
Economic importance of sport 1998-2010

A research report for **sportscotland** by the Sport Industry Research
Centre, Sheffield Hallam University

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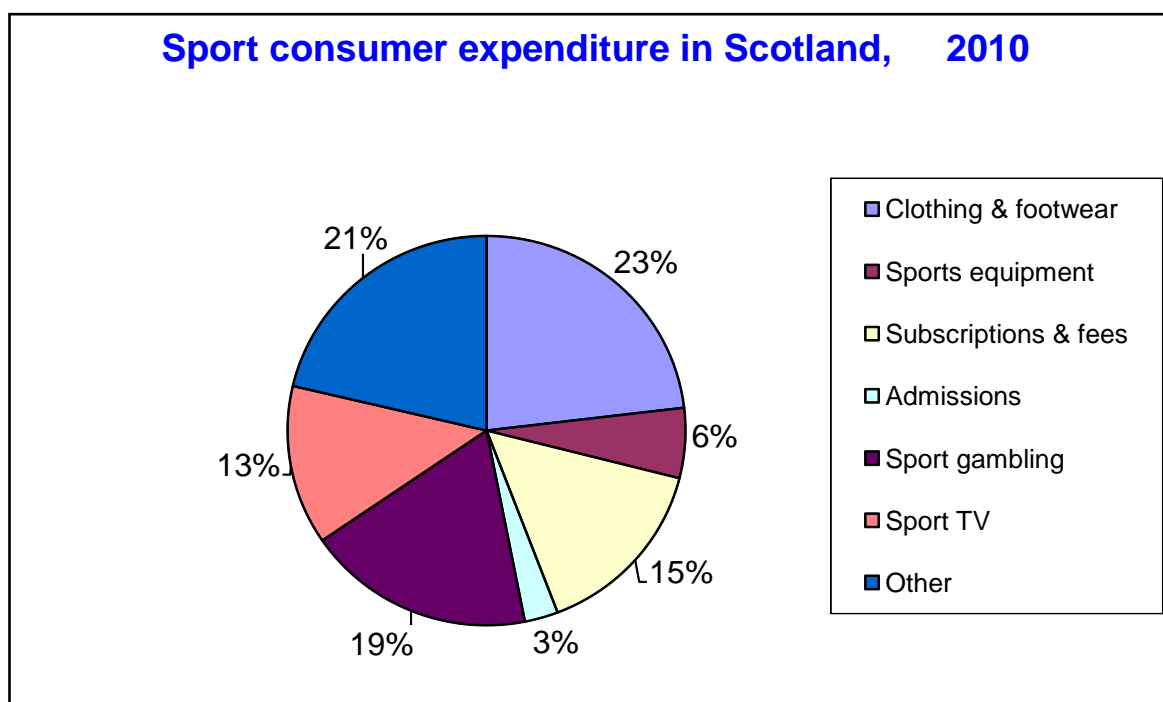
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1. Executive summary

- This report provides an update of the economic importance of sport in Scotland using the spreadsheet model developed by the Sport Industry Research Centre as part of its review of the economic importance of sport studies. Previous economic importance of sport in Scotland research was published for the years 1998, 2001, 2004, and 2008. This report provides the output from the SIRC model for 2010 and summarises the key indicators for the economic importance of sport in Scotland.
- The economic value of sport has been assessed across Scotland, focusing on consumer spending, value added and employment.
- This report focuses on the economic importance of sport in Scotland in 2010, providing comparisons with estimates from Wales for the same time period, and the latest percentage structure of the English sports economy (2008). Unless specified, the analysis is conducted in market prices.
- The methodology employed in this report is based on national income accounting and the income and expenditure flows between sub-sectors of the economy. By using the latter we can derive a monetary value for sport production (value added) which is consistent with the national statistics framework and crucially avoids the problem of double counting.

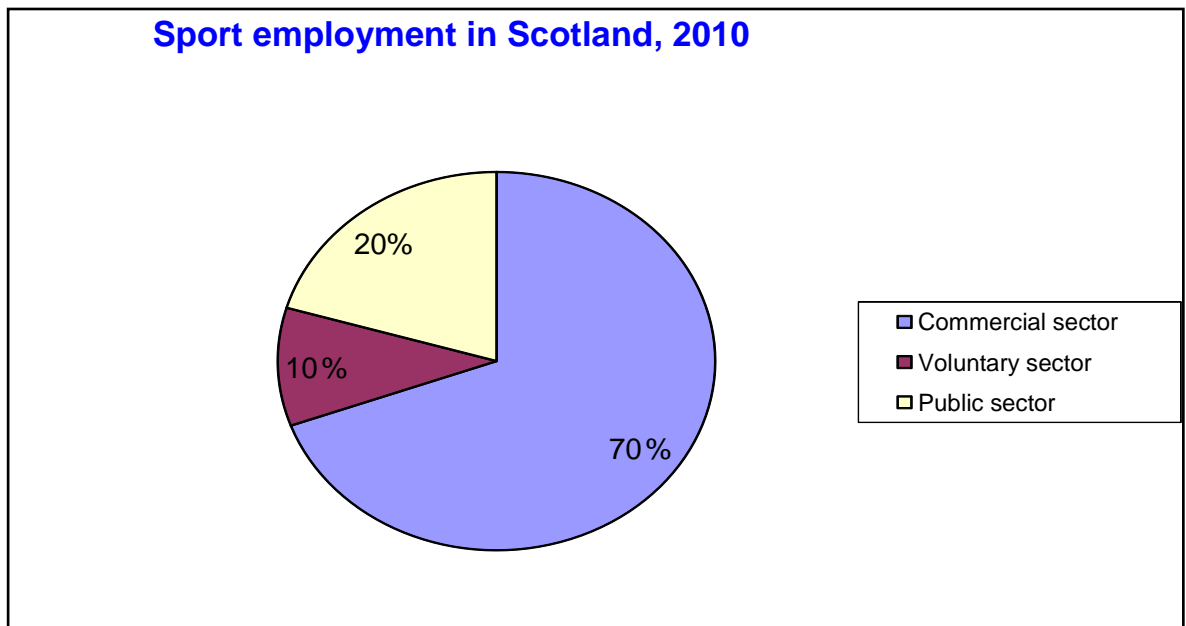
Figure 1.1



- In 2008 and 2010, Scottish consumers spent **£1,830m** and **£1,898m** on sport respectively. Consumer expenditure on sport in 2010 as a percentage of total expenditure was 2.5% in Scotland and 2.4% in Wales.
- There has been a continuous rise in the share of sport-related employment, as a percentage of total employment, since 1998. In 2010, sport-related employment accounted for 2% of total employment in Scotland.

