

## **Consumers' expenditure on sport in the UK: Increased spending or under-estimation?**

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### **Citation:**

DAVIES, L. E. (2002). Consumers' expenditure on sport in the UK: Increased spending or under-estimation? *Managing leisure: an international journal*, 7 (2), 83-102. [Article]

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**CONSUMERS' EXPENDITURE ON SPORT IN THE UK:  
INCREASED SPENDING OR UNDER-ESTIMATION?**

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# **CONSUMERS' EXPENDITURE ON SPORT IN THE UK: INCREASED SPENDING OR UNDER-ESTIMATION?**

## **Abstract**

The paper will present the findings of a consumer survey carried out in Sheffield in 1996/97 to demonstrate that spending on sport-related goods and services in the UK has been underestimated. It will argue that consumers' expenditure on sport by residents in Sheffield was greater than anticipated from national estimates, largely due to methodological reasons rather than increased spending. The paper will illustrate that conventional approaches, which use published data sources to measure sport-related expenditure are firstly, not a valid measure of sports spending and secondly, have omitted several items of sport-related expenditure from current estimates. The paper will explore the implications of these findings for policy makers and managers of sport and leisure services and will suggest that a review of methods used to calculate consumer spending on sport is required in the future.

# **CONSUMERS' EXPENDITURE ON SPORT IN THE UK: INCREASED SPENDING OR UNDERESTIMATION?**

## **Introduction**

The leisure industry accounts for over a quarter of all consumer spending in the UK. Within the last two decades, spending on leisure and particularly sport, which is the fastest growing sector, has increased considerably (Gratton, 1998). Between 1985 and 1995, real consumers' expenditure on sport grew by 30% and the latest UK estimates indicate that this trend is continuing. In 1998, consumer spending on sport was estimated to be £13.07 billion, or 2.50% of total consumers' expenditure, representing an increase from 2.41% in 1995 (Gratton *et al*, 2000). Consumers and their expenditure are thus a key element of sport-related economic activity and a growing component of spending in the UK. They represent a potential growth market for different types of leisure product and information about their spending patterns is therefore relevant to managers of public and private leisure services.

While statistics on consumer spending reveal that expenditure on watching and participating in sport is increasing, this paper will argue that these figures largely underestimate the actual amount consumers spend on sport. It will present the results of a consumer survey on sport-related goods and services, which was carried out in 1996/97 as part of the data collection for measuring the economic importance of sport in Sheffield. The paper will provide evidence to suggest that the findings, which reveal that spending on sport by residents in the city was between two and three times greater than spending in the

UK as a whole, can largely be accounted for by the underestimation of spending on sport at the national level, rather than above average spending in Sheffield.

The paper will demonstrate that when sport-related expenditure is targeted using a consumer survey, spending is found to be considerably greater than if calculated using published data sources of general household expenditure, such as the Family Expenditure Survey (FES). It will argue that this is largely due to methodological reasons. The paper will conclude by discussing the implications of the findings for measuring the economic importance of sport, recognising the ability of the sports sector to create wealth within the local economy and for policy makers and managers of sports and leisure services. Furthermore, it will suggest that accurate identification of consumer spending patterns is important for decision makers on the supply side of the leisure market, to make positive supply decisions and to target leisure products successfully in the future.

### **Estimating consumers' expenditure on sport: previous research**

In the UK, consumers' expenditure on sport has primarily been estimated as part of the data collection for measuring the economic importance of sport. Since the mid 1980s, nine studies have been undertaken (Henley Centre for Forecasting, 1986, 1989, 1990, 1992, 1992a; Piedad, 1991, 1994; Centre for Advanced Studies in the Social Sciences, 1995; LIRC, 1997). With the exception of the Scottish research (Piedad, 1991), which carried out a consumer survey, all of these studies used published data sources such as FES to calculate consumers' expenditure on sport.

From the UK economic impact studies and other European economic impact studies, there is evidence to suggest that when consumers are actually surveyed and asked specifically how much they spend on sport (Les Pratique Sportives En Communaute Francasie, 1985; Piedad, 1991; Lamb *et al*, 1992), consumers' expenditure is found to be between two and five times greater than when estimated using published sources (Henley Centre for Forecasting 1992a; Kesenne *et al*, 1987; LIRC, 1997; Martin and Mason, 1984 ; Oldenbroom *et al*, 1996).

Piedad (1991) used a consumer survey to measure sports expenditure in Scotland and it was found that expenditure was particularly higher than in previous studies in the UK, at approximately £11.38 per household per week. Piedad noted that

Comparison with the UK study suggests that the present estimate of Scottish sport-related value-added is over twice the level that would be implied by the UK study when allowance is made for inflation and Scotland's share of the UK national economy (Piedad, 1991: 18).

The Scottish study concluded that the principal reason for this was the high level of expenditure found by the consumer survey.

Similar results were also obtained in a European study on the economic importance of sport. Taks and Kesenne (1999) found that expenditure on sport per household per week in the Flanders was approximately £22.96. The Flanders study, which was undertaken 15 years after an initial study, found that household consumption in real terms was almost 4.7 times higher than previously measured (Kesenne *et al*, 1987). While there was no doubting that consumer spending on sport had risen within Europe over this period, Taks

and Kesenne (1999) acknowledged that part of the reason for the spectacular growth was methodological.

Whereas many of the published sources used to estimate consumer spending on sport such as the FES are reliable data sources, it is arguable whether they are actually a valid measure of sport-related spending. When items of sport-related expenditure are derived from published sources, in some cases there is exact correspondence with the relevant items of sport-related expenditure and the data reported in official statistics. However, in many cases, since the sports industry is not a conventionally defined sector, an assumption is required to identify the sport-related component from more general expenditure (LIRC, 1997). Although with some items reasonably good information is available upon which to base the assumption, in others, little or no information is available. For example, the Henley Centre for Forecasting (1992a) assume that 2% of total footwear repair expenditure is sport-related, with no justification for this. In these cases estimation of sport-related expenditure using published sources is *ad-hoc* and the validity of estimates is questionable.

A further reason for the differences found between consumer spending on sport measured using different methods, is that estimates derived from published data sources have tended to exclude a number of items of sport-related economic activity that are widely considered in other European countries to be part of the sports industry. An example is expenditure on food and drink while participating and watching sport. Several studies in Europe have included this item within the boundaries of sport-related expenditure (Les Pratiques Sportives En Communauté Française 1985; Oldenbroom *et al*, 1996; Taks and Kesenne,

1999). However, with the exception of the Scottish study (Pieda, 1991), no study in the UK has incorporated this item, despite travel costs being included as sport-related expenditure. Generally those estimates of consumer spending that have been derived using survey techniques rather than published data sources have included food and drink as sport-related expenditure. Further items of sport-related expenditure that have been excluded from estimates generated using published sources in the UK include spending on the hire of equipment for participation and with the exception of entrance charges, expenditure on watching sport.

