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Published version

RAMCHANDANI, Girish, SHIBLI, Simon and KUNG, Shia Ping (2018). The performance of local authority sports facilities in England during a period of recession and austerity. *International Journal of Sport Policy and Politics*, 10 (1), 95-111.

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The performance of local authority sports facilities in England during a period of recession and austerity

This paper examines how public sport facilities in England, which are dependent on subsidy from local authorities, have performed during a period of recession and austerity. Using data derived from Sport England's National Benchmarking Service (NBS), we track the changes in a series of key operational performance measures to investigate how local authority sports centres have fared between 2005/06 and 2015/16. Four dimensions of performance are analysed, namely: access; finance; utilisation; and, customer satisfaction. The study includes 1,116 sports centres in the time frame under review. Our results show that the overall financial efficiency of English public sport facilities has improved significantly in the face of a reduction in local authority expenditure on sport and leisure services. There appears to be a business model in the sector that includes outsourcing management and raising activity charges, which has been accompanied by higher levels of customer satisfaction with price-related service attributes and with the overall experience of using a facility. A possible explanation for these findings might be an improved quality of provision and greater customer orientation. At the same time, there appears to be a diminished focus on social inclusion objectives. We therefore conclude that promoting access to public sport facilities for hard-to-reach or disadvantaged groups has been compromised in exchange for the pursuit of financial stability. A key challenge is how to achieve market development whereby new and targeted customers are attracted to these existing facilities.

Keywords: performance; efficiency; access; customer satisfaction; austerity; sport centres

Introduction

Since 2008, the economic downturn has forced some national governments such as Greece to adopt austerity measures as a way out for their heavily indebted economies, whereas other countries, such as the UK, have brought in austerity measures via government political choice (Parnell et al., 2017). Blyth (2013, p. 2) defines austerity as ‘a form of voluntary deflation in which the economy adjusts through the reduction of wages, prices, and public spending to restore competitiveness which is best achieved by cutting the state’s budget, debts, and deficits’. While research undertaken to measure the impact that austerity has had on statutory public services is growing according to Walker and Hayton (2017), Parnell et al. (2017) note that there is a paucity of scholarly research that considers the impact of austerity measures in a sport management context. The scant research in this specific area to date has examined the effects of reduced public spending in relation to general participation in sport by hard-to-reach groups (e.g. older populations) (Widdop et al., 2017), local authority sport services and third sector sport organisations in England (King, 2013, 2014; Walker and Hayton, 2017) and in relation to national sports federations in Greece (Giannoulakis et al., 2017). Building on these recent but isolated studies, our paper is the first attempt to investigate the relationship between austerity policy in the UK and the management and performance of public sport facilities in England.

Recession and austerity policy in the UK

In the second quarter of 2008 the UK economy was officially classed as being in recession after two consecutive quarters of negative growth in Gross Domestic Product (GDP). This economic downturn lasted for five consecutive quarters with (weak) recovery coming in the third quarter of 2009. The change in government in 2010 from Labour to the Conservative and Liberal coalition led to the implementation of cuts in public spending and increases in

taxation, notably an increase in Value Added Tax. Collectively these measures are known as austerity policies whereby governments create harsh economic conditions in order to reduce public spending. In this case, the new government's goals were to eliminate the budget deficit and to reduce National Debt as a proportion of GDP. Considerable cuts to public spending were initiated, including a raft of austerity measures in its 'Comprehensive Spending Review', which outlined £81 billion cuts to government departments (Parnell *et al.*, 2017). One of the principal cuts to public expenditure was a reduction in funding to local authorities, which traditionally have been the most significant funders of sport and recreation opportunities for communities via the provision of publicly-funded sports and leisure centres. The Department of Communities and Local Government's funding was cut by 51% between 2010 and 2015, which resulted in grants to local government falling by 27% (Parnell *et al.*, 2015). Consequently, discretionary services, such as sport, leisure and culture faced funding uncertainty (Local Government Association, 2013; Parnell *et al.*, 2015). According to the Association of Public Service Excellence (APSE, 2012) local authority annual expenditure commitment to underpin 'sport development and community recreation' objectives is in decline. Furthermore, Conn (2015) notes that spending in respect of local authority sport and leisure services in England reduced from £1.4 billion in 2009–10 to £1 billion in 2013–14, with the budget purely for sport falling by £215 million per annum from £832 million to £617 million nationally.

Whilst the original austerity programme was intended to last from 2010 to 2015/16, the election of Conservative governments in 2015 and 2017 created the conditions for an extension of the programme to the 2019/20 fiscal year. It is against the backdrop of recession (2008/09) and austerity (2010 onwards) that this paper analyses the performance of local authority sport facilities in England. Using data derived from Sport England's National Benchmarking Service (NBS), we track the changes in a series of key operational

performance measures to investigate how local authority sports centres have fared during the period of recession and austerity. Using time series data our investigation begins in 2005/06 and concludes in 2015/16.

