point, it is advisable to refine the data. However, this is not easy and requires an assessment of all attendances across local sports clubs *and* events. There are examples in the next section of the guidance.

Description – Spectator sports (on-site)

The model uses the total number of jobs supported in BRES SIC code 93.1 (all sports service jobs) in the area as a base. In the national study the jobs in this SIC code would cover participant sport payments, sport/leisure class subscriptions/fees and spectator sport activities.

Nationally, the GVA derived from spectator sports is 16% of the total GVA generated by these three categories. The model assumes that employment follows this pattern and is 16% of the total jobs supported under SIC code 93.1.

GVA is estimated by using the ratio of employment to GVA from the national study results.

Production and retail of sports goods (non-participation)

This is calculated using local employment data, and sub-divided to reflect whether goods are used for sports participation or not.

The employment and GVA estimates for this category are based on the same method as for production and retail of sports goods (participation) described earlier. The only difference is that the calculation uses a different proportion to work out the non-participation element. Fifty six percent of equipment is assumed to be not for sports participation and eighty percent of sportswear.

Description – manufacture and retail of sports goods (not for participation)

An estimate of the local employment in the manufacture and retail of sports goods is taken from the national Business Register Employment Survey (SIC codes 3230 and 4764).

To derive an estimate of GVA for this activity, a ratio of employment to GVA is calculated from the national study, and this can be applied to the number of local employees.

To get a value for *non-participation in sport* the model uses the proportions from the national study, which suggests that 56% of equipment is for participation and 80% of sportswear

Sports gambling

Sports gambling in the Snapshot model only include betting shop GVA and employment. Online betting values must be added as part of the Refined Snapshot.

Sports gambling is an important part of national and local economies. It is part of the sports economy providing sports related services. It is included in the national study and has been carried through into the local sports value model.

It is important to understand that for sports gambling (as for sports TV services) the employment and GVA estimates are based on the delivery of these services within the local area and *not* on where the customer's expenditure is made from. **The estimates in this category are only for shop betting and do not include on-line betting**. The main refinement that should be made to these estimates is to add in sports on-line betting services, which can be major employers.

Description – sports gambling

The model takes the England values for GVA from the national model. From this 49% of gambling and betting is included as sports related. To estimate employment we have applied this percentage to the total number of gambling and betting jobs reported in BRES, in the local area. In addition, we have adjusted this to reflect only shop betting (excluding on-line GVA and employment that has to be added as a refinement).

GVA is then derived by working out a GVA per job figure from the national study and applying this to the number of jobs calculated above.

Sports broadcasting services

Sports broadcasting is another large part of the "consumption" of sports and the sports economy. Like the national study it is included the local model. Like gambling, it is important to understand that the employment and GVA estimates are based on the level of output from within the local area and *not* on where the customer's expenditure (or subscription) is made from.

The category will be dominated by employment at key sites television broadcasting sites such as London and Manchester. However most areas will have some employment in broadcasting and the model will assume that a proportion of this output is sports related. In England there are 25,147 people working in programming and broadcasting services. The national model estimated that *sports* broadcasting GVA was around £4.57 billion (inflated to 2013) or £181,620 per employee. This figure can be applied to the number of employees in this category in each area.

To calculate employment, data from the Annual Business Survey gives turnover for television programming and broadcasting of just over £10 billion. The national report uses an estimate of sports-related broadcasting consumer expenditure of £2.3 billion, which represents 23% of the total. To produce a local estimate we have assumed that employment follows a similar pattern and that sports related broadcast employment is 23% of the total broadcasting jobs in each area.

Description – Sports broadcasting

The model takes the England values for GVA from the national model. With 25,147 people working in the wider broadcasting sector this is equivalent to GVA of £181,620 sports output per employee in the sector. This figure can be applied to the number of people working in the broadcasting sector in the local area.

Employment is calculated as 23% of the broadcasting employment reported in the BRES data.

Wider benefits of sport

Health benefits

The CASE research provides a value that combines the savings in health costs (because people are fitter) and a value for the extended life expectancy.

The health benefits of participating in sports are one of the main reasons why national governments, local authorities and others use public money to support sports. There is strong evidence that participation in sport increases physical activity (and reduced inactivity) and as a result improves health, reduces health costs and increases life expectancy. Reducing inactivity also reduces the relative risk of the diseases. This has two benefits that can be valued: longer and improved quality of life and reductions in the costs to the health services.

Description – Health (see Annex C)

The health element of the Sport England Economic Value of Sport Local Model is based on a model MATRIX developed as part of the DCMS CASE programme.

The MATRIX model is built on estimates of the value of the health gain associated with engaging in different sports and for different-aged cohorts. It provides an estimate of the monetary value of the long-term benefits in engaging in sport, taking into account health-related quality of life and health care costs avoided.

Separate models were built for the CASE programme focusing on the 10 most frequently engaged-in sports according to the Taking Part survey 2008. The research produced monetary lifetime values associated with participating in each of the ten sports. The lifetime values are shown in Annex C.

The Economic Value of Sport Local Model uses these results, in combination with local data from the Active People Survey and population data, to provide a total value for the local area.

To translate the lifetime values to annual figures (the model shows the annual value of sport) the model here uses the same approach adopted in the national study, dividing the life time values by an average life-expectancy.

The value of improving health is assumed to be the same across all areas. Although the value shown is for one year (and over ten years the number would be ten times as big), it also assumes that participants continue to take part in the sport over a long enough period for them to derive the health benefits.

The total shown by the model is the annual value for the number of people participating in sport (at least once a week) - compared to a situation where those people were inactive. This should not be confused with the overall cost of inactivity within a local population.

Value of sports volunteer time

This value is based on the number of volunteers reported for the area by the APS and multiplies it by the notional GVA value used in the national study.

The Active People Survey provides estimates of the number of people engaged in sports volunteering over the last year. The national study provides an overall value for England of £2.8 billion. The APS data shows that there were 3,209,000 volunteers, which gives a value of £873 per volunteer over a year. The national study used the number of volunteer hours reported in the DCMS Taking Part survey. It assumed that each recorded volunteer contributed 108 hours of volunteer time a year that represents just over £8.00 an hour.

Description - Volunteering

Uses the economic value of volunteering from the national study and the number of volunteers from the Active People Survey to calculate the Economic value generated per volunteer. The local area value is calculated by multiplying GVA per volunteer identified in the national study by the number of volunteers in the local area from the Active People survey.

Wider expenditure of spectators and participants

This captures the value of "non-sports" spending made on trips to watch or participate in sports events – such as food, drink, transport etc.

The expenditure of spectators within sports facilities was captured earlier in the Non-participant section. These wider benefits are included to capture the rest of the expenditure made by spectators and participants making day or overnight trips that are sports-related (for example this can be to participate in sports – such as surfing in Cornwall, or running in the London marathon – or it can be to watch sports events.

This wider expenditure is not made with businesses that would be considered part of the sports industry, but it can be attributed to the presence of sports clubs or events in the area. It is also one of the largest contributors to economic value and an element that local authorities and others can seek to influence.

These are part of the "wider benefits" category because it is based on what people spend rather than the output of sports businesses. The businesses that benefit are hotels, restaurants, bars, petrol stations etc. rather than the output of the sports sector itself.

The tourism section brings together two types of tourist:

- Domestic tourists staying overnight in the area to watch or participate in sport
- Day trips (that last three hours or more) to watch or participate in sport.

Note that this includes all spectators and participants, whether or not they come from within the local area. This is different from economic impact studies that measure the *additional* expenditure that visitors bring to the area (which usually excludes local residents).

The numbers and the expenditure data are derived from two VisitEngland surveys (the GBTS and the UKDVS are described in the previous section). The proportion of day visitors that spectate or participate in sport is found in the UKDVS and the model uses only the proportion where sport is the *main* purpose of the trip.

A separate analysis of the activities of visitors using the GBTS data for England in 2012 is used for overnight trips. This provides an estimate of the proportion of trips that include spectating and participating in sport. To convert this into the proportion of trips where the *main* purpose was sport, this percentage has been reduced by 50% (the same ratio indicated by Day Visit survey which shows figures for both main purpose and all participation).

Generating estimates of the value of this activity is extremely difficult at the level of individual towns or cities although it is possible to provide an overall estimate based on national data. The model is also split between two categories:

- spectator expenditure
- participation expenditure

Table 3-1 uses data provided from GBTS and GBDVS for 2011 and 2012 to show the proportion of trips that involve watching or participating in sport nationally. For

example, 1% of all domestic (GB visitors staying in GB) overnight visits involved watching live sport and 3% of all leisure day trips (of more than three hours).

Table 3-1: Percentage of overnight and day visits that watch or participate in sport

	% of trips that involved	
	All domestic overnight trips	**Leisure day visits (3+ hours)**
Watching sports	1%	3%
Participating in sport	5%	2%

Source: GBTS and UKDVS data 2011 and 2012

The GBTS (2012) shows that for domestic overnight stays in England the average expenditure is £187 for all types of trip[4]. For day trips, expenditure can be shown separately for those participating and attending sports events.

- £14.22 for trips where taking part in sport is the main activity
- £31.45 for trips where watching live sporting events are the main activity.

These figures will include the purchase of tickets or entrance to facilities (for participation which are already included in the spectator sports part of the model) and should be subtracted. The Day Visit survey also has an estimate for the average expenditure on tickets for attending sports events, which is £8.96 and for using facilities £3.60. This leaves expenditure off-site of £22.49 for watching sport and £10.62 for participating.

Some further evidence of the level of non-ticket expenditure made by spectators attending football matches is provided in the Scottish National Football Survey[5] found that the average fan spends £27 on a match day, excluding match ticket cost. Given that football attendances make up a large proportion of the spectator sports, the average of £22.49 is reasonable.

These expenditure figures can be applied to the number of domestic trips reported in the GBDVS for each local authority.

[4] VisitEngland data - http://www.visitengland.org/Images/Headline%20summary%202012_tcm30-37312.pdf
[5] Available at http://www.scottishfa.co.uk/resources/documents/ScottishFA/Survey/survey%20pdf.pdf

Description – wider sports tourism

This is divided into two categories:

- Day trips (leisure trips of more than 3 hours)
- Domestic overnight trips

The estimates in the snapshot model use the *national* proportions of trips that involve either participating or watching sports. These proportions are applied to local estimates of the number of visits produced by the GBTS and GBDVS.

For overnight trips expenditure is assumed to be the national average spend per trip derived from the GBTS survey

For day visits, we have used specific expenditure estimates for trips that involve watching or participating in sports. After subtracting the costs of tickets or use of facilities, the model assumes £22.49 per trip to watch an event and £10.62 for trips that involve participation. These expenditure figures are applied to the number of trips made.

These figures are assumed to include all regular matches, annual and one-off events, but can be refined where better local data is available.

Show Hide Method

How Calculated button

The "How Calculated" button toggles between showing the detailed description of how each of the elements is calculated (Figure 3-4) and the simply the headings.

Figure 3-4: How Calculated button

Local authority: Export Results

Navigation: Home

Contextual: How Calculated? | Detailed results | Graphics: Flowchart | Area Comparison

Total direct economic value of sport		Gross Value Added:	£11.7m
		Jobs:	299

Participation	How it is calculated?	Gross Value Added	Jobs
Sports services	*Local area jobs in sports activities (SIC 93.1) multiplied by national expenditure per job*	£4.9m	196
Sportswear and equipment	*Local area jobs in retail sale of sporting equipment in specialised stores (SIC 47.64) and manufacture of sports goods (SIC 32.3) multiplied by national expenditure per job*	£0.4m	7
Sport education	*Local area school age population multiplied by England expenditure per school age person plus user specified FE students in sports related course multiplied by England expenditure per student*	£4.4m	53
Total participation		*£9.7m*	*256*

Non-Participation		Gross Value Added	Jobs
Spectator sports	*Local area jobs in sports activities (SIC 93.1) multiplied by national expenditure per job*	£0.9m	25*
Sportswear and equipment	*Local area jobs in retail sale of sporting equipment in specialised stores (SIC 47.64) and manufacture of sports goods(SIC 32.3) multiplied by national expenditure per job*	£0.6m	11
Sports broadcasting and gambling	*Local area jobs in gambling and betting (SIC 92) and television programming and broadcasting activities (SIC 60.2) multiplied by national expenditure per job plus user input of online betting jobs*	£0.5m	7
Total non-participation		£2.0m	43

Wider impacts		Wider value
Health	*Participants in any sport by age group multiplied by national per participant value*	£18.2m
Volunteering	*Number of volunteers multiplied by average annual replacement cost*	£2.7m
Wider spending	*Number of overnight sports tourist visits estimated using England sports Wider Spending data and local area Wider Spending data, multiplied by local area average spend per visit*	£0.3m

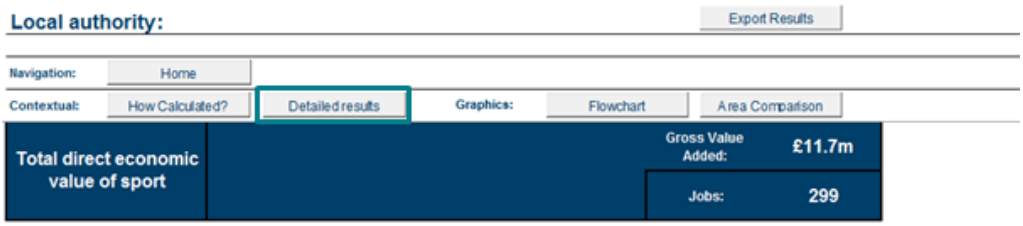
* Employment estimate directly from BRES and must be supressed by rounding to the nearest 100 (any value below 50 is set to 25).

Detailed results button

The Detailed Results button toggles between showing the detailed results and showing the summary results. The detailed results separate out:

- Sports services into "participant sport payments" and "sport/leisure class subscriptions/fees".
- Sports equipment and sportswear into its component parts
- The health impacts are shown separately for the Health cost savings and other Health Benefits
- Spectator and participation sports tourism.

Figure 3-5: Detailed results button



Participation	Gross Value Added	Jobs
Sport/class subscription fees	£3.7m	196
Participation sport	£1.2m	
Sports equipment	£0.4m	7
Sportswear	£0.0m	0
Sport education	£4.4m	53
Total participation	£9.7m	256

Non-Participation	Gross Value Added	Jobs
Spectator sports	£0.9m	25*
Sports equipment	£0.5m	8
Sportswear	£0.1m	2
Sports gambling	£0.1m	7
TV/satellite subscriptions	£0.4m	
Total non-participation	£2.0m	43

Wider impacts	Wider value
Health	£18.2m
Health cost savings	*£2.8m*
Other health benefits (QALY's etc)	*£15.4m*
Volunteering	£2.7m
Wider spending	£0.3m
Spectator wider spending	£0.2m
Participation wider spending	£0.1m

4. Presenting the results

It is important to understand the results and to be able to explain them easily and quickly. What do these figures actually mean? It is not easy because it involves several concepts that are worth summarising:

- The main elements of the model (under participation and non-participation) show *the output of sports-related businesses and organisations* making and selling sports goods, providing sports facilities, gambling, sports television production and education. *The GVA is the value of what they produce and the jobs are the number of people employed to produce these goods and services.*

- The wider benefits are necessarily presented in different terms. The health benefits are presented as the sum of the value of the "avoided health costs" and the value of the additional Quality Adjusted Life Years (described in Section 3) that are attributable to participating in sport (rather than being inactive). This means that although the results are presented in £s, they cannot be added to the other values.

- The value of volunteering time is a notional figure that represents the amount of activity carried out. Because there is no payment it is not recorded in official statistics and does not contribute to GVA statistics, and therefore cannot be added to other GVA values presented here.

- The wider spending (sports spectators and participants) is presented as expenditure, rather than as GVA. In other words, this is the gross amount of money received by businesses in the area and just their "value added".

Perhaps of most interest is the size of the health benefits and the contribution of the wider spectator and participant spend, relative to other elements. These are also the indicators that local authorities and partners can influence.