- Sport related economic activity generated **£1,737m** and **£1,838m** value added in 2008 and 2010 respectively. The importance of sport, in terms of gross value added (GVA), increased from **1.5%** of the national economy in 1998, to **1.9%** in 2010. Sport and associated industries are estimated to account for **46,300** full time equivalent jobs in Scotland, corresponding to **2%** of total employment (2010). The vast majority of sport employment comes from the commercial sector.

Figure 1.2



2. Introduction

2.1 Terms of reference

This report has been prepared by the Sport Industry Research Centre (SIRC) at Sheffield Hallam University on behalf of **sportscotland**. The purpose of the report is to provide an estimate of the economic importance of sport in Scotland and compare with past estimates. It builds on similar research carried out by SIRC in 1998, 2001, 2004 and 2008 that measured the value of the sport economy in Scotland. The model has been modified to enhance the use of Annual Business Survey (ABS) supply-related statistics. Selected comparisons have been made with previous studies to illustrate the change in the importance of sport to the Scottish economy. This report identifies the direct economic contribution of sport to the national economy both in monetary and percentage terms.

2.2 Methodology

The SIRC model of economic impact assessment uses economic variables from official statistics as its basic input. Hence, with the sole exception of the voluntary sector, there is no need for collection of primary data. National income accounting provides the framework for this model, which is consistent with the UK National Accounts. It allows for a division of the sports economy into the seven sectors below:

- **Consumers**, including the personal or household sector. Shows mainly sport-related expenditure, e.g. spending on sports clothing and footwear.
- **Commercial Sport** including spectator sport clubs, sports goods manufacturers and retailers. In this section, we would classify companies such as Nike, JJB and professional football clubs. We also include a section of the media where a sport produce/service is produced as sport TV, sport publications etc.
- **Commercial non-sport**, includes suppliers for the production of sport-related goods and services. This sector includes all companies of the commercial sector that do not provide a sport product, but they assist through supply of inputs or revenue in its production. An example is a bank sponsoring a football club. The sponsorship revenue received by the club represents a flow from the commercial non-sport to the commercial sport sector.
- **Voluntary** including non-profit making sport organisations such as amateur clubs run by their participants.
- **Local government** including income from local government sport facilities, sport-related grants from the central government and rates from the commercial and voluntary sector. The sector has expenses such as wages for labour (a flow towards consumers) and grants to the voluntary sector.
- **Central government** including taxes, grants and wages on sport-related activities. For example, a person buying a ticket for a football match records two flows: one towards the government sector as VAT, and another towards the commercial sport sector for the remainder of the price.
- **Outside the area sector** this includes all transactions with economies outside Scotland.

We record income and expenditure flows between the seven sectors above. As a result we can draw up a set of income and expenditure accounts for each sector. The 'double entry' accounting principle is applied, so every expenditure flow from sector A to sector B is also an income flow in the sector B accounts. The income and expenditure accounts are then used to derive estimates for the following economic impact indicators of the sport economy:

- Sport-related consumer expenditure
- Sport-related employment
- Sport-related value added

Sport-related value added is the most comprehensive statistic of economic value as it corresponds to the gross value added (GVA) in the economy as a whole. It shows the contribution of the sport industry to the economy. We measure it as the sum of wages and profit surplus in the sector, adjusted for the inclusion of value contributed from National Lottery projects.

The method used is consistent with the Office for National Statistics (ONS) estimate, as reported in the publication *Consumer Trends*¹. Inflation adjustment has been used for comparisons of the year 2010 with past data. The sport-generated product (GVA) as percentage of the total product is usually the most important statistic to consider. Together with average wages per sector and profit margins, GVA contributes towards producing estimates for sport-related employment. Following the abolition of the New Earnings Survey, which used to be the basis of calculating average wages, historical employment figures have been re-estimated to be consistent with the Annual Survey of Hours and Earnings.

2.3 Development of sport in Scotland

The 2014 Commonwealth Games have focused investment policy in Scotland and to a great extent have helped the sport sector to withstand the effect of the economic crisis. A significant investment is the £13.7m extension to the Tollcross Aquatics Centre in Glasgow, which is under construction and is to be used for the Commonwealth Games swimming competitions. New features include the creation of a 50m six-lane warm-up swimming pool, to complement the existing ten-lane one in the venue, and new fitness and health suites. The permanent number of pool-side seats will be doubled to 2,000, while an additional 3,000 temporary seats will be installed at the time of the Commonwealth Games.

Overall the Glasgow Commonwealth Games is estimated to be worth £35m to the city in terms of additional economic activity. However, the overall infrastructure plans are likely to exceed £500m. New major investments include the Sir Chris Hoy Velodrome, with a permanent viewing capacity of 2,500 and a temporary expansion of 2,000 for the Commonwealth Games, and the adjoined National Indoor Sports Arena with a viewing capacity of 5,000. Outside the traditional sport infrastructure, growth has been observed in the hotel sector with extra 2,500 rooms built, or planned for completion before the Commonwealth Games.

¹ *Consumer Trends Quarter 1 2011 (ONS)*

In the commercial sport sector Scotland attracts investment for new health and fitness clubs such as 24-hours operator Pure Gym with new clubs in Glasgow and Aberdeen. The health and fitness sector as a whole sees an opportunity in the effect of both the Olympics and the Commonwealth Games to counter the difficult trading period of the credit crunch and the recession.

Scotland is known as the home of golf. Although the country has 550 golf courses, around 70 of them generate the vast majority of economic benefits. According to SQWconsulting, the generated golf-related number of jobs and GVA are estimated at 3,800 and £123m respectively. Golf attracts many high spending US tourists, resulting in significant spillover effects for the local economies. Scotland regularly hosts major events such as the Open Championships (2007, 2009, and 2010) and will host the 2014 Ryder Cup in Gleneagles. There are 170 accommodation providers, including 56 hotels, that participate in VisitScotland's Visiting Golfers Welcome quality assurance scheme. Around one in three golf visitors to Scotland from outside the UK stay in golf resorts. Golf has become a catalyst for attracting investment from abroad, the most significant example being the planned £750m golf resort at the Menie Estate.

