Does the UK sport delivery system's approach to sport provision influence individuals' sport participation and their outcomes differently? A case study of a County Sport Partnership in England

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ABSTRACT

There is a lack of knowledge on how alternative forms of sports facility provision influences end user's sports and physical activity behaviour, and the consequent impact this has on their health, well-being and social capital. To address this knowledge gap, this thesis has undertaken a multi-level analysis of the sport delivery system. It examines if strategic priorities and objectives pursued by different types of sport and fitness facilities, that are being influenced by macro level forces, along with their characteristics and ownership, influences individuals' sport participation behaviour with a potential consequent impact on the policy outcomes of health, well-being and social capital. In the UK recently, sport policy objectives have focussed on increasing the population's participation in sport and physical activity to enhance a range of outcomes including health, well-being and social capital. Over the last three decades, there has also been significant changes in sport provision with the growth of private sector facilities, and public sector facilities being outsourced to private management. However, there is no evidence of the effectiveness of these alternative arrangements in delivering the policy objectives. There is limited knowledge on how different agents and actors in the sport delivery system function collectively to achieve these objectives or not, and a multi-level analysis of the sport delivery system i.e., from policy, through facilities, to end users does not exist.

This gap in knowledge is addressed in this thesis through the adoption of a mixed methods case study of Leicestershire and Rutland Sport-County Sport Partnership (LRS-CSP) region in the midlands of England. The sport participation of individuals who use differently owned and managed sport and fitness facilities in the LRS-CSP region is examined, and the impact this has on their health, well-being and social capital, from macro level (policy), meso level (facilities), and micro level (end users) perspectives. Data collected at these levels involves, semi-structured interviews with the regional managers (macro level) who are responsible for the development and provision of sport in the region, a quantitative survey involving the facility managers (meso level) who are responsible for the day-to-day activities of the facilities, and quantitative survey and focus groups of end users in the region (micro level). Surveys done at the meso and the micro level are matched to the facilities of a variety of different ownership and characteristics to explore the influence this might have on individuals' participation frequency and the impact this has on their health, well-being and social capital.

The results show that government and public sport agencies' priorities towards the sports sector which operate at the macro level of the sport delivery system influence the strategic objectives pursued by different types of sport and fitness facilities that are responsible

for sport provision at the meso level of the sport delivery system. Public sport agencies and government bodies through their policies seem to have a significant influence over public sector including LMC facilities' strategic decision making. However, this is not the case for the private sector facilities. Neither the strategic objectives of facilities nor their ownership and characteristics are shown to have a significant difference on the users' sport participation behaviour, nor on the sport policy outcomes of their health, well-being and social capital. The largest influence on sport participation seems to be when individuals engage in sport with those they meet at the facility, indicating that facilitation of the co-creation of social capital among individuals could play a bigger role in increasing participation levels. Along with this, results also show that sport participation has a direct positive influence on individuals' health which then enhances their well-being and social capital. This thesis contributes towards the long-standing debate about the relative value of different ownership types that span the public, private, and LMCs and their relationship with 'performance'. The findings of the thesis suggest that, providing general availability of space for sport and fitness activities and by facilitating a network of opportunities with others and across activities is important in achieving the policy outcomes of improved participation and the consequent positive impact this has on health, well-being and social capital, and should be given priority in sport provision.

Key words:

Sport policy, sport delivery system, provision, facility ownership, strategic objectives, characteristics, features, sport participation, fitness, physical activity, sport policy outcomes, health, well-being and social capital

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CHAPTER 1: INTRODUCTION

This thesis is inspired due to the lack of knowledge on how alternative forms of sports facility provision influences end users' sport and physical activity behaviour, and the consequent impact this has on their health, well-being and social outcomes. In this thesis, sport refers to the one described by the European Sport Charter 2001, where sport is not restricted to competitive and team games and is defined as "all forms of physical activity which, through casual or organised participation, aim at expressing or improving physical fitness and mental well-being, forming social relationships or obtaining results in competition at all levels" (WHO Regional Office for Europe, 2011, p. 12). In particular, it refers to sports undertaken for recreational purposes such as swimming, running/jogging, cycling, racquet & ball sports and fitness activities such as using a fitness suite, yoga, Pilates, Zumba etc. It is worth noting that some of these activities are considered as 'physical activity' in the corresponding literature but is referred to as sport in this thesis.

Sport has been globally recognized to have an impact on an individual's health and well-being. International organisations like the World Health Organisation (WHO) and International Society for Physical Activity and Health (ISPAH), as well as several governments across the world (especially in developed nations) in their respective public policies have emphasized the need for sport not only for the prevention of several chronic non-communicable diseases, but also to improve the health and well-being of those who are affected by these diseases. Since 1990s the prevalence of overweight and obesity has increased in developed and most developing countries (Finucane et al., 2011), causing a major concern not only for social policy, but also for health. It is argued that it could represent an 'obesity pandemic' that may lead to serious medical, psychological, social and economic consequences. These includes increased hypertension, type 2 diabetes, dyslipidaemia, certain types of cancer, depression, decreased quality of life, low self-esteem and higher health care utilization and costs (Wyatt, Winters & Dubbert, 2006). Chronic non-communicable diseases not only add to the nation's public health issues but also affects a nation's economy, and a brief discussion of which is given below.

Each year in the UK, it has been estimated that physical inactivity is directly responsible for more than 35,000 deaths (Allender, Foster, Scarborough & Rayner, 2007). It was estimated in 2011 that, if the current trend continues with the rise in obesity levels in the UK, by 2030, then 11 million more obese adults would prevail (Wang, McPherson, Marsh, Gortmaker &

Brown, 2011). HM Government (2015) suggest that growing levels of obesity and diabetes, mental health problems and other conditions associated with inactivity cost the UK £7.4 billion each year (HM Government, 2015). Research has well documented that appropriate intensity and duration of sport sessions could prevent obesity and several chronic non-communicable diseases (Warburton, Nicol & Bredin, 2006; Brown, Burton & Rowan, 2007). Hence, effective policies at the national level to promote sport is imperative. Sport also has economic benefits (Wang et al., 2011). The UK government suggest that sport adds £39 billion to the nation's economy each year, and half of this contribution comes from the population's involvement in grassroots sports (HM Government, 2015).

As well as economic benefits, the impact of sport on health care costs has economic consequences because sport can modify the risk factors for several chronic non-communicable diseases. This impact on the economy is in part due to the direct health care costs to treat the diseases linked to physical inactivity. A Sport England study, conducted in 2009/10 by the British Heart Foundation Health Promotion Research Group has found that, it costs more than £900 million for National Health Services (NHS) in England (Sport England, 2015), and more than £1.6 billion per year in the UK (Allender et al., 2007), and is estimated to increase by £1.9-2 billion per year by 2030 (Wang et al., 2011) to treat people with chronic non-communicable diseases linked to physical inactivity. This represents an average cost of more than £6.2 million for each primary care trust in England (Sport England, 2015). The impact on economic costs is also due to the indirect costs associated with the loss of productivity due to absence at work because of disability and illness (Humphreys, Mcloed & Ruseski, 2014). Empirical evidence suggests that, the positive effects of sport on health, as well as improved soft skills like team work, self-discipline, stress relief and self-confidence will increase general productivity levels of employees at all levels (Lechner, 2015). The non-healthcare costs affecting the economy due to physical inactivity and loss of productivity, is suggested to be much higher than health care costs required to treat diseases/conditions linked to physical inactivity. For example, in 2008 the economic loss due to productivity in the USA (which can be linked to physical inactivity) was between $390-580 billion, which is far more substantial compared to the health care costs associated with treatment of preventable non-communicable diseases (Wang et al., 2011).

In the UK context, under current circumstances, the publication of the last sports strategy by David Cameron's conservative government (HM Government, 2015) has emphasised the need to increase sport participation. This maintains an ongoing policy

commitment of focussing on enabling participation more than directly providing opportunities. This sport strategy is willing to utilise sport for social good by aiming to achieve the outcomes such as: physical wellbeing, mental wellbeing, individual development, social and community development, and economic development. These outcomes are consequently embedded in the policy delivery agency Sport England's most recent strategic initiative 'Towards an Active Nation' (Sport England, 2016a). Such objectives are not unique to the UK and are implicitly enshrined in the European Union (EU) Sports Charter that helps guide pan-European sports policy. To achieve the current sports strategy's objectives, the government attempts to harness and direct resources through its County Sports Partnerships (CSPs) who work at a sub-regional level in England, and act as coordinators of networks of stakeholders. In each of the CSP regions; public, private and third-sector providers operate alongside each other and provide sport opportunities for the potential users in their respective region. There is a lack of empirical evidence on how this mixed nature of sport provision impacts the intended outcomes. Especially, in the wake of the UK's new sport strategy's objectives, the mixed nature of sport and fitness facility provision in England need to be studied. This makes it important to address the following research question:

'Does the UK sport delivery system's approach to sport provision influence individuals' sport participation and their outcomes differently?'

Based on the research question the thesis aims to: Examine if and how policy objectives that may influence facilities' strategic priorities, strategy, ownership and characteristics influence individuals' frequency of sport participation and its outcomes.

To meet the aim of this thesis, the achievement of the following objectives is required:

1) Examine the strategic priorities and strategy of different types of sport and fitness facilities, and if this has varied influence on users' participation and their outcomes
2) Examine the level of influence different stakeholders in the sport industry have on the strategic decision making of different types of sport and fitness facilities
3) Examine the importance placed by different types of sport and fitness facilities on their service features, and if this has any influence on the end users' participation and their outcomes

4) Examine if different facility ownership types and its characteristics has varied influence on end users' participation behaviour and their outcomes
5) Examine facility users' participation frequency and their outcomes, based on their socio-demographics, economic and behavioural factors

To address the above research question, aim and objectives, this thesis is structured as follows:

Chapter 1 will explain the sport delivery system conceptualised in this thesis, and will summarise the UK sport policies since 1970s, it will also explain how sport participation is measured and the theoretical foundations of the sport outcomes. Chapter 2 will look at the theoretical background and the empirical evidence of the research components that are examined and will highlight those which are to be examined in this thesis. This is then followed by a conceptual model which will show the links between different aspects of sport provision. Chapter 3 will discuss about the philosophical underpinnings of this thesis and will justify the selection of research design and methods. Along with this it will also explain the sampling procedures undertaken, and the research instruments developed at different levels. This is followed by a justification of the validity, reliability and the ethical concerns of the research. Final section of the chapter 3 will explain the analysis strategies employed to address the research question, aim and objectives of the thesis using data collected at different levels.

In analysing data collected at the macro, meso and micro level, chapter 4 will address the above listed objectives from 1 to 5 under 'facilities level', and objectives 2 and 3 under 'user level'. It will also discuss the results and will explain its implication towards the sport delivery system that is conceptualised in this thesis. In analysing data collected at the meso and micro level, chapter 5 will address the above listed objective 4 under 'facilities level', and objectives 1 and 4 under 'user level' and will discuss its implications towards sport provision. The results from chapter 5 is expected to corroborate and challenge the results obtained from chapter 4 and this will be discussed in chapter 6. However, the main aim of chapter 6 is to show how data collected at different levels has helped to achieve the thesis' objectives- while linking it to the findings from different levels - by which it was able to address the aim and the research question of the thesis. Chapter 6 will also explain the thesis' contribution towards knowledge and practice, and the final section will discuss the limitations of the thesis and future research recommendations.

Chapter 1: The remainder of chapter 1 will explain how the sport delivery system is conceptualised in this thesis at different levels in section 1.1 and will mention what type of organisations are considered in each of the levels in the UK context. The role and functions of various institutions involved in sport provision at different levels is explained as well in section 1.1. These aspects of sport provision raise the question of who influences its form and function. This is explained in section 1.2, in which a summary of UK sport policies since 1970s is presented with an emphasis on key sport polices that have changed the course of sport provision. Section 1.3 will explain how participation is measured in England, and the key indicators of participation are presented. Along with this the participation rates in England since 2011-12 is presented, while highlighting the most popular types of sports at grassroots level. The final section 1.4 of this chapter will explain the theoretical background of the policy outcomes and why these are considered in this thesis for analysis.

1.1 Sport system

Citizens' sport participation in a given society, which could also be referred to as mass participation (Veal, Toohey, & Frawley, 2012), can take place either through informal activity which is usually not governed by any organisations, or formal governing body related activity, which is typical for team sports and can also include individual sports such as running, cycling, racquet sports and golf (Downward, Dawson & Dejonghe, 2009). Whilst informal and formal activity can be facilitated through open spaces, many individual and team sports clubs have their own facilities, it is sport and fitness facilities that cater most for mass participation in the UK (Downward et al, 2009).

Sport policies often use sport as a tool to address societal problems (Stenling, 2014) e.g. Sporting Future's strategy to address population's health, well-being and social concerns (HM Government, 2015), and this is particularly used to influence the dynamics and strategic direction of delivery systems (Shilbury, O'Boyle, & Ferkins, 2016; Wicker, Hallmann, & Breuer, 2013). A longstanding current emphasis of policy in Organisation for Economic Co-operation and Development (OECD) countries has spurred a movement away from pure public-sector delivery towards private sector provision and collaboration between the public, private and voluntary sectors in the management of sport facilities resulting in a neoliberalisation of the delivery system (Stenling, 2014). In such environment sport organisations have to operate with the conflicting demands arising from the inter-institutionalised system of sport delivery

(Phillips & Newland, 2014), as a result delivery of sport opportunities might differ with different sectors e.g. public, private and the third sectors and this could be reflected in their institutional features and logics (Stenling, 2014) despite co-existing in the same system. Sport facilities' influence on sport participation may, therefore, be varied and not necessarily have a positive impact on users' participation or their outcomes.

As mentioned earlier, mass participation in the UK is supported by facilities whose structure and functioning may be influenced by the policies, it is important to understand the whole delivery system that helps to capture how sport provision may affect participation and the outcomes i.e., from macro to meso to micro level. It can be argued that policy priorities at the macro level may affect the sport provision at the meso level, which could have an influence on individuals' sport participation and their outcomes at the micro level of the sport delivery system. In understanding this it helps to capture a bigger picture of the sport delivery system to better inform sport management strategies. For this purpose, in this thesis, it is conceptualised that the macro level of the sport delivery system involves policy makers, and in this research context it is the government and national sport agencies such as UK Sport, Sport England and National Governing Bodies (NGBs), as well as the regional sport bodies like CSPs. Collectively these agents of the sport delivery system are responsible for the development and provision of sport in the country. At the meso level of the sport delivery system; sport and fitness facilities that offer sporting opportunities for the potential users are considered, and at the micro level of the delivery system; end users of these facilities who are the recipients of sport provision are included to address the thesis' research question, aim and objectives. Below is a brief explanation of various institutions involved at the macro and the meso level in delivering sport opportunities to the end users at the micro level of the sport delivery system in England.

Macro level: At the macro level, the Department for Digital, Culture Media and Sport (DCMS) is the main driver of the sport delivery system and devise sport policies at the national level. Their current primary aim is to drive growth and enrich lives through cultural and sporting activities and prioritise in growing the economy, connecting the UK, encouraging participation and sustaining excellence and promoting Britain (DCMS, 2017a). The main role of the DCMS in sports delivery are:

- Drive the delivery of key projects and programmes within the sport sector by managing relationships with Sport England and UK sport.

- Encouraging improved governance and assisting professional sports with their operations within a commercial environment.
- Provide administrative staff to maintain expert knowledge and contacts within the sport industry so that they can provide high quality advice to ministers.
- Supporting NGBs to tackle inequality in sports, there by promoting equal opportunities, with the help of sport England.

UK Sport is the nation's high performance sport agency, and is funded by the government and The National Lottery (UK Sport, 2018). UK Sport's mission is to work in partnership to lead Olympic and Paralympic sport in the UK to world class success. It also works to strategically invest into the world class programme and works towards developing the people and programmes that supports elite level athletes and support staff, along with bidding for and staging international sport events (UK Sport, 2018). This informs that, although they are involved in development of sport in the UK, they work to develop performance sports to world class success i.e. to win more Olympic and Paralympic medals (UK Sport, 2018). It is important to note that, these sports are outside the scope of this thesis, hence UK Sport is not considered relevant in this thesis' context.

Sport England is the one of the home nation sports council in the UK and are accountable to the DCMS, it is responsible for delivering grassroots sport in England that promotes active lifestyle. Sport England's current main agenda is to enable everyone in England feels able to take part in sport or activity, regardless of age, background or ability (Sport England, 2017a). Sport England mainly work in partnership with NGBs, local authorities and CSPs, higher educational institutions and the commercial sectors to facilitate their function (Sport England, 2017a). Sport England mainly functions to create an environment in which more people in England could participate in sports, in which it aims to:

- Provide funding to NGBs to increase participation in sports.
- Grant funding projects in educational settings, including supporting extra-curricular sport in individual schools, competition between schools through the School Games and sport in colleges and universities.
- Supporting local authorities to develop effective strategies and delivery plans for sport in their areas.
- Providing expertise and funding for representative organisations and for projects to enable and encourage people who are less likely to play sport

- Providing capital funding to NGBs, local authorities, education organisations and sports clubs to create and redevelop sports facilities and provide sporting equipment.
- Providing funding and expertise to expand and develop the community sports workforce, including administrators and coaches.
- Encouraging and advising schools on opening their sports facilities to their local communities.
- By promoting a forward planning approach to the provision of facilities and opportunities to participate in sport. Among which, its objectives are to protect existing facilities, enhance the quality, accessibility and management of existing facilities, and provide new facilities to meet demand.
- Working with commercial organisations whose main business is not sport, but to encourage them to add opportunities to participate in sport.

There are 46 NGBs in England, where each of them represents, organise and promote a specific sport. They are essentially infrastructure organisations for formal sports, who organise, regulate and encourage more people into their sport or activity (Sport England, 2014a). In 2004, the Labour government, in order to rationalise the funded initiatives associated with grassroots sports, Sport England released a strategy document 'The Framework for Sport in England' (Sport England, 2004) which led to the formation of the CSPs, which now manage networks of local agencies such as local authorities, NGBs and their clubs, school sport partnerships, sport and leisure facilities, primary care trusts and many other sporting and non-sporting organisations (Philpotts, Grix, & Quaramby, 2011). There are 44 CSPs covering England which makes up the County Sport Partnership Network (CSPN), each CSP with their network is committed to working together to increase the number of people taking part in sport and physical activity, and thus transforming lives through sport and physical activity (CSPN, 2017). A CSP's main functions based on the current governments' strategies are (CSPN, 2017):

- Getting the nation active by delivering or commissioning high impact national and local programmes designed to meet customer needs.
- Using the power of sport and physical activity for social good
- Developing a high quality, diverse workforce (clubs, coaches, volunteers and professional workforce) and supporting them to deliver inspiring activities that are accessible to all

- Co-ordinating the effective delivery of local sport and physical activity by brokering relationships and influencing stakeholders
- Understanding the needs of the local area to influence and guide decisions to maximise investment into sport and physical activity
- Raising the profile of sport and physical activity through innovative local and national promotional campaigns.

Meso level: At the meso level, sport provision in England reflects a blend of facility types across the public, private and third sectors, otherwise referred to as cross-sector collaboration (Shilbury et al, 2016). There are differences on how these facility types are managed reflecting their belonging to the public, private and third sectors. They are primarily responsible for sport provision to end users.

Sports facility provision at the meso level in England could be categorised into 3 different types: in-house public facilities, trust and private contractors, and private facilities. The Audit Commission (2006) estimates that 62% of sports and recreational facilities in England are managed by the local councils/government (in-house management), 21% are managed by the trusts and 17% by private contractors. Hodgkinson and Hughes (2012), describe the in-house public facilities' approach as hierarchically managed by a local government committee board. Local government takes full responsibility for income, expenditure, pricing and programming, and is accountable for all risks involved. Trusts are not-for-profit organisations which may or may not have charitable status. Under this approach, local government transfers the facility and services to the trust and those trusts who have charitable status gain advantage on tax and Value Added Tax (VAT) charges on fees collected and 80-100% relief on national non-domestic rates (Hodgkinson & Hughes, 2012). The local government has less control over the operations of trusts than compared with the in-house provision (Audit commission 2006). Leisure Management Contractors (LMCs) are those with whom the local government forms a partnership with a private contractor and awards a contract with certain norms and regulations, predominantly for the management of facilities, the private contractor retains all income and is generally responsible for most of the expenditure other than the external fabric of the building and major operational plant replacement. Under this approach, the local government has significant control over the LMCs but lesser than compared with the in-house provision (Audit commission 2006).

There are some subtle differences in how a trust and a LMC operates in offering leisure services e.g. trust with a charitable status would not look to make a profit in their service offerings, however would like to earn enough to keep the facility operational. Whereas, a LMC facility who do not enjoy tax benefits like a charitable trust would be willing to make a profit in offering leisure services (Audit commission 2006). However, this is not relevant in the scope of this thesis, as the thesis' aim is to examine if and how policy objectives may influence facilities' strategic priorities which in turn may influence individuals' frequency of sport participation and its outcomes. Hence in this thesis trusts and LMCs are conceptualised to be similar, as the macro level agents of the sport delivery system would have similar influence on both trust and LMCs' strategic decision making particularly in terms of achieving outcomes i.e. to increase individuals' participation and enhance their health, well-being and social capital. This is because, a trust or a LMC facility is owned by the local government but is being managed by a third party due to the belief that private/external agents would better meet user needs and deliver better outcomes than the in-house provision (Morgan, 2013). Hence in this thesis, these two types of facilities are grouped into one single category for data collection and analysis purposes.

Private-sector facilities are typically governed and controlled by a parent firm, who are in turn either listed firms financed by shareholders or private firms with venture capital backing, and the local government may not have any control over how these facilities operate. In the UK's context different types of sport and fitness facilities with different ownerships exists in the CSP regions, which is indicative of the multiagency, cross-sector collaboration approach to sport provision. This makes it important to understand if this produces different results in achieving the outcomes.

As noted in the 'macro level' section of this chapter, DCMS is the main driver of the sport delivery system in the UK and is responsible for sport in the UK government's ministry. Policies devised by the DCMS needs to be complied by all those institutions in the macro and the meso level (mainly public sector) of the sport delivery system and may have to align their priorities accordingly. Hence, an understanding of the policy background is essential, and the next section of this chapter will summarise the sport policies in the UK since 1970s that are relevant for this thesis.

1.2 UK sport policy background

Since 1970s sport policy emphasis of the governments in the UK has changed frequently, and the rationale for developing the most recent sport strategy of Sporting Future by David Cameron's conservative government reflects historical, ideological and theoretical developments and this is reflected upon below.

It is well documented that following the Second World War, sport emerged as a branch of social welfare policy (McIntosh, 1980; Coalter, 2007; Downward et al., 2009), and that in the UK and across Europe by the 1970s a 'Sport for All' policy initiative led to the Council of Europe publishing the European Sport for All Charter, and this argued that every individual shall have the right to participate in sport. Explicit within the Charter were suggestions for achieving 'Sport for All' which included a high level of government intervention in the form of support from public funds, a planned approach to facility development, administrative machinery to develop and co-ordinate policy, and finally, a willingness to use legislation. In 1991 the European Sport for All Charter was replaced by the European Sports Charter which was subsequently revised in 2001 (Green, 2006). The European Sport for All Charter in 1975 reflected the broad welfare state approach to policy that had begun in the 1960s and embraced education, health and communities. As a result, during the 1970s in the UK there was a large rise in public investment in the provision of sports facilities and, particularly, swimming pools (Gratton & Taylor, 1991). Indeed, between 1971 and 1981 the British sports council helped local authorities to construct over 500 new swimming pools and almost 450 new indoor sports centres (Houlihan & White, 2002), and in the view of the government, local authorities had become the main providers of sport and recreational facilities in towns (Bloyce & Smith, 2010).

The election of Margaret Thatcher's government in 1979, however, led to an accelerating trajectory of economics-informed policy moving away from the Keynesian thinking that underpinned state intervention in the 1960s and 1970s, to a monetarist position that involved radically reducing the role of the state in society and embracing free-markets (Hall, 1993). Consequently, as documented by Houlihan (1997) and Henry (1993) a strong ideological desire to cut public spending, and to encourage private sector discipline in all aspects of the economy occurred. This led to the privatisation of nationalised industries and the outsourcing of public sector provision of services, including local authority leisure services, through Compulsory Competitive Tendering (CCT). This began in 1989 following the provisions of the Local Government Act 1988 (Coalter, 1995), and The Audit Commission

(1989) reported that, the use of leisure services by the local authorities was not being properly accounted for, monitored and evaluated, thus providing support to the introduction of CCT in which the aim was to improve the efficiency and effectiveness of delivery. However, it is argued that it led to a focus on financial savings (Stevens & Green, 2002), and consequently saw a decline in participation in sport and particularly in school provision of sport. This prompted a substantial change in the management of sport provision, and in the 1990s the conservative government of John Major, under the strategy of 'Raising the Game' (DoNH, 1995) sought to increase investment in sport, particularly in schools, drawing upon funds from the newly established National Lottery in 1994.

John Major's government through the Department of National Heritage (DoNH) instituted some key milestones in UK's sport policy and development (Bloyce & Smith, 2010). These are:

- Sports equity as a central feature shifted the thinking from the target group approach. This also made governing bodies, local authorities and other traditional providers of sport to think responsibly and to address inequity in service provision (Bloyce & Smith, 2010).
- Through the introduction of lottery in 1994, John Major's government found new resources of revenue for elite and grass root sport, particularly for capital projects (Jefferys, 2012).
- John Major's government also started the work of putting sport back at the heart of weekly life in every school, thus reviving the school sport policy (DoNH, 1995) which had been on a steep decline during Margaret Thatcher's regime (Bloyce & Smith, 2010; Jefferys, 2012).

A list of major sport policies in the UK since the John Major's conservative government with each policy's emphasis, objectives and specific goals is presented in Appendix E. However, the subsequent discussion on sport policy in the UK will focus on those which is relevant for this thesis.

As Stevens and Green (2002) argue that, the arrival of Tony Blair's New Labour Government in 1997 can be seen to represent broad continuity of the John Major government's policy thrust of increasing investment in sport by drawing upon funds from the National Lottery. With a vision of creating sporting opportunities for all, especially to encourage people to take sport beyond the school years, Tony Blair's New Labour Government in 2000 published

'Sporting future for all' (DCMS, 2000). During the New Labour Government's regime although CCT was replaced by 'Best Value' in which local authorities did not mandatorily have to put leisure services out to competitive tender, but they were not discouraged from doing so (Hodgkinson & Hughes, 2012); moreover, consumer needs and the quality of services were to be included as an objective (Hodgkinson, Hughes, Hughes & Glennon, 2017). Although CCT was replaced by 'Best Value', continued outsourcing of service delivery remained prominent (Ashworth, Boyne & Delbridge, 2009). Collectively, this broad public policy paradigm of modernisation was driven by New Public Management (NPM) reforms that led to 'changing modes of sport governance' (Green, 2009). During this period of outsourcing of public services, local authorities were given performance benchmarks to be achieved through the set of Best Value Performance Indicators with a focus on outcomes, measurement and inspection (Ashworth et al., 2009).

This embracing of the market provision of sport is fully expressed in the New Labour strategy document 'Game Plan' (DCMS/SU 2002), in which the government's strategy focussed on delivering sport and physical activity objectives in both mass participation at grass root level and performance at the elite level. In addition to this, Game Plan also suggested that the organisations running sport in the UK were poorly coordinated, lacked efficiency, and focus in their policy objectives and duplicated several services (Green, 2008). This brought about several organisational changes which instigated a reinvigorated effort to modernize government organisations and public sector that encompassed sport policy and development (Green 2008). The new Labour Government replaced the DoNH with the DCMS, the UK Sport Council and Regional Sport Councils were established by royal charter in 1997 from a division of the former Great Britain Sports Council. The English Sports Council changed its title to Sport England as its marketing name and the UK Sport Council to UK sport in 1999 (Bloyce & Smith, 2010). Following these changes Labour Government's focus on the twin sports policy objectives of delivering elite sport success and encouraging more grassroots participation were to be facilitated by UK Sport and Regional Sports Councils respectively that had emerged from a division of the Great Britain Sports Council in 1997.

Although, as Grix and Carmichael (2012) and Houlihan (2011) note, the shift to a neoliberal policy emphasis was paradoxically accompanied with greater public funding to elite sport through the National Lottery, these changes took place in the context of a general sentiment that whilst,

> "There are benefits from sport which accrue to individuals, communities and the nation as a whole…this is not a sufficient argument for government intervention in the market for sport … In the competition for scarce resources, …. sport must face up to the challenge of justifying, in more tangible ways, why public money should be invested in it…Government does not run sport – and nor should it" (DCMS/SU, 2002, p76).

The expectation was that any public money would be prioritised towards resolving market failures and inequities. As previously discussed in chapter 1.1, from the perspective of mass participation, to rationalise the funded initiatives associated with grassroots sports in England, the strategy document 'The Framework for Sport in England' released in 2004 by Sport England subsequently led to the formation of the CSPs. However, because of the previous deregulation of the sector they now do this alongside a well-established private sector and a public sector in which many services remain outsourced to private management as explained in chapter 1.1, as reported by Mintel (2016) this is set to increase in the coming years. As Local Government Association expects further pressure on the public sector, due to austerity measures introduced by the government towards sports and leisure sector (BBC, 2015), indicating a 47% reduction in councils' spending between 2013-14 and 2019-20, and suggests outsourcing of leisure services to private agents could see an increase during this period.

Charitable organisations have also developed in helping to deliver sporting opportunities, particularly to disadvantaged communities in meeting governments equity policy (Kelly, 2013), though they increasingly seek other funding streams in the light of austerity (Bingham & Walters, 2013). The legacy of NPM and neoliberalisation in the UK sport governance remains, as evidenced by the multitude of agents in the meso level of the sport delivery system. However, there has been a distinct move away from central control, measurement and inspection toward greater empowerment of local authorities to coordinate the local sport provision. This devolution of control as framed by the Localism Act (2011) places greater accountability on local authorities to deliver mass participation and facilitate its outcomes, such as improving health, well-being and social capital of the local population, which is evident by the Sport England measuring these outcomes through Active People Survey (APS) which has now been replaced by Active Lives Survey (ALS) in 2016 (these are explained in the next section of this chapter). The role of contemporary sport policy has subsequently been to establish the importance of networked delivery and the form in which

this might take to achieve desired ends, serving to guide - rather than control - local delivery systems by governance through networks.

Based on Sporting Future, the current sport strategy seems to have risen from the neoclassical economic approach (HM Government, 2015). Since the outcomes of this strategy is to increase participation levels among the population and to improve individuals' well-being, health and social development. At the same time, the current strategy does not seek a radical overhaul of who provides sport, nor does it seek reform to the multiagency, cross-sector collaboration approach to sport provision. Indeed, it emphasises the need to achieve outcomes rather than the means by which they are achieved. This supports the view that is prevalent across the EU, where it is construed that government should make provision for its citizens to participate in sports, but government need not be the only provider (European Commission, 2009).

It should also be noted that, from the neoclassical economics perspective which predicts that given the opportunity to participate in sport, the form of the arrangement will not matter. As individuals will allocate resources to maximise their utility regardless of the legislative arrangements. This flows from the Coase Theorem (Coase, 1960) which has been widely cited in the sports economics and management literature to explain why policies can be ineffective, for example in improving competitive balance in sports leagues (Downward et al, 2009).

This prediction is important because though there is consensus that sport related institutions and facilities are fundamental to improving participation and to support improvement or positive change in individuals and communities' health and wellbeing (MacIntosh & Spence, 2012), there is little consensus regarding the nature and form of this association. Morgan (2013), moreover, suggests that the private sector may best be able to achieve this. However, there is a significant gap in our understanding of the impact of the delivery system on sport participation and the subsequent impact this has on users' outcomes.

Based on the objectives of the current sport strategy in the UK, it can be understood that sports provision could be seen as a form of social welfare policy intervention. Sport management research of delivery systems typically focuses on public or private or third sector organisations in silo, neglecting the inter-institutional and cross-sector nature of sport systems (Gerke, Babiak, Dickson, & Desbordes, 2017).

The alternative forms of sports provision that depicts the multiagency, cross-sector nature in the CSP regions in England need to be studied collectively to understand the impact

this has in achieving the government's policy objectives, and these will be examined in this thesis in order to achieve the objectives listed in chapter 1.

Institutions related to sport provision in England at the macro and the meso level of the sport delivery system has been discussed in the previous sections of this chapter. Now it is important to understand how this has influenced participation of the population who are conceptualised at the micro level of the sport delivery system. Hence, the next section will discuss how sport participation is measured in England and will show different types of major sport activities undertaken by the population.

1.3 Types of sport participation and scale

Since 1976 based on the "Sport for All" campaign, many European countries developed sport policy programs with an aim to increase mass participation in sport (Green & Collins, 2008). These policies did serve the purpose with a significant increase in mass participation and the frequency of sport participation in Europe until the 1990s (Gratton & Taylor, 2000). However, since the late 1990s increase in sport participation have been either very sluggish in countries like Spain, Finland, Belgium, Portugal and Austria or there has been a decline not only in European countries like England, Netherlands and Italy (van Bottenburg, 2005) but also in Canada (Bloom, Grant & Watt, 2005) and United States of America (USA) (SFIA, 2012).

Sport England which is responsible for the development and delivery of grass roots sports in England, measures population's sport participation as one of its performance indicators. Sport participation in England was measured through the APS from 2005-6 until 2016, which allowed detailed analysis of sports participation across many sports. Since 2005-6 Sport England has measured sport participation, and around the same time, Taking Part Survey (TPS) was commissioned by DCMS and was used to collect data on some aspects of sport participation along with heritage and culture aspects of leisure provision, since 2016 APS has been replaced by ALS.

Prior to ALS, APS was designed to capture frequency and intensity of sport participation. In addition, the questionnaire has been designed to enable analysis of the data by gender, social class, ethnicity, household structure, educational attainment and disability and other demographic variables (Sport England 2014b). In addition to APS, TPS was designed to measure (with respect to sports only), walking and cycling, frequency, details, barriers and

Table 1.1

APS results of sports participation at national, regional, county and district level

	National level (England)	Regional (East midlands)	County council (Leicestershire)	Local authority (Charnwood)
APS 6 (2011-12) - sport participation: 16 years and over	1x30 - 36.9% 3x30 - 6.9 million	1x30 - 35.9%	1x30 – 40.2%	1x30 – 44.4%
APS 7 (2012-13) - sport participation: 16 years and over	1x30 – 36.6% 3x30 - 7.3 million	1x30 – 34.8%	1x30 – 37.3%	1x30 – 40.4%
APS 8 (2013-14) - sport participation: 16 years and over	1x30 – 36.1% 3x30 - No data	1x30 - 34.8%	1x30 - 37.0%	1x30 – 40.7%
APS 9 (2014-15) - sport participation: 16 years and over	1x30 – 35.8% 3x30 – No data	1x30 – 34.5%	1x30 – 38.0%	1x30 – 40%
APS 10 (2015-16) - sport participation: 16 years and over	1x30 – 36.1% 3x30 – No data	1x30 – 34.7%	1x30 – 39.2%	1x30 – 43.9%

Notes: APS- Active People Survey (Sport England, 2014g; Sport England, 2017c).

factors affecting sports participation, also questions are asked to understand changes in participation, which is supplemented by asking why more or less participation in sports (DCMS, 2014a). With an intent to address the duplication of sport questions and to resolve the issue of coherence between sport estimates provided by APS and TPS, and as this will help to reduce costs incurred, since 2012 there were efforts to merge or modify these 2 surveys, while still meeting the necessary requirements (DCMS 2012). TPS last surveyed sport participation in 2013-14, which is now replaced by Understanding Society Survey (USS). APS measured sport participation since 2005-06 with a few indicators, which are explained below

1x30 indicator- This captures sport participation of moderate intensity over the last four weeks, in which each session should have been of at least 30 minutes duration and equivalent of 1 time a week i.e. for 4 days in the last 4 weeks (Sport England, 2016b).

1-2x30 indicator- This captures sport participation of moderate intensity over the last four weeks, in which each session should have been of at least 30 minutes duration and equivalent of 1-2 times a week i.e. for 4-8 days in the last 4 weeks (Sport England, 2016c).

3x30 indicator- This captures sport participation of moderate intensity for 3 times a week over a four week period i.e. for 12 days in a four week period, in which each session should have been of at least 30 minutes duration (Sport England, 2016c).**0x30 indicator-** In addition to this, since 2014-15 the APS survey also captured no sport participation and was indicated 0x30

National Indicator 8 (NI8)- This measured the percentage of the adult population participating in sport and active recreation, at moderate intensity, for at least 30 minutes on at least 12 days out of the last 4 weeks, equivalent to 30 minutes on 3 or more days a week. The main difference between 3x30 and sport and active recreation participation indicators was that, the 3x30 indicator does not include recreational walking and cycling and has a more sport focussed definition (Sport England, 2016b).

Among the above mentioned indicators of participation, 1x30 indicator has been used as the key indicator consistently and the other indicators were given lesser importance as they have not been measured consistently. Table 1.1 shows the adult participation rates with 1x30 indicator across national, regional, county and local level, and 3x30 indicator data is also presented where available. Sport England has outsourced measurement of participation across England to a private institution, whose sampling procedure is different with APS and ALS and this is explained below. APS provided a minimum of 500 interviews of individuals aged over 16 years in most of the local authorities in England (Sport England, 2014b). Random digit dialling was used in the selection of the sample with one respondent randomly selected from the eligible household members. The random digit dialling sample was drawn by selecting numbers from a database comprising all exchange codes allocated for residential use in the UK. A representative sample was then drawn by randomising the last four digits of each number. The sample was representative of the areas covered with numbers generated in the correct proportions within each telephone exchange. In order to provide a more exact match, postcodes were obtained at the end of the interview and checked using address matching software linked to the Computer Assisted Telephone Interview script. Postcodes were matched

in nearly 90% of cases with the remainder allocated to a Local Authority using telephone exchange codes (Sport England, 2014b). The sampling procedure, survey questionnaire and the data collection methods in ALS have been completely changed from the APS, and Sport England's rationale behind this is "as patterns of telephone and technology use continue to change – and we start to embed our 2017-21 strategy Towards an Active Nation – now is a good time to measure engagement with sport and physical activity in a new way" (Sport England, 2016, p. 1). The overall sample size is around 198,250 people each year, and the minimum annual sample size for each English local authority will be 500 and the survey sample is randomly selected.

Table 1.2

APS results

Type of sports		National (England)	Regional (LRS-CSP)	County(Leicestershire)
Exercise, dance and movement	APS 6	1.62%	1.66%	1.73%
	APS 7	1.34%	1.23%	1.14%
	APS 8	1.02%	1.06%	0.89%
	APS 9	0.93%	0.93%	0.72%
	APS 10	0.98%	1.04%	0.71%
Fitness and conditioning sports	APS 6	3.89%	3.52%	3.99%
	APS 7	4.50%	3.89%	4.29%
	APS 8	4.21%	3.72%	4.31%
	APS 9	No data	No data	No data
	APS 10	3.94%	3.46%	3.17%
Gym	APS 6	9.40%	8.95%	9.72%
	APS 7	9.56%	8.84%	8.89%
	APS 8	9.78%	8.54%	8.25%
	APS 9	No data	No data	No data
	APS 10	No data	No data	No data
Swimming	APS 6	6.81%	6.75%	6.64%
	APS 7	6.77%	6.59%	6.34%

Type of sports		National (England)	Regional (LRS-CSP)	County(Leicestershire)
	APS 8	6.16%	6.09%	6.97%
	APS 9	5.70%	5.17%	4.74%
	APS 10	5.67%	5.20%	4.62%
Keep-fit classes (Yoga & Pilates)	APS 6	1.63%	1.40%	1.71%
	APS 7	1.72%	1.50%	1.73%
	APS 8	1.96%	1.48%	1.87%
	APS 9	No data	No data	No data
	APS 10	2.80%	2.45%	2.57%
Cycling	APS 6	4.66%	4.83%	5.54%
	APS 7	4.71%	4.99%	5.09%
	APS 8	4.84%	5.48%	6.53%
	APS 9	4.63%	4.72%	5.82%
	APS 10	4.40%	5.03%	6.82%
Football	APS 6	4.94%	5.07%	5.04%
	APS 7	4.25%	4.04%	4.61%
	APS 8	4.40%	4.34%	3.64%
	APS 9	4.17%	3.72%	3.72%
	APS 10	4.21%	3.64%	4.01%
Cricket	APS 6	0.43%	0.64%	No data
	APS 7	0.34%	0.43%	No data

Type of sports		National (England)	Regional (LRS-CSP)	County(Leicestershire)
	APS 8	0.39%	0.53%	No data
	APS 9	0.41%	0.38%	No data
	APS 10	0.36%	0.37%	No data
Netball	APS 6	0.37%	0.40%	No data
	APS 7	0.28%	0.31%	No data
	APS 8	0.35%	0.36%	No data
	APS 9	0.36%	0.41%	No data
	APS 10	0.42%	0.37%	No data
Rugby union	APS 6	0.42%	0.53%	No data
	APS 7	0.37%	0.41%	No data
	APS 8	0.42%	0.52%	No data
	APS 9	0.44%	0.39%	No data
	APS 10	0.46%	No data	No data

Notes: APS- Active People Survey, APS 6- year 2011-12, APS 7- year 2012-13, APS 8- year 2013-14, APS 9- year 2014-15 and APS 10- year 2015-16 (Sport England, 2017c).

Compared to APS in which paper based and telephone interviews were used as primary methods to collect data, in ALS online surveys are used as primary methods and telephone and paper-based methods are used as backup Sport England. (2017b). ALS measures sport participation which is of moderate intensity and includes all types of sports and physical activity measured by APS but excludes gardening, it has the following three indicators of participation (Sport England, 2017b):

- Inactive - Participation less than 30 minutes a week
- Fairly active – 30-149 minutes of participation a week
- Active – At least 150 minutes of participation a week

The ALS survey is relatively new and the results available suggest 25.6% of the sample population is inactive, 13.8% are fairly active and 60.6% are active (Sport England, 2017d). It is important to note that, ALS considers the following activities as sports (participation rates in each of the categories is presented):

- Sporting activities (22.7% active)
- Fitness activities (18.8% active)
- Cycling for leisure and sport (7.7% active)
- Cycling for travel (4.1% active)
- Walking for leisure (22.5% active)
- Walking for travel (16.9% active)
- Creative or artistic dance (1.3% active)

Table 1.1 gives an indication of adult's sport participation in England, and this includes various sporting and fitness activities, dance and gardening, cycling and walking for leisure as well as for travel. The next section of this chapter will show the scale of participation in various sport and fitness activities collected through APS and TPS and will highlight those which are of importance for this thesis.

Until 2013-14 the TPS survey, which also measured sport participation, uses a random probability sample methodology with the use of Post Office's Postcode Address File as a sampling frame. It is meant to be representative at a National and Government Office Region level, and the survey claims to keep the sample size as high as possible within funding constraints, so as to maximise the accuracy of the estimates and to keep confidence intervals as small as possible (DCMS, 2017b).

Data in Table 1.2 shows the adult participation in some of the most popular team sports in the UK such as football, rugby, cricket and netball. It also shows participation data of sport and fitness activities that falls under the definition of sports in this thesis which typically take place in sports and fitness facilities. It could be seen in Table 1.2 that higher percentage of population undertake such sport and fitness activities such as; fitness and conditioning sports, gym, swimming and cycling than compared to team sports. It could also be noted that team sports participation such as cricket and football is on the decline, whereas sport and fitness activities participation such as fitness and conditioning sports, gym and keep-fit classes is increasing.

Table 1.3

TPS results

Type of sport activity	Male participation	Female participation
Walking	84.1%	84.4%
Keep fit/yoga	11.9%	15.4%
Weight training	3.3%	10.4%
Running	5.3%	1.3%
Swimming (indoor)	8.8%	5.6%
Football (outdoor)	7.6%	0.8%
Rugby union	1.0%	0.1%
Netball	0.0%	0.5%

Notes: TPS- Taking Part Survey (DCMS, 2014b).

Data in Table 1.3 from TPS also depicts similar results, where higher percentage of people undertake sport and fitness related activities than compared to team sports and is the reason why sport and fitness activities are examined in this thesis which has a better capacity to have a general policy impact. It should also be noted that in England, the administrative machinery to co-ordinate sport policy focus more on team and individual sports which show relatively lower participation rates, and much of the resources are utilised to support this type of sports. As Sport England recognise and support various governing bodies (NGBs) who put

all their efforts in their specific domains, but the sport and fitness related activities such as gym, fitness and conditioning sports are yet to be recognised which currently has higher percentage of participation rates in England than compared to some of the most popular team sports.

1.4 Sport outcomes

The neoliberal underpinning of the policy developments discussed in chapter 1.2 have a traditional concept of social welfare as being measured by expenditure, which is derived from neoclassical economic theory. Such policies are developed with the view that, if free markets are allowed where possible to organise behaviour, then individual consumers could exercise free choices to allocate their income and time to activities that maximise their utility, and thereby maximising their social welfare (Downward et al., 2009). The monetary value of market transactions then represents a 'revealed preference' measure of social welfare and is why, for example, the level and distribution of Gross Domestic Product (GDP) has historically been emphasised in policy discussion. More recently it has been suggested that social welfare should also measure the population's quality of life, and this can be measured in connection with an individuals' subjective well-being (Stiglitz, Sen, & Fitoussi, 2010). As a result, in the UK, subjective well-being is now considered to be an important concept to measure in evaluating alternative policy outcomes to establish the social impact of investments (HM Treasury, 2011), and this has also been of importance in the current policy aspirations across Europe and OECD countries (European Commission, 2009; OECD, 2013). In the context of this thesis, more importantly, well-being of individuals is included as a key policy outcome in the most recent sports strategy 'Sporting Future' by David Cameron's conservative government (HM Government, 2015).

