case: the culture and sport evidence programme

Understanding the drivers, impact and value of engagement in culture and sport

An over-arching summary of the research

July 2010

dcms department for culture, media and sport

ARTS COUNCIL ENGLAND

ENGLISH HERITAGE

MLA MUSEUMS LIBRARIES ARCHIVES COUNCIL

SPORT ENGLAND

The CASE programme The Culture and Sport Evidence (CASE) programme is a three-year joint programme of research led by the Department for Culture, Media and Sport (DCMS) in collaboration with the Arts Council England (ACE), English Heritage (EH), the Museums, Libraries and Archives Council (MLA) and Sport England (SE).

The work on this project was carried out by a consortium led by the EPPI centre with Matrix Knowledge Group

The EPPI-Centre (Institute of Education, University of London) – The lead contractors and lead on the Impacts work:

Dr Mark Newman
Dr Karen Bird
Jan Tripney
Naira Kalra
Irene Kwan
Mukdarut Bangpan
Carol Vigurs

Matrix Knowledge Group – Lead for the Drivers and Value work:

Dr Kevin Marsh
Sam MacKay
David Morton
Will Parry
Evelina Bertranou
Jennie Lewsie
Dr Rashmi Sarmah
Prof Paul Dolan

This report can be downloaded at the CASE website: www.culture.gov.uk/case

Contents

Making the CASE

A brief history of CASE

The CASE programme is a joint strategic research programme led by the Department for Culture, Media and Sport (DCMS) and its sector-leading arms-length bodies: Arts Council England, English Heritage, Museums, Libraries and Archives Council and Sport England. The aim of CASE is to use interdisciplinary research methods and analysis to inform the development of policy in culture and sport. CASE is closely linked to the Taking Part Survey[1] both in terms of using data from the survey and in using the definitions of the sectors implicit in the choice of activities and levels of engagement included in the survey.

The programme was set up in 2008 and the 'drivers, impact and value of engagement' project was commissioned in December of that year. A year and half later, and the largest single piece of policy research in culture and sport is published. This is no ordinary research project. It is almost a programme in itself, comprising 3 different strands, each with a major report. It is the most comprehensive piece of work in this field, assessing a huge range of research and data, setting the foundations for evidence-based policy-making in culture and sport upon which future work can build. In addition to the reports, two new tools have been created to help policy-makers employ the available evidence: A new, comprehensive research database and a new computer simulation model. These provide a step-change in the ability to build culture and sport policy using evidence, and to retain the future knowledge gained through new initiatives both in the UK and abroad. These resources will add value to a huge range of activities in this sphere.

Box 1: About CASE

CASE is aimed squarely at developing evidence and analytic tools and methods for addressing fundamental policy questions in the domain of engagement in culture and sport. This report is focused on making the best use of the available evidence to draw together our understanding of what **drives** people to engage, what the **impacts** of that engagement might be, and how we might **value** that engagement for economic appraisal. It is not exhaustive – there are some clear boundaries around this project: We focused on a definition of engagement in culture and sport that is delimited by the activity questions in Taking Part; the analysis of value and impacts is only partial: there are other impacts to

[1] The Taking Part survey is joint-funded by the CASE partners, but pre-dates CASE. It is the key national-level survey for measuring and monitoring levels of engagement in culture and sport in England. For more information, visit: http://www.culture.gov.uk/what_we_do/research_and_statistics/4828.aspx

be considered, and therefore different values to generate. Finally, we present work based on what evidence and data is currently available. Like the best in innovation, CASE builds on solid, tried and tested methods, but also explores new ground. There are many issues in culture and sport policy research which CASE could have addressed. We focused on three:

- exploring new methods for determining the value of engagement that go beyond standard economic/monetary valuation,
- marshalling the available evidence on engagement in culture and sport, and demonstrate how robust synthesis can add value to the findings to support evidence on 'what works'.
- developing a theory and working model of engagement that can serve as a focal point, bringing all the evidence together to inform policy decisions and support an increasing knowledge base in this area

Using CASE evidence to improve policy-making

In this opening section, we want to help policy officials in a range of settings navigate the huge array of new resources that this work and other CASE products represent. Since the work is targeted at ensuring interventions in culture and sport deliver the best value for money we will use a framework based on the general stages that arguments for intervention or investments use. These frameworks include the Office for Government Commerce's guidance for business cases, and the published guidance from the Cabinet Office[2] or HM Treasury in the 'Green Book'[3].

Typically the processes for business cases, impact assessments or making the case for policy intervention are based on similar stages:

- **The reason for action**. In business cases this is called the 'business need', in policy development it is sometimes called the 'rationale'.
- **The objectives**. This sets out the desired outcomes, outputs and targets from the action. Sometimes these are called the 'benefits'.
- **Options appraisal**. This sets out what possible ways the objectives could be achieved. Typically the analysis here will involve a form of cost-benefit analysis in part to establish value for money, but also as a basis for ensuring affordability (in the costs) or return on investment (in the benefits).

Also related to good practice in policy development or investment is **monitoring and evaluation**. CASE also provides tools for adding value to whatever activity is undertaken here.

The following section outlines which elements of the work presented here or undertaken within the wider CASE programme provide evidence,

[2] See for example: http://www.nationalschool.gov.uk/policyhub/better_policy_making/

[3] See: http://www.hm-treasury.gov.uk/data_greenbook_index.htm

tools or guidance on how to make the case for action, and how CASE resources help inform judgements on the best use of limited resources.

The reason for action

The basic reasoning for action (such as changing regulation, deciding to invest in a new service, or changing the role of current operations) is the same at a national and local level (fundamentally, it should be based on an identified market failure) but the framing of the analysis can differ. At a local level, the reason for action may be explicitly framed in terms of a *local strategy*, based on meeting agreed priorities for the area. In that way, the reasoning may be based on 'strategic fit' – which itself should be grounded implicitly on evidence of local market failures. For national government the reasoning is more likely to be framed directly in terms of whether there is a 'market failure' to justify government action or intervention.

Local area

Local areas may want to look at culture and sport as a priority area for development in which case, the **Regional Insights** data project will be extremely useful in helping local areas understand where their strengths and weaknesses are on a range of culture and sport-related indicators (e.g. on investment, employment, training, engagement). If local area priorities are focused on raising health or education standards, for example, then the research presented here in the **Impacts** and **Value** sections will give valuable evidence for the role that culture and sport activity can play in delivering against those wider outcomes. For evidence on the role of culture and sport in other areas, bespoke research reviews can now be very quickly pulled together using the new **CASE database**, available via the CASE website.

National government

The fundamental reason for national and local government action is based on the economic principle of market failure. Market failure can occur for several reasons, but when it does occur it means the market will under value the benefits of engagement leading to an under supply of culture and sport. Therefore the market alone cannot be relied on to produce a socially optimum level of supply. In the case of culture and sport opportunities, this rationale proposes that government intervention can help promote continued access where the market fails to provide sufficient supply. It is not sufficient, however, just to identify *in principle* that a market failure may exist: **evidence is required**. This is for two reasons:

i) to show that the market failure is actually occurring (and exactly why)
ii) to determine whether the value of the benefits of intervention outweigh the value of the costs

A key element of this is establishing 'additionality' of interventions. That is, showing that the benefits derived are greater than those that would have occurred without government intervention. CASE provides both a

framework and evidence-base to measure benefits, justifying intervention in market failure terms. Government intervention in the absence of an identified market failure will distort the market and make it less efficient (producing worse outcomes for society), an effect known as 'government failure'.

For a full explanation of this approach as it relates to the culture sector, please refer to 'A framework for evaluating cultural policy investment' available on the DCMS website[4]. This approach can also be applied to sport, although the exact pattern of market failures may differ.

In addition to market failures, equity can be a reason for intervening. This is where there is seen to be an unfair distribution of resources, such as access to culture and sporting opportunities. Regardless of whether the reason is based on equity or market failure, evidence is required to show that the reason exists more than just in principle.

Evidence from the **Drivers** section can help determine whether there is an evidence for a market failure or inequity, For example:

- Females are **3 times** less likely to participate in sport than males
- Older ethnic minorities are around **half as likely** to attend arts events as older people not from ethnic minorities
- Households scoring low on socio-economic measures are **4 times** less likely to engage in culture than those scoring high
- University education is associated **with 2-3 times** increased likelihood to engage in culture over lower attainment levels
- Social housing tenants are around **a third less** likely to attend arts or heritage than those living in other kinds of housing

These facts are just a starting point: an inequity in access, such as fewer females accessing sports opportunities could represent a preference rather than a market failure as such. To explore the issue further, the CASE database provides swift access to a comprehensive range of research studies (see **Impacts** section). Evidence for market failures can also be derived from the computer simulation in the **Drivers** section. We can see, for example, what proportion of people are 'unaware' of opportunities to engage providing evidence of a possible 'information failure' – one form of market failure.

The objectives

CASE is primarily focused on developing the evidence around public engagement in culture and sport. Therefore, much of the work is based around the objective of increasing engagement. From there, CASE has looked at what the impact of that engagement might be – such as the health or educational impacts.

If there is an objective to increase engagement – either as an endpoint, or to obtain the health or other impacts associated with engagement as evidenced in this work (see **Impacts** and **Value** sections) – then the

[4] See: http://webarchive.nationalarchives.gov.uk/+/http://www.culture.gov.uk/reference_library/research_and_statistics/4853.aspx

Drivers section is your starting point. In that section there is a brief description of a new **computer simulation model**. The model aims to represent the decision-making pathway of people into engagement, by describing it in a number of stages. Each of these stages represents them being affected by a barrier, which certain types of policy 'levers' might address to remove, and result in increased engagement. Table 1 describes the different barriers currently used in the model, what the associated levers are, and how those might translate into actual policies.