Another example of the economic benefit of sport events in Scotland is the 2007 World Team Badminton Championships in Glasgow, which generated £6.7m additional spending for the city, with £3.5m of it coming from outside Scotland. The eight day event brought 15,000 visitors from all over the world to Glasgow. Similarly, according to EventScotland, three major rugby events hosted in May 2009 at the Murrayfield Stadium in Edinburgh, contributed £36m to the Scottish economy.

Other sport initiatives of wider importance include a £15.7m Regional Football Centre in Glasgow, with a full size indoor synthetic pitch, accommodating 700 spectators; and the launching of the Scottish mountain biking strategy in 2010. Mountain biking is expected to grow significantly over the next four years and to be worth, according to Tourism Intelligence Scotland, more than £155m to the country.

The current investment policy emphasises the community involvement in the new facilities and should enhance the relative importance of sport in Scotland within the next three year period.

3. The sport economy in Scotland

3.1 Summary of key indicators

Table 3.1 summarises the most important sport-related indicators for Scotland, namely consumer expenditure, gross value added and employment for the years 1998, 2001, 2004, 2008 and 2010. The table also makes comparisons with Wales, where possible. The estimates for total consumption expenditure in Scotland are derived using Family Spending and Consumer Trends statistics.

According to Table 3.1, £1,898m was spent on sport-related goods and services in Scotland in 2010. In the same year, consumer expenditure on sport accounted for 2.5% of the total

derived expenditure in Scotland, which is higher than the equivalent available national average for Wales (2.4%) in 2010. In the same year the Scottish sport economy benefited from construction work for the 2014 Commonwealth Games.

Table 3.1: Main sport-related indicators for Scotland

	1998	2001	2004	2008	2010
Consumer expenditure on sport (£million)	1,019	1,266	1,567	1,830	1,898
percentage of Scottish total	2.2	2.5	2.7	2.5	2.5
percentage of Wales total	2.2		2.3		2.4
Gross Value Added by sport (£million)	965	1,196	1,537	1,737	1,838
percentage of Scottish total	1.5	1.7	1.9	1.7	1.9
percentage of Wales total	1.7		1.8		2.0
Sport related employment (thousands)	37.9	39.3	43.0	47.2	46.3
percentage of Scottish total	1.6	1.7	1.8	1.9	2.0
percentage of Wales total	1.5		1.8		1.8

During this period, the proportion of consumer spending on sport within the economy increased gradually, from 2.2% in 1998, to 2.5% in 2001, and to 2.7% in 2004, before declining back to the 2.5% position in 2008 and 2010. In 2010, sport-related economic activity added £1,838m to the Scottish economy, which, in current prices, represents an increase of 20% over the year 2004. The contribution to GVA by sport in Scotland has increased from 1.5% in 1998 to 1.7% in 2001, and to 1.9% in 2004 and 2010. Sport maintained its economic share despite the overall fall of economic activity in Scotland from

2008 to 2010. Sport-related employment in Scotland grew from 37,900 in the year 1998 to 46,300 in 2010, peaking at 47,200 in 2008 before the start of the global economic crisis. As a percentage of total employment, the contribution of sport in Scotland increased from 1.6% in 1998 to 1.7% in 2001 and finally to 2.0% in 2010. On all three percentage indicators, the relative position of sport in Scotland was not undermined by the global economic crisis, even though there was an absolute decline in employment between 2008 and 2010 (both in sport and the economy overall).

3.2 Consumer spending

Table 3.2 summarises the value of sport-related consumer spending in Scotland. The estimates are consistent with the total reported in the ONS Consumer Trends publication. It shows that the total value of sport-related consumer spending was £1,898m in 2010, representing an increase of 21% over the year 2004. Sport clothing and footwear is the single largest participation-related category of consumer spending on sport, accounting for £439m or 23% of the market in 2010. In the same year, the combined participation-related sectors of subscriptions and fees (£289m), and sport goods (£110m) and sportswear accounted for 44% of the market. Consumer spending associated with the three aforementioned participation-related categories increased by 16% since 2004. However, the most important changes occurred in gambling and TV services.

Gambling accounted for £353m or 19% of the market in 2010. The increase (86%) in sport-related gambling expenditure during the period 1998-2004 can be explained by the abolition of gaming tax. By 2010, sport gambling was in decline (-28%) compared to 2008.

The role of sport in creating output and employment in the commercial non-sport sector is illustrated by the sports-related spending on 'TV and video rental, cable and satellite subscriptions', accounting for over 13% of the market. Other spending categories include publications, sport-related BBC licence fee, and sport travel.

Table 3.2: Sport-related consumer spending in Scotland, current prices

	1998	2001	2004	2008	2010
	£m	£m	£m	£m	£m
Sport clothing and footwear	246	277	336	356	439
Sports goods	78	127	108	51	110
Participation subscriptions and fees	204	261	279	236	289
Admissions to events	51	54	62	48	52
Sport-related gambling	168	173	312	490	353
TV/video rental, cable and satellite subscriptions	83	124	167	264	251
Other sport-related spending	189	350	303	385	404
Total	1,019	1,266	1,567	1,830	1,898

3.3 Consumer spending in 2008 prices

Table 3.3a summarises the value of sport-related consumer spending in Scotland using 2008 prices. The estimates are consistent with the price indices for sport produced in the publication Sport Market Forecasts 2011-2015 and overall with the Consumer Price Index. In this way we can compare volumes of spending without being influenced by price inflation. The categories of Table 3.3a correspond to the presentation of Table 3.2. Since we use 2008 prices, the numerical magnitudes in 2008 under both Tables 3.2 and 3.3a are identical. The exact price indices used are presented in Table 3.3b.