Positioning the research

Using data from Sport England's Active People Survey (APS), Gratton and Kokolakis (2012) found that the economic recession in the UK during 2008/9 had a significant lagged effect on the level of sports participation among adults in England. Their model showed that reductions in GDP lowered sport participation after a lag of three quarters and that this decline was more pronounced for relatively expensive sports such as skiing, golf and sailing. More recently, Widdop et al. (2017) analysed APS data for the period 2008–14 in order to understand participation levels in sport across socio-demographic groups defined as hard-to-reach, in the context of austerity measures taken by central government resulting in local authority income and expenditure reductions. These hard-to-reach groups included older populations, those from lower social classes, women, individuals who reside in rural areas, those that define themselves as disabled and members of ethnic minority groups. They found that policy goals associated with raising and widening participation were not met to any significant degree between 2008/09 and 2013/14 as participation levels have changed little for lower income hard-to-reach groups, which they argue is in part due to austerity measures impacting on local authority expenditure. Walker and Hayton (2017) examined the impact of austerity upon a third sector sport organisation (TSSO) - Greenbank Sports Academy - that specialises in delivering disability sport provision in the city of Liverpool in England, using 15 semi-structured interviews with senior officials of the organisation. The authors illustrate how the TSSO, through partnership and network development, manages resources to navigate the financial challenges faced as a consequence of reductions in available funding.

A common theme underpinning the work of Widdop *et al.* (2017) and Walker and Hayton (2017) was their primary focus on grassroots sport participation by hard-to-reach populations in England. However, as well as providing sport and recreational opportunities for people with disabilities, the sports academy at the heart of the Walker and Hayton (2017) study is also a centre dedicated to the development of elite performance pathways for disability sport. Aligned with the theme of elite sport development, Giannoulakis *et al.* (2017) explored the implications of austerity measures on strategies and operations of National Sport Federations in Greece. Their analysis indicated drastic reductions in public funding between 2009 and 2014, accompanied by a parallel decline in the overall medal count of Greek national teams in international competitions.

Two studies by King (2013, 2014) based on his research for the Association of Public Service Excellence (APSE, 2012) considered how local authority sport services in England were affected in the context of reduced local government finances since 2010. The research underpinning these studies utilised data gathered from a nationwide sample of heads of local council sport services and senior local authority personnel and sector representatives. According to King (2013), the retention or curtailment of strategies designed to increase sport and physical activity among the general population was determined largely by competing organisational models of local authority sport services, while the King (2014) study revealed a growing trend towards these services being outsourced. An omission from academic literature is the assessment of how public sport facilities have performed in the face of funding uncertainty caused by the implementation of austerity measures. It is this genuine gap in the knowledge that our study addresses from the perspective of public sport facilities operating in England. The conceptual underpinning of this research in terms of what is meant by 'performance' in this particular context and the perceived importance of performance management and benchmarking for sport facility managers is now discussed. The precise

setting of the research - the NBS - is covered thereafter. The anticipated response of public sport facilities to austerity policy is then considered briefly, which in turn provides the basis for framing the key research questions that can be examined through the lens of the NBS.

Conceptual underpinning and research setting

Dimensions of performance

Performance for a sport facility can have different interpretations, depending on what objectives are specified. The most common type of 'performance' found in the private sector is financial. Related to financial performance is the concept of 'economy', which is concerned with the input side of the production process and with costs. In the public sector, it has often been the case that performance has been measured by expenditure on inputs rather than the actual outputs. 'Efficiency' on the other hand is concerned with achieving objectives and targets at minimum cost and considers the best possible relationships between inputs and outputs. 'Effectiveness' is concerned solely with the achievement of output targets. It is an important performance aspect in public sector leisure services, since they are concerned with social objectives that are largely non-financial in nature. In addition to economy, efficiency and effectiveness, sometimes another 'e' is added to the list of important performance dimensions, particularly in public centre organisations - equity - which implies fairness in the treatment of all customers (Schwarz et al., 2015). Another performance dimension which is increasingly common is customer satisfaction. In the UK public sector the Audit Commission has provided two forms of advice in relation to performance measurement in the public sector: first, it is necessary to consider the general characteristics of indicators that can help to ensure that proposed indicators will be useful and effective (Audit Commission, 2000); and second, it is important that the data collected is reliable (Audit Commission, 2007).

Efficiency measures at sports and leisure centres in England have been implemented

well before the economic downturn in 2008. One of the five key principles of Code for Fiscal Stability 1998 was 'efficiency' and the UK Government Best Value legislation required local authorities to demonstrate that their operation of public services and assets, including leisure facilities, ensures that the community receives an effective, high quality service (Robinson and Taylor 2003). Despite budgetary constraints, APSE (2012) stated that the majority of Sport and Recreation Services (SRS) have arguably demonstrated 'efficiency' and 'effectiveness' in service delivery, and 'service quality' has increased over time; with the majority of SRS delivering experiences that are at least equivalent to that of many private and voluntary providers. APSE's assertion that customer satisfaction is generally high and the majority of local authority areas are delivering 'value for money' is consistent with the findings of Kung and Taylor (2010) that centres managed by local authority are associated with higher levels of satisfaction for service attributes linked to 'quality', 'staff', and 'value for money'.

In 2011, the largest share of facility management of leisure centres and swimming pools in the UK was still in-house, but trusts are now the leading operator type (Intel 2014, 2015). However, many of these trusts are established by leisure management contractors. APSE (2012) suggested that the moves towards management by trusts are mostly associated with the opportunity to reduce costs rather than defending welfare objectives, as perceived by a sample of senior local authority officers in England with oversight of sport services. Research by Kung and Taylor (2010) using empirical data from a sample of public sport centres in England offers a different perspective and suggests that trusts are potentially the most suitable management type if there is a balanced set of priorities across multiple performance dimensions.