Table 1: Levers and barriers used in the computer simulation model (see **Drivers** section)

Barriers	Levers	Example policy
Lack of awareness	Promotion	Advertising the opportunity to take part; ensuring coverage of activity on media.
Lack of interest	Promotion; Quality of supply (can impact via word of mouth)	As above, plus generating social media content; ensuring access for new engagers; improve staff training, more staff and/or better facilities
Lack of know-how	Education	Supply of evening classes; change to curriculum
Physical ill health	Access/support Change supply	Provide transportation, or support staff; make use of mobile opportunities that can be brought to people.
Lack of free time	Access Increase supply	Create more and more varied opportunities; provide opportunities which can be woven into routine; supply opportunities to workplace
Affordability	Reduce costs	Lower entrance fees; reduce travel costs; give vouchers;
Limited supply	Increase supply	Build more assets; use assets more widely

Note: the policy examples here are for illustration only and do not represent a statement of policy for any of the CASE member organisations.

The model helps to determine sensible objectives for raising engagement. If the reason for intervening is that young, low income males aren't obtaining the benefits of the arts, then we can not only see what kinds of barriers they seem to have, but also use the model to see what we can expect to happen should we do something about it ('what if' scenarios). This is fundamental to providing strategic insight and setting stretching but achievable objectives, based on analysis using the best available evidence.

Appraisal

Options appraisal includes both the need to generate options and the need to evaluate them, in order to determine what the best course of action is. CASE can help both with developing options and with appraising them.

Developing options

The process of generating options can include ideas from a range of sources. The identification of a market failure will tend to provide a starting point as this tells us what the problem to be addressed is. For example, when there is an 'information failure' the provision of information or marketing is usually the most suitable policy response, or if there are positive externalities then a subsidy to reduce price and increase participation is one logical course of action. The levers and barriers in Table 1 above reflect this. CASE provides one source, based upon data and analysis from the **Drivers** work but also from a new collation of studies published on the CASE website. This collation brings together the best 'quantitative'[5] evaluations of projects aimed at raising engagement, and is presented in a way designed to help feed in key evidence from these projects into the development of options. In addition, as referenced above, the computer simulation model can provide a steer both in terms of what sort of interventions might be best, as well as ways of sequencing them to get best effect (e.g. improving the quality of supply before promoting the opportunity will invariably add more value to the intervention than simultaneous activity).

Appraising the options

Appraisal helps determine which of the options is the best to undertake. The criteria from project to project will vary but very often there will be an analysis that weighs off the benefits against the costs. Weighing up the costs and benefits in the same terms is not always straightforward. Box 2 explains this issue in more detail. In culture and sport – as for other areas of government, this is often the thorniest of problems, and in a

[5] That is, evaluations where quantitative data were collected as a key means of evidencing impact. The principle reason for focusing on quantitative studies there was the need to generate numeric estimates of impact. These numeric estimates (e.g. 5% increase in engagement) can then be used more easily to set up scenarios in the model which are based directly on the evidence.

time when the need to understand 'net present value' is more important than ever, this is where CASE delivers another key contribution.

In the **Value** section, we present peer-reviewed research undertaken by Matrix Knowledge Group looking at deriving economic (monetary) values for engagement. The work is cutting edge, even by academic standards, yet still delivers practical insights for policy. There are some key limitations to note, not least the lack of data covering our sectors, meaning we have direct evidence for generating economic value of core benefits (like well-being gains) for some areas but not others. Note as well, that we have not explored the full range of possible economic values here, only well-being and health[6]. In addition the **subjective well-being income compensation** analysis in the **Value** section requires further exploration to understand the best way to use the values generated. This will no doubt generate useful debate which will feed into future research whether by government or externally.

Box 2: The problem of defining the economic value of engagement

Why do we need to generate economic values for things like 'engagement in culture and sport?'

Governments local and national invest public money in culture and sport opportunities. How do we know if the money is well-spent or wasted? Are we under or over-investing? At the moment the simplest way of expressing this is:

Public £ invested = ↑engagement

However, we can't tell whether £1 of additional investment brings about enough increase in engagement to justify that expenditure. Is one additional engager enough? 100? One way around this is to try to equate the value of an engagement with public money in some way – i.e. to produce an equivalent monetary value on both sides of the equation. By doing that, governments are better able to determine whether a £ invested by government delivers more than a £ of benefit and whether this is better or worse value than a £ spent by a person when trying to achieve the same outcome (e.g. improved quality of life).

Monitoring and Evaluation

Assessing the effectiveness of an intervention is important to ensure:

i) The policy is being implemented in the anticipated way
ii) The policy is having the anticipated effect and value for money, providing transparency and accountability to the public
iii) To record core information to help future policy development perform better

[6] The notion of economic value here is centred on 'micro-economic' value rather than macro-economic such as jobs and contribution to GVA.

Judging the effectiveness of an intervention should be based on a simple comparison: what would have happened had the intervention *not* taken place? This is known technically as the 'counterfactual question'. Without considering this it is impossible to judge whether or not the policy brings value for money: it could be the case that any improvement seen after the policy was implemented would have occurred anyway (meaning the policy investment was unnecessary). For example, a *fall* in a measure that we are trying to increase could be a sign of success: if without the policy the fall would have been greater. Without some kind of comparison (control), evaluative evidence is incomplete and can be misleading.

The research presented here and in the wider CASE programme can add value to evaluations in a variety of ways:

- The computer simulation in the **Drivers** section allows for the running of scenarios where the policy is implemented to different degrees, from nothing at all, to high levels of intervention
- The local area data CASE has marshalled provides both background trends in supply and investment, and the ability to identify comparison geographic areas which are similar on culture and sport factors. Finding similar comparison areas is essential to making a good comparison.
- The **Value** analysis provides essential health cost figures for judging cost-effectiveness of sport interventions using a 'common currency'
- The systematic reviews of research described in the **Impacts** section provide examples of what constitutes a robust evaluation methodology

Feedback

Ensuring we build on successful policies and avoiding the pitfalls encountered by others is central to ensuring that governments continually progress in making ever better use of public investment. The cultural and sports sector have fared relatively well in terms of marshalling evidence and making it accessible, though there have been distinct approaches for each sector. Box 3 summarises the range of sources.

Box 3: Research resources in culture and sport

Impacts Database – a collection of around 700 studies focused on measuring and recording the impacts of engagement or investment in culture and sport

http://www.impacts.arts.gla.ac.uk

MLA research resources – This resource for sharing research and evidence, has details of over 900 research and evaluation reports, case studies and research briefings (including archived material)

http://research.mla.gov.uk/

Arts Research Digest –an information resource for cultural managers, arts and cultural organisations, academics, policy-makers, arts practitioners, researchers, consultants and funders

http://arts-research-digest.com

Researching Cultural and Creative Industries in London (RCCIL) - RCCIL is an independent database of research on cultural and creative issues relevant to London. It aims to make research more accessible to policy-makers, academics, and service-providers working in the field. The database contains summaries of pieces of research together with bibliographical details and relevant links. It offers an information platform to disseminate research and keep up-to-date with new publications.

http://www.rccil.org.uk/

Value of sport monitor – The Value of Sport Monitor is a joint Sport England and UK Sport initiative working in conjunction with Professor Fred Coalter and colleagues at the University of Stirling. It provides an online monitoring service of the most up-to-date reference sources and critical reviews of published research evidence on the contribution of sport to a range of broader social issues

http://www.sportengland.org/research/value_of_sport_monitor.aspx

Heritage Research Group - The UK Heritage Research Group (UKHRG) brings together organisations from England, Northern Ireland, Scotland and Wales involved in commissioning policy research about the heritage sector.

http://www.gcu.ac.uk/ukhrg

CASE has addressed this fragmentation by bringing together in one place all this research and more. The CASE research database described in the **Impacts** section is now the foremost repository of empirical studies on culture and sport engagement in the world. With over 5000 studies, we are now able to make this knowledge of a huge range of studies more easily available to researchers who work across the artificial boundaries in our sectors. This is a core mechanism to ensure feedback from a huge range of approaches is available to inform future policy. And it is our intention that the resource will be continually updated to provide access to the most up to date international evidence base on culture and sport

Having all the research in one place is only one element though. Accessing the knowledge from 5000 studies is not a trivial task. Understanding what the implications of the research are for any new *policy X* is difficult. This is where the computer simulation described in the **Drivers** section plays an essential role in helping translate the research, together with personal knowledge and experience possessed by those working in our sectors, into advice on policy options.

Conclusion

Culture and sport, both as forms of human behaviour and as an area for government intervention, is hugely complex. An individual's decision to engage (or not to engage) is set within a range of competing priorities shaped by their beliefs and values but also by the opportunities available to them. The benefit they achieve from 'taking part' is felt individually (for example in terms of feeling better about yourself and just having fun) but also – crucially – by society as a whole: strengthened communities and social networks, increased independence into old age, greater innovation in our economy. The CASE programme has dipped its toes into this complexity and sought to use and generate evidence to provide new insights, new ways of looking at value, new practical tools that help shape better interventions, and develop new resources that will support further research. We do not underestimate the challenges policy-makers face and do not claim to have all the answers! But we do believe that the evidence and resources from this research provide a much stronger foundation to support better policy and practice in our sectors, and provide a genuine opportunity to move the sectors forward into a new era.