Table 3.3a: Sport-related consumer spending in Scotland, 2008 prices

	1998	2001	2004	2008	2010	1998/2010
	£m	£m	£m	£m	£m	change
Sport clothing and footwear	146	198	275	356	477	227%
Sports goods	62	107	101	51	108	74%
Participation subscriptions and fees	304	343	336	236	278	-9%
Admissions to events	77	71	73	48	49	-36%
Sport-related gambling	237	225	363	490	327	38%
TV/video rental, cable and satellite subscriptions	112	159	190	264	235	110%
Other sport-related spending	275	336	347	385	388	41%
Total	1,213	1,439	1,685	1,830	1,861	53%

During the period 2004-2010, sport-related consumer spending increased by 10% in real terms. This is a strong performance, given the economic crisis which began in autumn 2008. Overall, during the period 1998-2010, sport-related consumer spending increased by 53% in real terms. However, this increase was not observed equally throughout the sport economy. The consumer market was driven by sports clothing and footwear, sports goods, and sport TV, each one of them increasing by 227%, 74%, and 110% correspondingly, during the 1998-2010 period. The market that suffered most from the recession was sport-related gambling which, although increasing by 107% during the 1998-2008 period, declined by 33% in real terms during the years 2008-2010.

Table 3.3b summarises the price indices underpinning the estimation of consumer spending in 2008 prices. The indices are based on the Consumer Trends dataset (ONS). In our calculations $\text{Volume} = 100 * \text{Value}/\text{Price}$.

Prices follow a general increasing trend. The only exceptions are sport clothing and footwear, and sport goods (up to 2008), mainly because of the influx of Chinese produced goods.

Table 3.3b: Sport-related price indices, 2008 prices (=100)

	1998	2001	2004	2008	2010
Sport clothing and footwear	169	140	122	100	92
Sports goods	126	119	107	100	102
Participation subscriptions and fees	67	76	83	100	104
Admissions to events	66	76	85	100	107
Sport-related gambling	71	77	86	100	108
TV/video rental, cable and satellite subscriptions	74	78	88	100	107
Total	84	88	93	100	102

3.4 Sport-related output

Table 3.4: Sport-related value added in Scotland, current prices

	1998	2001	2004	2008	2010
	£m	£m	£m	£m	£m
Commercial sport	256	325	382	298	346
of which:					
Spectator sports	29	62	72	71	81
Retailing	156	177	215	120	170
Commercial non-sport	472	553	767	1,025	975
Voluntary sector	120	161	205	181	241
Public sector	116	159	183	233	276
Total	965	1,196	1,537	1,737	1,838

Estimates of sport-related output are based on value added by the sport sector. Value added is calculated as the sum of wages and profits generated within the sector. Table 3.4 summarises the value added by sport in Scotland. According to the table, sport-related economic activity increased from £965 in 1998 to £1,838 in 2010. The majority of this economic activity (£975m, 53%) is generated by the commercial non-sport sector. This has increased in importance following construction work associated with the Commonwealth Games. The next largest sector is commercial sport (£346m, 19%). Approximately two-thirds of the valued added in this sector is attributable to professional football clubs and retailing. The latter includes sport-related clothing and footwear, equipment and publications. The voluntary and public sectors account for the remainder (£517m, 28%) of the sport-related economic activity in Scotland. In each case, the ratios of wages and profits out of total turnover are calculated using the Annual Business Survey.

3.5 Sport-related employment

	1998 ('000)	2001 ('000)	2004 ('000)	2008 ('000)	2010 ('000)
Commercial sport	10.0	9.6	9.5	10.0	10.4
of which:					
Spectator sports	3.5	3.1	2.4	3.2	3.2
Retailing	3.5	3.7	4.0	4.0	4.5
Commercial non-sport	17.8	18.1	22.2	23.8	21.9
Voluntary sector	3.9	4.5	4.6	4.6	4.7
Public sector	6.2	7.0	6.7	8.7	9.3
Total	37.9	39.3	43.0	47.2	46.3

Table 3.5 provides estimates for sport-related employment in Scotland. The employment estimates are derived from calculations based on wage payments and average salaries per sector, as reported in the Annual Survey of Hours and Earnings (ASHE). The latter has been

adopted as a basis of average wages per sector following the abolition of the New Earning Survey which was used in all early economic studies. ASHE introduced a greater detail in the definition of economic sectors; accordingly, although the GVA estimates were not affected, employment figures (derived from GVA and wages) had to be re-estimated.

Sport and associated industries are estimated to account for 46,300 full time equivalent jobs in Scotland, accounting for 2% of all Scottish employment in 2010. This represents an increase of 22% since the year 1998. The relative share of employment generated within each sector is broadly consistent with their share of value added to the national economy. In 2010, as with value added, the largest sector was commercial non-sport, supporting 21,900 jobs or 47% of all sport-related employment in Scotland. The commercial sport, voluntary and public sectors support 22%, 10% and 20% of the nation's sport-related jobs respectively.

Sport employment has increased significantly its share in the national economy, from 1.6% in 1998 to 2.0% in 2010. In this sense, in the long run, the sport economy has increased its influence on the economy as a whole. This was achieved on the back of advances in the commercial non-sport, voluntary, and local government sectors. Construction work up to the Commonwealth Games is expected to be a major factor for further growth.

3.6 Summary of income and expenditure flows

Table 3.6 summarises the income and expenditure flows for the seven sport-related sectors in 2010. The majority of income is generated in the commercial non-sport sector, accounting for £1,283m. This is followed by the commercial sport sector (£951m) and the central government sector (£863m).

Within the commercial sport sector, 63% of generated income comes from retailing. This consists mainly of sport equipment, clothing, footwear, and sales of sport related books, magazines, newspapers and DVDs.

On the expenditure side, by far the most important category is the consumer sector accounting for £1,898m of expenditure. This is followed by the commercial non-sport (£1,257m) and commercial sport (£882m) sectors.

Table 3.6 Sport-related income and expenditure flows, 2010, current prices

	Income	Expenditure
	£m	£m
Consumer	848.2	1,897.7
Commercial sport	951.3	882.3
of which:		
Spectator sports	117.1	116.1
Participation sports	33.4	31.7
Retailing	598.5	516.2
Voluntary	446.2	224.6
Commercial non-sport	1,283.0	1,257.1
Central government	862.8	317.1
Local government	379.9	497.3
Outside the area	505.7	143.2

4. The sport economy in context

4.1 Spending, output and employment

Tables 4.1 to 4.3 compare Scotland (2010) to Wales (2010), and to the nine English regions (2008) in terms of sport-related consumer spending, value added and employment. Table 4.1 refers to consumer spending, table 4.2 refers to value added, while the last table presents the picture of sport-related employment. Although we don't have English data for 2010, the percentage 2008 structure (which changes slowly) can provide a basis for comparison between the Scottish and English sports economies.