### **Consumer spending and sports participation: A tenuous link?**

Within the field of leisure, it is widely acknowledged that consumer spending on sport is largely influenced by participation. Most researchers that have examined various aspects of spending on sport have focused on participation (Coalter, 1993; Lamb *et al*, 1992; Martin and Mason, 1984). Similarly, economic impact studies such as Jones (1989) and Henley Centre for Forecasting, 1986, 1989, 1990, 1992, 1992a; Pieda, 1991, 1994; Centre for Advanced Studies in the Social Sciences, 1995; LIRC, 1997, concentrate primarily on the cost and subsequent impact of participating in sport. It can be seen from Table 1, which shows consumers' expenditure on sport-related goods and services in the UK, that over 50% of consumers' expenditure on sport is related to participation through participants' expenditure on subscriptions, entrance charges, sports clothing, equipment, sports shoes and sports-related travel.



## **Insert Table 1**

While the figures in Table 1 show that a large proportion of consumer spending on sport is related to participation, these statistics omit several items of sports-related expenditure that are associated with watching sport. The ‘other consumers’ expenditure on sport’ category in Table 1 includes entrance charges for spectator sports (£384.78 million), derived from the FES. However, as various studies on the economic importance of sport and sports events have shown, admissions are only a small element of the actual income generated by a sports event (LIRC, 1996; Gratton *et al*, 2000). Additional expenditure on items such as food and drink, accommodation and merchandise all together account for a much larger proportion of consumers’ expenditure and economic activity generated than admissions and entrance charges.

Similarly the data in Table 1 only includes limited expenditure on sporting holidays. The only expenditure directly attributed to sports tourism is skiing holidays (£259.10 million), in the ‘other consumers’ expenditure category’. The UK economic impact studies, particularly the national studies (Henley Centre for Forecasting, 1986, 1992a; LIRC, 1997) have equally ignored the majority of sports tourism. Although it is acknowledged in the Scottish study (Pieda, 1991), it is essentially confined to golf tourism, with no mention of walking, skiing, climbing, fishing or shooting. While more recent studies have paid increasing attention to sports tourism (Centre for Advanced Studies in the Social Sciences, 1995; Pieda 1994), it is still largely underestimated. Furthermore, all of the UK economic impact studies that have included some element of consumers’ expenditure on sports

tourism have been linked to participation. However, none of the studies highlighted have included consumer spending on tourism for watching sport. Therefore, while the figures in Table 1 show that the link between spending on sport and participation is strong, this may be overemphasised because the full extent of consumers' expenditure on watching sport is not recorded.

Despite the arguments which suggest that expenditure on watching sports events is underestimated, there remains a significant correlation between the level of participation and the amount consumers spend. Les Pratique Sportives En Commuaute Francaise, (1985) found that nearly half of total sport-related consumers' expenditure was by intensive participants, which were those persons who participated in sport four or more times per week. This was also supported by the work of Lamb *et al* (1992) and Taks *et al* (1999), who found a positive significant correlation when the relationship between time spent doing sport and the amount of money spent on sport was tested using a Pearson correlation on data derived from 900 sportsmen in Belgium. Clearly as the frequency of participation increases so does the amount spent per person on sport-related activity.

## **Methodology**

The paper has so far given an overview of previous literature relating to consumer spending on sport. It will now outline the methodology used to estimate expenditure on sport-related goods and services by residents in Sheffield.

## **Data collection**

Consumer spending on sport by residents in Sheffield was estimated using a consumer survey. This was partly because the evidence presented above suggested that the use of published data sources to measure this sector leads to a significant under-recording of consumers' expenditure on sport, but also because no published sources exist for consumer spending at the city level. FES data is available for the Yorkshire and Humberside region, but not specifically for Sheffield. Data was therefore collected on sport-related consumers' expenditure using a household postal questionnaire. Given that a considerable amount of detail on sports spending was required, this was carried out in two parts (Part A and Part B).

Part A was used to obtain information about the behavioural patterns of residents in terms of their frequency of participating in and watching sport in the city. This was incorporated into the Sheffield Leisure Survey, which was carried out by the Leisure Industries Research Centre (LIRC) in 1997. Questions were asked about the type and frequency of sporting activities watched and participated in the last 12 months and the last 4 weeks. It was decided to use the previous 12 months to capture winter and summer sporting activities and the past 4 weeks to obtain a more accurate account of frequency. In addition, it was thought that these measures would allow comparison of the results with the General Household Survey (GHS). Information was also gathered on the demographic characteristics of the respondents and whether they were prepared to take part in a follow-up questionnaire. Part A was sent to a computer generated random sample of 5130 residents aged 18 and over within Sheffield, from the electoral register. Fifty-one of these

were subsequently returned giving the reason as either no longer residing at the address or deceased. These were therefore deleted from the total giving a sample of 5079.

Part B was designed to obtain information on sport-related consumers' expenditure in Sheffield. It was divided into 5 sections. These were sports participation, sports spectating, expenditure on others watching and participating in sport, sports goods and sporting holidays. Section 1 and 2 were both structured similarly and asked for information on the frequency of participation and spectating on sport in Sheffield and the amount of money spent on the last occasion. This covered items of expenditure such as admissions/entrance charges, food and drink, travel, hire of equipment (participation only) and any other items. It was made clear that if someone else paid on the last occasion, expenditure should be recorded as £0 to avoid double counting. A question was also asked about the cost of annual membership to sports participation and spectating clubs. The questions in Section 1 and 2 related only to personal expenditure. Section 3 was concerned with expenditure on others participating and spectating in sport and was divided into expenditure on children and on behalf of other adults. Section 4 asked questions about expenditure on sports goods, including clothing, footwear, equipment videos, books and magazines. This section was concerned with both personal expenditure and that on behalf of others. Finally, Section 5 focused on expenditure related to sporting holidays.

Part B was sent to those residents who had returned Part A, participated in sport in the last 12 months and agreed to take part in a follow-up questionnaire. In addition, 75 non-sports participants were also asked to complete Part B, to estimate any further expenditure on

watching sport, sports goods, and expenditure on behalf of others. Four hundred and forty nine Part B questionnaires were sent out. Twelve of the questionnaires returned were only partially completed or had identification codes removed, which meant that the information provided could not be cross-referenced with that provided in Part A. Consequently, these were removed from the total leaving a sample of 437.