This section was written on behalf of the CASE board. It does not necessarily reflect the views of the contractors who carried out the work described in the remained of the report. Nothing here should be construed as a statement of official policy.

.

The Drivers of Engagement

Introduction

The objective of this part of the project was to answer the question:

What drives engagement in culture and sport?

In this section we describe the outcomes of new analysis looking to:

- Understand the impact of **background factors,** such as age and income, on the likelihood that people engage in culture and sport.
- Understand the impact of **policy interventions,** such as promoting engagement through advertising or reducing cost, on the likelihood that people engage in culture and sport.

Addressing these questions has important policy implications, promoting best practice for increasing engagement and delivering the benefits associated with it. This is a key aim of the CASE partner organisations.

Engagement in culture and sport can take many forms. This section is concerned with engagement as attendance at culture events / sites and participating in sport. These engagement types are in large part the focus of public investment in culture and sport. More precisely still, the following definitions are adopted:

- Heritage: attending a heritage site.
- Art: attending an arts event.
- Sport: participating in sport.
- Museums, libraries and archives: attending a museum, library or archive.

Throughout the remainder of this section, the above engagement types are generically referred to as “engagement in culture and sport”.

Current approaches to the question of what drives engagement in culture and sport can be divided into two types:

- The economic literature that focuses on the relationship between price and income and engagement.
- The sociological literature that provides evidence on the relationship between socio-demographic factors and engagement levels.

Many of these studies are, however, of limited policy relevance due to limitations of the available data and the analytical techniques employed. For more detail on the existing literature see ‘The Drivers of Engagement

in Culture and Sport: Technical Report' published alongside this report on the CASE website.

The research reported in this section is designed to overcome some of the limitations with the existing literature. Two separate pieces of analysis were undertaken. First, statistical techniques were employed to analyse existing UK-based survey and administrative data. Second, simulation models were built predict the effect of policies on engagement levels.

The output from this research is twofold:

- Greater insights into who does and does not engage and what the reasons might be, by using analysis undertaken with new combinations of data and the latest analytic techniques.
- A new tool for understanding what might work best to address particular groups' needs when looking to increase engagement in culture and sport.

The remainder of this section outlines each of these research projects in turn.

The factors that predict engagement: A statistical analysis

Introduction

Previous work on the factors that drive engagement has addressed the question by undertaking statistical analysis, generally of a single dataset and focused on a single sector. In order to improve understanding of the factors that drive engagement, this section applies a consistent method across a range of engagement type. Furthermore, the analysis is made as comprehensive as possible by reviewing and drawing on the range of available datasets.

A range of data sources were reviewed to identify those that would best provide an understanding of the drivers of engagement. *Taking Part* 2007/8 was selected as the principle source due its robustness and coverage. This was supplemented with data on cultural and sporting assets and national indicator data[7].

A statistical analysis was undertaken to assess the drivers of engagement. The approach used enables understanding of the effect on engagement of one particular factor, while controlling for the effect of others. For instance, we can understand what effect living in social

[7] The National Indicator Set was the only set of indicators on which central government performance managed local government prior to 2010. It covered services delivered by local authorities alone and in partnership with other organisations like health services and the police. It also included indicators from the 'Place Survey' which collated citizen's views on local services, such as libraries. A selection of these relevant data were used in the analysis.

housing has on engagement, controlling for other background factors commonly associated with living in social housing such as low income.

This section presents a concise summary of the research. For more detail on the methods and findings for this part of the research see 'The Drivers of Engagement: Technical Report' published alongside this report on the CASE website.

An overview of the findings

A number of trends emerge across the models of different engagement types, including:

- Increasing age predicts increasing cultural engagement but diminishing engagement in sport.
- Self-reported childhood experience of engaging in all types of culture is positively associated with engaging in culture as an adult.
- Those with higher levels of education are more likely to engage in culture.
- Those of higher social economic status are more likely to attend arts events, visit a heritage site, or visit a museum.
- Media consumption is positively associated with engagement in culture and sport.
- Men are much more likely than women to participate in sport, but less likely to attend arts events, visit a museum, or visit a library.
- Families are more likely than non-families to visit heritage and libraries.

Figure 1 shows how the probability of visiting a museum varies with age and the extent that people visited museums as a child. It demonstrates that those individuals who visited museums as children are more likely to do so as adults and that this effect is maintained throughout their lifetime. A positive relationship between childhood experience of engagement and the probability of engaging as an adult is observed for all sectors.

Figure 1: Probability of visiting a museum by age and likelihood that visited a museum in childhood

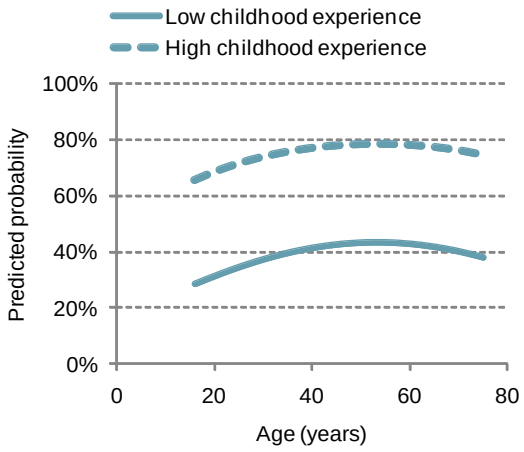
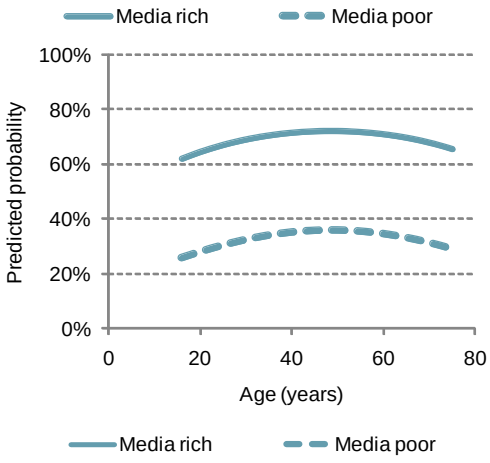


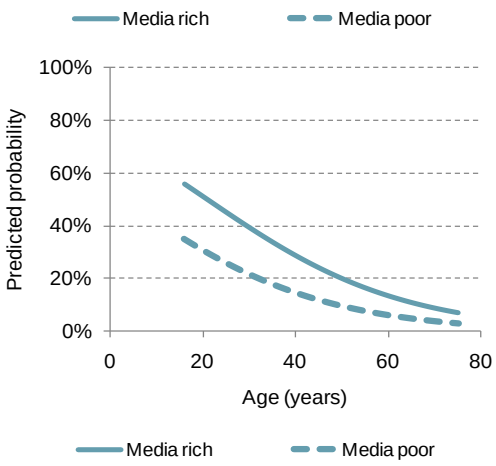
Figure 2 shows a comparison of the predicted probability of doing sport or attending an arts event by age for individuals who are media rich with those who are media poor. Those who are media rich have access to the internet, watch relevant TV programmes (e.g. arts programmes in the arts attendance analysis), watch 2 hours of television per day and have a radio. It demonstrates that those who are media rich have high probability of attending an art event and that this effect is maintained throughout people's lifetime. This trend is also observed for the probability of visiting a heritage site or a museum. Media rich individuals are also more likely to participate in sport, but the difference between media rich and media poor individuals diminishes with age which becomes an overriding factor determining participation.

Figure 2: Probability of engaging by level of media consumption

2a. Attending an art event



2b. Participating in sport



Focusing on a specific form of media consumption, there is a positive association between whether people watch culture- and sport-related TV programmes and whether they engage in culture and sport. Thus, while TV watching may generally be considered a substitute for engagement, as those with high levels of TV watching are less likely to engage, specific forms of TV watching are complements to engagement. It is, however, likely that this association is explained by an underlying interest in culture and sport, rather than TV watching having a causal effect on actual attendance at cultural events / sites or participation in sport.

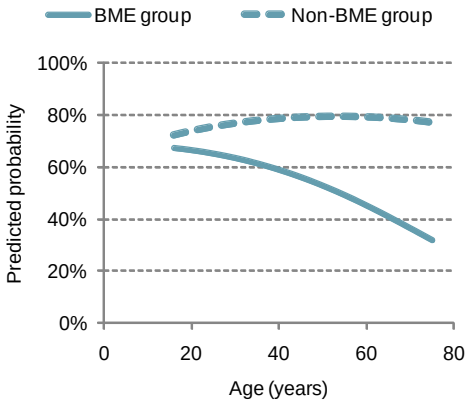
An interesting relationship was observed between ethnic background, age, and engagement. In the cases of visiting a heritage site, attending an arts event, or visiting a museum, young people from BME and non-BME groups have a similar probability of engaging in culture, while among older people those from a BME group are less likely to engage in culture. Figure 3 illustrates this relationship for the probability of visiting a heritage site. A contrasting pattern is observed for visits to libraries. The greater likelihood of younger generations of BME groups engaging in culture may have important implications for social cohesion.