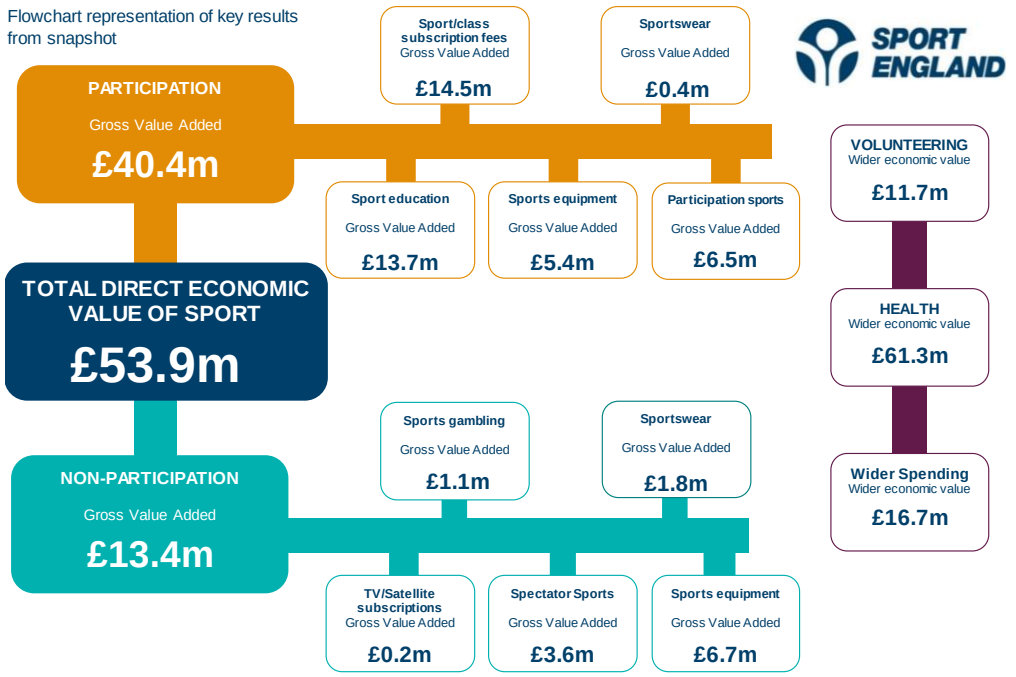
Showing graphics

A flowchart is shown at the top of the Results page, but clicking on the Flowchart button will produce it as a simpler, single page graphic. The flowchart has been designed to replicate the main diagram in the national Economic Value of Sport study, but to show the figures at a local or sub-regional level. It uses the results from the model, but presents them in a more attractive way that could serve as a useful introduction for discussions around the different elements of sport's contribution.

Clicking on the Show Flowchart button produces a diagram similar to the one in (Figure 4-1).

Figure 4-1: Flowchart

Flowchart representation of key results from snapshot



Show Comparison

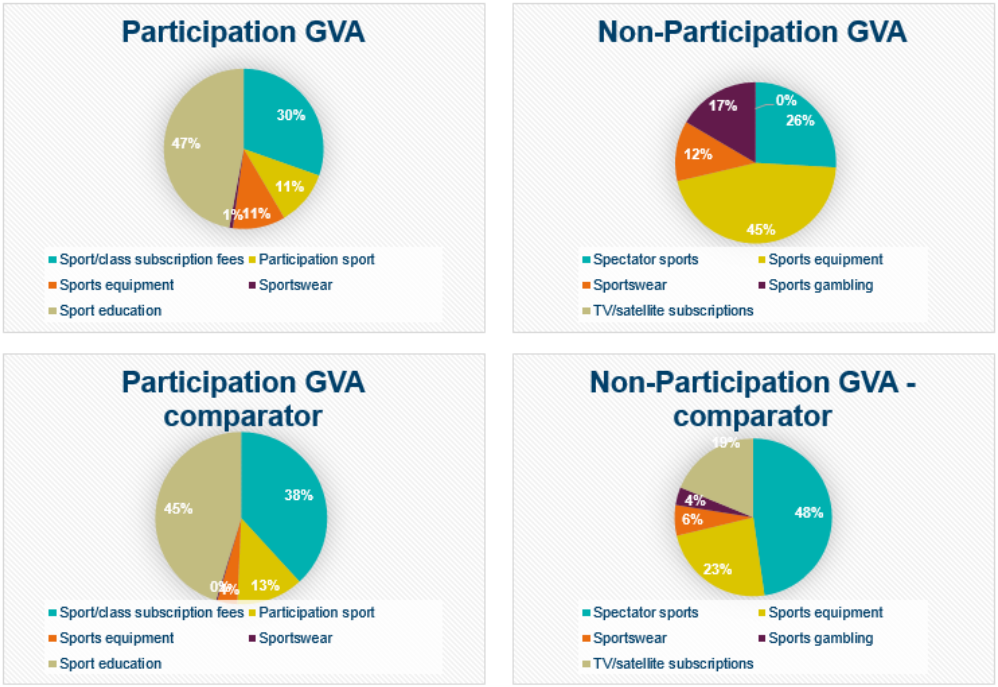
The final button associated with the snapshot model allows the local data to be shown alongside results for a comparator area. A comparator area can be chosen from the drop down menu at the top of the page.

It then shows two sets of graphs:

- The first set of pie charts show the selected area and a comparator area. It shows the composition of the "value of sport" for participation and non-participation in these areas.
- The second set of bar charts shows the actual values for the main area and the comparator that has been selected, again showing participation and non-participation.

Figure 4-2 shows the first output, the pie charts comparing GVA between the main area and comparator.

Figure 4-2: Comparator graphics



These charts can be exported to a pdf document using the Export to PDF button, which asks the user to save the results.

Because the results are brought together from different sources, finding another set of activities for comparison is difficult. However, users could investigate the number of jobs and GVA supported by other sectors. In most cases the output and employment from sports manufacture and retail will be relatively small compared with high profile sectors, such as manufacturing or finance, unless the area has some very large sports business employers.

More typically, the analysis should consider the value for money of investing in supporting sport. In this case, it is more appropriate to use the Impact Assessment section of the model. This will focus on the difference that a specific investment could make (mainly in terms of the health benefits) and this can be compared with the anticipated costs. A longer term assessment could use the 25 Year model that Sport England plan to make available later this year.

CIPFA neighbours

The Chartered Institute of Public Finance and Accountancy (CIPFA) provides a "nearest neighbour" model that aids local authorities in comparative and benchmarking exercises. Local authorities can use the model to identify the most appropriate peers for benchmarking and comparison. This can identify comparators for use in the Economic value of sport - local model.

5. Refined Snapshot model

The second stage is refining the model. The more information the user can provide the better the estimates will be

The second stage is refining the model and this section of the Guidance considers how local data can be included to improve these figures. Specific examples are provided in Annex A.

In principle, *any of the variables used in the model can be changed to reflect local conditions*. Consideration should be given to where it is worth investing time to improve these estimates. This is a function of the importance of the estimate and the amount of effort that would be needed to provide a better one. For example, the data from the BRES survey may not be perfect, but trying to derive alternative figures from other surveys would be a major exercise and improvements may only be fairly minor.

In practice, there are three areas where improvements can be made relatively easily. These are in:

- Sports students and staff (which will depend on the presence of institutions and courses)
- Spectator sports (where sports clubs and events can make a big difference)
- Wider expenditure by spectators and participants (again where the level of activity will vary significantly from national averages).

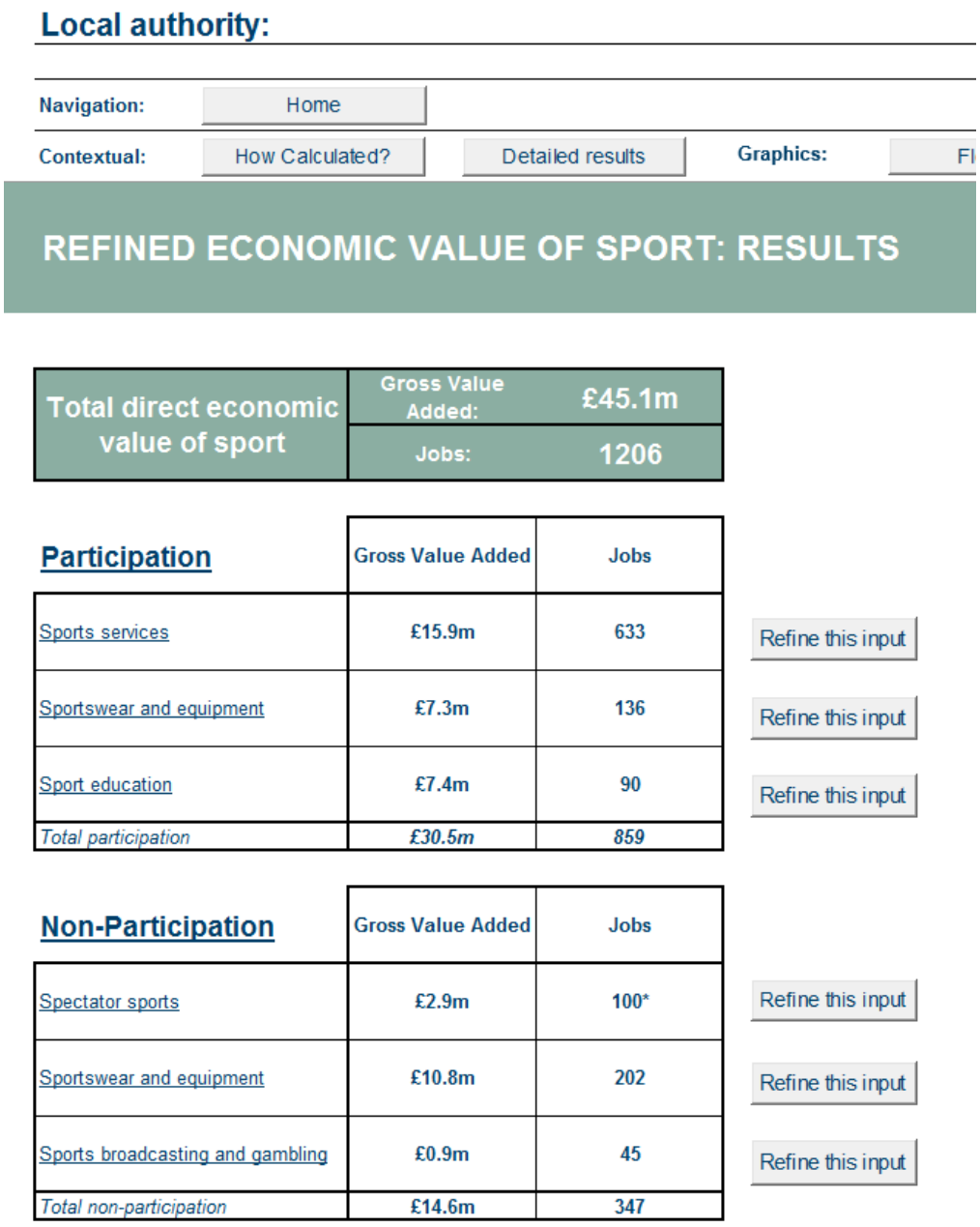
Although these are the areas that are most likely to be worth investigating, we have summarised all the estimates that can be refined below.

To bring up the Refined Snapshot screen click on the button which will produce a page similar to Figure 5-1. Without making any changes this will show the same values as the model, but it includes a series of buttons to the right that allow the assumptions for each of the values to be altered.

It is important to note that the values in the Snapshot model will remain unchanged. Clicking on the Refined Snapshot button throughout this section will show the user the refined results. Clicking on the Snapshot will return the user to the snapshot model results. When a value has been changed in the Refined Snapshot section, it is shown in red where the number has decreased and green when it increases.

This section goes through the potential for changing these, the data that is needed and some guidance on how it should be used.

Figure 5-1: Refined Snapshot screen



Refining sports services

Clicking on the refine sports services button brings up boxes to enter new data on the number of jobs supported by fitness facilities. This would be hard to calculate independently, but local areas may have more detailed information on this type of employment where there are a small number of facilities. If so, the figure can be entered here.

Sports services combines the employment supported through fitness facilities with the estimates for "participant sports fees". The model will combine the new jobs for fitness facilities with the model's own estimate for the jobs supported by the

"participant sports fees" element to give a total. GVA is adjusted by multiplying the number of jobs by the GVA per job derived by the national study.

Figure 5-2: Sports services adjustment

Adjustment from Baseline

Contains full list of values that the user can adjust. For comparison, we show the base estimates used to calculate the default results.
All users inputs are denoted by a **yellow** background

Note: Adjustments will be reset if the local area is changed.
* Employment estimate directly from BRES and must be supressed by rounding to the nearest 100. User inputs should be entered in as

Sports services	New baseline value	Default baseline value	Difference from default
Sports services jobs		836	N/A

Refining sports goods manufacture and retail

Clicking on the "Refine sportswear and equipment" button brings up Figure 5-3, which allows the user to enter a different number of jobs supported by the sector. Again, this would be hard to calculate independently, but local areas may have more detailed information on employment in manufacture and retail. If so, the figure can be entered here. GVA is recalculated using the GVA per job derived by the national study.

Figure 5-3: Sports services adjustment

Adjustment from Baseline

Contains full list of values that the user can adjust. For comparison, we show the base estimates used to calculate the default results.
All users inputs are denoted by a **yellow** background

Note: Adjustments will be reset if the local area is changed.
* Employment estimate directly from BRES and must be supressed by rounding to the nearest 100. User inputs should be entered in as

Sporting goods (Equipment and sportswear)	New baseline value	Default baseline value	Difference from default
Manufacture and retail of sporting goods jobs		267	N/A

Refining sports education and student numbers

Adding the value of students and staff from FE and HE courses, engaged in sports

The snapshot model makes a simple estimate of the GVA and jobs supported by school sports education. However, the sports economy should also cover the activities of students and staff participating in sports courses. This includes Higher and Further Education courses and sports-related staff and students spend money in the local economy.

Clicking the refine button next to sports education brings up boxes where the user can enter the number of sports students and staff in the local area. This information has to be collected locally and should cover all sports related FE and HE courses. This is relatively straightforward and local authorities will often have access to the data. Alternatively, it is necessary to contact all the local institutions and request information on sports-related staff and student numbers.

Case example - sports students in Stoke-on-Trent

Stoke-on-Trent Council provided data on the number of students participating in a number of related courses. The numbers area shown below. In total, there are 211 students and 16 staff and these numbers can be used in the model. The results are added to the sports education value and employment.

- AS Physical Education - 30 students
- A2 Physical Education - 7 students
- BTEC Subsidiary Diploma in Sport Development, Coaching and Fitness - 52 students
- BTEC Diploma in Sport Development, Coaching and Fitness - 18 students
- BTEC Subsidiary Diploma in Sport and Exercise Sciences - 31 students
- BTEC Diploma in Sport and Exercise Sciences - 13 students
- BTEC Extended Diploma in Sport and Exercise Sciences - 10 students
- BTEC Subsidiary Diploma in Sport Performance and Excellence - 8 students
- BTEC Diploma in Sport Performance and Excellence - 8 students
- BTEC Extended Certificate in Sport - 11 students
- Foundation Year in Sport Development and Coaching - 26 students

- Number of Full Time Sport Lecturers/Teachers - 8
- Number of Full Time Technicians - 1
- Number of Full Time Sport Development Officers - 1
- Number of Part Time Sports Coaches/Instructors - 6

For example, entering these numbers into the adjustment sheet in the model adds £3.6 million of GVA as well as the 16 jobs.

Figure 5-4 shows how these numbers would be entered in the Refine Sports Education boxes.

There is also a box to enter a School Sports pupil premium. This can be used where the user is aware of additional funds being made available for school sport in their area. The amount entered should be *per pupil,* not the total value of the additional funding. This box could also be used in cases where school sports funding is known to be above (or below) average.

Figure 5-4: Refine Sports Education

Adjustment from Baseline

Contains full list of values that the user can adjust. For comparison, we show the base estimates used to calculate the default results.
All users inputs are denoted by a **yellow** background

Note: Adjustments will be reset if the local area is changed.
* Employment estimate directly from BRES and must be supressed by rounding to the nearest 100. User inputs should be entered in as

Education	New baseline value	Default baseline value	Difference from default
Further education students on sport related courses	211	0	211
Further education jobs for sports related courses	16	0	16
School sports premium	£0	£0	N/A

Refining the values for sports gambling and broadcasting

The snapshot model uses the employment reported by the BRES for SIC Code 92, which covers sports gambling and betting and provides estimates at a local authority level. However, this relates to employment by traditional shop betting rather than employment by on-line operators. Given the scale of on-line sports betting, this should be added independently where possible. In our case studies, the most obvious example is in Stoke-on Trent where there is significant employment in online sports betting.

Where more local data is available, the model allows the user to enter the number of sports gambling jobs for both on-line and shop betting. Given that the online betting value is initially set at zero, it is important to make adjustments where there are known to be businesses within the area.