Performance management and benchmarking

Schwarz *et al.* (2015) identify three key reasons why performance management and benchmarking are important techniques for sport facility managers. First, they help sport facility managers to achieve better results by enabling them to understand the drivers of performance and how to influence them. Second, benchmarks provide much more authoritative reporting of performance than an organisation's performance reported in isolation. Third, when benchmarking / performance management techniques become established as part of the organisational culture, they provide the basis for a clear focus on the business credentials as well as the direction for continuous improvement.

External benchmarks for performance enable a judgement to be made on the relative performance of an organisation. This is particularly important in the public sector where central government is keen to monitor the relative performance of individual local government services, if only because it directly funds around half of the costs of these local services in the UK (Schwarz *et al.*, 2015). In the UK there are two benchmarking services relevant to sport - APSE Performance Networks and Sport England's National Benchmarking Service (NBS). The data derived from the NBS has been used widely as the basis for examining a range of performance management issues around public sector sports facility provision including their operational efficiency (Liu *et al.*, 2007), usage by disadvantaged groups (Liu *et al.*, 2009a; Taylor *et al.*, 2011; Kung and Taylor, 2014) as well as the relationship between sport facility performance and different management types (Kung and Taylor, 2010) and quality awards (Ramchandani and Taylor, 2011). NBS data has also been used to measure customer service quality (Liu *et al.*, 2008), identify customer segments (Liu *et al.*, 2009b) and profile customer satisfaction (Kung *et al.*, 2010) in the context of English public sport facilities. The NBS is therefore deemed by the authors to be a recognised tool through which a robust assessment of the performance of English sport facilities across

different dimensions can be conducted. Our research utilises NBS data, an overview of which is now presented.

The National Benchmarking Service (NBS)

The NBS provides a set of performance indicators and benchmarks covering a broad range of performance dimensions, which allows individual facilities and authorities to select indicators appropriate to their different needs, circumstances and priorities (Taylor and Godfrey, 2003). The performance indicators provided by the NBS fall into the following four groups (Liu et al., 2007):

- first access, representing the extent to which facilities are used by different target groups and new users, particularly in the context of social inclusion;
- second financial, representing subsidy, cost and income performance;
- third utilisation, representing the scale and nature of usage and non-usage of facilities;
- fourth service quality, representing both the extent to which users are satisfied with attributes of the facility and how important these attributes are to them.

The NBS compiles data for several performance indicators across these four dimensions of performance. These indicators are shown in Appendix I and II. Furthermore, in order to prevent comparison against dissimilar organizations or against organizations with dissimilar customer profiles, the results of the NBS are structured by four ‘families’ of centres representing major influences on performance: the type of centre, the socioeconomics of the centre's location, the size of the centre and the type of management. They facilitate ‘like for like’ comparisons of performance (Robinson and Taylor, 2003).

Because public sport facilities include a range of different attributes relative to other services, we compare the NBS dimensions with the two other relevant models, in order to clarify the service dimensions of our study. The Centre for Environmental and Recreation

Management (CERM) at the University of South Australia has developed a customer service quality measurement model which includes 15 core attributes and can be grouped into four dimensions: core service, staff quality, general facility and secondary service (Howat et al., 1996). The CERM model focuses on leisure industry sectors, particularly public sport and leisure centres. According to Lentell (2000), the '3Ps' (physical evidence, process and participants) model suggested by Booms and Bitner (1981) can be used to outline the major service dimensions of sport facilities. 'Physical evidence' comprised the facility itself and the equipment in it. 'Process', such as bookings, tuition of a class or serving customers in the bar/cafeteria, is directed at customers and requires their active participation. 'Participants' includes all service personnel who have contact with customers. A comparison between the NBS customer service dimensions and the above-mentioned frameworks is shown in Table 1. The NBS employs more specific terminology but its customer service dimensions are consistent with the principles of both CERM and the '3Ps'.

Outline hypothesis and research questions

In response to a cut in public funding for sport and leisure services in England, those sports facilities that tend to be reliant on subsidies from the local authority to underwrite their costs of operation might be forced to either close down or devise income generation and cost reduction strategies. Increasing revenue may take the form of raising prices, growing throughput by incentivising more repeat visits from existing customers (i.e. market penetration) and targeting new customers from the local catchment population (i.e. market development). A decrease in operating costs could be facilitated by, for example, reducing facility opening hours and fewer staff being employed, given that staff costs tend to be most significant component of the total operating costs of these facilities. The outsourcing of the management of public sport facilities to commercial contractors or trusts may be another

option for local authorities to alleviate any potential financial risk. However, financial pressures are in danger of diverting councils from promoting social inclusion. Hence, the pursuit of financial objectives by sports facilities during a period of austerity is likely to result in a reduced focus on usage by disadvantaged groups (e.g. the unemployed or those on low incomes, people with a disability etc.). Using cross-section data from the NBS we test these outline hypotheses by comparing the performance of sports centres in England across a number of indicators before and after the implementation of austerity measures. Our study attempts to answer the following research questions:

1. Is there any evidence that public sport facilities in England have managed to become less reliant on subsidies from local authorities following austerity policy?
2. To what extent have these facilities increased their revenue and/or curtailed their operating expenditure in the face of reduced public funding?
3. To what extent is any change in income generated by these facilities related to changes in the overall level of throughput, customer reach, prices/charges or a combination of these factors?
4. In what way, if at all, have these facilities managed to constrain their operating expenditure?
5. Has customer satisfaction with relevant service quality attributes improved, stayed the same or decreased over time?
6. Has the usage of public sport facilities by disadvantaged or hard-to-reach groups been adversely affected?