The analysis also identifies a positive relationship between whether people perceive themselves to have greater influence over decision-

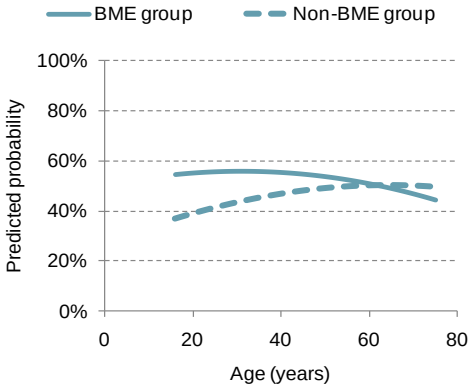
making and the probability of visiting a library or a museum, attending an art event, and doing sport. It is difficult, however, to draw firm policy conclusions from this observation. It is possible, for instance, that the line of causation runs from engagement to influence. That is, those people who engage more are perhaps also more likely to get involved in the running of their local club or cultural organisation or site.

Figure 3: Probability of engaging by age and ethnic background

3a. Visiting a heritage site



3b. Visiting a library



A number of interesting sector-specific trends also emerge from the analysis, including:

- Those living in areas with more heritage sites are also more likely to visit a heritage site.
- Those people with a limiting illness are less likely to participate in sport.
- Overall income does not predict likelihood of attending art events.
- Those who report having greater influence over library services are more likely to attend a library

What does this mean for policy making?

The results outlined above have a number of important implications for policy makers. First, the analysis helps identify those people who are less likely to engage in culture and sport, helping policy makers target their efforts. For instance:

- Older BME groups are less likely than older non-BME groups to attend heritage sites, art events or museums.
- Single males are less likely than others to attend arts events, museums or libraries.
- Females, older people, and BME groups are less likely than others to do sport.
- People with lower educational attainment are less likely than others to attend culture or do sport.

- Social housing tenants are less likely than others to attend arts events or heritage sites.
- Families are less likely than non-families to attend arts events or do sport.
- The employed are less likely than the unemployed to attend cultural events or do sport.

Second, the analysis helps identify interventions that may increase engagement in culture and sport. For instance:

- Making heritage sites more accessible to those without access to a car.
- Undertaking activity that improves satisfaction with libraries.
- Improving the accessibility of cultural and sport events/sites to those with limiting illnesses, such as improving disabled access.
- Interventions to improve awareness of cultural and sporting opportunities.

The impact of policy on engagement: A simulation model

Introduction

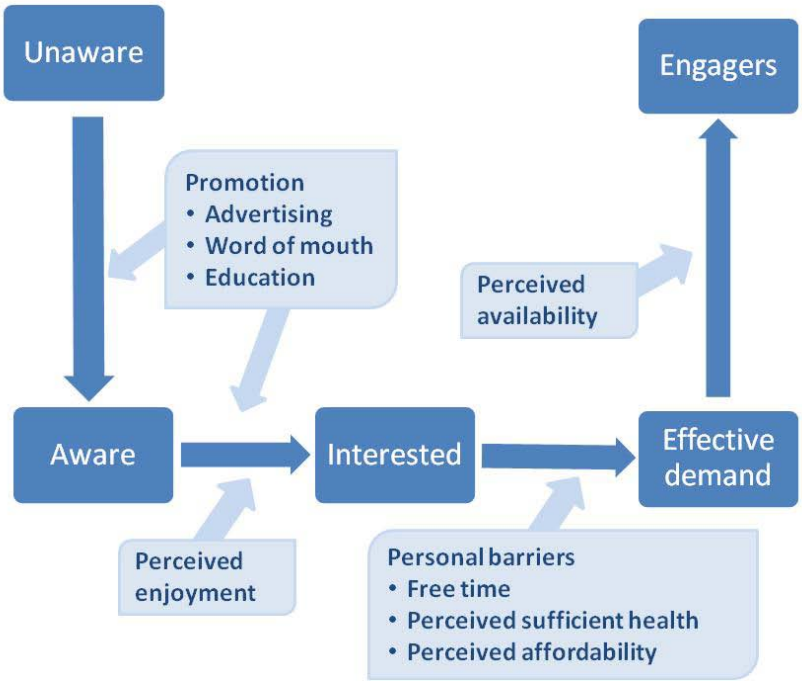
Limitations with the available data means that statistical analysis is able to generate only limited evidence on the effect of policy. In order to overcome these limitations, a computer simulation model was built. The simulation acts as both a model to generate sensible predictions about the effects of policy on engagement, and as a tool for policy makers and analysts to interact with when developing future policy.

The simulation models predicts how people move between the states involved in the decision to engage in culture and sport, from total disengagement (comprising being unaware, uninterested and unable to engage) to engagement. At a given time people sit in one of the following five independent stages: unaware of the opportunity to engage; aware of the opportunity but not interested in engaging; interested but unable to engage; able to engage by stopped from doing so by a lack of supply; or engaging. Figure 4 summarises the model structure.

The model allows the assessment of a number of policy ‘levers’ that can be used to influence engagement levels, including:

- Promoting engagement via communications campaigns.
- Education in culture and sport activities.
- Reducing the cost of engagement.
- Improving the quality of the engagement experience.
- Increasing the supply of opportunities.

Figure 4: Structure of the simulation model



The simulation model is designed to run for 1,254 different combinations of activity and groups of people. Table 2 summarises the activity types for which models were specified. These were chosen as they were the highest-volume activities based on the 2007/2008 Taking Part survey. The simulation model can be run for each activity, or for each sector as a whole – a total of 38 different activity types.

For each activity type, the model was constructed for a number of different groups. The complexity of the modelling meant that the number of different groups were limited to combinations of the following:

- Gender: male and female
- Age: 11-15 years old, 16-29 years old, 30-49 years old, 50-64 years old and over 65 years old.
- Income of the highest earner in the household: low (£0 - £14,999), average (£15,000 - £39,999), high (£40,000+).

Table 2: List of activity types modelled

Attending arts events	Heritage	MLA	Sport
1. Music	1. A city or town with historic character	1. Museums or galleries	1. Swimming
2. Theatre (adults only)	2. A historic park, garden or landscape open to the public	2. Libraries	2. Health, fitness, gym, conditioning & weightlifting
3. Opera or musical theatre (adults only)	3. A monument such as a castle, fort or ruin	3. Archives	3. Football
4. Opera or musical theatre and theatre (children only)	4. A historic building open to the public (non-religious)	4. All MLA	4. Badminton
5. Visual art	5. A historic place of worship attended as a visitor		5. Golf
6. Street art	6. A place connected with history or historic transport system		6. Athletics (includes track and field athletics, and jogging)
7. Carnival (adults only)	7. A site of archaeological interest		7. Tennis
8. Culturally specific festival (adults only)	8. A site connected with sports heritage		8. Squash
9. Carnival and culturally specific festival (children only)	9. All heritage listed above		9. Cricket
10. Dance			10. Recreational walking
11. Video or digital art			11. Cycling
12. Crafts			12. All sports listed above
13. Books or writing			
14. All arts listed above			

As each of these groups can be run in combination with each other (e.g. young males), the total number of different subgroups for which the simulation model can be run is 33. These groupings were chosen as they represented the groups at which policies are often aimed.

This section presents a concise summary of the research. For more detail on the methods and findings for this part of the research see 'The Drivers of Engagement in Culture and Sport: Technical Report' published alongside this report on the CASE website.

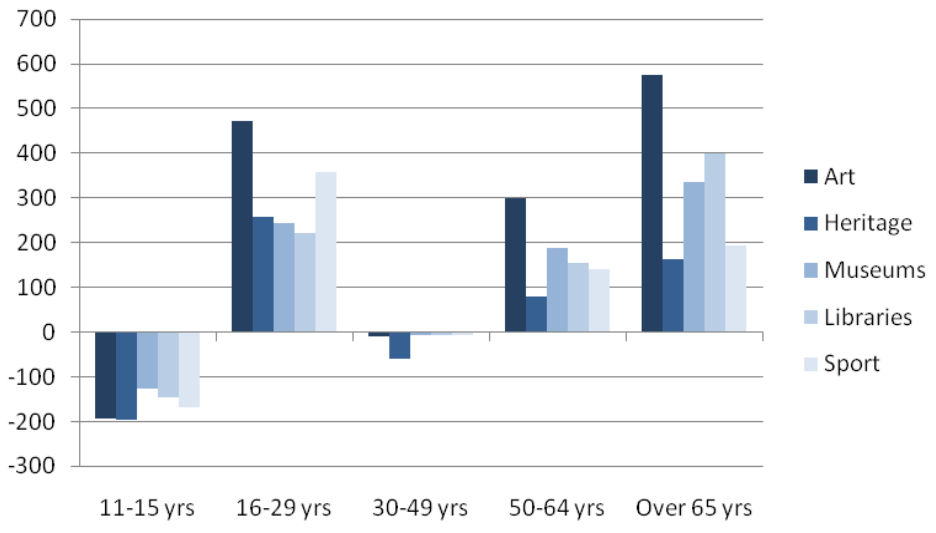
Box 4: Using the model

The simulation model should be seen as a tool to aid development of policy, allowing evidence from previous research to usefully inform the creation of effective policy options. If you know how a policy impacts on, for instance, whether people perceive engagement to be affordable, the model allows the effect of this intervention on engagement levels to be predicted. It is advised that the model is used in collaboration with analytic experts.

Using the simulation model: An illustration

This section illustrates the use of the simulation model. The model can be used to simulate the effect of a range of policies on engagement. It also allows simulation of the effect of demographic changes on engagement levels. To illustrate this, the model was used to assess the effect on engagement levels of the change in the age of the population in 2012 as predicted by the Office of National Statistics. Figure 5 summarises the results of this analysis. It is estimated that the effect of changes in the age of the population by 2012 will increase the numbers of people attending arts events, visiting museums and visiting libraries by about 3%, increase the numbers of people doing sport by 2.3%, and increase the number of people visiting heritage sites by 0.7%.