From Table 4.1 it can be seen that the consumer spending on sport-related goods and services for Scotland ranks fourth, compared to the English regions, in terms of its share (2.5%) in overall national consumption. In absolute terms the level of sport-related consumption in Scotland is £363 per person, greater than the level in Wales and most English regions.

Similarly, according to Table 4.2, the sport-related output in Scotland (£1,838m) ranks fourth, compared to the English regions, in terms of its share out of the overall national GVA (1.9%). Hence despite a general economic disadvantage compared to the English average, the sport-related output does not lag behind.

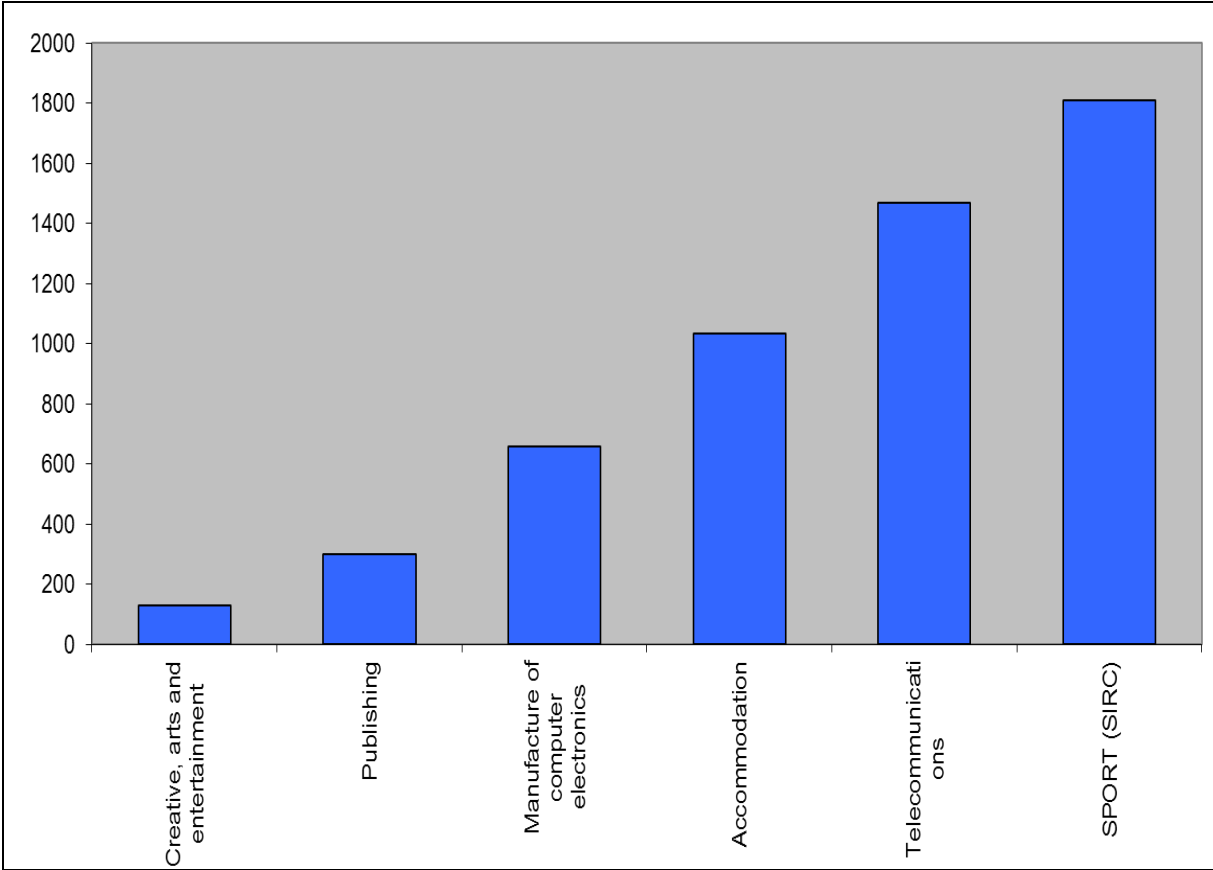
Finally, according to Table 4.3, sport-related employment in Scotland (46,300) is ranked joint fourth compared to the nine English regions, in terms of its share out of total employment (2.0%). Both the absolute and comparative statistics indicate that sport in Scotland showed resilience in the face of recession and has been developed into a major tool for economic growth.

4.2 Sport and leisure industries

Figure 4.1 below provides a comparison between the Gross Value Added produced by sport and the gross value added produced by other leisure-related industries in Scotland. The statistics are taken directly from the regional Annual Business Survey. We consider the categories: Creative Arts and Entertainment (including: performing arts, supporting activities, artistic creation, operation of arts facilities), Publishing (including: publishing of books, newspapers, journals, sound recordings), Accommodation (including: hotels, holiday and other short stay accommodation, camping grounds), Manufacture of Computer Electronics, and Telecommunications (including wired, wireless and satellite telecommunication activities). Sport is represented as gross value added derived from SIRC for the benefit of this report. For the year 2010, sport-related GVA is £1,838m, which is greater than all the aforementioned categories. Additionally, sport has greater economic importance (in terms of generated GVA) than the sum of 'Accommodation', 'Creative Arts', and 'Publishing'. While many economic sectors were negatively affected from the recession, the Scottish sport industry showed limited growth, exceeding in GVA size the Telecommunications sector which decreased from £1,509m in 2008 to £1467m in 2010 (revised regional ABS figures).

The Scottish sports economy, in terms of GVA, did not experience a recession-related decline, improving its position within the general economy. The construction activity of the Commonwealth Games is contributing to increasing growth and economic stability.