Methods

The NBS data archive is held by the authors, who are supported by the owners, Sport England, to share the learning from the process with both the industry and the academic

community. An overview of the main instruments used in order to derive performance indicator scores across the four dimensions of performance measured by the NBS (access, finance, utilisation and customer satisfaction) is provided in Table 2.

To generate the industry benchmarks, the NBS requires managers of sport facilities to conduct a user survey of 350-400 customers and to submit a standardised management and financial information return. In addition, output from the Facilities Planning Model¹ is used to compute the catchment area population and its demographic composition which provides the basis for measuring access via representativeness ratios. The NBS user surveys are conducted using a systematic sampling method over a standard period of nine consecutive days, normally including two weekends and at normal periods of operation. These questionnaires are either administered by trained interviewers (mostly from market research companies), or self-completed by customers, after their activities to capture information on their experience.

The findings presented in this paper are based on NBS data collected from 2006 to 2016. Two types of analyses were undertaken. First, we conducted a time series analysis of key access, financial and utilisation indicators and customer satisfaction with selected attributes. For each access, financial and utilisation indicator we calculated the median score across all centres on an annual basis. The data included in this paper are derived from 1,116 centres that subscribed to the service during the period under review.

Customer satisfaction in the NBS is scored on a five point Likert Scale - a score of one being 'very dissatisfied', a score of five being 'very satisfied' and with three being the neutral score ('neither satisfied nor dissatisfied'). We examined the mean customer satisfaction score across all centres year on year in relation to: 'activity charges'; 'value for

¹ The Facilities Planning Model is a Sport England tool that models supply and demand at local level to enable evidence-based decision making concerning the provision, closure and upgrade of major sport facilities.

money of activities'; and, 'overall visit'. The scores for the access indicators and customer service attributes are based on data collected via user surveys from more than 320,000 customers across 916 centres between 2006 and 2016. The user survey sample for 2016 was relatively low and so the data relating to this year has been merged with the 2015 data for the time series analyses.

The perceived discrepancy between the samples used for different indicators can be explained by the fact that the NBS provides some flexibility around the type of data that can be submitted depending on the dimensions of performance in which facilities are interested. Hence, some facilities could sign up for the access and customer satisfaction performance dimensions only, some could subscribe only to finance and utilisation, whereas others could choose the complete package. It is also important to recognise that while some facilities took part in the NBS in more than one year during the time frame chosen for analysis our sample is not longitudinal in nature. For example, 99 sports centres went through the NBS in 2008 compared with 115 in 2016. There are also some notable differences in the characteristics of the annual samples in terms of the type of facility (dry/wet/mixed), the socio-economics of the centres' location (high/medium/low deprivation), the size of the centre (small/medium/large/very large) and the type of management (local authority in-house/commercial contractor/trust), as evidenced by the comparative data shown in Table 3 for 2008 and 2016. The results of our investigation should therefore be interpreted in the context of these inherent limitations of unequal sample sizes and somewhat varying sample composition year on year.

The second piece of analysis that we conducted was to compare the 2008 data with 2016 data for selected performance indicators. A direct comparison of this type enabled us to examine changes in the performance of facilities pre and post implementation of austerity measures. The same caveats regarding facility sample size and composition apply to this line

of enquiry. Statistical tests were performed using IBM SPSS Statistics 20, which included correlation analysis to detect significant trends in performance over time and median tests for analysing changes in selected performance indicators' scores between different years.

Results

Overall financial efficiency of public sport facilities

The main indicators of financial efficiency in the NBS are 'cost recovery' and 'subsidy per visit'. Cost recovery, which measures the percentage of costs covered by income, is a summary measure of a facility's financial performance. A higher percentage score for cost recovery represents better overall financial efficiency. The relationship between income and costs can also be expressed in terms of subsidy, which is the deficit between annual operating expenditure and annual income. In the NBS the amount of subsidy that facilities consume is expressed in relation to their overall level of throughput in a given year. A lower ratio for subsidy per visit is indicative of better overall financial efficiency (a negative score denotes a surplus). The median scores for cost recovery and subsidy per visit for the period 2005/6 to 2015/16 are shown in Figure 1 and Figure 2 respectively.

The financial performance of the sector on both of these efficiency indicators was at its most adverse point during the time series in 2008/9, which coincided with the UK being in a period of economic recession. Following austerity policies coming into effect from 2010 onwards, which led to reduced spending on local authority sport and leisure services, there appears to have been a marked improvement in the median subsidy per visit and cost recovery scores, to the point that in both 2014/15 and 2015/16 the annual income of the sector exceeded its operating expenditure. This point is evidenced by median cost recovery scores in these two years being in excess of 100% and median subsidy per visit scores of less

than zero (i.e. a surplus per visit).

Overall between 2005/6 and 2015/16 there has been a fairly strong reduction in the median subsidy per visit scores ($r = -0.65$) and a corresponding increase in the median cost recovery rates ($r = 0.74$). These time series trends are statistically significant ($p < 0.05$). Moreover, the improvements identified for these indicators between 2007/8 (before the onset of recession and austerity) and 2015/16 (post the economic downturn but still during a period of austerity) were also found to be statistically significant ($p < 0.05$). Having established this headline point, we now consider the relative influence of income and expenditure on the sector's improved overall financial efficiency position.

Focus on growing income or reducing costs?

The data presented in Table 4 illustrates that there has been a statistically significant increase between 2007/8 and 2015/16 in the median scores for three income indicators and one utilisation indicator, as well as statistically significant decreases in two cost indicators.