Figure 5: Change in the number of people engaging in culture and sport as a result of demographic changes by 2012 (thousands)



Conclusion

The objective of this section was to answer the question: What drives engagement in culture and sport? There is no straightforward answer this question. The statistical analysis and simulation modelling draw on the available survey and administrative data. An overview of the insights from this work is presented in the previous two sections.

The gaps in this data mean, however, that the analysis is limited in its ability to develop policy relevant insight. This work, therefore, points to a number of important research projects to improve the evidence base available to inform the development of policies to increase engagement in culture and sport, including:

- Theoretical and empirical work into the mechanisms by which decisions are made to engage in culture and sport, and the role of drivers in influencing these decisions.
- The collection of more data on the proximity, quality and cost of cultural and sporting opportunities.
- The collection of larger and longitudinal surveys to provide robust data on engagement rates in local areas and for important sub-groups of the population.
- Studies of the effect of policy interventions on key steps in the sequence of decisions required to engage, such as becoming interested in engagement, or overcoming barriers to engagement.

Given the gaps in the current survey and administrative data, a simulation model was constructed to support policy makers. The simulation model draws on a wider range of evidence to predict:

- The effect of policies on engagement levels.
- The effect of future socio-economic trends on engagement levels.

Thus, the simulation model can be used to generate context, population, and activity-specific predictions of the impacts of policies on levels of engagement in culture and sport.

Further information

For more information about the analysis presented here, see the accompanying reports '*The Drivers of Engagement in Culture and Sport: Summary report*' and full details on methods and accompanying literature review see '*The Drivers of Engagement in Culture and Sport: Technical Report*' available for download from the CASE website: www.culture.gov.uk/case. Access to the model is available via CASE or via analysts in the CASE member organisations.

The impacts of engagement

Making the best of the published research

For the CASE programme, systematic reviews were conducted across the culture and sporting sector to examine what interventions are effective in delivering positive learning outcomes for young people. This section summarises this research in three parts. The first part outlines the methods used to carry out the systematic reviews (for full details, see the technical report referenced at the end of this section). The second part details the main findings and policy implications from four systematic reviews that cover each sporting and cultural sector summarised in the accompanying report, available on the CASE website. The third part provides details of the CASE database- a searchable, web based catalogue of research studies in culture and sport (including single evaluation studies, systematic reviews and other study designs).

The project was carried out in three stages (see Figure 6):[8]

- **Stage one**: creating a database (repository) of studies. All research evidence about engagement, impact and value in culture and sport was identified. The potential value and utility of this database is discussed further below.

- **Stage two**: creating a descriptive 'map' of all research evidence that had quantitative measures of the impact of cultural and sporting engagement on learning and/or social outcomes. This information was shared with the CASE board and provided a basis for discussing the focus of the in-depth reviews in stage three.

- **Stage three**: identifying and quantifying the impacts of cultural or sporting engagement on young people's learning outcomes. Four in-depth reviews evaluated the impact of engagement within specific sectors and included a number of individual syntheses. These examined different types of engagement with the sporting/ cultural sector, as highlighted below:

    1. The **arts**: the impact of young people's **participation** in structured arts activities on their learning outcomes

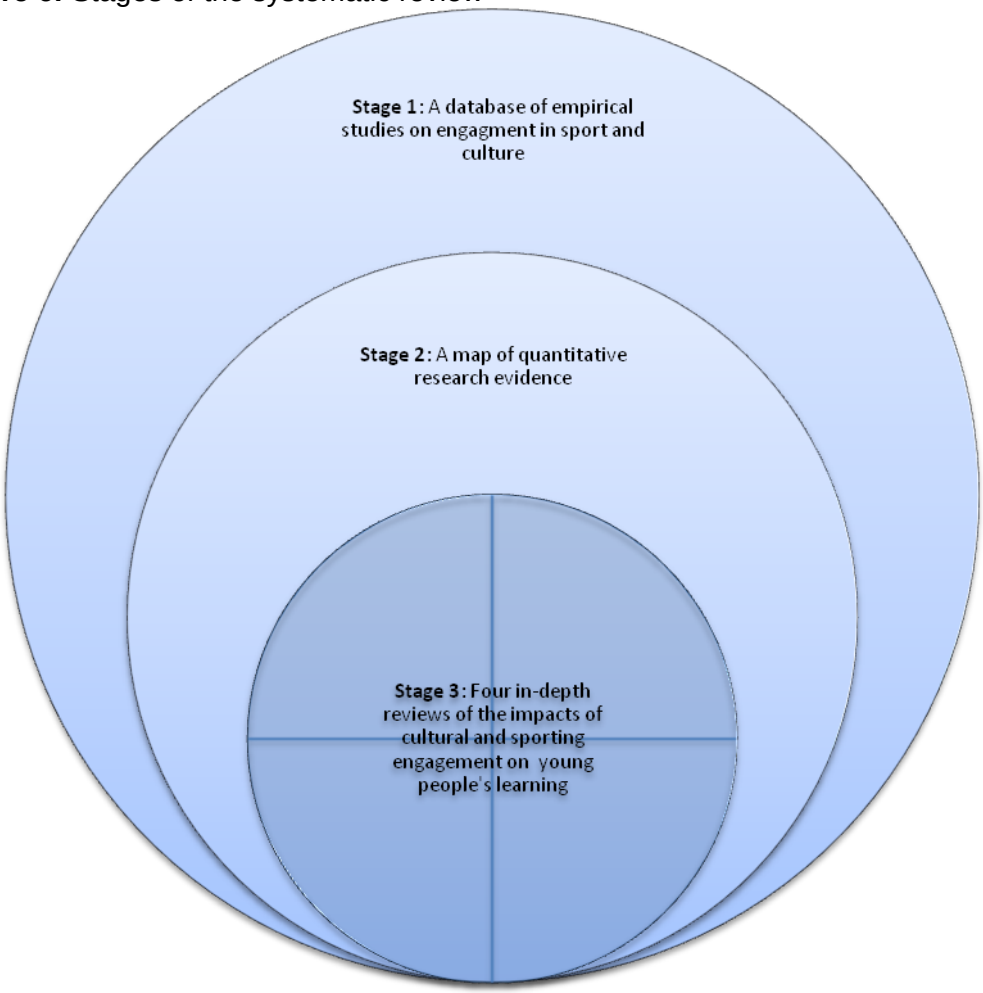
    2. **Sport**: the impact of young people's **participation** in organised sporting activities on their learning outcomes.

[8] These did not necessarily run sequentially.

3. **Libraries**: the impact of young people's **attendance** of school libraries on their learning outcomes.

4. **Museums, galleries and heritage**: the impact of young people's **attendance** at museums, galleries and heritage sites on their learning outcomes.

Figure 6: Stages of the systematic review



Review findings

The impact of participation in structured arts activities on young people's learning

When compared to non-participation in structured arts activities, participation in structured arts activities have been shown to improve:

- secondary school students' academic attainment
- pre-school and primary students' early literacy skills
- young people's cognitive abilities (based on various measures of intelligence)
- young people's transferable skills.

There is promising, yet limited, evidence that participation in arts activities improves primary school aged children's academic attainment**.**

These findings are based on 24 'high quality' studies conducted in North America, Europe or Asia. Study populations included young people within the age range of 3-16 years.

Policy implications

Any consideration of policy responses will need to take into account a wide range of other knowledge about policy and practice, other benefits that might be obtained from participation in arts, and the potential for other mechanisms to deliver these outcomes and costs.

The size of the impacts identified could be interpreted as follows:

- The participation of young people of secondary school age in structured arts activities could increase their academic attainment scores by 1% to 2%, on average, above that of non-participants (all other things being equal).

- The participation of young people in structured arts activities could increase their cognitive abilities test scores by 16% to 19%, on average, above that of non-participants (all other things being equal).

- The participation of young people in structured arts activities could increase their transferable skills test scores by 10% to 17%, on average, above that of non-participants (all other things being equal).

The impact of participation in organised sports activities on young people's learning

- Young people's participation in organised sports activities, when compared to non-participation, improves their numeracy skills.
- Young people's participation in extra-curricular activities linked to organised sport, when compared to non-participation in extra-curricular activities linked to organised sport, improves a range of learning outcomes for underachieving pupils.

These findings are based on six 'high' quality studies conducted in the United Kingdom and North America. Study populations included young people within the range of 4-16 years old.

Policy implications

The size of the impacts identified could be interpreted as follows:

- The participation of young people in organised sport could increase their numeracy scores, on average, by 8% above that of non participants (all other things being equal).
- The participation of underachieving young people in extra-curricular learning activities linked to sport could increase their numeracy skills, on average, by 29% above that of non participants (all other things

being equal). These findings apply to both primary and secondary school aged children.
- The participation of underachieving young people in extra-curricular learning activities linked to sport could increase their transferable skills, on average, by between 12% and 16% above that of non participants (all other things being equal). These findings apply to both primary and secondary school aged children.

The impact of attendance/ provision of school libraries on young people's learning

- Better school library provision was associated with increased students' performance on standardised assessment tests.
- Participants rated school libraries as helpful with the development of their knowledge, reading, independence and academic achievement.

There is promising evidence that improving the quality of school libraries improves academic attainment.

These findings are based on 12 quantitative studies conducted in North America and Israel. Study populations included young people within the age range of 4-16 years.