Figure 4.1: GVA Scotland, 2010, £m



Sources: Annual Business Survey, SIRC

Table 4.1: Summary of sport-related consumer spending in Scotland, Wales (2010), and the English Regions (2008)

	East	East Midlands	London	North East	North West	South East	South West	West Midlands	Yorkshire & Humber	Wales	Scotland
	(£m)	(£m)	(£m)	(£m)	(£m)	(£m)	(£m)	(£m)	(£m)	(£m)	(£m)
Sport clothing and footwear (£m)	429.6	293.0	633.0	164.9	417.6	520.2	347.6	441.4	290.6	226.9	438.9
Sports goods (£m)	155.6	118.2	229.2	44.3	133.9	137.0	115.7	100.6	81.0	61.9	110.3
Participation subscriptions and fees (£m)	443.6	248.1	518.8	126.1	379.0	524.2	396.2	279.6	258.9	124.6	289.3
Admissions to events (£m)	82.1	45.9	96.1	23.4	70.2	97.1	73.4	51.8	47.9	22.3	51.7
Sport-related gambling (£m)	350.13	237.5	369.5	214.6	350.2	385.8	278.0	610.7	303.7	140.7	353.0
Other sport-related spending (£m)	854.6	455.6	882.5	255.2	710.1	904.2	600.6	651.9	553.0	326.7	654.5
Total expenditure on sport (£m)	2,315.6	1,398.4	2,729.1	828.5	2,060.9	2,568.4	1,811.6	2,135.9	1,535.2	902.8	1,897.7
Per capita sport spending (£)	404.2	315.5	358.1	321.7	299.7	306.5	347.8	394.7	294.5	300.3	363.4
Proportion (%) of total consumer expenditure	2.6%	2.4%	2.1%	2.6%	2.2%	1.9%	2.3%	2.9%	2.2%	2.4%	2.5%

Table 4.2: Summary of sport-related output in Scotland, Wales (2010), and the English Regions (2008)

	East	East	London	North	North	South	South	West	Yorkshire	Wales	Scotland
	East	Midlands	London	East	West	East	West	Midlands	& Humber	Wales	Scotland
	(£m)	(£m)	(£m)	(£m)	(£m)	(£m)	(£m)	(£m)	(£m)	(£m)	(£m)
Commercial sport	664.9	358.8	740.3	190.9	496.0	752.0	344.2	470.1	309.8	174.6	346.3
Spectator sports	83.9	66.8	178.7	73.7	187.2	135.5	75.64	90.0	55.7	37.1	80.9
Participation sports	67.4	31.5	121.9	15.4	55.9	80.6	60.43	43.7	26.3	11.3	18.4
Retailing	215.7	112.6	282.1	60.3	149.6	194.6	135.82	180.6	136.7	85.9	170.4
Manufacturing	77.2	46.2	75.6	24.7	58.9	65.8	39.5	54.9	58.5	22.1	44.0
TV and Radio	34.6	27.0	81.2	15.9	42.6	50.0	32.3	32.4	31.6	18.2	32.3
Commercial non-sport	1,085.6	705.8	1,294.8	444.7	1,085.5	1,273.4	858.1	1,115.2	772.5	466.4	975.1
Voluntary sector	302.6	160.7	333.4	91.6	247.7	332.4	260.6	214.4	166.5	97.7	241.1
Public sector	187.4	150.1	222.1	90.6	253.0	233.9	143.1	139.9	175.6	158.5	275.1
Total sport-related economic activity	2,240.5	1,375.3	2,590.5	817.8	2,082.3	2,591.6	1,606.0	1,939.6	1,424.5	897.1	1,837.6
Sport GVA as % of total GVA	2.0%	1.7%	1.0%	2.0%	1.7%	1.4%	1.6%	2.0%	1.6%	2.0%	1.9%

Table 4.3: Summary of sport-related employment in Scotland, Wales (2010), and the English Regions (2008)

	East	East Midlands	London	North East	North West	South East	South West	West Midlands	Yorkshire & Humber	Wales	Scotland
	('000)	('000)	('000)	('000)	('000)	('000)	('000)	('000)	('000)	('000)	('000)
Commercial sport	25.2	12.5	20.9	7.2	18.8	25.5	12.7	18.1	9.8	5.4	10.4
Spectator sports	3.9	2.9	5.5	3.7	9.0	5.9	3.7	4.2	2.9	1.7	3.2
Participation sports	3.0	1.3	3.6	0.7	2.5	3.3	2.8	1.9	1.3	0.2	0.7
Retailers	6.5	3.4	8.6	1.8	4.5	5.8	4.1	5.4	4.0	2.5	4.5
Manufacturing	2.3	1.0	1.5	0.6	1.6	1.3	0.9	1.8	0.5	0.6	1.2
TV and Radio	0.8	0.8	1.7	0.5	1.2	1.2	1.2	1.2	1.2	0.5	0.9
Commercial non-sport	23.8	16.5	20.7	11.1	25.3	26.0	20.1	26.1	18.5	11.9	21.9
Voluntary sport	6.2	3.4	4.9	2.2	5.8	7.0	5.7	4.9	4.5	2.4	4.7
Public sector	6.8	5.4	6.3	3.4	9.7	8.1	5.5	5.1	7.0	6.3	9.3
Total jobs in sport	62.1	37.9	52.8	24.0	59.5	66.7	44.0	54.2	39.8	26.0	46.3
Proportion (%) of total employment in sport	2.2%	1.8%	1.4%	2.1%	1.9%	1.6%	1.7%	2.2%	1.6%	1.8%	2.0%

5. Appendices

A1: Statistical sources

Sources of data used in the model include the following publications:

- Annual Survey of Hours and Earnings
- Consumer Trends
- Travel Trends
- Family Spending
- Regional Trends
- 'Focus on...' reports
- Annual Business Survey
- New Earnings Survey
- **sportscotland** Annual Report
- Regional Accounts
- National Travel Survey
- Labour Trends
- Housing and Construction Statistics
- UK National Accounts
- BBC Annual Report and Accounts
- PRODCOM Annual Industry Reports
- HM Customs and Excise Report
- Monthly Digest of Statistics
- Financial Statement and Budget Report
- Horserace and Betting Levy Board Report
- Government's Expenditure Plans
- Deloitte: Annual Review of Football Finance
- BSkyB Annual Report
- Labour Force Survey