The samples for Part A and Part B were divided into two mail-outs. This was to account for seasonal variations in sports participation and expenditure. For Part A, the first half was sent in February/March 1997 and the second half was sent in June/July 1997. The corresponding follow-up questionnaire, Part B, was sent out approximately 6 weeks after Part A in both periods. The responses obtained to Part A and Part B are given in Table 2.

It can be seen that 1162 responses were obtained from Part A, giving a response rate of 22.9%, which was low but as expected for a household survey. There was some bias in the responses obtained towards older male residents but this was accounted for in the analysis and at the aggregation stage. Details of this will be given later in the paper. Two hundred and fifty responses were obtained from Part B giving a response rate of 57.2%, which was considerably higher than Part A. This was firstly, because the sample identified had agreed to take part in further research and secondly, because the topic under investigation was particularly relevant to the targeted population.

### **Defining a typology for sports consumers**

To estimate sport-related consumers' expenditure by residents in Sheffield, a typology based on the frequency of participation in sport was derived. There were several reasons for using participation. Firstly, a larger proportion of the population participate in, rather than watch sport, consequently there was likely to be a greater diversity of expenditures associated with participation rather than spectating. Furthermore, the literature suggests that while spectator sport has become a major domain of the sports industry, the majority of household expenditure is for active participation in sport rather than spectating (Chelladurai, 1999; Taks and Kesenne, 1999). In addition, Taks *et al* (1999) who outlined other literature where a positive relationship between expenses and sports participation were found, showed statistically that time spent doing sport was the strongest determinant of expenditure on sport. Although the typology was based on participation, expenditures associated with watching sport were still included in the expenditure profiles.

From Table 3, it can be seen that while frequency of sports participation (FREQPART) was correlated significantly with expenditure on participation (EXPPART), sports goods (EXPGOODS) and total personal expenditure on sport (EXPTOTAL), it was not related to attending or spending money at sports events. This indicates that those people who watch sporting events are not necessarily the same as those who take part in sport.

### **Insert Table 3**

The typology was defined as follows. Each of the Part A and Part B respondents were classified accordingly and expenditure profiles for each category of the typology were derived from Part B.

Type 1 (T1) Not participated in sport\* in the last 12 months

Type 2 (T2) Participated sometime in the last 12 months, but not in the last 4 weeks

Type 3 (T3) Participated on 1 occasion in the last 4 weeks

Type 4 (T4) Participated on 2-4 occasions in the last 4 weeks

Type 5 (T5) Participated on 5-10 occasions in the last 4 weeks

Type 6 (T6) Participated on more than 10 occasions in the last 4 weeks

*\*as defined by the European Sport for All Charter (Council of Europe, 1980)*

Table 4 shows the profile of Part B respondents, classified using the typology outlined above. Given that there were a low number of T3 respondents, this category was combined with the expenditure data of T2. The new category represented those adults who had participated in sport sometime in the last 12 months, but not more than once in the last 4 weeks.

#### **Insert Table 4**

While it was not ideal to combine T2 and T3, it was considered to be more appropriate than combining T3 and T4 for the following reasons. Firstly, it will be seen later in the paper that the largest category of sports participants in the Sheffield population was T4. Combining T3 with this would have meant that an even larger proportion of the resident population would have fallen into this category, thus reducing the benefits of using a

participation typology to determine total consumers' expenditure on sport. Secondly, there were 71 respondents in Part B that were classified as T4, which was sufficient to produce a fairly accurate expenditure profile for this category. However, there were only 29 respondents in T2. This category represented the next smallest after T3 and was therefore the most logical choice to merge it with. T2 was consequently combined with T3.

Although consumers' expenditure tends not to be normally distributed, it was decided that the mean was the most appropriate measure of central tendency to derive the profiles of consumer spending on sport for several reasons. Firstly, although the mean is affected by extreme cases, it was decided that the outlying values of expenditure on sport, represented by clusters of high and low expenditure, were an important part of consumers' expenditure. To use a measure of central tendency such as the median, which effectively ignores these, would lead to a serious underestimation of expenditure on sport. Secondly, because the aggregation of consumers' expenditure was based on the typology of participation rather than across all sports participants, any over-estimation using the mean would be minimised. Finally, while it was feasible to use other measures of central tendency, the majority of previous studies that have estimated consumers' expenditure have also used mean values (Pieda, 1991; Lamb *et al*, 1992; Coalter, 1993).

### **Calculating total consumers' expenditure on sport in Sheffield**

Total consumer spending on sport by residents in Sheffield was estimated by using the expenditure profiles derived from Part B, together with the participation rates of the resident population identified from Part A. The first stage of aggregating consumers'



expenditure on sport was to estimate the profile of the Sheffield resident population in terms of the typology outlined above. The profile of the Sheffield resident population was calculated by dividing the total population aged over 18, obtained from Sheffield census data<sup>1</sup> (Census for Population, 1991), by the typologies of Part A respondents. The estimated profile of the Sheffield resident population derived using this method is shown in Table 5. As it can be seen, the largest category of sports participating residents were T4 (those who have participated in sport on 2-4 occasions in the 4 weeks).

### **Insert Table 5**

The typology of Part A respondents was weighted to account for the lower response obtained from female residents and those aged 18-24. This was to ensure that the sample upon which the aggregation was based was representative of sex and age variables, both of which are widely acknowledged to influence participation rates in sport (Gratton and Taylor, 2000; Coalter, 1999; Office for National Statistics, 1997).

While the survey was self-completion and therefore self-selection, sample weighting of sex and age variables should overcome any bias in participation levels, providing that the behaviour of respondents in the sample was characteristic of the variables they represent. Although it is possible that the self-selected respondents were not representative of the age and sex characteristics they displayed, the rates of participation shown by the aggregated

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<sup>1</sup> The 1991 census was used as it was the only source available for determining the sex and age profile of the Sheffield population. However, this may currently lack accuracy due to the data being collected 6 years prior to the research in Sheffield being undertaken.

sample were only marginally lower than the corresponding estimates produced by the GHS. This indicates that the weighting procedure has reduced any distortion of participation rates in the Sheffield population, resulting from the sample being under-representative of female residents and those aged 18-24.

Total consumers' expenditure on sport in 1996/97 was calculated by multiplying the consumers' expenditure profiles for each type of sports participant, by the number of each type in the Sheffield population, shown in Table 5. The process of using profiles of expenditure and multiplying by the total population has been used previously to estimate consumers' expenditure on sport (Pieda, 1991; Taks and Kesenne, 1999), although these studies did not use a participation typology and instead multiplied the average consumers' expenditure profile by the total population.