'Direct income per visit' relates to the revenue associated with participation in activities whereas 'secondary income per visit' corresponds to the sales of catering, vending, and equipment hire. The increase in 'total income per visit' was driven by an increase in direct income, while there has been a marginal and statistically insignificant decrease in secondary income. While at face value facility usage measured in terms of 'annual visits per square metre' grew by some 15%, this finding was also statistically insignificant. Hence the improvement in the 'subsidy per visit' indicator over time is not necessarily linked to there being more visits to public sport facilities. There does, however, appear to be a genuine increase in 'total income per square metre'. The evidence therefore indicates that the growth achieved in overall revenue was facilitated largely as a result of increasing activity prices i.e. higher 'direct income per visit'. It would also appear that public sport facilities have been

more effective in widening their 'reach' in their local catchment, as evidenced by the statistically significant increase in the 'weekly number of people visiting' indicator, which takes into account the size of a facility's catchment area population.

In terms of operating expenditure, there has been a significant reduction in staff costs relative to total income. The relative improvement on this indicator can at least in part be attributed to the growth in overall revenue evidenced above. However, it may also be an indication of reduced staffing costs, although this particular assertion is not supported by the data, given that the 'total operating cost per visit' indicator has remained relatively unchanged. It is more likely that public sport facilities are employing a much more sales-oriented approach such that each £1 of staff cost is generating more income than it did previously. One particular component of cost has increased significantly - 'energy costs per square metre'. This increase reflects higher energy prices resulting from abnormal price increases in the cost of utilities during the period. This basic problem of rising energy costs was compounded in some instances by structural disadvantage in the case of facilities that were old and less energy efficient.

Given that the increasing cost recovery rates and decreasing subsidy levels appear to have been delivered through facilities raising their prices, rather than a genuine increase in their usage or through tighter cost control, it is worthwhile to consider whether this has impacted upon customers' satisfaction with relevant service quality attributes.

Changes in customer satisfaction levels

Table 5 shows the annual mean customer satisfaction scores (out of five) for 'activity charges', 'value for money of activities' and 'overall visit'. There are three key points that

emerge from this data. First, for each year in the time series there is a very high level of satisfaction with these attributes, as evidenced by mean scores in excess of four. Second, there is a general trend of increasing customer satisfaction over time with 'activity charges' ($r = 0.85$), 'value for money of activities' ($r = 0.82$), and their 'overall visit' ($r = 0.78$) and this time trend is statistically significant ($p < 0.05$). Third, the highest mean customer satisfaction score in the time series for all of these attributes was recorded in 2015/16.

Collectively our findings demonstrate that the apparent increases in prices charged for activities by public sport facilities are matched by increases in customer satisfaction. A possible explanation for these findings might be an improved quality of provision and greater customer orientation. We now consider whether raising the prices of activities may have had any detrimental impact in terms of promoting access to facilities and participation by certain disadvantaged or hard-to-reach groups.

Social inclusion

The NBS incorporates access performance indicators for a variety of user groups, some of which are more relevant than others from a social inclusion standpoint. Table 6 compares the median access performance scores for eight specific user groups between 2006 and 2016. For the first six of these user groups the performance indicator scores are expressed relative to their incidence in facilities' local catchment population. For these access indicators a score of one means that visits by these user groups are representative of the local population, a score below one is under-representative and above one is over-representative. For the last two access indicators shown in Table 6 - 'people who are unemployed' and 'disadvantaged people with a discount card' - the scores relate to the percentage of total visits to public sport

facilities that are accounted for by these groups from the user surveys and not in relation to the catchment population.

On the one hand, there has been a strong and statistically significant decline in the 'ratio of visits by young people aged 11-19 years' in the time frame examined ($r = -0.93$, $p < 0.01$) and, to a somewhat lesser extent, in the 'ratio of visits by disabled people under 60 years' ($r = -0.71$, $p < 0.05$). Conversely, there have been moderately strong and statistically significant improvements in the access scores for 'visits by disadvantaged card holders' ($r = 0.71$, $p < 0.05$) and for the 'ratio of visits by people aged 60 and over' ($r = 0.70$, $p < 0.05$). However, the latter of these groups is still far from being representative, as evidenced by an access ratio of well below one. The time series trends for the scores relating to the other user groups in Table 6 are not significant ($p > 0.05$).

While there has not been a significant improvement over time in the 'ratio of visits by ethnic minority groups', the scores for this indicator have remained above one (i.e. over-representative of the local population). However being a member of an ethnic minority group is a one-dimensional characteristic, which does not necessarily imply being disadvantaged. By contrast, being in the lowest economically active social group - NS-SEC 6&7 - is a multi-dimensional classification that involves among other things adverse employment conditions, low disposable income, relatively poor education, housing and health, less likely to have access to transport and so on. These are the really hard-to-reach groups, with access ratios consistently below one, and over the ten years under review the sector has done little to change this. Our overall interpretation of these findings is that certain user groups have remained excluded from public sport facilities over time, whereas some others have become even more excluded. In the wider context of a trend that shows overall financial efficiency improving in the sector, there appears to be a diminished focus on social inclusion objectives.

Discussion

Public sector sport and leisure is a complex business with many stakeholders and multiple strategic and operational objectives. In the face of a reduction in local authority expenditure on sport and leisure services in England since 2010, some public sport facilities have faced the threat of closure, consolidating their provision, or having to shorten the opening hours (APSE, 2012; Conn, 2015; Parnell et al., 2015). The facilities that have continued to operate appear to have adapted their underlying business model to incorporate commercial practices more akin to the private sector. Using NBS data, we found that the overall financial efficiency of public sport facilities has shown a marked improvement during a period of austerity. The sector is now far less reliant on local authorities subsidising their running costs. There is a recent trend of negative subsidies or surpluses being generated as a consequence of income exceeding expenditure.