The model reports a proportion of all broadcasting employment within the local area as the basis for its estimates. This is a very rough approximation and if any more local information is available, this can be used to enter more accurate values. GVA will then adjust accordingly.

Figure 5-5 shows the Sports gambling and broadcasting adjustment boxes. It shows how an additional 1,000 online betting jobs can be added in the Sports gambling and broadcasting section.

Figure 5-5: Sports gambling and broadcasting adjustment

Note: Adjustments will be reset if the local area is changed.
* Employment estimate directly from BRES and must be supressed by rounding to the nearest 100

TV & satellite subscriptions	New baseline value	Default baseline value	Difference from default
Sports TV subscriptions jobs	0	N/A	N/A

Sports gambling	New baseline value	Default baseline value	Difference from default
Online betting jobs	2000	0	971
Shop betting jobs	200	1229	

6. Refining estimates for spectator sports, events and wider expenditure

Working with spectator sports, events and the wider spending of spectators and participants is given a separate section in this guidance because it is a part of the model that users are most likely to be interested in, and also because it is one of the most complicated.

It is important to stress, up front, that the model will use either the Snapshot estimates *or* the Refined Snapshot data that is entered. This means that **if the user wants to refine these estimates they must be prepared to compile a full estimate. It is not possible to add just one or two sports clubs or events. It must use a complete estimate of all sports club and event activity.**

This does not necessarily mean everything has to be identified. In most cases, it will be reasonable for the user to make their own *informed judgements* where there is no information or where it requires a disproportionate amount of effort to gather. For example, where details of the main sports clubs and events are known these can be used, but they must be supplemented by estimates for any others. Usually the main clubs and events will represent the large majority of spectator sports.

The aim is to improve the estimate using local knowledge rather than carry out an audit of everything that has happened

Spectator and participant spending on and off-site

It is important to understand that the model has two elements:

- **Spectator sports at the venue (on-site)** - the jobs and value added generated *in* sports clubs and facilities that host matches and other events.
- **Wider Spectator and Participant expenditure elsewhere (off-site)** - the jobs and value added generated by the *wider expenditure* that are made by people attending or participating in sports activities in the local area (food and drink, transport etc). This spending benefits businesses that are not obviously sports–related (hotels, bars, restaurants etc) and is not covered in the national value of sport study).

Numbers of attendances are used to estimate both the "on-site" value (in clubs and facilities, and the "off-site" expenditure

These are connected because any spectator sports event, for example will contribute to both the sports jobs (and GVA) in the facilities where matches or events take place *and* those same spectators will spend further money during the rest of their trip on food, drink, transport etc.

The model uses the tourism survey data to provide indicative estimates of these figures, but they are limited to using national averages. This means that where there is better local information the results can be improved.

This means that the number of spectators is central to both of these values. It makes sense to start by estimating total attendances for clubs and events, before going on to calculate their "on-site" and "off-site" effects.

Calculating GVA for the sports clubs that attract significant numbers of spectators

Estimating spectator numbers

This element of the model is driven by the number of spectators, the types of trips they make and the amount that they spend. To calculate a local estimate it is necessary to provide the total number of attendances for both regular fixtures and annual and one-off events.

All match attendances and specific events must be included to generate the full spectator sports values. These should be figures for one full year. The steps to calculating this are described below followed by an example:

In addition, where the area hosts one or more large clubs or facilities, the model allows GVA values to be entered separately.

For teams/clubs

1. Identify the sports teams and clubs that attract a significant number of spectators over a year and list them (we suggest that only regular attendances of more than 500 are included)
2. Estimate the attendances for each
3. If you suspect that there are some regular spectator events that are not included, it would be reasonable to also add "others" (perhaps 5% to 10%)
4. The model assumes that the split between day and overnight visits is equivalent to the baseline estimate, however, where there is evidence that the proportion of day and overnight visit should be different, this proportion can be entered in the model (and is used to calculate the off-site spending).

For events

For events, a similar process can be followed:

1. Identify the annual or one-off sports events that attracted a significant number of spectators over the past year and list them.
2. Estimate the number of spectators for each (these can be approximate) and the average ticket prices paid
3. If you suspect that there are some events that are not included, it would be reasonable to also add "others" (perhaps 5% to 10%)
4. The model assumes that the split between day and overnight visits is equivalent to the baseline estimate, however, where there is evidence that the proportion of day and overnight visit should be different, this proportion can be entered in the model (and is used to calculate the off-site spending).

5. Set these out in the spreadsheet. The model will add them up.

Case example - Sports spectators in Sheffield

Sheffield has two major football clubs, Sheffield Wednesday and Sheffield United. Combined these clubs have annual home gates of 539,000. Income from this attendance was £10.5 million in 2012 or £19 per attendance.

The city also has a rugby league club, Sheffield Eagles, a Basketball team, Sheffield Sharks, the Sheffield Steelers (ice hockey) and the Sheffield Tigers speedway team. The city also has a greyhound racing track. The Steelers have an annual attendance of 130,000, while the others have attendances of around 1,000 per match or 30,000 a year (assuming 30 matches. Taken together this would give an estimate of a further 220,000 attendances to add to the football clubs, giving a total of around 759,000 attendances a year. *These are all assumed to be made as day trips of more than 3 hours, which means that the expenditure data from the GB day Visitor survey can be used*

Events

The most recent review of the impact of sports events in Sheffield was carried out in 2009/10 by H2 Sports[6] and covered the full Programme of sports events over that period. This is used as an example of a "typical year".

The 2009/10 Programme included 58 events including the World Snooker Championship. H2 reported a total of 174,000 attendances and participants of which 57,000 attendances were made by visitors and 117,000 by residents. The report also found that there were an additional 60,000 overnight stays associated with these events. Assuming that on average staying visitors spent two nights in the city, this would mean that 30,000 of the visitors stayed overnight and 27,000 were on day trips.

Summary data for the model

The data for the model would then be 903,000 day visits (759,000 at regular fixtures and 144,000 at events), and 30,000 overnight visits.

Case Example - Sports spectators in Stoke-on-Trent

Stoke-on-Trent has two football clubs in the English leagues, Stoke City in the Premier League and Port Vale. Combined these clubs had attendances of 640,000 in 2012/13. The expenditure estimates assume that these are all day trips of more than three hours.

Events

Stoke-on-Trent City Council was able to provide details of some of the main events held over the last year. Together these attracted 15,250 spectators. There is no data

[6] The Economic Impact of Major Sports Events Staged in Sheffield (2011), H2 Sport for Activity Sheffield

on the proportion that stayed overnight and we have assumed that this is 30% given that a number of the events were national meetings). There were also two larger events, a British Gymnastics Event that attracted 1,332 spectators (of which 54% stayed overnight) and a stage of the Tour of Britain that started in Stoke-on-Trent and was attended by 20,000 (of which 15% stayed overnight).

Summary

Taken together this gives 640,000 attendances from the football clubs, a further 28,300 day trips related to events and 8,300 overnight trips.

Spectator sports on-site

GVA

Dealing with large clubs and facilities

Where there are major football clubs or facilities, GVA can be calculated and added separately.

For most sports facilities and clubs, expenditure from spectators represents the majority of their income. However, for Premier League and Championship football clubs and for some major venues, finances include bigger sources of income (TV, sponsorship income), high player wages and complex funding structures and loan arrangements. This makes estimating their economic contribution much harder to measure, even where accounts are available. To provide an indicative estimate of the associated GVA the model allows users to enter specific values for these major clubs.

As a reasonable proxy for GVA, we suggest that users add **the value of the club wages and salaries and the operating profit (or loss) made in that year**, to give a measure of GVA. This is then entered separately in the model. These figures can be found in the club or company accounts.

Case example (on-site GVA from spectators) Sheffield

Sheffield's two major football clubs reported a total salary and wage bill of £21.1 million in 2011/12 and a combined annual operating loss of £9.5 million. This gives an indicative GVA of around £11.6 million for the two clubs in that year. This figure can be added directly to the model in the in the football club GVA box.

Source: Club accounts 2012/13

Case example (on-site GVA from spectators) Walsall

Walsall Football Club reported a total salary and wage bill of £2.5 million and an operating profit of £86,000. This gives an indicative GVA of around £2.6 million for the club in 2013. This figure can be added directly to the model in the in the football club GVA box.

Source: Club accounts 2012/13

Other events

For other clubs and events, expenditure on tickets is used and converted into GVA

For other events, the main proxy will be the value of ticket sales. Where the average ticket value for each event is known, it can be included alongside the attendance for each event. Alternatively, where attendances for all events are aggregated a single average can be used. Multiplying attendances by ticket prices will give a total expenditure. This is assumed to represent the direct income to the facility or club. For some events, there will also be further public or organiser support that can be added to the direct expenditure.

Employment

Employment is estimated using the BRES data. For big clubs and facilities the actual numbers may be available and can be used to check the results

The employment estimates in the model are presented as a proportion of the total employment for SIC code 93. This element is only related to the on-site employment (jobs in facilities and clubs) and not the wider off-site jobs. Deriving a local figure can be done based on the value of the on-site expenditure and applying a ratio of turnover to jobs. However for the major clubs, which have some very high wages and salaries this approach would not be appropriate. In these cases, a specific estimate of the number of jobs is needed.

For areas that include a major sports club, this is a two stage process, adding together the employment from the club and the estimated number of jobs supported through expenditure at the remaining clubs and events.

Case example (employment) Sheffield

In their accounts Sheffield United report just over 222 jobs in 2012/13 and Sheffield Wednesday report a similar number (221) giving a total of 443 people[7]. Separately, the other clubs and events generate expenditure of £1.98 million. The expenditure per job for all activities under SIC 93.1 (Sports Activities) is £47,930[8]. This would support a further 41 jobs. Giving a refined total of 484 jobs supported on-site.

This compares with 600 jobs from the Snapshot.

Case example (employment) Walsall

Walsall Football Club employ around 113[9]. With no other significant spectator activity this would be close to the total. Using the model produces a rounded Snapshot estimate of 200. This shows how the refined values can be used to improve accuracy.

[7] From the clubs company accounts - http://www.swfc.co.uk/documents/swfc-reportsandfinancialstatements138-1385743.pdf
[8] Uses the ONS Annual Business Survey estimate of GVA and employment (2011) to produce this ratio
[9] From the clubs company accounts

Entering the data on spectator sports

Having gathered all the data on attendances at sports clubs and other sports events, these can be entered into the model. The example below uses the material from Sheffield described in the text box earlier. The attendance at each of the football clubs and the Steelers is recorded separately. Attendance at the other clubs and the ticket prices have been estimated.

Note that the yellow boxes for the spectator sports day visits and spectator sports overnight visits will update automatically as clubs and events are added.

Because we have been able to enter the GVA estimate for the two football clubs, the ticket price has been set to zero (circled in screen shot).

It is important that where GVA is entered directly for the large sports clubs, the ticket price is set to zero. This is so that the model does not double-count income from tickets as well the reported GVA of these clubs.

For the other clubs and events, ticket prices are included so that the GVA can be calculated.

Figure 6-1: Entering spectator and event attendances in Sheffield

Spectator Sports

	New baseline value	Default baseline	Difference from default
Spectator Sports Jobs	484	600	-97

Events

	Expenditure	Spectator sports visits	Spectator sports day visits	Spectator sports overnight visits
Recurring events	£2,200,000	759000	759000	0
One off events	£1,740,000	174000	144000	30000

Large sports club/venue

If you have estimated the GVA of a professional sports club in your area, please enter the figure here, and also enter their ticket sales in the box below with an average price of zero.

GVA	£11,600,000

Recurring events

(To add additional events write an event name in a new row and the table will be expanded)

Event Name	Number of tickets sold	Average ticket price	Number of events per year
Sheffield United	238000	£0.00	1
Sheffield Wednesday	301000	£0.00	1
Sheffield Steelers	130000	£10.00	1
Others	90000	£10.00	1

Annual/One off events

Event Name	Number of tickets sold	Average ticket price
All events	174000	£10.00

Adding this data provides a refinement of the estimates for Sheffield. The GVA generated by spectator sports rises from £14.6 million in the Snapshot to £17.1 million in the Refined Snapshot model. Employment has been updated from a rounded estimate of 600 to the more accurate estimate of 484.

Wider spending of spectators and participants

The wider expenditure of spectators (off-site) depends on whether they stay overnight or are on day trips.

In addition to the GVA and employment supported by spectators on-site, there is also considerable expenditure off-site. The Snapshot model uses the national tourism surveys to provide numbers and average expenditure. The more accurate attendance figures calculated earlier can be used to provide better estimates for the value of this off-site expenditure.

This off-site expenditure is a combination of the number of people and the type of trip. To calculate this wider expenditure, the model uses a value of £22.49 for a day trip and £146 for overnight visitor trips.

Case example

Using the Sheffield data, there were estimated to be 903,000 day visits (759,000 at regular fixtures and 144,000 at events) and 30,000 overnight visits.

The model assumes that the day trips are all 3 hour plus trips and that the off-site expenditure is £22.49 per trip. This gives a total spend of £20.3 million. In addition, there are 30,000 overnight trips with expenditure of £4.4 million. Taken together the off-site expenditure is £24.7 million.

The model also includes an allowance for expenditure by people on day trips participating in sports. In this case, it adds a further £7.9 million, giving a total of £32.6 million.

The wider expenditure of participants is based on national data. However, where it is related to specific events it may be included as part of the spectator figures

Entering the data on the wider spending of spectators and participants

Clicking on the Refine Wider Spending button brings up a page where changes to the number of day and staying trips can be entered. The table should already have the numbers entered from the Refine Spectator Sport table.

With the Sheffield data entered it should look like the screen shot in Figure 6-2. We have used the results calculated in the earlier text box which indicated that there were 903,000 day visits (760,000 at regular fixtures and 144,000 at events), and 30,000 overnight visits. The figures have been refined on this page to allow the expenditure patterns to be applied.

It is possible, here, to change average expenditure, but with no further information this has been left at the default values. The third column shows how these numbers have changed from the original estimates.

It also shows the numbers used for trips that "participate" in sport. There is unlikely to be a method for estimating these numbers and we recommend that basic values, based on the national tourism surveys are used. A more accurate estimate would require discussions with VisitEngland to increase the sample sizes for the local area.

Figure 6-2: Refining the wider spending table for Sheffield

Wider Spending	New baseline value	Default baseline value	Difference from default	
Overnight visits				
Spectator sports visits	30,000	2123	27877	Note: Derived from Spectators s
Participation sports visits		5279	N/A	
Average spend per spectating trip		£146	N/A	
Average spend per participation trip		£152	N/A	
Day Visits				
Spectator sports visits	903,000	920,370	-17370	Note: Derived from Spectators s
Participation sports visits		669,360	N/A	
Average spend per spectating trip		£22	N/A	
Average spend per participation trip		£11	N/A	

The difference that this makes to the results is shown by clicking on the Back to Results button and also compared with the Snapshot. The Screen shots below show the effect of these changes.

The adjustments have led to an increase from £26.7 million to £32.6 million in this wider expenditure.

Figure 6-3: Refined Snapshot results for Sheffield on wider spending

Wider impacts	Wider value	Wider value (Diff from snapshot)
Health	**£257.5m**	**£0.0m**
Health cost savings	*£39.5m*	**£0.0m**
Other health benefits (QALY's etc)	*£218.0m*	**£0.0m**
Volunteering	**£33.5m**	**£0.0m**
Wider spending	**£33.4m**	**£3.7m**
Spectator wider spending	£24.7m	**£3.7m**
Participation wider spending	£8.7m	**£0.0m**

Showing the Refined Snapshot graphics

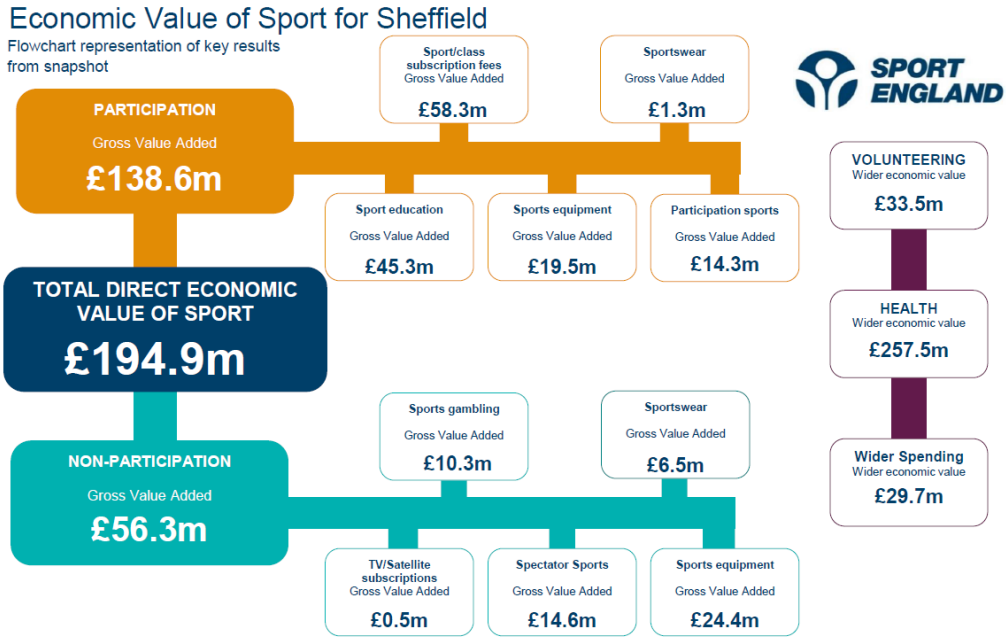
Having made all the refinements the results on Refined Snapshot page should be complete and can be compared with the results from the base model that should still be available when you click on the Snapshot button.