Subjective well-being is viewed as a complex multidimensional concept (Office for National Statistics, 2015), as well-being of individuals depends on both economic and non-economic resources, and it includes economic resources such as income, consumption and wealth, and non-economic resources such as health, education, social, environment, insecurity, personal activities including work, and political voice that affects governance (European Commission, 2009; OECD, 2013). The most recent sport strategy of the DCMS; 'Sporting Future' recognises the importance of non-economic resources, such as; individuals' subjective well-being, health and social development and are used as key policy outcomes.

The Office for National Statistics has long attempted to measure health in national surveys dating back to 1976 with the General Household Survey, and 1991 with the Health

Survey for England. From an economic theoretical perspective health may be an important feature of an individual's well-being, however, well-being of an individual cannot be restricted only to the health perspective (Dolan, Peasgood & White, 2008). As non-health components that are related to personal and professional life, apart from the social and environmental factors involved, could derive overall satisfaction in an individual's life (Downward & Dawson, 2015). Hence, therefore measures of subjective well-being and social trust are also now included in major surveys in the UK. An example of this is the British Household Panel Survey, which has become absorbed within a new larger survey called Understanding Society; and, also The Taking Part Survey (2013) and the Active People Survey (2015-16), which has now transformed into the Active Lives survey since 2016, which were commissioned by the DCMS and Sport England respectively in 2005.

Sporting Future also emphasises the importance of social and community development, which can be understood as social capital. The literature categorizes social capital as comprising bonding and bridging capital (Putnam, 2002; European Commission, 2009), where bonding capital refers to fostering bonds among a group of individuals who share similar values and characteristics, and bridging capital refers to linking different groups of individuals who share different values and characteristics in a society. It has been suggested that experience of association generates trust and consequently helps to build social capital (Delhey & Newton, 2003), and trust as a form of social capital is important for an individual's well-being (European Commission, 2009; OECD, 2013). Hence, the amount of trust an individual may have on their neighbourhood could be measured to understand their social capital levels. Downward, Pawlowski and Rasciute, (2013, p. 4) suggest "all of the literature generally predicts that trust, as a form of social capital, can be enhanced by the experience of voluntary association", and social capital, then, can arise from the voluntary association enacted through sport participation; such that, a positive influence of engagement with participation is derived from social experiences (Downward et al, 2013).

In the UK, subjective well-being, health and social capital dimensions are now included in the major surveys of sports participation as well as in other surveys as noted above. Hence, in this thesis, subjective well-being, health and social capital that results from sport participation is used as outcomes that helps to evaluate the policies and priorities of those agents who are responsible for sports provision at macro and meso levels of the sport delivery system.

Chapter 1 conclusion: Section 1 of this chapter has discussed the importance and the background of the thesis that has led to the research question and aim to be addressed and objectives to be achieved. Subsequently, section 1.1 has presented a discussion on how sport delivery system is conceptualised in this thesis, and the characteristics along with the functions of various institutions operating at the macro and the meso level of the sport delivery system in England is explained. This is then followed by a discussion on the UK's sport policies since the 1970s that are relevant to this thesis leading up to the most recent sport strategy of Sporting Future is presented in section 1.2. At the end of section 1.2, while discussing the approach of the government towards sports provision and how this may or may not affect their intended outcomes, it is also highlighted why is it important to examine the thesis' research question, aim and objectives. Focussing on the micro level of the sport delivery system which includes individuals in a society who are recipients of the sport provision, section 1.3 presents how the government measures individuals' sport participation, and which type of sports is undertaken by the majority of people in England, hence justifying the type of sport and fitness related activities considered for investigation in this thesis. The chapter concludes with a discussion of the theoretical basis of the sport outcomes analysed in this thesis, and why they are relevant to measure the effectiveness of sport provision in section 1.4.

CHAPTER 2: LITERATURE REVIEW

This chapter focusses on the meso and the micro level of the sport delivery system, and section 2.1 will review different factors associated with sport facility infrastructure's influence on participation and section 2.1.1 will present the empirical evidence of the same. Section 2.2 will explain organisational strategy and strategy content, and section 2.2.1 will explore the potential strategies that sports organisations could adopt, which includes models developed by Miles and Snow (1978), Porter (1985) and Faulkner and Bowman (1995), it will also explain why they are relevant in this thesis. Section 2.2.2 will present the empirical evidence associated with strategy, ownership and performance, and will highlight what will be examined in this thesis. In also focussing on the micro level of the sport delivery system, that is participation, in this chapter, section 2.3 will present a review of economic theories associated with sport participation that includes the determinants of sport participation based on socio-demographic, economic and behavioural/lifestyle factors. In the subsequent section 2.3.1 empirical evidence of determinants of sport participation based on socio-demographic, economic and behavioural/lifestyle factors is presented. Section 2.3.2 will discuss the empirical evidence of the impact of participation on health, well-being and social capital. The Final section 2.4 of this chapter will present a conceptual model, which will outline the scope of the thesis and postulate the relationship of various components in the sport delivery system that are examined in this thesis.

2.1 Sport facility infrastructure

Gratton and Taylor (1991), suggested that public investment in new (indoor) sport facilities increased the opportunities for sport participation among the general population. A very few empirical studies have measured the influence of public expenditure on sport participation through facility infrastructure (Humphreys & Ruseski, 2007), sport activities (De Carvalho & Nunes, 2013), health (Van Tuyckom, 2011), and health and education (Lera-Lopez, Wicker & Downward, 2016). Also there has been little attention given to the supply-side or the built environment of sport provision on participation (Wicker, et al, 2013), this is despite the fact that the literature on mass participation has emphasized the importance of sport infrastructure (Wicker et al, 2013), and has been suggested that "better provision of sports facilities is generally associated with increased sport participation" (Eime et al., 2017; p. 1).

Though the availability of sport facilities is identified as important for an individual's participation in sport, there is a suggestion that that all types of sport infrastructure have a positive impact on sport participation in general (Wicker et al, 2013). However, there are not many research studies which have evaluated the interrelationship between general sport participation and sport facilities. Even among the empirical studies which have investigated certain sport facility infrastructure factors, not all mechanisms have been clearly identified theoretically. Table 2.1 lists those studies which have investigated certain factors associated with sport facility infrastructure, and if this affects people's decision to participate in sports as well as their frequency levels. The sport infrastructure factors that have been considered in empirical studies that examine the effect on sport participation, and could be classified into

a) Availability of sport facilities and its location
b) Access to sport facilities
c) Satisfaction with facilities
d) Different sport programmes on offer

Availability of sport facilities and its location

The availability of number of sport facilities in a region has been suggested to affect local population's participation levels (Poupaux & Breuer, 2009), and availability of sport facilities in a region has been suggested to have significant relationship with sport activity patterns of different age groups (Wicker, Breuer & Pawlowski, 2009). Wicker and Breuer (2012), suggests that understanding of sport infrastructure was operationalised subjectively in almost every study until 2011, in which examining sport infrastructure included general assessments of the respondents' view of presence of facilities in the neighbourhood and thus was measured subjectively in most of the studies. This type of measurement that is based on the perceptions of the respondents was argued to cause estimation bias, as active respondents would have better perception of sport infrastructure than inactive respondents. However, since 2011 there has been an effort to objectively measure the influence of sport infrastructure factors on participation, by including the number of sport facilities present in a given region. Among one of these studies, Hallmann, Wicker, Breuer and Schönherr (2012), show that sport participation is not only influenced by the individuals' socio-economic factors but the presence of different types of facilities is also important.

Hallmann, Wicker, Breuer and Schüttoff (2011), suggest that town size could be an indicator for the availability of sport facilities, indicating that people living in larger cities

(urban area) may have better infrastructure and more options to participate in sport. As, larger cities (urban area) may contain more sport facilities and these facilities collectively may offer variety of sport activities to the local population, compared to small sized towns (rural area) which may contain lesser sport facilities and collectively offer fewer types of activities and might affect the local populations' participation levels. However, in different regions, empirical studies have shown that non-metropolitan area which have better provision for sport facilities, shows higher participation rates (Eime et al., 2017). This indicates that, regardless of urban or rural area, it is the provision of sport facilities which affects sport participation.

Access to sport facilities

Access to sport facilities is connected, in the literature, to the proximity of individuals to sport facilities and the price related to sport activities (goods and services). The proximity of sport facilities plays an important role in an individual's decision to participate in sport. This becomes important due to the time available for an individual, as the time that is invested in travelling to facilities that are far from an individual's location (workplace/house) could be utilized in sport activities (Hallmann et al., 2011; 2012). Price related to the use of sport activities has been shown to have an influence on individuals' decision to participate in sport (Anokye, Pokhrel & Fox-Rushby, 2014). Where studies have shown that the price related to sport participation which demand the requirement for consumer spending on sport products and services is an important factor in driving sport participation. Since, in maximising utility, when the individuals' sport consumption increases the price of sport related goods and services could fall, while all other factors are held constant. However, the price of sport related goods and services may rise if the individuals' sport consumption decreases (Anokye et al., 2014). Other studies have examined if subsidising prices related to the use of sport facilities could increase participation behaviour among the population whose income levels and socio-economic status (education levels and occupational status) is considered to be low and have found that this has a significant positive relationship (Higgerson, Halliday, Ortiz-Nunez, Brown and Barr, 2018).

Satisfaction with facilities

Satisfaction with facilities corresponds to the users' perceived experience of the built environment that could be used for sport. Hallmann et al. (2011), suggests that the design of the neighbourhood and the recreation environment is one of the most important aspects of sport infrastructure. Similarly, the conceptual framework developed by Roult, Adjizian, Lefebvre

and Lapierre (2014), suggest that the built environment inspires sport by offering three central factors i.e., accessibility, appeal and security. Firstly, the accessibility factor involves three types which include: economic accessibility (individual's capacity to consume /financial capacity), symbolic and social accessibility (to benefit from personal appeal and individual perception) and geographical accessibility (proximity to reach sport facilities from workplace/household). Secondly, the appeal factor of the built environment refers to the aesthetic and cosmetic characteristics of the facilities, along with the atmosphere which relates to lights and spatial configuration, the cleanliness and the efficient maintenance of the facilities, and the architectural quality and innovation. Finally, the security factor involves the feeling of insecurity due to crime, which could play a major role in influencing an individual's decision to use a facility, and the road traffic factors involving road signals, traffic calming measures, balance between modes of various transportation including car, bus, bicycle and foot could also be influential for an individual to choose a place for sport. Other security factors include, taking care of elements which minimizes the risks/injuries, and the installation of surveillance measures also play a role in an individual's decision to participate in a particular place or facility (Roult et al., 2014).

Different sport programmes on offer

Apart from the variety of sport activities on offer to the local population, which caters to the taste of different individual's needs in the society (Wicker et al., 2009), the sport development process incorporated by the sports delivery system also plays an important role in defining the participation levels of the local population. Green (2005), proposes that sport development process could be improved by understanding the various factors that influence people's decision to begin participation in sport. He suggests that, this decision is influenced at the individual, family and sport delivery system levels, and here the focus will be on sport delivery system levels. At this level, Green (2005), claims that for an individual to make a decision to begin sport participation is influenced by the availability of particular sport and sport programs that is of his/her interest. According to Green (2005), this could be achieved by not only by providing opportunities but also by spreading awareness on three aspects, first to provide flexibility in membership options, second through encouragement to continue, and third by socialization into new norms and expectations. For example, need for flexibility in time and cost for mothers with young children and also by designing specific sport programs which allows them to initially participate at lower levels, and aiming to increase their participation levels as their life stage changes. This informs that the sport programs could be

designed by the sport providers in a way which could possibly meet the expectations and lifestyle of different groups in the population, and these groups could then benefit, by the advantages that sport participation has to offer.

2.1.1 Empirical evidence

Among the available studies that have investigated the above mentioned sport facility infrastructure factors are listed in Table 2.1, and evidence related to the following factors is summarised below; financial expenditure on sport facilities/activities, number of facilities in a given area, location of facilities, space available in the facilities/overcrowding, accessibility of the sport facilities, travel time or proximity to the facility from home/work, price required to use the facility, condition of sport facility/playing surface and type of sports offered.

Empirical evidence suggests that, spending on parks and recreation increases group sport participation, but reduces participation and time spent in walking for exercise (Humphreys & Ruseski, 2007). De Carvalho and Nunes (2013) also claim that expenditure on sport contributes to an increased number of sports participants. Lera-Lopez et al., (2016) suggest health spending by government has some association with participation, however spending on education has a significant positive association with participation in sport of various regularities. Local funding has been suggested to increase participation rates (Kokolakakis, Castellanos-Garcia & Lera-Lopez, 2017).

The number of sport facilities in a given area seems to have an influence on the individual's participation in sport, as Downward et al., (2009) show a positive relationship between the existence of sports clubs and participation. Wicker et al., (2009), claim that the public playground area and the number of fitness centres have a significant positive influence on regular sport activity, and also demonstrate that the frequency of activities is reduced with a lower number of sport facilities in a given area. It has also been suggested that the number of sport facilities in an area has a positive and significant effect on the frequency of sport participation (Poupaux & Breuer, 2009). On the contrary, De Carvalho and Nunes (2013) claim that a greater number of sports clubs does not necessarily mean more participants. The presence of certain sport facilities in towns and cities seems to influence end user's participation, as Hallmann et al., (2011) claim that in the metropolis (urban area) supply of swimming pool seems to have a significant impact on sport participation, and the supply of sport fields is important in medium sized towns (rural area).

Table 2.1

Summary of empirical studies with sport facilities' infrastructure

Study, Country and Year	**Sample Characteristics**	**Theories/ Models Considered**	**Measured (dependent) Variable/s**	**Methodology**	**Findings/evidence**
Searle and Jackson (1985) Canada, 1981 Recreational activity	1981 Primary data n = 1,240		1) Is there any recreational activity that you don't take part in now but would like to start regularly? 2) Why don't you participate in this activity	Chi-square test	Main barriers: Overcrowding of facilities People most likely to be affected by barriers to participation include the poor, the elderly, and single parents
Coalter (1993) Scotland, 1993	1993 Centre for Leisure Research and Household surveys n = four sports leisure centres and one swimming pool		Price increases and value for money	Qualitative interviews	Cost of entrance is an absolute barrier for participation for a small number of people.
Lera-lopez and Rapun-Garate (2005) Sport participation	2004 Primary data n = 700 Age: 16 to 65 years	Consumer expenditure on sports Demographic variables, socio-cultural background and economic variables involved in sports participation and sports consumption	1) Participation in sports and frequency 2) Membership fees and entrance fees 3) Sports equipment and clothing 4) Sports instruction and training	Ordered probit and tobit models	Consumer expenditure on sports is principally determined by gender, education and income level.
Humphreys and Ruseski (2007) Canada 1998-2000 Physical activity	1998 and 2000 Behavioural Risk Factor Surveillance System (BRFSS) n = 146,260 (1998) and	The SLOTH framework	Participation in physical activities and sports with frequency and time spent	ANOVA and Regression analysis	Spending on parks and recreation increases participation in group sports and reduces participation, and time spent, in walking for exercise.

Study, Country and Year	Sample Characteristics	Theories/ Models Considered	Measured (dependent) Variable/s	Methodology	Findings/evidence
and sport participation	n = 175,246 (2000) Age: Mean age 47 years				
Gallardo, Burillo, Garcıa-Tascon and Salinero (2009) Spain, 2005	2005 The 2005 Spanish National Sports Facilities Census (CNID-2005), National Population Census and Territory of each Spanish Region- supplied by the National Statistics Institute (Spain)		Compare the state of sports infrastructures in the regions of Spain, using a synthetic indicator to promote healthy social framework	Mixed method approach (Qualitative and Quantitative approach) **Quantitative approach:** Pearson correlation and Principals Components analysis	1) A small amount of spaces and sports area per inhabitant leads to fewer opportunities for active sports participation by the population, as well as to the presence of too many users in the spaces, which lessens the comfort and convenience for users in their activities. 2) Vital aspects of the sports facility, such as accessibility, the state of the playing surface or the existence of complementary spaces, all crucial for the proper supply of sports services.
Wicker, Breuer and Pawlowski (2009) Germany, 2007 Sport participation	2007 Primary data n = 2,054 (sport participation) n = 23 urban districts of Stuttgart (sports clubs and facilities) Age: 3 years and above (parents answer on behalf of children)	Economic behaviour theory	Participation in sports- Frequency, duration, organisation, etc.	Hierarchical linear models Regression analyses: Regression (sub-model) and interdependent regression model	1) Public playground area and the number of fitness centres, in particular, have a significant positive influence on regular sport activity. 2) Poor supply of gymnasia, sports fields and public playgrounds, as well as fitness centres, influences regular sport activity negatively. 3) For 29-35 year old persons, fitness centres were especially important for their sport activity. 4) For 3-17 year old persons the supply of swimming pools and public playground areas plays a

Study, Country and Year	Sample Characteristics	Theories/ Models Considered	Measured (dependent) Variable/s	Methodology	Findings/evidence
					central role. 5) Sport activity of the 65-year olds is influenced by the supply of forest area.
Poupaux and Breuer (2009) Germany, 2008	2008 primary data n = 11,715	1)Neo-classical and heterodox approaches 2) Post Keynesian consumer choice theory	Sport participation and frequency	1) Traditional nonlinear econometric analysis 2) Logit and poisson models 3) Two-level nonlinear hierarchical models	1) Acceptable distance of sport facility from an individual's home has a significant and positive impact on both the decision of practicing a sport and on the frequency of this activity. 2) The number of the different types of sport infrastructures existing in the district seems to have a significant and positive impact on the frequency of the sport practice. 3) The number of sport infrastructures has a positive and significant effect on the frequency of the sport participation in most of the cases.
Lim, Warner, Dixon, Berg, Kim and Newhouse-Bailey (2011) Netherlands, USA and Republic of Korea Sports participation	Primary data n = 122 Age: 20 years and over	Green's (2005) sport development theoretical model	1) Do you currently play sport 2) Please describe the sport delivery system and sport opportunities available in your community 3) How has this impacted your sport participation	Qualitative approach: Asynchronous online focus groups using semi structured questions	1) Results indicates that delivery system level factors are also critical apart from individual-level factors for differences in sport participation. 2) Sports delivery system that are more readily accessible or predictable and those that create social opportunities may be key to increasing adult sport participation.

Study, Country and Year	Sample Characteristics	Theories/ Models Considered	Measured (dependent) Variable/s	Methodology	Findings/evidence
Hallmann, Wicker, Breuer and Schüttoff (2011) Germany, 2008-2009 Sports participation	Sport infrastructure data: Secondary data provided by the respective municipalities. n = 25 for the metropolis n = 53 for the medium sized municipalities	Economic behaviour theory	Sport activity at least once per week	Within a multi-level analysis, a separate regression model (sub-model) is calculated for every level	1) In the metropolis, particularly the supply of swimming pools has a significant impact on sports participation. 2) Supply of sport fields is of importance in medium-sized municipalities.
Van Tuycom (2011) Europe- 27 countries, 2005, Leisure Time Physical Activity	Eurobarometer 64.3 n = 24,846	Macro-environmental factors associated with leisure-time physical activity	Derived self-reported overall and gender-specific LTPA rates	Bivariate linear regression models	Gross Domestic product (+), policy (+), public expenditures on health (+), urbanisation (+)
Wicker and Breuer (2012) Germany, 2008 Sports participation	2008 Primary data n = 11,715 (Micro Level) n = 25 (district of Munich - Macro level)	Micro level and Macro level determinants	General sport participation for 30 minutes at least once a week	Multi-level analysis	1) Availability of swimming pools and parks is especially important for the residents' sport participation. Increasing the number of swimming pools is likely to increase sport participation
Hallmann, Wicker, Breuer and Schönherr (2012) Germany 2008-2009 Participation in different sports	2008-2009 Primary data n = 4 municipalities in Germany (Infrastructure level) n = 9,302 (individual level	Individual socioeconomic factors and infrastructure factors	Infrastructure level: 1) Number of sport halls 2) Number of sport fields 3) Number of swimming pool 4) Number of tennis courts 5) Park area	Multi-level analysis	Park area has a significant and positive relationship with participation in swimming and running.
De Carvalho and Nunes (2013) Portugal, 2002-2007 Sport participation	2002-2007 National Institute of Statistics (INE)		Number of sports participants related to district population	Regression analysis and LSDVC dynamic estimator	1) Greater number of clubs does not necessarily mean more participants. 2) Only current expenditure on

Study, Country and Year	Sample Characteristics	Theories/ Models Considered	Measured (dependent) Variable/s	Methodology	Findings/evidence
	n = 18 Portuguese sub-regions (districts)			proposed by Bruno (2005)	sport activities is important for increasing participation in sport.
Anokye, Pokhrel and Fox-Rushby (2014) England, 2006 Participation in Physical activity	2008 from Economics of Physical Activity Survey (EPAS) n = 1,683	A utility (satisfaction) maximisation approach	Have participated in physical activities (one or more activities) in the last 4 weeks	Count regression models	1) High travel time and prices per occasion of physical activity are associated with lower participation in physical activity. 2) Positive financial incentives: Subsidising price of participation, could lead to an increase in quantity of physical activity particularly among those already exercising.
Downward, Lera-Lopez and Rasciute (2014) Europe, 2009 Sport participation	2009 Eurobarometer 72.3 n = 26,788	1) Economic time-allocation theory of Becker (1965) 2) The economic theoretical approach 3) Sociological and psychological theories 4) Lifestyle factors	**Sport facilities questions:** (Dichotomized variables) 1) Many sport opportunities in the area 2) Local sports club offer opportunities to participate	Zero-Inflated Ordered Probit (ZIOP) model	1) Provision of sports facilities is of more importance for males. 2) Results suggest greater problems of access to sport for females.
Roult, Adjizian, Lefebvre and Lapierre (2014) Canada, 2010-2011 Physical activity	2010-2011 primary data (face-to-face electronic surveys, structured observations and semi-structured interviews) n = 352 Age: 6 years and above	Recent studies published in the fields of physical activity, territorial planning, urban planning and public health	1) The level and frequency of free users' physical and sport activities 2) The accessibility of the ice rink and of its location area 3) The appeal of the ice rink to reinforce or to create some social bounds 4) The impacts of the construction of the ice rink on physical activity	**Quantitative method:** Descriptive statistics **Qualitative method:** Through NVivo to underline the textual occurrences related to the research issues	Building a sport facility is not sufficient in itself to attract a mildly active or non-active clientele. In fact, it seems necessary to complement the facility with onsite-organized activities.

Study, Country and Year	Sample Characteristics	Theories/ Models Considered	Measured (dependent) Variable/s	Methodology	Findings/evidence
Downward and Rasciute (2015) England, 2007/08-2009/10 Sport participation	1) Active People Survey (APS)- 2007/08 and 2009/10 2) Active Places Survey (APLS)- 2008 n = 1000 and 500 respondents per local authority Age: 16 years and over		Sport participation in the last 4 weeks- frequency, duration and intensity	Zero-Inflated Ordered Probit (ZIOP) model	1) Existing sport delivery system typically benefits males more than females through facility provision. 2) Satisfaction with facilities is of most relevance for females, and the number of clubs for males.
Eime, Harvey, Charity, Casey, van Uffelen and Payne (2015) Health-Enhancing Leisure-time Physical Activity	2010 Exercise, Recreation and Sport Survey (ERASS) was conducted by telephone interview in four quarterly waves n = 21,602 Age: 15 years and over	Health-Enhancing Leisure-time Physical Activity (HELPA)	HELPA activities and sessions of HELPA activity by setting and frequency	Cross-tabulation a measure of concordance (the gamma statistic)	Club sport participation contributes considerably to Leisure Time Physical Activity at health enhancing levels
Hallmann, Feiler and Breuer (2015) Sport Participation	2008 Municipality of Munich and University data n = 6924	1) Rationale for the provision of sports for all by different types of organisations: failure theories 2) Economic theory of behaviour	1) Do you practise sport in your free-time? of at least 30 minutes once a week 2) which type of provider (non-profit sport club, commercial sport provider, or state-run programmes) the sport was executed	Multilevel analyses	1) Non-profit sport clubs foster participation in clubs 2) Availability of programmes of commercial providers decreases participation in non-profit clubs 3) No influence was observed for state-run programmes 4) Non-profit sport clubs can be regarded as guarantors of sport participation, and they also foster social capital and positive externalities
Deelen, Ettema and Dijst (2016)	2014 primary data, Netherlands	Hierarchical leisure constraints theory	1) Average sports participation during the 12 months prior to the survey	1) Principal component analyses on the scores of the	1) Constraints were related to neighbourhood liveability and distance to indoor sports facilities

Study, Country and Year	Sample Characteristics	Theories/ Models Considered	Measured (dependent) Variable/s	Methodology	Findings/evidence
Sport Participation	n = 776 Age: 18-80 years		2) Frequency: 1 to 3 times a month to at least 3 times a week	items of the Leisure Constraints Scale 2) Hierarchical regression analyses: Multivariate analyses & ordinal regression analyses	and swimming pools. 2) Need for increased importance of the public space for sports participation
Lera-Lopez, Wicker and Downward (2016) Physical activity and sport	Eurobarometer 72.3 n = 25,243 Age: 15 years and over		1) Participation in any physical activity outside sport including cycling or walking from a place to another, dancing, gardening etc. at least once a month 2) Participation in any physical activity and sport at least once a week, and five times a week or more, and three or four times a week 3) Participation in sport at least once a month	Multi-level analyses	1) Mainly education spending that has a significant positive association with participation in sport of various regularities 2) Health spending has some association with participation in other physical activity and sport of a lower regularity 3) Health spending will have most effect combined with earlier influences from education spending
Kokolakakis, Castellanos-Garcia and Lera-Lopez (2017) Sport participation	Active People Survey (APS) 5, 2010/11 n = Approximately 166000 Age: 16 years and over		1) Informal participation at least once per month 2) Formal participation at least once per month 3) No participation in the last month 4) Frequent formal participation at least three times per week	beta and Dirichlet models	**Formal participation:** Local funding (+), inland water (+), urban environment (+) **Informal participation**: Urban environment (-) Sporting infrastructure is only influential for the transition from non-participation to formal participation

Study, Country and Year	Sample Characteristics	Theories/ Models Considered	Measured (dependent) Variable/s	Methodology	Findings/evidence
Higgerson, Halliday, Ortiz-Nunez, Brown and Barr (2018) Sport participation	Active People Survey, UK 2005-2014 n = 1,556,563 Age = 16 years and over		1) Relative change in the number of gym and swim attendances in a Leisure centre before and after an intervention 2) 30 minutes of moderately intensive gym or swimming activity in the past four weeks 3) Measuring the performance of LAs at promoting health and well-being and increasing participation in sport	Interrupted time series analysis	Removing user charges from leisure facilities in combination with outreach and marketing activities can increase overall population levels of physical activity while reducing inequalities

Notes: N = Number of participants (+) = Increases participation, (-) = Decreases participation

Furthermore, another study by Wicker and Breuer (2012), suggest that the availability of swimming pools and parks in the metropolis (urban area) is especially important for the local population's sport participation, and increasing the number of swimming pools is likely to increase sport participation. Kokolakakis et al., (2017) show that urban environment increases the chance of formal and informal sport participation. Similarly, Eime et al., (2017) discover that better provision of facilities in the non-metropolitan region resulted in higher participation rates than the metropolitan region. This indicates that, configuration/characteristics of facilities is one of the factors which may have an influence on individuals' participation.

The number of facilities in an area might affect the space available to the end users in sport facilities, which in turn affect their participation levels. This could be because research studies suggest that a small amount of space and sports area per inhabitant leads to fewer opportunities for active sports participation (Gallardo, Burillo, Garcıa-Tascon & Salinero, 2009). It has been recognized since the 1980s that the overcrowding of sport facilities is one of the main barriers for the end user's participation in sport (Searle & Jackson, 1985), and could have a negative impact on participation. Similar findings have been reported in the recent past, as Gallardo et al., (2009) suggest that, presence of too many users in facilities lessens the comfort and causes inconvenience for the users to perform their activities (Gallardo et al., 2009), which may reduce the motivation to participate in sport.

It has also been suggested that sports delivery system that are more readily accessible, where the local population are aware of the sport delivery system by which they can gain entry and participate in facilities, and those that create social opportunities, in which the participants are able to socially interact with other participants, may be the key to increasing adult sport participation (Lim et al., 2011). There are gender differences in accessibility to sport, in which females have reported greater problems for access (Downward et al., 2014b).

The time required to travel (distance) to sport facilities from home/work also has an influence on sport participation, as Poupaux and Breuer (2009), suggest that the acceptable distance of sport facility from an individual's home has a significant and positive impact on both the decision of practicing a sport as well as on the frequency of sport activity. Similarly, Anokye et al. (2014), claim that high travel time per occasion of physical activity (sport) is associated with lower participation levels. Deelen, Ettema, and Dijst (2016) suggest that distance to indoor sport facilities acts as constraint for participation.

Price required to use sport facilities could play a role in an individual's decision to participate in sport and also the frequency of activities, especially among economically disadvantaged groups, as Coalter (1993), claims that cost of entrance to a sport facility is an absolute barrier for participation for a small number of people. Similarly, a more recent study in the UK has found that "removing user charges from leisure facilities in combination with outreach and marketing activities can increase overall population levels of physical activity while reducing inequalities" (Higgerson et al., 2018; p.1). These findings are supported by Anokye et al. (2014), who claim that higher money prices per occasion of physical activity (sport) are associated with lower participation levels, and also suggest that subsidising price of participation, could lead to an increase in physical activity particularly among those already exercising.

Research studies have indicated that the state of sport facilities or the condition of playing surface also affects participation, as Gallardo et al., (2009), suggest that the state of the playing surface in a sport facility, along with accessibility of sport facilities is crucial for the proper supply of sport services, which drives people's participation. The same is supported by Wicker et al., (2009), who suggest that poor supply of gymnasia, sports fields and public playgrounds, as well as fitness centres, influences regular sport activity negatively.

A variety of sports offered is one of the factors which drives people to participate in sport, as Poupaux and Breuer (2009), suggest that the number of the different types of sport facilities existing in the district has an impact on the frequency of the sport participation. Similarly, Wicker et al., (2009), suggest that sport clubs' programmes have a significant positive influence on regular sport activity.

Among other sport facility infrastructure factors that influences participation, it has been suggested that, fitness centres are especially important for those in the age group of 29-35 years to indulge in sports, and supply of forest area influences the sport activity of those who are 65 years and older (Wicker et al., 2009). Evidence also suggest that sport facility provision, influences gender based participation too, as the number of sport clubs (Downward & Rasciute, 2015), along with provision of sport facilities (Downward et. al., 2014b) is of more importance for males, and satisfaction with facilities is of most relevance for females (Downward & Rasciute, 2015). Among other factors that influence participation, availability of programmes of commercial providers decreases participation in non-profit clubs (Hallmann,

Feiler & Breuer, 2015). Deelen, Ettema and Dijst (2016) suggest that there is a need for increased importance of the public space for sports participation.

It could be argued that facilities with different ownership types could have different priorities that could reflect in their service offerings which may have an influence on users' sport participation behaviour. Empirical evidence presented above that affects individuals' participation does not examine these service features between different types of facilities. However, based on the discussion in chapter 1.2, the institutional policy reform of sport provision that has led to a multi-agency, cross sector collaboration of facilities in the UK's sport delivery system need to be studied to examine if this produces different results in achieving the outcomes.

Hence, in this thesis, from the facility managers' perspective the following facility infrastructure factors will be examined between different types of sport and fitness facilities i.e. between public, private and LMC facilities. This is aimed to understand how much importance each of the facility types place on their service features which is shown to have an influence on individuals' participation. As empirical evidence presented above suggests that these factors are important not only for an individual to make a decision to participate in sport, but also the frequency and duration of sport participation by which it defines their participation behaviour. Out of the above mentioned factors, this thesis will focus on measuring the following sport and fitness facilities' features that are on offer which may have an influence on users' sport participation behaviour.

Hence, to understand sport provision at the meso level, different types of sport and fitness facilities' features will be measured by asking how much importance the respective facility managers place on the following service features:

a) Price related to the use of facility
b) Distance travelled to the facility from home/work
c) Space availability in facility (measured by asking 'opening timings and scheduling')
d) Range of activities on offer
e) Maintenance of facility
f) Customer service
g) Configuration/characteristics of facilities

2.2 Organisational strategy: Strategy content

The concept of strategy emerged from the need to help managers translate the events and decisions they faced on a daily basis in an orderly way, in order to evaluate the position of the organisation within its environment (Porter, 1983). In the management literature there remains a lack of consensus over the definition of strategy despite a multitude of attempts to analyse and compare the different definitions of strategy in extant literature (Hofer & Schendel, 1978; Bracker, 1980; Evered, 1983; Barney, 1997; Grant, 2008). Ronda-Pupo and Guerras-Martin (2012) propose a 'consensual definition' of strategy, based on an analysis of 91 definitions formulated between 1962 and 2008. They propose strategy as "The dynamics of the firm's relation with its environment for which the necessary actions are taken to achieve its goals and/or to increase performance by means of the rational use of resources" (p. 182).

The concept of strategy content refers to how organizations actually behave, in contrast to strategies that are merely rhetorical or intended but unrealized (Andrews, Boyne & Walker, 2006). Strategy content is concerned with the plan of action through which organisations' goals/objectives are achieved in relation to environmental circumstances and internal characteristics (Walker & Andrews, 2013). In the management literature, there are numerous studies demonstrating the importance of strategy content to an organisations' performance (Hafsi & Thomas, 2005; Chari, Katsikeas, Balabanis & Robson, 2014). Meier, O'Toole Jr, Boyne and Walker (2007) suggest that, strategy content influences organisational performance and is central to management theory, and it has been shown to be a means to improve service performance in public (Andrews et al., 2006, 2009; Meier et al., 2007; Meier, O'Toole Jr, Boyne & Walker, 2010; Walker, Andrews, Boyne, O'Toole Jr & Meier 2010) and in private sector organisations (Harrigan, 1980; Miller, 1986; Ketchen, Thomas & McDaniel, 1996). It has also been suggested that, a core managerial function is to shape strategy content, which defines how an organisation interacts with its environment and the way it seeks to improve its performance (Andrews et al. 2009). Research on strategy content has proved that it is a means to improve organisational performance (Andrews et al., 2006, 2009; Meier et al., 2007, 2010; Walker et al., 2010). Similarly, Ketchen et al. (1996) suggest that strategy content of an organisation is a key determinant of its performance and Andrews et al. (2006) argue that strategy content matters to the performance of English local governments, a claim also supported by Hodgkinson (2013).

Hence in this thesis, understanding the organisational strategy of sport and fitness facilities is important in understanding how they plan to improve performance and to achieve its intended objectives. Section 2.2.1 of this chapter will review different types of strategy typologies that different organisations could adopt. The subsequent section 2.2.2 will discuss the research findings of strategy typologies that is defined below, which will help to identify its strengths and weakness, and this will eventually help to identify the usefulness of these typologies for this study.

2.2.1 Strategy typologies

Typology in a broad sense is literally the study of types. In conceptual terms it is a product of observations and categories derived from existing literature. Strategy typologies are theoretically derived dimensions that assess similarities and differences across a profile that consists of a set of strategic characteristics (Robinson & Pearce, 1988), resulting in a set of interrelated ideal types in which each type has a unique combination of organisational attributes that are considered to be causally related to the outcomes (Doty & Glick, 1994). They go on to suggest the value of typologies helps to translate complex conditions in management into tight descriptions that can predict and explain outcomes and form the basis for organisational action. Management typologies are the key means by which ideas are communicated (Knott, 2006) that helps to inform practitioners. As researchers develop ideas and group them into tight classifications which then could be introduced to be empirically investigated in the real world that may inform practitioners.

Typologies do not provide a blue print for its use but enables the users to interpret and suit strategy to their specific needs and context (Knott, 2006). That is, they are complex theoretical statements, which can be subjected to quantitative modelling and rigorous empirical testing (Doty & Glick, 1994). In the management literature, two dominant typologies were developed by Miles and Snow (1978) and Porter (1985). These models are usually presented as competing classifications of organisational strategy (Boyne & Walker, 2004). Faulkner and Bowman (1995), developed a strategy typology which is more popularly known as the 'strategy clock'. The following section of the literature review present the characteristics of the above mentioned typologies.

Miles and Snow's Typologies

Miles and Snow (1978), propose that managers within an organisation develop stable patterns of strategic behaviour over a period of time that seek to align to its perceived environmental conditions. Miles and snow's typology of strategies developed in 1978 was derived inductively from a range of organisations and is explicitly intended to cover private firms, public agencies and not-for-profit organisations (Boyne & Walker, 2010). Miles and Snow (1978) classify organisations within a given industry into four groups: prospectors, defenders, analysers and reactors which is based on their field work in four industries: college textbook publishing, electronics, food processing and health care.

Prospectors: These are organizations that ‘‘almost continually search for market opportunities, and they regularly experiment with potential responses to emerging environmental trends’’ (Miles & Snow 1978: p. 29). These organizations thrive in changing environments that have an element of unpredictability and succeed by constantly examining the market in a quest for new opportunities. Moreover, prospector organizations have broad product or service lines and often promote creativity over efficiency (Hambrick, 1983a). Thus, these organisations often are the creators of change and uncertainty to which their competitors must respond (Evans & Green, 2000). Prospectors are often pioneers in the development of new products (Boyne & Walker, 2004). According to Boschken (2000) the characteristics of a prospector in public sector include being proactive, taking risks, and making rapid organisational responses to new circumstances.

Defenders: These are organisations that ‘‘devote primary attention to improving the efficiency of their existing operations’’ (Miles & Snow 1978: p. 29). Defender organisations take a conservative view towards the new product development and tries to maintain a secure position in a narrow segment of the market, and typically compete on price and quality on the existing products or services (Boyne & Walker, 2004). Defenders do not strive to be the leaders in the market and are late adopters of innovations once they have been tried and tested. They focus on a narrow range of services like efficiency and process improvement (Andrews et al., 2006). Defenders seek better performance on a limited number of core products and services (Meier et al., 2007).

Analyzers: These organisations are rarely "first movers," but, instead, "watch their competitors closely for new ideas, and ... rapidly adopt those which appear to be most promising" (Miles & Snow 1978: p. 29). Analyzers represent an intermediate category, sharing elements of both prospector and defender. They try to maintain a secure market position within a core market,

but also seek new markets and products (Boyne & Walker, 2004). In other words, they seek efficiency to maintain low costs and standard services using formalised structures and processes, but they also emphasize on new product and service development to remain competitive when the market changes, by closely watching their competitors and then rapidly adopting those ideas that appear to be the most promising. Analyzers tend to prefer a 'second but better' strategy (DeSarbo, Di Benedetto, Song and Sinha, 2005).

Reactors: These organisations have no consistent substantive stance and they lack a coherent strategy (Andrews et al., 2006). A reactor "seldom makes adjustment of any sort until forced to do so by environmental pressures" (Miles & Snow 1978: p. 29). Inkpen and Choudhury (1995) suggest reactor stance in an organisation could be equated with an absence of strategy. In reactor organisations, top managers frequently perceive change and uncertainty in their organizational environments but typically lack any consistent strategy (Boyne & Walker, 2004). Reactors, therefore, are likely to have a formal stance imposed by external agencies, such as regulators. Even if a reactor is instructed to behave like a prospector, it may lack the culture and expertise to successfully adopt this strategy (Andrews et al., 2006).

Porter's Generic Competitive Strategies

Porter (1980), identifies three generic strategies that may be used to position an organisation/firm with respect to its competitors in a particular industry. An underlying principle of the typology is that performance is at the heart of any strategy (Porter, 1985). The generic strategies are:

Cost leadership: This strategy involves pursuit of economy and efficiency in all business operations with the aim of providing the product or service to the buyer at the lowest possible price (Porter, 1980). Porter argues that a typical cost leadership strategy involves amassing market share, keeping tight control of overheads and maximising the cost benefits of industry experience and new technology. Under this strategy the products and services are relatively low cost and made available to a very large customer base, sustaining this strategy requires a continuous search for cost reductions in all aspects of the business. Once in place, a cost leadership strategy should be self-sustaining as increased market share leads to further economies of scale (Porter, 1985). However, there are some disadvantages with this generic strategy, as it requires an initial competitive advantage to be successful, start-up costs may be substantial, and the price difference from the market must be maintained through continual

streamlining and reinvestment in processes, which may lead to the potential detriment of the product and service quality (Porter, 1985).

Differentiation: This generic strategy involves developing one significant aspect of a product to set it apart from its competitors (Porter, 1980). Porter argues that, if this strategy is to be successful, the unique features or benefits should provide superior value for the customer and they should perceive the product or service as unrivalled and unequalled. By this the customers tend to be more loyal and could provide considerable insulation from competition, the resultant added value perceived by the customers offsets the impact of higher price (Porter, 1985). This generic strategy may however pose some challenges to the organisation as it may result in limited market share, need to invest in areas such as; research and development, high quality materials and intensive customer support which results in high start-up and running costs (Porter, 1985).

Focus: This generic strategy involves targeting the product or services specifically towards the needs of a highly defined market segment. It may be viewed as a variation on the differentiation approach (Porter, 1980). Under this strategy, an organisation aims to provide an exhaustive service to a precisely identified buyer group or geographic market. Ideally the organisation will achieve both a differentiated and a low cost position with respect to its chosen market segment. An organisation typically seeks to gain competitive advantage through effectiveness rather than efficiency (Porter, 1985). This generic strategy has similar cost and investment considerations to the differentiation strategy and the target market may not follow the same growth pattern as the overall industry market. The cost leadership and differentiation strategies attempt to address a whole industry, whereas the focus strategy address specific and targeted buyers within an industry (Wright, 1987).

Faulkner and Bowman's 'Strategy Clock'

This typology includes the combination of perceived price and perceived product or service benefits which are at the heart of the customers, when they make choices. Faulkner and Bowman introduced the notion that customers examine both price and perceived quality while making their buying decisions. This typology is more market-focused than Porter's (1985) typology, emphasising perceived value and price for customers rather than costs to the organisation and is consistent with increasing emphasis on customer focus and customer choice evident in the private sector, but also increasingly in UK public leisure services (Hodgkinson & Hughes, 2014). The 'strategy clock' represents different positions in a market where

customers have different requirements in terms of value for money (Johnson, Scholes & Whittington, 2008). This distinguishes customer's behaviour of purchasing from one source over another, because either the price is lower than that of another organisation, or the services offered are more highly valued by the customer (Johnson et al., 2008).

Faulkner and Bowman (1995) developed eight strategies; 'low price-low value/no frills', 'low price', 'hybrid', 'differentiation', 'focussed differentiation', 'increased price-standard product', 'high price-low value' and 'low value-standard price'. They stress that 'increased price-standard product', 'high price-low value' and 'low value-standard price' are not viable in the long term outside of a protected monopoly. Since the introduction of CCT and BV, which has enabled the private and third-party organisations to enter the UK public sector in a wide range of service delivery, monopoly does not exist in the UK leisure sector services. Hence, the remaining strategies developed by Faulkner and Bowman are considered.

Low price-low value/No frills: In this type, organisations combine low price with low perceived product or service benefits, with a focus on a price sensitive market segments (Johnson et al., 2008). This is not a desirable position, but many organisations find themselves forced to compete here as their products or services lack differentiated value. (Faulkner & Bowman, 1995). However, this strategy can lead to performance gains in those organisations who operate by retaining the bare essentials and removing the additional benefits of the products and/or services, thereby offering low price to the customers (Montgomery, 2008).

Low price: This strategy offers a lower price than competitors but maintains similar perceived product or service benefits offered by competitors. Organisations in this category balance very low margins with very high volume (Faulkner & Bowman, 1995). Under this strategy, organisations try and attain some degree of differentiation, but this is kept to a possible minimum (Carlisle & Faulkner, 2005).

Hybrid: Organisations under this strategy seeks to achieve a combination of low price and high value relative to its competitors, i.e., the products and/or services would have more differentiated value than that of 'low price' strategy and lower price than that of 'differentiation' strategy and leads to high market share (Johnson et al., 2008). A hybrid strategy allows an organisation to secure a balanced position in the market against their rivals, who pursue either only a price based or a differentiation strategy. Under this strategy organisations try to build a reputation of offering fair prices for reasonable products and services, and gain customer loyalty (Faulkner & Bowman, 1995). Researchers suggest that a hybrid strategy generates

higher returns and improved performance, as it combines the specialisation of price based strategies and differentiation (Miller, 1992; Gopalakrishna & Subramanian, 2001; Spanos, Zaralis & Lioukas, 2004; White, 1986).

Differentiation: Under this strategy, organisations offer product or service benefits that are widely valued by the customers but are different from their competitors in the market. This perceived value either comes at a price premium or without it, and those organisations who do not charge a price premium are most likely to acquire a larger market share. Under this strategy, an organisation offers a 'better' product or service, compared to the organisations who adapt no frills or low-price strategies (Faulkner & Bowman, 1995).