The process of using a participation typology to calculate consumers' expenditure on sport rather than the conventional method of multiplying average consumers' expenditure by the total population was considered to be more appropriate model for the following reason. Total consumer expenditure on sport is not normally distributed, instead it tends to be heavily skewed towards those who participate in sport most frequently (Jones, 1989; Lamb *et al*, 1992). For example, Les Pratique Sportives En Communaute Francaise (1985) found that nearly half of the total sport-related consumers' expenditure in Belgium (French community) was by intensive participants and that regular and intensive participants who accounted for 50% of sports people accounted for 70% of consumer spending (Jones, 1989). Thus, using mean expenditure across all participants would over-estimate total

consumer expenditure on sport. While the mean expenditure of each type of sports participant within the typology may also not be normally distributed, the margin of error is likely to be less than if the mean expenditure across all participants was used. The use of the participation typology should therefore be more representative of total consumer expenditure on sport than conventional methods used in previous studies.

### ***The base model***

To compare consumers' expenditure on sport by Sheffield residents with average consumers' expenditure at the national level, it was necessary to derive benchmark estimates of national expenditure. A base model of consumers' expenditure on sport for residents in Sheffield was estimated using the LIRC model for the economic importance of sport in England (Gratton and Kokolakis, 1997). This was calculated on a pro-rata basis using the population of Sheffield, the number of households in Sheffield and the percentage of England that Sheffield represents (based on total population). Since the England model represented 1995, a price inflator based on the retail price index (RPI) was used to estimate the base model for 1996/97.

The base model gave an aggregated estimate of consumer spending on sport and the sport-related economic activity in the city, if Sheffield consumers were typical of those in the rest of England. It also gave dis-aggregated base estimates for each category of consumer expenditure (participation, spectating, sport goods and other items) and several components of these. For example, expenditure on sports goods was divided into clothing, footwear, equipment, videos, magazines and books. The base model thus provided an

estimate of expected levels of spending by consumers in Sheffield, against which actual levels of spending could be analysed.

## **Consumer spending on sport-related goods and services: results**

The results of the consumers' expenditure survey are presented in two parts. Firstly, as the expenditure profiles for the typology outlined previously and secondly, as an aggregated estimate of total consumers' expenditure on sport by all residents in Sheffield.

### **Typology profiles**

The following section of the paper will present the expenditure profile of sport-related goods and services for the typology outlined above. The results presented were derived from Part B of the household questionnaire and focus on three categories of consumers' expenditure in Sheffield. These are sports participation, watching sport and the purchase of sports goods.

### ***Sports participation***

From Table 6 it can be seen that by and large, expenditure by residents on participating in sport within Sheffield increased with intensity, with the most infrequent participants spending on average £84.59 per year (£1.63 per week) and those who participated most frequently spending £686.65 per year (£13.20 per week). In addition, as found by Taks *et al* (1999), it can be seen that the proportion of expenditure on each item varies according to the intensity of participation. For example, membership fees accounted for a larger

proportion of T2 & T3 expenditure (27%) than any other type of sports participant. Similarly, admissions & hire of facilities accounted for a greater proportion of T4 expenditure than any other type (50%).

### **Insert Table 6**

Coalter (1993) analysed the annual expenditure patterns of participants in eight selected sports and found that entrance fees were the largest single item of reoccurring expenditure, accounting for approximately a third of all expenditure, with 25% on transport and 17% on food and drink. While similarities can be drawn between the relative importance of expenditure on these items and average expenditure of Part B respondents in the Sheffield research, the table shows that there is considerable variation across the different types of sports participants. For example, T2 & T3 participants spent approximately £23.12 on membership of sports participation clubs whereas T6 participants spent £112.35. This variation again highlights the problem of using conventional methods to calculate total consumers expenditure on sport. Average expenditure across all types of sports participants would be distorted by the high expenditure shown by T6 respondents and therefore lead to overestimation of total consumer expenditure on sport.

The distribution of sport-related expenditure on participation by consumers varied, not only by frequency of participation but also by sporting activity. Table 7 shows mean consumers' expenditure on participating in selected sporting activities across all types. It can be seen that there was a large difference in terms of expenditure on various sporting

activities, for example, average expenditure on participating in golf was approximately double that of any other sport in the table. Other activities in which consumers spent over £5 on the last occasion they participated were walking, snooker and angling, with cycling and running averaging the lowest expenditure.

Further examination of consumer spending by sporting activity also reveals considerable variation across each item of expenditure. As shown in Table 7, it can be seen that the majority of consumers' expenditure on golf (£8.25) was on admission fees. Other sports that had a high proportion of expenditure on admission fees were swimming (£2.21), keep fit (£1.89) and weight training (£1.25). In contrast, analyses of consumers' expenditure on walking (£5.22) showed a high proportion of expenditure on food & drink (£2.07) and travel (£2.22). Other sports where food and drink accounted for a large proportion of total consumers' expenditure were snooker and football.

#### **Insert Table 7**

#### ***Sports spectating***

It was highlighted earlier in the paper that attendance and expenditure on sports events was not significantly correlated with participation in sport. It can be seen from Table 8 that the highest expenditure on sporting events was from T1 respondents (non-participants) who spent on average £112.27 per year (£2.16 per week) on sporting events. In terms of sports participants, it can be seen that as participation increased, so did expenditure on events,

with the most infrequent participants spending on average £54.53 per year (£1.05 per week) and the most frequent participants spending £107.77 per year (£2.07 per week).

### **Insert Table 8**

Examination of the average profile of expenditure across all Part B respondents reveals that approximately 35% of total expenditure on attending sports events in the last 12 months was on admissions. As discussed earlier in the paper, with the exception of Pineda (1991), all economic impact studies in the UK have used FES data on entrance fees as the only measure of expenditure on sporting events. Clearly from the data presented in Table 8, it can be seen that previous studies have significantly underestimated consumers' expenditure on sport in this area. Items such as membership fees to spectating clubs and food and drink account for a considerable proportion of overall expenditure. Again, as with expenditure on participation, the average profile of expenditure derived for Part B respondents disguises significant fluctuations across the typology (T1-T6). For example, although membership accounted for £24.52 across all Part B respondents, it actually varied between £4.47 for T5 participants and £48.89 for T1 participants.

### ***Sports goods***

Table 9 shows actual expenditure by residents on sports goods in Sheffield during the last 12 months and a breakdown of the components of this. The table reveals that generally as participation increased, so did expenditure on sports goods. The most frequent participants (T6) spent almost twice as much in the last 12 months (£340.65) on sports goods in

Sheffield as the least frequent participants (T2& T3), who spent approximately £179.36. Table 9.