Our results also show that the improvement in the overall financial efficiency of public sport facilities has not been achieved as a result of cost savings, but rather by focusing on revenue generation. This finding reinforces the point that the costs associated with running these facilities are essentially fixed and hence the only logical strategy is to increase income. This income growth in turn has been achieved by raising the prices of activities, whereas the extent to which these facilities are utilised has not changed materially. The genuine increase in the amount of direct income generated per visit is illustrative of the shift away from the traditional 'pay and play' model towards direct debit membership schemes, which has had the effect of transferring the risk of attendance to customers. The demand for access to regular participation in sport is relatively inelastic to price (Gratton and Taylor, 2000) and increasing entrance charges at sports centres may act as a relative barrier for committed participants by reducing the frequency of their participation (Coalter, 1993). With the level of usage of

public sport facilities in our study staying virtually the same over time, customers in effect pay a different price per visit depending on how frequently they use a facility.

The increase in the cost of participation has been accompanied by higher customer satisfaction with price-related service attributes and with the overall experience of using a facility. Improvements in indicators relating to financial efficiency and customer satisfaction might be explained by a change in management of public sport facilities in England. Between 2008 and 2016, there has been a notable decline in the proportion of facilities in the NBS sample managed in-house by local authorities and a corresponding increase in management being outsourced to external partners and local trusts (see Table 2). While the NBS sample may not be wholly representative of the sector, there has certainly been a movement among councils in England away from direct delivery towards facility management by charitable trusts, many of which are established by, or operate in partnership with, commercial management contractors. According to Mintel (2015), the number of trust operated leisure centres and swimming pools in the UK has almost doubled between 2007 and 2015. The trend away from the direct provision of sport services by local authorities in England was also identified by King (2014).

External partners tend to operate newer, more cost efficient centres with a better mix of new facilities, compared to the older stock in-house operations are being left to run (APSE, 2012). In order to win the right to operate facilities, trusts and commercial contractors have had to demonstrate that they offer better value for money than in-house operations. This has required a more market-oriented approach, notably customer relationship management as a result of improved IT and the requirement to use membership cards to gain access to facilities. Consequently, it is possible to build relationships with customers (e.g. through programme reviews) and to follow up with people who make limited or no use of their memberships. For in-house operators in order to avert councils outsourcing sport facility

management they have had to demonstrate the ability to improve service delivery and cost efficiency in order to be competitive.

There is a clear influence of socio-demographic factors on sport participation (Kokolakakis et al., 2012). Participation in sport is correlated with social structures such as gender, level of education, age and social class (Coalter, 2013). Furthermore, people who are hard-to-reach tend to use and depend on local authority provision as opposed to commercial providers or non-profit sport sector providers (Widdop et al., 2017). The organisational model of local authority sport services is known to influence the extent to which programmes aimed at widening participation among the general population are continued (King, 2013). In this context, our findings demonstrate that promoting access to public sport facilities by hard-to-reach or disadvantaged groups has been compromised in exchange for the pursuit of financial stability. The critical role of local authorities in raising participation in groups that are currently under-represented in sport is highlighted by the Cabinet Office (2015) and Sport England (2016). However, little appears to have been done to address a declining trend in public sport facility usage by certain groups (e.g. young people) and stable but still under-representative usage by others (e.g. NS-SEC 6&7). While these trends are in the context of participation that occurs in public sport facilities, they resonate with the findings from a recent study by Widdop et al. (2017), according to which lower sport participation among hard-to-reach groups in England as a whole is a continuing pattern. This pattern is clearly at odds with one of the legacy ambitions of the London 2012 Olympic and Paralympic Games, which was to harness the United Kingdom's passion for sport to increase grass roots participation, particularly by young people – and to encourage the whole population to be more physically active (DCMS, 2010). Indeed, Weed et al. (2015) question the extent to which this legacy promise has been met. It is also questionable whether growing participation

in sport was a feasible policy aspiration in a context of austerity and local authority budget reductions.

As mentioned previously, it is possible to characterise and group public sport facilities according to the nature of their provision, the socio-economics of their location, their size as well as their management type. The analysis presented in this paper has been conducted at an overall sector level by incorporating facilities with different characteristics. Hence our findings may mask potential nuances in the performance of different 'families' of facilities during austerity. In order to facilitate a more like-for-like comparison, further research is needed to explore whether and how a facility's characteristics may influence different dimensions of performance in the current climate of reduced public funding for sport.

Conclusion

This research that underpins this paper is the first attempt to gauge how public sport facilities in England, which are dependent on subsidy from local authorities, have performed during a period of recession and austerity. Given the declining support for subsidising discretionary services, there appears to be a business model in the sector that includes raising charges, which can have an adverse impact on participation among disadvantaged groups. With austerity meaning local authorities continue to scrutinise their budgets, it is vital that operators of public sport facilities defend their subsidies, which requires convincing evidence of access, utilisation and customer satisfaction. Thus, despite the recent NBS data showing improvements in key financial efficiency indicators, challenges remain in terms of reducing subsidies and promoting social inclusion by disadvantaged users in local communities. For groups that are hard-to-reach, price on its own can be considered a crude instrument by which to stimulate participation. The sector has worked out a way to skim the top of the market with market penetration strategies (existing customers making more intensive use of existing

facilities). The key challenge remaining is how to achieve market development whereby new (and targeted) customers are attracted to these existing facilities; 'sport for whom' (Audit Commission, 1989) indeed.