Policy Implications

Given the comparatively small number of low quality studies identified, the priority would seem to be to develop a more rigorous evidence base on the impact of school library attendance and/or provision on the learning outcomes of young people.

The impact of attendance of museums, galleries and heritage sites on young people's learning

- Young people's attendance of a museum, gallery and/ or heritage site with supplementary learning support has 'promising' impacts on learning, suggesting that further investigation may be warranted.
- Young people's attendance of a museum, gallery and/ or heritage site was perceived as leading to improved student learning (by students and teachers).

These findings are based on 11 quantitative studies conducted in the UK and USA. Study populations included young people within the age range of 4-16 years.

Policy implications

Given the comparatively small number of low quality studies identified the priority would seem to be to develop a more rigorous evidence base on the impact of museum, gallery and/or heritage site attendance/provision on young people's learning outcomes.

From the evidence we have on museums, galleries and heritage sites it seems clear that whilst many young people enjoyed their experiences and went away with a perception of having learnt something, it is not clear that this translates into actual impact on their learning outcomes. Whilst there might be reasonable

theoretical justifications for arguing that attendance at these type of cultural sites supports learning (e.g. through supporting motivation to learn and/or facilitating the contextualization of abstract knowledge) it is important that further rigorous research is carried to ascertain the specific characteristics of such interventions that are necessary to impact on learning outcomes.

The CASE database

The CASE database[9] is a powerful resource for policymakers and analysts in this field. It holds the titles and abstracts of 5,733[10] individual studies or reviews on the drivers, impact and value of engagement in culture and sport. The database provides a single, web-based location for policy makers, researchers or interested stakeholders to search for and identify primary and secondary research on sport and culture. The database can be searched using free text and some limited keywords.

The database can serve as a starting point for detailed analytical work. It was used, for example, as the source for identifying the studies for the systematic reviews summarised above. The database is also useful for many other evidence related enquiries. A descriptive overview of the content of the database is provided below.

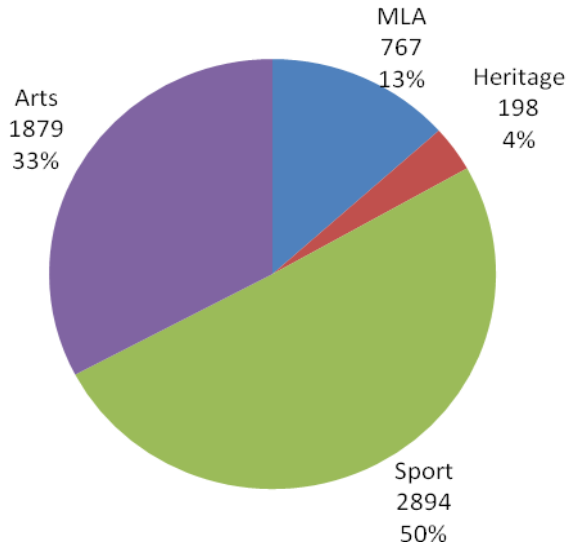
A total of 5,733 studies are catalogued in the CASE database. The database includes all research and evaluation studies that examine public engagement in culture and sport (for full details of what is, and is not, included in the database, see the inclusion criteria in the Technical report referenced at the end of this section). Culture and sport is broadly defined, and includes activities registered on the Taking Part list (this is a list that defines activities for the National Survey of Culture, Leisure and Sport). The database therefore holds research studies across, and within, each sector.

Figure 7 illustrates the composition of the database, identifying the number and proportion of studies that pertain to each sector. Studies of the sporting sector make up half of the database; the arts constitute a third and the MLA and Heritage sectors having comparatively fewer studies listed.

[9] The database can be accessed via the CASE website: www.culture.gov.uk/case

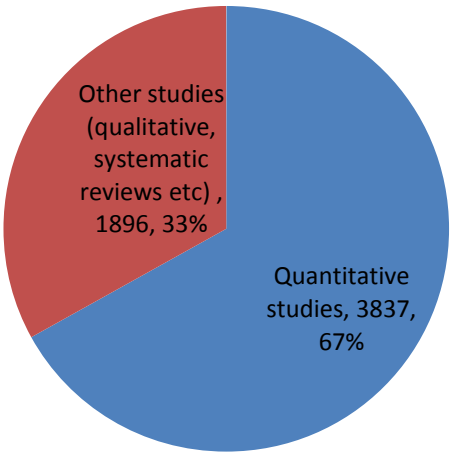
[10] As at July 2010

Figure 7: Proportion of studies in the CASE database by sector



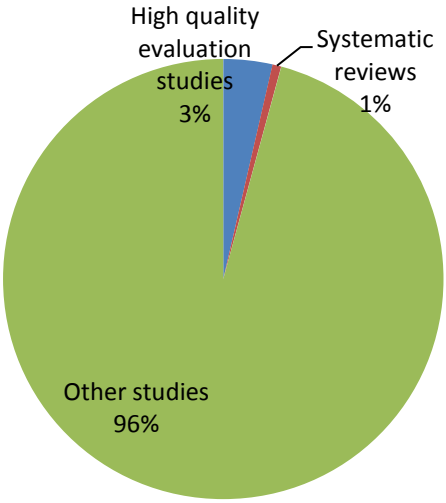
The database includes a wide range of study designs. Figure 8 illustrates that the majority of the studies in the database (67%) use quantitative methods.

Figure 8: Proportion of studies in the CASE database based on whether or not they used quantitative field methods



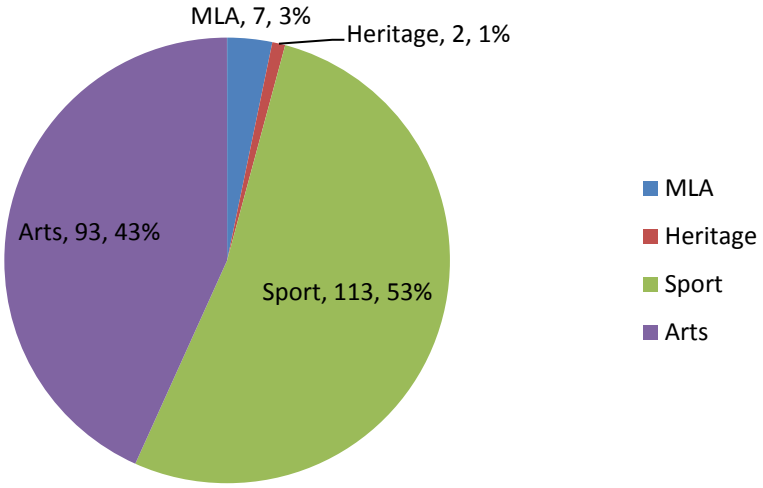
Relatively few of the studies catalogued within the database are high quality evaluations of an intervention (206).

Figure 9: High quality evaluation studies and systematic reviews



Of the 3% of studies classified as 'high quality evaluation', the majority examine an intervention in the sporting sector (53%, see Figure 10). As mentioned above, there are relatively few high quality evaluation studies within the MLA and Heritage sectors (7 and 2 respectively).

Figure 10: High quality evaluation studies, by sector



The CASE database – adding value to the sector

One of the most time consuming and difficult things about trying to use research evidence is finding it in the first place. Given the breadth of the sector evidence is spread across a wide variety of sources. Not only does this add to the difficulty of finding evidence it makes it more likely that relevant evidence will be missed. The CASE database is very valuable addition to the sectors capacity for using research evidence. The comprehensive and systematic effort that went into identifying and selecting relevant studies means that users seeking to address a policy or practice related question can be more confident that they will be able to

identify all the relevant empirical evidence on a particular question in a reasonable amount of time.

Further information

For more information about the analysis presented here, see the accompanying reports '*The Impacts of Engagement in Culture and Sport: A systematic review of the learning impacts for young people'* and full details on methods and accompanying literature review see '*A systematic review of the research on the Drivers, Impacts and Value: Technical Report'* available for download from the CASE website: www.culture.gov.uk/case.

The value of engagement

Introduction

The objective of this part of the project was to address the question:

What is the value of engagement in culture and sport?

In this section we outline the analysis we undertook to:

- Understand the **short-term individual value** of engagement – specifically the improvement in subjective well-being generated by engagement in culture and sport.
- Understand the value of **long-term health benefits** of engagement – specifically the healthcare costs saved and improved health-related quality of life generated by doing sport. It was the intention of the research to estimate the long-term value to society of engagement. Given the limitations of the available data, the research focused on health related benefits.

Engagement in culture and sport can take many forms. Thus, before considering the value of engagement in culture and sport, a more precise definition of engagement is required. This project is concerned with engagement as attendance at cultural events / sites and participating in sport. More precisely still, the following definitions are adopted:

- Heritage: attending a heritage site.
- Art: attending an arts event.
- Sport: participating in sport.
- Museums, libraries and archives: attending a museum, library or archive.

Engagement in culture and sport was defined as **attendance** at cultural events / sites and **participation** in sport. These engagement types are the primary focus of public investment in culture and sport. Throughout the remainder of this report, the above engagement types are generically referred to as “engagement in culture and sport”.

What do we currently know about the value of engagement in culture and sport? Government intervention to promote and support engagement in culture and sport requires two conditions to be met. First, the market fails to ensure an optimal level of engagement. Second, the benefit generated by government action exceeds its cost. The literature identifies a number of reasons why the market might fail to ensure an efficient level of engagement in culture and sport. For instance, the value that the market puts on engagement ignores a number of important values generated by engagement, including maintaining the option to engage and increased social cohesion.