Focused differentiation: Faulkner & Bowman (1995) claim that, this strategy offers perceived high-quality products and/or services and appeals only to a smaller segment of the market who value these offerings. Although, under this strategy customer will have to pay a substantial price premium, it offers a highly perceived product or service benefits to a selected market segment (Johnson et al., 2008). While a differentiation strategy involves offering unique features that appeal to a variety of customers in the market, focused differentiation strategy requires offering unique features that fulfil the demands of a narrow market (Carlisle & Faulkner, 2005). Under this market segment, customers buy only due to the perception of higher value on the products or services, however they do not have more real value than the other 'normal products' in the market (Faulkner & Bowman, 1995).

According to Johnson et al. (2008), Faulkner and Bowman's 'strategy clock', could be differentiated into three distinct zones; 'low priced zone', 'differentiation zone' and 'hybrid strategy zone'. 'Low priced zone' is characterised by low prices and low perceived value (no frills and low price strategies), 'differentiation zone' is characterised by high perceptions of product and service benefits among customers and this comes with or without a price premium (differentiation and focused differentiation strategies) and the 'hybrid strategy zone' is characterised by lower prices than differentiation strategies, and higher benefits than low-price strategies (hybrid strategy).

2.2.2 Strategy, ownership and performance

The central contention of the Miles and Snow model is that prospectors, defenders, and analyzers perform better than reactors (Boyne & Walker, 2004). This finding is supported by

a number of studies, (Conant, Mokwa, & Varadarajan 1990; Hawes & Crittenden 1984; Shortell & Zajac 1990; Moore, 2005). Some empirical studies have tested Miles and Snow's framework and distinguish the performance between prospectors and defenders, and suggest that, when the environment favours prospectors, they outperform defenders (Zajac & Shortell, 1989; Woodside, Sullivan & Trappey, 1999; Moore, 2005; O'Regan & Ghobadian, 2006; Walker et al., 2010). Similarly, Andrews et al. (2006), tested Miles and Snow's model of strategy content on English local authorities and examined the relationship between strategy and organisational performance. The results revealed a hierarchy of strategy types, showing organisational performance is positively associated with prospector stance, neutral with defender stance and negatively associated with reactor stance.

Researchers have found empirical support for the existence of porter's generic strategies. Hambrick (1983b) found empirical support for Porter's dimension of generic strategies, while Miller and Friesen (1986) also validated Porter's generic strategies. Among the Faulkner and Bowman's typology, research evidence suggests that organisations who adopt hybrid strategy are connected with higher organisational performance than compared to those who adopt either only cost based or differentiation strategy (Cronshaw, Davis & Kay, 1994; Chan & Wong, 1999; Kim, Nam & Stimpert, 2004). Hodgkinson (2013), found that hybrid strategy appears to be fit for purpose, as it seeks to add value while permits low prices relative to competitors. Although, the author exercises caution against generalising the results. Hodgkinson and Hughes (2014) derived a new typology that goes beyond singular categorizations, which reflects multiple dimensions of strategy derived from Porter's and Faulkner and Bowman's strategy typologies. This new typology is a combination of different dimensions of low-cost, value-added, cost-focus, low-price, and hybrid stances, and show that 'value differentiation' and 'equilibrial' stances which could respectively be related to 'differentiation zone' and 'hybrid strategy zone', show the ability to deliver greater performance, when compared with 'socially responsible' strategic stance that could be related to 'low priced zone'.

Despite strong research evidence that support the above typologies, there are also a number of criticisms levelled at them. First, a study of several hundred public organisations showed that the contingency relationships proposed by Miles and Snow do not hold (Meier et al., 2010). Miles and Snow developed their typologies based on their work in four industries and may therefore not sufficiently capture strategies that exist in other industry settings (DeSarbo et al., 2005). Second, Miles and Snow (1978) suggest that, prospectors keep on

prospecting, defenders keep on defending and reactors keep on reacting, thereby placing each of these strategies into mutually exclusive boxes. However, Hambrick (1983a) suggest that there are more complex relationships based on other variables like; organisational capabilities, environmental attributes and strategy. DeSarbo et al. (2005) tested these variables and suggest that Miles and Snow's classification of strategic types could be considered as first order 'primitives'. That is, strategic types tend to be highly context-dependent and do not neatly fall into the tight classification as suggested by Miles and Snow. Boyne and Walker (2004), criticize the relevance of Miles and Snow's framework for placing organizations in mutually exclusive boxes, and for assuming that each organization has only a single strategic stance. They argue that organizations' strategies are messy and complex rather than neat and simple. A mix of strategies is likely to be pursued at the same time by a given organisation, because they are expected to satisfy a range of conflicting and competing goals. Hence, it is inappropriate to categorize organizations as belonging solely to a single type.

Third, Chrisman, Hofer and Boulton (1988) and Wright (1987), argued that Porter's generic strategies are not adequately described as they are not collectively exhaustive. Mintzberg (1988), has questioned the appropriateness of Porter's simple notions of low cost and differentiation in the ever-changing corporate environment characterized by increased competition and technological change. It has also been suggested that there are theoretical and practical problems with Porter's generic strategy concepts which have caused a degree of confusion in strategic management thinking (Faulkner & Bowman, 1992). Porter (1980: p. 40) claims that "the generic strategies imply different organizational arrangements, control procedures, and inventive systems. As a result, sustained commitment to one of the strategies as the primary target is usually necessary to achieve success", this indicates that these generic strategies should be mutually exclusive for an organisation. Hill (1998) and Wright (1987), argue that generic strategies are the underlying dimensions of organisations' competitive strategies and have questioned Porter's assertion, that generic strategies are mutually exclusive. Wright (1987) argues that the combination of generic strategies is possible in an organisation, and this is particularly true for those organisations who adopt differentiation strategy as their main strategy, but also in conjunction adopt focus strategy to some extent. The existence of hybrid strategy, which has the characteristics of both cost leadership and differentiation among several organisations that are associated with higher returns and improved performance (for reference see hybrid strategy) and suggests Porter's assertion of these strategies being mutually exclusive is inappropriate. While this issue is in part acknowledged by Faulkner and Bowman's

hybrid stance, the issue of fitting organisations into pre-conceived strategy classifications is still problematic. Although, the above typologies are useful in classifying organisational strategy, they are limited as these strategies force organisations into 'boxes'. It has been suggested that alternative strategy typologies may be appropriate for different contexts (industry settings) depending on the internal and external conditions present (Hodgkinson & Hughes, 2014; Walker et al., 2010). DeSarbo et al. (2005) in their conclusion claim that they expect different numbers and/or strategic groups (i.e. strategy types) to emerge in different contexts (industry settings).

The strategy of an organisation plays an important role in realising its outcomes (Walker & Andrews, 2013) and is important regardless of whether it is undertaken by private, public, or third sector organisations. Indeed, strategic planning and management practices of the private sector are adopted by public organisations, under the assumption that what works for the private sector will work for public sector organisations (Hendrick, 2003). It is evident from chapter 1.1 that various government reforms in the UK have sought to establish a private sector philosophy in public service provision, which is underpinned by NPM and neoliberalism, with Compulsory Competitive Tendering (CCT) and Best Value (BV) delivering on this notion for over a decade since late 1980s. This show, these developments are largely based on the assumption that inclusion of private and third-party service providers in the delivery of sport provision will maximize performance, however there is little evidence to support this. Different facility types representative of different types of ownerships are typically associated with different structural features that are expected to impact performance outcomes. For instance, in the context of public-private partnerships, private agents are often contended to have a better record of managing projects than pure public-sector delivery (van den Hurk & Verhoest, 2017). However, Kort and Klijin (2011) report that private organizations do not have a significant impact on outcomes under such arrangements. Private facilities are more likely driven by profit in delivering their services as evidenced by their focus on higher-income groups than their public and third sector counterparts (Audit Commission, 2006), than compared to public facilities who may get subsidies and grants from the government (Audit Commission, 2006). LMCs/third sectors in their organisational strategy, will have to consider government's policy priorities in delivering their services to the population while at the same time have to be concerned about profit maximisation (Audit Commission, 2006; van den Hurk & Verhoest, 2017).

Hence, an empirical investigation of the multiagency, cross-sector collaboration approach to sport provision, in which there is different ownership types of sport and fitness facilities might help to understand these aspects of sport provision better. For this purpose, sport and fitness facilities' strategic priorities and strategy typologies will be examined in this thesis that will eventually help to investigate if these organisational aspects differ based on ownership types and produces different results in achieving outcomes i.e. users' participation behaviour and the consequent influence this has on their outcomes.

2.3 Sport participation

In the context of this thesis, discussion of theoretical perspectives and empirical evidence of determinants of sport participation, based on socio-demographic, economic and behavioural/lifestyle factors is also important. As the question addressed in this thesis is 'does sport delivery system's approach to sport provision influence individuals' sport participation and their outcomes differently'. Since 1990s, policy developments in the UK - as discussed in chapter 1.2 – could be understood to arise from the neoclassical economic approach. As social welfare of individuals in the society in one form or another is represented as the aggregate outcome of sport policy. These developments happen at the macro level of the sport delivery system, which may have an impact on the users' participation and their outcomes who are conceptualised at the micro level of the system. Hence from this perspective, economic theories associated with sport participation that includes the determinants of sport participation based on socio-demographic, economic and behavioural/lifestyle factors are reviewed below.

Economic Theories of Sport Participation

The economic analysis of sport participation, has been classified into two main approaches. The neoclassical and heterodox (Downward, 2007; Downward & Rasciute, 2010) approaches. In both these approaches analysis of sports tends to be indirect and reflects different general theoretical concerns about how to model decision making (Downward & Riordan, 2007). As noted above, since the UK sport policies seem to arise from neoclassical economic approach, it is discussed below.

Neoclassical Approach

The Neoclassical approach suggests that individuals want to maximize their utility or well-being, by consuming goods and services, given income and time constraints. It assumes

that individuals are perfectly informed rational agents (Downward, 2007; Thibaut, Vos & Scheerder, 2014). Under this approach, the methodological emphasis is not on describing behaviour but to predict the outcome of decisions. According to this approach, the demand for sport is reflected in the trade-off between utility received from consumption of sporting goods and services, and the disutility because of work which is necessary to earn income. Consequently, the price of leisure is reducible to the wage rate (Downward, 2007). More recently it has been generalised to focus on the demand for sport as part of a general problem of allocating time to activities within a household, with consequent investment in human and social capital (Downward, 2007; Kokolakakis, Lera-López and Panagouleas, 2011). This calls for the inclusion of lifestyle characteristics and socio-demographic variables to explain sports participation.

Downward, Lera-Lopez and Rasciute (2011), suggest that neoclassical economics has three main theoretical approaches, sharing the view in which preferences are given and fixed towards sport participant, and these are discussed below:

Firstly, basic economic consumer demand theory suggest that sport is a commodity, which is both durable and non-durable consumption good, which means the benefits of sports consumption accrue over time as well as during the sport activity, as the sport activity provides satisfaction (utility) in the present as well as the future. For example, the pleasure, excitement and tension during the sport activity and the physical, psychological and social benefits one could accrue overtime. Furthermore, like any durable good the utility depreciates overtime without regular participation (Gratton & Taylor, 2000). These explanations predict that previous experience in sports is likely to raise participation, and social interactions or lifestyles will also affect participation (Downward & Riordan, 2007).

Secondly, the income leisure trade-off model of labour supply, considers sport as a form of leisure and is defined as the dual of work, in which work provides income for consumption of sporting goods and services, by which an individual could maximize utility. This model considers the cost of leisure consists entirely of foregone earnings, and the cost of commodities is foregone consumption of other commodities (Downward & Riordan, 2007).

Lastly, the economic time-allocation theory of Becker (1965), argues that individuals invest time and income directly to produce and then to consume sport. Production relies on access to income and time, and investments of these into sports production then influences human capital and social capital. This means that the costs of participation in sport fall and that

multiple sport individuals emerge as individuals invest in social characteristics that they see as desirable (Downward & Rasciute, 2010). A variant of the same model is developed by Humphreys & Ruseski (2009). In which, it suggests that subject to budget constraints, individuals purchase bundle of goods and services, and maximize utility by allocating time to participate in sport and all other activities such as; sleeping, sedentary leisure, paid work and home production/unpaid work, including childcare. As the above mentioned model, it also indicates that budget constraints, time availability and individual preferences play a major role in an individual's decision to participate in sport, and the duration of each episode of sport activity/exercise. The theories discussed above cover the influences on sport participation behaviour of individuals i.e., the decision to participate in sport, and the frequency and duration of sport participation. These theories predict that prior experience in sport is likely to raise participation levels.

2.3.1 Empirical evidence

All the empirical studies which measure general sport participation, utilize certain determinants that are used to explain the patterns and trends of sport participation in a given population. Research on sport participation typically focuses on one or combination of the following aspects that are used as dependent variable/s in a research study: The decision to participate in sport, and the frequency, intensity and duration of sport participation. The dependent variable/s in the empirical studies that are considered for review in this chapter are listed in Table 2.2. The decision to participate in sport is measured using a dichotomized variable. For example, regular sport participation at least once a week, (Studer, Schlesinger & Engel, 2011) or active sport involvement over the last 12 months (Scheerder & Vos, 2011), or do you practise sport in your free time? (Breuer, Hallmann & Wicker, 2011), with the possible answers of yes/no. The frequency of sport participation is measured using a continuous or ordinal variable. For example, Downward, Lera-Lopez & Rasciute (2014b) analyse the responses of respondents to a question asking how often do you practice in sports, in terms of number of days. To measure the intensity of sport participation dichotomized variables are often used. For example, Anokye, Pokhrel and Fox-Rushby (2014) examine responses of respondents to questions associated to participation in 'low time intensity', 'moderate time intensity' and 'high time intensity' sports, with the possible answers of yes/no.

Table 2.2

Summary of empirical studies with determinants of sport participation

Study, Country and Year	**Sample Characteristics**	**Theories/Models Considered**	**Measured (dependant) variable/s**	**Methodology**	**Findings/Evidence**
Stamm and Lamprecht (2011) Switzerland, 2007 Sport participation	2007 Swiss surveys: Swiss Health Survey (SHS), Sport Switzerland (SPOCH), and the Swiss Household Panel (SHP). Age: 15-74 years n = 16,733 (SHS) n = 10,264 (SPOCH) n = 6,428 (SHP)	None	Sports participation in Switzerland	Simple statistical analysis	Age (-), gender (neutral), education (+), income (+), higher management (+).
Studer, Schlesinger and Engel (2011) Switzerland 2000-2008	2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007 and 2008 Swiss household panel (SHP) n = 6,904	Basic model from behavioural economics	Dichotomized variable: Regular sports participation (at least once a week)	Multivariate regression analyses	Gender (neutral), age (-), income (+), education (+), less working hours (+)
Garcia, Lera-Lopez and Suarez (2011) Spian 2002-2003 Physical activity and sports	2002-2003 Spanish Time-Use Survey n = 27,268 Age: 18-65 years	Static neoclassical consumer model	Time spent on physical activity and sports	Seemingly Unrelated Regression (SUR) method and the Heckman two-step procedure	Education (+), married female (+), married male (-), age up to 33 (-), age 34 till retirement (+), medium or large sized cities (+)
Engel and Nagel (2011) Switzerland, 2008 Sport participation	2008 'Sport in life course' survey n = 1,739 Age: over 50 years	The life course approach- A retrospective longitudinal study	Sports participation over the lifespan- at least once a week over a 6-months period during leisure time	The Kaplan-Meier method and exponential transition rate model	Probability of returning to sport after age 40 tends to be higher, when they had previously engaged in more sport during younger age.

Study, Country and Year	Sample Characteristics	Theories/Models Considered	Measured (dependant) variable/s	Methodology	Findings/Evidence
Scheerder and Vos (2011) Flanders, 1969-2009 Sport participation	Five large scale surveys: 1969- n = 7,581 (Ostyn et al., 1980), 1979- n = 19,396 (Simons et al., 1990), 1989- n = 8,624 (Taks et al., 1991), 1999- n = 10,356 (Scheerder et al., 2002) and 2009- n = 5851 (Scheerder & Vos, 2010) Age: mainly 25-60 years	Repeated cross-sectional research, using time-trend analysis	Dichotomized variable: Active sport involvement of adults- overall sport participation over the last 12 months	1) Univariate and bivariate statistics 2) Binary logistic regression 3) Logistic regression modelling	**Univariate and bivariate analysis:** Gender (Neutral), age group 35-49 higher participation rate, higher education (+). **Binary logistic regression:** Female (+), age (-), higher education (+), single parents (-).
Breuer, Hallmann and Wicker (2011) Germany, 2007-2009 General sport participation	2007, 2008 and 2009, 7 sport participation surveys in Germany n = 26,263 Age: 3-101 years	Demographic–economic model is based on the economic theory of behaviour	Do you practise sport in your free time?	Logistic regression analysis	Sport participation increases until a certain age is reached and remains stable thereafter. Higher education (+), higher income (+), male (+), native of the country (+)
Pawlowski and Breuer (2011) Germany, 2006 Leisure services	2006 Continuous Household Budget Survey (CHBS) n = 7,724 households	Neoclassical demand theory and demographic translation framework	Expenditure shares of the leisure services serve as dependent variables	Extended regression models Tobit model (type 1 and 2)	1) Households living in rural areas have a lower probability to consume and spend a lower budget share on sport. 2) Households with young children (aged 6 and under) spend a significant lower budget share on sport. 3) Households with a white-collar worker as head of household have a higher probability to consume and spend a higher budget share on sport.

Study, Country and Year	Sample Characteristics	Theories/Models Considered	Measured (dependant) variable/s	Methodology	Findings/Evidence
Hallmann, Wicker, Breuer and Schüttoff (2011) Germany, 2008-2009 Sports participation	Sport infrastructure data: Secondary data provided by the respective municipalities. n = 25 for the metropolis n = 53 for the medium sized municipalities	Economic behaviour theory	Sport activity at least once per week	Within a multi-level analysis, a separate regression model (sub-model) is calculated for every level	1) Metropolis- People with no migration background/foreign nationality, a high educational level and a high weekly workload are more likely to participate in sport. 2) Medium-sized municipalities- young people with no migration back-ground/foreign nationality and a high educational level who spent lots of time for the care of children and relatives are more likely to practise sport.
Ruseski, Humphreys, Hallmann and Breuer (2011) Germany, 2009	2009 primary data n = 1,934 Age: 3-70 years	Economic model of participation and time spent in physical activity developed by Humphreys and Ruseski (2009)	Do you practise sport in your free time? Plus, weekly frequency and duration of sports participated in the last week, throughout the last year asked.	Probit and tobit models	Sport participation at first increases with age and then decreased after peaking sometime in middle age. Gender (neutral), higher education (+), native Germans (+), caring for children and relatives (-), active children in the household (+), presence of children in the household (-), time constraint (-).
Downward, Lera-Lopez and Rasciute (2011) Spain, 2005 Sport participation	2005 Centro de Investigaciones Sociológicas (CIS) and the Spanish High Council for Sport (CSD) n = 8,170 Age: 18-74 years	No attempt is made to discriminate between the available approaches and the empirical work note the broad shared insights from various approaches.	Any sport and sport frequency	1) Regression with Binary Probit and Ordered Probit 2) Zero-Inflated Ordered Probit (ZIOP) model	**Participation:** Male (+), parental influence (+), age (+) **Frequency:** Higher income (+), age (+), watching sport on television (complementary) **Motivation:** Stay fit
Kokolakakis, Lera-Lopez and Panagouleas (2011) Spain	Spain: 2005, centre for sociological research (CIS) n = 7,078	Neoclassical and Heterodox economic theories	Recreational and/or competitive sport	Logistic regression	**England:** Female (+), age (-), higher education (+), professional or managerial occupation (+)

Study, Country and Year	Sample Characteristics	Theories/Models Considered	Measured (dependant) variable/s	Methodology	Findings/Evidence
(2005) and England (2005/06), 40 different professional and nonprofessional sports and recreational activities	Age: 16-74 years England: 2005-06 Active people survey (APS) n = 319,131 Age: 16-74 years		participation lasting at least 30 minutes		**Spain:** Gender (Neutral), age (-), higher education (+), professional or managerial occupation (+).
Palacios-Ceña, Fernandez-de-las-Peñas, Hernández-Barrera, Jiménez-Garcia, Alonso-Blanco and Carrasco-Garrido (2012) Spain, 2000-2010	2000, 2005 and 2010 Sporting Behaviour of the Spanish Population (SBSPS) n = 21,381 Age: 15 years and above	None	Do you actually practise one or more sports?	Multivariate logistic regression models	Female (-), age (-), higher education (+) No time due to work or study
Anokye, Pokhrel, Buxton and Fox-Rushby (2012) England, 2006 Participation in physical activity	2006 Health Survey for England n = 14,142 Age: 16 years and above	Process' modelling frameworks	Decision to participate in physical activity and exercise activities (vigorous) during the past 4 weeks	Single probit regression model	**Female:** White (+), education (+), drinkers (+), more household children (-), age (-), smokers (-), marriage and living with partner (+) and higher income (+). **Male** respondents have same results except more household children (+) and married (-).
Hallmann and Breuer (2012) Germany, 2009 Sport participation	2009 primary data n = 1,934 Age: 3-90 years	Beckerian approach and the economic theory of behaviour	1) Weekly participation in sports 2) Frequency of weekly participation in sports	Regression analysis	Higher education (+), income (neutral), social recognition and friends involvement (+) and family involvement (+).
Humphreys, Maresova and Ruseski (2012) International (34 countries), 2007	2006-2008 International Social Survey Programme (ISSP) n = 51,952	Economic model of participation and time spent in sport and physical activity	Sport and physical activity participation and	Probit model	Higher income (+), working long hours (-), education (+), age (-),

Study, Country and Year	Sample Characteristics	Theories/Models Considered	Measured (dependant) variable/s	Methodology	Findings/Evidence
Leisure time sport and physical activity	Age: Mean age of participants 46 years	developed by Humphreys and Ruseski (2011)	frequency of participation		married (-), higher household size (-).
Federico, Falese, Marandola and Capelli (2012) Italy, 2006 Sport and leisure time physical activity participation	2006 National Institute of Statistics n = 27,760 Age: 25-64 years		Frequency of sport and leisure time physical activity in the last 12 months	Multivariable logistic regression models	Gender (neutral), higher education (+), occupation (-)
Thibaut, Vos and Scheerder (2014) Flanders, 2009 Sport participation	2009 Cross-sectional sample of households in Flanders n = 3005 households	Neoclassical and Heterodox approaches	Sports participation habits and expenditure on sports participation	Two-step Heckman approach	**Sport participation:** Family income (+), sports participation during youth (+), **Household spending:** Higher family income (+), lower household size (+), higher household education (+).
Anokye, Pokhrel and Fox-Rushby (2013) England, 2006 Participation in sport and exercise	2006 Health Survey for England n = 14,142 Age: 16 years and above	Economic theory	1) Any sports and exercise activities 2) low time intensity activities 3) moderate time intensity activities 4) High time intensity activities	1) Probit regression models are fitted adjusting for a range of covariates 2) principal component analysis (PCA)	Evidence suggests that the increase in wage earnings may not be directly transferable to active leisure purposes.
Balish, Rainham and Blanchard (2014) International (22 countries), 2006-2008 Individual sport, team	2006-2008 International Social Survey Programme (ISSP) n = 27,693 Age: Mean age of participants 46 years		Dichotomous variables: 1) Participation in individual sport 2) Participation in team sport	1) Hierarchal non-linear Bernoulli modelling 2) Unconditional models 3) Three non-linear,	1) Evidence show that communities between 100, 000 and 10, 000 residents are related to increased sport participation, particularly team sport participation. 2) Community with less than 10

Study, Country and Year	Sample Characteristics	Theories/Models Considered	Measured (dependant) variable/s	Methodology	Findings/Evidence
sport, and exercise participation			3) Participation in exercise	multilevel Bernoulli models 4) Logistic regression	000 residents is negatively related to exercise participation.
Gallardo, Sánchez-Sánchez, Calabuig, Burillo, Felipe and Fernández-Luna (2014) Five European countries (Spain, Italy, Cyprus, Ireland, and Hungary), Physical activity habits	2010 Primary data n = 856 Age: 12-81 years	1) Economic perspective 2) Sociological perspective 3) Psychological perspective (Psychological Continuum/Connection Model (PCM) or Theory of Participation)	Frequency, place, reason for physical activity habits, along with the fitness level of the participants.	1) Descriptive statistics 2) Nonparametric statistics 3) Residual analysis 4) Two-tailed tests	**Frequency of physical activity:** Gender (neutral), age (-) up to 65 years.
Downward, Lera-López and Rasciute (2014) Europe, 2009 Sport participation	2009 Eurobarometer 72.3 n = 26,788	1) Economic time-allocation theory of Becker (1965) 2) The economic theoretical approach 3) Sociological and psychological theories 4) Lifestyle factors	**Sport participation questions:** Dichotomized variable- Do you participate in sport? Ordinal variable- How often do you practice in sport?	Zero-Inflated Ordered Probit (ZIOP) analysis	**Motivational factors for participation:** 1) Women are affected more by a need to improve self-esteem. 2) Men are affected by the need to produce social integration.
Rowe (2014) England, 2011 Sport participation	October 2011 Active People Survey (APS) n = 4527 Age: 16 years and over	Theory of sporting capital	Sport participation questions from physiological, psychological and social perspectives	Factor analysis and linear regression	1) The higher the level of sporting capital, higher the probability that someone will participate regularly in sport. 2) Lower the level, higher the probability of sedentary behaviours and drop-out, i.e. of not participating.

Study, Country and Year	Sample Characteristics	Theories/Models Considered	Measured (dependant) variable/s	Methodology	Findings/Evidence
					3) Men have higher sporting capital level than women.
Muñiz, Rodríguez and Suárez (2014) Spain, 2002-2003 Sports and cultural habits	2002-2003 Time Use Survey (TUS) n = 24,000 households Age: 18-65 years	Econometric model	How many times individuals have practiced sports in the last 4 weeks	Zero-Inflated Poisson (ZIP) model and the Zero-Inflated Binomial Negative (ZINB) model	Female (-), having children (-), large cities (+), higher income (+).
Downward and Rasciute (2015) England, 2007/08-2009/10, England Sport participation	1) Active People Survey (APS)- 2007/08 and 2009/10 2) Active Places Survey (APLS)- 2008 n = 1000 and 500 respondents per local authority Age: 16 years and over	WHO's Health Enhancing Physical Activity (HEPA)	Sport participation in the last 4 weeks- frequency, duration and intensity	Zero-Inflated Ordered Probit (ZIOP) model	Family (-), higher education (female)- higher intensity
Eime, Harvey, Charity, Casey, van Uffelen and Payne (2015), Australia Health-Enhancing Leisure-time Physical Activity	2010 Exercise, Recreation and Sport Survey (ERASS) was conducted by telephone interview in four quarterly waves	Health-Enhancing Leisure-time Physical Activity (HELPA)	HELPA activities and sessions of HELPA activity by setting and frequency	Cross-tabulation a measure of concordance (the gamma statistic)	Health (+)
Eime, Harvey, Charity and Paine (2016) Sport participation, Australia	Australian sports club membership data from five popular team sports 2010-2012 (Australian rules football, basketball, cricket, hockey and netball)		Sport participation for the period 2010–2012	Estimated resident population (ERP), Membership registrations per 100	Children 5-14 years (+), female older than 15 years (-),

Study, Country and Year	Sample Characteristics	Theories/Models Considered	Measured (dependant) variable/s	Methodology	Findings/Evidence
	n = 414,167 in 2010 to 465,403 in 2012			persons and Rate ratio	
Borodulin, Harald, Jousilahti, Laatikainen, Männistö and Vartiainen (2016) Leisure time physical activity, Finland	Series of National FINRISK studies from 1982 to 2012 in Finland n = 46214	Leisure Time Physical Activity (LTPA), Commuting Physical Activity (CPA), Occupational Physical Activity (OPA)	1) How much do you exercise and stress yourself physically in your leisure time?	1) Ordinal logistic regression 2) Time trends	Men (+), Women (-)
Garcia, Muniz, Rodriguez and Suarez (2016) Sport Participation, Spain	Spanish Time Use Survey (Encuesta de Empleo del Tiempo) 2002-03 n = 60000 Age: 18-65 years	Neoclassical time allocation model	1) Have you done any of the following sports in the last four weeks? 2) How many times in the last four weeks?	Zero-inflated negative binomial (ZINB) count data models	Sport participation: Job (- or =), hourly wages and non-labour income (+), less time (-), more adults (-), female (-), Age (-), education (+), more than two adults and children at home (-), winter and spring (-), summer (+) Frequency: Male (+), age (U shaped), working (-), higher wage (+), non-labour (-).
Downward and Rasciute (2016) Sport Participation, Briatin	British Household Panel Survey (BHPS) between 1996/7 and 2006/7 n = 34,624 Age: 16 years and over	Peer effects and their identification: Endogenous, exogenous and correlational effects.	How frequently do you play sport or go walking or swimming?	Dynamic panel data analysis: Fixed effects, random effects and OLS estimators	Employed (-), student (-), age (-), married (-), long illness (-), education (+), male more than female (+)
Marques, Martins, Peralta, Catunda and Nunes (2016) Sport and Physical activity, Europe	European Social Survey round 6, 2012 n = 29,278 Age: 15 years and older	WHO's Health Enhancing Physical Activity (HEPA)	On how many of the last seven days did you walk quickly, do sports, or other PA for 30 min or longer?	Mann–Whitney test and Chi-square test ANOVA: Tukey's HSD test; Student t-test	Female more than male (+) , education (+), unemployed and students (+), rural area (+), more members in the household (+), income (+)

Study, Country and Year	Sample Characteristics	Theories/Models Considered	Measured (dependant) variable/s	Methodology	Findings/Evidence
				Chi-square test and Fisher's exact test Binary logistic regression analysis	
Cheah, Azahadi, Phang and Hazilah (2017) Physical activity, Malaysia	National Health and Morbidity Survey 2011 (NHMS 2011) n = 17,783		1) In the past 7 days, how many days in which physical activity (including leisure, work, home and transport) for at least 10 min per session were carried out? 2) On the day you carried out the physical activity, how long did you do this activity?	Lognormal hurdle model	Male (-), age (-), unmarried (-), have insurance (+), health (+) Time spent: smoking (-), health (-), education (-), unmarried (-)
Kokolakakis, Castellanos-Garcia and Lera-Lopez (2017) Sport participation, England	Active People Survey (APS) 5, 2010/11 n = Approximately 166000 Age: 16 years and over		1) Informal participation at least once per month 2) Formal participation at least once per month 3) No participation in the last month 4) Frequent formal participation at least three times per week	beta and Dirichlet models	**Formal Participation:** Education (+), urban environment (+), male (+), children in households (+), income over £41,600 (+) **Informal participation**: Education (+), urban environment (-)

Study, Country and Year	Sample Characteristics	Theories/Models Considered	Measured (dependant) variable/s	Methodology	Findings/Evidence
Van Cauwenberg, Van Holle, De Bourdeaudhuij, Van Dyck and Deforche (2017) Physical activity participation (Mainly walkability), Belgium	Belgian Environment & Physical Activity Study in Seniors (BEPAS-Seniors) 2010-2012 n = 508 Age: 65 years and older	Mediating relationships of transportation walking and Moderate Vigorous Physical Activity (MVPA) in total relationships of walkability with health outcomes	How important following eight possible reasons were for selecting their neighbourhood for physical activity: proximity of open spaces, public transit, shops and services, recreational facilities, family and friends living nearby, easy to walk/having to drive the car less frequently, sense of community and safety from crime	R packages Multilevel linear regression model Mediation analyses	Health (+), income (+),

Notes: N = Number of participants (+) = Increases participation, (-) = Decreases participation

To measure the duration of sport participation, continuous variables are typically used. For example, Ruseski, Humphreys, Hallmann and Breuer (2011) analyse responses about the number of minutes of sports participation in the last week, throughout the last year.

As shown in Table 2.2 there are several empirical studies which have investigated sport participation by utilising socio-demographic determinants like age, gender, marital status, household members, nationality, occupation, place of residence. Economic determinants such as; income, time, along with human capital (level of education) have also been used in several empirical studies. Lifestyle/behavioural factors like smoking, drinking, live sports viewership, and family or friends involvement/influence have also been used in some studies. Empirical evidence of these determinants of sport participation is reviewed below.

Empirical investigation related to sport participation until 2010 is summarised by Downward et al., (2011), and suggest that the probability of sports participation decreases with Studer et. al., 2011), Flanders-Belgium (Scheerder & Vos, 2011), England (Kokolakakis, et al., 2011), Spain (Kokolakakis et al., 2011; Palacios-Ceña et al., 2012). An international study by Humphreys, Maresova & Ruseski (2012) involving 34 countries and Gallardo et al., (2014), involving five European counties (Spain, Italy, Cyprus, Ireland and Hungary) also show that sport participation declines with age. However, other studies have shown different results, a Spanish study shows that from adulthood until 33 years of age sport participation decreased and from 34 years until retirement age sport participation increases (Garcia, Lera-Lopez & Suarez, 2011). Similarly, a Swiss study by Engel and Nagel (2011), shows that the probability of returning to sport after the age of 40 tends to be higher if and when they had previously engaged in more sport during younger age. In contrast to these two studies, German studies show that either sport participation at first increases with age and then decreases after peaking in middle age (Ruseski et al., 2011), or sport participation increases until a certain age is reached and remains stable thereafter (Breuer et. al., 2011).

Summary of empirical studies on sport participation offered by Downward et al., (2011) until 2010, suggest that males tend to participate more in sport than women and with higher frequencies. However since 2011, some studies claim that, the gap in gender participation has narrowed in certain countries in the last 10 years (Fridberg, 2010; Stamatakis & Chaudhury, 2008), and show that in countries like Switzerland, Flanders-Belgium, Spain, Germany, Cyprus, Ireland, Hungary and Italy there is no difference in sport participation levels between male or female population (Stamm & Lamprecht, 2011; Studer et al., 2011; Scheerder & Vos,

2011; Ruseski et al., 2011; Federico, Falese, Marandola and Capelli, 2012; Gallardo et al., 2014). However, other studies show that female participation in sport is higher than male in countries like Spain, Falnders-Belgium and England (Garcia et al., 2011; Scheerder & Vos, 2011; Kokolakakis et al., 2011) and some studies show that male participation is higher than females in countries like Germany and Spain (Breuer et al., 2011; Downward et al., 2011; Palacios-Ceña et al., 2012; Muñiz, Rodríguez & Suárez, 2014; Borodulin et al., 2016).

It has been suggested that, until 2010, married people participate less in sports and dedicate less time, and households with greater number of adults and children are more likely to participate in sports (Downward et al., 2011). Since 2011, studies who that, single parents are less likely to participate in sports (Scheerder & Vos, 2011), particularly among females (Anokye et al., 2012). The presence of children who are not very active decreases the sport participation levels among adults in the household (Ruseski et al., 2011; Anokye et al., 2012; Muñiz et al., 2014), however, having active children in the household, increases the sport participation levels among adults (Ruseski et al., 2011). Also, it has been reported that, as the household size increases, sport participation level decreases (Humphreys et al., 2012; Thibaut et al., 2014), and households with children aged 6 and under spend a significant lower budget share on sport (Pawlowski & Breuer, 2011).

Three German studies show that natives of the country participate more in sports compared to foreigners (Breuer et al., 2011; Ruseski et al., 2011; Hallmann et al., 2011). The lower levels of participation among people with a migration background could be due to experiences in cultural barriers (Snape & Binks, 2008: Hallmann et al., 2011). Occupational status seems to affect sport participation, as lower participation levels among non-skilled workers and lower socio-economic groups, and higher frequency of participation among those with white collar jobs has also been reported (Downward et al., 2011; Stamm & Lamprecht, 2011; Kokolakakis et al., 2011). It has also been suggested that, households with a white-collar worker as head of the household have a higher probability to consume and spend a higher budget share on sport (Pawlowski & Breuer, 2011).

Living in cities or rural areas also seems to affect sport participation, as those living in medium or large sized cities show higher probability of participating in sports (Garcia et al., 2011; Muñiz et al., 2014; Balish, Rainham & Blanchard, 2015), and households living in rural areas have a lower probability to consume and spend a lower budget share on sport (Pawlowski

& Breuer, 2011). However, empirical evidence from Australia suggests the opposite relationship (Eime, Harvey, Charity & Payne, 2016).

Downward et al., (2011) suggest that empirical studies until 2010 show that, higher the education level, higher the reported levels of sport participation. However, no conclusive evidence on the frequency and duration of sport participation is reported based on education levels. Higher reported levels of sport participation among higher education group, could be attributed to higher hourly wages that helps to allocate resources (time and money) to sport participation, and also to greater awareness of the importance and benefits of sport participation. The sedentary occupation of higher education group may serve as a motivational factor for higher levels of sport participation due to the benefits associated with it (Fridberg, 2010). Similar results could be found in empirical studies since 2011, as there seems to be a general consensus among many studies that higher the income and/or educational levels, higher the levels of sport participation (Stamm & Lamprecht, 2011; Studer et al., 2011; Garcia et al., 2011; Scheerder & Vos, 2011; Kokolakakis et al., 2011; Breuer et al., 2011; Ruseski et al., 2011; Downward et al., 2011; Palacios-Ceña et al., 2012; Anokye et al., 2012; Humphreys et al., 2012; Federico et al., 2012; Thibaut et al., 2014; Muñiz et al., 2014). However, a Spanish study done by Garcia, Muniz, Roudriguez and Jose Suarez (2016) suggest that working full time reduces participation and frequency.

Particularly in the UK, drinking alcohol has been associated with higher sport participation levels, whereas, those who smoke report lower participation levels (Anokye et al., 2012; Cheah, Azahadi, Phang & Hazilah, 2017). Among other behavioural/lifestyle factors, watching live sports seems to increase the frequency of sport participation (Downward et al., 2011) and family and friend's involvement/influence increases sport participation levels (Hallmann & Breuer, 2012; Downward, Hallmann & Pawlowski, 2014a). Time constraint due to study (Palacios-Ceña et al., 2012) or working long hours seems to be a barrier for sport participation (Ruseski et al., 2011; Palacios-Ceña et al., 2012; Humphreys et al., 2012).

The empirical evidence presented above shows that, men not only participate more in sport than women but also show higher frequency of participation, and most of the research shows that sport participation decreases with age. The household size seems to influence sport participation, where having active children in the household increases participation, but having children who are not active and those under the age of 6 decreases participation, particularly among single parents. Those who are native of the country and those who work at the

managerial level and above show higher sport participation rates than their counter parts, and people living in urban area show higher participation levels than those living in rural areas. Results from empirical studies demonstrate a general consensus with regards to individuals reporting lower sport participation levels among those with lack of time, lower income and educational levels and vice versa. Behavioural factors like drinking alcohol, watching live sports and friends/family's influence seems to increase participation levels, whereas cigarette smoking has been linked with lower sport participation levels.

Among barriers for participation in sport, those with lower household income levels are less likely to participate, as it requires sporting goods and services that will cost money. Time constraints due to occupation, those who work for long hours and where one must care for children or elderly has been negatively correlated with participation, since they may find difficult to spare time.

The above mentioned determinants of sport- based on socio-demographic, economic and behavioural/lifestyle factors will be utilised to understand the participation behaviour of the facility users. There is very little evidence about whether participation differs among individuals who use different types of facilities for their sporting needs. The alternative forms of sports provision that depicts the multiagency, cross-sector nature in which public, private and LMC facilities operate in the same sport delivery system need to be studied collectively to examine if this has varying effect on individuals' participation. In this thesis, individuals' participation will be examined categorised by the type of the facility they use for their sporting needs.

2.3.2 Empirical evidence of sport outcomes

Following the discussion of the sport outcomes in chapter 1.4, empirical evidence of well-being, health and social capital that results from sport participation is presented below:

Subjective well-being: Economists and social scientists have examined the impact of sport participation on well-being based on secondary data, by analysing the individual, socio-economic and environmental factors. These are recognised as; age, ethnicity, level of education, marital status/household composition, income and its aspirations, unemployment and employment/self-employment. Studies examining the impact of sport participation on well-being measure is based on a single item scale, comprising statements of either the

respondents' happiness with life or satisfaction with life as a whole (Downward & Rasciute, 2011).

In the literature, there is evidence indicating a positive impact of sport on the well-being of individuals (Hassmen, Koivula & Uutela, 2000; Stubbe, de Moor, Boomsma, & de Geus, 2007; Rasciute & Downward, 2010; Pawlowski, Downward & Rasciute, 2011; Downward & Rasciute, 2011; Huang & Humphreys, 2012; Ruseski, Humphreys, Hallmann, Wicker & Breuer, 2014). In examining the effect of sport participation on individuals' subjective well-being with the use of individual, socio-economic and environmental factors, Downward and Dawson (2015) present a literature review. In this, it has been suggested that age shows a U-shaped relationship with well-being, suggesting that individuals show high levels of well-being during the younger age, and lower levels during middle age, and higher levels of reported well-being in the old age. Females tend to report greater happiness compared to males. White ethnicity is associated with greater well-being comparatively, but the gap between white and other ethnicities is declining, and higher levels of education is associated with higher levels of well-being. It has also been suggested that being married increases well-being of individuals compared to being divorced/separated/bereavement. Among the economic factors, higher income and its aspirations can increase an individual's well-being, and employment compared to unemployment is associated with higher levels of well-being. Environmental factors such as civil conflict, Russian economic transition, German reunification, in transition economies and drought have also been examined in relation to well-being, however, these factors are not relevant in the context of this thesis.

Among other factors that may influence individuals' well-being, Hassmén et al., (2000) suggest that more physically active participants experienced less depression, less suppressed anger and less perceived stress in comparison to those who exercised less frequently. Research has also shown that sport participation reduces depression and improves mood and thereby improves well-being (Chalder et al., 2012; Krogh, Nordentoft, Sterne & Lawlor, 2011). It has been found that physically active people are more satisfied with their lives and happier than those who are physically inactive (Stubbe, et al., 2007; Huang & Humphreys, 2012; Ruseski et al., 2014) and participation in outdoor physical activity induces greater enjoyment and more activity as well (Coon et al., 2011). Not only among healthy individuals, but also disabled participants have reported that sport participation increases life satisfaction (Lee & Park, 2010).

Health: The literature suggests that, sport has a positive impact on physical health (Bravata et al., 2007; Sofi, Capalbo, Cesari, Abbate & Gensini, 2008; Lechner, 2009; Brechot, Nüesch & Franck, 2014; Humphreys et al., 2014; Sarma, Devlin, Gilliland, Campbell, & Zaric, 2015; Van Cauwenberg, Van Holle, De Bourdeaudhuij, Van Dyck & Deforch, 2017). Practising sport regularly has many physical benefits, among which it helps to improve cardiovascular and respiratory fitness (Sofi et al., 2008; Warburton et al., 2006), that could prevent several non-communicable diseases, like coronary heart disease, hypertension, stroke, colon cancer, breast cancer, type 2 diabetes, and osteoporosis (Allender et al., 2007; Humphreys et al., 2014), and physically inactive people are most likely to be obese (Zanin, 2015), which in itself is a crucial risk factor for chronic non-communicable diseases (Warburton et al., 2006; Brown, Burton & Rowan, 2007). Empirical evidence also suggest that sport is beneficial to health with or without weight loss (O'Donovan et al., 2010), indicating regardless of weight issues, one needs to engage in sports for health benefits. Mcloed and Ruseski (2015), found that those who are physically active are less likely to report having arthritis and high blood pressure. It has also been found to improve bone health and muscle strength (Warburton et al., 2006; Warburton, Katzmarzyk, Rhodes, & Shephard, 2007), and Brechot et al. (2014), found that there is a significant reduction in the number of doctor visits, overweight and sleeping problems, if sport is practised at least once a week.

Social capital: Putnam (2000) has observed that social capital declines due to irregular meeting of acquaintances and reduced association with individuals who may have different values and characteristics. Sport participation as a voluntary association is one of the important sources through which social interaction could be achieved that might help to develop trust and civic engagement (Sobel, 2002; Downward, Pawlowski & Rasciute, 2013), thereby improving social capital within a population. The experience of association that generates trust and consequently social capital is viewed as a central general feature of the social capital literature (Delhey & Newton, 2003). Similarly, empirical findings show that those who engage in physical activity/sports have more friends, meet them more often, and integrate more in social contexts than those who are not physically active contributing to users' citizenship and social capital (Pawlowski et al., 2011).

Empirical findings show that those who engage in physical activity/sports have more friends, meet them more often, and integrate more in social contexts than those who are not physically active (Becker & Haring, 2012). It has been suggested that those who are physically active experience less cynical distrust and stronger sense of coherence compared to those who

are relatively physically inactive (Hassmén et al., 2000). Delaney and Kearny (2005), suggest that there is a strong correlation between sports club membership and the levels of social capital at the individual and the national level. It has been found that, sport clubs are important venues for social contacts, and these interactions are largely restricted to maintain existing relations rather than establishing new ones, particularly in fitness centres (Ulseth 2004; Fussan, 2006). Pawlowski, Schuttoff, Downward and Lechner (2016), find significant effect of sports participation (in groups) on social capital through the perceived support of friends and peers in difficult times. However, Downward, Hallmann & Rasciute (2017) identify no association between sports participation and social capital.