Furthermore, it can be seen from Table 9 that residents who did not participate in sport (T1) still spent on average £85.13 per year. When analysing the components of this expenditure, it can be seen that an above average proportion of expenditure was spent on clothing (37%). Given that respondents were asked to estimate expenditure on clothing predominantly for the purposes of sport rather than general usage, this expenditure may represent clothing purchased for watching sport such as replica sports kits or clothing purchased on behalf of others such as children.

#### **Insert Table 9**

Table 9 reveals that expenditure on sports goods also varied across the typology. For example, the table shows that the proportion of expenditure on clothing, the second largest component of sports goods expenditure, tended to increase with participation, accounting for 40% (£135.97) of total expenditure for T6 residents, but only 22% (£38.89) of total expenditure for T2 & T3 participants. Other variations are also shown across other sports goods.

#### **Consumer spending on sport in Sheffield: do residents spend more?**

Table 10 shows the complete profile of consumer spending on sport by residents in Sheffield using the participation typology outlined earlier. While the majority of



expenditure data presented was collected using the consumer survey, to complete the profile of spending on all sport-related goods and services it was necessary to derive some expenditure from published sources. These are recorded in Table 10 as 'other expenditure'. The published sources used included the FES (Office for National Statistics, 1998a) and other sources such as the British Video Association Yearbook, 1998, the BBC Annual Report and Accounts, 1996/97 and the H.M. Customs and Excise Annual Report 1996/97. Many items derived from these sources required an adjustment to derive the sport-related component from broader expenditure therefore adjustments were made using the assumptions of the LIRC (1997) and the Henley Centre for Forecasting (1992a).

#### **Insert Table 10**

Table 10 also shows data from the base model, which represents an estimate of consumer spending on sport in Sheffield if consumers were typical of the rest of England. It can be seen that total consumers' expenditure on sport-related goods and services by residents in Sheffield was £236.76 million, approximately 2.7 times greater than the base model, which predicted expenditure in Sheffield to be approximately £89.48 million.

From the table it can also be seen that those items investigated using the consumer survey (expenditure on participation, watching sport and sports goods), were those recorded to be considerably larger than predicted. Expenditure on other items in most cases was marginally above the national average, but given these were derived using the same methods as the base model, it was expected that these figures would be comparable.

One of the most significant differences in the primary data collected for Sheffield and the base model estimates was for expenditure on sports spectating. The only item of consumer spending that was taken into account in the base model was admissions. No estimates of expenditure on membership, food and drink and other items have been considered. From Table 10 it can be seen that previous studies which have used only admissions to estimate consumers' expenditure on watching sports events have considerably underestimated total spending in this area. The Sheffield study and the Scottish study Piedad (1991), which is the only UK study to have considered other aspects of spectating expenditure, both found admissions to account for only 35% and 25% of total expenditure on spectating respectively. Interesting, while the Scottish study recorded admissions of £30 million, its original survey results actually found admissions to be £60 million. However, given these were some five times greater than anticipated using published sources, Piedad reduced the estimates by half. If the original survey results had been used, the study would have shown that approximately 40% of spectating expenditure were on admissions.

Piedad (1991) found that spectating accounted for 8% or £119 million of all consumers' expenditure on watching and participating in sport. Similarly, European studies such as the Flanders study (Taks and Kesenne, 1999) have found consumers' expenditure on spectating accounted for approximately 15% of expenditure on participant and spectator sport. This research found that spectating accounted for 29% of all expenditure on participating and watching sport in Sheffield, thus representing a far more important element of consumers' expenditure than previously discovered. The reasons for this will

be explored in the following section. Nevertheless, the magnitude of this finding supports the suggestion by Gratton (1998) that consumers' expenditure statistics do not fully spending on sports events.

### **Explaining consumers' expenditure on sport in Sheffield**

The following section of the paper will argue that consumer spending on sport by residents in Sheffield was found to be considerably greater than the base model, primarily due to previous research under-estimating sport-related expenditure rather than increased spending by consumers in the city.

One reason for the difference between the primary data and the base model was that many expenditure items were not included in the original estimates from which the base model was derived. The main items that were not included in the base model were food and drink consumed while watching and participating in sport, expenditure on hire of equipment when participating in sport and with the exception of entrance charges and travel, expenditure on watching sports events. It was discussed earlier in the paper that these items are increasingly being recognised as sport-related expenditure yet are seldom included in estimates of consumer spending that are derived from published sources. They were included within the Sheffield consumer survey and represented a significant difference in the predicted and actual data. For example, it was found that Sheffield residents spent approximately £17.94 million and £6.21 million on food and drink alone on participating in and watching sport respectively.

It was estimated that the missing items of expenditure on food and drink, hire of equipment and membership of spectating clubs, accounted for approximately 8% (or £12.20 million<sup>2</sup>) of the difference between the estimates of spending on sport that were derived from the base model (£89.48 million) and those generated from the primary data collected in Sheffield (£236.76 million). While including these missing items in the base model would increase estimates of total consumer spending on sport-related goods and services to approximately £101.68 million, it would only reduce the difference between the actual data for Sheffield and the base model from 2.7 times greater to just 2.3. Thus, in relative terms, missing items only accounted for a small percentage of difference between the actual and expected estimates of consumer spending.

A further explanation for the difference shown between estimates derived from the consumer survey and the base model is that the published sources used to estimate consumer spending on sport, such as the FES are reliable but not necessarily valid measures of sport-related goods and services. As highlighted at the beginning of the paper, this is because published sources often require an assumption to be made to extrapolate sports spending from larger expenditure categories. For example, expenditure on sport-related travel for watching sports events was not directly available from the National Travel Survey in the UK national study (Henley Centre for Forecasting, 1992a; LIRC, 1997). Therefore, it was assumed that consumers' expenditure on this item, which was included in the 'entertainment/public activity' sub category, would have the same weighting as 'spectator sports admissions charges' in the FES spending category 'theatres,

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<sup>2</sup> This was calculated by taking the proportion of expenditure that the missing values accounted for in each category of the primary data and multiplying it by the corresponding sub total in the base model

sports events and other entertainments (Henley Centre for Forecasting, 1992a). Clearly the validity of using such data is questionable and likely to yield quite different results to those obtained directly from the consumer survey. Similarly, if consumers are asked specifically how much they spend on sport-related goods and services, this is likely to produce quite different estimates to those obtained in response to questions about consumers' expenditure in general.

While it is possible to approximate the percentage of difference in the base model that is accounted for by missing items, it is considerably more difficult to do this for the use of invalid published sources. Indeed, without further research it is not possible to quantify this. However, previous studies which have used alternative techniques such as a consumer survey to collect data on sport-related spending have found that estimates are between two and five times greater than those produced using published sources. The use of invalid sources for estimating consumers' expenditure on sport is therefore likely to explain a considerable amount of the variation between the actual and predicted data.