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Tables and Figures

Table 1: Service quality dimensions measured in the NBS in context

NBS	CERM Model	3Ps Model
Accessibility	Core service	Process
Quality of facilities/services	Core service; Secondary service	Physical evidence
Cleanliness	General facility	Physical evidence
Staff	Staff quality	Participants
Value for money	Core service; Secondary service	Physical evidence

Table 2: NBS performance dimensions and data sources

Performance Dimensions	Data Sources		
	Facility Users' Survey	Catchment Population Data	Management / Financial Return
Access	✓	✓	
Finance		✓	✓
Utilisation	✓	✓	✓
Customer Satisfaction	✓		

Table 3: Number and composition of sport facilities using NBS in 2008 and 2016

NBS Families	2008		2016	
	Sample Size	Sample %	Sample Size	Sample %
Facility Type				
Dry	19	19%	16	14%
Mixed	44	44%	55	48%
Wet	36	36%	44	38%
Location (NS-SEC 6&7)				
<15%	19	19%	14	12%
15% to <20%	57	58%	34	30%
20%+	23	23%	67	58%
Size				
Small	14	14%	9	8%
Medium	41	41%	34	30%
Large	23	23%	48	42%
Very large	21	21%	24	21%
Management				
External partner & local trust	78	79%	103	90%
Local authority	21	21%	12	10%

Table 4. Median scores for efficiency indicators 2015/6 v 2007/8

	Financial Year End		Change	Median test Sig.
	2008	2016		
<i>Income indicators</i>				
Total income per sq.m (£)	303.13	387.18	84.05	0.013
Total income per visit (£)	3.23	3.76	0.53	0.002
Direct income per visit (£)	2.82	3.40	0.58	0.002
Secondary income per visit (£)	0.22	0.16	(0.06)	0.139
<i>Cost indicators</i>				
Total operating cost per visit (£)	3.94	3.71	(0.23)	0.527
Maintenance & repair costs per sq. m. (£)	18.03	18.42	0.39	0.887
Energy costs per sq. m. (£)	30.07	39.76	9.69	0.001
Staff expenditure as % of total income	71.37	55.45	(15.92)	0.000
Central charges as % of total costs	6.46	6.42	(0.04)	1.000
<i>Utilisation indicators</i>				
Annual visits per sq. m.	89.69	103.28	13.59	0.265
Weekly number of people visiting	10.31	11.76	1.45	0.025

NB. Bold = significant differences ($p < 0.05$)

Table 5. Mean satisfaction with selected service quality attributes

Year	Activity charges		Value for money of		Overall visit	
	Mean	Rank	Mean	Rank	Mean	Rank
2006	4.16	8	4.24	7	4.35	7
2007	4.17	7	4.23	8	4.33	8
2008	4.13	9	4.18	9	4.30	9
2009	4.12	10	4.17	10	4.26	10
2010	4.23	5	4.28	5	4.36	6
2011	4.21	6	4.28	5	4.37	5
2012	4.26	3	4.33	2	4.42	2
2013	4.25	4	4.30	4	4.39	4
2014	4.28	2	4.32	3	4.41	3
2015/16	4.42	1	4.43	1	4.50	1

Table 6. Median scores for access indicators 2006-2016

Year	Ratio of visits by 11-19 years	Ratio of visits by 60+ years	Ratio of visits by disabled 60+ years	Ratio of visits by disabled under 60 years	Ratio of visits by NS-SEC 6&7*	Ratio of visits by ethnic minority groups	% visits with discount card for 'disadvantage' #	% visits by the unemployed
2006	0.91	0.45	0.27	0.72	0.56	1.14	11.81	1.76
2007	0.75	0.53	0.32	0.67	0.56	1.19	12.45	1.45
2008	0.74	0.53	0.35	0.78	0.45	1.26	12.85	1.16
2009	0.73	0.52	0.29	0.65	0.52	1.49	14.72	2.08
2010	0.75	0.57	0.35	0.59	0.61	1.31	19.58	2.87
2011	0.53	0.61	0.32	0.58	0.59	1.35	17.48	1.77
2012	0.55	0.64	0.27	0.52	0.70	1.28	17.87	2.50
2013	0.59	0.60	0.35	0.70	0.58	1.71	18.31	1.84
2014	0.47	0.57	0.34	0.56	0.62	1.76	17.13	1.91
2015/16	0.35	0.57	0.31	0.47	0.59	1.28	16.06	1.88

* The lowest economically active socio-economic group.

Includes over 50s, students, unemployed, disabled, single parents, income support/ family credit, widows, GP referrals, elite performers.