A2: Model output

Consumer expenditure on sport related goods & services, 2010	
	£million
Admissions	51.7
Sports goods	110.3
Bicycles	3.6
Boats	115.7
Participants sports subscriptions & fees	289.3
Clothing sales	316.6
Footwear sales	122.4
Repairs and laundry	2.7
Travel	96.3
Books and magazines	15.4
Newspapers	42.3
Video/software: purchase and rental	1.9
BBC license	33.9
TV and video rental, cable & satellite subscriptions	250.8
Internet subscriptions	0.9
Skiing holidays	77.1
Independent schools	13.8
Gambling: football pools	13.8
Horse racing	307.0
Raffles and gaming	32.2
Total	1,897.7

Commercial sport income, 2010

£ million

Spectator clubs:

Admissions	50.7
Sponsorship & advertising	32.9
Corporate entertainment	11.5
Horserace Betting Levy	7.5
TV rights	13.0

Participation clubs:

Subscriptions & fees	33.4
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Retailers (net of Vat):

Equipment	152.5
Clothing and footwear	386.8
Books, newspapers and magazines & videos	59.3
Exports and manufacturers' sales of clothing, footwear & equipment	127.0

TV and radio:

BBC	33.9
Commercial	30.5
Exports	2.0
Internet subscriptions	0.7

Total income	942.3
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Commercial sport expenditure, 2010

£ million

Current factor expenditure

Spectator clubs:

Wages 78.4

Other inputs 37.7

Participation:

Wages 16.7

Other inputs 15.0

Retailers:

Wages 88.1

Other inputs 428.1

Manufacturers:

Wages 25.7

Other inputs 83.1

TV and radio:

Wages 30.8

Other inputs 18.9

Total factor expenditure

Total wages 239.8

Total other inputs 582.8

Total factor surplus 106.2

Total value added 346.0

Current transfers

Corporation tax 14.1

Rates 10.4

Capital expenditure

Investment 35.3

Total expenditure leaving sector 882.3

Voluntary sector income, 2010

£ million

Factor income (monetary)

Players' subscriptions and match fees	162.0
Equipment	1.1
Sponsorship and advertising	22.4
Raffles and gaming machines	32.2
Bar receipts	217.8

Subtotal (factor income) 435.7

Other monetary income

Grants	75.1
Foundation for Sport and Arts	0.7
Employers' subsidies	53.4
Interest	9.1
Lottery awards	11.5
Lottery partnerships	13.7

Total monetary income 381.4

(excluding bar receipts)

Voluntary sector expenditure, 2010

£million

Factor expenditure

Wages	132.0
Ground hire and rents	20.1
Equipment	1.1
Other	36.5
(Bar purchases)	152.5
Subtotal (factor expenditure)	342.2
Rates	9.0
Interest	2.0
Investment	23.9
Total monetary expenditure	224.6
(excluding bar purchases)	

Commercial non-sport income, 2010

£million

Receipts net of tax from consumer spending:

Travel	22.0
Gambling	285.6
Skiing	35.0
Independent schools	11.4
TV rental, cable & satellite subscriptions	206.9

Sales of current inputs to:

Central government	23.5
Local government	80.7
Commercial sport	432.7
Voluntary sector	40.2
Interest from voluntary sector	2.0

Sales of capital inputs to:

Local government	101.5
Commercial sport	21.8
Voluntary	19.7
Promotion expenditure for sponsorship (intra-sectoral flow)	77.3

Total income **1,283.0**

Commercial non-sport expenditure, 2010

£million

Producers of inputs to sport:

wages	628.0
imports	321.2
(factor surplus)	347.1
(value added)	975.1

Corporation tax	46.0
Rates	29.3

Purchases of inputs from sport:

Sponsorship and advertising	86.3
ITV and radio advertising	30.5
Corporate entertainment at sports events	11.5
Employees' sports subsidies	10.7
Horserace Betting Levy	7.5
Interest payments to voluntary sector	9.1

Promotion expenditure for sponsorship:

(to elsewhere in commercial non sport sector)	77.3
Cost of the rights to top league matches	13.0
Lottery awards	34.9
Lottery partnerships	29.1

Total expenditure leaving sector	1,257.1
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Central government income, 2010

£ million

Taxes:

on expenditure	335.9
on incomes generated in:	
commercial sport	95.3
voluntary sector	46.3
commercial non-sport	285.5
local government	84.2

Total income **862.8**

Lottery awards 7.0

Lottery partnerships 4.7

Central government expenditure, 2010

£ million

Transfer payments

Grants	61.0
Grant support for local government expenditure on:	
sport (net spending)	103.1
education	72.1
Foundation for Sport and Arts	0.9

Factor expenditure

sportscotland : capital spending, wages and other inputs	20.2
Other spending: royal parks	
wages and other inputs	4.8

Total **317.1**

Local government income, 2010

£ million

Local authority sports facilities:

fees and charges	71.6
sales of equipment	36.9
ground hire	10.0

Grants from central government:

to fund net expenditure on sport	103.1
sport education	72.1
via sportscotland	9.1

Rates:

voluntary sector	9.0
commercial sport	10.4
commercial non-sport	29.3

Payments for policing 1.5

Lottery awards 16.1

Lottery partnerships 10.5

Total income 379.9

Local government expenditure, 2010

£ million

Current expenditure

Direct gross expenditure:

Wages 127.6

Other current expenditure 108.7

Education:

Wages 87.1

Research 2.1

Local transport and policing:

Wages and other inputs 25.5

Grants to voluntary clubs 23.3

Capital expenditure

Investment 123.1

Total expenditure 497.3

Outside the area income, 2010

	£ million
Sports, clothing, footwear and equipment	107.2
Import content of skiing	28.6
TV imports	4.7
Prize income	15.8
Import content of UK production of:	
Sport related goods and services	28.1
Commercial non-sport sector output	321.2
Total income	505.7

Outside the area expenditure, 2010

	£ million
Sports, clothing, footwear and equipment	115.6
Admissions to sports events	9.8
TV exports	2.0
Prize income	15.8
Total expenditure	143.2

Value added by sport-related economic activity, 2010

	£million	Index
Commercial sport:		
Wages	239.8	
Surplus	106.2	
Total	346.3	18.8
Voluntary sector:		
Wages	132.0	
Surplus	93.5	
Lottery projects	15.6	
Total	241.1	13.1
Commercial non-sport:		
Wages	628.0	
Surplus	347.1	
Total	975.1	53.1