The value of engagement in culture and sport not captured by the market can be illustrated by considering those benefits associated with engagement that don't accrue to the individual engager. Table 3 summarises the benefits of engagement in culture and sport identified through a stakeholder engagement exercise undertaken as part of this project.

Table 3: Benefits generated by engagement in culture and sport

Individual engager	Community	National
Achievement	Bequest value	Citizenship
Continuity with the past	Community cohesion	International reputation
Creativity	Community identity	National pride
Diversion	Creativity	
Enjoyment	Employment	
Escape	Existence value	
Expression	Innovation	
Health	Option to use	
Income	Productivity	
Inspiration	Reduced crime	
Knowledge of culture	Shared experience	
Self-esteem	Social capital	
Self-identity		
Skills/competency		
Solace/consolation		

While government intervention to support engagement in culture and sport is supported by the limitations of the market to provide sufficient engagement opportunities, the existing literature on the value generated by government interventions is limited. It provides little guidance as to the most efficient way for government to increase engagement. Not only is there a paucity of studies, few of these studies are undertaken in the UK. Furthermore, these studies estimate value as people's willingness to pay (WTP) to engage in culture and sport, while it is argued that this narrow notion of value fails to capture all the benefits of engagement. For more detail on the existing literature see 'The Value of Engagement in Culture and Sport: Technical Report' published alongside this report on the CASE website.

Two strategies are employed to overcome these limitations:

- An alternative to measuring WTP is adopted to estimate the value of the short-term private value of engaging in culture and sport – the use of subjective well-being (SWB) measures. This approach has the potential to overcome some of the methodological and conceptual limitations with conventional WTP-based estimates.
- Models are built to estimate the long-term health benefits associated with doing sport.

Measuring short-term private benefit of engagement

Introduction

The first of the two pieces of analysis undertaken to value engagement was the use of SWB measures to value the short-term private gain associated with engagement. The use of the SWB method to inform policy making is still in its infancy. Despite the increased interest in the method, and the developing body of evidence to support the validity of the approach, the approach is still experimental in nature The SWB approach is, thus, applied in this section to consider its usefulness to culture and sport policy making. Box 5 describes the approach in non-technical terms.

Box 5: Valuing engagement using subjective well-being (SWB) measures

A fundamental issue for culture and sport policy is to understand whether the use of government funding to promote engagement in culture and sport is **value for money**. To do that it is necessary to estimate the economic value for engagement.

The use of SWB measures offers a way to overcome the lack of evidence on the value of engagement in culture and sport. Compared to traditional economic approach, which focus on people's willingness to pay, the SWB approach also has the potential to value engagement in a way that was much more relevant to the sectors key strength – enhancing people's **quality of life**.

The approach involves two steps. First, survey data is used to estimate how a person's SWB changes when they engage in culture and sport. Second, this change in SWB is valued monetarily using the 'income compensation approach'. That is, the analysis estimates the increase in SWB generated by an increase in income. This effect is then used to estimate the change in income that would generate the same change in SWB associated with engagement in culture and sport.

The application of the SWB approach to value engagement in culture and sport reported in this paper has been anonymously peer reviewed by two internationally recognised experts in the field.

Statistical analyses were run to estimate the effect of engagement in culture and sport on SWB. The approach adopted allowed the effect of other factors measured in the same survey (such as demographics, socio-economic status and other characteristics or behaviours of an individual) on SWB to be "controlled for". This ensures that the separate effect of engagement on SWB is isolated.

The analysis drew on data in the *British Household Panel Survey* (*BHPS*) to measure the effect of engagement on SWB. The data available in the *BHPS* meant that the analysis was restricted to three types of engagement: doing sport; attending the cinema; and attending concerts.

The income compensation (IC) approach was used to transform estimates of the impact of engagement on SWB into estimates of the monetary value of

engagement. Specifically, the outputs from the analysis were employed to estimate the income required to hold SWB constant following a change in engagement in culture and sport.

This section presents a concise summary of the research. For more detail on the methods and findings for this part of the research see 'The Value of Engagement in Culture and Sport: Technical Report' published alongside this report on the CASE website.

Overview of the findings

Figure 11 shows the estimated impact on SWB of doing sport, going to the cinema, and going to live arts (such as concerts and theatre), based on actual measures of engagement in the *BHPS*. It demonstrates that engagement in culture and sport has a positive effect on SWB. The exception to this rule is doing sport once a year or less, for which no effect was identified. Further, a higher frequency of engagement is generally associated with a higher level of SWB.

The SWB measures used in the analysis are responses to the question: "How dissatisfied or satisfied are you with your life overall?" The magnitude of the impact of engagement in culture and sport on SWB summarised in Figure 11 is measured in increments on a scale of 1 (not satisfied at all) to 7 (completely satisfied). Such an effect is easier to understand when compared with other policy outcomes.

Figure 11: The SWB effect (on a scale of 1-7) of engaging in culture and sport – measures of actual engagement

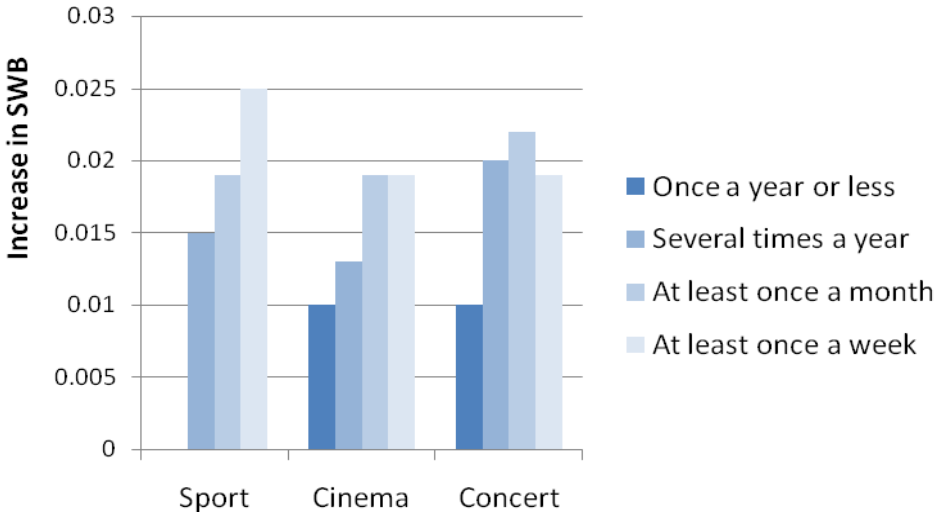
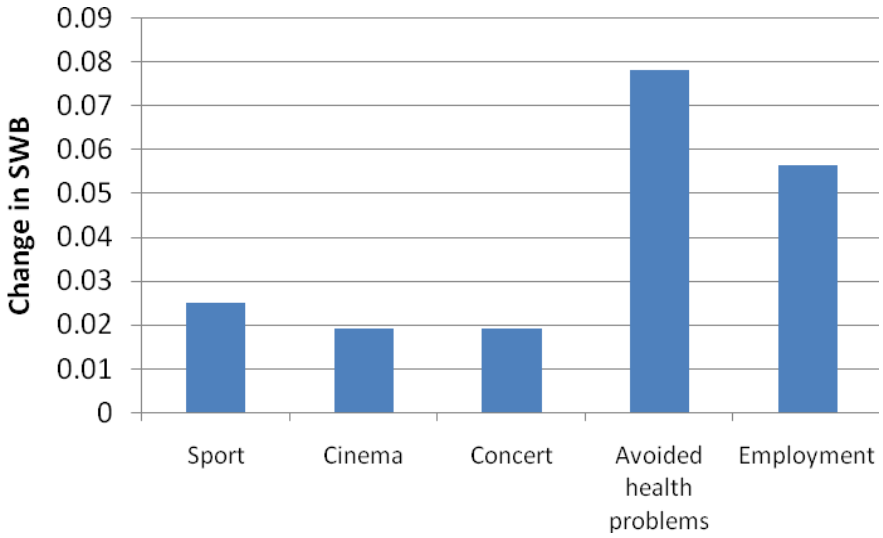


Figure 12 shows the effect of engagement in culture and sport and other policy outcomes on SWB. It demonstrates that, for instance, doing sport at least once a week is associated with an increase in SWB approximately one third the amount acheived by avoiding health problems or one half the amount acheived by being employed (compared with being unemployed).

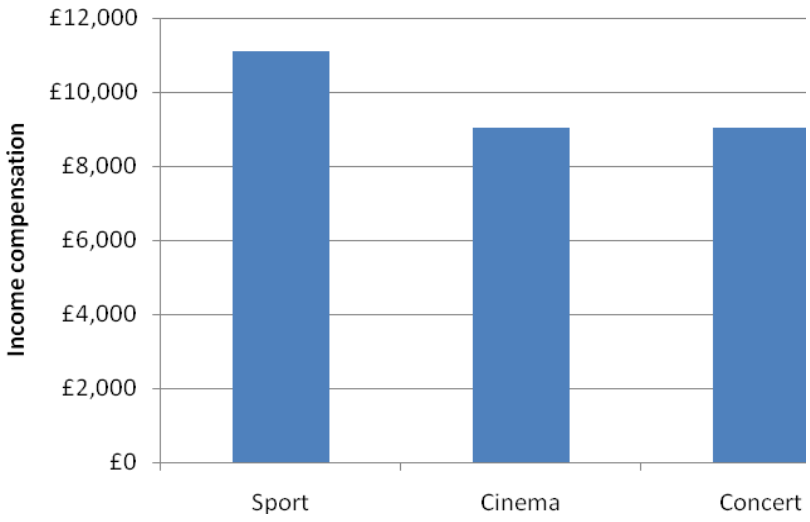
Figure 12: The SWB effect – comparison of engaging in culture and sport (at least once a week) and other policy outcomes



Deriving economic values from subjective well-being gains

The 'income compensation' approach can be used to convert estimates of the SWB effect of policy outcomes, such as engagement in culture and sport, into estimates of the monetary value of these policy outcomes. Figure 13 shows the IC estimates for doing sport, attending a cinema, and attending a concert at least once a week (based on actual measures of engagement). It demonstrates that, for instance, doing sport at least once a week generates SWB the equivalent to a £11,000 increase in annual household income.