Flowchart

From the Refined Snapshot page, clicking on the Flowchart button will bring a summary of the updated baseline. The flowchart has the same structure as for the Snapshot - and the same structure as the national study.

There is no scope to compare the Refined Snapshot with the results from England, or other areas, because any area specific refinements mean that it would no longer be on the same basis.

Figure 6-4: Flowchart graphic



Exporting the results

The flowchart graphic can be exported to a separate file using the Export to PDF or Export to XLS buttons along the top. The file is then saved separately in that format.

Ending the session

If the Tool is closed and then reopened, it will lose any refinements to the data. Similarly, if the geographical area (in the home sheet) is changed it will reset all the results. When working with the model is complete the results can be saved by exporting to a summary spreadsheet (by using the Export to XLS) button at the top of the results page

7. Impact Assessment

This section shows users how to look at the results of specific changes to numbers of participants, spectators or investment

One of the most important features of the model is the ability to consider how different scenarios affect the values in the model. What happens if the number of participants increases, or decreases? Or if the number of spectators increases or declines?

There are also important conceptual differences with interpreting the impact assessment part of the model with the snapshot results in the other sections. This aims to show the difference between scenarios, rather than the overall value. This part of the model is designed to allow the user to make changes to a number of the variables to see how the values change e.g. data on possible net changes in levels of participation. This is then used in the model to show *the change* in the value of sport. This is mainly a result of changes to the health benefits.

Users should build certain levels of additionality and displacement into their assumptions prior to inputting data into this level. The model only considers additional participants who would otherwise not be active. People who move from one facility to another, or who would otherwise have travelled further to participate in sport elsewhere do not represent additional sports activity.

Key Factors to remember when using modelling tools

1. Start with the question you want help with; then see what tool/dataset is appropriate to help you.
2. Understand what information the tools/datasets are based on and their capabilities and limitations.
3. Don't use any tools /datasets in isolation.
4. Always use results in combination with other data, in particular locally generated data.
5. Use the tool as it is intended to be used. Misuse could store up problems

If data from this model forms part of local scenario testing or facility planning strategy, users, where possible should consider local data on facility usage/ throughput, programming and local circumstances in order to check and challenge actual against theoretical.

We would advise following a simple but structured approach (3 stages) as set out below.

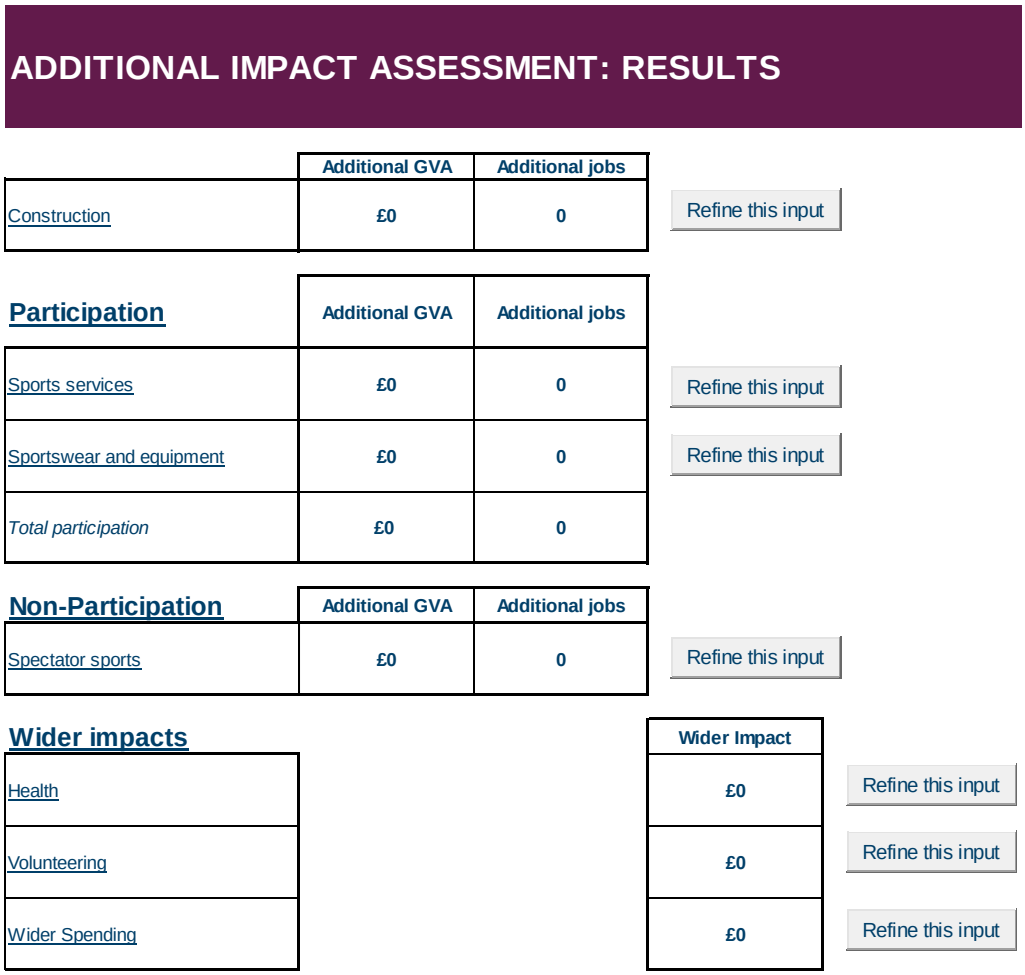
Stage A: **Prepare and tailor your assessment**
Establish a clear understanding of the purpose, scope and scale of the assessment

Stage B: **Gather information on supply and demand**
Establish a clear understanding of the current supply, current demand and future demand

Stage C: **Assessment – Bringing the information together**
Build a picture with a variety of data sources and be clear to demonstrate the implications

Figure 7-1 shows the Impact Assessment Screen in the model.

Figure 7-1: Impact Assessment



Within this screen, the user can examine the impact of changing some of the figures used in the model. Clicking on the "Refine this input" boxes takes the user to further screens where the number of additional participants can be added.

Including construction expenditure

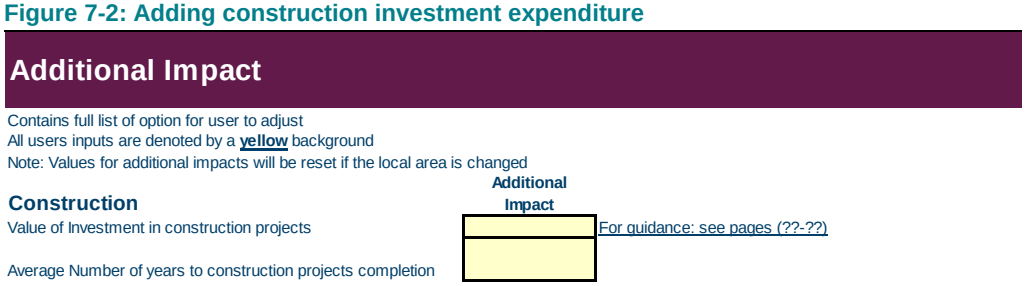
The model can include the GVA and employment values of the total capital investment

The first element included in the impact assessment is construction costs. Investment in new facilities or upgrading existing ones will usually involve investment in the physical infrastructure. The model uses a simple calculation to produce estimates of the GVA and jobs that would be associated with this investment.

Clicking on the Refine button brings up a box where the total investment can be entered along with the number of years the project is expected to last. This calculates a per year figure for the model.

GVA and employment are calculated using multiplier values from the UK Input-Output Tables[10].

Figure 7-2: Adding construction investment expenditure



Estimating changes in participants

This is an important part of the model, but needs careful estimation of the profile of any additional sports participants.

This is one of the most challenging elements of the impact assessment. The effect of changes in facilities (or other conditions) are specific to local areas and the model requires users to provide estimates of changes.

Assessing how levels of participation will change in response to different policies, interventions, infrastructure etc. is clearly a complicated task. **The model can't forecast the scale of change, it can only show how changes will impact on the values in the model.**

Accurately estimating changes in demand is clearly important for significant investment. In some cases, it will make sense to commission research to calculate the likely scale of any changes. It would be important that any commissioned research is able to make specific estimates of the change in the number of people that would be engaged in sport.

Things to consider

Footfall or visits and the number of people

In estimating the number of additional participants consider, the number of visits per person, the types of user and sports and whether they are new to sport or just moving between facilities.

The health benefits of sport are valued per person, rather than per visit. Many facilities use footfall or visits as the main unit for their calculation of use. This makes sense because at an operational level facilities are interested in the number of visits because it relates to the amount of revenue that can be generated. However, the economic benefits of health improvements relate to the number of people participating in sports.

The model uses the number of additional participants as the main driver of the economic impact. For example, where a new sports facility is opened, or an old one closed, or others merged, estimates of demand are presented as footfall. To use the model, the number of people that will use the combined facilities has to be calculated. We are interested in whether, and by how much the number of

[10] Add UK Input-Output Tables reference from CE

participants, increases or decreases as a result of the changes. The figures can then be used in the model.

Types of users

The model also allows the user to make changes to the profile of participants, by age group and by type of sport. This means that where the main sport is known (swimming, fitness, football, badminton etc.) the number of new participants can be entered for each type of sport. The model uses this to estimate of the value of the health benefits. Figure 7-3 shows the screen where the number of additional participants can be added.

In the box in the first row labelled "expected additional participants" the user can enter a single number for additional participants. This is allocated across the different sports and ages in the rest of the table. It assumes that the additional people participating in sport have the same profile that is found in the national APS data.

Where the user knows more about the likely profile of the additional participants the figures can be added separately to the spreadsheet. For example, if all the new activity will be in health and fitness, the number of additional participants can be added to the second from last column, and also shown by age group. In Figure 7-3 we have added 120 new swimmers. This produces an additional health impact of £95,000 *for one year.*

The value of additional participants in health and fitness is higher than additional participants playing badminton, for example, or football. By age, the economic value of doing sport increases between adolescence and middle age, before reducing to old age[11].

The list of sports is restricted in the model to the ten shown. This is because these are the ten sports that the CASE research has been able to produce health values for. The analysis is based primarily on the level of intensity of the exercise so where a new activity will generate participation in other sports, users could the sport on the list that most closely reflects the intensity of physical activity that it involves.

Multi-use facilities and co-location

There may be occasions when facilities to be included cover a number of different uses. This could be a building that includes a library and sports hall, for example. To assess the impact of the sports element it is necessary to think about the construction costs for the square footage that the sports hall occupies. It's also important to identify the number of people that will use the sports element, and the pattern of use. For example, if the facilities include a swimming pool, gym and

[11] This pattern is the result of the discounting: Economic value incurred in the future is discounted in line with H.M. Treasury guidance. Thus, for instance, if a stroke is likely to happen at the age of 60, a 15 year old avoiding that stroke in 45 years time is worth less than a 20 year old avoiding a stroke in 40 years' time.

squash courts. The user would consider how many additional participants there are likely to be from each and add the numbers into the "additional participants" table manually. This would be done in two stages:

- How many people are expected to use the sports facilities?
- How many of these will be additional to the current number in the area?
- How many of the additional participants will be participating sufficiently frequently (1x30) to benefit from the health benefits?

It is important to stress that in all cases it is the number of *additional* people participating in sports that is critical and not just the total. If these people would have participated in sport elsewhere, anyway, then they do not represent any additional activity.

Once these are entered the model will attribute a value to the combined mix of participants.

Another complex case would be where the assessment is being carried out across several geographies. In these cases, the model can either be run separately for each local authority and added together. In this case, the number of users of the new facility would have to be divided between those coming from each authority (to avoid double counting). However, it would have to be recognised that the non-health benefits (such as wider expenditure) would probably occur in the area where the facility is situated.

The timing of the impact

This part of the model allows the user to estimate the economic impact of both construction and use of a facility side-by-side. However, it is clear that, in a given year it is extremely unlikely that these two benefits will both be realised – instead the construction impact will be felt during the construction or renovation of a facility, and the boost to participation (and the associated economic impact) will be felt once the construction is completed and the facility is operational.

Figure 7-3: Adding additional participants

Additional Impact

Contains full list of option for user to adjust
All users inputs are denoted by a **yellow** background
Note: Values for additional impacts will be reset if the local area is changed

Participation

	Additional Impact	Baseline value
Expected additional participants		70616

For guidance: see pages (??-??)

Note: Participation drives the following modules: Health, sports services and sports equipment & sportswear.

Estimated participant breakdown	Athletics	Badminton	Cricket	Golf	Squash	Tennis	Swimming	Football	Cycling	Health & fitness	Total
16-29	0	0	0	0	0	0	50	0	0	0	50
30-49	0	0	0	0	0	0	20	0	0	0	20
50-64	0	0	0	0	0	0	20	0	0	0	20
65+	0	0	0	0	0	0	30	0	0	0	30
Total	0	0	0	0	0	0	120	0	0	0	120

Participant share of total	Athletics	Badminton	Cricket	Golf	Squash	Tennis	Swimming	Football	Cycling	Health & fitness	Total
16-29	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	41.7%	0.0%	0.0%	0.0%	41.7%
30-49	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	16.7%	0.0%	0.0%	0.0%	16.7%
50-64	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	16.7%	0.0%	0.0%	0.0%	16.7%
65+	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	25.0%	0.0%	0.0%	0.0%	25.0%
Total	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%	100.0%

Wider impacts

	Wider Impact	
Health	£95,291	Refine this input
Volunteering	£0	Refine this input
Wider Spending	£0	Refine this input

Additionality

The key to using the impact part of the model is understanding that this is about the number of people that will participate in sport (or in the case of events, spectate). This can be complicated and the approach will vary in each circumstance. In some cases new facilities may not generate more participants but will make them visit more often and/or their trip more enjoyable. In these cases there may be no additional participants and therefore no immediate additional health benefits in the model (although longer term it makes participation more attractive.

Using the impact part of the model therefore requires careful estimates of the number of users that will *genuinely be additional participants.*

As part of any demand assessment for a specific facility or revenue investment, we would expect there to be some measure of the additional number of people that are expected to participate in sport. Alternatively, where a facility or participation intervention is closing, there would need to be an assessment of the number of people who would transfer to other activities and how many would stop participating altogether. In the case of events, additionality is equally important and described later.

Sport England's Facilities and Planning model (FPM) combines supply and demand estimates calculated for specific facilities and provides a total potential throughput. It is used in a standard facility planning process.

The connection to the Economic value of sport – local model is that the outputs from the Facilities and Planning Model can help inform assumptions about likely participation (by taking users through the process of considering different supply and demand factors and ultimately providing an indication of potential throughput). In order to generate the expected number of additional participants, users of the tool may need to consider how to convert expected throughput to expected new participants. This could involve extra research, for example to understand existing patterns of usage – how many participants are taking part, and how many of these people were previously inactive.

Users may seek advice from their local Sport England contact about what evidence or examples are available for similar scenarios or what data may need to be commissioned.

Displacement and additional participants

It is important, to be sure that the model is only considering additional participants who would otherwise not be active. People who move from one facility to another, or who would otherwise have travelled further to participate in sport elsewhere do not represent additional sports activity.

However, it could be that over time, without investment existing facilities could deteriorate meaning that fewer people take part. It is not possible within this one year model to include these types of effects, but a 25 year model, where the profile of

sports use can be modelled, is being developed and can be made available by Sport England later this year. This would allow a more detailed analysis of changes in participation.