Lamb *et al* (1992) argue that the few studies which have attempted to provide quantitative data on consumers' expenditure on sport in the UK have largely underestimated this because they have not examined the cost of sports participation to those people who are actually participating. They suggest that while studies such as Gratton and Taylor (1987) provide figures that are relevant to average household income and expenditure on sport-related activities, and Jones (1989) supply data representing the sport-related expenditure

of the whole population, neither study examines the cost of participation to regular sports participants. They argue that

Recent General Household Survey figures (1986) show that only 32% of adults in Britain were regularly engaged (at least once per month) in outdoor sports, games and physical activities (including walking), and likewise 28% engaged in indoor sports. The above figures therefore cannot reflect the true cost of participation to this atypical section of the population (Lamb *et al*, 1992: 20)

Thus, the consumer survey in Sheffield may have revealed greater spending on sport-related goods and services because a large amount of data was collected from residents who participated regularly in sport. Again, in this research it is difficult to quantify exactly how much this factor may account for the differences shown in Table 10. Nevertheless, it is likely to be a relatively small explanatory element compared to either the missing items or the invalid sources discussed previously.

With regard to the primary data collected in Sheffield, it is plausible that the respondents of the consumer survey were over-representative of those people who participate in and watch sport. However, the participation rate of Part A respondents was 61% in the last 4 weeks, compared to the General Household Survey estimates of 64% (Office for National Statistics, 1997). Sports participation for both Part A and the aggregated sample was below the national average. In terms of spectating, the proportion of Part A respondents watching a sporting event in the last 12 months was 35%. Although the GHS does not provide comparable data on sports spectating, Social Trends (Office for National Statistics, 1998b) revealed that 22% of adults in the UK watched a live sporting event in the last 3 months, thus suggesting a pattern of behaviour similar to that shown in Sheffield.

Consequently, the frequency of sports participation and spectating in Sheffield was not an explanatory variable for increased spending on sport-related goods and services.

A final explanation for the difference between data derived from the consumer survey and the base model is that residents in Sheffield actually spend more on sport-related goods and services than their counterparts elsewhere in England. One area of consumer spending in Sheffield that was notably higher than the base model was sports spectating. Sheffield has an annual programme of major sports events and is one of only several cities in the UK to have a representative team in each of the four professional sports in the UK, which are football, rugby league, basketball and ice hockey. In addition, it had both a Premier League Club and a Division One side when the data was collected. It is possible that consumers in Sheffield are not typical of those in the rest of England and actually spend more on watching sports events than the general population.

Again, as with the other explanations, the percentage of the difference that is accounted for by Sheffield specific factors is difficult to assess. It was discussed previously that increased spending on spectating was not a direct consequence of increased levels of participating. Furthermore, aside from Sheffield being an urban area and therefore having a concentration of service-related activity, there is no evidence to suggest that higher levels of spending are due to factors specific to the city. Moreover, it is likely that consumers' expenditure on watching sport has been largely underestimated in previous research (Pieda, 1991; Gratton, 1998). It is unlikely that Sheffield specific factors accounted for any more difference in the actual and predicted data than the missing items of expenditure. To

understand more about the spending patterns of consumers on watching sports events it is necessary to carry out further research not only on those who participate in sport but also on non-sports participants. In this research, T1 respondents were found to spend more per head of population on watching sport than any other group. Therefore, studies that only focus on the expenditure of sports participants underestimate the full extent of consumer expenditure on spectating.

## **Evaluating the impact of higher spending on sport**

### **Implications for measuring the economic importance of sport**

Earlier in the paper it was highlighted that consumers' expenditure on sport in Sheffield was estimated as part of broader research investigating the economic importance of sport at the city level. The value-added of sport-related activity in Sheffield was found to be £165.61 million, which was approximately 4.11% of Gross Domestic Product (GDP) in Sheffield in 1996/97. This compares with just 1.61% of GDP at the national level. While it is beyond the scope of this paper to discuss the reasons for this finding in detail, it is relevant to point out that one likely explanation for this was the greater than average consumer spending on sport in the city. This paper has debated whether the reasons for this were methodological or otherwise and these will not be repeated again. However, given consumers' expenditure is one of the principal driving forces of the sports industry and this was found to be approximately 2.7 times greater than predicted, this was considered to be a contributing factor to the apparent increased importance of sport in the Sheffield economy.



The National Income Accounting (NIA) framework, which was used to measure the economic importance of sport in Sheffield, is a macro-economic approach to impact analysis and is based around the derivation of GDP. The NIA framework is basically a measure of the monetary value of the total flow of goods and services produced in an economy. The NIA framework is applied to the sports industry by dividing the economy into seven sectors. These are the consumer sector, commercial sport, commercial non-sport, voluntary sector, local government, central government and overseas. Sport-related final expenditure within the economy is then identified and categorised into one of these sectors. Following this, sectoral accounts are constructed to show how expenditure in one sector of the economy can contribute to income in several others. Consequently, if consumers' expenditure is estimated to be considerably greater than predicted, the knock-on effect and thus value-added attributed to the commercial sport and commercial non-sport sectors, which are the main recipients of consumers' expenditure, is also greater.

### **Implications for sport as a wealth creator**

For an industry to contribute to local economic development and revitalisation, it is fundamental that the industry concerned can generate wealth in the form of income and employment to the respective economy. Sport generates a considerable amount of wealth to the economy. As noted above, in the UK it is currently estimated at approximately 1.61% of GDP (LIRC, 1997). However, revised estimates of consumer spending on sport to justly represent the amount spent on sport by consumers will undoubtedly reveal that the ability of sport to create wealth within the local economy is in fact greater. This

recognition may encourage policy makers to reconsider the use of sport for regeneration strategies and urban revitalisation.

The need to generate external income is arguably a central feature of local economic development policy. However, Williams (1997:239) argues “for an economy to grow, it is not the rise in external income alone, but rather, an increase in net income which is required”. Therefore, not only is it important for planners and policy makers within cities to recognise that consumers’ expenditure on sport is greater than previously thought, but also that retaining the expenditure of residents within Sheffield through the provision of sports services to meet local demand, will prevent leakage of money outside the local area and thus generate net income within the local economy. It is hence important that consumer spending on sport is measured accurately to predict the extent to which service provision in an area adequately satisfies this need and to identify those parts of the market where there may be a deficit of sport-related services. Subsequent provision of these services will consequently prevent leakage of expenditure outside the local economy.