It is also important to note that, these sport outcomes in the literature are either examined individually or with the combination of health and well-being, and very few studies have examined all the three sport outcomes in a single study, and none of the studies have examined the interrelationship between these three outcomes. It can be argued that the three outcomes of health, well-being and social capital are interrelated, and one could influence the other e.g. better health may lead to better well-being and social capital and vice versa. Similarly, research has shown that interrelationship between participation and the outcomes exists (Lechner, 2009; Downward & Dawson, 2015; Downward et al., 2014b) i.e., not only adequate amount of sport participation will help to achieve better health, well-being and social capital outcomes but also those who have better outcomes are more likely to participate in sports. Further, it has not been examined if individuals' outcomes vary depending on which type of sport and fitness facility they use for their sporting needs. The alternative forms of sports provision that depicts the multiagency, cross-sector nature in which public, private and LMC facilities operate in the same sport delivery system that is prevalent in the UK need to be studied to examine if this has varying effect on individuals' outcomes. Hence, in this thesis, individuals' outcomes will be examined categorised by the type of the facility they use for their sporting needs, which will help to achieve one of the objectives of this thesis.

2.4 Conceptual model

Based on the policy and literature review discussed in chapter 1 and 2, a conceptual model has been developed to indicate how different aspects of sport provision in a sport delivery system might be related. Figure 1 below outlines the scope of the thesis and postulates that sport policies set at the macro level influences the sport and fitness facilities' ownership

types as well as its strategic priorities, and based on the strategic priorities, facilities with different ownership types offer different services which defines their characteristics. The characteristics of facilities might influence end user's choice of utilising the available services driving their sport participation behaviour which may then have an impact on their subjective health, well-being and social capital.

Figure 1

Schematic representation of the conceptual model

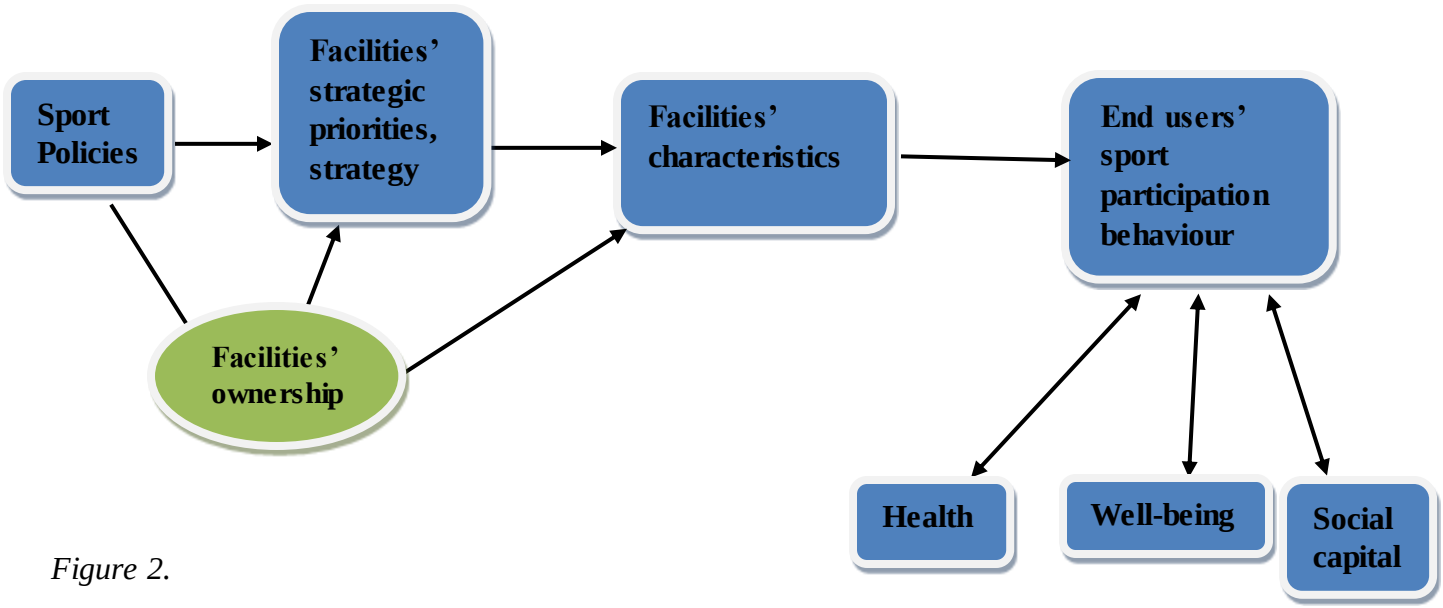
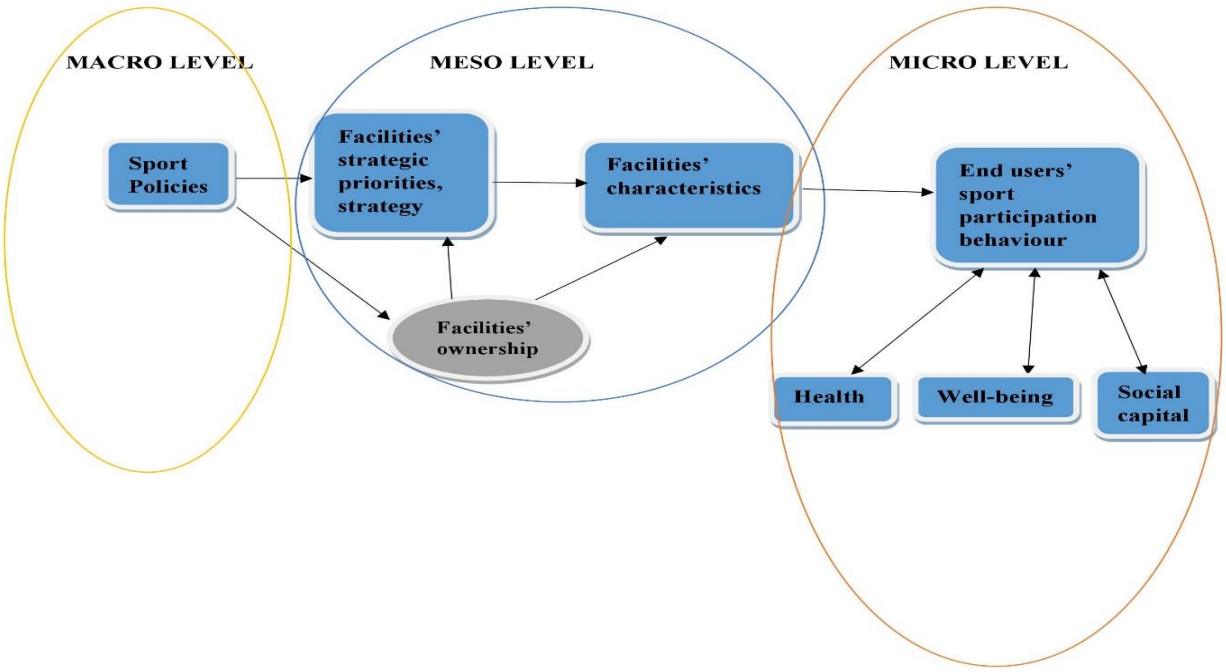


Figure 2.

Schematic illustration of sport delivery system and the conceptual model



As shown in Figure 1 and 2 above, the arrows indicate the relationship postulated to exist. Thus, sport policies will influence facilities' ownership and strategic priorities. The double headed arrows indicate that endogeneity might be present, in that sport participation may not only improve an individuals' health, well-being and social capital, but also those individuals who have better health, well-being and social capital might participate in sport more often. This raises the question of how this model relates to the sport delivery system that is explained in chapter 1.1, and Figure 2 above depicts a schematic representation of the same.

Chapter 2 conclusion: Based on the evidence presented in the previous sections of this chapter, it can be concluded that sport participation has clear benefits associated with individuals' well-being, health and social outcomes. Along with this, there is consensus that facility provision is important in improving participation which consequently affect health, well-being and social capital of the individuals (MacIntosh & Spence, 2012). However, there is very less evidence relating to the role of the supply side of sport provision in achieving these outcomes, representing a significant gap in our understanding on how sport delivery system influence individuals' sport participation behaviour and the consequent impact this has on their health, well-being and social capital. Particularly there is no evidence on sport delivery system as a whole which spans across macro to the meso level, in which there exists a multiagency, cross-sector collaboration approach to sport provision that may have an influence on the micro level of the system in which it affects users' sport participation behaviour and their outcomes.

In this regard, the above discussed determinants of sport- based on sport facilities/infrastructure factors, and socio-demographic, economic and behavioural/lifestyle factors, along with the sport outcomes of health, well-being and social capital will be utilised to understand if the multiagency, cross-sector collaboration that is prevalent in the UK sports delivery system has any influence on individuals' participation and their outcomes and if it varies based on facilities' ownership types and configuration/characteristics i.e., if different types of sport and fitness facilities' strategic priorities, strategy, ownership and characteristics has any influence on the individuals' sport participation and the consequent impact this has on their health, well-being and social capital and if it varies based on the facilities' ownership types and characteristics. Whilst this is examined, the interrelationship between participation and the outcomes, as well as between the outcomes will be analysed as well.

CHAPTER 3: METHODOLOGY

This chapter will outline the philosophy, methods, design and strategy of the research to answer the research question. Section 3.1 will discuss the research paradigm in which ontology and epistemology is discussed in section 3.1.1, which also includes the justification of the researcher's philosophical assumptions in answering the research question addressed in this thesis. Section 3.1.2 will discuss various research designs, and section 3.1.3 will present different research methods. Considering the conceptual model explained in chapter 2.4, section 3.1.2 and 3.1.3 will explain and justify the selection of research designs and research methods in order to address the research question, aim and objectives. Considering different levels of the sport delivery system which is explained in chapter 1.1, section 3.2 will explain and justify the sampling procedures undertaken in each of those levels, followed by the research instruments developed in section 3.3. Data analysis to be undertaken to address the research question, aim and objectives is discussed in sections 3.4.1 and 3.4.2. The final section 3.5 of this chapter will discuss validity and reliability and will explain how validity and reliability is addressed in this thesis in section 3.5.1, which is then followed by various aspects of the ethical concerns addressed in conducting research and is highlighted in section 3.5.2.

3.1 Research paradigm

Philosophically, researchers could assume different ontological and epistemological positions to develop a research plan that will help to address their research question, aim and objectives and these are discussed below.

3.1.1 Ontology and epistemology

Ontology and epistemology are closely related and are often wrongly collapsed together. However, there is a distinction between them (Grix, 2002). Ontology, which is the starting point of all research, helps a researcher to understand 'what is out there to know about a subject' whereas epistemology, which is a core branch of philosophy helps to understand 'what and how can we know about it' (Grix, 2002). It is important to understand the ontological and epistemological assumptions that underpins a research for the following reasons (Grix, 2002):

- To understand the interrelationship of the key components of research
- To avoid confusion when discussing theoretical debates and approaches

- To be able to recognise others', and defend a researcher's own, position

Everitt and Fischer (1995), suggest that ontology is the 'study of being' or 'study of existence', and Blaikie (2000), suggests that ontological assumptions involves nature of reality of a social phenomenon, and claims about "what exists, what it looks like, what units make it up and how these units interact with each other" (P. 8).

Ontological assumptions could be classified into two main perspectives; 'objectivism' and 'constructivism'. Objectivism asserts that reality exists separately from consciousness and that something can exist and have its own meaning separately from social actors and their influence (Crotty, 1998). In contrast, constructivism which is at the other end of the spectrum in ontology, assumes that reality could be uncovered from human engagement with the world (Crotty, 1998). It has been argued that ontological assumptions are not true in any absolute sense (Guba & Lincoln, 1994), and as a critique for these two perspectives, it has been argued that a new ontology is required (Bhaskar, 1979). In this regard, critical realism as a realist philosophy of science provides an alternative paradigm, in which one is able to speak and understand reality of as existing apart from human experience, thought, language and knowledge of such reality (Bhaskar, 1979).

Epistemological assumptions develop how the researcher seeks knowledge. As Blaikie (2000, p. 8) suggests "it claims about how what is assumed to exist can be known". It mainly focuses on the knowledge gathering process that helps in developing new models and theories which is not static, but forever changing (Grix, 2002). The epistemological position of a researcher has the following influences on a research study (Carter & Little, 2007):

- It influences the relationship between researcher and participant – whether participants are viewed as active contributors or subjects to be studied.
- It influences the way in which the quality of methods is demonstrated– the types of actions undertaken to ensure data collection and analysis is rigorous.

Two contrasting epistemological positions are those contained within the perspectives of 'positivism' and 'interpretivism' (Bryman, 2001). Critical realism could be said to lie between these alternatives; thus, each are now considered:

Positivism: Bryman (2001, p. 12), suggests that positivism "is an approach that advocates the application of the methods of the natural sciences to the study of social reality and beyond". The positivist approach helps to find regularities and causal relationships between the

components of a theory/model (Burrell & Morgan, 1979), while trying to identify general patterns and trends among the research participants, with an option to generalise results at an aggregate level (Lin, 1998) and is commonly associated with quantitative research. The positivist approach involves the researcher assuming that they can study a subject without influencing it or being influenced by it and is able to suspect any threats to the validity of the research methods and adopt appropriate strategies to reduce or eliminate it (Guba & Lincoln, 1994). It is also argued that it helps to prevent outcomes of the research from being influenced by values and biases and has been suggested that this enables the findings from such a research study replicable and true (Guba & Lincoln, 1994). The critiques of positivist approach claim that "the difficulties of capturing social reality in formal propositions, quantifying it, and subjecting it to experimental controls" (Lee, 1991, p. 343) is more complex and is not as straight forward as it is in natural science. It is argued, this is due to the social and cultural elements associated with the subject matter, and if the methods of natural sciences are implied stringently it may lead to the possibility of neglecting these elements (Strauss & Corbin, 1998). However, other researchers suggest that the properties of a social world could be measured objectively as it exists externally to the human subjects (Easterby-Smith, Thorpe & Lowe, 1991).

Interpretivism: This approach argues that the differences between the analysis of people and the objects of natural sciences needs to be accounted for. Hence it suggests that, researcher needs to grasp the subjective meaning of social action (Bryman, 2001) and is commonly associated with qualitative research. Schutz (1973), advocating in favour of interpretivist approach, claims that the methods of natural sciences are inadequate in social science research. As subjective meanings do not have any value in the natural sciences, whereas the subjective meanings created in the social sciences needs to be accounted for (Schutz, 1973). According to Lee (1991) social science research with an interpretivist approach, in which the people, the physical and the social artefacts that are utilised for analysis is fundamentally different from only the physical reality examined in the natural sciences (Lee, 1991). As physical reality could be studied objectively without the involvement of subjective meanings. However, in social science research the human action, the physical and the social artefacts that are formed in a particular context and are being studied, can have different meanings for different human subjects, including the researcher who is conducting the study (Lee, 1991). Particularly where human action could be infused with intentions, motives, beliefs, social rules and values which are socially constructed. According to interpretivist approach, the social world is best

understood from the participant's perspective who is experiencing the physical, social and the cultural norms (Hassard, 1993), and the researcher attempts to conceptualise, and understand events and concepts, while trying to understand how others may interpret the information (Kaplan & Duchon, 1988). This leads the researcher with an interpretivist approach to critically explore the subjective meanings investigated in their study as an integral part, while also trying to look for the objective meanings of the subject matter (Lee, 1991).

Critical realism: This approach does not believe that structures created within a society and the society itself are 'closed' systems; rather reality is a structured 'open' system (Sayer, 2000; Lawson, 2003). In such a system, critical realists argue that 'the real', 'the actual' and the 'empirical' domains are related (Downward & Mearman, 2007) in which the agents and the structures are distinct but related. In this, 'the real' exists independently of our understanding of the world, in which actual structures and causal powers reside. 'The actual' refers to what actually happens if causal powers are activated. "Thus, in the empirical realm, the real and actual are observed and experienced" (Downward & Mearman, 2007, p.88). It has been suggested that "causes act 'transfactually', but because society is open causes, though operating consistently, may not reveal themselves in empirical regularities because of countervailing influences" (Downward & Mearman, 2007, p.88). This means that causal laws that operate as tendencies of reality are expressed as powers, potentials and liabilities which may exist without being actualised. Based on this, knowledge could be acquired using triangulation of different methods of observing and experiencing various phenomena. However, such knowledge is expressed and informed by subjectivity, and this approach accepts the short comings of such knowledge and is cautious in linking it to reality (Downward & Mearman, 2007).

Unlike in interpretivism and positivism, where the mode of reasoning is either inductive or deductive, where inductive reasoning does not involve formalised logic of inference but tries to identify patterns of regularities in the data that can be described and generalised while assuming that the task of observing this reality is unproblematic. Whereas, deductive reasoning involves formalised logic of inference by testing concepts and ideas through specific hypotheses derived from theory and asserts that conclusion is certain. However, critical realism advocates 'retroduction', where reasoning is offered to account for observed phenomenon, and involves a thought process that moves beyond a specific ontological content to another to link between the actual events observed through empirical investigation to real causes e.g. motivational, behavioural, relational etc. (Downward & Mearman, 2007). Critical realism has been suggested to be compatible with wide range of methods, in which analysis should be

matched to the appropriate level of abstraction and the material under investigation i.e., it should begin with units of analysis and explore its contextual relations. It allows different methods of observing and experiencing a phenomenon to seek knowledge and could be used to reveal different aspects of that phenomenon (Downward & Mearman, 2007). In critical realism, a mixed methods approach is "not only possible but also necessary to reveal different features of the same layered reality without the presumption of being exhaustive" (Downward & Mearman, 2007).

A researcher could assume an ontological position based on his/her assumption of the nature of reality, and assume an epistemological position depending on his/her beliefs of how they might discover knowledge about the research topic. Based on the earlier discussion of ontology and epistemology, and after careful consideration of the research question, aim and the objectives of this thesis which is based on the conceptual model explained in chapter 2.4 researcher believes that reality exists, however the nature of our understanding of this is not true in any absolute sense. Hence in this thesis, researcher assumes a realist ontological position and different methods of data collection to examine different aspects of sport delivery system, where interaction of human agency and institutions or structures are involved, and critical realism provides the methodological apparatus to cope with this (Downward & Mearman, 2007). It has also been suggested that critical realism is useful to study inter-disciplinary subjects (Downward & Mearman, 2007), and is particularly useful in this thesis, since the research topic transcends the disciplines of economics, policy, organisational management, sport behaviour, health and social sciences. As it examines policy, organisational strategic priorities and characteristics that could have an impact on individuals' sport participation behaviour which in turn has an impact on their health, well-being and social capital as illustrated in Figure 1. In this respect, critical realism allows the researcher to find the regularities and causal relationships between different components of the conceptual model, as well as try to identify general patterns and trends among the research participants, while understanding the different meanings created by the physical and social artefacts, as well as the human actions. During this process, researcher will try and attempt to grasp the subjective meaning of social action that is relative to the research context. Hay (2002), suggest that "ontology logically precedes epistemology" (P. 5), and has been discussed above. The next section of this chapter will first discuss about research design following which research methods is discussed.

3.1.2 Research design

Research design defines the context and means of data collection and analysis to effectively address the research question, aims and objectives (Churchill & Iacobucci, 2002). This section of the thesis will explain different types of research designs and will justify how the adopted design will help to address the research question, aim and objectives.

a) Narrative: This type of design usually associated with qualitative studies is also known as biographical in which the author describes an event/life to get meaning from them using various archival documents available in various media, such as personal diaries and other writings, and interviews and speeches which may be available through audio or video footage as well as pictures (Denzin & Lincoln, 2000)

b) Grounded Theory: In this research design, the focus is to systematically generate or discover a theory, which is inductively derived from studying a phenomenon through the emerging patterns in the data and is usually associated with qualitative studies. In this design initially, there is no theory involved but begins with the area of study through inductive analysis of the data, and what is relevant is allowed to emerge from the research (Glaser & Strauss, 1967).

c) Phenomenology: In this type of research the focus is to understand the meaning of the experience from the first-person point of view along with relevant conditions of experience and is based on the premise that reality consists of phenomena which is understood by the perception of human consciousness and not independent of it, and is generally associated with qualitative studies (Husserl, 2001).

d) Ethnography: This type of research design is generally associated with qualitative studies and is useful in understanding social interactions and behaviours within a culture, organisation or a group of individuals in their natural environment. It provides a rich descriptive account of participants' views and actions concerned with their culture including shared meanings, experiences and patterns. In ethnography a researcher may collect data by directly observing participants while listening to their interactions, but also could be based on interviews, video/audio recordings, diaries or artefacts which is used by the participant/s (Jones, Brown & Holloway, 2013).

e) Case study: In this type of research a particular phenomenon i.e., individual, organisational, political or social is studied in depth where a broad subject, population or field

is researched by selecting a typical section in that category. This research design, which is a distinctive form of empirical enquiry is useful to provide a more realistic picture of the topic that is examined by testing whether a theory or conceptual model actually applies to phenomena in the real world and is especially useful when little is known about the research topic (Yin, 2014). It has been suggested that case studies are generalizable to theoretical propositions but not to populations or universes, and the goal of the researcher could be to expand and generalise theories (Yin, 2014).

f) Descriptive: Descriptive research helps to describe what exists with relation to the variables used to observe a sample population/institutions that help to obtain information about the current status of the phenomenon (Creswell, 2013). Descriptive research is generally used as a platform for other types of quantitative analysis as it helps to describe the sample population and helps to answer certain questions like who, what, when and where. Descriptive research design is also used in qualitative research, in which the objective is to describe a phenomenon and its characteristics (Nassaji, 2015).

g) Correlational: Correlational research investigates the relationship between two or more variables and determines if the variables under investigation are related to each other. If there is a correlation between two variables there is a possibility that one may affect the other, however if there is no correlation between two variables cause and effect between these two variables is not possible (Bernard, 2000). It is important to note correlation analysis alone cannot examine cause and effect and is usually associated with quantitative studies.

h) True experimental: This type of research usually associated with quantitative studies allows greater control to the researcher and is designed to establish cause and effect between the variables that are being studied on a randomized population, where the independent variable is manipulated by applying it only to the experimental group but not to the control group, however both are measured with the same dependent variable (Bernard, 2000). When there is a greater magnitude of correlation between the variables, generally there is consistency in the causal relationship i.e., a cause will always lead to the same effect.

h) Causal comparative: This type of research design categorises participants into two groups and a comparison is drawn using statistical analysis and helps the researcher to identify causal relationship between variables that are being studied and is used when the phenomenon has already occurred i.e., studied on an ex post facto basis. This type of research design is

particularly useful when the topic under investigation cannot be done using true experimental designs and is generally associated with quantitative studies (Fraenkel, 2006).

i) Cohort study: This is when a researcher wants to study their participants over a period of time in which outcome of participants in each cohort is measured, from which specific characteristics are determined (Bernard, 2000). Cohort studies could be prospective or retrospective depending on when the cohort is identified at the beginning of the study. Prospective study involves a researcher studying their participants going forward in time and is known as longitudinal if the study is experimental, and retrospective study involves a researcher studying their participants based on historical data i.e., observing phenomenon retrospectively generally used in case-control studies where experiments are involved (Bernard, 2000). This type of design is generally associated with quantitative methods, although could be adopted for qualitative studies.

j) Cross sectional: In this type of research, participants are observed by the researcher without manipulating the study environment and is used in both qualitative and quantitative studies. Unlike in cohort study, cross sectional research observes participants at a single point in time and allows to compare different groups in a population (Creswell, 2013). The main advantage of this type of research design is that many variables could be observed at the same time and could be subjected to various analytical techniques, and it is inexpensive and less time consuming compared to other research designs. However, it is difficult to determine temporal relationship between outcome and exposure, and cause and effect cannot be established unless suitable instrumental variables have been used in the study, generalizability may be limited based on the sampled population (Bernard, 2000).

Among the above outlined research designs, a case study is considered to be most appropriate to address the research question, aim and objectives of this thesis. While the research setting is based on a case study design, cross sectional design is adopted for data collection purposes. Since, every CSP region in England have a similar multiagency, cross-sector collaboration approach to sport provision, this thesis will examine the different aspects of sport provision in one of these regions by focusing on Leicester-Shire and Rutland Sport – County Sport Partnership (LRS-CSP) which is described below, by doing this it will help to address the research question, aim and objectives. Utilisation of the case study design by selecting the LRS-CSP region allows examination of the sport delivery system as a whole by

investigating the relationship between different aspects of sport provision that is explained in the conceptual model (Figure 2).

LRS-CSP is a local network and support team of 24 employees working for the development of physical activity and sport within the region of Leicestershire, Leicester and Rutland which has a combined population of 729, 686 individuals (Leicester Shire Rutland Statistics Research 2018). It aspires to be the most active place in England by building a healthy and vibrant future for its community. In order to achieve this, with its 24 employees, they work in partnership with local authorities of Leicestershire, Leicester and Rutland as well as with schools, school sport and physical activity networks, local and national organisations, clubs, coaches and volunteers (LRSport 2018).

LRS-CSP's objectives are (LRSport 2018):

- Getting more people to take part in physical activity and sport.
- Improving our citizen's physical and mental well-being.
- Developing our paid and unpaid workforce.
- Creating a strong voice for physical activity and sport.
- Building a physical activity and sport environment that is safe, fair and customer focused.

3.1.3 Research methods

Any research which attempts to explain a phenomenon, uses a particular research method to collect and analyse the data. There are several methods that a researcher could adopt which is reflective of the paradigm based on his/her ontological and epistemological assumptions. These approaches could be categorised as; 'quantitative' and 'qualitative', and there has been the emergence of 'mixed methods approach' in which a researcher could utilise both quantitative and qualitative methods in research. These are explained below:

Quantitative methods: In social science studies, this method is often used to code observations numerically that helps to generate knowledge, and the data collected from a representative sample of population and places in a given society allows to generalise the findings, as Leedy and Ormrod (2001) suggest "Quantitative researchers seek explanations and predictions that will generate to other persons and places. The intent is to establish, confirm, or validate relationships and to develop generalizations that contribute to theory" (p. 102).

Quantitative methods are best suited to develop 'descriptive' and 'inferential' statistics. This method is particularly good at providing information in breadth and for looking at cause and effect, from a large sample of data that could be utilised in testing hypotheses and theories (Cohen, Manion & Morison, 2000). Aliaga and Gunderson (2000), define quantitative research as explaining phenomena by collecting numerical data that are analysed using mathematical and statistical techniques. Quantitative data utilised to address a research topic could be primary or secondary, where the primary data is collected by the researcher to address their research topic and is previously unknown (Burns & Bush, 2006). However, if the researcher utilise data which were previously collected to answer another research topic it is considered as secondary data (Vartanian, 2011). Generally, quantitative data is collected by following means (Leedy & Ormrod, 2001):

- Face to face questionnaire interviews
- Telephone questionnaire interviews
- Paper questionnaire surveys by post
- Web based questionnaire surveys

Qualitative methods: Creswell (1994) suggests qualitative research occurs in a natural setting in which a researcher could develop details by being involved in the actual experiences. This approach primarily uses inductive reasoning and attempts to identify reality from the participants' point of view who are being studied. Social world is considered fundamentally different from the physical world, and qualitative research seeks to explain beliefs and behaviours within the context that they occur in their natural settings (Denzin & Lincoln, 2000).

Unlike in quantitative methods, qualitative approach allows the researcher to refine and modify the strategy during the data collection phase, and there is an opportunity for the researcher to modify his/her questions while gathering data (Denzin & Lincoln, 2000). However, this may not allow for a meaningful comparison of responses across study participants and sites (Leedy & Ormrod, 2001). Qualitative research could utilise primary or secondary data to address the research question, aim and objectives. A researcher could adopt one or a combination of the following methods in their study:

Primary methods of data collection are (Marshall & Rossman, 2006):

- Observation- Systematic noting and recording of events, behaviours, and objects in the social setting chosen for study. Which also includes 'participant

observation' and demands the researchers' first-hand involvement in the social world chosen for study. Observation could be unobtrusive as well, where the cooperation of the participants may not be required, as the researcher may be invisible to the participants while collecting data.

- Interviews- With this method, data is usually collected using 'open ended questions', in addition to generic in-depth interviewing, there are other forms, including ethnographic interviewing, phenomenological interviewing, elite interviewing, and interviewing children.
- Focus group interviews- which involves a group of people up to 12, who share certain characteristics relevant to the research study.

Secondary methods of data collection are (Marshall & Rossman, 2006):

- Life histories - which involves gathering, analysing and interpreting the stories people have told about their lives.
- Historical analysis – which discovers what has happened using records and accounts.
- Films, videos and photography

The critiques of qualitative research suggest that, it usually involves relatively smaller number of participants which makes it difficult to identify patterns and trends at the aggregate level and does not allow generalisation of the results (Griffin, 1986). Another main critique of qualitative method is 'researcher bias', which tends to result from selective observation and selective recording of data, and also interpretation of the data from a personal viewpoint (Pope, Ziebland & Mays, 2000). These elements make the replicability of a research study difficult. Although attempts have been made to improve the inter-rater reliability of such types of research by involving more than one analyst/researcher, by which it helps to validate and challenge the findings of different analysts/researchers. However, the appropriateness of the concept has been challenged by Armstrong, Gosling, Weinman and Marteau (1997), who asked six researchers to identify themes in the same focus group transcript. Although there was agreement in the basic themes identified, but each analyst packaged the themes differently.

Mixed methods approach: In this approach, researchers incorporate both quantitative and qualitative methods for the purposes of collecting and/or analysing data in a single research study (Creswell, 2003). Rossman and Wilson (1985) identified the following reasons for combining quantitative and qualitative research:

- The confirmation or corroboration of the methods and results through triangulation
- To provide rich empirical data using different methods which allows to complement the short comings of one method to another e.g. strengths of quantitative methods could supplement the shortcomings of qualitative methods and vice versa.

This approach is an extension rather than replacement for the quantitative and qualitative approaches and aligns well with the critical realist philosophical assumptions. The goal in using this method is an attempt to extract the strengths and minimise the weakness of qualitative and quantitative methods (Johnson & Onwuegbuzie, 2004). Williams (2007), suggest that "the mixed methods approach to research provides researchers with the ability to design a single research study that answers questions about both the complex nature of phenomenon from the participants' point of view and the relationship between measurable variables" (p. 70). The above discussion suggests that combining these two methods could help to interpret and better understand the complex reality of a given situation and the implications of quantitative data.

This thesis uses mixed methods approach in which both quantitative and qualitative methods are used for data collection which is recommended by critical realism. As discussed in chapter 3.1.1, based on the realist ontological position, mixed methods approach would be ideal to address the research question, aim and objectives. This will allow to examine different aspects of the multi-layered sport delivery system, as critical realism through legitimising a mixed methods approach allows, "a nexus of mutually supportive explained propositions to be constructed in which the whole stands distinct from its parts. Therefore, these mutually supported propositions are where MMT [*Mixed Methods Triangulation*] adds 'validity'" (Downward & Mearman, 2007; p. 92). This is important for this thesis, as sport delivery system is examined at the macro, meso and micro levels using different methods. Combining the results from each level gives insight into the sport delivery system as a whole.

Since low number of participants were targeted at the macro level, data collection using quantitative methods was considered inappropriate as it may not allow for meaningful analysis. Hence, semi-structured interviews using qualitative methods was considered appropriate at this level to understand the macro level agents' role towards sport provision in the LRS-CSP region and also the influence they might have on the meso level agents in the region, that ultimately impacts the micro level agents of the sport delivery system. To maintain the representativeness of the facilities and the users in the LRS-CSP region, at the meso and the micro level, a higher

number of random participants were targeted to collect data. Hence, an online survey to be analysed using quantitative methods was considered appropriate at these levels that helps to generalise results within a particular context (Leedy & Ormrod, 2001).

Focus groups involving users of different types of sport and fitness facilities was also conducted before the launch of online survey of such users. By doing this it was perceived that, this would help the researcher to identify any additional variables – other than those identified from the literature review- which could be used in the online survey to collect quantitative data. By conducting focus groups and online survey at the micro level, through triangulation it will help the researcher to corroborate as well as challenge the results obtained from these two methods.

3.1.4 Phases of data collection using mixed methods

In this thesis, as shown in Table 3.1 qualitative data at the macro and the micro level, and quantitative data at meso and the micro level was collected in four different phases as explained below.

Phase one: Using qualitative methods, at the macro level, semi structured interviews with managers who are responsible for sport development in the region has been conducted to understand how national strategic priorities in the sport and fitness landscape affect the strategic objectives and strategies adopted along with the different aspects of service provision of different types of facilities in the LRS-CSP region.

Phase two: Using qualitative methods, at the micro level, three separate focus groups were conducted involving users of public, private and LMC facilities which has helped to understand the influence sport and fitness facilities in the LRS-CSP region has on the user's sport participation behaviour and consequential impact this has on their health, well-being and social capital.

Phase three: Using quantitative methods, at the meso level, sport and fitness facility managers who are responsible for the operation of a facility on a day-to-day basis were approached to complete an online questionnaire that has helped to understand different types of facilities' strategic objectives and strategies adopted along with the different aspects of service provision. It has also helped to understand the influence different stakeholders in the sport industry have on different types of facilities in the LRS-CSP region.

Phase four: Using quantitative methods, at the micro level, users of public, private and LMC facilities in the LRS-CSP region were approached to complete an online questionnaire to understand different demographics in the region along with their sport participation behaviour and their health, well-being and social capital.

Table 3.1

Different phases of data collection using mixed methods

	Macro (policy) level	**Meso (facility) level**	**Micro (user) level**
Phase one	Qualitative method**:** Semi-structured interviews with regional managers in the LRS-CSP region		
Phase two			Qualitative method**:** Focus groups involving facility users in the LRS-CSP region
Phase three		Quantitative method**:** Online survey with facility managers in the LRS-CSP region	
Phase four			Quantitative method**:** Online survey of facility users in the LRS-CSP region

Semi structured interviews are used for data collection purposes at the macro level, which generally involves an interviewer and a participant engaged in a formal conversation with some predetermined questions asked by the interviewer in a particular order but ensures flexibility in asking questions probing for more information if necessary (Dunn, 2005). As it allows investigation of the attitudes, values, beliefs and motives of the participant in a one-to-one situation. The Focus groups used for data collection at the micro level which may usually last up to 90 minutes, involves between 6 and 12 people who share a common interest based on the research topic, who meet in an informal setting to discuss that topic (Stewart, Shamdasani & Rook, 2006). Similar to semi-structured interviews, some predetermined questions are asked by the interviewer in a particular order but ensures flexibility to ask

questions probing for more information if necessary, and the agenda is set by a moderator/facilitator who oversees the proceedings during the discussion (Stewart et al., 2006).

At the micro level, focus group discussions are used as they are useful in obtaining personal as well as group feelings, opinions and perceptions, and in comparison to individual interviews, focus groups are less time and resource intensive (Brod, Tesler & Christensen, 2009). In the context of this thesis it is particularly helpful not only to capture the feelings, opinions and perceptions of the end users who use a particular facility in the LRS-CSP region e.g. public, private or LMC, but also about their:

- Sport participation behaviour
- Subjective health, well-being and social capital

At the meso and the micro level, online surveys are used to collected data from the facility managers and the users of different types of facilities respectively in the LRS-CSP region. Survey is a general term used to include all methods of data collection in which each respondent is asked to respond to the same set of questions in a predetermined order (deVaus, 2002), which helps to obtain data in an efficient way from a large sample of participants (Saunders, Lewis & Thornhill, 2009). As mentioned in chapter 3.1.2 Churchill and Iacobucci's (2002), Bryman (2004) and Dillman (2007), indicate four different ways to collect data using this method. Out of these methods online survey has been utilised as it does not incur huge costs and could target specific people by directly emailing the potential respondents while targeting a large sample in the population. However, researcher acknowledges the disadvantages associated with this method, such as; generally, the response rate with this method is quite low (Saunders et al., 2009). The researcher has taken a few steps to maximise the response rate of the surveys; at the meso level, researcher has personally talked to all the facility managers to explain the relevance of the research and has sought permission to send an email containing a link to the online survey to be completed. If the survey was not completed after 7 days, researcher has called the relevant manager again to request completion of the survey. LRS-CSP officials have also been helpful in persuading some of the public and LMC facility managers to complete the survey. At the micro level, in an effort to increase participation, potential respondents were offered three random prize draws of vouchers with monetary value. To further increase participation, a reminder email was sent to yet-to-complete users after seven days of the launch of online survey (Dillman, 2007). It is also acknowledged that, by using this method only those participants are included who are computer/technology

literate with a possibility of selection bias. However, ONS (2017) reports "In 2017, 90% of households in Great Britain had internet access, an increase from 89% in 2016 and 57% in 2006" (p. 2). At the meso level, it was expected that facility managers are computer literate and has access to it, thus it would not apply.

3.2 Sampling procedure

Churchill and Iacobucci (2002), suggest that to maintain the validity of the data collected for a research study it is important to identify the appropriate population with relevant characteristics from whom the researcher seeks information, which then helps them to address their research question, aim and objectives. A sample population could then be derived from this defined population, as it has been suggested "it is rarely practical, efficient or ethical to study whole populations" (Marshall, 1996, p. 522). The selection of participants from the defined population by an appropriate technique will determine the representativeness of the sample to the whole population and will avoid any potential bias (Burns, 2000), this may help the researcher to generalise the research findings to the whole population (Dillman, 2007), this is particularly possible in quantitative sampling approaches if the sample population is large enough and is randomly selected from the defined population as all members stand equal chance of being selected for the research study (Marshall, 1996).

In this thesis, data is collected at three different levels, the population sought for data collection is different at each level. The next section of this thesis will define the population at each level and explains the sampling procedures adopted to select participants from these populations who are included for semi-structured interviews, focus groups and online surveys.

Macro level: At this level, in order to understand how sport provision is viewed and addressed in the LRS-CSP region and what kind of influence sport development managers and other macro level agents such as; DCMS, Sport England and NGBs have on the functioning of the sport and fitness facilities who operate at the meso level of the sport delivery system, those who work for the development of sport in the LRS-CSP region were considered for interviews.

Purposive sampling technique which is "based on a specific purpose rather than randomly" (Tashakkori & Teddlie, 2003, p. 713) is used for selecting participants at this level. According to Teddlie and Yu (2007), purposive sampling technique could be further

Table 3.2

Macro level interviewees

	Role and location	Interview duration
Private consultant 1	Is the director of the leisure Management Improvement Services based in LRS-CSP region. During which, since 2014 has supported Sport England with their member leadership academies, peer reviews and improvement initiatives including strategic commissioning, and has also worked with individual councils, leisure trusts and other organisations with their improvement journeys. He is also a chartered fellow of Chartered Institute for the Management of Sport and Physical Activity (CIMSPA)	40 minutes
Private consultant 2	Is the joint director of the Leisure-net Solutions based in the LRS-CSP region. He has been part of sport and leisure sector since 1983 and has the competency to support sport organisations to change from strategy through to operational training and development. He is also a chartered fellow of CIMSPA	31 minutes
LMC facility manager	Works for one of the LMC's operating in the LRS-CSP region, as a divisional sports and community development manager	38 minutes
Public facility manager	Works as a leisure services manager in the NWLDC, Leicestershire County and is responsible for managing leisure facilities and sport development in the NWLDC	27 minutes
Director of LRS-CSP	Works for the development of sport and physical activity in the region across the sporting landscape. Has the responsibility of actively supporting various stakeholders in the region to increase participation in sport and physical activity. He oversees a team of officials whose focus is to ensure that national sport and physical activity resources have local reach.	39 minutes

categorised into sampling to achieve representativeness or comparability, sampling special or unique cases, sequential sampling and sampling using multiple purposive techniques. At the macro level through purposive sampling, with the aim to achieve representativeness or comparability between public, private and LMC sectors, key individuals who are responsible for the development of sport in the LRS-CSP region and could represent different sectors in the industry were interviewed face-to-face by adopting semi-structured interviews between

April and June 2016. As this helps "to find instances that are typical of a particular type on a dimension of interest" (Teddlie & Yu, 2007, p. 80) e. g. individuals who are responsible for the development of a particular discipline in a particular region. This has allowed the researcher to compare and contrast public, private and LMC sector managers' strategies adopted in the LRS-CSP region for the sake of sport development, it has been suggested that comparisons or contrasts is the very core of qualitative data analysis strategies (Glaser & Strauss, 1967; Mason, 2002; Spradley, 1979, 1980, as cited in Teddlie & Yu, 2007). Role of the sport development managers along with the duration of interview with each of them is listed in Table 3.2.

To maintain the representativeness of different types of ownerships in the sport and fitness sector in the LRS-CSP region following individuals were interviewed:

- Two individuals who work as consultants in the sport and fitness industry and particularly for the private sector, primarily in the LRS-CSP region
- One individual who is the divisional sports and community development manager who worked for one of the LMC's in the LRS-CSP region
- One public sector leisure services manager in the LRS-CSP region
- The director of LRS-CSP, where LRS-CSP is primarily responsible for sport development in the region

Meso level: At this level, to capture the varying degrees of importance placed on the facility's strategic objectives and strategies, along with the facility's different aspects of service provision, different types of sport and fitness facilities' managers in the LRS-CSP region were approached to complete an online questionnaire during the period between August-September 2016. These managers were particularly targeted since they are responsible for the operation of the facilities on a day-to-day basis.

Stratified random sampling which has helped to ensure a greater level of representation of the multiagency, cross-sector nature of sport provision in the region, is a type of probability sampling technique in which the population is divided into different groups based on their common characteristics (Levy & Lemeshow, 2013). This technique has helped to guarantee the sample selected to represent specific sub-groups or strata in the given population (Levy & Lemeshow, 2013).

A total of 145 sport and fitness facilities were identified in the LRS-CSP region. To maintain the representativeness of this sample, at least 20 percent of the available facilities

from public, private and LMC sector were selected through stratified random sampling. LRS-CSP officials were consulted with the randomly selected list of facilities. They suggested inclusion of some of the major sport and fitness facilities in the region, since these facilities accommodate larger number of users in the region than compared to other facilities. This resulted with the selection of 3 public, 17 private, 10 LMC facilities at the meso level, which has helped to maintain the representativeness of different types of sport and fitness facilities available for the population's use in the LRS-CSP region.

Micro level: At this level, as mentioned in chapter 3.1.4 both qualitative and quantitative data is collected, and the sampling procedures are explained below:

Qualitative data: Working with the LRS-CSP purposive sampling technique was used to select one public, private and LMC facility from the 30 randomly selected facilities at the meso level. Public, private and LMC facility users were then recruited for three separate focus group discussion.

To address the research question, aim and objectives, recruitment of participants for the focus groups was based on the following two criteria:

- Age group- 18 years and above
- Activity levels- Those who engage in informal sport activities from a recreational perspective.

Participant recruitment for focus groups was undertaken by the researcher in the following ways:

- Public facility – researcher was able to personally recruit random participants in May 2016 by vising the facility since access was granted.
- LMC facility – facility manager helped to recruit random participants in June 2016 after being informed of the participant criterion. Since researcher was denied access to the facility.
- Private facility – researcher used snowball sampling technique to recruit participants in July 2016. Since access to the facility was denied to the researcher and the management did not help to recruit the participants either. During snowball sampling, researcher was able to recruit one of the members of the selected private facility through his personal contacts, and that participant helped the researcher to recruit other participants. Table 3.3 shows the number of participants in each of the

three focus groups, along with age group, number of male and female participants and the length of the focus group discussions.

Table 3.3

Focus group participants

	Number of participants	**Gender**		**Age group of participants**	**Length of discussion**	**Location**
		Male	**Female**			
Public facility	8	7	1	18-24 years – 1 25-34 years – 1 35-44 years – 3 45-54 years – 2 55-64 years – 1 65-74 years – 0 75 years and older - 0	100 minutes	Leisure centre
LMC facility	13	6	7	18-24 years – 0 25-34 years – 0 35-44 years – 2 45-54 years – 0 55-64 years – 2 65-74 years – 3 75 years and older - 6	58 minutes	Leisure centre
Private facility	5	5	0	18-24 years – 1 25-34 years – 0 35-44 years – 3 45-54 years – 1 55-64 years – 0 65-74 years – 0 75 years and older - 0	63 minutes	Leisure centre

Quantiative data: At this level, in order to understand the sport participation behaviour of the end users in a facility as well as outside, and the demographics that is typically associated with sport participation derived from the literature, along with the subjective health well-being and social capital of the end users an online survey was launched in November 2017.

This survey was launched by utilising the LRS-CSP's contacts of approximately 20,000 individuals in the region who at some point have participated in informal sports in the LRS-CSP region, particularly in a sport and fitness facility. This database was particularly important because it helped in including random participants for the study from the local population who participate in informal sports by utilising the facilities available in the region, and ultimately would help to map them to those 30 facilities that are sampled at the meso level. This allowed to merge the data collected at different levels i.e., at meso and micro level and is used for statistical analysis to address the research question, aims and objectives.

3.3 Research instruments

For the successful collection of primary data that helps to addresses the question, aim and objectives of this thesis, development of effective research instruments is critical. This section of the thesis will explain the different research instruments developed as part of the qualitative and quantitative methods. This section will also explain how the validity and reliability of these research instruments has been addressed in this thesis.