Figure 1. Median cost recovery rates

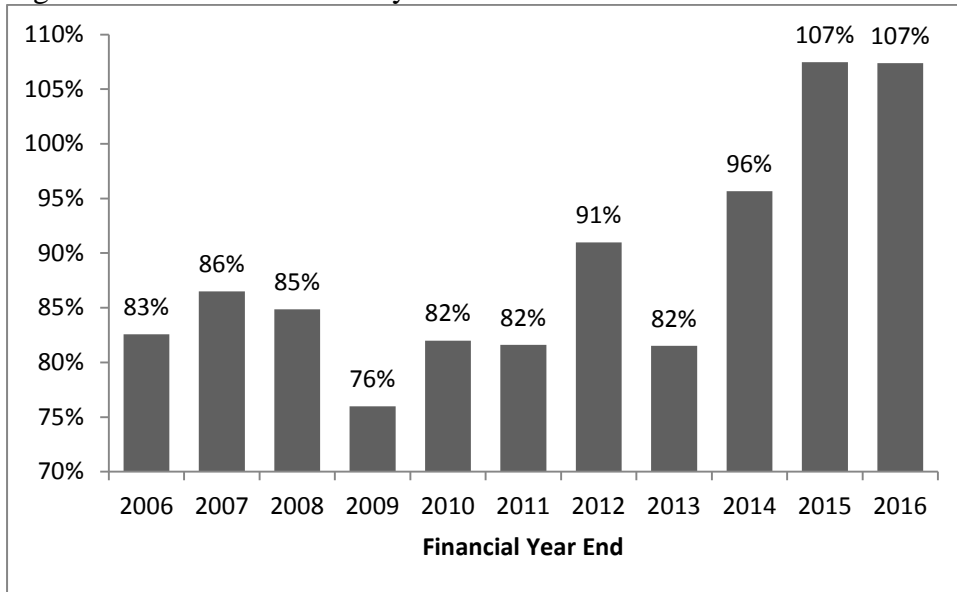
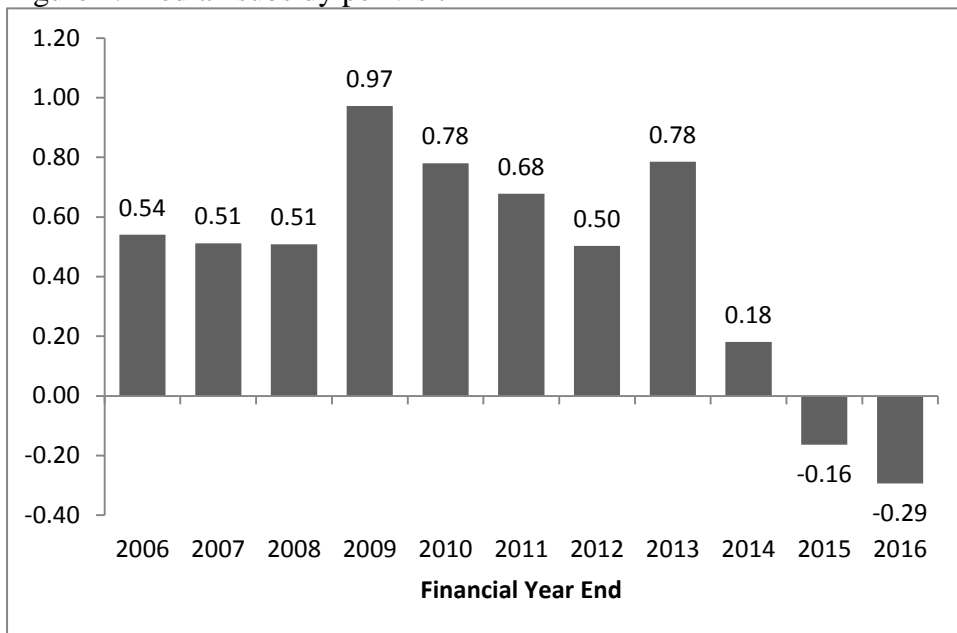


Figure 2. Median subsidy per visit



Appendix I: The NBS performance indicators for access, finance and utilisation

Access
<i>'Hard to reach' groups</i>
% visits 11-19 years ÷ % catchment population 11-19 years
% visits from NS-SEC 6 & 7 ÷ % catchment population in NS-SEC 6 & 7
% visits from black, Asian & other ethnic groups ÷ % catchment population in same groups
% visits from 60+ years ÷ % catchment population 60+ years
% visits from disabled under 60 years ÷ % of catchment population disabled under 60 years
% of visits disabled, 60+ years ÷ % of catchment population disabled, 60+ years
% of visits with discount cards for 'disadvantage'
% of visits unemployed
<i>Other groups</i>
% of visits 20-59 years ÷ % of catchment population 20-59 years
% of visits female ÷ % of catchment population female
% of visits which were first visits
% of visits with discount card
Financial
cost recovery
subsidy per visit
subsidy per square metre
subsidy per head of catchment population
total operating cost per visit
total operating cost per square metre
maintenance and repair costs per square metre
energy costs per square metre
staff costs as % of total income
central establishment charges as a % of total expenditure
total income per visit
total income per square metre
direct income per visit
secondary income per visit
Utilisation
annual visits per square metre
% of visits casual, instead of organised
weekly number of people visiting the facility as % of catchment population

Appendix II: The NBS service quality performance dimensions and indicators

<i>Accessibility</i>	<i>Quality of facilities/services</i>
Availability of activities at convenient times	Quality of flooring in sports hall
Ease of booking in advance	Quality of lighting in sports hall
Activity charges/fees	Quality of equipment
The range of activities available	Water quality in swimming pool
	Water temperature in swimming pool
<i>Cleanliness</i>	Number of people in swimming pool
Cleanliness of changing area	Quality of car parking on site
Cleanliness of activity spaces	Quality of food and drink
<i>Staff</i>	<i>Value for money</i>
Helpfulness of reception staff	Value for money of activities
Helpfulness of other staff	Value for money of food/drink
Standard of coaching/ instruction	
<i>Overall</i>	
Overall satisfaction with visit	