Visitors from outside the authority boundary

The analysis in the model is only interested in the impact within the local authority (CSP or LEP) boundaries. People from other areas who derive health benefits as a result should not be included. In the assessment of additional participants, consideration should be given to the number of people (or the proportion of footfall) that can be attributed to visitors from outside the area. This can be important where a facility is close to a local authority boundary and/or for new facilities that attract people from further afield.

The impact of events

This section focuses on using the model to enter sports events and the data that is needed.

For many, the economic benefit of sport is considered to mainly come from its ability to attract visitors, participants and organisers' expenditure through big sporting events. Studies on major events indicate that while they can be expensive to host they can bring large amounts of additional expenditure into an economy.

In our consultations with local authorities, it was clear that hosting sports events was considered to be an important contributor to the economy, and should be part of the model.

The model produces the "gross impact" of an event - the total expenditure associated with attendance. Understanding the "net" effect requires a separate model.

However, this model is only able to provide an estimate of the total or gross expenditure associated with an event, or programme of events. The complexities of assessing the *net impact* of an event requires a separate model.

Where it is necessary to understand the *difference* that an event makes, we recommend using the EventIMPACTS website and materials.

To be clear, this part of the model will provide the total value of all the expenditure associated with attendances, even if they would have spent the same money in the area anyway.

Adding events

The value of events is different from the value of spectator sports described earlier. Events are usually one-off, or annual, while spectator sports estimates relate to the regular fixtures of football, rugby or cricket clubs. Examples of one off events that could be included here are World, European or national championships for specific sports. The World Snooker Championships in Sheffield, the World Gymnastics in Stoke-on Trent or stages of the Tour of Britain or Tour de France would all be included.

In the model there is an **Events sheet**. In this, each of the events to be included can be set out, along with estimates of the number of spectators and participants. It also asks for the proportion that will stay overnight or be on day trips. This information is used in the model to present a total value of events for the area.

This is the total value and not the *additional value of visitors* that is more typically used as a measure of the impact of an event.

Adding an event to the model to calculate the associated impact

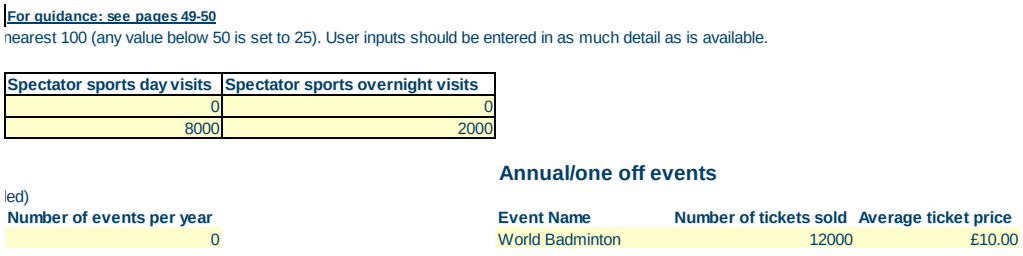
Case example: Hosting the World Badminton Finals

Although these numbers are fictitious, this give an example of how data can be used with the model to identify the impact of typical sports events.

In this example, we have assumed that the event attracts 10,000 people, 60% from within the local authority area and 40% visiting. Among the visitors, half are staying for one night and attending both days of the event (so there were 12,000 attendances). Tickets were sold at an average of £10 each.

The data from this research can be used in the model. Using the Spectators button brings up the boxes for adding visitors attending recurring or one-off events. For this example, the 12,000 attendances have been recorded with an estimated £10 ticket price. The split for day and overnight visits was then adjusted in the visits boxes (highlighted in yellow) with 2,000 overnight trips and 8,000 day trips. It is important to make sure that where the number of attendances and people differ, this is reflected in the changes that you make to the yellow boxes. In the example in Figure 7-4, there are 10,000 people making 12,000 attendances.

Figure 7-4: Adding sports event spectators


For guidance: see pages 49-50

nearest 100 (any value below 50 is set to 25). User inputs should be entered in as much detail as is available.

Spectator sports day visits	Spectator sports overnight visits
0	0
8000	2000

Annual/one off events

led)

Number of events per year	Event Name	Number of tickets sold	Average ticket price
0	World Badminton	12000	£10.00

The expenditure can then be adjusted to take into account the Wider spend section. Click on the Wider spend button to bring up the boxes in. This uses the number of people in the previous section to calculate the average expenditure per trip (Figure 7-5). It shows the expenditure per day that will be used for each type of visitor. In this case, all the visitors are spectators. The value of the expenditure can be altered here if necessary. For example, if we know that the average expenditure per day trip (minus the value of the ticket) is higher than the £22.00 assumed by the model, this can be increased to say £30.00. If the expenditure per overnight trip is also higher (say £150) this can also be changed. These examples are shown in Figure 7-5.

Figure 7-5: Adding an event - wider expenditure

Contains full list of option for user to adjust
All users inputs are denoted by a **yellow** background
Note: Values for additional impacts will be reset if the local area is changed

Wider spending	Additional Impact	Baseline Value	For guidance: see page 50
Overnight visits			
Spectator sports visits	2000	66	Note: Derived from Spectators sports inputs
Participation sports visits		164	
Average spend per spectating trip	£150.00	£116	
Average spend per participation trip		£121	
Day Visits			
Spectator sports visits	8000	10409	Note: Derived from Spectators sports inputs
Participation sports visits		7570	
Average spend per spectating trip	£30.00	£22	
Average spend per participation trip		£11	

Clicking on the Back to Results button shows the overall impact. There are no changes to any of the participation values, but there is an increase in Spectator Sports GVA (£171,270) and an estimate of the number of jobs supported, seven (these are notional and based on the GVA value).

There is also a substantial wider expenditure associated with the event of £540,000. This is expenditure (not GVA), and includes all the spending of local people as well as visitors.

It is important to understand that this is the total (gross) impact of all expenditure associated with the event and not the *additional (net) impact* that is brought into the area as a result of the event (see net impact description later).

Figure 7-6: Adding an event - Results

Non-Participation	Additional GVA	Additional jobs
Spectator sports	£171,270	7

Refine this input

Wider impacts	Wider Impact
Health	£0
Volunteering	£0
Wider Spending	£540,000

The model provides a simple way of combining estimates of attendance and trip expenditure to produce the total expenditure associated with the event.

It will always be necessary to enter an estimate of the attendance, but where there is no estimate, the model provides average expenditure figures based on the national tourism survey. When using this part of the tool it makes sense to consider the types of visitor that would be attracted, the proportion that would stay overnight and the amount that they will spend per night.

Another example, provided by the case studies, is the World Snooker Championships held annually at the Crucible in Sheffield. The Championship has consistently had the biggest economic impact of the city's events. A separate study of the Championships was carried out in 2011 Sport Industry Research Centre at Sheffield Hallam University. It found that the 2011 Betfred.com World Snooker Championship generated visitor expenditure in Sheffield of £2.22m.

This figure represents the spending in Sheffield by event-specific visitors from outside the city. In addition, the net spend by organisers with Sheffield based suppliers amounted to c. £83,000 (allowing for leakage of monies originating in Sheffield) which resulted in an overall impact on Sheffield of £2.31m.

The total number of tickets was confirmed from Box Office records as 40,322. The number of admissions generated by people normally resident in Sheffield was 5,836.

The study found that £1.8 million of the expenditure was generated by spectators with an average expenditure per day of £58.52. Among those that stayed overnight, this was £67.32, although this did not include admission fees.

The model would use the number of attendances by day visitors and staying visitors as well as the average expenditure to calculate the overall expenditure associated with the event. The example also highlights the potential to include the organiser's expenditure. This could be added to the "per attendance" figures within the model.

Net impact

It is usual to assess the economic impact of events as a "net" rather than the "gross" impact. This allows for the expenditure that would have been made anyway, if the event had not taken place. It is a better measure of the difference that an event makes.

The *net impact* is the difference that the event makes and is concerned with only the *additional expenditure (jobs or GVA)* that is generated. Most economic impact studies assume that expenditure by *visitors* to an area is additional, while the expenditure of residents is not. This is generally a good principle, although where visitor surveys are used, they can ask residents and visitors directly whether or not their trip and spending is the result of the event.

Typically, an event impact study would be based on a survey of spectators. It would ask questions to determine:

- Total expenditure
- How much of their expenditure was made within the local area (leakage)
- Whether or not they would have been in the area anyway (displacement).

EventIMPACTS provides detailed guidance and toolkits for estimating the economic impact of events

Making these adjustments is not possible within this model, but should be done separately using EventIMPACTS (click for link). This is a collaboration between UK Sport, Visit Britain, EventScotland, the London Development Agency, the North West Development Agency, Yorkshire Forward and Glasgow City Marketing Bureau. The

Toolkit is intended to provide organisers and supporters of public events with some key guidance and good practice principles for evaluating the economic, social, environmental and media-related impacts associated with their event.

Using a 25 year model

There is a slightly more complex spreadsheet that is being developed and will be available later this year that allows changes in participation, age and sports activity to be modelled over 25 years. It compares a "base scenario" e.g. what would have happened, with a "new" scenario, which reflects what is expected to happen *as a result of some form of intervention,* for example, a new facility or the closure of an existing one; the merger of facilities or even modelling the effect of marketing activity.

Multiplier effects

The model is mainly driven by the output of sports related businesses and does not include multiplier or "knock-on" effects. Multiplier effects occur where an increase in demand for a particular product or service means that there will also be an increase in demand on their suppliers and so on down the supply chain. This increase in demand will also increase the level of wages, salaries and profits for employees and owner, who in turn will re-spent a proportion of this on other goods and services. This would be applicable where there are changes in employment (and income) in any of the sectors used in the analysis, including construction.

The output of sports goods and services requires supplies, some of which will be purchased locally, and generates wages that may also be spent in the local area. The scale of this effect depends on the nature of the businesses, the supplies that they purchase and where they are purchase from. There are very few estimates of the scale of these local effects, which means that it is not possible to include them within a model. However, it is an important concept to bear in mind in making a case for retaining investment. As a very broad example the Homes and Communities Agency's Additionality Guidance includes a table that shows a local multiplier value for recreation of 1.38 and 1.56 at a regional level.

Working with appropriate multipliers is complex and if not used correctly could undermine the results of the economic impact work. Unless there are good reasons for including them and they are well understood, it is better to leave multiplier effects out of the analysis.

8. The wider benefits of sport

There are many wider benefits of sport. The Economic value of sport – local model described in this guidance uses a number of methods and assumptions to provide monetary values associated with sport. It is focussed on the jobs it supports and the income that it generates (GVA). Not all the benefits of sport can be valued in this way. Encouraging participation in sport has many other benefits that cannot be easily measured, although approaches such as Social Return On Investment (SROI)[12] are gradually developing.

There is a risk that focusing on just the elements of economic value that can be captured by this model and similar approaches, underestimates the true value of sport and as a result could be misleading for policymakers that seek to compare investment in sport with alternatives. It is very important that the potential wider benefits are described clearly alongside the economic values.

There are a number of sources that provide a starting point. The range of evidence, particularly in relation to activity generally, rather than just sport is huge. Sport England brings a lot of this together in its Value of Sport Monitor. This provides overviews of research in seven themes which can be downloaded separately:

- Crime reduction and community safety
- Economic impact and regeneration
- Education and lifelong learning
- Playing sport
- Physical fitness and health
- Psychological health and well-being
- Social capacity and cohesion.

The Sports and Recreation Alliance also produced a wide ranging report The Game of Life, (2012) that describes the findings of research in physical activity across five themes.

- Physical Health
- Mental Health
- Education and Employment
- Antisocial Behaviour

[12] See for example http://www.neweconomics.org/issues/entry/social-return-on-investment for descriptions and approaches

- Crime Social Cohesion

This report includes many research findings that can be used as evidence around these wider themes. For example, it includes references to a tool promoted by the National Institute for Health and Clinical Excellence (Promoting Physical Activity in the Workplace, Business Case). This allows users to enter the numbers of employees, their salary cost, sick days taken, recruitment costs and so on against the costs of any physical activity interventions to calculate the potential savings that could be generated as a result.

Sports facilities are also increasingly a part of the physical regeneration of many towns and cities. Their construction, which contributes to health and wellbeing through participation, also improves the built environment, making places better to live even for those that do not use the facilities.

Sport in all its forms clearly creates a very wide range of social and economic benefits. For some, like those in this model, it is possible to provide at least a monetary measure of their contribution to the economy, but many more cannot be measured in this way or are very dependent on the local context. For example, projects that encourage participation and reduce crime in one area may not be as effective in another.

This model is a starting point for analysis and opening discussions, but it is strongly suggested that it should be set alongside a more qualitative description of the context and the potential wider effects depending on the audience.

Other Tools

There are other tools that it might be useful to use alongside side such as the recently published NICE Return on Investment tool for Physical Activity. Sport England will publish a summary on the various Return on Investment tools on their website later in 2014.

Commissioning further work on the local economic value of sport

The model is a starting point for understanding the different elements that contribute to the value of sport. The introduction made clear that the model is not a substitute for more detailed local work (although it does provide a good structure for identifying the areas that users might be interested in).

Users of the model may need help to refine it, or may want to undertake a more detailed study. This could be for a number of purposes; perhaps to set out the importance of the sector generally or where there are plans to make changes to current sports provision.

Where there is not the expertise or resources in-house, the work can be contracted externally to consultants and organisations will have their own procurement policies that they will need to follow.

The most likely requirement for a more detailed assessment will be triggered by new investment (in facilities, people or marketing), or the threat of losing these, and estimating the potential impact that this will have on health outcomes in the area. For assessing the impacts of events on tourism, for example, a methodology such as EventsImpact (referenced earlier) is more appropriate. For most purposes the data from the Annual Business Survey will provide a sufficient basis for estimating employment and GVA, although this can be refined if there is additional information.

Understanding the difference that any changes will have means understanding the market and the profile of users. How will demand be affected and how will this translate into, most importantly, health outcomes? The model can help value these changes.

The first steps to undertaking a more detailed study will be setting up a project group and developing a brief.

Developing a Project Brief

The project brief is important because it sets out the requirements for the project. It provides the basis on which the consultants will prepare their proposals and quotations. The Brief should cover:

- Background to the study and the rationale for doing it
- The objectives and key research questions
- Outline existing data and studies
- Guide price
- Timings for the project for responses. project milestones and completion
- Guidance on how proposals will be assessed

Including suggestions about the methodology can be helpful, but this can be left to the consultants to propose. Identifying the potential pool of consultants can be done by using local contacts and through web searches. It can be more cost effective to send the Brief to an agreed number of potential firms rather than use an entirely open tender, which can take a lot of time to manage. For larger projects it is important to hold interviews. For smaller ones the evidence in the proposal may be sufficient to make an appointment. All this though may be informed by individual organisations approach to procurement which will need to be taken into account.

In this type of work the main issues are likely to be around:

- An understanding of additionality and displacement - how to assess changes in the number of people participating in sport
- Understanding the processes for valuing changes

- Understanding the specific investments that have been made or are proposed
- Sources of data and how this will be collected
- Use of surveys and issues around response rates
- Management of the study and quality assessment
- Experience of similar types of work and the outcomes.

It is important to understand that the consultants are quoting to do the work set out in their proposal and not necessarily everything that is described in the Brief. It is useful to make sure that the main research questions are addressed to the satisfaction of the Project Group.

The model provides a good basis for any of the analysis. However, in developing a more detailed assessment, some of the raw data will be needed, so consultants will need to access the original sources referenced in the guidance in order to assess their reliability and in some cases refine the data.

For example, a study to assess the return on investment for new facilities may use the model to provide a simple overview of sports activity in the area, but most of the work will focus on determining the *net* difference that it will make to the number and type of users. At this stage most projects will already have demand assessments that set out the profile of potential users. The economic impact assessment would use this data to consider how these changes will affect employment, income and the value of social and health benefits. These vary depending on the profile of the people participating in sports.

While commissioning external consultants to carry out this type of work has advantages, it might also be worth considering whether a joint approach could be used. For example, carrying out the work in-house, and using external support only for guidance. This means that those doing the work build up a better understanding of how to do it and are then better placed to interpret it in the future. This depends on the availability of resources.

If you are considering undertaking a more detailed study then Sport England would be happy to discuss this with you.

Annex A: Using the model – Case examples

This section expands on the three examples used in the Guidance and show how the model can be used initially to produce the Snapshot results, and then adjusted to show the Refined Snapshot results.