Qualitative: To conduct semi-structured interviews or focus groups, it has been suggested that developing an interview guide is important (Brod et al., 2009). This guide may involve three sections; introduction, questions and conclusion. An introduction section, which will allow the interviewer to introduce to the participant/s and state the purpose of the discussion during the interview which will allow to build a rapport between the interviewer and the participant/s has been advised (Dunn, 2005). This is crucial, as the participant is more likely to engage in the conversation resulting in rich data. In the questions section, researcher's knowledge about the topic, which is informed by the literature review as well as expert opinion, should develop questions that will help to address the research question. However, these questions are not the final list but acts as a guide for the interviewer as semi structured interviews and focus groups allows flexibility to ask further questions depending on the answers obtained by the participant/s (Dunn, 2005; Brod et al., 2009). During the interview, Brod et al., (2009; p. 1266) suggest that "The facilitator must be flexible at all times to switch direction or topic from the guide while still covering all areas during the interview". The conclusion section of the guide will allow the interviewer to thank the participant for being a part of the study and ask if they have any questions.

As mentioned earlier in Table 3.1, in this thesis, semi structured interviews and focus groups were conducted at macro and micro level respectively and the research instruments used at these levels are explained below:

Macro level: In order to understand the current sport and fitness provision in the LRS-CSP region, and to capture the views of sport development managers with respect to the changes made by the government especially in relation to the new strategic document 'Sporting Future', along with the pressure different types of organisations are facing due to the recent changes in the sport and fitness industry, interview questions were developed based on the government's new policy document 'Sporting Future' (HM Government, 2015). A List of questions used at this stage of data collection is listed in Appendix A.

Micro level: At the micro level, focus group questions included those which helps to understand the sport participation behaviour of the end users during a four-week period in a sport and fitness facility, as well as any informal and organised sport activity outside a facility. It also includes questions relating to why they participate in sports and the benefits that they believe they get from participating in sports were also asked. Along with the reasons for using a particular type of facility and the difference in participating in a facility and outside were also asked. Focus group discussions also included questions relating to how they feel about their facility's service provision along with if there is any room for improvement in aspects such as; price, facility opening timings, avoiding congestion through scheduling, equipment, range of activities, maintenance of facility, training and development of staff/employees and customer service. List of questions used at this stage of data collection is listed in Appendix B.

Quantitative: There are different steps involved in constructing a good questionnaire using quantitative methods. Questionnaire development stages involved in this study follow those suggested by Churchill and Iacobucci's (2002) and Saunders et al., (2009).

Unlike in other methods like observation or semi-structured interviews, questionnaires for quantitative analysis need to be defined precisely before administration. This is because observation or semi-structured interviews provide opportunity to improvise during data collection, whereas this is not possible with the quantitative questionnaire method (Saunders et al., 2009). Hence, information to be sought to develop a questionnaire that will precisely address the aims and objectives of a research study is very critical. Ghauri and Gronhaug (2010), suggest that apart from reviewing the literature carefully that helps to identify the elements required for questionnaire development, a researcher must discuss his/her ideas with

colleagues and other interested parties prior to designing a questionnaire. It is also important to ensure that the research instruments selected are those which have been tried and tested in previous research studies since their validity and reliability would have been already established (Saunders et al., 2009). However, in many occasions a researcher might have to adapt the used research instruments to suit their current study's requirements (Dillman, 2007).

In this thesis, online surveys to be analysed by quantitative methods are conducted at meso and micro level and the research instruments used at these levels are explained below:

Meso level: At this level, in order to capture the varying degrees of importance placed by the different types of facilities on their strategic objectives, and the influence different stakeholders in the sport industry have on different types of facilities, single item questions were developed based on the government's new policy document 'Sporting Future' (HM Government, 2015). Along with this to understand the importance different types of facilities (ownership) place on their service features, questions were developed based on the literature review conducted for 'sport facilities and infrastructure' as presented in chapter 2.1. This also included the objective measure of identifying facilities by its ownership types along with its configuration/characteristics e.g. facilities were identified based on the amenities available for use by its users, such as; health and fitness suite, sports hall, multiple facilities with pool, weight training, cardio-vascular equipment, swimming pool, indoor and outdoor courts, and indoor and outdoor halls. To understand to what extent different types of facilities adopt generic competitive strategies and strategy typologies, questions developed by Dess and Davis (1984) and descriptors developed by Snow and Hrebiniak (1980) were adapted for in this thesis. All the questions asked to the facility managers at this stage of data collection are based on a five point Likert scale. A full list of questions used in this stage of data collection is listed in Appendix C.

Micro level: At this level, to understand the sport participation behaviour of the end users, questions relating to their use of a facility, frequency and intensity during a four-week period are adapted from the APS questionnaire. Similar questions relating to informal and organised sport activity outside a facility during a four-week period are also asked. The International Physical Activity Questionnaire (IPAQ) is utilised to understand respondents' physical activity at work and active travel, which are used as controls in this research study. Users' subjective health, well-being and social capital is captured by adapting questions from the ONS survey. Demographic questions typically associated with sport participation and are guided by the

literature review are also asked at this stage of data collection. To establish causality between facility ownership as well as characteristics and users' participation behaviour and their outcomes certain instrumental variables were also included in the questionnaire and these are listed in Appendix D. These instrumental variables are useful to address issues like; omitted variable bias, measurement error or reverse causality among the variables analysed. These are sources of endogeneity between the independent and dependent variables. If this is not accounted for in the estimates, it results in systematic error. A full list of questions used in this stage of data collection is listed in Appendix D.

3.4 Data analysis strategy

The aim of the thesis is to 'examine if and how policy objectives that may influence facilities' strategic priorities, strategy, ownership and characteristics influence the frequency of sport participation and its outcomes'. As mentioned previously in chapter 3.3 examination of these aspects of sport provision in a sport delivery system is undertaken using a mixed methods approach, where both qualitative and quantitative methods are used to observe how institutions or structures may influence individuals' sport participation behaviour and the consequent impact this has on their outcomes (as illustrated in Figure 2). In order to achieve the above mentioned aim of this thesis, data collected at the macro, meso and the micro level of the sport delivery system will be utilised for analysis in two stages and is explained below:

3.4.1 Analysis strategy one

Here the objective is to conduct a multi-level analysis of the qualitative data collected at the macro and micro levels, and the quantitative data collected at the meso level of the sport delivery system. In this thesis multi-level analysis of the data refers to analysis of the collected data at different levels of the sport delivery system that is conceptualised in this thesis as explained in chapter 1.1, data collected at different levels of the sport delivery system is explained in chapter 3.3. It is important to note that, multi-level analysis in this thesis does not relate to the term used in econometrics, where the term 'multilevel model' is used to address a statistical technique which is utilised for data analysis purposes. In this the quantitative data used is grouped in more than one category and the data is measured at multiple levels.

Multi-level analysis of the qualitative and quantitative data will enable to achieve the following objectives of this thesis:

- Examine the strategic priorities and strategy of different types of sport and fitness facilities, and if this has varied influence on users' participation and their outcomes
- Examine the level of influence different stakeholders in the sport industry have on the strategic decision making of different types of sport and fitness facilities
- Examine the importance placed by different types of sport and fitness facilities on their service features, and if this has any influence on the end users' participation and their outcomes

In achieving these objectives, it helps to address the research aim of examining 'if and how facilities' policy objectives that may influence facilities' strategic priorities, strategy and its service features influence the frequency of sport participation and its outcomes'. For this purpose, qualitative data collected at the macro and the micro level will be analysed with thematic analysis, and quantitative data collected at the meso level will be analysed using ANOVA along with Tukey post hoc test and effect size for one-way ANOVA. These are explained below:

Thematic analysis: This is a method for identifying and reporting themes within data and is seen as a foundational method in qualitative analysis, which is flexible as it could originate from a particular theoretical or epistemological position or it could be independent of theory and epistemology (Braun & Clarke 2006). It allows to organise and describe the data in detail, and also helps in interpreting different aspects of the research topic (Boyatzis, 1998). It is particularly useful in highlighting similarities and differences across the data sets (Braun & Clarke, 2006), which is essential in this thesis to identify various themes in the data sets between different types of sport and fitness facilities to address the research question, aim and objectives. Thematic analysis has been suggested to be suitable in informing policy development (Braun & Clarke, 2006), which is useful in thesis as the research question is aimed to address sport policy developments. Critics claim that while using this technique, researchers may misinterpret and claim that 'themes emerging' reside in the data, whereas it might be that research's thought process in interpreting the data and creating links as it is being understood (Ely, Vinz, Downing, & Anzul, 1997). For this purpose, at the macro and the micro levels,

once the data collection process was completed and transcribed, manual thematic coding analysis was undertaken and later checked for robustness through intra and inter coding. Examining the data carefully and meticulously allowed for the codes identified in the data to be grouped under overarching themes and sub-themes, which were then collated in a 'thematic map'. In general, researcher has adopted the six phases of thematic analysis proposed by Braun and Clarke (2006), which involves the following:

1) Familiarising yourself with the data - Transcribing data, reading and rereading the data, noting down initial ideas.

2) Generating initial codes - Coding interesting features of the data in a systematic fashion across the entire data set, collating data relevant to each code.

3) Searching for themes - Collating codes into potential themes, gathering all data relevant to each potential theme.

4) Reviewing themes - Checking in the themes work in relation to the coded extracts (Level 1) and the entire data set (Level 2), generating a thematic „map" of the analysis.

5) Defining and naming themes - Ongoing analysis to refine the specifics of each theme, and the overall story the analysis tells; generating clear definitions and names for each theme.

6) Producing the report - Selection of vivid, compelling extract examples, final analysis of selected extracts, relating back of the analysis to the research question and literature, producing a scholarly report of the analysis.

Thematic analysis with macro level data has helped the researcher to compare and contrast how regional managers of different sectors in the LRS-CSP region view the current sport and fitness provision in the region, and views with respect to the changes made by the government especially in relation to the new strategic document 'Sporting Future', along with the pressure different types of organisations are facing due to the recent changes in the sport and fitness industry. At the micro level it has helped the researcher to compare and contrast between users from different types of facilities about the benefits they believe they get from participating in sports, and the reasons for using a particular type of facility as well as their experience of using the said facility for their sporting needs. It also helped to understand their sport participation behaviour during a four-week period in a sport and fitness facility, as well as any informal and organised sport activity outside a facility. Key themes, sub-themes and

codes identified from the qualitative data collected at the macro and the micro level along with the illustrative quotes is shown in appendices G & H respectively.

Quantitative analysis: Since the aim here is to 'examine if and how policy objectives that may influence facilities' strategic priorities, ownership and features influence the frequency of sport participation and its outcomes'. Quantitative data collected at the meso level includes different variables that address facilities' strategic objectives, influence of stakeholders in the industry on the facilities' strategic decision making, and the importance facilities place on their various service features in their service provision. Along with this, variables that capture different types of sport and fitness facilities' generic strategies and strategy typologies have also been included.

In order to assess group differences among public, private and LMC facilities, across the above mentioned multiple variables that helps to understand the heterogeneities of service delivery between different types of sport and fitness facilities, ANOVA was used to examine the differences in the mean scores across different types of facilities.

The validity of ANOVA depends on the following three assumptions (Elliot & Woodward, 2007):

a) Experimental errors of the data are normally distributed – Assumptions of normality should be particularly tested when the sample size is small, or the sample is highly non-normal or if the effect size is small. However, normality tests are not required if the sample size is equal to or greater than 30 (Elliot & Woodward, 2007). Also, the effect size for one-way ANOVA is shown to be large among those variables which are statistically significant (Table 4.6).
b) Sample selected is through randomization – This assumption is satisfied by the selection of facilities at the meso level through stratified random sampling.
c) Homogeneity of variance – meaning the spread of each group should be the same, and this is addressed by selecting at least 20 percent of the available public, private and LMC facilities in the LRS-CSP region to maintain the representativeness of different types of facilities.

As ANOVA alone is not sufficient to identify significant difference among groups, Tukey post hoc test is undertaken to compare groups and identify which pairs of means are statistically significantly different. As Hair, Black, Babin, and Anderson (2010), in their study indicate that this is an appropriate method for both equal and unequal sample sizes and is useful

for comparisons among groups, which may have significant differences. Along with this, in order to estimate the size of the difference in means across different groups, effect size for one-way ANOVA is calculated (Ellis, 2010), which has helped to determine if the size of difference is large or small. In this thesis to distinguish the effect size into small or large, researcher has adopted the guidelines prescribed by Goldsmith and Walker (2015).

3.4.2 Analysis strategy two

Here the objective is to examine the meso and the micro level quantitative data that helps to corroborate or challenge the results obtained from the micro level qualitative data. This will enable to achieve the following objectives of this thesis:

- Examine if different facility ownership types and its characteristics has varied influence on end users' participation behaviour and their outcomes
- Examine facility users' participation frequency and their outcomes, based on their socio-demographics, economic and behavioural factors

In achieving these objectives, it helps to address the research aim of examining 'if and how facilities' ownership and characteristics of different types of sport and fitness facilities influence the frequency of sport participation and its outcomes'. The large enough number of cases examined from the micro level quantitative data helps in the generalisation of results within the LRS-CSP region with respect to outcomes. For this purpose, two linear regression models are estimated as below;

a) To explore the impact of facility ownership and characteristics on frequency of participation.
b) To explore the impact of frequency of participation on the users' subjective health, well-being and social capital.

In order to achieve the above mentioned objectives and aim with the help of regression models mentioned above, following variables are included in the analysis:

1. Typical sport activities that are undertaken in a sport and fitness facility and outside, and this is captured in terms of minutes of participation during a four-week period. Along with this any moderate or vigorous physical activity undertaken at work or for active travel in a week is used as controls.

2. Socio-demographic variables derived from the literature review, along with the various activities offered in different types of facilities.
3. Access variables such as distance travelled to the facility and also the effective payment for a session of use are included to explore the impact this has on participation.
4. Respondents' behaviour of watching live sports on television and in sporting events are included to capture potential substitute passive sports behaviour, or a general interest in sport.

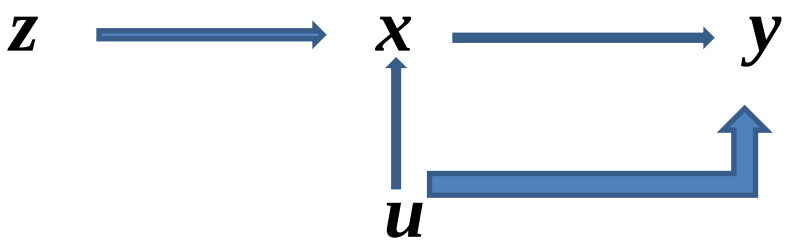
As mentioned in chapter 2.4, under section 'chapter 2 conclusion' endogeneity between participation and outcomes, as well as between the outcomes is acknowledged in this thesis. To address this, the empirical strategy adopted in both cases of examining participation and the impact of participation on the policy outcomes involves; testing for the endogeneity of the relationship between the outcomes as an influence on sports participation in exploring the impact of facility provision on the latter, and also exploring the endogeneity between the outcomes and sports participation as an influence upon them. If endogeneity is present, an Instrument variable (IV) estimation strategy is to be employed, whilst theoretically it could be argued that these relationships will be endogeneous, what matters for the empirical estimation is the presence of sufficient endogeneity to bias the results. This could be statistically examined through Hausman test for endogeneity which is explained below. The following section of this chapter will explain the basic assumptions and interpretations of the statistical techniques used in analysis strategy two, which helps to address the above mentioned empirical strategy.

Instrument Variable (IV) estimates: It is possible that in an OLS estimate, changes in independent variable/s are not only associated with changes in dependent variable/s but also with changes in the error terms. Due to the possible presence of these endogenous regressors in a regression model, OLS estimates may only measure the magnitude of association rather than the magnitude and direction of causation between the independent and dependent variables that are subjected to analysis. IV estimator could be a solution in such scenarios which helps to obtain consistent parameter estimates (White, 1982). IV estimation is a statistical process of investigating relationships between variables, and focuses on the explanation of individual variation of the dependant variable i.e. to generate only exogenous variation in dependent variable/s. This technique helps to ascertain the causal effect of one variable upon another, for example, the effect of sport participation on well-being.

A path diagram is shown in Figure 3 that helps to understand links between an IV, independent and dependent variables, as well as the error term in a regression model. In which *z* is associated with '*x*' but not with '*y*' or '*u*' and has the qualities such that changes in '*z*' are associated with changes in '*x*' but does not lead to changes in '*y*' or '*u*'. In such an estimate, '*z*' and '*y*' are not directly correlated but indirectly through '*x*'.

Figure 3

Instrumental variable path diagram



Note: ***z*** *- instrument variable,* ***x*** *- independent variable,* ***y*** *- dependent variable and* ***u*** *- error term.*

It is suggested that at least one IV should be included for each endogenous variable which will satisfy the 'exclusion restriction' e.g. if there are four endogenous variables included, then no less than four IVs should be included in the estimator (White, 1982). If the number of included endogenous variables equals the number of IVs (exogenous variables) then the order condition is satisfied with equality, if there are more IVs than the endogenous variables then the order condition is satisfied with inequality. In the scenario of this inequality the condition is known to be 'overidentified' (White, 1982), and the 2SLS estimator could be used to derive unique estimates.

The following IVs were used in the online survey conducted during the micro level data collection for examining the impact of sport participation on health, well-being and social capital:

• Height of the participant, for the outcome variable health

• Whether the participants were happy or anxious when growing up, for the outcome variable well-being

• Whether they could trust their neighbours when growing up, for the outcome variable social capital

This will help to establish causal relationship between sport participation and outcomes, since endogeneity between participation and outcomes has been recognised in the literature (Lechner, 2009; Humphreys et al., 2014, Sarma et al,, 2014; Pawlowski et al., 2011, Downward and Dawson, 2015; Downward et al., 2014b; Pawlowski et al., 2016).

Ordinary Least Squares (OLS): This method is widely used to estimate the parameters of regression model. Estimates are based on the minimised difference between observed values of variables and predicted values of the variables from the regression model (Stone & Brooks, 1990).

A good OLS estimate has to meet some ideal conditions/assumptions based on Gauss-Markov's theorem, and these are explained below.

- There should be linearity in parameters, without which the relationship between variables tested could not be detected.
- There is random sampling of cases that are under observation, this allows the expected value of the error term to be zero for all observations.
- Independent variables should not be co-related with the error terms, such that the expected value of the mean of the error term should be zero.
- There is no linear relationship between independent variables, which allows for better OLS estimates in establishing the impact of independent variables on dependent variable/s
- There is homoscedasticity, such that all the error terms in the regression model have the same variance. This implies that the uncertainty of the model is identical across all observations.

If the data under observation meet the above mentioned assumptions of an OLS estimate, and if a coefficient is significant in the regression analysis it is possible to draw conclusions beyond the observed sample to the population. Only if the characteristics of the population matches with the characteristics of the observed sample. If these assumptions are not met the standard errors of the coefficients might be biased, and the results of significance in the regression analysis might be wrong leading to false conclusions (Stone & Brooks, 1990).

A Hausman test for endogeneity will help to detect endogenous regressors in the model because of endogeneity. This test assumes that there is no correlation between error term and the explanatory/independent variable (Hausman, 1978), and if the results from Hausman test

for endogeneity is insignificant OLS results can be considered for the regression model. However, if results are significant, IV estimation has to take place. Although it may not remove the bias entirely, however it will yield consistent estimates in the regression models with some loss of efficiency and control for the endogeneity between the independent and dependent variables due to various confounding variables that may be involved (Angrist, Imbens & Rubin, 1996).

Two Stage Least Squares (2SLS): If a number of possible IVs are included for endogenous independent variables 2SLS estimator may be utilised. When multiple IVs are used and depending on which of the IV is used for analysis, different IV estimates are derived with differing degrees of precision leading to different possible conclusions about the constructed model (Angrist & Imbens, 1992). In such scenarios 2SLS is useful, in the first stage of 2SLS, all of the IVs included are used as independent variables to construct an auxiliary regression model, and the predicted values of the auxiliary regression will serve as the IV related to the original independent variable. The instrumental variables need to be statistically significant in this regression. In the second stage of 2SLS, the predicted values of the auxiliary regression is utilised in the original regression model. Thus, 2SLS estimation will yield a unique set of parameter values for a given list of IVs (Angrist & Imbens, 1992).

Three Stage Least Squares (3SLS): As 2SLS does not exploit the correlation of the disturbances across equations, in such scenarios, and when more than one dependent variable is considered, 3SLS estimator could be used, since it adds efficiency gains to 2SLS/IV consistent estimator of equation/s with endogenous regressors. Such an estimator can be obtained in three OLS stages, in which one has to perform the first two stages of 2SLS for each equation as explained above. In the third stage, residuals calculated until the 2nd stage along with the original independent variable is retrieved and sum of these residuals are estimated, then these residuals are used to form a consistent estimate of the covariance matrix of the disturbances with Feasible Generalised Least Squares (FGLS), which is then with the help of Generalised Least Squares (GLS) weighting matrix is used as to obtain new values of the parameters. However, 3SLS estimators for a single equation are potentially less robust and will be inconsistent if IV assumptions fail in any equation (Zellner & Theil, 1962).

Since, research studies have shown that endogeneity is present between participation and outcomes (Lechner, 2009; Humphreys et al., 2014), and since outcome variables seem to be related to each other, to address this issue suitable IVs have been used for analysis. In the

first regression model, where the impact of facility's ownership and characteristics is examined on the frequency of participation OLS regression model along with IV is used. In the second regression model where more than one outcome variables are examined using several IVs i.e. the impact of frequency of participation is examined on the users' subjective health, well-being and social capital, 3SLS regression model is used along with IVs. By following analysis strategy one and two, data analysis results presented in chapter four and five will help to discuss the research aim of examining 'if and how policy objectives that may influence facilities' strategic priorities, strategy, ownership and characteristics influence the frequency of sport participation and its outcomes'. Subsequently, based on this discussion, chapter six will be able to address the research question of 'does the UK sport delivery system's approach to sport provision influence individuals' sport participation and their outcomes differently?'

3.5 Validity and reliability

Once the decision is made, to carefully select the sample population for a research study and the research instruments required, the relevant questions to be addressed are: are we measuring accurately what we want to measure? which represents the validity of the study, and can we be sure, if repeated the findings of the study will be the same? which represents the reliability of the study (Carmines & Zeller, 1979). Validity and reliability of a study's findings depends on the meaningfulness, accuracy and efficiency of the research instruments utilised, as well as the sample population/items selected for which the research instruments are intended. Irrespective of whether it is qualitative or quantitative research, reliability and validity measures employed in the study, that avoids measurement issues and bias, plays a crucial role in ensuring that the study's findings are valid and reliable. These two concepts which are crucial, and determines the meaningfulness, accuracy and efficiency of this thesis' findings are described below:

Validity: The credibility or believability of a research study depends on the validity of the research instruments and samples employed in it, i.e., it depends on whether the measures employed are able to really measure what is being intended. The most relevant types of validity for a research study are considered and discussed below:

Construct validity: Construct validity refers to the inferences that could be made from the theories. For example, developing clearly defined research hypotheses based on validated constructs (Graziano & Raulin, 2007). Instruments developed in a research should be based on

its theoretical constructs by which it allows for the validation of theory (Scandura & Williams, 2000).

Internal validity: Internal validity refers to accurateness about conclusions reached based on the cause-effect relationships between the measures, i.e., it demonstrates the causality between different variables of the research study (Graziano & Raulin, 2007). Internal validity is not concerned with whether the researcher has measured what he/she is supposed to measure, but mainly concerns with whether the observed occurrences/changes could be attributed to the cause established in the study and not to the other possible causes (Sackett & Larson, 1990). A cause-effect relationship between variables can only be asserted if there is a true covariation among them, and the methods employed in data collection demonstrate that the cause preceded the effect while alternative explanations being discarded (Sackett & Larson, 1990).

External validity: This refers to the ability of the research instruments utilised in a study which allows to generalise the study's findings to different populations, time periods, circumstances and settings (Scandura & Williams, 2000).

Content validity: This is concerned with the instruments employed in a research study, and if it is representative of every single element of the theoretical construct. Content validity determines if instruments employed in the research study measures what it is supposed to measure (Johns & Lee-Ross, 1998).

Reliability: If the results and findings of a research is replicable using the same exact methods, then the reliability of such a research study could be considered very high. The reliability of a research study is determined by the capacity of the instruments employed in it to deliver the same results over and over again (Carmines and Zeller, 1979), regardless of who does the measuring (Graziano and Raulin, 2007). Bryman and Bell (2003), has identified three types of reliability which are considered and discussed below:

Stability reliability: This is also called as 'test-retest reliability', and concerns with the instruments employed in a study to yield same results on repeated occasions. Good instruments will largely cope with many systematic and random factors that may affect the research participant's responses and give relatively little variation when retested (Bryman & Bell 2003).

Internal reliability: This is also called as 'internal consistency reliability' and refers to measuring the same construct with different questions/items (multiple-items) that is able to

produce consistently similar results (Bryman & Bell, 2003), i.e., looking at the coherence among different items within a construct or in a measure (Graziano & Raulin, 2007).

Inter-rater reliability: This is also called as 'inter-observer reliability', and concerns with evaluating consistency across observers in a research study. This is of importance when more than one observer is involved in translation of data into categories or while developing different constructs within a measure (Bryman & Bell, 2003).

3.5.1 Addressing validity and reliability

Questions listed in Appendix A and B, which are used for macro and micro level qualitative data collection through interviews and focus groups respectively, were developed based on the government's new policy document 'Sporting Future' (HM Government, 2015). This was deemed important to understand how macro level agents in the LRS-CSP region perceive the new strategy introduced by the government and how they view this will affect sport provision in the region. As macro level agents could influence sport provision at the meso level through the implementation of their policies which in turn affects the users at the micro level of the sport delivery system as illustrated in the conceptual model. Selected items were then subjected to a brain storming session with the experts in the corresponding field and based on the discussions, questions were adapted for use in the interviews. By developing interview questions with the help of Sporting Future document, and by especially consulting experts in the relevant field, researcher has sought to enhance construct and content validity of these instruments along with the inter-rater reliability.

In this thesis, research instruments for online surveys are developed from relevant studies as discussed in chapter 3.3, this has helped to address the construct and content validity of these instruments. Based on the explanation and the justification given about the sampling procedures undertaken at macro, meso and micro level as explained in chapter 3.2, researcher has tried to address the external validity of the research by recruiting random participants from the respective population where possible.

Scandura and Williams (2000) suggest that in a research study, if self-report measures that utilises Likert-type rating scales are used, employing multi-item measures as opposed to single-item measures might improve the construct validity and internal reliability. However, single item measures to capture strategic objectives and service features of sport and fitness

facilities are used, as similar single item measures that capture service objectives and features that underpins strategy content have been used in public management literature showing the reliability of single item measures to compare favourably with indices or multiple measures (Andrews et al., 2006; Enticott & Walker, 2008; Walker et al., 2010; Hodgkinson & Hughes, 2014). This is based on the argument by James and Hatten (1995) that multi item scales are no more reliable than single item measures in determining the strategic archetype of a firm, by this it satisfies the construct validity and internal reliability dimensions of this thesis.

Pretesting and piloting of questionnaires has been carried out initially with three academics of relevant discipline as well as two industry experts, and the feedback obtained has helped the researcher to improve the validity of the instruments. Researcher has then used this version for piloting the surveys with colleagues and friends and feedback obtained has further helped to improve the validity of the instruments. By undertaking pretesting and piloting of questionnaires as explained above, researcher has tried to address stability reliability of the instruments. By selecting appropriate analysis techniques to address the cause and effect between different components of the conceptual model as explained in chapter 3.4.1 and 3.4.2, researcher has tried to address the internal validity of the study. For example, from the econometric point of view, Hansen-Sargan test will be utilised to identify if the IVs utilised is not correlated with the error term which will prove its validity (see figure 3). Wald test will be carried out to test the overall significance of the regression model with IVs. R square test will be utilised to test the goodness of fit for a linear model, and F value test will be done to test the overall significance of the regression model with OLS. From the measurement point of view, use of such valid IVs and instruments would then be statistically accurate to use in the estimated regression models to explain the cause and effect between different variables used for analysis.

During the analysis of the qualitative data, particularly during the phases of 'searching for and reviewing themes' in the data, as suggested by Braun and Clarke (2006), two academics in the relevant field have been consulted to check for consistency in searching for and reviewing themes' in the data and this has helped to address the inter-rater reliability. To establish causality between different components of the conceptual model such as: influence of facilities' ownership and characteristics on individuals' participation and their outcomes, appropriate statistical techniques have been utilised as explained in chapter 3.4.2 e.g. OLS and IVs. Suitable IV strategy is used to address the endogeneity between outcome variables as well as between participation and outcomes as explained in chapter 3.4.2. In doing this, researcher

believes that it has helped to address the validity and reliability of the research methodology that has helped to address the research question, aim and objectives.

3.5.2 Ethics

In this thesis, for effective completion of data collection, researcher thoroughly understood Loughborough University's 'Code of Practice' on investigations involving human participants. An ethics approval form, along with a risk assessment carried out to ensure the safety of the researcher and participants involved in the study was submitted to Ethics Approval Sub-Committee, Loughborough University before data collection for this thesis started, and certain ethical considerations that has been approved are explained below.

In this thesis, human participants were involved through interviews, focus groups and online surveys during the data collection process. Participants' consent was obtained through their signature on the consent form (Appendix F) for focus groups and interviews. For online surveys, an invitation was sent to the potential participants outlining the objectives of the research study, clearly mentioning that participation is not compulsory, and the data will be treated anonymously. In, an effort to increase participation, potential participants were offered three random prize draws of vouchers with monetary values, which was approved by Ethics Approval Sub-Committee, Loughborough University. None of the participants belonged to any of the vulnerable groups as below:

- Under 18 years of age (for online surveys it was clearly mentioned "not suitable for below 18 years of age")
- Incapable of making an informed decision for themselves
- Pregnant women (except for online survey involving a random sample population)
- Prisoners/detained persons

Data collected for this thesis is complied with the Data Protection Act 1998, among which collected data are kept in a secure place and not released for any use by third parties. Some sensitive information of participants was collected to address the research question, aim and objectives and this has been treated in a highly confidential manner. Moreover, participants were informed beforehand that data collected will be kept anonymous and would not be traceable to anyone except the researcher, and any results would be shown in an aggregate form

and only anonymised comments would be used to support analysis. Data collected would be destroyed once all the investigations possible is completed.

Chapter 3 conclusion: This chapter has discussed how case study research design allows examination of the sport delivery system as a whole by selecting the LRS-CSP region in England. A discussion on how critical realism has guided to adopt a mixed methods approach is presented, and a justification is offered on why qualitative methods are used for data collection at the macro and the micro level, and quantitative methods are used for data collection at the meso and micro level using cross sectional design. This chapter also explains the purposive sampling technique used to recruit research participants at the macro and the micro level qualitative data collection, stratified random sampling used for the meso level quantitative data collection, and random recruitment of participants for the micro level quantitative data collection. It also explains how research instruments developed for different phases of data collection helps to address the research question, aim and objectives. While explaining how these research instruments were developed, justification of its validity and reliability along with the ethical concerns is also discussed. Strategies that is utilised to analyse the empirical data, using qualitative and quantitative methods that helps to address the research question, aim and objectives is discussed in the final section of this chapter.

CHAPTER 4: MULTILEVEL ANALYSIS OF SPORT DELIVERY SYSTEM

As mentioned in chapter 3.4.1, the objective of this chapter is to present results based on the multi-level analysis of the sport delivery system. The analysis draws upon the semi-structured interviews of regional managers and focus groups of facility users, as well as the meso level quantitative data completed by facility managers in the LRS-CSP region. Results obtained from different levels of the sport delivery system are aimed at achieving the objectives outlined in chapter 1 and specifically the following:

1) Examine the strategic priorities and strategy of different types of sport and fitness facilities, and if this has varied influence on users' participation and their outcomes
2) Examine the level of influence different stakeholders in the sport industry have on the strategic decision making of different types of sport and fitness facilities
3) Examine the importance placed by different types of sport and fitness facilities on their service features, and if this has any influence on the end users' participation and their outcomes

This will help to address the thesis' aim of examining 'if and how policy objectives that may influence facilities' strategic priorities, strategy and ownership influence individuals' sport participation and its outcomes'. Analysis of the macro level semi structured interview data will address the above mentioned objective numbered 1 and 2 under facilities level. In this regard, section 4.2 will present the results of macro level data which will inform about how the regional managers in the LRS-CSP region view the current sport and fitness provision based on the changes made by the government, along with the strategic priorities of different types of sport and fitness facilities and the pressures they are facing to enable sport provision for their potential users in the region. Analysis of the meso level survey data will address the above mentioned objective numbered 1, 2, 3, 4 and 5 under facilities levels. In this regard, section 4.2.1 will first present a description of the strategic priorities of different types of sport and fitness facilities, followed by a description of different stakeholders' influence on the strategic decision making of sport and fitness facilities. This section will also present a description of the importance placed by different types of sport and fitness facilities on their service features, in offering sport and fitness activities to its users. This is then followed by a description of the generic strategies and strategy typologies of different types of sport and fitness facilities in the

LRS-CSP region. The subsequent section 4.2.2 will then present the ANOVA results, along with Tukey post-hoc test and effect size for a one-way ANOVA, related to the examination of facilities' strategic objectives and service features along with the influence of the macro level agents on facilities' strategic decision making.

Analysis of the micro level data from the focus groups, combined with the results obtained from meso level data will address the above mentioned objectives numbered 1 and 2 under user level. In this regard, section 4.3 will present results of micro level data which will inform about why users select a particular type of facility for their sporting needs, followed by their opinion on different aspects of their facility's service provision. It will also present the results related to the users' participation behaviour and the benefits they think they get by participating in sports. In section 4.4.1, by considering the macro level thematic analysis results and meso level ANOVA results, a discussion about the objectives of the sport and fitness facilities and the influence of macro level agents on the facilities' strategic decision making is presented. Following this, in section 4.4.2, by considering the meso level ANOVA results and the micro level thematic analysis results, a discussion on the influence (or not) of facilities' objectives on the users' participation and their outcomes is presented that will help to address the above mentioned objectives numbered 1 and 2 under user level, along with some concluding remarks.

4.1 Macro level results

Thematic analysis from the semi-structured interviews with those responsible for the development of sport in the LRS-CSP region is presented below. Some quotes from the interviews are presented in this section where necessary, however Appendix G shows key themes, sub-themes and codes identified from the qualitative data collected at the macro level along with the illustrative quotes.

When discussing the current scenario of the sport and fitness industry in the LRS-CSP region, all five officials suggested that the competition is intensifying in the sport and fitness industry, particularly due to the recent influx of cheaper private sector chains. As a result, concerns were expressed, especially from the LMC official, regarding user retention.

> "The biggest challenge with that question is … is … the customer's already there, the challenge for them is in sustaining them and keeping them, so it's a conundrum for

whether you're public and private sector, you want to keep the people that you've got there"

Public-sector representatives emphasised the need for additional investment in the sport sector, especially to meet the needs of hard to reach groups, while the private-sector consultants suggested that their focus has shifted to differentiation of services through market intelligence for a more tailored service offering. The private-sector consultants suggested this could be done by understanding what the competitors in the region are doing and differentiating themselves from this, and by offering better services.

> "You just couldn't keep dropping your prices because you end up having very small yield for an awful lot of work, so the value was taken out of it, so you had to demonstrate what your USPs (*unique offerings*) were, what's different about you, what was better about you, so that somebody bought from you, rather than bought from just a low cost operator because it happened to be 12.99 a month….
>
> …. I think market intelligence is beginning to have a bigger profile, and again we need that for the efficiency side of stuff, but in the past it's always been about competitors, what are competitors doing? So, I think competition has been very, very fierce in the sector"

All five regional managers agreed that sport provision pertaining to the number of sport and fitness facilities in the LRS-CSP area is sufficient, but they may not be in the right place according to the CSP director. However, there was no agreement in their views on sport participation of the population, with opposing opinions expressed regarding changes in participation trends. For instance, one private consultant and the CSP Director argued that there has been no change in participation levels recently, the county community development manager and the other private consultant suggested that the numbers are rising, whereas the leisure services manager from the District Council claimed that participation is in fact decreasing.

In response to the objectives of the different sport organizations, all managers agreed that there is a clear divide between public and private provision. According to the interviewees, the public-sector's focus is on the needs of the population and its subsequent health, well-being and social capital, while the private sector aims at making profit and being financially effective. Further suggesting that cost efficiency is not the primary objective of the public sector, and social objectives are not the primary objective of the private sector:

> "So if you look at public providers, they've been less worried about cost, less worried about efficiency, with a far greater focus on trying to deliver a greater equality of opportunity, address need, etc […]. Private operators […] will be driven by the profit motive […] and they tend to be a million miles away from social need objectives"

Regardless of their motivations, however, all managers argued that the overall financial climate is having an effect on the sport industry. The financial pressures introduced due to the government's austerity measures has created additional challenges for public-sector facilities which includes LMC facilities that are often struggling to find a balance between controlling cost and achieving their social objectives.

Further, public and LMC sector managers suggested that social objectives are an obligation for them to be achieved as one of their main outcomes which is imposed by the national and local governments, and the public-sector representatives noted that this has not been matched with increased financial assistance which has limited the resources available to them in order to meet these targets. Instead they are struggling due the recent austerity measures to the sector by the government. They argued that it is these intensified pressures that will influence future service objectives and achieving the targets of social and financial objectives will be very challenging. In contrast, the private-sector consultants praised the government's policies on increasing sport participation rates among the population as they viewed this as a means for generating new customers and generating more profit for their organisation.

> "Private operators, particularly if they are a pure private operator, with stakeholders, will be driven by the profit motive, so they will really drive down cost and will really focus on markets that will deliver them high turnover, good secondary spend, high price, high yield customers. And they tend to be a million miles away from social need objectives unless they're required by the contract to do so".

> "private sector provider will be looking to see where their margin in providing that service"

Responding to the questions about engaging with the users in the region with regards to service provision, the District Council representative and the CSP Director both suggested that the public-sector is being pushed to seek balance between meeting customer needs and offering a consistent set of programmes to the population, and that they are trying to achieve this with the limited resources at hand and are limited in their ability to adapt to new trends or embrace technological advances that could be of use in their provision. However, the LMC

official mentioned that despite limited resources they have a stronger engagement with users by collecting data to understand their needs and preferences, the results of which is used to improve their service provision.

> "A lot of the time it is going at them, us trying to get feedback from them what do they like, what don't they like, for example, just to try and make sure the feedback we're getting isn't us just sitting back, waiting for a problem and the feedback comes to us, it's a completely ongoing battle. we then send e-mails out to them on their phones, that they complete very quickly and it comes back to us, and we see a massive uplift in our feedback coming from customers, positive and negative from that, and we've had a lot more suggestions coming through from our customers, so it is really ground-breaking for us, we've found a different way of trying to go at it with our members, previously it was fill out this card, fill out this feedback card ….. it didn't really get us quite the service that we wanted, the feedback that we wanted"

In stark contrast, the private-sector consultants explained how their strategy is not user-led, but rather their approach to provision reflects the belief that they provide the best facilities in the sport delivery system: "I don't think we are a needs led service, we are incredibly a supplier led service, we focus on basically just marketing and hoping that the marketing approach works in terms of addressing needs".

Public and LMC officials suggested that national and the local government has huge influence through their policy changes and on their facilities' strategic decision making which eventually changes their priorities and they maintain a strong relationship with them. They also suggested that NGBs' are important for the sport sector and their support is very important as well, and that CSP has direct influence by increasing connectivity among different stakeholders and enhance the exposure of sport. Whereas private consultants mentioned that government has little influence on their facilities' strategic decision making and also said that NGBs set up is not ideal. However, private consultants mentioned that CSP has more influence on the private sector's strategic decision making where they are trying to bring all the sectors together to improve sports provision to the population in the region.

4.2 Meso level results

Results from the meso level quantitative data is presented by grouping different types of facilities based on the ownership criteria, as this allows for comparison between these facilities, as studies have argued that different type of ownerships show different strategic and functional

characteristics and may lead to different outcomes (Kort & Klijin, 2011; van den Hurk & Verhoest, 2017). In doing this, it will help to address the thesis' objective of examining if different facility ownership types have varied influence on end users' participation and their outcomes based on the results from micro level data.

This section of the chapter will first present the descriptive statistics collected by surveying sport and fitness facility managers in the LRS-CSP region who are responsible for the operation of these facilities on a day-to-day basis. Subsequently, to understand the varying degrees of importance placed by different types of sport and fitness facilities on their strategic objectives and on their various service features, results from ANOVA analysis along with effect size and Tukey post hoc test is presented. This section also presents ANOVA results along with effect size and Tukey post hoc test relating to varying degrees of influence different stakeholders have on facilities' strategic decision making. Finally, ANOVA results of facilities' generic strategies and strategy typologies is presented.

4.2.1 Descriptive results of meso level data

Responses to the six questions asked to investigate the strategic objectives of facilities are presented in Table 4.1. Among the data shown the first, second and the third items represent the social objectives while the fourth, fifth and the sixth items represents the commercial objectives. Each of these questions have been rated on a 5-point Likert scale (unimportant=1, slightly important=2, fairly important=3, important=4 and very important=5).

Strategic objectives and priorities

The data presented in Table 4.1 indicates that all the public facility managers and 9 of the 10 LMC facility managers have said that the social objectives are either important or very important to them with a mean score of 4.18, whereas only 10 out of 17 private facility managers have said that it is either important or very important for them to create opportunities for the under representative groups to participate in sports and to meet the wider community needs and only 2 facility managers have said that meeting social outcomes are important to them with a mean score of 3.25 from the three social objective items. Fourteen out of 17 private facility managers have said that it is either important or very important for them to meet their commercial objectives and to realise their profit margins, and 12 private facility managers have said that gaining market share is important to them, with a mean score of 3.99 from the three

commercial objective items. Whereas, all the 10 LMC facility managers reported that it is either important or very important for them to meet their commercial objectives and to realise their profit margins.

Table 4.1

Descriptive of sport and fitness facilities' strategic objectives

Social and Commercial Objectives (n=30)	**Private (n=17)**		**LMC (n=10)**		**Public (n=3)**	
1. Under representative groups ***(e.g. ethnic minority, low income, etc.)*** **have the opportunity to participate**	*IMP/V.IMP* n=10	*MS* 3.58	*IMP/V.IMP* n=9	*MS* 4.22	*IMP/V.IMP* n=3	*MS* 4.66
2. Meeting wider community needs? ***(e.g. participation of minority groups, young people…)***	*IMP/V.IMP* n=10	*MS* 3.47	*IMP/V.IMP* n=9	*MS* 4.22	*IMP/V.IMP* n=3	*MS* 5.0
3. Meeting social outcomes? ***(e.g. through participation to reduce crime, reduce young people's drug use…)***	*IMP/V.IMP* n=2	*MS* 2.70	*IMP/V.IMP* n=9	*MS* 4.11	*IMP/V.IMP* n=3	*MS* 4.66
4. Meeting commercial objectives	*IMP/V.IMP* n=14	*MS* 4.0	*IMP/V.IMP* n=10	*MS* 4.77	*IMP/V.IMP* n=3	*MS* 4.66
5. Realising profit margins	*IMP/V.IMP* n=14	*MS* 4.41	*IMP/V.IMP* n=10	*MS* 4.77	*IMP/V.IMP* n=2	*MS* 4.0
6. Gaining market share	*IMP/V.IMP* n=12	*MS* 3.58	*IMP/V.IMP* n=4	*MS* 3.55	*IMP/V.IMP* n=3	*MS* 4.33

Notes: n= number of sport and fitness facilities (surveyed/response), IMP = Important, V. IMP = Very important, MS = mean score from Likert scale.

However, with the mean score of 4.36, only 4 LMC facility managers indicated that gaining market share is very important to them. All 3 public facility managers have said that the 3 social objectives items are either important or very important to them with a mean score of 4.77, data suggest that commercial objectives are also important to the public facility managers (with the exception of one facility manager indicating that it is fairly important to realise profit margins) with a mean score of 4.33 derived from the three commercial objective items. Based on these mean scores, it could be argued that, it is equally important for public, private and LMC facilities to achieve their commercial objectives. Whereas, LMC and public facilities are more concerned about the social objectives and are more important to them compared to private facilities.

Stakeholders' influence on facilities' strategic decision making

Various stakeholders' influence on different types of sport and fitness facilities' strategic decision making is presented in Table 4.2 below:

Table 4.2

Descriptive of stakeholders' influence on sport and fitness facilities' strategic decision making

Stakeholders in the sports industry (n=30)	**Private (n=17)**		**LMC (n=10)**		**Public (n=3)**	
1. Government bodies ***(e.g. DCMS, other government departments…)***	*INF/T.INF* n=1	*MS* 2.0	*INF/T.INF* n=3	*MS* 3.0	*INF/T.INF* NA	*MS* 2.66
2. Public sport agencies ***(e.g. Sport England, National Governing Bodies, County Sport Partnership…)***	*INF/T.INF* n=1	*MS* 1.58	*INF/T.INF* n=3	*MS* 2.88	*INF/T.INF* NA	*MS* 3.0
3. Major employers ***(e.g. Corporate links, NHS, police, fire services…)***	*INF/T.INF* n=1	*MS* 2.52	*INF/T.INF* n=3	*MS* 2.77	*INF/T.INF* NA	*MS* 3.0
4. Local authority	*INF/T.INF* NA	*MS* 2.23	*INF/T.INF* n=9	*MS* 3.77	*INF/T.INF* n=3	*MS* 4.33
5. Lenders/financiers ***(e.g. Bank…)***	*INF/T.INF* n=4	*MS* 2.64	*INF/T.INF* n=2	*MS* 2.0	*INF/T.INF* NA	*MS* 1.33
6. Suppliers ***(e.g. Gym/fitness equipment…)***	*INF/T.INF* n=8	*MS* 3.23	*INF/T.INF* n=1	*MS* 2.66	*INF/T.INF* n=1	*MS* 2.66
7. Community/Sport clubs	*INF/T.INF* n=1	*MS* 2.47	*INF/T.INF* n=5	*MS* 3.0	*INF/T.INF* n=1	*MS* 3.33

Notes: n=number of sport and fitness facilities (surveyed/response), INF = Influence, T.INF = Total influence, MS = mean score from Likert scale, NA- none.