### **Implications for sports and leisure providers**

Identification of higher consumer spending on sport is not only important to local economic development planners, but also to public and private providers of sport and leisure services. Accurate identification of how much consumers spend on sport-related goods and services and on which components within the sports economy, is important for identifying those areas of the market to invest in. Lack of expenditure data in sport severely restricts demand estimation (Gratton and Taylor, 2000). Identification of where

money is being spent and where the demand for sport-related goods and services lies, would inform service providers within the market of where supply is lacking.

At present within the UK, limited consumers' expenditure data on sport-related goods and services means it is only possible to obtain a limited picture of consumer behaviour. This is largely because participation rates cannot be related to other indicators of demand such as consumers' expenditure (Gratton and Taylor, 2000). Research such as the consumer survey carried out in Sheffield and the subsequent typology of consumer spending based upon a profile of participation, goes some way to increasing information about the demand for sport. This information not only helps service providers to identify niches within the market but also to target markets for their products. Wider adoption of such practices for recording sports expenditure data should therefore be considered in the future.

## **Conclusion**

This paper has presented the findings of a consumer survey that was used to measure spending on sport by residents in Sheffield. The results have shown that expenditure on sport in Sheffield was approximately 2.7 times greater than predicted from the base model, which was derived from previous estimates of consumer spending on sport in England. A number of explanations have been suggested for this.

While it is difficult to estimate precisely the value of the different explanations without further research, the paper has presented evidence to suggest that the reasons are largely methodological. It has argued that the use of published data sources such as the FES are

an invalid method for estimating consumers expenditure on sport-related goods and services and are the main reason for the differences shown between the base model and the data collected in Sheffield. The paper has suggested that when consumers are specifically asked how much they spend on participating and watching sport, as in the Sheffield consumer sport survey, higher levels of expenditure are revealed than otherwise found using a general household survey. This supports the findings of other studies that have also targeted consumers' expenditure on sport using a similar approach, such as Les Pratiques Sportives En Communauté Française (1985), Pineda (1991), Lamb *et al* (1992) and Taks and Kesenne (1999). The paper has demonstrated that missing items of consumers' expenditure also contribute to the differences shown between the actual and predicted data, but that this explains no more than approximately 8%. Nevertheless, together with the use of invalid sources, these two factors have resulted in previous studies under-estimating spending on sport-related goods and services in the UK. While it was suggested that increased spending in Sheffield might contribute to the results that were found, it was argued that this was unlikely to explain any more of the results than the missing values. In summary then, it can be concluded that consumers' spending on sport in Sheffield was found to be greater than the rest of England primarily as a result of underestimation in other studies rather than increased spending.

Consumers' expenditure statistics on sport are relevant to managers in the leisure industry. They feed into economic impact studies and are also relevant for monitoring demand of sport-related goods and services. They are therefore of paramount interest to both the public and private sector and instrumental for the planning and provision of sport-related

goods and services in the future. Accurate recording of these is thus important for both academics and practitioners with a vested interest in the sports industry. The paper has produced ample evidence to indicate that the methods used for measuring consumers' expenditure on sport at the national level need reviewing. This paper recommends that a full evaluation of the sources used to estimate consumer spending on sport in the UK is carried out. In particular, this investigation should examine the reasons why estimates of spending on sport are much higher when a consumer survey is used and why sources such as the FES are not adequately measuring levels of spending on sport. An outcome of this review may be that an independent survey of consumer spending on sport in the UK needs to be undertaken on a regular basis in the future.

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## TABLES

**TABLE 1. CONSUMERS' EXPENDITURE ON SPORT-RELATED GOODS AND SERVICES IN THE UK (CURRENT PRICES: £MILLION)**

	<i>1995</i>
Participant sports: subscription and admission charges	2,010.8
Clothing sales	1,407.0
Footwear sales	938.0
Travel	473.9
Gambling:	
Football pools	633.2
Horseracing	2,299.2
Other consumers' expenditure on sport	2,649.2
Total	10,411.5

*Source: Gratton et al (2000)*

**TABLE 2. QUESTIONNAIRE SAMPLE AND RESPONSES: PART A AND PART B**

	<i>Sample</i>	<i>Response</i>	<i>%</i>
<b>Part A</b>			
February	2,598	485	18.7
June	2,481	677	27.3
<i>Total</i>	<i>5,079</i>	<i>1,162</i>	<i>22.9</i>
<b>Part B</b>			
March	208	111	53.4
August	229	139	60.7
<i>Total</i>	<i>437</i>	<i>250</i>	<i>57.2</i>

**TABLE 3. PEARSON'S BIVARIATE CORRELATION AND SIGNIFICANCE LEVEL MATRIX**

					Significance level ( <i>p</i> )	
					Correlation coefficient ( <i>r</i> )	
	<i>FREQPART</i>	<i>EXPPART</i>	<i>FREQSPEC</i>	<i>EXPWATCH</i>	<i>EXPGOODS</i>	<i>EXPTOTAL</i>
<i>FREQPART</i>		**0.000	0.859	0.089	**0.000	**0.000
<i>EXPPART</i>	0.525		*0.016	**0.000	**0.000	**0.000
<i>FREQSPEC</i>	0.011	0.153		**0.000	**0.001	**0.000
<i>EXPWATCH</i>	0.109	0.289	0.692		**0.00	**0.000
<i>EXPGOODS</i>	0.249	0.360	0.201	0.324		**0.000
<i>EXPTOTAL</i>	0.453	0.792	0.434	0.615	0.737	

\* = Correlation is significant at the 0.05 level (2 - tailed)

\*\* = Correlation is significant at the 0.01 level (2 - tailed)

*FREQPART* = Frequency of participation

*EXPPART* = Expenditure on participation

*FREQSPEC* = Frequency of events attended

*EXPSPEC* = Expenditure on events

*EXPGOODS* = Expenditure on sports goods

*EXPTOTAL* = Total expenditure on

sport (Personal)

**TABLE 4. TYPOLOGY OF PART B RESPONDENTS**

	<i>T1</i>	<i>T2</i>	<i>T3</i>	<i>T4</i>	<i>T5</i>	<i>T6</i>	<i>Total</i>
Part B	55	29	9	71	48	37	249

**TABLE 5. PROFILE OF SHEFFIELD RESIDENT POPULATION (18YRS+)**

	<i>Number of residents</i>	<i>%</i>
Type 1	145,994	36.7
Type 2 & 3	25,500	6.4
Type 4	89,843	22.6
Type 5	77,214	19.4
Type 6	58,969	14.8
<i>Total</i>	<i>397,520</i>	<i>100.0</i>