As the guidance explained, in principle *any of the variables used in the model can be changed to reflect local conditions*, but in practise there are only a small number where there is likely to be sufficient local data to make the refinements. The data on employment that is produced in the BRES survey, and used for many of the estimates, may not be perfect, but trying to derive alternative figures from other surveys would be a major exercise and not guaranteed to produce results that are more reliable.

The three cases used show the areas where local information is likely to be available and how this can be used. There are three areas where improvements can be made relatively easily and should be considered by anyone using the model. These are in:

- Spectator sports (where sports clubs and events can make a big difference)
- Wider expenditure by spectators and participants (again where the level of activity will vary significantly from national averages).
- Sports students and staff (which will depend on the presence of institutions and courses)
- Specific sectors (such as broadcasting and gambling where there is known to be high levels of economic activity.

Sheffield City Council

Sheffield is the largest city covered by the case study and therefore has some of the most complicated amendments. Sheffield Council were also able to provide some good information on the sector in the city that has allowed the model to be refined. The case study goes through the steps used to refine the model, starting with the snapshot results.

Using the model

For Sheffield, the model produces the summary results shown in **Error! Reference source not found.** below. These results indicate that sports-related employment is around 5,500 jobs and that participation in sports generates health benefits of £195 million a year (relative to participants being inactive).

Figure A-1: Sheffield Initial Economic Values

Total direct economic value of sport	Gross Value Added:	£194.9m
	Jobs:	5526

Participation	Gross Value Added	Jobs
Sports services	£72.6m	2893
Sportswear and equipment	£20.8m	388
Sport education	£45.3m	572
Total participation	*£138.6m*	*3853*

Non-Participation	Gross Value Added	Jobs
Spectator sports	£14.6m	600*
Sportswear and equipment	£30.9m	577
Sports broadcasting and gambling	£10.8m	496
Total non-participation	£56.3m	1673

Wider impacts	Wider value
Health	£257.5m
Volunteering	£33.5m
Wider spending	£29.7m

Note that in some cases the sum of the figures does not always match the total because of rounding

Refining the model

Sheffield has large and complex sports economy that requires considerable refinement in the model to produce the most robust results. There are three areas where we have made significant changes:

- Spectator sports – given the number and size of sports clubs in the city
- Education – there are large number of students and staff engaged in sports education
- Wider spending – with large spectator crowds for the sports clubs and for a programme of events including the World Snooker Championships there is more data on the role of events

Spectator sports

Sheffield has two major football clubs, Sheffield Wednesday and Sheffield United. Combined these clubs have annual home gates of 539,000. Income from this attendance was £10.5 million in 2012 (£19 per attendance).

The city also has a rugby league club, Sheffield Eagles, a Basketball team, Sheffield Sharks, the Sheffield Steelers (ice hockey) and the Sheffield Tigers speedway team. There is also a greyhound racing track. The Steelers have an annual attendance of 130,000, while there are no attendance figures available for several of the others, these are likely to be around 1,000 per match or 30,000 a year. Taken together this would give an estimate of a further 220,000 attendances to add to the football clubs, giving a total of around 759,000 attendances a year. These are all assumed to be made as day trips (of more than 3 hours), which means that the expenditure data from the GB day Visitor Survey can be used. These numbers are added into the model and shown in **Error! Reference source not found.**.

Events

In order to provide an indication of the value of events to Sheffield generally we have used the most recent review of impacts, undertaken for 2009/10. This is used a proxy for the most recent year.

In Sheffield, a review of events and impacts in 2009/10 was carried out by H2 Sports and covered the full Programmes of sports events over that period. The 2009/10 Programme included 58 events including the World Snooker Championship. H2 reported a total of 174,000 attendances and participants of which 57,000 attendances were made by visitors and 117,000 by residents. The report also found that there were an additional 60,000 overnight stays associated with these events. Assuming that on average staying visitors spent two nights in the city, this would mean that 30,000 of the visitors stayed overnight and 27,000 were on day trips.

Large club GVA

Sheffield's two major football clubs reported a total salary and wage bill of £21.1 million in 2011/12 and a combined annual operating loss of £9.5 million. This gives an indicative GVA of around £11.6 million for the two clubs in that year. This figure can be added directly to the model in the in the football club GVA box (note that for it to be included the ticket price for the football clubs is set to zero.

Employment

In their accounts Sheffield United reports 222 jobs in 2012/13 and Sheffield Wednesday report a similar number (221) giving a total of 443 people. Separately, the other clubs and events generate expenditure of £1.98 million. The expenditure per job for all activities under SIC 93.1 (Sports Activities) is £47,930. This would support a further 41 jobs. Giving a refined total of 484 jobs supported on-site. This compares with 600 jobs from the Snapshot.

Figure A-2: Refining sports spectators and events in the model

Spectator Sports

	New baseline value	Default baseline	Difference from default
Spectator Sports Jobs	484	600	-97

Events

	Expenditure	Spectator sports visits	Spectator sports day visits	Spectator sports overnight visits
Recurring events	£2,200,000	759000	759000	0
One off events	£1,740,000	174000	144000	30000

Large sports club/venue

If you have estimated the GVA of a professional sports club in your area, please enter the figure here, and also enter their ticket sales in the box below with an average price of zero.

GVA	£11,600,000

Recurring events

(To add additional events write an event name in a new row and the table will be expanded)

Event Name	Number of tickets sold	Average ticket price	Number of events per year
Sheffield United	238000	£0.00	1
Sheffield Wednesday	301000	£0.00	1
Sheffield Steelers	130000	£10.00	1
Others	90000	£10.00	1

Annual/One off events

Event Name	Number of tickets sold	Average ticket price
All events	174000	£10.00

Wider spending

There were an estimated 904,000 attendances day trips and 30,000 overnight trips to spectator events and each is assumed to also spend money offsite. The model uses the national average of £22 per day trip and expenditure per trip of £146 for spectators based on the VisitEngland GBTS data for Sheffield. Applying these expenditure figures gives a total adding these figures gives £24.7 million. The model also includes an allowance for expenditure by people on day trips participating in sports. In this case, it adds a further £7.9 million, giving a total of £32.6 million

This is higher than the Snapshot model result of £26.7 million.

Figure A-3: Sheffield calculation of wider expenditure

Wider Spending	New baseline value	Default baseline value	Difference from default	
Overnight visits				
Spectator sports visits	30,000	2123	27877	Note: Derived from Spectators
Participation sports visits		5279	N/A	
Average spend per spectating trip		£146	N/A	
Average spend per participation trip		£152	N/A	
Day Visits				
Spectator sports visits	903,000	920,370	-17370	Note: Derived from Spectators
Participation sports visits		669,360	N/A	
Average spend per spectating trip		£22	N/A	
Average spend per participation trip		£11	N/A	

Education

Sheffield City Council also provided data on the number of sports-related students at Sheffield Hallam University. The Higher Education Statistics Agency provides data on the number of students enrolled by institution and course. In 2012/13, there were 1,150 sports science students. The University has a total of 34,720 students and 2,100 academic staff. This gives a ratio of 16.5 students per staff member. Applying this to the number of sports students gives 70 staff members associated with sports. In addition, The Sheffield College offers sports teaching. The average College in England has 235 students studying sports-related courses (8%) of full time students. The Sheffield College has just over 7,000 full time students, which would indicate around 560 full time sports students. We have also assumed a further20 staff.

These numbers are added to the sports education refinement page (**Error! Reference source not found.**).

Figure A-4: Refining sports education estimates

Education	New baseline value	Default baseline value	Difference from default
Further education students on sport related courses	1710	0	1710
Further education jobs for sports related courses	90	0	90
School sports premium		£0	N/A

Results

Returning to the Results page shows how these adjustments have changed the estimates of the value of sport (**Error! Reference source not found.**). Overall, the changes are fairly modest. Although GVA has increased, the estimate of the number

of jobs has fallen slightly because more detailed information has been added for the football clubs:

- the refinements reduce the total number of jobs slightly from 5,527 to 5,501.
- GVA has increased from £195 million to £206 million
- wider spending has increased from £29 million to £33 million
- sports education has increased employment from 572 jobs to 662
- GVA from sports spectating has increased from £14.6 million to £17.2 million

Making these refinements has only a relatively small effect on the Snapshot estimates. To generate figures that are even more accurate would require considerably more information about the operations of sports clubs.

Figure A-5: Refined results for Sheffield

Total direct economic value of sport	Gross Value Added:	£206.2m
	Jobs:	5500

Participation	Gross Value Added	Jobs	Gross Value Added (Diff from snapshot)
Sports services	£72.6m	2893	£0.0m
Sportswear and equipment	£20.8m	388	£0.0m
Sport education	£54.0m	662	£8.7m
Total participation	*£147.3m*	*3943*	*£8.7m*

Non-Participation	Gross Value Added	Jobs	Gross Value Added (Diff from snapshot)
Spectator sports	£17.2m	484	£2.6m
Sportswear and equipment	£30.9m	577	£0.0m
Sports broadcasting and gambling	£10.8m	496	£0.0m
Total non-participation	£58.9m	1557	*£2.6m*

Wider impacts	Wider value
Health	£257.5m
Volunteering	£33.5m
Wider Spending	£33.4m

Note that in some cases the sum of the figures does not always match the total because of rounding

Stoke-on-Trent City Council

Stoke-on-Trent's Sport and Leisure Services is based in the regeneration directorate, and focuses on improving the sporting and leisure offer to help attract inward business investment. The twin drivers for investing in sports and leisure in Stoke-on-Trent are: stimulating economic growth and improving the health and wellbeing of residents.

Using the model

Running the Snapshot model for Stoke-on-Trent produces the summary results shown in Figure A-1.

Figure A-1: Stoke-on-Trent Snapshot

Total direct economic value of sport	Gross Value Added:	£92.3m
	Jobs:	2915

Participation	Gross Value Added	Jobs
Sports services	£20.6m	823
Sportswear and equipment	£8.5m	159
Sport education	£20.8m	261
Total participation	*£50.0m*	*1243*

Non-Participation	Gross Value Added	Jobs
Spectator sports	£3.9m	200*
Sportswear and equipment	£12.7m	237
Sports broadcasting and gambling	£25.7m	1235
Total non-participation	£42.3m	1672

Wider impacts	Wider value
Health	£82.1m
Volunteering	£9.9m
Wider spending	£6.4m

Note that in some cases the sum of the figures does not always match the total because of rounding

Revising the results

The next step was to revise the data using local information. In this case the model has been adjusted to include data from:

- Sports spectators by including football club details and other events
- Sports Education include students and staff from appropriate courses
- Include a large on-line sports betting business

Sports spectators

There are three categories of events used in the estimates:

- Sports club spectators
- Major events
- Smaller local events

Sports clubs

There are two professional football clubs in the city; premiership team **Stoke City Football Club** and **Port Vale Football Club** in Football League One. These are the main professional sports clubs in the city for inclusion in the model. Attendance data has been estimated for the two clubs for the 2012/13 season using the WorldFootball.net. **These are aggregated to give an attendance of 640,000** (2012/13 season).

Estimating GVA for large football clubs is extremely difficult given the complexities of players' wages and the different financial and debt structures that can be used. Financial information is also confidential for many of the clubs. In this case, therefore, the model focuses on employment estimates rather than GVA. The attendance data is still important because it generates the expenditure, which is included in the wider benefits section.

Major events

There is information for two of the major events held in Stoke-on-Trent in 2013. The British Gymnastics and the Tour of Britain. Both provided details of the number of attendances (overnight and day trips) and expenditure.

British gymnastics events at Fenton Manor

A one multi-day international British Gymnastics event generated £80,000 in tourism revenues[13]. There were 454 gymnasts and 878 spectators at Fenton Manor -

[13] Source: independent evaluation report commissioned by British Gymnastics.

a total attendance of 1,332 visits. Of these 54% were staying overnight (719) and 613 on day trips.

Economic benefits for The Tour of Britain 2013

As part of this, a report on the Stoke-on-Trent to Llanberis leg was produced. There were estimated to be 20,000 visitors in Stoke-on Trent for the event, of which 3,082 stayed overnight. They spent a total of £247,328 or £80.25 each during their trip. There were 16,918 day visitors who spent £620,313 in total or £36.67 each.

Other smaller events in Stoke-on-Trent sports centres

Annually, between 200 and 250 events are held at sports venues and facilities in the city. Many of these are small local events, but there are several larger events (typically in gymnastics, boxing and cycling) per month at Fenton Manor Sports Complex.

Between April 2013 and March 2014, 12 events[14] with overnights stays, bringing additional expenditure into the local economy, were hosted at Fenton Manor Sports Complex[15] (see the table below). The largest event attracted 2,300 spectators (TeamGym British Championships) and the smallest 150 spectators (I.C.C Badminton). Table A-1 sets out details of the main events in 2013/14. The total was 11,650 attendances. However, this is only a proportion of the sports events. To include an allowance for all events, this has been increased to 18,000.

Table A-1: List of events in Stoke-on-Trent sports centres, April 2012 – March 2014

Event Start	Event name	Category	Event duration	Attendees
06/04/2013	Winterguard	Sport	1 day	950
13/04/2013	British Acro Champs 2013	Sport	2 days	1,200
11/05/2013	B.S.G.A School Gym 2013	Sport	2 days	1,500
17/05/2013	British Acro N.D.P Finals	Sport	2 days	1,200
24/05/2013	Teamgym British Champs	Sport	2 days	2,300
02/06/2013	Tumbling N.D.P. Finals	Sport	2 days	500
22/06/2013	British Rhythmic Champs	Sport	2 days	500
23/11/2013	British Acro Tournament	Sport	2 days	1,200
01/02/2014	Cat Show	Other	1 day	400
08/02/2014	I.S.A Gymnastics	Sport	1 day	400
08/03/2014	Team Trio Nat Final	Sport	2 days	500
09/03/2014	Nationwide Streed Dance	Sport	1 day	1,000
Total				11,650

Source: Stoke-on-City Sports and Leisure Service. Note that the list is provided to help formulate / test the model, and may not be a truly representative (i.e. events may have more / less attendees, generalisation of overnight stays etc.).

[14] 26 were sports-related.
[15] Fenton Manor is the major sports venue in the city.

There are no details about the proportion that were staying overnight, although the British Gymnastics survey found 54% staying away from home. The average is likely to be lower than this, and we have assumed 30% for inclusion in the model. This gives 5,400 overnight visits and 12,600 day trips. The figures for the three types of events are entered into the refined model:

- Spectators at sports clubs (Stoke City and Port Vale) is aggregated with attendances
- The major events (Tour of Britain and British Gymnastics are shown separately under one–off events.
- Other events are shown as a further line with an average ticket price of £10.

We also include a separate estimate for spectator sports jobs – the largest source of jobs will be through the football clubs, which support around 300 jobs between them. The remaining ticket expenditure will support around 100 further jobs – giving a total of around 400. This provides a more reliable estimate than deriving the figure from the GVA results.

Within the one off events, there are estimated to be 9,201 overnight trips (719 from the British Gym event, 3,082 for the Tour of Britain and an estimated 5,400 for others. The remaining 30,131 are day trips. These estimates can be entered into the Refined Spectator Sports page.

Education

There are three Further and Higher Education Institutions in Stoke-on-Trent. To value the contribution sports education makes to the local economy, we asked the three education providers to make available the following data for the last academic year:

- Titles of courses related to sports studies (e.g. sports science) and numbers of students studying each course
- Employment associated with these courses (total number of academic, technical, administrative staff)

Annex Table A-1: Number of course participants and staff associated with sports-related studies in Stoke-on-Trent

Course participants		Number
Stoke-on-Trent 6th Form College		214
Staffordshire University		578
Stoke-on-Trent FE College		88
	Total	880
Employment		**Number**
Stoke-on-Trent 6th Form College - Full time employees		10
Stoke-on-Trent 6th Form College - Part time employees		6
Staffordshire University - Full time employees		53.6 *(includes 12 PHD students)*
Stoke-on-Trent FE College - Full time employees		3
Stoke-on-Trent FE College - Part time employees		5
	Total	**77.6**

Source: Stoke-on-Trent FE College, Stoke-on-Trent 6th Form College, Staffordshire University

These figures can be added into the model in the "Refine sports education" section.

Figure A-1: Refining sports education

Contains full list of values that the user can adjust. For comparison, we show the base estimates used to calculate the default results.
All users inputs are denoted by a **yellow** background

Note: Adjustments will be reset if the local area is changed.