Data in Table 4.2 depicts the views of the facility managers who have rated each item listed in Table 4.2 on a 5 point Likert scale (no influence = 1, slight influence = 2, some influence = 3, influence = 4 and total influence =5). Descriptive results shown in Table 4.2 indicate that while the government bodies do not seem have much influence neither on public, private or LMC facilities, public sport agencies seem to have some influence on public and LMC facilities and little or no influence on private facilities. Major employers seem to have some influence on public, private and LMC facilities with 10 private facility managers reporting that they have 'some influence' or 'influence' on their strategic decision making. Comparatively the Local authority seems to have greater influence on public facilities than on LMC facilities and only a slight influence on the private facilities. Based on the mean scores from the Likert scale Lenders/financiers and suppliers seem to have comparatively greater influence on private facilities than on public and LMC facilities. Community/sports clubs within the research context of LRS-CSP appears to have some influence on public and LMC

facilities while they have slight to some influence on private facilities' strategic decision making.

Strategic importance on facilities' different aspects of service provision

Descriptive results relating to several aspects of facilities' service features is presented in Table 4.3, in this regard respective facility managers were asked to rate the importance they place on different aspects of their service provision on a 5 point Likert scale (unimportant=1, slightly important=2, fairly important=3, important=4 and very important=5).

Table 4.3

Descriptive of sport and fitness facilities' service provision

Different aspects of service provision (n=30)	**Private (n=17)**		**LMC (n=10)**		**Public (n=3)**	
1. Price	*IMP/V.IMP* n=14	*MS* 4.05	*IMP/V.IMP* n=9	*MS* 4.33	*IMP/V.IMP* n=3	*MS* 4.66
2. Facility opening timings	*IMP/V.IMP* n=17	*MS* 4.23	*IMP/V.IMP* n=10	*MS* 4.55	*IMP/V.IMP* n=3	*MS* 4.66
3. Avoiding congestion through scheduling	*IMP/V.IMP* n=10	*MS* 3.52	*IMP/V.IMP* n=8	*MS* 4.33	*IMP/V.IMP* n=1	*MS* 3.33
4. Equipment	*IMP/V.IMP* n=17	*MS* 4.47	*IMP/V.IMP* n=9	*MS* 4.44	*IMP/V.IMP* n=3	*MS* 4.33
5. Range of activities	*IMP/V.IMP* n=13	*MS* 4.0	*IMP/V.IMP* n=10	*MS* 4.55	*IMP/V.IMP* n=2	*MS* 4.33
6. Memberships	*IMP/V.IMP* n=16	*MS* 4.64	*IMP/V.IMP* n=10	*MS* 4.66	*IMP/V.IMP* n=3	*MS* 4.33
7. Ancillary revenue/Secondary spend	*IMP/V.IMP* n=8	*MS* 3.05	*IMP/V.IMP* n=8	*MS* 3.77	*IMP/V.IMP* n=3	*MS* 4.0
8. Maintenance of facility	*IMP/V.IMP* n=17	*MS* 4.76	*IMP/V.IMP* n=10	*MS* 4.66	*IMP/V.IMP* n=3	*MS* 4.33
9. Training and development of staff/employees	*IMP/V.IMP* n=16	*MS* 4.29	*IMP/V.IMP* n=10	*MS* 4.66	*IMP/V.IMP* n=3	*MS* 4.33
10. Customer service	*IMP/V.IMP* n=17	*MS* 4.94	*IMP/V.IMP* n=10	*MS* 5.0	*IMP/V.IMP* n=3	*MS* 4.66

Notes: n=number of sport and fitness facilities (surveyed/response), IMP = Important, V. IMP = Very important, MS = mean score from Likert scale.

Mean scores in Table 4.3 indicate that price, facility opening timings, equipment, range of activities, memberships and training and development of staff/employees are all important

for public and private facilities, and comparatively LMC facility managers seem to place a greater strategic importance on these aspects of service provision.

LMC facility managers have said that it is important for them to avoid congestion through scheduling. Comparatively, private and public facility managers indicate that congestion is of slightly lesser importance to them. Public and LMC facilities seem to place more importance on services which generate ancillary revenue for their facilities compared to private facilities, while the maintenance of facility and customer service seems to be very important to public, private as well as LMC facility managers.

Strategy content

This section will present the descriptive results related to strategy content of different types of sport and fitness facilities in the LRS-CSP region and includes Porter's generic competitive strategies and Miles and Snow's strategy typologies.

Porter's generic competitive strategies: In order to identify to what extent does the sport and fitness facilities adopt Porter's generic competitive strategies, ten questions were asked to the respective facility managers who rated each of these questions on a 5 point Likert scale (never = 1, rarely = 2, sometimes =3, often = 4, always =5). Among the ten questions asked to the facility managers as listed in Table 4.4, first four items represent the differentiation strategy, item numbers five, six and seven represents the cost leadership strategy and the eighth, ninth and tenth items represents the focus strategy.

Data shown in Table 4.4 indicates that more private facilities are likely to adopt a differentiation strategy than cost leadership or focus strategy, as 14 out of 17 private facility managers have said that they often/always adopt differentiation strategy, whereas 9 out of 17 private facility managers have said they often/always adopt cost leadership strategy, however it is worth noting that 14 out of 17 private facility managers have said that they often/always emphasize on efficiency. This is also supported by the Likert scale mean scores for private facilities of 4.11 for a differentiation strategy, and 3.62 and 3.29 for cost leadership and focus strategies respectively. LMC facilities show that they are often likely to adopt a hybrid strategy in which they not only focus on offering unique and highly differentiated services while placing a high degree of value in their service, but also focus on cost saving by redesigning

Table 4.4

Descriptive of facilities' adoption of Porter's strategies

Porter's generic strategies (n=30)	Private (n=17)		LMC (n=10)		Public (n=3)	
1. Provide unique service	*OFT/ALW* n=14	*MS* 4.12	*OFT/ALW* n=8	*MS* 4.10	*OFT/ALW* n=1	*MS* 3.33
2. Offer a highly differentiated service	*OFT/ALW* n=12	*MS* 3.88	*OFT/ALW* n=8	*MS* 4.10	*OFT/ALW* NA	*MS* 2.67
3. Offer a high degree of value in your service	*OFT/ALW* n=17	*MS* 4.59	*OFT/ALW* n=10	*MS* 4.80	*OFT/ALW* n=3	*MS* 4.33
4. Offer services with distinctly different features from those of your competitors	*OFT/ALW* n=12	*MS* 3.88	*OFT/ALW* n=7	*MS* 3.80	*OFT/ALW* n=1	*MS* 3.33
5. Invest in cost saving	*OFT/ALW* n=7	*MS* 3.41	*OFT/ALW* n=9	*MS* 4.0	*OFT/ALW* n=1	*MS* 3.33
6. Emphasize efficiency	*OFT/ALW* n=14	*MS* 4.29	*OFT/ALW* n=9	*MS* 4.10	*OFT/ALW* NA	*MS* 2.67
7. Redesign services to reduce costs	*OFT/ALW* n=5	*MS* 3.18	*OFT/ALW* n=8	*MS* 3.80	*OFT/ALW* n=2	*MS* 3.33
8. Offer only a few services specifically designed for your customers	*OFT/ALW* n=8	*MS* 3.35	*OFT/ALW* n=4	*MS* 3.10	*OFT/ALW* NA	NA
9. Appeal to a specific 'niche' in the marketplace	*OFT/ALW* n=8	*MS* 3.47	*OFT/ALW* n=2	*MS* 3.20	*OFT/ALW* NA	NA
10. Focus your efforts on a particular type of customer	*OFT/ALW* n=5	*MS* 3.06	*OFT/ALW* NA	*MS* 2.90	*OFT/ALW* NA	NA

Notes: n=number of sport and fitness facilities (surveyed/response), OFT = Often, ALW = Always, MS = mean score from Likert scale.

services and emphasizing efficiency. As 8 out of 10 LMC facility managers have said that they often/always adopt a differentiation strategy and 9 out of 10 LMC facility managers have said that they often/always adopt a cost leadership strategy, whereas only 2 out of 10 LMC facility managers have said they often/always adopt a focus strategy, this is also supported by the Likert scale mean scores for LMC facilities which is 4.20 and 3.96 for differentiation and cost leadership strategy respectively, whereas it is 3.06 for focus strategy.

Similarly, public facilities show that they are likely to adopt a hybrid strategy, however their mean scores from Likert scale is lesser compared to the LMC facilities for differentiation and cost leadership strategies, which indicates that public facility managers are 'sometimes' likely to adopt a hybrid strategy than compared with LMC facilities who are 'often' likely to adopt a hybrid strategy. Only 1 out of 3 public facility managers said that they often/always adopt differentiation and cost leadership strategies, while noting that all 3 public facility

managers have said that they often/always offer a high degree of value in their service, with the Likert scale mean scores being 3.41 and 3.11 for differentiation and cost leadership strategy respectively. Whereas none of the public facility managers have said they adopt a focus strategy. In summary, based on the mean scores, private facilities in the LRS-CSP region adopt a differentiation strategy in offering their services, whereas LMC and public facilities adopt a hybrid strategy with a combination of differentiation and cost leadership strategies in offering their services.

Miles and Snow's strategy typologies: In order to identify to what extent the sport and fitness facilities adopt Miles and Snow's strategy typologies, four descriptors were given to all the facility managers, who rated them on a 5 point Likert scale (not at all = 1, slightly = 2, somewhat = 3, moderately = 4, absolutely = 5), this is based on how closely the descriptors might match their organizational strategy.

Table 4.5

Descriptive of facilities' adoption of Miles and Snow's strategy typologies

Miles and Snow's strategy typologies (n=30)	**Private (n=17)**		**LMC (n=10)**		**Public (n=3)**	
1. Defender	*MDT/ABT*	*MS*	*MDT/ABT*	*MS*	*MDT/ABT*	*MS*
	n=7	3.41	n=3	2.70	n=2	4.0
2. Prospector	*MDT/ABT*	*MS*	*MDT/ABT*	*MS*	*MDT/ABT*	*MS*
	n=3	2.65	n=5	3.20	n=2	3.0
3. Analyser	*MDT/ABT*	*MS*	*MDT/ABT*	*MS*	*MDT/ABT*	*MS*
	n=9	3.35	n=6	3.30	n=1	3.0
4. Reactor	*MDT/ABT*	*MS*	*MDT/ABT*	*MS*	*MDT/ABT*	*MS*
	NA	1.35	n=1	1.40	n=1	2.0

Notes: n=number of sport and fitness facilities (surveyed/response), MDT = Moderately, ABT = Absolutely, MS = mean score from Likert scale.

Data shown in Table 4.5 indicates that compared with other types of organisations some of the private facilities sometimes adopt 'analyser' strategic stance as 9 out of 17 private facility managers have said that they moderately/absolutely agree that their approach resembles that of 'analyser' descriptor with the Likert scale mean score of 3.35, and some of the private facilities sometimes adopt a 'defender' strategic stance as 7 out of 17 private facility managers have said that they moderately/absolutely agree that their approach resembles that of 'defender' descriptor with the Likert scale mean score of 3.41. However, none of the private facility managers have moderately/absolutely agree that their approach resembles that of 'reactor'

strategic stance, while only 3 out of 17 private facility managers have said that they moderately/absolutely agree that their approach resembles that of 'prospector' strategic stance, with the Likert scale mean score of 1.35 and 2.65 respectively.

Data from Table 4.5 indicate that some of the LMC facilities sometimes adopt 'analyser' strategic stance as 6 out of 10 LMC facility managers have said that they moderately/absolutely agree that their approach resembles that of 'analyser' descriptor with the Likert scale mean score of 3.30, and some of the LMC facilities sometimes adopt 'prospector' strategic stance, as 5 out of 10 LMC facility managers have said that they moderately/absolutely agree that their approach resembles that of 'analyser' descriptor with the Likert scale mean score of 3.20. However, only 1 out of 10 LMC facility managers have said that they moderately/absolutely agree that their approach resembles that of 'reactor' descriptor with the Likert scale mean score of 1.40, and 3 out of 10 LMC facility managers have said that they moderately/absolutely agree that their approach resembles that of 'defender' descriptor with a 2.70 Likert scale mean score. Public facilities are more likely to adopt a 'defender' strategic stance with a mean score of 4, while some of the public facility managers are likely to adopt 'analyser' or prospector' strategic stance as well. Only 1 out of 3 public facility managers have said that they moderately agree that their approach resembles that of 'reactor' and the mean score of 2 suggest they are less likely to adopt 'reactor' strategic. In summary, based on the mean scores, private facilities in the LRS-CSP region are likely to adopt a combination of analyser and defender stance, while LMC facilities are likely adopt a combination of prospector and analyser stance, whereas public facilities adopt a defender stance.

4.2.2 ANOVA results

Results in Table 4.6 suggest that there is no significant difference in how much importance public facilities including LMCs and private facilities give for under representative groups e.g. ethnic minority, low income, etc. to have the opportunity to participate in sports. However, public facilities place a higher importance than the private facilities in meeting wider community needs as suggested by the Tukey test of difference in means with a large effect size. Similarly, public facilities including LMCs place higher importance than private facilities in

Table 4.6

ANOVA results one

	Facility Group (Mean[SD])			*F*-ratio	Tukey Test (Mean difference)	n^2
	Private	LMC	Public			
Objectives						
Under representative groups (e.g. ethnic minority, low income, etc.) have the opportunity to participate	3.58[1.17]	4.30[.67]	4.66[.57]	2.50	*nsd.*	
Meeting wider community needs? (e.g. participation of minority groups, young people…)	3.47[1.00]	4.30[.67]	5.00[.00]	5.55**	Private<Public (1.52941*)	.291
Meeting social outcomes? (e.g. through participation to reduce crime, reduce young people's drug use…)	2.70[.77]	4.10[.56]	4.66[.57]	18.42**	Private<Public (1.96078**); Private<LMC (1.39412**)	.577
Meeting commercial objectives	4.00[.61]	4.70[.48]	4.66[.57]	5.44**	Private<LMC (.70000*)	.287
Realising profit margins	4.41[.94]	4.70[.48]	4.00[1.00]	.92	*nsd.*	
Gaining market share	3.59[1.06]	3.50[1.50]	4.33[.57]	.57	*nsd.*	
Stakeholders						
Government bodies (e.g. DCMS, other government departments…)	2.00[.79]	2.90[1.10]	2.66[.57]	3.38*	Private<LMC (.90000*)	*.200*
Public sport agencies (e.g. Sport England, National Governing Bodies, County Sport Partnership…)	1.59[.94]	2.90[.87]	3.00[.00]	8.44**	Private<LMC (1.31176**) Private<Public (1.41176*)	.384
Major employers (e.g. Corporate links, NHS, police, fire services…)	2.53[.80]	2.70[1.15]	3.00[.00]	.382	*nsd.*	
Local authority	2.23[.83]	3.80[1.03]	4.33[.58]	13.70**	Private<Public (2.09804**); Private<LMC (1.56471**)	.503
Lenders/financiers (e.g. Bank…)	2.64[1.11]	2.00[1.24]	1.33[.57]	2.24	*nsd.*	
Suppliers (e.g. Gym/fitness equipment…)	3.23[.97]	2.60[.70]	2.66[1.52]	1.59	*nsd.*	
Community/Sport clubs	2.47[1.00]	3.10[.99]	3.33[.57]	1.86	*nsd.*	
Features						
Price	4.05[.65]	4.30[.67]	4.66[.57]	1.25	*nsd.*	
Facility opening times	4.23[.43]	4.50[.52]	4.66[.57]	1.60	*nsd.*	
Avoiding congestion through scheduling	3.53[.94]	4.20[.78]	3.33[1.52]	1.85	*nsd.*	
Equipment	4.47[.51]	4.40[.69]	4.33[.57]	.094	*nsd.*	
Range of activities	4.00[.70]	4.60[.51]	4.33[1.15]	2.37	*nsd.*	
Memberships	4.64[.60]	4.60[.51]	4.33[.57]	.379	*nsd.*	
Ancillary revenue	3.05[1.19]	3.80[.78]	4.00[.00]	2.20	*nsd.*	
Maintenance of facility	4.76[.43]	4.70[.48]	4.33[.57]	1.10	*nsd.*	
Training and development of staff/employees	4.29[.58]	4.60[.51]	4.33[.57]	.948	*nsd.*	
Customer service	4.94[.24]	5.00[.00]	4.66[.57]	2.17	*nsd.*	

Notes: **p ≤ 0.01. *p ≤ 0.05. nsd: no significant differences found; $\mathbf{n^2}$ – Eta-Squares
Facility objectives scale and facility features scale: 1=unimportant, 2=slightly important, 3=fairly important, 4=important and 5=very important [targeted programmes: 1=not at all, 2=slightly, 3=somewhat, 4= moderately and 5=absolutely; efficiency: 1=never, 2=rarely, 3=sometimes, 4=often and 5=always]; Facility stakeholders scale: 1=no influence, 2=slight influence, 3=some influence, 4=influence and 5=total influence;
A value of $n^2 = 0.01$ is a small effect, a value of $n^2 = 0.06$ is a moderate effect, and a value of $n^2 = 0.14$ is considered a large effect (Goldsmith and Walker, 2015).

meeting social outcomes such as; through sport participation trying to reduce crime, young people's drug use etc. with a large effect size.

Tukey test also shows that private facilities are not as much concerned as LMC facilities in meeting commercial objectives with a large effect size. Results show that there is no difference in the influence major employers, lenders or financiers, suppliers and community clubs have on public, private or LMC facilities' strategic decision making.

However, Tukey test results suggest that public sport agencies such as; Sport England, NGBs, CSPs etc. and local authority have a stronger influence on public sector facilities including LMCs' strategic decision making than on private facilities with a large effect size.

It can also be seen that government bodies such as the DCMS have a stronger influence on LMCs' strategic decision making than on private facilities with a large effect size. This shows that public facilities including LMCs face more pressure and demands from wider stakeholders in the sport and fitness industry. As shown in Table 4.6, there is no significant difference in the mean values observed between public, private and LMC facilities among the service features.

Based on the descriptive results presented in chapter 4.2.1, strategy variables has helped to understand the strategic content that is likely to be adopted by different types of sport and fitness facilities. However, data analysis shown in Table 4.7, shows that there is no significant difference between public, private and LMC facilities except for the emphasizing efficiency variable, in which public facilities do not seem to focus on efficiency in their service offerings compared to private or LMC facilities.

This result suggests those facility managers who have to focus on generating profit will emphasise efficiency in their service offerings, which is understandable as they have to ensure that the cost of services that are offered to their users have to be reduced in order to make financial gains for their organisation.

If more variables had shown significant differences, it would have helped to classify generic strategies and strategy typologies into alternative strategy types. However, this is now not possible, since only one of the variable has been shown to be significantly different among public, private and LMC facilities.

Table 4.7

ANOVA results two

	Facility Group (Mean[SD])			F-ratio	Tukey Test (Mean difference)	n^2
	Private	LMC	Public			
Differentiation strategy						
Provide unique service	4.12[.85]	4.10[.99]	3.33[.57]	1.03	nsd.	NA
Offer a highly differentiated service	3.88 [.99]	4.10[.73]	2.67[.57]	3.06	nsd.	NA
Offer a high degree of value in your service	4.59[.50]	4.80[.42]	4.33[.57]	1.23	nsd.	NA
Offer services with distinctly different features from those of your competitors	3.88 [.85]	3.80[.91]	3.33[.57]	0.51	nsd.	NA
Cost leadership strategy						
Invest in cost saving	3.41[.71]	4.00[.81]	3.33[.57]	2.20	nsd.	NA
Emphasize efficiency	4.29[.77]	4.10[.56]	2.67[.57]	6.97*	Public<Private (1.627**) Public<LMC (1.433*)	0.340
Redesign services to reduce costs	3.18[.63]	3.80[.78]	3.33[1.15]	2.25	nsd.	. NA
Focus strategy						
Offer only a few services specifically designed for your customers	3.35[1.16]	3.10[.87]	2.33[.57]	1.24	nsd.	NA
Appeal to a specific 'niche' in the marketplace	3.47[1.00]	3.20[.78]	2.67[.57]	1.07	*nsd.*	
Focus your efforts on a particular type of customer	3.06[1.08]	2.90[.31]	2.67[.57]	.302	nsd.	NA
Miles and Snow's strategy typologies						
Defender	3.41[1.06]	2.70[1.63]	4.00[1.00]	1.57	nsd.	
Prospector	2.65[.86]	3.20[1.31]	3.00[1.73]	.80	nsd.	
Analyser	3.35[1.27]	3.30[1.33]	3.00[1.00]	.09	nsd.	
Reactor	1.35[.70]	1.40[.96]	2.00[1.73]	.65	nsd.	

Notes: **p ≤ 0.01. *p ≤ 0.05. nsd: no significant differences found; **n^2** – Eta-Squared
A value of $n^2 = 0.01$ is a small effect, a value of $n^2 = 0.06$ is a moderate effect, and a value of $n^2 = 0.14$ is considered a large effect (Goldsmith and Walker, 2015).

4.3 Micro level results

By using thematic analysis, results obtained from three separate focus group discussions involving the users of public, private and LMC facilities in the LRS-CSP region is presented below. Some quotes from the focus group discussions are presented in this section where necessary, however Appendix H shows key themes, sub-themes and codes identified from the qualitative data collected at the micro level along with the illustrative quotes.

End users of all types of sport and fitness facilities informed that they select a facility for sport participation mainly based on the activities offered by that facility, and also depending on its proximity to their home/work. However, LMC and public facility users mentioned that the 'loyalty and sense of belonging' to their facility is the main reason why they continue to use the facility despite having several options in the market. Whereas, the private facility users suggested that their facility functions like a profit-driven corporation, but the additional perks, such as aesthetics, parking, cleanliness and friendliness of staff was the reason behind their choice for using their facility.

Facility users from across the sector suggested that the price they pay is reasonable to what they get in return and that they are happy with the location of the facility from their home and work.

> "I'd say the initial fee is quite expensive and a bit of an eye-opener, but with the quality of what you get, as I say, the instruction is available if you need it or if you want it. Opening hours, as I say, you couldn't pay to sort of go anywhere else at that time, so there's nowhere else open"

Among other service provision features, public facility users mentioned that they are not completely satisfied with facility opening timings and space availability, suggesting that often customer requirements are not met as the demand exceeds capacity, on the other hand LMC and private facility users seem to not have any concerns in this regard. All facility users mentioned that general cleanliness in the facility needs improvement, particularly public facility users, who also suggested that the equipment in the facility utilised for sport participation needs upgrading.

Users described that the frequency of sport participation depends on how they feel during a four-week period and the intensity of sports undertaken can be identified depending on the age of the users. Older age participants (55 years and older) prefer light intensity activities and young (18-34 years) and middle aged (35-54 years) users prefer moderate and vigorous activities. Generally, the older aged use the facility for weight training activities once a week, whereas the younger and middle aged users say they use the facilities three to four times a week for various activities. Other than using a facility, middle aged users mentioned that they walk and use a cycle to get to places every day, whilst younger, middle and older age participants all suggested that they participate in other sport activities outside a leisure centre

such as; running, golf, canoeing and surfing. The younger and middle-aged users particularly mentioned that they enjoy team sports like; football, rugby and cricket outside the leisure centre.

Facility users from across the sectors have expressed identical benefits with regards to health and well-being, in which users mentioned that the physical and psychological benefits include; improved health and fitness, as well as their increased energy, paired with an enhanced sense of confidence, optimism and overall well-being.

> "Confidence for feeling physically fitter and feeling stronger. That gives me a kind of an inner sense of strength, plus a bit of vanity as well. (private facility)"

> "Being able to do the class, survive it and stick with it and see my fitness level change has really impacted on my sense of wellbeing and kind of like how I feel about myself ultimately. I am alive, do stuff! (Non-profit facility)"

> "A lot of us find that once you go to the gym maybe once or twice, you start to feel a lot better about yourself, rather than being cooped up in the house. Not only from a physiological point of view, but also from a mental perspective, it made me feel better. (public facility)"

All types of facility users suggested that socialising and networking opportunities that their facility has to offer is the key motivating factor in their continued sport participation, as users mentioned that they started sport participation in order to enhance their health and fitness levels but what keeps them going beyond that is the social bonds that they have created with their peers in their facility which often extends beyond the training hours into their social life, which not only enhances their social capital but also their overall well-being. This indicates that facility provision plays an important role in promoting social capital, in which, it helps to bring people together with similar interests and characteristics i.e., those who engage in similar sport activities. In addition to this, some of the users mentioned the improvement they have seen in their relationships among family members, as families come together to a facility in order to participate in sport. It appears that perceived health, well-being and social capital are not influenced by the type of facility used.

"In the gym you see friendships, you see bonds, you see people like really dig deep for someone else. (public facility)"

"Get talking to people, networking with people and just being healthy and getting that. (LMC facility)"

"So, it is a family environment, which you've said about your friends, I'd say it's quite important and it's sort of gone beyond keeping yourself fit, that becomes expected for having the gym, in partly the social side and your family environment, it's somewhere to meet and go on from there onwards". So, I was better, that meant I was better with my kids, I didn't growl at them, I was better with my wife, so it was better for my relationship, so it snowballed"

Users described barriers to sport participation as having kids, and family and work commitments which does not leave them with enough time, particularly with the middle age users belonging to 36-54 years.

4.4 Discussion

The previous sections of this chapter have presented the results obtained from the data collected at the macro, meso and the micro level of the sport delivery system. In which, macro level data has shown the clear divide between public sector including LMC facilities and the private facilities' strategic objectives and pursued aims. It is seen that public facilities pursue social objectives, private facilities pursue commercial objectives, and LMC facilities pursue both social and commercial objectives. It is also seen that, Government including public sport agencies have more influence on public including LMC sectors facilities' strategic decision making and have little influence on private sector facilities. Meso level data has shown that, public including LMC facilities pursue social objectives more than private facilities, and local authorities and public sport agencies have more influence on public including LMC facilities' strategic decision making than on the private facilities. Meso level results of facilities' service features or strategy items have not shown to be significant. Micro level data has shown that, users' reported sport participation and their health, well-being and social capital is identical regardless of whether they use a public, private or LMC facility for their sporting needs. This has helped to achieve the following objectives of this thesis:

1) Examine the strategic priorities and strategy of different types of sport and fitness facilities, and if this has varied influence on users' participation and their outcomes
2) Examine the level of influence different stakeholders in the sport industry have on the strategic decision making of different types of sport and fitness facilities
3) Examine the importance placed by different types of sport and fitness facilities on their service features, and if this has any influence on the end users' participation and their outcomes

This has particularly helped to understand the following aspects of the conceptual model that is explained in chapter 2.4:

Sport Policies; Qualitative data collected at the macro level has helped to capture how sport development managers in the LRS-CSP region view the current sport and fitness landscape. Along with this, based on the recent changes carried out by the government in the sport sector, it has helped to understand what effect this has on different (ownership) types of sport and fitness facilities in the region from the sport development managers' perspective. As well as it has helped to understand the pressure facility managers have to cope from different stakeholders in the industry.

Facilities strategic priorities and strategies adopted based on ownership and its service features; From facility managers' perspective, quantitative data at the meso level has helped to examine the macro level agents' influence on the facilities' strategic decision making. As well as the importance facility mangers place on their strategic objectives, strategy and various service features.

End users' sport participation behaviour and their subjective health, well-being and social capital; Facilities' strategic priorities, strategies and service features which may affect the facilities' offerings that may influence users' sport participation behaviour which in turn may affect their health, well-being and social capital. This is understood from the qualitative data collected at the micro level.

By combining the results obtained from macro, meso and the micro level data, the next section of the thesis will discuss these results categorised by different ownership types and will inform how macro and meso level agents of the sport delivery system operate in the LRS-CSP region, and if this has any difference on the users' participation and their outcomes who are

conceptualised at the micro level of the system. In doing so, it will help to address the research aim of 'if and how policy objectives that may influence facilities' strategic priorities, strategy, ownership influence individuals' sport participation and its outcomes'. The discussion of the findings is presented in two separate topics as below;

1) Objectives of sport and fitness facilities – In this section, macro and meso level results are discussed to inform how strategic objectives of different types of sport and fitness facilities in the LRS-CSP region varies which may be influenced by various stakeholders in the industry who operate at the macro level of the sport delivery system. As policies and priorities formulated by these stakeholders might influence facilities' strategic decision making and may affect the service provision, which in turn may affect the users.
2) Facilities' objectives and users' outcomes– This section will discuss the findings obtained from meso and micro level data, and will discuss what this means for sport provision.

4.4.1 Objectives of sport and fitness facilities

The views expressed by the regional managers at the macro level suggest that there is a clear divide in the strategic objectives of the public including LMCs and the private sport and fitness facilities in the region. ANOVA results from the meso level support these views in which facility managers responsible for the day to day operations have also reported similarly i.e., as one of their main outcomes, public sector including LMCs are more focussed on achieving the social objectives of increasing sports participation among population and in promoting their health, well-being and social capital. Especially among minority groups and vulnerable young people who could otherwise be exposed to crime and drug use. This seems to be due to the imposition by the national government through their policies which becomes an obligation to the public sector including LMC facilities, and this is controlled by the government through grants, subsidies, contracts and funding opportunities available for the public sector including LMCs (Audit commission, 2006).

Governments' imposition of their policies on public sector facilities including LMCs seems to gain further strength, as findings show that both regional managers at the macro level and the facility managers at the meso level agree that the government including public sport

agencies such as Sport England, NGBs, CSPs etc. have more influence on their strategic decision making than compared to the private sector, and this is reflective in their strategic objectives. As a result of which, public sector facilities including LMCs' strategy seems to change as the government's policies and priorities towards the sports sector changes. For example, the recent austerity measures introduced by the government (BBC, 2015) and the obligation of meeting social objectives of sport provision i.e., to increase sports participation among the population thereby promoting their health, well-being and social capital (HM Government, 2015) has created additional challenges for these facilities, especially LMCs who are trying to find a balance between social and commercial objectives for their survival in the industry and has been described as a struggle. This struggle for survival seem to have created intensified pressure on public sector, especially LMCs thereby influencing their service objectives. The Public sector has had to compromise on certain aspects of service provision due to lack of financial means e.g. not only they are unable to effectively provide services to the under representative groups such as ethnic minorities, low income groups etc. but also unable to hire enough personnel who could help in delivering better services to the general population. This was emphasized by the District Council representative and the CSP Director who thinks they are limited in their ability to adapt to new trends or embrace technological advances in the sport sector which is the need in today's environment, and by which they probably could further increase sport participation levels among the general population.

On the other hand, the private sector seems to be driven by the commercial objectives of realising their profit margins to remain financially effective in the market, and to some extent to gain market share in the industry and are less worried about achieving social objectives. Private sector is unlikely to receive any funding from the government, hence are not obliged to meet the social outcomes of sport provision compared to the public sector including LMCs. Findings from both macro and meso level data show that the government's and public sport agencies' influence on private facilities' strategic decision making is lesser compared to public sector. Hence, it is not an obligation for the private sector to prioritize in achieving social objectives which is reflective of their strategic objectives as observed at the macro and the meso level results. Similar to private facilities in the region, it should be noted that LMC facilities are also concerned about making profits as their funding opportunities are limited compared to the pure form of public sector facilities (Audit commission, 2006), as a result they are facing dual pressure of achieving the social objectives imposed by the governments as well as meeting their commercial objectives to remain viable in the industry, which is probably why

ANOVA results show that private facilities are less concerned than LMCs in meeting their commercial objectives.

Based on the recent changes towards sports sector by the government, in contrast to public sector managers, private sector consultants suggested that the current scenario of recent austerity measures and the government's priority of increasing sport participation rates among the population is an opportunity for the sector in generating more profit for their organisation by attracting new customers. This has turned out to be somewhat true, as a leading online news agency in the UK has reported that "Low-cost gyms have muscled their way into the fitness market" (Telegraph, 2017), in which it reports that the number of gyms (in this research context; sport and fitness facility) have risen since 2016, and people are more likely to go to such facilities than ever before, which is indicative of the influence private sector facilities could have on the UK populations' sport participation behaviour in the future.

At the macro level, private consultants suggested that the sector's strategy is not user led, meaning they do not engage their customers in their strategic decision making but believe they provide the best facilities in the industry by focussing on providing distinctive service offerings to its users with the help of market intelligence. However, in contrast to this, LMC official claims, despite their limited resources they have a strong engagement with their users which helps them to improve their service provision. However, the meso level ANOVA results did not support any of these claims as none of the 'service features' items in the between group differences were significant.

It has been suggested that values guide managers' behaviour and preferences for outcomes (MacIntosh & Spence, 2012). In this research context, findings reported suggest that strategic priorities of the facilities are guided by the sport policies formulated at the macro level i.e., government and regional managers, with public including LMCs and private sector facilities pursuing different outcomes. However, the main question that needs answering to address the research aim is; does this difference in strategic priorities of different types of facilities reflect in the users' reported outcomes of participation and the consequential impact this has on their health, well-being and social capital. The same is discussed in the next section of this thesis.

4.4.2 Facilities' objectives and users' outcomes

Unlike in the Australian context where Shilbury et al., (2016) show that values and strategic priorities of all member associations' plans of national sport organizations are

common. Based on the LRS-CSP's case study in the UK, there is a clear divergence in the public sector including LMCs and the private sector facilities' strategic priorities and the outcomes they pursue. Even in the public sector there are some subtle differences in the strategic priorities of pure form of public and LMC facilities, where the public official suggested that their primary objective is to achieve the social outcomes of sport provision but not cost efficiency. Whereas LMC sector manager suggested that they prioritize both social and commercial objectives and are struggling to find a balance between them due to the limited financial support they receive.

In this research context, different types of sport and fitness facilities have shown that they may have different strategic priorities and accordingly pursue different outcomes. However, it cannot be guaranteed that the achievement of the outcomes would materialize accordingly (Hodgkinson & Hughes, 2012) i.e., the facilities might pursue certain outcomes based on their strategic objectives but the achievement of these outcomes may not totally be under the control of these organisations, as the micro level data results show that users report identical participation trends and perceived health, well-being and social capital benefits. Otherwise micro level results should have shown different levels of participation and difference in reported health, well-being and social capital status. This is explained further below.

As explained in chapter no 2.2.2 sport and fitness facility management was outsourced to external private management with the presumption that they are better equipped in providing services and eventually in achieving the outcomes (van den Hurk & Verhoest, 2017). Based on this LMC users should have reported exceeding levels of sport participation and the impact this has on their health, well-being and social capital. However, neither the meso level data suggest that the importance they place on their service features are significantly better than that of the public facilities nor the micro level data suggest that the LMC users' participation behaviour and their subjective health, well-being and social capital is better than those of the public or private facility users, despite LMC sector manager suggesting that they pursue these outcomes and prioritize them in their strategic objectives. Similarly, when the strategic objectives of the pure form of public facilities is compared with that of private facilities, results show that pure form of public facilities pursue social outcomes in their strategic objectives more than that of private facilities. Based on which, micro level data should have shown considerable difference in pure form of public facility users' participation and outcomes, however, micro level results do not support this.

These findings support the suggestions made by Osborne, Radnor, Kinder and Vidal (2015), where NPM reforms (explained in chapter 1.2) and external ownership specifically have failed to deliver on their promised gains. In the sports sector this possibly could be explained due the lack of understanding of the users' perceived values (MacIntosh & Spence, 2012) by the facility managers. Interestingly, this was also suggested by the private consultants as they mentioned that the sector is not user led and there is a lack of understanding of what users need pertaining to sport provision. Users at the micro level mentioned that they are happy with the opportunities for sport participation, which supports the claim made by the regional managers at the macro level. This indicates it is not the access to facilities nor the programs available which is the concern, but the quality of service that they can receive in terms of flexible opening times, space and availability of equipment, cleanliness, customer service and quality equipment regardless of the facilities' strategic objectives or ownership. This indicates that, it is the internal portfolio of services and activities with in a facility that could influence users' participation behaviour and not the strategic objectives or ownership of the facility. One of the key findings from the research study is that socialising and networking opportunities that their facility has to offer is the key motivating factor in their continued sport participation.

Since there is no difference in the reported outcomes of users' sport participation, and in their perceived health, well-being and social capital, the findings in this research study highlights one of the main principles of the neoclassical economics theory explained in chapter 2.3 that resource allocation through a particular form of organisation is not important, as individuals who are rational agents could adapt their behaviour to best suit their judgement of their welfare. Hence, the findings suggest that neither the ownership of a sport and fitness facility nor its objectives pursued have a direct effect on users' participation nor on their perceived health, well-being, or social capital. Rather, users' motivation to participate in sports lies in the opportunity for social encounters and a social network (Yoshida, 2017), provided they are willing to co-create social capital.

Chapter 4 conclusion: This chapter has presented a multi-level analysis of the sport delivery system by using the data collected at the macro, meso and the micro level. This has shown that, Local government and the public sport agencies have significant influence on the public including LMC facilities' strategic decision making, which is probably why different types of facilities pursue different strategic objectives in offering sport and fitness opportunities to its users. However, micro level results have shown that, this does not make any difference to the end users' participation and their outcomes, as users from public, private and LMC facilities

have reported almost identical participation trends and identical levels of health, well-being and social capital. Results have not been significant in terms of facilities' service offerings and strategy typologies adopted. As a result, it has not been possible to comment on if they have any influence on users' participation and their outcomes. The next chapter will examine the quantitative data collected at the micro level along with some meso level data that may help to corroborate or challenge results obtained from this chapter which is one of the strengths of mixed methods approach.

CHAPTER 5: ANALYSIS OF MESO AND MICRO LEVEL COMPONENTS OF THE SPORT DELIVERY SYSTEM

Chapter four has presented the macro and micro level qualitative results and the meso level quantitative results. The purpose of this chapter is to present an analysis of meso and micro level quantitative results which may help to corroborate or challenge the results obtained from the micro level qualitative data. For this purpose, micro level quantitative data from the users' survey and the meso level quantitative data from the facility managers' survey will be used to examine the following objectives of the thesis:

1) Examine if different facility ownership types and its characteristics has varied influence on end users' participation behaviour and their outcomes
2) Examine facility users' participation frequency and their outcomes, based on their socio-demographics, economic and behavioural factors

In the process of analysing this data, endogeneity between participation and outcomes, as well as between the outcomes is also addressed with suitable statistical techniques as explained in chapter 3.4.2. The particular focus of this chapter is to examine a portion of the thesis' aim of 'if different ownership types of sport and fitness facilities' and their characteristics has varying impacts on the users' sport participation frequency; and, the impact this has on their subjective health, well-being and social capital'.

Hence, in the subsequent sections of this chapter; descriptive results from the micro level data which will inform about the demographics of the sample population, and their participation behaviour along with the outcomes is presented in sections 5.1.1 and 5.1.2 respectively. Following which, in sections 5.2.1 and 5.2.2, analysis of meso and micro level data will be presented with two regression models that are estimated as explained in chapter 3.4.2. Results of which will help to achieve the above listed objectives.

5.1 Descriptive results

As explained in chapter 3.2 quantitative data at the micro level was collected through online survey involving facility users in the LRS-CSP region. Out of the 457 respondents, 403 respondents could be matched to one of the 30 facilities that are sampled at the meso level. However, due to some missing data from some of the variables that are included in the different regression models that are estimated to achieve the above mentioned objectives, the number of

observations vary between n= 358, and n=361 for the two distinct regression analyses that are conducted. The following section of this chapter will present the descriptive results of both the raw data (n = 403) and, for comparison, the respondents included in the regression analysis (when n = 361).

5.1.1 Demographics of the sample population

There is not much difference in the descriptive results between the raw data (n = 403) and respondents included for regression analysis (n = 361) as shown in Table 5.1. Data summarised below includes both raw data and the respondents included for regression analysis, in which the first figure presented for each item represents the raw data and the second figure represents those respondents included for regression analysis.

The data reveal that the age range is typically between 59 years and 32 years of age of which 61.5 percent and 60 percent is female. Approximately 32 percent and 21 percent is not married or is not in a domestic relationship. Individuals typically belong to households of 2 adults, and 40 percent and 42 percent respondents have at least one child in their household. Approximately 10 percent of respondents from both samples have a child below 3 years of age, 20 percent and 22 percent of the respondents have a child between 4 to 10 years of age, and 21 percent respondents from both samples have a child between 11 to 16 years of age. Approximately 93 percent of respondents from both samples are White British or European.

Approximately 66 percent and 73 percent of the respondents have a professional degree, 28 percent and 22 percent of the respondents are educated above GCSE but do not have a professional degree, and 5.7 percent and 2 percent of the respondents are educated up to GCSE or below. Approximately 2 percent of respondents from both samples have no income, 4 percent from both samples have income level up to £10,399, approximately 67 percent of respondents from both samples income ranges between £10,400 and £51,999, and approximately 26 percent respondents from both samples have income over £52,000.

Among the behavioural variables, approximately 31 percent of the respondents from both samples visit a sport and fitness facility with a family member, 34 percent and 35 percent visit with a friend, 8 percent of respondents from both samples visit with their colleagues,

Table 5.1

Descriptive of participants' demographics and behaviour

Demographics		**Private**		**LMC**		**Public**	
		Raw data (n=134)	**Reg data (n = 125)**	**Raw data (n=186)**	**Reg data (n = 164)**	**Raw data (n=83)**	**Reg data (n = 72)**
1. **Age groups**	18-24 year old	15	14	16	14	6	6
	25-34 year old	33	25	23	20	9	6
	35-44 year old	28	28	55	49	27	23
	45-54 year old	31	31	40	33	18	16
	55-64 year old	20	20	37	33	14	12
	65-74 year old	6	6	11	11	9	9
	75 years and older	1	1	4	4	0	0
2. **Gender**	Male	59	55	67	62	29	25
	Female	75	69	119	101	54	48
3. **Marital status**	Married/in relationship	86	86	130	130	57	57
	Single/divorced	48	34	56	32	26	13
4. **Dependent children in the household**	Yes	49	49	82	72	32	30
	Children up to 3 years	15	15	16	14	9	7
	Children 4-10 years	24	24	42	38	18	18
	Children 11-16 years	23	23	44	38	18	16
	White (UK/other)	121	109	173	157	80	72

5. **Ethnicity**	Other	13	11	13	10	3	2
6. **Education**	Degree level	90	86	131	131	46	46
	Below degree-above GCSE	36	31	45	36	32	23
	GCSE and below	8	1	10	5	5	2
7. **Household Income bands**	No income	3	3	3	3	1	1
	Up to £10,399	8	6	4	4	4	4
	£10,400 to £51,999	89	82	124	107	64	55
	£52,000 and more	34	32	55	50	14	14
Behavioural characteristics							
1. **Sport participation in a facility with**	Family	34	31	64	57	27	26
	Friends	49	46	64	58	25	23
	Colleagues/Workmates	13	12	16	13	7	6
	Those met at the facility	26	24	37	33	15	14
	On their own	47	42	51	45	30	24
2. **Smoking, drinking and watching sports**	Smoking	8	8	14	11	3	3
	Drinking	117	113	160	141	68	59
	Sport on television: Group 1	44	44	68	60	38	34
	Sport on television: Group 2	90	82	118	107	45	40
	Live sport in person: Group 1	102	98	142	128	69	60
	Live sport in person: Group 2	32	28	44	39	14	14

Notes: n=number of respondents, Reg data = participants included in regression estimates, Sport on television (Group 1 – those who either do not watch sport on television or watch it rarely, Group 2 – those who watch it at least once a week to everyday, Live sports (Group 1 – those who either do not watch live sport in person or do so rarely, Group 2 – those who watch it at least once a month to once a week regularly.

19 percent respondents from both samples visit with those they have met at the sport and fitness facility and 32 percent and 30 percent use it on their own. Approximately 6 percent of respondents from both samples smoke, and 85 percent and 86 percent of the respondents drink alcohol. Approximately 37 percent and 38 percent of the either do not watch sport or watch it rarely on television or by other media, while 63 percent of respondents in both samples watch it at least once a week, and approximately 78 percent and 79 percent of the respondents either do not watch live sport in person or do so rarely. Approximately 22 percent of the respondents from both samples watch live sport in person at least once a month.

5.1.2 Sport participation and outcomes

As in the previous section, data from Table 5.2 summarised below includes both raw data and the respondents included for regression analysis, in which, where applicable the first figure presented for each item represents the raw data and the second figure represents those respondents included for regression analysis.