Figure 13: Income compensation estimates for engagement in arts and sport (at least once a week)



What does this mean for policy makers?

SWB measures can be used to inform policy making in a number of ways. First, SWB can be employed as a standard measure of policy outcomes, allowing the relative benefit of different policy outcomes to be compared. For instance, the analysis undertaken in this section estimates the effect of engagement in culture and sport on SWB and how this compared with the effect of other policy outcomes, such as improved health or reduced unemployment on SWB.

A second way in which SWB measures can be used to inform policy making is by estimating the monetary value of policy outcomes, which can be calculated using the IC approach. This enables policy makers to assess the value for money of policy options in a way that includes an estimate of the well-being impact associated with engagement.

The research summarised in this section represents an important development in the generation of evidence to inform policy making in the culture and sport sectors. However, this research also represents one of the first attempts to apply the SWB method to the culture and sport sectors and is thus subject to a number of important caveats. The estimates of SWB effect and IC generated are both larger than might be reasonably expected. This suggests that further research is required before the SWB can yield policy-relevant evidence. First, further research is required to generate better measures of engagement in culture and sport, as well as the other factors that impact on SWB. Second, estimating of ICs requires a better understanding of the relationship between income and SWB.

Measuring long-term public benefit of engagement

Introduction

A second piece of research was undertaken to estimate the long-term public benefit of engagement. Due to data and evidence constraints, this work was focused further on the health gains associated with doing sport. Table 3 summarised some of the longer-term benefits associated with engagement in culture and sport include health gains, improvements in employment and productivity, the social capital and cohesion benefits associated with shared experience and community-identify, bequest, reductions in crime and anti-social behaviour, and learning outcomes. Due to limitations in the data available to model the relationship between engagement and these longer term outcomes, this section focuses solely on the monetary value of the long-term health gains associated with engagement in sport.

Given the lack of a single source containing the data necessary to estimate the value of the long-term benefit of engagement in culture and sport, a model-based approach was adopted. This approach draws on accepted best practice, an approach recommended by the National Institute for Health and Clinical Excellence's (NICE).

The model distinguished between the impacts for five different age groups, and considered the varying intensity, duration, and frequency of engagement in different types of sport. It estimated the impact of doing sport on the likelihood of experiencing four different health states: chronic heart disease (CHD), colon cancer, stroke, and type II diabetes. These effects were then valued in terms of health costs avoided and health-related quality of life gains.

This section presents a concise summary of the research. For more detail on the methods and findings for this part of the research see 'The Value of Engagement

in Culture and Sport: Technical Report' published alongside this report on the CASE website.

Overview of the findings

Figure 14 shows the economic value associated with doing different types of sport in the age range 30-49 years old, compared with not doing sport. The results for the value of sport at other ages are available in the accompanying report '*Understanding the Value of engagement in culture and sport: technical report'* published alongside this report on the CASE website. It shows the healthcare cost savings and the overall economic value (health care costs saved and improved health-related quality of life[11]) generated by doing sport. These vary between £1,750 per person (badminton) and £6,900 per person (health and fitness), and that the total economic value generated by doing sport varies between £11,400 per person (badminton) and £45,800 per person (health and fitness). The variation in value is a result of two factors: the intensity level of the activity, and the duration and frequency with which a sport is undertaken

What does this mean for policy?

The objective of this section was to estimate the value of the longer-term health benefits generated by engagement in sport. It demonstrates that a number of sports generate substantial long-term economic value in terms of avoided health costs and improved health-related quality of life. This evidence provides policy makers with an indication of the amount of resources that it can be justified spending to increase the number of people doing sport.

A number of caveats are necessary, however, before the results are applied to policy evaluation. First, the benefits included in the analysis are particularly relevant from a health policy perspective, while the costs of encouraging engagement in sport will most likely be borne by a number of other departments. Understanding the distribution of costs and benefits is important in order to facilitate informed policy discussion.

Second, the benefits captured in the analysis will be experienced in the long-term, while policy perspectives might dictate a shorter-term perspective is necessary to justify investment. Further work is required to assess the exact timing of the benefits associated with playing sport.

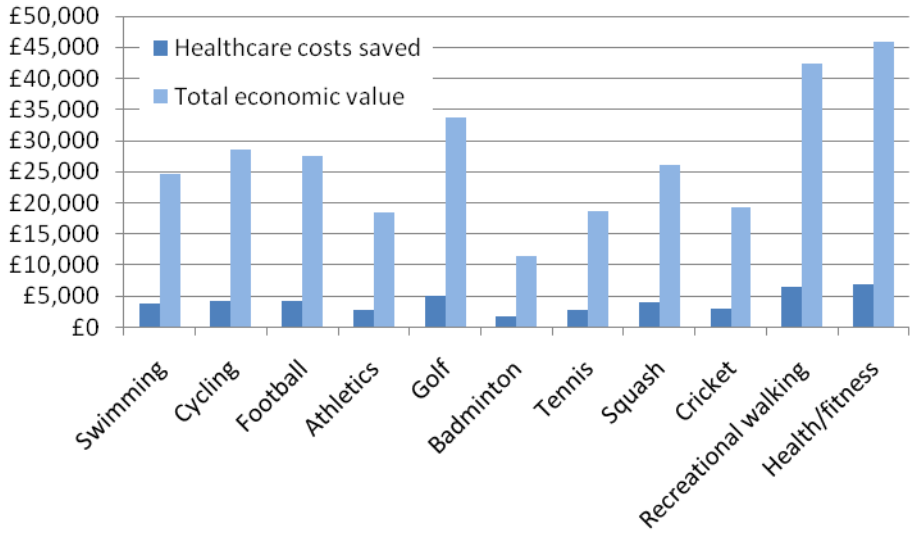
The work also points to a number of important research projects that will help inform policy. In particular, the work focused only on the health gain associated with doing sport. There are a range of other outcomes associated with engagement in culture and sport that were not included in the analysis within the timeframe of the research project. Further research should focus on analysing existing survey data to assess the effect of engagement in culture and sport on longer-term effects, such as improved learning and community cohesion.

[11] Improvements in health-related quality of life were estimated in Quality Adjusted Life Years (QALYs), the metric employed by NICE. QALYs gained as a result of doing sport were valued at £20,000 per QALY, the lower end of the range of QALY values implicit in NICE's decision making process.

Conclusion

The objective of this report is to address the question: What is the economic value of engaging in sport and culture? This question is important as there are a number of reasons why the market fails to efficiently provide the benefits of engagement. In this instance, government intervention to increase engagement is important, but policy makers need to decide how much to spend to increase the level of engagement in culture and sport. Despite the importance of this question to policy making, a review of the current economic literature identified a paucity of evidence on the economic value of engagement.

Figure 14: The economic value generated by doing sport at 30-49 years old, compared with not doing sport



This report presented two innovative modelling approaches to overcome the gaps in the literature. First, an analysis of the impact of engagement on SWB was undertaken to estimate the short-term private value of engagement. Second, a decision modelling exercise was undertaken to estimate the long-term health benefits associated with doing sport.

The results of these analyses can be employed to estimate the relative value of policy options. For instance, the relative value of investing in healthcare and investing in increasing the number of people doing sport requires that the effect on health outcomes of each of these policy options is understood.

The research reported in this report represents an important and innovate development in our understanding of the economic value of engaging in culture and sport. It should be considered as an initial attempt to estimate such economic values. The estimates presented in this section could be considered an underestimate, as they represent only part of the value generated by engagement in sport.

A number of important research developments that are required to understand fully the economic value of engagement, including:

- More measures of engagement should be included in national longitudinal surveys, such as the *British Household Panel Survey* (*BHPS*). The inclusion of such measures in the successor to the *BHPS*, *Understanding Society*, will ensure such data is available in the future.

- Further research is required on the relationship between income and SWB.
- Further research is required into the effects of engagement in culture and sport on outcomes such as community cohesion and learning.

In summary, this section has demonstrated the potential of a number of modelling approaches to valuing engagement in culture and sport. These approaches have the advantages over traditional economic valuation techniques, as they do not require the same level of resource as primary research. It is, therefore, possible to provide policy makers with information within a shorter timescale. However, further methodological development is required to fully understand how the results of methods such as the SWB approach should be used by policy makers.

Further information

For more information about the analysis presented here, see the accompanying reports '*The Value of Engagement in Culture and Sport: Summary report*' and full details on methods and accompanying literature review see '*The Value of Engagement in Culture and Sport: Technical Report*' available for download from the CASE website: www.culture.gov.uk/case.

department for
culture, media
and sport

2-4 Cockspur Street
London SW1Y 5DH
www.culture.gov.uk