* Employment estimate directly from BRES and must be supressed by rounding to the nearest 100. User inputs should be entered in as

Education	New baseline value	Default baseline value	Difference from default
Further education students on sport related courses	880	0	880
Further education jobs for sports related courses	78	0	78
School sports premium		£0	N/A

Adjusting the broadcasting and gambling estimates

For Stoke-on-Trent, this is particularly important given the number of jobs supported by online sports betting. For example, a major online business indicates on its website that it employs around 2,000 people in the city.

The model reported 1,229, which includes shop betting, but clearly not all the jobs supported by on-line sports betting. Among other local authorities with similar populations, the average number of sports gambling jobs is typically around 200 (where there are no on-line operations based). To adjust the model, the online sports betting business jobs can be added to the estimate of a further 200, to give 2,200 jobs. There is no sports broadcasting activity. The adjustment is made in the Refined Model by adding these numbers into the online and shop betting boxes (Figure A-2).

Figure A-2: Adjusting the broadcasting and gambling estimates

TV & satellite subscriptions	New baseline value	Default baseline value	Difference from default
Sports TV subscriptions jobs		N/A	N/A

Sports gambling	New baseline value	Default baseline value	Difference from default
Online betting jobs	2000	0	965
Shop betting jobs	200	1235	

Results

Returning to the Results page shows how these adjustments have changed the estimates of the value of sport (Figure A-3). For two categories which are dominated by single businesses GVA estimates are not shown to protect confidentiality, however estimates of employment numbers are shown

- The total number of jobs has increased from 2,916 jobs to 4,158
- The number of jobs supported through sports education increased to 339
- The wider spending has increased from £6 million to £18 million with the inclusion of spectators expenditure attending football matches and other events
- The jobs supported by gambling and broadcasting have been adjusted from 1,229 to 2,200.

Figure A-3: Refined results for Stoke-on-Trent

Total direct economic value of sport	Gross Value Added:	*
	Jobs:	4158

Participation	Gross Value Added	Jobs	Gross Value Added (Diff from snapshot)	Jobs (Diff from snapshot)
Sports services	£20.6m	823	£0.0m	0
Sportswear and equipment	£8.5m	159	£0.0m	0
Sport education	£25.3m	339	£4.5m	78
Total participation	***£54.5m***	***1321***	***£4.5m***	***78***

Non-Participation	Gross Value Added	Jobs	Gross Value Added (Diff from snapshot)	Jobs (Diff from snapshot)
Spectator sports	*	400	*	200
Sportswear and equipment	£12.7m	237	£0.0m	0
Sports broadcasting and gambling	*	2200	*	965
Total non-participation	*	2637	***£247.8m***	***965***

Wider impacts	Wider value
Health	£82.1m
Volunteering	£9.9m
Wider Spending	£6.4m

Note that in some cases the sum of the figures does not always match the total because of rounding

Walsall Council

Using the model

For Walsall, the snapshot model produces the summary results shown in Figure A-4 below. These results indicate that sports-related employment is around 2,100 and that participation in sports generates health benefits of £73 million a year (relative to participants being inactive).

Figure A-4: Walsall Initial Values (unadjusted)

Total direct economic value of sport	Gross Value Added:	£73.9m
	Jobs:	2104

Participation	Gross Value Added	Jobs
Sports services	£24.3m	970
Sportswear and equipment	£4.5m	84
Sport education	£25.0m	313
Total participation	***£53.8m***	***1367***

Non-Participation	Gross Value Added	Jobs
Spectator sports	£4.7m	200*
Sportswear and equipment	£6.7m	125
Sports broadcasting and gambling	£8.7m	412
Total non-participation	£20.1m	737

Wider impacts	Wider value
Health	£95.7m
Volunteering	£18.5m
Wider spending	£6.9m

Note that in some cases the sum of the figures does not always match the total because of rounding

Refining the model

Compared to the other case study areas, Walsall has no characteristics that would suggest that the value of its sports activity is likely to be much higher or lower than is calculated by the estimates produced by the Snapshot model.

The main area where more information can be provided is around the football club and other local events. This impacts on the estimates for the GVA and employment supported by spectator sports and through the wider spending of those attending events.

Sports spectators

The main football club, Walsall, plays in Football League One. The local authority estimated that there are perhaps another 20 smaller clubs and an allowance can also be made in the model for these.

The football club has just over 100,000 attendances a year. With an average ticket price of £9 it generates around £900,000 in gate receipts. The club reported wages and salaries of £2.4 million in 2013[16] and a gross operating profit of £86,000. Salaries and operating profits combine to give the GVA of £2.5 million.

The local authority reported around 20 clubs that are likely to have an economic impact and a number of events including:

- Boxing events at the town halls
- Walsall Gala Baths which hosts competitions
- Wolverhampton University (Walsall hosts their sports campus) hosts some events

As a simple estimate, assuming that the 20 clubs host 20 events each attended by 100 spectators, this would generate 40,000 attendances. The remaining one-off events might generate a further 10,000, giving a total of 50,000 attendances. With an average ticket price of £5 this gives £250,000 of revenue.

Figure A-5 shows how these numbers are added to the Refined Model Spectator Sports page. This includes the attendance at the football club, the GVA, an estimate for other clubs and for other events. Note that because it uses total annual attendances the number of events per year is set to 1 for the clubs. **To allow the GVA for the football club to be included, the ticket price is set to zero to avoid double counting.**

[16] From Walsall Football Cub Directors Report and Financial Statement 2013

Figure A-5: Walsall adding data on spectator sports

Spectator Sports	New baseline value	Default baseline	Difference from default
Spectator Sports Jobs		200	N/A

Events

	Expenditure	Spectator sports visits	Spectator sports day visits	Spectator sports overnight visits
Recurring events	£200,000	141000	140890	110
One off events	£50,000	10000	9992	8

Large sports club/venue

If you have estimated the GVA of a professional sports club in your area, please enter the figure here, and also enter their ticket sales in the box below with an average price of zero.

GVA	£2,500,000

Recurring events

(To add additional events write an event name in a new row and the table will be expanded)

Event Name	Number of tickets sold	Average ticket price	Number of events per year
Walsall	101000	£0.00	1
Other clubs	40000	£5.00	1

Annual/One off events

Event Name	Number of tickets sold	Average ticket price
Other events	10000	£5.00

Wider spending

There were an estimated 151,000 attendances associated with the wider spending "offsite". The model uses the national average of £22 per day trip. This gives £3.4 million of expenditure. In addition, there is expenditure made by participation in sport. This continues to use the Snapshot model estimate £1.8 million, based on the proportion of all day trips that involve participating in sport (the Detailed Results button shows how the wider spending is split between spectators and participants). The model uses the attendances and the participation estimate automatically to produce the wider spending figures

Figure A-6: Walsall calculation of wider expenditure

Wider Spending	New baseline value	Default baseline value	Difference from default
Overnight visits			
Spectator sports visits	117	176	-59
Participation sports visits		438	N/A
Average spend per spectating trip		£54	N/A
Average spend per participation trip		£59	N/A
Day Visits			
Spectator sports visits	150,883	226,380	-75497
Participation sports visits		164,640	N/A
Average spend per spectating trip		£22	N/A
Average spend per participation trip		£11	N/A

Results

Returning to the Results page shows how these adjustments have changed the estimates of the value of sport (Figure A-7). The red numbers indicate where the figures are lower than in the Snapshot model:

- the refinements reduce the total number of jobs slightly from 2,104 jobs to 2,018
- Wider spending has been reduced from £6.9 million to £5.2 million

In this case making the refinements has only a relatively small effect on the Snapshot estimates. To generate figures that are even more accurate would require considerably more information about the operations of sports clubs.

Figure A-7: Refined results for Walsall

Total direct economic value of sport	Gross Value Added:	£72.0m
	Jobs:	2018

Participation	Gross Value Added	Jobs	Gross Value Added (Diff from snapshot)
Sports services	£24.3m	970	£0.0m
Sportswear and equipment	£4.5m	84	£0.0m
Sport education	£25.0m	313	£0.0m
Total participation	***£53.8m***	***1367***	***£0.0m***

Non-Participation	Gross Value Added	Jobs	Gross Value Added (Diff from snapshot)
Spectator sports	£2.9m	114	-£1.9m
Sportswear and equipment	£6.7m	125	£0.0m
Sports broadcasting and gambling	£8.7m	412	£0.0m
Total non-participation	£18.2m	651	***-£1.9m***

Wider impacts	Wider value
Health	£95.7m
Volunteering	£18.5m
Wider Spending	£5.2m

Note that in some cases the sum of the figures does not always match the total because of rounding

Annex B: SIC codes used by the model

Details of the SIC codes used in the study are shown in Table B-1. More detail of all SIC codes is available here.

Table B-1: SIC codes used in the model

SIC Code	Name	Comment
32.70	Manufacture of sports goods	Used to value equipment and retail activity
47.64	Retail sale of sporting equipment in specialised stores	Also used to value equipment and retail activity
60.20	Television programming and broadcasting activities	Television programming and broadcasting, proportion related to sport
92.00	Gambling and betting	All gambling and betting, proportion related to sport
93.11	Operation of sports facilities	Covers all types of sports facilities including local authority
93.12	Activities of sport clubs	All types of sports clubs
93.13	Fitness facilities	Gyms and other fitness facilities
93.19	Other sports activities	Includes sports bodies

Source: ONS

Annex C: Lifetime health values used by the model

The Sport England Economic Value of Sport Tool incorporates the model for determining the long term benefits in engaging in sport was developed by MATRIX as part of the DCMS CASE programme alongside the use of Active People Survey and population data.

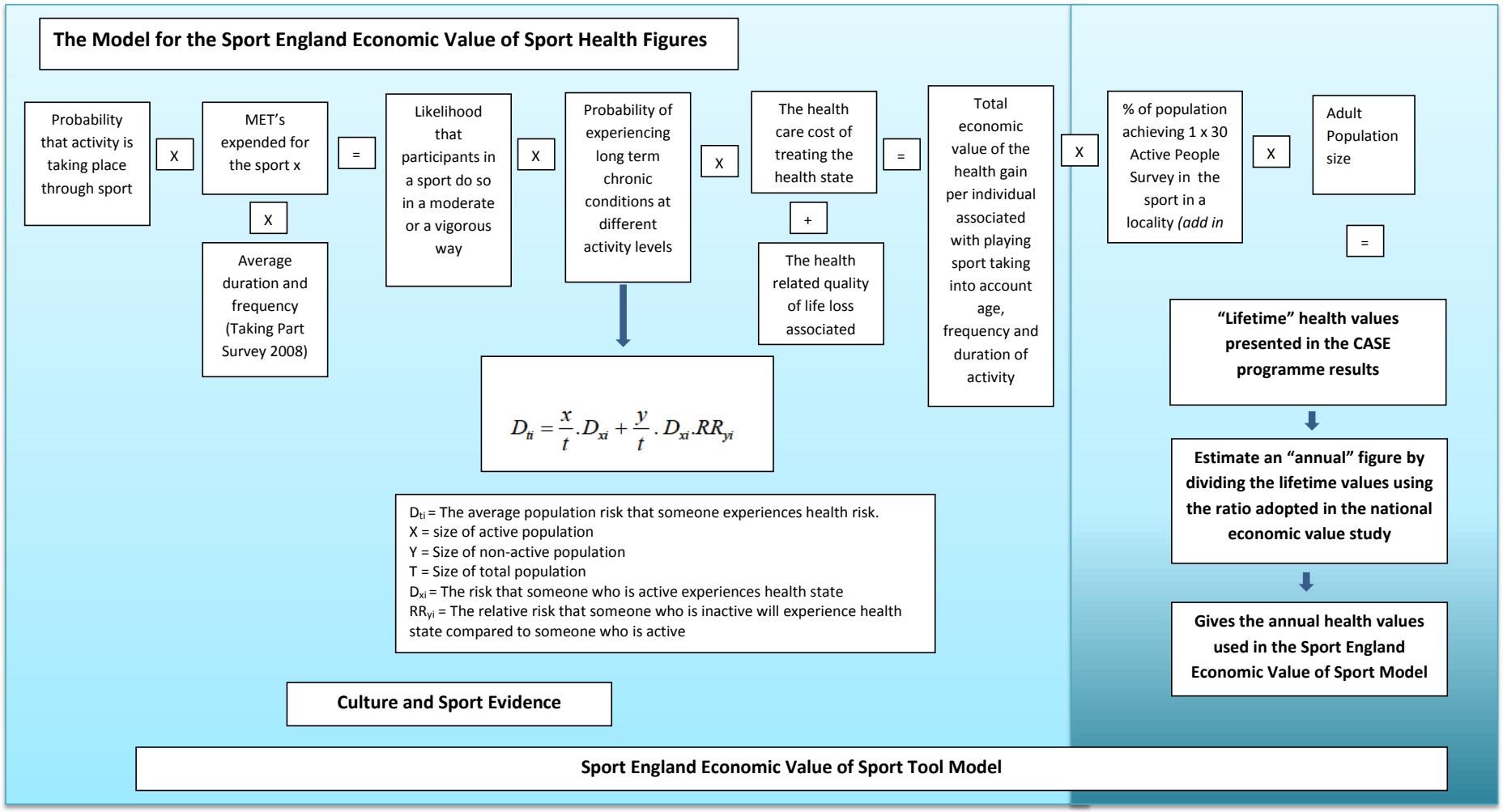
The model for determining the long term benefits in engaging in sport was developed by MATRIX as part of the DCMS CASE programme. It provides an estimate of the monetary value of the long term benefits in engaging in sport, taking into account health-related quality of life and health care costs avoided.

The approach used in the CASE modelling draws on accepted best practice in the field of health economics, using a decision model that provides a quantitative and systematic approach to synthesising data from differences sources that forms part of the NICE recommendations on how to conduct economic evaluations ((Mugford, 2001; Cooper et al., 2007).

The model is built on estimates of the value of the health gain associated with engaging in different sports and for different-aged cohorts. Separate models were built for the CASE programme focusing on the 10 most frequently engaged-in sports according to the Taking Part survey 2008. These are:

- Swimming
- Cycling
- Football
- Athletics
- Golf
- Badminton
- Tennis
- Squash
- Cricket
- Recreational Walking
- Health and Fitness

To translate the lifetime values to annual ones, the local model here uses the approach adopted in the Economic Value of Sport national study. The national study divides the lifetime values by the average life expectancy for each of the age cohorts used in the CASE programme. The national study estimated a lifetime health benefit value of £238.3 billion in England, based on the number of people participating in sport in 2012. The value for one year was estimated as £11.2 billion per annum which is equivalent to dividing the lifetime total by 21.28. This ratio is used in the local model to similarly calculate annual figures.


The Model for the Sport England Economic Value of Sport Health Figures
Probability that activity is taking place through sport
X
MET's expended for the sport x
X
Average duration and frequency (Taking Part Survey 2008)
=
Likelihood that participants in a sport do so in a moderate or a vigorous way
X
Probability of experiencing long term chronic conditions at different activity levels
X
The health care cost of treating the health state
+
The health related quality of life loss associated
=
Total economic value of the health gain per individual associated with playing sport taking into account age, frequency and duration of activity
X
% of population achieving 1 x 30 Active People Survey in the sport in a locality (add in
X
Adult Population size
=
$D_{ti} = \frac{x}{t}.D_{xi} + \frac{y}{t}.D_{xi}.RR_{yi}$
"Lifetime" health values presented in the CASE programme results
Estimate an "annual" figure by dividing the lifetime values using the ratio adopted in the national economic value study
Gives the annual health values used in the Sport England Economic Value of Sport Model
D_{ti} = The average population risk that someone experiences health risk.
X = size of active population
Y = Size of non-active population
T = Size of total population
D_{xi} = The risk that someone who is active experiences health state
RR_{yi} = The relative risk that someone who is inactive will experience health state compared to someone who is active
Culture and Sport Evidence
Sport England Economic Value of Sport Tool Model

Tables 14 and 15 are from the CASE report. It shows the economic value generated by the health gains associated with getting people to do sports at different points in their life. For instance, compared with a person who does not play sport, a person who swims at the age of 30-49 years old is expected to experience health outcomes worth about £28,500 over the remainder of their lifetime, comprising about £3,800 in avoided health care costs and £24,700 in improve quality of life.