As shown in Table 5.2 on average, respondents from both samples have reported approximately 8 hours of participation at a sport and fitness facility during a four-week period, and there is not much of a difference whether they use a public, private or a LMC facility, with likely skew associated with such participation. Private users are likely to use a facility 1 day more than public and LMC users during a four-week period, this is the case with respondents from both samples. Among the amenities available in a sport and fitness facility, those having a swimming pool seems to be the most popular choice among the users, as among the raw data 37 percent of the respondents prefer this type of activity, followed by 34 percent use cardiovascular equipment, approximately 26 percent prefer fitness suite/weight training, approximately 19 percent prefer intense activity classes e.g. spinning, body pump, CrossFit/circuit training etc. and 22 percent prefer other activity classes like Pilates, Yoga, Zumba etc. and there is 1-2 percent difference among the respondents included for regression analysis compared with the raw sample .

Respondents also participate in other activities such as; walking and cycling for recreation, as well as organized and informal physical activities and on average during a four-week period, private and LMC users have reported approximately 12-13 hours of such activities in both samples.

Table 5.2

Descriptive of participants' sport participation and outcomes

		Private		LMC		Public	
		Raw data (n =134)	**Reg data (n = 125)**	**Raw data (n =186)**	**Reg data (n = 164)**	**Raw data (n = 83)**	**Reg data (n = 72)**
Sport participation	Total minutes outside the sport and fitness facility	716.0992	689.585	745.7015	777.025	950.4512	792.287
	Total minutes in a sport and fitness facility	519.9254	481.617	508.159	456.075	514.277	497.178
	Number of days using a sport and fitness facility	8.35	7.95	7.17	7.19	7.21	7.04
	PA at work A (no work)	67	62	85	77	36	32
	PA at work B (1 or 2 days)	21	21	40	36	15	13
	PA at work C (3 to 7 days)	46	43	61	54	32	29
	Walk & cycle to commute A (no use)	25	21	30	27	17	16
	Walk & cycle to commute B (1 or 2 days)	23	22	45	41	19	16
	Walk & cycle to commute B (3 to 7 days)	86	83	111	99	47	42
Type of activities participants use in a sport and fitness facility	Weight training	49	44	40	36	15	13
	Cardiovascular equipment	60	56	59	51	20	18
	Intense activity classes	29	28	30	25	16	14

		Private		LMC		Public	
		Raw data (n =134)	Reg data (n = 125)	Raw data (n =186)	Reg data (n = 164)	Raw data (n = 83)	Reg data (n = 72)
	Other activity classes	32	29	39	36	17	15
	Swimming pool	43	38	69	62	39	35
	Indoor courts	11	10	23	22	8	6
	Outdoor courts	5	5	3	3	0	0
	Indoor halls	7	7	19	17	10	10
	Outdoor halls	6	6	15	13	5	5
Subjective health, well-being and social capital	Health	4.13	4.15	4.23	4.20	4.08	4.14
	Well-being	7.22	7.21	7.73	7.51	7.69	7.82
	Social capital	4.63	3.65	4.85	3.83	4.81	3.81

Notes: Subjective health (1=very bad, 2=bad, 3=fair, 4=good, 5=very good), well-being (0- extremely unhappy and 10- extremely happy) and social capital (0=don't know, 1=just moved here, 2=no one can be trusted, 3=a few can be trusted, 4=some can be trusted, 5=most of the people can be trusted), n=number of respondents, Reg data = participants included in regression estimates, PA at work - In a typical week, number of days of vigorous/moderate intensity physical activities for at least 10 minutes duration while working, Walk & cycle to commute - In a typical week, number of days walk or cycle for at least 10 minutes duration to get to and from places.

While, respondents who use a public facility have reported approximately 16 hours of such activities in the raw sample, and there is not much of a difference among the respondents included for regression analysis as shown in Table 5.2. Other than recreational sport, moderate/vigorous physical activity at work and walk and cycle for commuting has also been recorded, among which 46 percent of the respondents have said they do not do any moderate/vigorous physical activity at work, while 19 and 34 percent of the respondents have said they do for 1-2 days and 3-7 days in a week respectively in both samples. Whereas, approximately 18 percent of the respondents have said they do not do any walking or cycling for commuting, while 22 and 60 percent of the respondents have said they do for 1-2 days and 3-7 days in a week respectively in both samples. Respondents from all types of facilities have reported almost identical and high levels of general health, happiness (well-being), and trust in the neighbourhood (social capital) in both samples.

Now that the descriptive of raw and the respondents from the survey included for regression analysis has been presented, the next section of the thesis will focus only on the respondents who are included for regression analysis. First, it will present the mean scores of various physical activity variables along with the effective price per visit, which is calculated by using the period of subscription paid to the facility divided by the number of times they use a facility calculated for a four-week period. This also includes the distance travelled from work/home to the facility and any longstanding illness/disability is presented in Table 5.3. This data involving the above mentioned variables is important because, it indicates the mean score of all the respondents included for regression analysis. Following this, facilities' characteristics used in the regression analysis is explained which is then followed by data analysis results.

As shown in Table 5.3, on average the sample engages in 4 hours of organized sports, 3 hours of informal sports and 5 hours of walking and cycling for recreation in a four-week period. On average, between 1-2 days respondents indulge in moderate or vigorous physical work in a typical week. The mean effective price paid for each visit to a sport and fitness facility is £5.5, and on average they travel around 6 miles to the facility from their home or work and approximately 24 percent of the sample population say they have a longstanding illness, disability or infirmity.

In addition to this, based on the characteristics of various facilities, public private and LMC facilities are grouped into 4 categories as below and are included in the first regression model to explore if this has any impact on participation:

- Health and fitness suite (variable code - HFS) – Those facilities which has only health and fitness suite
- Sports hall (variable code - Hall) – Those facilities with at least one sport hall
- Multiple facilities and pool (variable code – Multipool) – Those which are a chain of facilities across the country and have swimming pool
- Multiple facilities and no pool (variable code – Multi) - Those which are a chain of facilities across the country and have no swimming pool

Table 5.3

Various physical activity participation variables

Variable	Description	Mean
OrgPAtotmins	Total minutes of organised sport and physical activity	264.070
InfPAtotmins	Total minutes of informal sport and physical activity	187.740
WalkCyc	Total minutes of walking and cycling in atypical week	290.092
PAworkdays	Days in the week, moderate or vigorous physical work	1.788
Price	Effective price per visit (£)	5.577
Distnfct	Distance in miles from the facility	6.179
Longi11	Longstanding illness, disability or infirmity (1 'Yes'; 0 'No')	0.243

5.2 Data analysis

This section of the thesis will present the regression results that will help to address a portion of the research aim i.e. 'if and how ownership and characteristics of different types of sport and fitness facilities' influence the frequency of sport participation and its outcomes i.e. health, well-being and social capital'. To address this part of the thesis' aim, two regression models are estimated as explained in chapter no 3.4.2, and the next two sections of this thesis will discuss the results of these regression models.

In the first model, OLS and 2SLS regression is used to explore the impact of facility ownership and characteristics on the users' frequency of participation. In this, the variable code 'Gymminutes' is used as dependent variable which captures users' frequency of sport participation in terms of minutes during a four-week period.

Table 5.4

Variables utilised in OLS and 3SLS regression analysis

Variable	Description
Health	General Health (5 'Very Good' to 1 'Very Poor')
Well-being	Happy (0 'Extremely unhappy' to 10 'Extremely happy')
Social capital	Trust in neighbourhood (1 'No-one' to 4 'Most people')
HFS	Health and Fitness Suite (1 'Yes'; 0 'No')
Hall	Sports Hall (1 'Yes'; 0 'No')
Multipool	Multiple facilities and pool (1 'Yes'; 0 'No')
Multi	Multiple facilities and no pool (1 'Yes'; 0 'No')
Weight training	Weight training (1 'Yes'; 0 'No')
CV equipment	Cardio-vascular equipment (1 'Yes'; 0 'No')
Intensity activity classes	Intensive activity classes (1 'Yes'; 0 'No')
Other activity classes	Other activity classes (1 'Yes'; 0 'No')
Swimming pool	Swimming pool (1 'Yes'; 0 'No')
Indoor courts	Indoor courts (1 'Yes'; 0 'No')
Outdoor courts	Outdoor courts (1 'Yes'; 0 'No')
Indoor halls	Indoor hall (1 'Yes'; 0 'No')
Outdoor halls	Outdoor facility (1 'Yes'; 0 'No')
Age in years	Age in years

Variable	Description
Marital status	Marital status (1 'Single'; 0 'Other')
Income	Household income (£s)
Gender	Gender (1 'Male'; 0 'Female')
White	Ethnicity (1 'White British'; 0 'Other')
Drink or not	Drink alcohol (1 'Yes'; 0 'No')
Smoke or not	Smoke (1 'Yes'; 0 'No')
Privatefac	Privately owned facility (1 'Yes'; 0 'No')
Publicfac	Publicly owned facility (1 'Yes'; 0 'No')
Price	Effective price per visit (£)
Gym minutes	Total Minutes of activity in the last 4 weeks
OrgPAtotmins	Total minutes of organised sport and physical activity
InfPAtotmins	Total minutes of informal sport and physical activity
Totspmins	Total minutes of activity including in a facility, organised and informal sports
WalkCyc	Total minutes of walking and cycling
PAworkdays	Days in the week physically working
Higher education	Higher Education (1 'Yes'; 0 'No')
Distance from facility	Distance in miles from home or work to facility
Family	Use the facility with family (1 'Yes'; 0 'No')
Friends	Use the facility with friends (1 'Yes'; 0 'No')
Colleagues/workmates	Use the facility with work colleagues (1 'Yes'; 0 'No')

Variable	Description
Metfct	Use the facility with those met there (1 'Yes'; 0 'No')
Longi11	Longstanding disability (1 'Yes'; 0 'No')
Adults	Number of adults in the household
Children	Number of children in the household
Live sport in person	Weekly attendance at live sport event
Sport on television	Watch sport on TV or media at least once a week
Height (IV)	Height of the participant, IV for the outcome variable health
Hppy/Anxsgrwup (IV)	Were happy or anxious when growing up, IV for the outcome variable well-being
Trstneighgrwup (IV)	Could trust their neighbours when growing up, IV for the outcome variable social capital

Notes: IV = Instrumental Variable.

Among the independent variables; those which control for typical sport and fitness activities that are undertaken and will help to examine if particular activities contribute to participation such as; organised and informal activities have been included. Along with this, any physical activities at work which maybe of moderate and vigorous intensity and walking and cycling activities to commute from one place to another and is continuous for at least 10 minutes duration has been included since they may have an impact on participation and on their health as well.

Ownership types of sport and fitness facilities are included to examine if different ownership types influence participation differently, in this one of the categories is dropped (LMC) and forms the base against which other ownership types are compared i.e. private facility (variable code- Privatefac) and public facility (variable code - Publicfac). Access variables such as distance needed to travel to facility from home or work, and effective payment for a session of use are used as these variables are likely to be associated with participation. Standard socio-demographic variables, which are typically used in the literature as being important to understand participation, have been used. To understand if the respondents' interest in sports has any impact on their participation. Variables measuring their attendance in sports events and watching sports on television or social media are included as well. To understand the impact of participation on health, well-being and social capital; general health, happiness and trust in the neighbourhood variables have been included. Table 5.4 shows the description of variables and the IVs used for OLS and 3SLS regression.

Before discussing the results of the OLS regression model, it is important to understand if the regression models estimated are valid. For this purpose, the following statistical criteria with the OLS and IV alternatives where appropriate were considered as shown in Table 5.5 below:

R Square: This test shows the percentage of the response variable variation that is explained by a linear model and explains goodness of fit for a linear model. In this model R square value for OLS is 29.8% and for IV estimates is 24% as shown in Table 5.5, low R square values are generally acceptable in behavioural sciences (Cohen, 1988) hence this model is estimated to predict participation behaviour.

F value: This tests the overall significance of the regression model with OLS and is the ratio of the mean regression sum of squares divided by the mean error sum of squares. As shown in

the Table 5.5 the results are significant indicating that the explanatory/independent variables included in the analysis fit in the estimated OLS regression model.

Wald test: This test is based on the estimated variance-covariance matrix of the parameters and is helpful in testing possible constraints placed on the estimated parameters of a model and tests the overall significance of the regression model with IVs. Significant results shown in Table 5.5 suggest that the IV instruments fit in the estimated OLS regression model.

Table 5.5

Diagnostics results

	OLS	**IV**
R^2	0.298	0.241
F(41, 316)	3.03***	
Wald chi2(41)		128.20***
Endogeneity		
Robust score chi2(3)	1.802	
Robust regression F(3,313)	0.540	
First stage		
Well-being		6.73***
Health		3.64***
Social capital		2.19*
Hansen chi2(1)		0.655
Exclusion tests		
F (2,316) Privately owned facility=Publicly owned facility with LMCs=0	0.29	
F(4,316) HFS = Hall = Multipool = Multi = 0	0.38	
F(9,316) Weight training = Cardiovascular equipment = Intense activity classes = Other activity classes = Swimming pool = Indoor courts = Outdoor courts = Indoor halls = Outdoor halls = 0	2.88***	

* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

Significant results from the above tests suggest that the variables used in the OLS regression model are valid and are appropriate to statistically test the relationship between the dependent and the independent variables. As explained in chapter 3.4.2 certain IVs were used to establish causal relationship between participation and outcomes, and to test if the IVs used are valid, first-stage regression and Hansen test was performed to test for over identifying restrictions. The results of the first-stage regression shown in Table 5.5 indicates that the instruments are significant. The Hansen test results suggest that the IVs are independent of the errors of the equation confirming the validity of the IVs used in the analysis. The Hausman test for endogeneity results are not significant as shown in Table 5.5, suggesting that there is no correlation between error term and the independent variables e.g. it rejects sufficient endogeneity to bias the results and shows no evidence of endogeneity between participation and outcome variables of health, well-being and social capital, hence OLS results are considered for commentary below. However, for robustness IV estimates are also presented along with OLS results in Table 5.6, which shows very similar results in both estimates.

5.2.1 Results from OLS

Based on the individual t-ratios OLS results shown in Table 5.6, and the F-tests of exclusion results shown in Table 5.5, it indicates that frequency of participation is not significantly influenced by the ownership of facility or by its characteristics. This demonstrates that ownership and characteristics of facilities does not have any impact on end users' sport participation behaviour. However, based on the OLS results, data shown in Table 5.6 suggest that specific activities undertaken by the users within the facilities impact the frequency of participation, among which intense activities such as; spinning, body pump, cross fit/circuit training and sport played on outdoor courts for racquet sports seem to increase frequency of participation, whereas other activities such as; Pilates, Yoga, Zumba seems to decrease frequency of participation.

However, an F-test of exclusion for all the activities can be rejected as shown in Table 5.5. Based on these results, it is understood that specific activities may distinctly raise participation, but importantly these activities are jointly significant and is indicative of individuals undertaking portfolios of activity at the facilities regardless of how they are configured. Results also show that the frequency of participation in a sport and fitness facility is not affected by the ownership of the facility or its characteristics.

Table 5.6

OLS regression and IV estimate results

OLS regression variables	**(OLS)**	**(IV)**
	Gymminutes	**Gymminutes**
Health	30.89	130.3
	(0.78)	(0.42)
Well-being	-6.954	-47.68
	(-0.46)	(-0.57)
Social capital	48.28	-114.8
	(1.05)	(-0.49)
HFS	-72.02	-57.14
	(-1.00)	(-0.72)
Hall	150.4	104.6
	(0.38)	(0.24)
Multipool	-56.63	-61.66
	(-0.84)	(-0.85)
Multi	-100.3	-80.40
	(-0.40)	(-0.31)
Weight training	113.0	125.3*
	(1.61)	(1.69)
CV equipment	-5.141	-28.12
	(-0.10)	(-0.43)
Intense activity classes	151.7**	151.8
	(2.10)	(1.28)
Other activity classes	-102.9**	-94.13*
	(-2.03)	(-1.73)
Swimming pool	-44.06	-33.70
	(-0.89)	(-0.63)
Indoor courts	-55.84	-72.42
	(-0.96)	(-0.70)

OLS regression variables	(OLS)	(IV)
Outdoor courts	471.8**	440.8*
	(2.23)	(1.71)
Indoor halls	-78.86	-56.90
	(-1.45)	(-0.89)
Outdoor halls	95.30	76.60
	(0.80)	(0.55)
Age in years	-0.523	0.784
	(-0.18)	(0.25)
Marital status	56.01	55.12
	(0.73)	(0.67)
Income	-0.00209	-0.000991
	(-1.02)	(-0.42)
Gender	143.1***	153.2***
	(2.73)	(2.98)
White	103.3	158.7
	(1.01)	(1.34)
Drink or not	-186.2**	-194.4**
	(-2.43)	(-2.26)
Smoke or not	65.86	49.14
	(0.76)	(0.54)
Privatefac	7.751	-36.27
	(0.12)	(-0.49)
Publicfac	45.88	55.59
	(0.76)	(0.80)
Price	-10.67***	-10.49***
	(-4.17)	(-4.06)
OrgPAtotmins	-0.165***	-0.159***
	(-3.32)	(-3.14)
InfPAtotmins	0.0268	0.00801
	(0.54)	(0.09)

OLS regression variables	(OLS)	(IV)
WalkCyc	-0.00417	-0.00104
	(-0.06)	(-0.02)
PAworkdays	17.33	10.31
	(1.12)	(0.53)
Higher education	28.76	30.73
	(0.58)	(0.54)
Distance from the facility	-5.091*	-4.665
	(-1.84)	(-1.39)
Family	16.65	21.58
	(0.31)	(0.39)
Friends	65.98	63.13
	(1.46)	(1.05)
Colleagues/workmates	43.29	61.42
	(0.41)	(0.59)
Facility companions	235.9***	243.5***
	(3.18)	(3.31)
Longi11	40.52	48.94
	(0.67)	(0.33)
Adults	22.18	29.27
	(0.69)	(0.80)
Children	-26.01	-26.17
	(-0.98)	(-0.96)
Live sport in person	89.01	49.36
	(1.28)	(0.58)
Sport on television	17.75	19.35
	(0.36)	(0.34)
Constant	274.0	636.7
	(0.91)	(0.75)
n	358	358

* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$ *Notes: coefficients & individual t-ratios (upper and lower row respectively- each variable), n=number of respondents.*

The relationship between the individual types of activities and portfolio activities and the policy outcomes of health, well-being and social capital is explored in the second regression model which is presented in chapter 5.2.2. The OLS results also show that frequency of participation among males is higher compared with females which is consistent with empirical results in the literature (Breuer et al., 2011; Downward et al., 2011; Palacios-Ceña et al., 2012; Muñiz et al., 2014), and those who do not drink have shown higher frequency of participation compared with those who drink which contradicts the results from other studies done in the UK (Buraimo, Humphreys & Simmons, 2010; Anokye et al., 2012). Higher the price related to the use of facility and the distance travelled to the facility from home or work seem to reduce the frequency of participation which is to be expected due to economic reasons. Those who engage in organised sports have shown reduced frequency of participation than those who do not, indicating higher levels of sport participation in a facility is a substitute for organised sports. Respondents' frequency of participation seems to be higher if they engage in sport and fitness activities with those whom they meet at the facility, suggesting that co-creation of social capital through sport activities is an important factor in encouraging more participation and can help to compensate any loss in opportunities to engage in organised sport activities.

Findings from OLS have shown that, neither the facility's ownership nor its characteristics influence individuals' participation frequency. However, specific activities undertaken by the users such as; intense activities such as; spinning, body pump, cross fit/circuit training and sport played on outdoor courts for racquet sports seem to increase participation frequency. But other activities such as; Pilates, Yoga, Zumba seem to decrease participation frequency. Males, those who do not drink, lower price related to the use of facility and smaller distance travelled to the facility seem to increase participation frequency. Those who engage in organised activities have shown reduced participation frequency and the biggest positive influence on participation frequency is when individuals undertake activities with those whom they meet at the facility, supporting the findings from focus groups presented in chapter 4.

5.2.2 Results from 3 SLS

In the second regression model, since three dependent variables are used in the analysis, and due to the potential endogeneity between the outcome variables of health, well-being and social capital and the endogeneity between participation and these outcome variables, 3SLS

estimations is used and the results are shown in Table 5.7. To establish the validity of the IVs-first-stage regression and Hansen-Sargan's test of over identifying restrictions is performed. The results show acceptance of null hypothesis confirming the validity of the instruments used.

In this model, to explore the impact of the frequency of participation on the users' subjective health, well-being and social capital, the policy outcome variables are used as dependent variables. Among the independent variables; sport/physical activity variables that are included in the first regression model, along with a variable which account for all types of sport activities that users perform in a facility as well as outside was constructed by combining the individual sport/physical activity variables. This resulted in a single variable (variable code-Totspmins) which indicates total minutes spent in all forms of sport during a four-week period. Since it is likely that sport participation will be a portfolio activity (Downward & Riordan, 2007). Along with this, demographic variables and watching sport on television and in person used in the previous model have also been included for analysis.

In the 3SLS model, each of the two remaining policy outcomes are included as explanatory variables in an equation explaining the impact of sport participation on the other remaining policy outcome. The results shown in Table 5.7 suggest interrelationship between participation and outcomes, and between the outcome variables of health, well-being and social capital as identified in the literature (Downward et al., 2017). As it indicates improvement of health improves well-being and vice versa, and that improvement of health is a result of portfolio of activities and not just the use of a facility or organized or informal activities. In addition, social capital is shown to have a positive influence on health and vice versa, suggesting that the achievement of one outcome through portfolio of activities that of particularly health will help to enhance the other outcomes. The results obtained from 3SLS shows that white population in the sample show higher well-being and social capital, but poor health. This may be because, white population in the sample might have a better social network in the region leading to better perceived well-being, however may have perceived concerns with their physical health. Drinking alcohol seem to have a positive effect on individual's perceived health but reduce social capital, and the possible explanation for this could be that, those who drink alcohol and are married might have good perceived physical health, but due to family commitments, such as responsibility of children among others it may not give them enough time to socialize with others, indicating reduced perceived social capital. This seems plausible, as previously discussed in chapter 5.1.1 79 percent of the respondents included for regression analysis are either married or are in a domestic relationship.

Table 5.7

3 SLS and IV estimate results

3SLS variables	**Well-being**		**Health**		**Social capital**	
	(1)	(2)	(1)	(2)	(1)	(2)
Health	2.712**	2.528***			0.489	0.721**
	(2.39)	(3.74)			(0.64)	(2.39)
Well-being			0.271**	0.340***	0.0545	-0.171
			(2.34)	(4.86)	(0.21)	(-1.46)
Social capital	-0.0136	-1.483	0.419	0.908***		
	(-0.01)	(-1.30)	(0.81)	(2.99)		
Gym minutes	0.000825		-0.0000858		-0.000378	
	(0.26)		(-0.08)		(-0.44)	
OrgPAtotmins	0.00262		-0.000360		-0.000984	
	(0.62)		(-0.25)		(-0.70)	
InfPAtotmins	-0.00350		0.00113		-0.000253	
	(-1.64)		(1.54)		(-0.24)	
Totspmins		-0.00176		0.000769*		-0.000627*
		(-1.63)		(1.94)		(-1.78)
Age in years	-0.0168	-0.00563	0.00445	0.000779	0.00118	0.000837
	(-0.73)	(-0.32)	(0.61)	(0.11)	(0.15)	(0.14)

3SLS variables	Well-being		Health		Social capital	
Marital status	-1.793	-0.871	0.562	0.336	-0.0839	-0.234
	(-1.56)	(-1.14)	(1.51)	(1.15)	(-0.15)	(-0.87)
Income	-0.0000176	-0.00000612	0.00000337	0.000000697	0.00000434	0.00000140
	(-0.86)	(-0.42)	(0.47)	(0.12)	(0.62)	(0.29)
Gender	-0.489	0.169	0.134	-0.0648	0.0236	0.0405
	(-0.71)	(0.42)	(0.60)	(-0.39)	(0.10)	(0.29)
White	0.999	2.023**	-0.555	-0.907***	0.630	0.763***
	(0.71)	(2.09)	(-1.43)	(-2.86)	(1.58)	(2.62)
Drink or not	-0.293	-1.034	0.229	0.475**	-0.345	-0.414**
	(-0.29)	(-1.55)	(0.73)	(2.04)	(-1.38)	(-2.01)
Smoke or not	0.420	0.134	-0.0920	-0.00332	-0.0756	-0.0477
	(0.52)	(0.21)	(-0.35)	(-0.01)	(-0.31)	(-0.23)
WalkCyc	-0.00461	-0.00452	0.00178	0.00189	-0.00101	-0.00147
	(-1.12)	(-1.42)	(1.47)	(1.61)	(-0.64)	(-1.36)
PAworkdays	-0.190	-0.0408	0.0672	0.0275	-0.0275	-0.0333
	(-1.01)	(-0.39)	(1.11)	(0.70)	(-0.40)	(-1.00)
Higher education	-0.193	0.0403	0.0613	-0.0194	-0.0107	0.0149
	(-0.42)	(0.12)	(0.42)	(-0.15)	(-0.08)	(0.13)
Longi11	0.898	0.560	-0.352**	-0.230	0.212	0.186

3SLS variables	Well-being		Health		Social capital	
	(1.21)	(1.11)	(-2.14)	(-1.50)	(0.64)	(1.02)
Adults	0.0782	0.352*	-0.0489	-0.138*	0.0625	0.0944
	(0.24)	(1.70)	(-0.47)	(-1.66)	(0.68)	(1.26)
Children	0.0140	-0.341	0.0311	0.134	-0.0848	-0.0949
	(0.03)	(-1.45)	(0.23)	(1.50)	(-0.73)	(-1.14)
Live sport in person	0.0455	0.142	-0.0656	-0.0715	0.126	0.0749
	(0.05)	(0.22)	(-0.25)	(-0.28)	(0.53)	(0.34)
Sport on television	-1.210*	-0.392	0.317	0.118	0.0936	-0.0432
	(-1.81)	(-1.23)	(1.26)	(0.94)	(0.26)	(-0.37)
Constant	-0.680	4.766	-0.416	-2.603*	1.486	2.552**
	(-0.10)	(1.16)	(-0.19)	(-1.83)	(0.87)	(2.51)

n =361

First stage

Social capital F(8, 338) = 2.42**

Health F(8, 367) = 2.20**

Well-being F(8, 367) = 5.65***

Hansen-Sargan $\chi^2(1)$

(1) 4.013 (p = 0.7782)

(2) 8.629 (p=0.8004)

* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$, *n= numbers of respondents*

Results show that, presence of more adults in the household seem to improve well-being but they may have poor health. Understandably, those with long illness show poor health, and those who watch sport on television show reduced well-being, as evidence show that greater use of media is associated with increase in depression and loneliness (Kraut et al., 1998). More importantly, the results shown in Table 5.7 informs that sport participation in facilities along with other types of physical activities elsewhere improves health, suggesting it is the portfolio of sport activities that an individual undertakes improves health. Thus, it also helps to improve well-being and social capital indirectly, since these three outcomes are inter-related as explained above. Interestingly, results also show that all forms of sport activities could directly reduce social capital controlling for the impact of other outcomes. This probably because sport may be becoming more casual and individualized, however the results also show that positive health outcomes can subsequently improve social capital. Coupled with the earlier OLS results, that the participation frequency in terms of minutes are much higher for those who attend facilities with people that were met at the facility, this shows that the facilities have the potential to impact on social capital in an emergent way through co-creation despite perhaps, a different explicit objective motivating participation.

5.3 Discussion

Results presented in the previous two sections of this chapter has helped to achieve the following objectives of this thesis:

1) Examine if different facility ownership types and its characteristics has varied influence on end users' participation behaviour and their outcomes
2) Examine facility users' participation frequency and their outcomes, based on their socio-demographics, economic and behavioural factors

In achieving these objectives, it has helped to address a portion of the thesis' aim of 'if different ownership types of sport and fitness facilities' and their characteristics has varying impacts on the users' sport participation frequency; and, the impact this has on their subjective health, well-being and social capital', a discussion of which is presented below.

There has been a large policy literature that has documented the role that facility provision has on sports participation; noting that this depends on the sport delivery system, the welfare system within which sports policy might operate and the culture of sport (Nicholson et

al. 2011). However, there has been little literature that has formally tested if the supply side provision affects the participation behaviour of individuals. In Germany, Hallmann et al. (2015) show that the availability of private sector facilities in the environment around residents provides a substitutable opportunity for participants relative to state-run facilities, but the facility ownership does not affect the overall incidence of participation. Results from this empirical chapter focusses directly on the amount of participation that is undertaken by users of different types of facilities, rather than treating participation as a binary variable, and for the first time, tests if ownership type influences behaviour by examining the facility actually used by the individual. In doing so, this study moves the policy administration discussion away from generalised concern for the outcomes of efficiency, effectiveness, and equity (Andrews et al., 2011) to a domain specific outcome: participation behaviour and its associated policy outcomes of SWB, health and social capital.

The ownership–performance relationship has been a central feature of public policy investigation over the years, with many conflicting findings reported to the merits of public and private sector. However, it is important to note that this has not been examined with sports facilities and this study has made the first attempt in this direction which also include third sector providers. The assumption made under NPM (as discussed in chapter 1.2), which has driven service delivery externalisation among many developed economies, is that external providers better meet the specific needs of a heterogeneous society relative to public providers that simply seek to satisfy the median voter (Amirkhanyan, Kim, and Lambright, 2008). This is argued on the premise that external providers are incentivised to meet the varying demands of users for market survival (Andersen and Jakobsen, 2011). However, findings from the statistical analysis presented in this empirical chapter has shown that neither the ownership of the facilities nor its characteristics have any impact on the users' participation behaviour i.e., OLS results show that frequency of participation is not influenced by facility ownership types. OLS results also show that, facilities' ownership and characteristics do not have any impact on the users' health, well-being and social capital.

These empirical results directly confront the normative presumption of the neoliberal approach to public policy that has dominated NPM, which is underpinned by the neoclassical economics assumption that markets better deliver consumer needs. Suggesting that once you control for the configuration of facilities and other key socio-demographic factors, private sector facilities should be able to encourage greater participation in order to deliver the desired well-being, health and social capital objectives of government. The empirical finding that the

ownership of facilities does not lead to greater participation of users challenges the normative presumption of neoliberalism that the private sector better meets consumer needs as there is no difference in participation behaviour. Thus directly contradicting the assumption that new organizational forms lead to better results (Ashworth et al., 2009), an assumption that has held sway as a tool for delivering better outcomes since the rise of the New Right in the 1970s and the pursuit of NPM from the 1980s onwards (Andrews et al. 2011). 'Privateness' does not appear to be an appropriate mechanism alone to achieve policy objectives. Hence, the historical understanding of private agents being more effective in delivering services and achieving the desired policy outcomes in the sport and leisure sector does not hold in the present scenario.

As discussed in chapter 1.2 in the UK, since last three decades this understanding had resulted in outsourcing of sport and leisure services to external agents, who have been no more effective than other type of facilities in the industry under current circumstances. There is no evidence that particular ownership type or its characteristics increase frequency of participation nor it has a better impact on users' reported health, well-being and social capital. However, results show that frequency of participation increases if they engage in sport activities in a facility with those whom they meet there. Hence, it could be suggested that facilitating co-creation of activities could be used as a policy mechanism in sport provision to boost participation levels. Hence, emphasis on ownership and characteristics of facilities in sport provision may not be necessary, rather the focus need to shift in facilitating co-creation of sport activities which has emerged as an important factor in increasing frequency of participation. The necessity of co-creation of sport activities gains further strength, as 3SLS and IV estimate results show that combination of all types of sport activities i.e., in a facility and outside including organised and informal physical activities, seem to impact users' health which then indirectly enhances their well-being and social capital, but individually these different types of sport activities do not have any significant impact on the policy outcomes, informing it is rather the portfolio of activities that individuals undertake that has an impact on the policy outcomes.

The results also demonstrate that engaging in organised sports reduces the frequency of participation in a facility, indicating users utilise the facility provision as an alternate option for their sporting needs if they are unable to engage in organised sports or perhaps they use facility provision for sport and fitness activities to boost their organised sport activity performance. Either ways this demonstrates the importance of facility provision to boost participation levels. Results also show that higher the price and distance required to travel to the facility, frequency of participation reduces, emphasising the need for sufficient facilities

available to the population within their vicinity (Eime et al, 2017), and the need for reasonable pricing for the services on offer. Comparatively frequency of participation among males is higher than that of females, which is consistent with the past empirical evidence as noted before; this aspect needs to be further explored to understand the reason behind this.

Findings also show that the health, well-being and social capital dimensions are inter-connected, and one influences the other, particularly positive influence on an individual's health resulting from all forms of sport participation could then improve well-being and social capital. Indicating that, it is the portfolio of activities which is not only internal i.e. within a facility but also external i.e. activities undertaken outside a facility which enhances individuals' health that then contributes to better well-being and social capital. Findings also show that all forms of sport activities could directly reduce trust, probably perhaps sport is becoming more casual and individualized. At this stage, it becomes important to highlight the findings from the OLS results, in which it was shown that users' frequency of participation increases if performed with those they meet at the facility, highlighting the importance of facilities' potential to impact on social capital through co-creation. Hence, based on OLS results, co-creation seems to influence frequency of participation, consequently this having a direct positive influence on health in conjunction with other types of sports, and thus indirectly enhancing well-being and social capital as well.

In summary, three main findings from this empirical chapter could be identified which calls for certain changes in the present UK sport delivery system. Firstly, the findings contradict the maintained assumption that the private sector should provide sporting opportunities as it will enhance participation through meeting consumer needs more effectively than public providers and hence contribute to the achievement of policy outcomes (DCMS/SU, 2002; HM Government, 2015). The emphasis on ownership and configuration in recent policy discourse in the UK appears misplaced, since there is no evidence that the preferred ownership type allowing for variations in service configuration increases participation frequency. This is important because as it is argued by Nicholson et al. (2011) in the international context "…It is unclear what the direct impact of the facility provision has been on participation rates, although it is clear that access to sports facilities is an important aspect of effective national government participation policy" (p.303). The current paper provides clear evidence that neoliberalism, as indicated in the private ownership of facilities compared to their public ownership, cannot be assumed to better deliver outcomes; though it is clear too that it is not worse.

Second, findings shows that having the opportunity to engage in a portfolio of activities does increase participation frequency and the achievement of desirable policy outcomes. Moreover, the main driver of participation frequency is shown to be going to facilities with friends met at the facility. This suggests that it is the general availability of space and portfolios of activities in which to network and co-create the sport and fitness activity that takes place that is of most importance as a policy lever. These results indicate that the consequentialist neoliberal position that is embedded in 'Sporting Future' (HM Government, 2015) that the means to achieving a policy outcome do not matter is only correct in viewing the means of achieving policy in terms of ownership. The current research shows that having means that allow individuals to engage with one another to co-create activity does matter.

Third, particularly as UK sport policy now focusses on outcomes such as SWB, health and social capital stemming from sports participation (HM Government, 2015), it is demonstrated that participation in sport and fitness activities can influence health outcomes and consequently SWB and social capital when facility activities are part of a wider external portfolio of behaviour (i.e. sport and fitness activities in a facility along with participation in organised and informal activities outside of the facility). Therefore, it can be argued here too that the means to achieving policy aims are important in meeting the outcomes suggested by Sporting Future i.e., health, well-being and social capital. Collectively, then, it is this network of opportunities and not a presumed superiority of the private sector, to both engage with others and engage with a wider portfolio of activities that CSPs should seek to foster and develop.

It is clear from the Sporting Future that increasing participation and enhancing individuals' health, well-being and social outcomes matters most for policy. The means of achieving these outcomes through the provision of appropriate opportunities provided in facilities is thus important. However, this is not because of the maintained neoliberal assumption that the private sector ownership structure will necessarily lead to better outcomes which is presumed to deliver better outcomes in the sport sector since the past few decades. Perhaps there is a lack of understanding of individuals/users' preferences and requirements pertaining to sport provision. Hence, there is a need to better understand individuals' preferences and requirements which may yield better results in terms of increasing participation which can then influence their health and consequently well-being and social capital.

Chapter 5 conclusion: This chapter has presented results of the quantitative data collected at the meso and the micro level. The results have shown that, endogeneity exists between the

sport outcomes of health, well-being and social capital and between participation and the outcomes as well. Results suggest that portfolio of sport activities within a facility as well as outside has a direct positive relation on users' health which then enhances their well-being and social capital. However, facilities' different ownership types and characteristics does not have any influence on users' participation behaviour and the consequent impact this has on their health, well-being and social capital. Results also suggest that, users engaging in sport with those that they have met at the facility has a large effect on participation behaviour, and portfolio of sport activities within a facility as well as outside has a direct negative influence on social capital. The discussion of the findings has helped to address a portion of the thesis' aim i.e., if and how ownership and characteristics of sport and fitness facilities has any impact on users' sport participation behaviour and the consequent impact this has on their health, well-being and social capital.

CHAPTER 6: CONCLUSION

This chapter will draw the results from chapter 4 and 5, and will list the findings from macro, meso and micro level of the sport delivery system. Along with this, it will list the corresponding objectives achieved, and will explain how this has helped to address the thesis' aim and research question. Based on the conceptual model, it will also illustrate the findings of the thesis from the macro, meso and the micro level of the sport delivery system. Section 6.1 will discuss this thesis' contribution, in that it will discuss thesis' contribution towards knowledge and practice. Section 6.2 will discuss the limitations of the thesis and the future research recommendations. Based on the findings from chapters 4 and 5, section 6.3 will draw conclusions of the thesis while discussing the answer to the research question in detail.

This thesis was conducted to answer the research question; 'does the UK sport delivery system's approach to sport provision influence individuals' sport participation and their outcomes differently?'' To answer this question, it was aimed to 'examine if and how policy objectives that may influence facilities' strategic priorities, strategy, ownership and characteristics influence individuals' frequency of sport participation and its outcomes'.

To address this aim the following objectives were set to be achieved:

1) Examine the strategic priorities and strategy of different types of sport and fitness facilities, and if this has varied influence on users' participation and their outcomes
2) Examine the level of influence different stakeholders in the sport industry have on the strategic decision making of different types of sport and fitness facilities
3) Examine the importance placed by different types of sport and fitness facilities on their service features, and if this has any influence on the end users' participation and their outcomes
4) Examine if different facility ownership types and its characteristics has varied influence on end users' participation behaviour and their outcomes
5) Examine facility users' participation frequency and their outcomes, based on their socio-demographics, economic and behavioural factors

Following results from the macro, meso and the micro level of the sport delivery system has helped to achieve the above mentioned objectives of this thesis, by which it has helped to address the thesis' aim and research question.

Results from macro level semi-structured interviews has shown that:

1) It is an obligation for public and LMC facilities to pursue social objectives but not for private facilities
2) Clear divide between public sector including LMCs and the private sector's strategic objectives and pursued aims i.e. social objectives by public including LMC facilities and commercial objectives by private facilities
3) All sector managers agree that the sport facility provision in the LRS-CSP region is adequate to the local population
4) Government including public sport agencies have more influence on public including LMC sectors facilities' strategic decision making and have little influence on private sector facilities
5) Sport development managers in the LRS-CSP region had mixed opinions about the population's participation rate in the region. Public sector manager says decreasing, LMC sector manager says it is rising and the private consultant and CSP director says there is no change

These results, from the macro level data has not only helped to understand sport and fitness landscape in the region, but has also helped to achieve the following objectives of this thesis:

1) The level of influence different stakeholders in the sport industry have on the strategic decision making of different types of facilities
2) The strategic priorities of different types of sport and fitness facilities which may influence participation and its outcomes
3) If strategic priorities adopted by different types of sport and fitness facilities has differing influence on users' participation and their outcomes

The meso level results from online survey shows that:

1) Public including LMC facilities pursue social objectives more than private facilities
2) Local authorities and public sport agencies have more influence on public including LMC facilities' strategic decision making than on the private facilities
3) No significant results with the facilities' service features or strategy typologies adopted

The micro level results from focus groups and online survey shows that:

1) Facilities' different ownership types, strategic priorities and characteristics does not have any influence on users' participation behaviour and the consequent impact this has on their health, well-being and social capital
2) Sport policy outcomes of health, well-being and social capital are interrelated, and improved health enhances well-being and social capital
3) Portfolio of sport activities within a facility as well as outside has a direct positive relation on users' health which then enhances their well-being and social capital
4) Portfolio of sport activities within a facility as well as outside has a direct negative influence on social capital indicative of sport becoming more casual and individualised
5) Users engaging in sport with those that they have met at the facility increases participation frequency

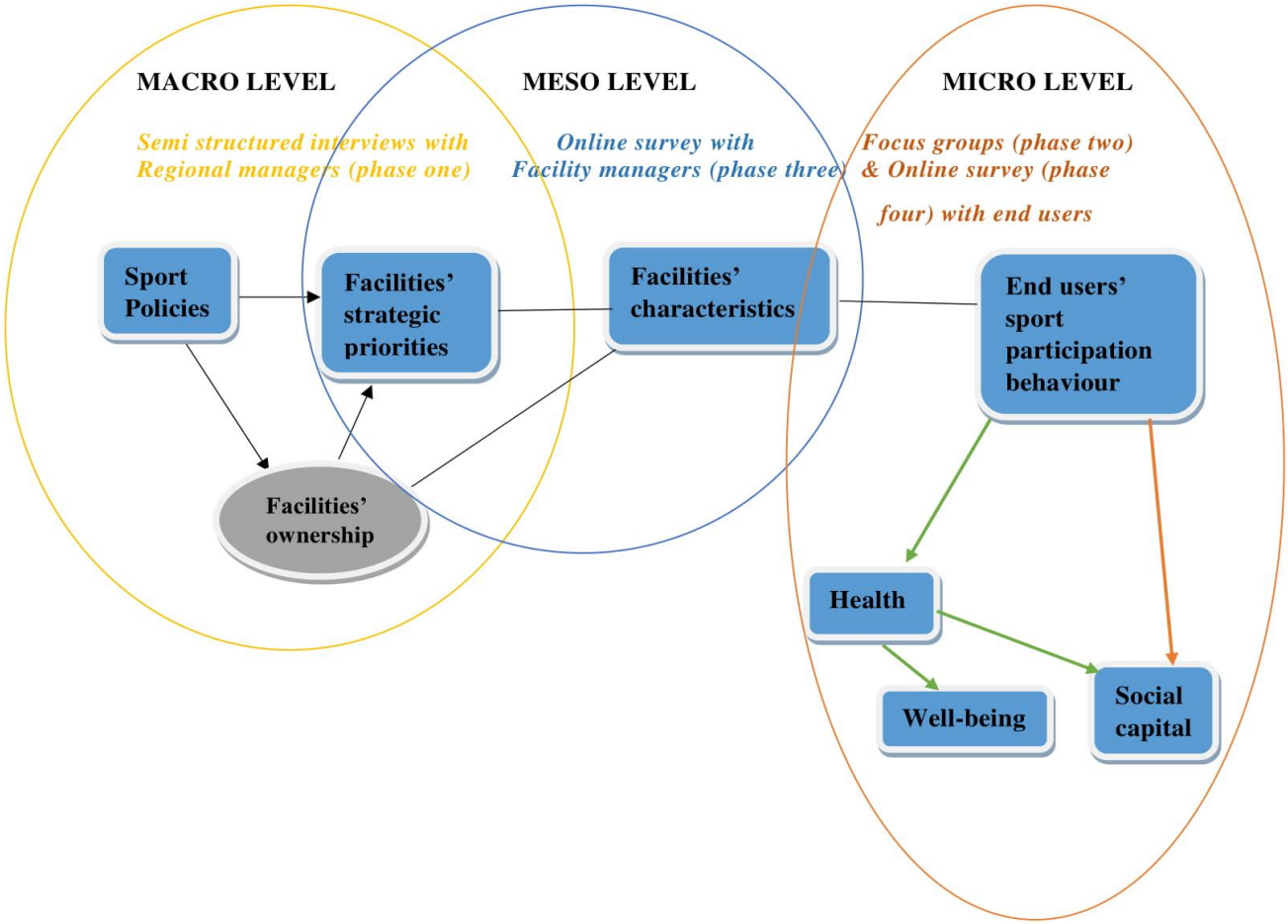
These results, from the meso and micro level data has helped to achieve the following objectives of this thesis:

1) Examine the strategic priorities and strategy of different types of sport and fitness facilities, and if this has varied influence on users' participation and their outcomes
2) Examine the level of influence different stakeholders in the sport industry have on the strategic decision making of different types of sport and fitness facilities
3) Examine the importance placed by different types of sport and fitness facilities on their service features, and if this has any influence on the end users' participation and their outcomes
4) Examine if different facility ownership types and its characteristics has varied influence on end users' participation behaviour and their outcomes
5) Examine facility users' participation frequency and their outcomes, based on their socio-demographics, economic and behavioural factors

In achieving these objectives, the findings have helped to address the thesis' aim of examining 'if and how policy objectives that may influence facilities' strategic priorities, strategy, ownership and characteristics influence individuals' frequency of sport participation

Figure 4

Conceptual model, data collection phases and main findings



and its outcomes'. Based on the results listed above, it could be understood that, macro level forces influence the meso level agents' strategic priorities which influences their characteristics affecting the sport provision available to the individuals in a society, who are conceptualised at the micro level of the sport delivery system.

However, these aspects do not seem to affect the sport participation behaviour of the micro level agents, nor does it have any difference in impact on their health, well-being and social capital. Based on the conceptual model explained in chapter 2.4, a schematic representation of the above mentioned results and data collected from different levels of the sport delivery system in different phases is presented in Figure 4. In this, the direction of arrows

represents the relationship between different components of the model, and the link with no arrow indicates no significant impact in the relationship between the components, while the green arrow indicates a positive and the orange arrow indicates a negative influence on the components.