**TABLE 6. EXPENDITURE ON PARTICIPATING IN SPORT WITHIN SHEFFIELD DURING THE LAST 12 MONTHS £ (%)**

	<i>T1</i>	<i>T2 &amp; T3</i>	<i>T4</i>	<i>T5</i>	<i>T6</i>	<i>Average*</i>
Admissions/ hire of facilities	0.00	30.99 (37.0)	126.73 (50.0)	128.95 (36.0)	250.90 (37.0)	102.83 (40.0)
Hire of equipment	0.00	0.11 (0.0)	1.04 (0.0)	11.01 (3.0)	1.06 (0.0)	2.62 (1.0)
Food & drink	0.00	16.92 (20.0)	32.86 (13.0)	80.89 (23.0)	140.88 (21.0)	48.63 (19.0)
Travel	0.00	12.27 (15.0)	54.27 (21.0)	67.34 (19.0)	159.17 (23.0)	53.96 (21.0)
Other items	0.00	1.19 (1.0)	4.29 (2.0)	8.76 (2.0)	22.31 (3.0)	6.42 (3.0)
Membership	0.00	23.12 (27.0)	35.57 (14.0)	57.90 (16.0)	112.35 (16.0)	41.24 (16.0)
Total	0.00	84.59	254.76	354.83	686.65	255.70

\* across all Part B respondents

**TABLE 7. MEAN EXPENDITURE BY SPORTING ACTIVITY: PARTICIPATION ON LAST OCCASION (£)**

	<i>Admissions</i>	<i>Equipment</i>	<i>Food &amp; drink</i>	<i>Travel</i>	<i>Other</i>	<i>Total</i>
Walking	0.13	0.00	2.07	2.22	0.80	5.22
Swimming	2.21	0.00	0.71	0.89	0.12	3.93
Snooker	1.48	0.14	3.53	0.44	0.00	5.59
Keep fit	1.89	0.00	0.11	0.59	0.01	2.60
Cycling	0.14	0.00	0.20	0.48	0.01	0.83
Weight/gym	1.25	0.00	0.27	0.55	0.39	2.46
Cricket	1.40	0.00	2.16	1.10	0.00	4.66
Running	0.01	0.00	0.47	0.62	0.00	1.11
Football	1.56	0.00	1.65	0.95	0.17	4.33
Golf	8.25	0.00	1.20	1.00	0.11	10.56
Angling	2.09	0.77	1.00	0.91	0.36	5.13

**TABLE 8. EXPENDITURE ON ATTENDING SPORTING EVENTS WITHIN SHEFFIELD DURING THE LAST 12 MONTHS £ (%)**

	<i>T1</i>	<i>T2 &amp; T3</i>	<i>T4</i>	<i>T5</i>	<i>T6</i>	<i>Average*</i>
Admissions	32.3 (29.0)	7.13 (13.0)	27.86 (33.0)	44.04 (62.0)	38.76 (36.0)	30.43 (35.0)
Food & drink	17.38 (15.0)	14.79 (27.0)	9.06 (11.0)	12.85 (18.0)	25.28 (23.0)	14.91 (17.0)
Travel	7.74 (7.0)	7.66 (14.0)	11.88 (14.0)	5.74 (8.0)	13.97 (13.0)	9.45 (11.0)
Other items	5.88 (5.0)	2.29 (4.0)	9.35 (11.0)	4.45 (6.0)	16.22 (15.0)	7.59 (9.0)
Membership	48.89 (44.0)	22.66 (42.0)	25.90 (31.0)	4.47 (6.0)	13.54 (13.0)	24.52 (28.0)
Total	112.27 (100.0)	54.53 (100.0)	84.05 (100.0)	71.55 (100.0)	107.77 (100.0)	86.9 (100.0)

*\* across all Part B respondents*

**TABLE 9. EXPENDITURE ON SPORTS GOODS IN SHEFFIELD DURING THE LAST 12 MONTHS £ (%)**

	<i>T1</i>	<i>T2 &amp; T3</i>	<i>T4</i>	<i>T5</i>	<i>T6</i>	<i>Average*</i>
Clothing	31.48 (37.0)	38.89 (22.0)	42.45 (25.0)	64.57 (25.0)	135.97 (40.0)	57.69 (30.0)
Footwear	18.64 (22.0)	37.97 (21.0)	38.03 (23.0)	48.56 (19.0)	76.32 (22.0)	41.44 (21.0)
Equipment	21.27 (25.0)	89.41 (50.0)	76.63 (46.0)	130.13 (51.0)	106.05 (31.0)	80.80 (42.0)
Videos	10.00 (12.0)	6.78 (4.0)	3.31 (2.0)	6.00 (2.0)	8.78 (3.0)	6.65 (3.0)
Magazines/books	3.74 (4.0)	6.31 (4.0)	7.18 (4.0)	7.10 (3.0)	13.53 (4.0)	7.23 (4.0)
Total	85.13 (100.0)	179.36 (100.0)	167.6 (100.0)	256.36 (100.0)	340.65 (100.0)	193.81 (100.0)

*\* across all Part B respondents*

**TABLE 10. CONSUMER EXPENDITURE ON SPORT-RELATED GOODS AND SERVICES IN SHEFFIELD (£ MILLION)**

	<i>Sheffield data (actual exp.)</i>	<i>Base Model (predicted exp.)</i>
<b>Participation</b>		
Admissions/ membership/hire of facilities	51.81	18.61
Food & drink	17.94	N/A
Travel	19.77	(inc. spectating) 4.35
Other items	3.42	N/A
<i>sub total exp. participation</i>	<i>92.94</i>	
<b>Spectating</b>		
Admissions/ membership/hire of facilities	24.28	3.56
Food & drink	6.21	N/A
Travel	3.66	(see participation above)
Other items	3.06	N/A
<i>sub total exp. spectating</i>	<i>37.21</i>	
<b>Sports goods</b>		
Clothing	22.41	12.97
Footwear	15.36	8.44
Equipment	28.57	8.26
Videos	2.91	0.16
Magazines/books	2.7	1.34
<i>sub total sports goods</i>	<i>71.95</i>	<i>31.17</i>
<b>Other expenditure</b>		
Repairs and laundry	0.16	0.41
Newspapers	3.39	3.38
Video rental	0.11	(inc. sports goods above)
BBC licence	1.32	1.11
TV and video rental	0.56	0.93
Satellite/cable TV subscription	3.26	N/A
Public school fees	0.6	0.63
Gambling		
Football pools	2.12	3.72
Horseracing:		
on course	2.89	2.37
off course	18.05	17.20
Raffles and gaming	2.2	2.06
<b>Total Expenditure</b>	<b>236.76</b>	<b>89.48</b>