The life expectancy assumptions that underpin the lifetime economic value generated by health gains from sport are based on national estimates from the ONS for the different age cohorts covered below. This is covered in detail in NICE 2006 *Physical activity – economic modelling report.*

Table C-1: Lifetime discounted health cost savings associated with playing sport (based on actual frequency and duration of engagement)

	Age (years)				
	11-15	**16-29**	**30-49**	**50-64**	**65+**
Swimming	£1,383	£2,955	£3,768	£3,061	£832
Cycling	£1,574	£3,362	£4,287	£3,285	£854
Football	£1,532	£3,274	£4,174	£3,264	£862
Athletics	£1,030	£2,201	£2,806	£2,282	£621
Golf	£1,870	£3,996	£5,095	£3,922	£1,023
Badminton	£645	£1,378	£1,756	£1,472	£409
Tennis	£1,042	£2,225	£2,837	£2,255	£603
Squash	£1,458	£3,114	£3,970	£3,181	£856
Cricket	£1,081	£2,310	£2,945	£2,403	£655
Recreational walking	£2,350	£5,021	£6,401	£5,005	£1,322
Health/fitness	£2,524	£5,393	£6,876	£5,190	£1,332

Source: reproduced from Understanding the value of engagement in culture and sport: Technical Report (2010) DCMS

Table C-2: Lifetime discounted total economic value of the health gain associated with playing sport (based on actual frequency and duration of engagement, and £/QALY = £20,000)

	Age (years)				
	11-15	**16-29**	**30-49**	**50-64**	**65+**
Swimming	£9,023	£19,320	£24,681	£16,432	£7,953
Cycling	£10,418	£22,290	£28,473	£17,965	£8,471
Football	£10,093	£21,601	£27,594	£17,732	£8,438
Athletics	£6,718	£14,383	£18,375	£12,244	£5,928
Golf	£12,368	£26,463	£33,805	£21,417	£10,119
Badminton	£4,171	£8,934	£11,413	£7,827	£3,840
Tennis	£6,833	£14,627	£18,685	£12,186	£5,840
Squash	£9,543	£20,428	£26,097	£17,149	£8,249

	Age (years)				
	11-15	16-29	30-49	50-64	65+
Cricket	£7,045	£15,084	£19,270	£12,881	£6,246
Recreational walking	£15,481	£33,129	£42,321	£27,195	£12,940
Health/fitness	£16,772	£35,879	£45,831	£28,521	£13,355

Source: reproduced from Understanding the value of engagement in culture and sport: Technical Report (2010) DCMS

The national study uses these lifetime values and converts them into annual values based on ONS life-expectancy data and the Active People Survey participation rates for those participating in sport once a week.

It is therefore important to note that the national study warns that "*the CASE research from which these estimates are derived is focused on lifetime, capitalised savings/value, from which per annum figures have been calculated for the purposes of this report. The estimates of annual value should therefore be treated as indicative.*" These are the figures used in the local model and should also be treated as indicative.

The model for the CASE programme takes into account the following assumptions and caveats

- The values given are lifetime values generated by participating in sport. To translate the lifetime values to annual ones, the model here uses the approach adopted in the national study by dividing the lifetime values by an average life-expectancy
- It is assumed in the model that those people who do sport do so with frequency and duration of reported in the Taking Part survey. Increasing frequency and duration of participation will increase the health cost savings. For instance, if an individual who is 30 – 49 participates in football at the taking part survey frequency and intensity the lifetime healthcare savings are £4,174 however if their frequency increases to 3 x 30 minutes per week the savings increase to £6,119. This can be seen in the results tables of the CASE model.
- It is uncertain how soon after taking up an activity the benefits are achieved, but the epidemiological literature shows that the activity needs to be long term to benefit disease reduction.
- Sensitivity analysis was run to overcome challenges to the model. These challenges included the epidemiological data available in the current literature is rarely presented for the specific age cohorts for whom the models were run. The epidemiological literature employs a range of definitions of physical activity and the analysis is run for a range of physical activity categories, which do not always match precisely with the data on the activity levels associated with different sports. The models

were run using the intervals for the relative risk of health states and to determine how QALY gains and healthcare costs avoided vary with the relationship between physical activity levels and longer-term health outcomes within the sensitivity analysis.

- All health care cost and QALY loss estimates in the model are discounted at 3.5% in line with H.M. Treasury guidance.
- The health care costs make assumptions on the annual utility loss caused by the condition, the age of onset of the condition and the period from onset of the condition to death.
- The model uses an estimate of the value of participating in sport as a young person (11-29). That is, it was necessary to estimate the relationship between undertaking sport as a young person, and being physically active as an adult (30-49 years old).
- The modelling focuses on CHD, stroke, type-2 diabetes and colon cancer health states, as it was thought that these are most likely to be influenced by physical activity levels. This ignores the positive impact of sport on other health outcomes, such as mental health.
- It is assumed that the chances of experiencing the four health states included in the model are independent. This is unlikely to be the case.
- The model does not consider the costs to the health service of increased longevity as a result of the intervention.
- Negative effects of physical activity, such as injuries, are not considered in the model.
- There is suggested uncertainty about the value of a QALY. NICE's current threshold of £20,000-£30,000 is based on an analysis of previous decisions taken by NICE guideline development committees, rather than population preference (as suggested by the H.M. Treasury Green Book).
- Whilst the savings can be made to the NHS, the costs of encouraging engagement in sport will most likely fall on a number of other departments.
- The economic value generated by doing sport is generated a number of years in the future. The benefits captured in the analysis will be experienced in the long-term. The exact timing of the gain depends on the age of doing sport, and the nature of the chronic disease avoided – stroke, diabetes, cancer, and CHD.

Annex D: Core data sources and updates

This model uses a number of multipliers to estimate the impact of expenditure in each section of the model on both GVA and Jobs all of which are based on national data. The multipliers only consider the direct impact of expenditure and do not consider the indirect impact from supply chain effects or the induced impacts from wages. The GVA multipliers are expressed as the ratio between GVA and expenditure so a multiplier of 0.6 means that £1m expenditure would directly generate £600,000 GVA. The employment multipliers are expressed as jobs per £1m expenditure so an employment multiplier of 25 means that £1m expenditure would directly generate 25 Jobs.

Table D-1 sets out the main data sources used in the model the most recent data year and when they are updated. The Table includes hyperlinks to the relevant publications.

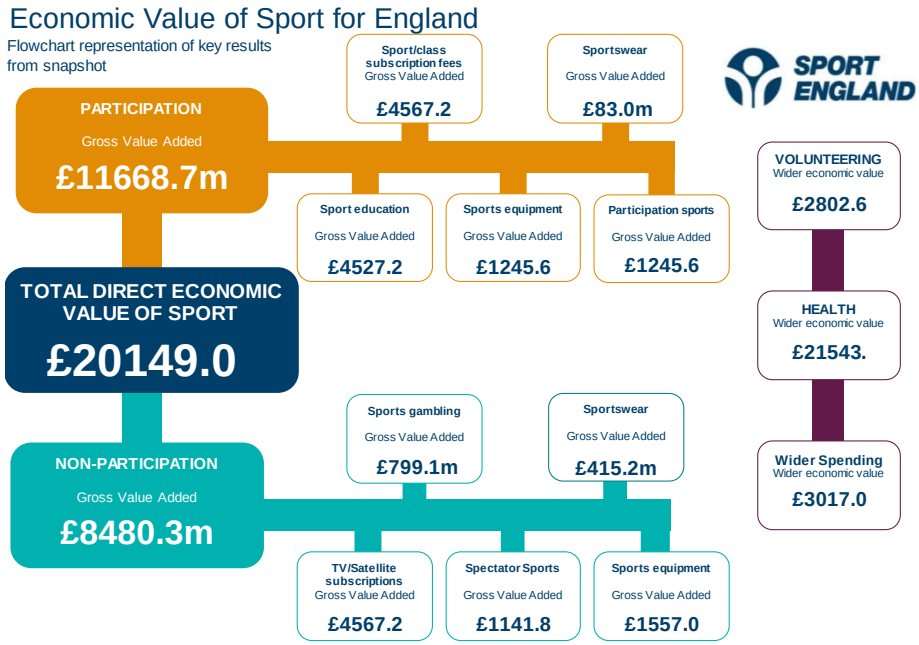
Table D-1: Data sources

Data source	Most recent	Update
The National Economic Value of Sport Study (2013) (AMION for Sport England)	2013	No update planned
Business Register Employment Survey (BRES) (ONS)	2013	Updated annually
The Active People Survey (Sport England)	2013	Updated annually
Great Britain Travel Survey (GBTS) (VisitEngland)	2012	Updated annually
GB Day Visit survey (UKDVS) (VisitEngland)	2012	Updated annually
Understanding the value of engagement in culture and sport (DCMS, 2010)	2010	No update planned
ONS Mid-Year Population Estimates (ONS)	2012	Updated annually

Source: Various

Annex E: Technical guide

This annex sets out the broad methodology used in the model. It covers each individual part of the model as set out in the flowchart below, which we refer to in this guide as modules of the model.



Broadly, the model uses the best available local and national data to estimate expenditure (where relevant from both government and households). It then uses multipliers (typically derived from the national model) to convert this expenditure into GVA – this is equivalent to the input-output methodology used in the national model, although it assumes that the ratio of expenditure to GVA is consistent across all local areas (for example it assumes that average wage rates are the same). Where employment is not an input to the expenditure calculation, this is calculated from the GVA by using the GVA to employment ratio calculated in the national model.

Participation modules

Sport/class subscription fees

Employment is estimated used the figure for employment in sports activities (SIC 93.1), adjusted in accordance with the England data on the split between sport/class subscription fees, participation sports and spectator sports. The resultant figure multiplied by an England figure for expenditure per job (from the national study). This is converted to GVA using the national expenditure-to-GVA ratio. Employment is reported directly from the BRES data.

Participation sport

The model estimates expenditure by multiplying participation in 'participation sports' (which are those for which a fee is required for participation, defined as athletics, badminton, golf, cricket, squash, tennis, swimming and football) with a national expenditure per participant figure (calculated by dividing the national expenditure figure by England participation in these sports). GVA is calculated using the national expenditure to GVA ratio, while employment is calculated using an equivalent national ratio for expenditure to jobs.

Sports equipment and sportswear (both participation and non-participation)

These are grouped together as they are calculated using the same methodology; in the national study they were calculated as a single figure and then split according to available data. Local area employment is calculated as the sum of retail sale of sporting equipment in specialised stores (SIC 47.64) and manufacture of sports goods (SIC 32.3). A figure from the national study for expenditure per job is applied, and then a multiplier to convert expenditure into GVA.

Sport education

First data from the national study, and the latest population estimates from the ONS, are used to estimate consumer expenditure per pupil. Government expenditure per pupil is estimated on a regional basis using available data on total spending in each region divided by total school age population in the region. The school age population in a given local area is then multiplied by these figures to give separate estimates of consumer and government expenditure. The two are added together to give total expenditure, which is then converted to GVA using a multiplier from the national study. Employment is estimated using a national GVA to employment ratio.

Non-participation modules

Spectator sports

Employment is estimated used the figure for employment in sports activities (SIC 93.1), adjusted in accordance with the England data on the split between sport/class subscription fees, participation sports and spectator sports. This figure is multiplied by national study multipliers to calculate GVA and employment.

Sports broadcasting and gambling

Gambling estimates are constructed using employment data for gambling and betting (SIC 92), multiplied by a national expenditure per employee figure to construct total expenditure and an expenditure to GVA multiplier to estimate GVA.

Broadcasting uses employment in television programming and broadcasting activities (SIC 60.2) to distribute the national expenditure, and a GVA multiplier is used to estimate GVA as above. However, because no data exists on how much of SIC

60.2 is related to sports broadcasting, the employment data is not included in the estimate for the combined sports broadcasting and gambling module.

Wider benefits

Health

Health benefits for a given area are calculated by aggregating data from the APS for participation by sport and age band (this level of disaggregation is not large enough in scale to be reliable at a local level) across sports (to give us just participation by age band in the related sports). These participants are then distributed across the ten sports included in CASE in line with the England average (so in each local area a given age band is assumed to undertake different sports in the same proportions as in England as a whole). The cost savings and value of additional life per participant values (be each sport and age band) from CASE are then multiplied by the participation data to give total cost savings and value of life estimates.

Volunteering

Data on the number of volunteers in a given local area is multiplied by a replacement cost per volunteer value calculated from the national study and APS data for England.

Wider spending

Wider spending is calculated based on the number of overnight and day trips in a given local area. These are estimated using local area data on the total number of overnight and day trips in an area (taken from VisitEngland data), and a national figure for the percentage of these that are primarily for a sporting purpose (participating or spectating) is applied to give total number of sports-related tourist trips (split by overnight and day trip). National data on the average spend per overnight visit and average spend per day visit is used to give an estimate of total spending by these visitors.

Annex F: GVA and employment multipliers used in the model

The model that has been constructed estimates the Gross Value Added (GVA) and employment (in total jobs) associated with economic activity in the sports sector. It is based upon the framework used in the *National Economic Value of Sport*, published by Sport England in 2013. The national model presented in that work estimates expenditure (from both expenditures and, where relevant, government) and uses national accounting multipliers to estimate the GVA and employment generated by this expenditure.

Similarly, the local model presented in this guide uses a number of multipliers to estimate the GVA and jobs generated by expenditure in each section of the model, drawing on a number of England- or UK-level data sources. As in the national study, the multipliers only consider the first-order (direct) impact of expenditure (i.e. the GVA and jobs generated within the relevant part of the sports economy where the expenditure takes place) and do not consider the indirect impact from supply chains (i.e. the economic activity involved in supplying products to the final agent) or the induced impact (i.e. the economic impact that derives from workers spending their wages in the wider economy). The GVA multipliers are expressed as the ratio between GVA and expenditure so a multiplier of 0.6 means that £1m expenditure would directly generate £600,000 GVA. The employment multipliers are expressed as jobs per £1m expenditure so an employment multiplier of 25 means that £1m expenditure would directly generate 25 Jobs.

Table E-1 sets out the multipliers used in the model to derive the GVA estimates. Links to sources for the multipliers are included where applicable.

Table E-1: GVA Multipliers (GVA to expenditure ratio)

Model estimate	Direct GVA Multiplier	Source
Participation sport	0.66	National Economic Value of Sport Study / Living Costs and Food survey
Sport/class subscription fees	0.91	National Economic Value of Sport Study / Living Costs and Food survey
Sport education (consumer expenditure	1.05	National Economic Value of Sport Study
Sports education (government expenditure)		
Sports equipment (Participation)	0.69	National Economic Value of Sport Study
Sportswear (Participation)	0.12	National Economic Value of Sport Study
Spectator sports	1.43	National Economic Value of Sport Study/ Living Costs and Food survey
Sports equipment (Non-Participation)	0.69	National Economic Value of Sport Study
Sportswear (Non-Participation)	0.13	National Economic Value of Sport Study

Sports Gambling	0.22	National Economic Value of Sport Study
TV/satellite subscriptions	1.91	National Economic Value of Sport Study
Construction (investment based)	0.39	ONS UK Input output tables 2011

Notes:

1. *Multipliers sourced from the National Economic Value of Sport Study (2013) are calculated from the ratio between the GVA and consumer expenditure figures reported for England.*
2. *Some sections of model did not have a consumer expenditure figure reported in the National Economic Value of Sport Study (2013) report. As such, the consumer expenditure figures were obtained from the ONS Living cost and food survey (2012).*

Table E-2: Employment Multipliers (Jobs per £m expenditure)

Model estimate	Direct Employment Multiplier	Source
Participation sport	26.1	Living Costs and Food survey /BRES
Sport/class subscription fees	36.4	Living Costs and Food survey /BRES
Sport education (consumer expenditure	44.24	National Economic Value of Sport Study/BRES
Sports education (government expenditure)	18.94	Department for education/BRES
Sports equipment (Participation)	13.0	National Economic Value of Sport Study /BRES
Sportswear (Participation)	2.3	National Economic Value of Sport Study /BRES
Spectator sports	56.9	Living Costs and Food survey /BRES
Sports equipment (Non-Participation)	13.0	National Economic Value of Sport Study /BRES
Sportswear (Non-Participation)	2.4	National Economic Value of Sport Study /BRES
Sports gambling (Shop betting)	10.7	National Economic Value of Sport Study /BRES
Sports gambling (Online betting)	1.7	
Construction (investment based)	13.5	Offpat paper on construction jobs, 2009

Notes:

1. *Multipliers sourced from the National Economic Value of Sport Study (2013) and BRES are calculated from the ratio between the England employment figure from BRES and consumer expenditure figures reported for England from the National Economic Value of Sport Study (2013).*
2. *Some sections of model did not have a consumer expenditure figure reported in the National Economic Value of Sport Study (2013) report. As such, the consumer expenditure figures were obtained from the ONS Living cost and food survey (2012).*