In achieving this aim, it has helped to answer the research question 'does the UK sport delivery system's approach to sport provision influence individuals' sport participation and their outcomes differently?'. The current sport provision which stems from the policies formulated and implemented since the late 1980s through to the current period does not seem to influence the individuals' participation behaviour differently, nor does it seem to influence their outcomes i.e. health, well-being and social capital differently. This is further discussed in section 6.3 below.

6.1 Thesis contribution

To the best of researcher's knowledge there has been no research done in a single study to understand how the macro, meso and the micro levels of the sport delivery system influence sports provision, which in turn influence sport policy outcomes i.e., how sport policies formulated by the macro level forces may influence strategic priorities of facilities at the meso level, which influence the service features that are on offer to the population influencing their participation behaviour and consequently impacting their health, well-being and social capital. This thesis has investigated these aspects of sports provision and has a number of contributions towards knowledge and practice as explained below.

6.1.1 Contributions towards knowledge

It is well established through research that sport is beneficial to an individual's health and well-being and is debated about the benefits of sports on individual's social capital, evidence of which is presented in chapter 2.3.2. However, there is limited research on how these benefits are being influenced by the opportunities available to the population that are being managed by different agents at various levels of the sport delivery system. Hence this thesis has tried to address this gap in the literature by conducting a multilevel analysis of the sport delivery system in which it has helped to understand how sport priorities of macro level agents i.e., government bodies and public sport agencies at the national level, through their

policies influence the strategic priorities of the meso level agents i.e., sport and fitness facility managers, by which it drives the sport participation behaviour of the individuals in a society at the micro level, consequently affecting their health, well-being and social capital as illustrated in the conceptual model that is explained in chapter 2.4. The conceptual framework developed in this research project will provide a basis for other researchers in the sport management field to design and undertake further research.

The majority of the studies in the sport and physical activity literature either focus on how macro or meso level agents affect participation and may or may not examine how this may impact health, well-being and social capital, which are considered as sport policy outcomes (European Commission, 2009; OECD, 2013; HM Government, 2015). However, the conceptual model used in this thesis helps to understand how sport provision at the meso level could be influenced by the sport policies and strategic priorities of macro level forces, eventually affecting the opportunities available to the population at the micro level influencing their participation behaviour, which consequently affects the sport policy outcomes.

Based on a case study, involving the LRS-CSP region in the Midlands of England, this thesis is first in the sport management field to capture the holistic picture of sport provision and how various agents at different levels responsible for sport provision function within their capacity influencing the opportunities available to the individuals in a society and the consequent impact this has on the sport policy outcomes. The findings of this thesis have helped to understand the strategic priorities pursued by different types of sport and fitness facilities and has helped to discover that this eventually need not make a difference in the realisation of the intended outcomes. In addition to this, it has also shown that outsourcing of public sport services to a private management does not yield better results in realising the intended outcomes, despite both public and LMC sectors pursuing similar objectives in sports provision for the benefit of the population. The thesis has helped to uncover the influence of various stakeholders in the industry who shape meso level agents' strategic priorities ultimately affecting the opportunities available to the population.

Mixed methods research has been considered an effective way of answering research questions (Creswell, 2013), which has resulted in adopting this method in various fields such as sociology, nursing, psychology, management, health sciences, evaluation, and education (Tashakkori & Teddlie, 2003). Mixed methods research which is relatively new is not extensively used in the sport management discipline (Rudd & Johnson, 2010). This thesis helps

to fill this void, especially due to the complex nature of this study, where various stakeholders in the industry involved at different levels of the sport delivery system are examined to understand how sport provision is being managed and how this affects the individuals in the society with respect to their participation behaviour and consequent impact this has on their outcomes.

The mixed methods approach - the advantages of which are explained in chapter 3.1.2 - has helped to corroborate the research findings by triangulating the results from qualitative and quantitative data at the micro level, and by conducting focus groups at the micro level before the launch of online survey, it has helped the researcher to check if any additional variables could be identified other than, the ones found in the literature, which could then be used in the questionnaire utilised for the online survey at the micro level.

6.1.2 Contributions towards practice

The findings of this thesis are valuable for policy makers at the macro level, and facility managers at the meso level in sports provision. This thesis has shown that in order to achieve the policy outcomes of health, well-being and social capital in sports provision, ownership of facilities and their characteristics do not make any difference, despite public and private facilities pursuing different strategic priorities of social and commercial objectives respectively. Findings also suggest pursuing specific strategies to realise the intended outcomes do not produce better results, informing that even if the facilities' strategic objectives are aligned towards achieving policy outcomes it does not produce better outcomes. Hence, outsourcing of services to a private management system purely based on the understanding that it delivers better outcomes is not an effective way of managing sport provision at the macro level of the sport delivery system.

However, as shown in this thesis managing network of opportunities to both engage with others and across activities should be promoted to enhance participation and the outcomes. As results have shown that co-creation of social capital during activities increases participation, and portfolio of sport activities has a direct positive effect on individuals' health which then enhances their well-being and social capital. Hence, policy makers should focus on policy mechanisms which could facilitate co-creation of sport activities which seems to increase frequency of participation, and also should seek to foster and develop opportunities to engage across activities by building networks between different organisations who at present are trying

to promote sports only within their domain. In this regard, CSPs could play a crucial role in bridging relationships between various organisations in the sport sector for the benefit of the population's health, well-being and social capital.

The above mentioned recommendations towards sport provision should first be carried out at the macro level which will then influence the meso level agents i.e., changes first made in the government's policies could then influence the strategic priorities of sport and fitness facilities. As the findings shows that there is a clear hierarchy in how sports provision is affected from macro to meso level, which is demonstrated by the strategic objectives pursued by different types of sport and fitness facilities. For example, public sector including LMC facilities' strategic decision making seem to be significantly influenced by government and national sport agencies than compared to private facilities. This ultimately then influences the opportunities available to the population at the micro level of the sport delivery system.

In this thesis, users at the micro level of sport provision have suggested that they are happy with the type and number of facilities available in the region for their sporting needs. However, this is an important aspect of service provision that policy makers need to take into account in their policies. As findings show that distance required to travel to a sport and fitness facility has an effect on the frequency of participation i.e., frequency of participation reduces with greater distance to be travelled, suggesting the importance of availability of facilities within a reasonable distance to the users' home or work.

Findings in this thesis show that, activities offered in a facility has an impact on the frequency of participation. Hence, there is need for facility managers to understand the users' needs pertaining to activities and design their programs and services accordingly. This could be achieved through co-production of services in which facility management could involve users in developing programs and activities for the benefit of users, which in turn will benefit the facility as well. Based on the thesis' findings, there is a need for the facility managers to understand what factors would create a suitable environment for the users to co-create social capital. Since, co-creation of activities seems to increase frequency of participation, facility managers could identify users with similar sporting needs and preferences and could facilitate activities among these individuals which will help them to co-create social capital by which it will increase their participation levels.

Male users have shown higher frequency of participation in a facility than compared to females, and the difference seems to be quite large, as male users seem to participate in sport

and fitness activities 143 minutes more than female users during a four-week period. Hence, facility managers need to understand the barriers faced by female users and improve their service provision to boost female users' participation levels.

6.2 Limitations of the thesis and future research

Although major actors of the sport delivery system working at different levels are included in this study, the findings of this thesis are based on a case study of a single region in the UK. Hence, the findings of this thesis will only apply to those regions who have a similar sport delivery system as explained in chapter 1.1. Although the functions of the CSPs or similar organisations in their respective regions in the UK are very similar, user perceptions and sport and fitness facilities' characteristics may vary in different regions. Hence, investigation in other CSP regions or similar organisations in their respective regions might give a better understanding of the sport delivery system in the UK. In this case, it would also be necessary to interview suitable agents in the government, national sport agencies such as Sport England and NGBs by which it will provide a clear picture of the sport delivery system.

The findings of this thesis also make it important to study the supply features of other sport activities, as it shows that it is not only sport and fitness related informal sports, but jointly with other activities such as organized and informal/casual activities that contribute positively towards health which in turn enhances well-being and social capital of the individuals. However, it might be challenging to match actual organisations to individuals across a range of several organisations, as it has been done in this thesis.

In addition to this, the primary data that is collected in this thesis is cross-sectional and caution should be exercised while inferring causality between different types of organisations and its objectives which has been addressed using ANOVA results in this thesis. However, causality has been addressed through appropriate statistical analysis and the use of instrumental variables while trying to understand the facilities' ownership and characteristics having an effect on individuals' participation behaviour and outcomes. Additionally, the sample size examined in this thesis is relatively small and is cross-sectional, and longitudinal data might be more suitable to understand the transitional arrangements examined in this thesis, particularly with respect to social capital formation. This will be useful in understanding individuals' behaviour over a period of time as opposed to capturing a snapshot of behaviour during one

particular time. However, the time and financial resources available to the researcher did not allow this to happen.

In this thesis, a top-down approach to the sport delivery system is adopted in understanding how management of sport provision in a particular region could influence individuals' sport participation behaviour and the consequent impact this has on their health, well-being and social capital. However, a bottom-up approach, in which an investigation of users' influence on the sport delivery system i.e., if users' behaviour would influence different types of sport and fitness facilities' characteristics, and strategic priorities which may have an influence on sport policies would be useful. This would help to compare the results between these two approaches giving a better understanding of the sport delivery system. Based on the finding from this thesis, that co-creation of social capital by the users themselves helps to enhance their participation frequency that in turn influence their health which then enhances their well-being and social capital, further research is needed to understand about how this occurs and identify the factors that helps to enhance this aspect of sport provision. This would not only help the policy makers to devise suitable policies, but also the facility mangers to create a conducive environment within their facilities.

In this thesis, users of facilities who are already active have been considered to study their participation frequency and the impact it has on their health, well-being and social capital. Although this has helped to understand active individuals' sport participation behaviour in a sport and fitness facility and elsewhere, however it does not provide an understanding of the influence of sport delivery system on the entire population, as inactive individuals in the population have not been included in the thesis. Hence, in future research, active and inactive individuals should be included in the study that will help to understand whether individuals choose to participate in sport as well as their choice of facilities. This may help to demonstrate the influence of the sport delivery system on wider population's sport participation behaviour and the impact this has on their outcomes.

6.3 Thesis conclusion

In an attempt to address the research question, case study design was adopted and LRS-CSP region in the Midlands of England was selected as the research setting. The methodological objective of this thesis was to provide a multilevel analysis of the sport delivery system with the help of critical realism as explained in chapter 3.1.1, through which different

components of the conceptual model spanning macro, meso and micro level of the sport delivery system was to be examined.

Based on the discussion from chapter four, it is clear that the strategic objectives pursued by different types of sport and fitness facilities towards sports provision is influenced by macro level forces i.e., public, private and LMC facilities are influenced by the government's priorities towards the sports sector. Public sport agencies and government bodies through their policies and priorities seem to have significant influence over public sector including LMC facilities' strategic decision making than on the private sector facilities as demonstrated by ANOVA results. Hence, public sector including LMC facilities pursue social objectives, which may have been imposed by the macro level forces, but private sector facilities are not concerned about social objectives as much and pursue commercial objectives.

However, results obtained from the data collected by both qualitative and quantitative methods at the micro level demonstrate that neither the strategic objectives of different types of facilities nor the ownership and characteristics of these facilities have a significant difference on the users' sport participation behaviour, nor on their outcomes. This has helped to answer the research question, where the current UK sport delivery system's approach in which there is a multiagency, cross-sector collaboration approach to sport provision, in that different types of facilities pursue different strategic priorities in offering sport and fitness activities, however it does not influence individuals' participation and outcomes differently.

The ANOVA results from the meso level quantitative data shows that there is no reported significant difference among the service features that are offered to the users by different types of facilities, suggesting all facility types place similar importance on their service features. Rather, it is the portfolio of facilities' service features which helps to improve informal interactions and social exchanges that increases participation, and a portfolio of sport activities that individuals undertake within and outside facilities has a direct positive influence on the individuals' health, which then enhances their well-being and social capital, as these policy outcomes are inter-related as demonstrated in chapter 5.2.2.

This thesis contributes towards the long-standing debate about the relative value of different ownership types that span the public, private, and LMCs and their relationship with 'performance' (Andrews et al., 2009). As explained in chapter 1.2, historically private sector agents have been assumed to deliver more efficient and effective services, using this argument public sector leisure services including sports sector has been outsourced to private agents.

However, findings in this thesis question the real impact of NPM and neoliberalism in sport delivery in achieving the social outcomes, that stems from CCT and Best Value as explained in chapter 2.2.2. Since, results show that users from different types of facilities have reported almost identical participation trends and reported almost identical levels of health, well-being and social capital.

These findings support the suggestions made by Kort and Klijin (2011) and Hodgkinson, Hughes, Hughes and Glennon (2017) indicate that private agents should not be assumed to be the best form of delivery. Findings in this thesis also suggest that the emphasis on sport facilities' ownership in recent policy discourse, in which an expected outsourcing of leisure services to private agents between the period of 2013-14 and 2019-20 (Mintel, 2016) - as noted in chapter 1.1 - appears misplaced. Since there is no evidence that the preferred ownership type or its strategic objectives and characteristics increases individuals' participation frequency and enhances their health, well-being and social capital.

Based on the micro level qualitative data analysis, findings suggest that the socializing and networking opportunities available to the users is a key motivating factor in enhancing their participation levels. These findings are further strengthened by quantitative data analysis, in which results show that users' frequency of participation increases when they engage in sports with those they meet at the facility. This highlights the importance sport and fitness facilities could play in increasing sport participation levels by facilitating co-creation of social capital among its users through activities. Since the results suggest that, informal interactions and social exchanges among individuals increases participation, and it is the portfolio of sport activities within as well as outside a facility which has a positive influence on individuals' health which then enhances their well-being and social capital. Hence, providing general availability of space for sport and fitness activities and facilitating network of opportunities with others and across activities is important in achieving the policy outcomes of improved participation and the consequent positive impact this has on health, well-being and social capital, and should be given priority in sport provision.

This thesis examines only those individuals at the micro level of the sport delivery system who currently participate in some form of sport. However, there is no reason why this cannot be used with those who have never participated in sport as well, as co-creation of social capital during activities could be beneficial in driving their participation behaviour and the consequent impact this has on their health, well-being and social capital. This could be

particularly useful in the UK context and elsewhere, which has a similar sport delivery system and inactivity problems in their society. Since, as noted in chapter 1, public health seems to be a growing concern among health officials in the UK (Allender et al., 2007; Wang et al., 2011; HM Government, 2015), and research has demonstrated that appropriate intensity and duration of sport participation could prevent obesity and several chronic non-communicable diseases (Warburton et al., 2006; Brown et al., 2007). Without which it will incur huge economic costs to the governments due to inactivity as discussed in chapter 1. It has been suggested that, sport in the UK has come to be defined by a transactional relationship between users and facilities in the delivery of public good (Hodgkinson et al., 2017).

However, the results obtained in this thesis call for a fundamental shift in the sport policy discourse connected with participation which is being practiced for several decades in the UK. As the results suggest, it is the informal interactions and social exchanges across a portfolio of activities that are core to the user experience and drive participation frequency, not the specific ownership and characteristics of facilities i.e., process and not product. In other words, the sport delivery system must become customer-oriented and relational for contemporaneous service production and consumption (Vargo & Lusch, 2004).

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APPENDIX A

Regional manager interview questions

1) What is your view of the current sport and fitness landscape with regards to spending on facilities, the number of facilities in Leicestershire area (with respect to demographic needs like age, gender, ethnicity, etc.)
2) Your current view of key changes to this sector and future threats and opportunities? (Commercial: funding, investments etc. and Social: participation rates of different demographics like age, gender, ethnicity, education, occupation and income levels etc.) What is your current role now and will this change with the key changes and future threats and opportunities?
3) Would you describe your approach as inward looking (e.g. cost control) or outward looking (responsiveness to users, citizens, etc.)?
4) What is your organisation's main financial Objectives? How broadly do you seek to achieve these objectives?
5) What is your organisation's main social objectives? How broadly do you seek to achieve these objectives?
   a) What is your strategy towards the end users, in creating an environment to socially interact with each other?
   b) What is your strategy in ensuring that the under representative groups (minority groups, economically disadvantaged, single parents, etc.) have the opportunity to participate?
6) What is your relationship with the other main stakeholders in the industry (Public/ private/trusts/voluntary sport organisations, DCMS, other government departments, Local Authority, Sport England, NGB's, CSP)?
   a) In terms of co-operation
   b) In terms of competition
7) What strategies and plans do you have in place to ensure access for all citizens through price subsidies or providing a low entry price?
8) What is the relationship between (management) practice and performance?
9) What pressures do you respond to? (from the government, national governing bodies, CSP and keep up with one's competitors)
10) What forces shape your decision-making (e.g. policy, market size, users, community, etc.)?

APPENDIX B

Focus group interview questions

1) Could you talk about the (sport) activities that you do, how many times in a week do you do it and typically how long is each session?
    a) Would you describe your activities as light, moderate or vigorous (ex; no sweating and heavy breathing, light sweating and heavy breathing, or lot of sweating and heavy breathing)
2) Do you prefer structured (sport) activities (ex. instructed dance, aerobic, yoga classes etc.) or self-use (ex. uninstructed fitness suite, swimming etc.) Please explain why? (responsibility for experience)
3) Why do you participate in the (sport) activities that you do? And what do you believe you receive from participating in it?
4) Why do you use the leisure centre/club/gym that you do?
    a) Are you aware of other facilities in the area and the reason for not selecting any of the other facilities?
5) Do you participate in sport in your leisure centre/club/gym with anyone else?
    a) If yes, with whom, why and what for?
    b) Please explain, how does it make you feel compared to use your leisure centre/club/gym
6) Do you participate in (sport) activities in your leisure centre/club/gym with anyone else? If yes, the reasons for the same (do you always go with the same person?)
    a) Please explain, how does this make you feel compared to using alone
    b) Do you think engaging in activities with a companion helps to enhance your health and well-being?
7) Do you think, your leisure centre/club/gym management is encouraging their customers to interact with one another? What improvements would you like to see in this regards?
8) Do you interact with others in your leisure centre/club/gym? If yes, are they from the same community/local area?
    a) Does this help to improve the feelings about the community?
9) How satisfied are you with your leisure centre/club/gym with respect to:
    a) Opening timings and space availability/overcrowding
    b) Location of your leisure centre/club/gym from your home/work

c) Price related to the use of facility

d) Aesthetics of the facility/condition of playing surface

e) Equipment, range of activities, maintenance of facility and customer service

10) What is the single thing that you like and do not like about your leisure centre/club/gym?

a) Are there any changes that you would like to see (in the way your leisure centre currently operates)

11) Will you continue to use your leisure centre/club/gym in the future? If not, reasons for the same

APPENDIX C

Facility managers' questionnaire

Please rate the following statements based on how important they are to the operation of your facility (Unimportant = 1, Slightly important = 2, Fairly important = 3, Important = 4, Very important = 5)

1. Ensuring that under representative groups (e.g. minority groups…) have the opportunity to participate?

2. Meeting wider community needs? (e.g. participation of minority groups, young people…)

3. Meeting social outcomes? (e.g. through participation to reduce crime, reduce young people's drug use…)

4. Meeting commercial objectives?

5. Realising profit margins?

6. Gaining market share?

Please indicate the influence that the following stakeholders have on strategic decision making in your facility. (No influence = 1, Slight influence = 2, Some influence = 3, Influence = 4, Total influence = 5)

1. Government bodies (e.g. DCMS, other government departments……..)

2. Public sport agencies (e.g. Sport England, National Governing Bodies, County Sport Partnership...)

3. Major employers (e.g. Corporate links, NHS, police, fire services…….)

4. Local authority

5. Lenders/Financiers (e.g. Bank…..)

6. Suppliers (e.g. Gym/Fitness equipment…..)

7. Community/Sport clubs

In offering your services please indicate how much importance you place on the following

(Unimportant = 1, Slightly important = 2, Fairly important = 3, Important = 4, Very important = 5)

1. Price

2. Facility opening timings

3. Avoiding congestion through scheduling

4. Equipment

5. Range of activities

6. Memberships

7. Ancillary revenue/Secondary spend

8. Maintenance of facility

9. Training and development of staff/employees

10. Customer service

Please indicate to what extent your strategy is to

Never = 1, Rarely = 2, Sometimes = 3, Often = 4, Always = 5

1. Provide a unique service?

2. Offer a highly differentiated service?

3. Offer a high degree of value in your service?

4. Offer services with distinctly different features from those of your competitors?

5. Invest in cost saving?

6. Emphasize efficiency?

7. Redesign services to reduce costs?

8. Offer only a few services specifically designed for your customers?

9. Appeal to a specific 'niche' in the marketplace?

10. Focus your efforts on a particular type of customer?

Please indicate how closely the following statements describe your facility's approach when compared with competitors in your local area (Miles and Snow's strategy types: Prospector, Defender, Analyser, Reactor)

(Not at all = 1, Slightly = 2, Somewhat = 3, Moderately = 4, Absolutely = 5)

1. Defender descriptor

2. Prospector descriptor

3. Analyser descriptor

4. Reactor descriptor

APPENDIX D

End users' questionnaire

Health, well-being and social capital questions

1) How is your health in general? (5 'Very Good' to 1 'Very Poor')

2) Taking all things together, how happy would you say you are? (0 'Extremely unhappy' to 10 'Extremely happy')

3) In your neighbourhood, would you say that.... (1 'No-one' to 4 'Most people')

Facility use questions

1) Which sport, health and fitness facility do you primarily use? (list of facilities provided)

2) At this facility, which of the following activities do you typically undertake

a) Weight training
b) Cardiovascular equipment
c) Intense activity classes
d) Other activity classes
e) Swimming pool
f) Indoor courts
g) Outdoor courts
h) Indoor halls
i) Outdoor halls

3) Did you do any physical activity in this facility in the last four weeks? (Yes/No)

a) How many days in the last four weeks have you used this facility?
b) Approximately for how many minutes did you typically undertake your activity each time?
c) Was the effort you put in usually enough to raise your breathing rate?
d) Was the effort you put in usually enough to make you out of breath or sweat?

4) Typically, do you visit the facility that you primarily use with any of the following? (Multiple responses)

a) Family
b) Friends
c) Colleagues/Workmates
d) Those you have met at the facility
e) Others (please specify)
f) Use it alone

5) Outside of this facility, did you do any organised physical activity in the last four weeks (Yes/No)

a) How many days in the last four weeks have you participated in these activities?
b) Approximately for how many minutes did you typically undertake your activity each time?

6) Outside of this facility, did you undertake any informal physical activity? (Yes/No)

a) How many days in the last four weeks have you undertaken these activities?

b) Approximately for how many minutes did you typically undertake your activity each time?

7) Other than the activities above, did you undertake any walking and/or cycling for recreational purpose in the last four weeks? (Yes/No)

a) How many days in the last four weeks have you undertaken these activities?
b) Approximately for how many minutes did you typically undertake your activity each time?

8) In a typical week, on how many days do you undertake vigorous/moderate intensity physical activities for at least 10-minute duration while working?

9) In a typical week, on how many days do you walk or cycle for at least 10-minute duration to get to and from place

Instrumental variables

1) What is your height in feet and inches

2) To what extent do you agree or disagree with the following statements:

a) There is an expectation in society to be physically active
b) When I was growing up I was encouraged to donate and/or was involved in charity/fund raising events (e.g. church activities, street fairs, etc.)

3) How satisfied were you with the opportunities to engage in sport, health and fitness activities when you were growing up?

4) How satisfied or dissatisfied were you with your health when you were growing up?

5) How happy were you when you were growing up?

6) How anxious were you when you were growing up?

7) When you were growing up, in your neighbourhood, would you say that:

8) My parents engaged in sport/physical activity when I was growing up

9) Sport was important in my schools that I attended when I was growing up

10) How satisfied were you with your life when you were growing up?

11)Typically, I use to travel to school by walking or riding a bike when I was growing up

Demographics

1) To which of the following age groups do you belong to?

2) Gender

3) What is your marital status?

4) What is the postcode district where you primarily live currently?

5) How many adults live in your house?

6) Are there any dependent children living in your house?

a) How many children in the age group of \Up to 3 years\" live in your house?"
b) How many children in the age group of \4-10 years\" live in your house?"
c) How many children in the age group of \11-16 years\" live in your house?"

7) What is your ethnic group?

8) What is your religion?

9) Do you have any long-standing illness, disability or infirmity?

a) Does this illness or disability limit your activities in any way?

10) What is the highest level of qualification that you have received from school, college or since leaving education?

11) Approximately, which of the following bands would best represent your household income?

12) Which of the following categories apply to you?

Users behaviour that may influence sport participation

1) How often do you smoke?

2) How often do you drink?

3) How often do you watch television/use social media?

4) How often do you watch sporting events on television/social media?

5) How often do you attend live sporting events as a spectator?

APPENDIX E

Policies related to sport	Emphasis on	Objectives	Specific goals
1995- Sport: Raising the game (DoNH 1995)	Improve sports in schools and help best sports men and women make the very best of their talents (DoNH 1995).	• Improve links between School and club sport (DoNH 1995). • To continue sporting opportunities after school into colleges and universities (DoNH 1995). • Ideas to improve talent spotting and talent support at home (elite level) (DoNH 1995). • With the help of national lottery create a British academy of sport with world class facilities (DoNH 1995).	• Put sport back at the heart of weekly life in every school (DoNH 1995). • To re-establish sport as one of the great pillars of education alongside the academic, vocational and the moral (DoNH 1995). • Develop network of regional and sports academies to bring on the best (DoNH 1995).
1997- Best Value (DETR 1997)	Change the provision of leisure and recreational services offered in England and Wales (DETR 1997).	• Secure economic, efficient and effective services continuously (DETR 1997). • Comparison of service provision with that of other private and public providers (DETR 1997). • A regime of audit and measurement of performance,	• Continuous effort to improve quality, efficiency and effectiveness of the respective leisure and recreational service providers across England and Wales (DETR 1997). • Local rate payer receives better quality services at a reasonable cost (DETR 1997).

		with year on year expectation of costs would reduce and quality will increase (DETR 1997). • Outlining the consequence of performance (DETR 1997).	
2000- Sporting future for all (DCMS 2000).	New labour government's vision of creating sporting opportunities for all (DCMS 2000).	• Create pathways of success for those who have the talent and the desire to rise to the top (DCMS 2000). • Plans to help schools in creating more and better sporting opportunities for children (DCMS 2000). • Encourage people to take sport beyond the school years (DCMS 2000). • Increase clarity about roles of organisations involved in sport and improve co-ordination among them (DCMS 2000). • Increase professionalism of sports management (DCMS 2000).	Give better sporting future for the people (DCMS 2000).

2002- Game Plan (Game Plan 2002).	Strategy for delivering government's sport and physical activity objectives from both mass participation and performance perspective until 2020 (Game Plan 2002).	• Clear vision on where UK needs to be in terms of sport and physical activity by 2020 (Game Plan 2002). • Developing and improving UK's sports and physical activity culture (Game Plan 2002). • Enhancing international success in sports performance (Game Plan 2002). • Combat social exclusion through sports (Game Plan 2002). • Improving the approach to mega sports events and major sports facilities (Game Plan 2002). • Improving the organisation and delivery of sport and physical activity in the UK (Game Plan 2002).	• Major increase in sports participation especially among disadvantaged groups (Low socioeconomic, young people, women and elderly) (Game Plan 2002). • To be one of the best sporting nations in the world (Game Plan 2002).
2002/3- (PESSCL) (DfES & DCMS 2003).	Strategy to increase the number of sporting opportunities for 5-16 year olds (DfES & DCMS 2003).	• At least 2 hours of high quality physical education and sport at school delivered within the curriculum (DfES & DCMS 2003).	Increase the percentage of school children who spend a minimum of 2 hours a week on high quality PE and school sport within and beyond the

		• An additional 2 or more hours beyond the school day delivered by a range of school, community and club providers (DfES & DCMS 2003). • Specialist sport colleges to be set up and schools sports partnerships- cluster of schools around sports colleges (DfES & DCMS 2003). • To encourage involvement in sports leadership and volunteering (DfES & DCMS 2003).	curriculum to 75% by 2006 and 85% by 2008 (DfES & DCMS 2003).
2012- Creating a sporting habit for life: A new youth sport strategy (DCMS 2012a).	Helping young people in particular to start a sporting habit for life (DCMS 2012a).	• Improving links between schools and their own clubs (DCMS 2012a). • Bring a sharper sense of direction and purpose across the entire sporting family (DCMS 2012a). • A collective discipline of building on what works and	Offer long term pathways that help young people continue playing sport into adulthood (DCMS 2012a).

		discarding that doesn't (DCMS 2012a). • Most successful organisations to be rewarded and those who do not deliver to be punished in terms of funding (DCMS 2012a).	
2015 – Sporting Future: A New Strategy for an Active Nation	To get more people participating in sport and to win more Olympic and Paralympic medals (HM Government, 2015)	• More people from every background regularly and meaningfully taking part in sport, volunteering and experiencing live sport (HM Government, 2015) • Priority of Olympic and Paralympic success (HM Government, 2015) • Stand up for the integrity of the sports we love by establishing a new governance code (HM Government, 2015)	Harnessing the potential of sport for social good by improving the following (HM Government, 2015): • Individuals' physical well-being • Individuals' mental well-being • Individual development • Economic development • Social and community development

APPENDIX F

Loughborough University

RESEARCH ETHICS: CONSENT FORM

Full title of Project: Co-creation and the casualization of sport and fitness participation: Does neoliberalism produce solutions to social inclusion and public well-being?

Name and contact address of Researcher: Harish Kumar
National Centre for Sports and Exercise Medicine, Loughborough University
Telephone number: 07948534296, Email: H.Kumar@lboro.ac.uk

Please Initial Box

1. I understand that my participation is voluntary and that I am free to withdraw at any time, without giving reason. ☐
2. I agree to take part in the research study. ☐
3. I agree to the focus group consultation being audio recorded ☐
4. I agree to the use of anonymised quotes in publications ☐

Name of Participant	Date	Signature
Name of Researcher	Date	Signature

APPENDIX G

THEMES	SUB-THEMES - Level 1	SUB-THEMES - Level 2	CODES
Social welfare	Different types of Leisure centre's position in relation to social welfare		Public sector focus on needs of the population, greater equality of opportunity - *Private consultant* Private sector focus on making profit, high yield customers, not on social objectives - *Private consultant* Focus on social policy without subsidy - *Private consultant* It is improving but depends on funding (Strategy to create sociability in sport organisations) - *Private consultant* Private sector and LMCs are doing better than public sector in terms of increasing sport participation - *Private consultant*
	Different Leisure centre's strategies towards social welfare	Strategy to improve sociability	No particular strategy but they do and encourage - *Public official* It is improving but depends on funding - *Private consultant* Digital innovation for social interaction - *Private consultant* As a Leisure centre no strategy but have some small projects - *LMC official*
		Strategy for disadvantaged groups to participate in sports	Unable to meet the demand due to lack of resources - *Public official* Leisure sector is far away from the needs of disadvantaged groups - *Private consultant* No research data or information- Leisure sector does not understand the needs of disadvantaged groups - *Private consultant* Policies and strategies in this regard is not being implemented effectively - *Private consultant* Private sector focus more on 'margin'-profit (not on sociability) - *Public official* Concession in price for disadvantaged groups (public sector) - *Public official* Have particular strategies towards increasing participation and we are doing well in this aspect - *LMC official*
Service provision	Leisure centre's strategies towards service provision	'Inward or outward looking':	One drives the other but more emphasis on reducing costs - *Public official* Both 'inward' and 'outward' looking- 'efficiency savings' (cost control) as well as focus on customer service - *LMC official*
		Strategy to meet end users' needs	Not a needs led service but supplier led service - *Private consultant* No difference over the last 25 years - *Private consultant* Balance between understanding the customer and offering balanced programme of activities - *Public official* Good customer relations - *Public official* Adequate provision and access to facilities - *Public official* Cleanliness, health and safety, programming of activities - *LMC official* Follow trends as well as create new - *LMC official* Engage with customers about service offerings through feedback - *LMC official* Upgrading equipment depends on the contract - *LMC official*
		Involvement in 'partnership' and/or 'co-production':	Not a priority in the Leisure sector - *Public official* Customer involvement is very much in place but it excludes those who do not participate in sport/physical activity - *Private consultant*

			Very much engage with customers - *Public official* Customer involvement for receiving feedbacks about service offerings - *LMC official*
	Factors influencing service provision	Due to recent changes in the sport sector (e.g. government policy)	More resources and effort put into least active communities (recent changes in sport policy) - *Public official* Happy with the changes and hard to disagree - *Public official* Concerns for clubs and governing bodies - *Public official* DIFFERENTIATION' in service matters - *Private consultant* Market intelligence beginning to have bigger profile - *Private consultant* Good for LMCs - *LMC official*
		Competition in the industry	More competition in the Leisure sector- *Public official* Pressure due to competition in the industry - *LMC official* More competition among LMCs – *LMC official* Influx of cheaper (low) end gyms - *Public official* Retaining customers is the biggest challenge - *Public official*
		Availability of sport facilities based on demographics of the population	Geographically facilities not in the right place - *Public official* Facilities offered may not be matching to what people want - *Private consultant* "Extremely sufficient and incredibly good" (facilities' provision for sport participation) - *LMC official* More provision for sports only in certain areas (than compared to others) and smaller districts are struggling - *Private consultant*
		Sport participation rates (Leicestershire County)	Participation rate over the years hasn't changed much - *Private consultant* Participation rates in physical activity is increasing - *Private consultant* Participation in traditional sport decreasing - *Private consultant* APS survey is not adequate to measure physical activity participation - *Private consultant* Technology play an important role and sector has not really embraced it (to increase sport participation) - *Public official*
Austerity	Effects of austerity measures	Current state of the industry (Leicestershire County)	Last 14years- focus on increasing efficiency and reduce cost in the leisure sector - *Private consultant* Turbulent austerity agenda is driving the environment - *Private consultant* Opportunities for low end private sector facilities due to budget cuts - *Public official* Public sector is struggling due to investment (to meet user's need) - *Private consultant* LMCs struggling - *Private consultant* All authorities are facing financial pressures - *Public official* Greater challenges for public and LMC facilities - *Public official* No investments, focus on reduction in costs as sport is not compulsory (particularly in public sector) - *Private consultant*

		On service provision	Big challenge to balance financial pressure and to manage the leisure facilities - *Public official* Wants efficient and effective programmes but funds are withdrawn - *LMC official* Pressure to be efficient and subsidy free - *Private consultant* Governmental pressure to adapt service and be profitable at the same time - *LMC official* Challenge to maintain and improve existing infrastructure and facilities - *Private consultant* LMCs trying to maintain their finances - *Private consultant* Subsidy cuts-hard to reach groups are left out - *Private consultant* Unable to meet the demand due to lack of resources (for disadvantaged groups) - *Public official*
		Pressure on senior management in the industry	Has removed industry leaders and those who are passionate about the industry - *Private consultant* Shortage in human resources- senior management taken out - *Private consultant* 'Non-commercial' managers are walking away from the sector - *Private consultant* Volunteers have become crucial for Leisure sector - *Public official*
	Reasons to improve investment in the industry (Leicestershire County)		Investment needs to increase in NWLD as housing projects are increasing - *Public official* Not enough investment in facilities and needs improvement - *Private consultant* Public sector needs to embrace technology but no investment - *Public official*
Stakeholders' influence on different types of sport organisations			
DCMS and Sport England			1) Mainly on public health agenda - *Public official* 2) No direct influence but indirect influence through their policies - *Public official* 3) DCMS and Sport England's influence in the past was very significant, but now not so much (Mainly funding from Sport England) - *Public official* 4) DCMS' policies will eventually change LMC's priorities- indirect influence - *LMC official*
LA			1) LA is important for their projects - *LMC official* 2) Strong relationship with LA because of which have been successful in their objectives - *LMC official*
NGBs			1) NGBS are clearly needed - *Public official* 2) NGBs support is very important - *LMC official* 3) NGB setup is not ideal ('locality plan' more important); not much influence except for financial output - *Private consultant*
CSP			1) Limited influence and focus on how resources might be accessed - *Public official* 2) Raise quality by increasing connectivity and enhance the exposure of sport and PA - *Public official* 3) CSP has more influence on the sector - *Private consultant* 4) CSP has (direct) influence on public facility - *Public official* 5) CSP is important for the projects (LMC) - *LMC official*

APPENDIX H

THEMES	SUB-THEMES: Level 1	SUB-THEMES: Level 2	CODES
Sport participation benefits	Social capital	End user's social capital	Improve networking – *Public and private Leisure centre (Young and middle age group)* Meet new people - *Public and private Leisure centre (Young age group)* Enjoy social atmosphere - *Public, private and LMC Leisure centre (Middle and old age group)* Good place to socialise - *Public, private and LMC Leisure centre (Young, middle and old age group)* Enjoyment – *Public Leisure centre (Young, middle and old age group)* Helps socialising with friends, family and others - *Private Leisure centre (Young and middle age group)* Get out of house – *Public Leisure centre (Young age group)* Enjoy socialising aspect in the leisure centre - *LMC Leisure centre (Old age group)* Better family relationship- *Private Leisure centre (Middle age group)*
		Leisure centre's strategy to encourage sociability	Facility environment has changed, women and family feel more comfortable in the settings - *Public Leisure centre (Middle age group)* Hold events to promote sociability (quiz nights, evening do's, Christmas event, a live band) - *Private Leisure centre (Middle age group)* Instructors help to socialise with others - *LMC Leisure centre (Middle and old age group)* May be they do it (Strategy at the Leisure Centre) - *Public Leisure centre (Middle age group)* Happens naturally anyways - *Public Leisure centre (Middle age group)* No particular strategy - *Private Leisure centre (Middle age group)*
	Health	Overall effect on health	Enhance, improve health - *Public, private and LMC Leisure centre (Young, middle and old age group)* Health and fitness - *Public, private and LMC Leisure centre (Young, middle and old age group)* Stay alive - *LMC Leisure centre (Old age group)* Keeps you young - *LMC Leisure centre (Old age group)*
		Physical benefits contributing to better health	Look better - *LMC Leisure centre (Young and middle age group)* Weight loss, keeping weight down – *Private and LMC Leisure centre (Middle and old age group)* Helps to support yourself, keeps you mobile/active - *LMC Leisure centre (Old age group)* Improve fitness – *Public, private and LMC Leisure centre (Young and middle age group)* More energy to do things - *LMC Leisure centre* (*Old age group)*
	Well-being	Overall effect on well-being	Improve sense of well-being - *Public, private and LMC Leisure centre (Young, middle and old age group)* Family environment- better family relationship – *Private Leisure centre (Middle age group)*
		Psychological benefits contributing to well-being	Inner sense of strength- confidence of feeling physically fitter and stronger, improves vanity/confidence – *Public Leisure centre (Middle age group)* Psychological boost – *Public and private Leisure centre (Middle age group)* Feel good - *Public, private and LMC Leisure centre (Middle and old age group)*

			Feel better about yourself - *Public, private and LMC Leisure centre (Middle age group)* Sport has given a new look at life and how I perceive it - P*rivate Leisure centre (Middle age group)* More motivation to do things – *Public, private and LMC Leisure centre (Middle and old age group)*
Service provision	End users' choice of service provision for sport participation in the area	Why use the said Leisure centre (why not others in the area)	Close to home – *Public, private and LMC Leisure centre (Young, middle and old age group)* Variety of activities on offer – *Public, private and LMC Leisure centre (Young, middle and old age group)* Culture and environment- feel comfortable as a women – *Public and private Leisure centre (Middle and old age group)* Loyal- sense of belonging to the centre - *Public and LMC Leisure centre (Middle and old age group)* Family environment – *Private Leisure centre (Middle age group)* Quality of service and cleanliness - *Private Leisure centre (Young, middle and old age group)* Aesthetics of the facility - *Private Leisure centre (Young, middle and old age group)* Friendliness and efficiency of staff - *Private Leisure centre (Middle age group)* Extra perks- booking a room for business meetings - *Private Leisure centre (Middle age group)* Secure car parking - *Private Leisure centre (Middle age group)* Concession in price – *LMC Leisure centre (Old age group)* Space availability - *LMC Leisure centre (Middle and old age group)*
		In the Leisure centre vs Outside	Difficulty in motivating self when training alone outside the Leisure centre - *Public Leisure centre (Young age group)* Enjoy socialising aspect in the leisure centre - *LMC Leisure centre (Old age group)* No customer service (outside the Leisure centre)- *Private Leisure centre (Middle age group)* Fresh air and feel good in nature - *Private Leisure centre (Middle age group)* Finds no difference - *Public Leisure centre (Middle age group)*
	Leisure centre's service provision parameters that influence end user's sport participation behaviour	Opening timings and space availability	Sometimes overcrowded - *Public Leisure centre (Young and middle age group)* Young people and non-users hogging equipment; people watching only TV and occupying equipment - *Public Leisure centre (middle age group)* Saturday they should open early - *Public Leisure centre (Young and middle age group)* Happy with opening timings and space availability – *Private and LMC Leisure centre (Young and middle age group)* Opening extra hours will not help - *Private Leisure centre (Middle age group)*
		Location from home/work	No concerns and are happy (otherwise would have used a different facility) – *Public, private and LMC Leisure centre (Young, middle and old age group)*
		Cleanliness and Aesthetics	Was in a really poor state but now has improved - *Public Leisure centre (Middle age group)* It has been improved recently - *Private Leisure centre (Middle age group)* Locker rooms need improvement - *Private Leisure centre (Middle age group)* Change rooms and shower rooms are not clean - *Private Leisure centre (Middle age group)* Outdoor pool filthy - *Private Leisure centre (Middle age group)*

			Badminton area filthy - *LMC Leisure centre (Middle and old age group)* People do not keep the pool clean even though it is cleaned on hourly basis - *LMC Leisure centre (Middle and old age group)* Halls are not clean on Mondays and Saturdays - *LMC Leisure centre (Middle and old age group)*
		Price related to the use of the facility	Reasonable for what they get out of the Leisure centre – *Public and LMC Leisure centre (Young, middle and old age group)* Older age group (65 years and older) say they get concession - *LMC Leisure centre (Old age group)* Expensive but worth it - *Private Leisure centre (Middle age group)* Targets driven facility - *Private Leisure centre (Middle age group)* They are here to make money from us and work like a corporate company - *Private Leisure centre (Middle age group)*
		Other concerns	Kit/equipment needs upgrading - *Public Leisure centre (Young and middle age group)* Not happy with food service - *Private Leisure centre (Middle age group)* Parking's one of the biggest issues, not big enough for 4,000 members - *Private Leisure centre (Middle age group)* Equipment repair takes long time - *LMC Leisure centre (Old age group)*
Sport participation behaviour	While using a Leisure centre	Participating in group activities	Social aspect - *Public, private and LMC Leisure centre (Young, middle and old age group)* Friendships, bonds – *Public Leisure centre (Young, middle and old age group)* Competition – Public and p*rivate Leisure centre (Young and middle age group)* Encouragement, motivation – *Private and LMC Leisure centre (Young, middle and old age group)* Guidance, advice - *Private Leisure centre* (*Young, middle and old age group)*
		Participating with a companion	Wouldn't participate in sport without companionship - *Public Leisure centre (Middle age group)* Either way is fine but enjoy companionship - P*rivate Leisure centre (Middle age group)* Enjoys companionship of people from different communities and is not intimidating, friendly when they can talk to each other - *LMC Leisure centre (Old age group)* Depends on the kind of activity - *Public Leisure centre (Young and middle age group)*
		Self-use	(some) Prefer self-use - *Public Leisure centre (Middle age group)*
	Sport Participation Behaviour of participants in general	Frequency	Depending on how they feel – *Public Leisure centre (Young age group)* Every day walking and cycling – *LMC Leisure centre (Middle and old age group)* Use gym once a week - *LMC Leisure centre* (*Middle and old age group)* Use gym three to four times a week - *LMC Leisure centre* (*Young and middle age group)*
		Intensity	Light - *Old age group* Moderate - *Young and middle age group* Vigorous - *Young and middle age group*
		Sporting activities	Mix of sporting activities on a weekly basis – *Public Leisure centre* (*Middle age group)* Use gym – *Public, private and LMC Leisure centre (Middle age group)*

			Group activity classes (yoga, Zumba, aerobics, spinning) – *Public Leisure centre (Middle and old age group)* Rehabilitation exercise program (heart smart) - *LMC Leisure centre (Old age group)* Team sports (football, rugby, cricket, squash, tennis) – *Public and Private Leisure centre (Young and middle age group)* Individual sports (running/walking/cycling outside, golf, canoeing, surfing) – *Public, private and LMC Leisure centre Young, middle and old age group)*
		Other physical activity/s apart from using their Leisure centre (with whom and what for)	Running and walking with the dog - *Public Leisure centre (Middle age group)* Activities with family, friends and work colleagues- helps in networking, develop friendships, socialise - *Public and private Leisure centre (Middle age group)* Play football- competitive edge, enjoyment and more informal - *Private Leisure centre (Young and middle age group)* Running alone- has no difference compared to running in the gym - *LMC Leisure centre (Middle age group)* Running with mates- Sociable - *LMC Leisure centre (Middle age group)*
		Barriers of sport participation	Having kids limits opportunities to engage more in sports - *Private Leisure centre (Middle age group)* Family and work does not allow - *Public Leisure centre (Middle age group)*