Central government:		
Wages	11.4	
Lottery projects	7.2	
Total	18.6	1.0
Local government:		
Wages (education)	87.1	
Wages (sports facilities)	127.6	
Wages (transport and policing)	25.5	
Lottery projects	16.4	
Total	256.5	14.0
Total value added	<u>1,837.6</u>	100.00

Employment, 2010

Employment ('000s)

Sector

Commercial sport

Spectator clubs	3.2
Participation clubs	0.7
Retailers	4.5
Manufacturing (exports)	1.2
TV and Radio	0.9
Subtotal	10.4
Voluntary sport	4.7
Commercial non-sport	21.9

Central government

Administration	0.2
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Local government

Sports facilities	5.1
Education	2.9
Transport/police	0.8
Subtotal	8.9

Total	46.3
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The expenditure flows matrix, 2010 (£m)

Flows from:	Flows to:						
	CON	CS	VOL	CNS	CG	LG	OV
Consumer sector	0.0	708.3	195.4	560.8	288.9	108.6	28.6
Commercial sport	155.7	0.0	0.0	454.5	104.3	11.9	155.8
Voluntary sector	85.8	0.9	0.0	61.8	57.0	19.1	0.0
Commercial non-sport	422.2	104.9	67.5	0.0	285.5	55.8	321.2
Central government	11.4	2.5	95.2	23.5	0.0	184.6	0.0
Local government	157.4	8.9	23.3	182.3	125.4	0.0	0.0
Overseas	15.8	125.7	0.0	0.0	1.7	0.0	0.0

A3: Sources and methods

This section attempts to explain how the estimates are derived. Many are generated through the flows in the model. The flows among the sectors in the SIRC model are based on a double entry principle between income and expenditure. Data sources mostly relate to the expenditure side, especially in the case of consumers. The Outside the Area sector is treated as residual in the flow system. No data exist to adequately describe the Voluntary sector; for this reason we use relationships that arise from previous studies and surveys to relate the Voluntary sector to the sport economy. The estimation of the remaining five sectors is explained below:

Consumer expenditure

Many items of sport related consumer expenditure are located in the Family Expenditure Survey (FES) at the UK level. Only broader categories of spending exist for UK regions. The latter are used to extract the relative statistics from the UK figures in a proportionate manner, or directly using the Essex Archives.

Admissions: They are estimated from FES. Data exist for 'Spectator sports - admission charges' for the UK as a whole and for 'Sports admissions and subscriptions' for the regions. Our estimate for 2008 comes directly from the database deposited in the Essex Archives.

Sports goods: Expenditure is estimated from FES 'Sports and camping equipment' and annual reports of major sports companies.

Bicycles: The basis of the estimate comes from Consumer Trends. This is filtered regionally according to FES and the proportion of sport related bicycle journeys from the National Travel Survey (NTS).

Boats: The estimate is derived from a SIRC model for the sector based on statistics from the British Marine Federation.

Participant sports subscriptions and fees: Expenditure is estimated using the FES categories: 'participant sports excluding subscriptions' and 'subscriptions to sports and social clubs'.

Clothing and footwear sales: The estimate is based on a SIRC model, annual reports from sports companies and statistics from Consumer Trends and FES.

Sport related travel: This is derived from a SIRC model based on NTS statistics.

Books, magazines and newspapers: Statistics are based on FES and Consumer Trends.

Video and DVDs purchase and rental: Based on statistics from FES and the British Video Association.

BBC licence: Expenditure is derived from the sport related content of the BBC licence. It is based on data from the BBC annual report, a SIRC model and the number of households.

TV rental, cable and satellite subscriptions: The basic estimate is derived from FES. Its sport related estimate is filtered by using BSkyB and BBC statistics.

Sport related gambling: The basis of the estimates is the UK figure which is derived from official HM Customs and Excise data. A model by SIRC is used to ensure that the value of the overall gambling sector corresponds to the Consumer Trends statistic. Subsequently the regional element is derived by using FES and the number of households.

Commercial sport income

Spectator club admissions: This is a flow of income coming from the domestic consumer sector and the overseas visitors to Scotland. Data from FES and HM Customs and Excise have been used. Income from Tourists is estimated from Travel Trends and the Digest of Tourist Statistics.

Sponsorship: Most of this income comes from the Commercial Non Sport sector. Various sources are used from the SIRC archive. We also assume that the sponsorship market is associated with the size of the spectator sports industry.

Horserace betting levy: This statistics is calculated using data from the Horserace Betting Levy Board Annual Report and population statistics from Population Trends.

Cost of the rights to top league matches: The basic estimate is derived from BSkyB statistics.

Subscriptions and fees: This is derived from the income and expenditure flows in the model.

Retailing: Income from retailing is associated with consumer expenditure on sport related equipment, clothing, footwear, books, newspapers, magazines and DVDs. A part of this expenditure is flowing towards Local Authorities, while VAT is going to the central government.

Exports: Income from exports is estimated using trade assumptions based on Input-Output tables for wider (than sport) sections of the economy. These ratios are applied on the sport related consumer spending.

TV and radio: Income in the case of BBC comes directly from the license fee. Only the sports-related part is considered.

Commercial sport expenditure

Wages: The calculation of wages is based on the flow of income to the sector and estimated statistics (on the basis of the old Business Monitors and the Annual Business Inquiry) that relate wages to total income. This method of calculating wages is repeated in all sectors at a UK regional level.

Other inputs: In the case of spectator and participation clubs an estimation of profits is required. Then 'other inputs' is the residual income after profits and wages have been accounted for. In the case of retailers, 'other inputs' can be estimated directly through statistics from the Input-Output tables and the ABI at a UK regional level.

Investment: In a similar way investment is estimated as a ratio of the generated value added in each sub sector. We do some assumptions so that we end up with the best possible estimates given the existing information. For example the share of investment out of value added in the sport retailing sector is assumed to be the same as in the retailing sector as a whole.

Commercial non-sport income

Income coming from consumer spending (net of tax): This is determined according to the flows of consumer expenditure. For example in the case of gambling, consumer spending is directed towards government as taxes and towards the Commercial Non-Sport sector as income.

Sales of current inputs to other sectors: These are determined again from the flows of the model. For example sales to the commercial sport sector are identified from a part of the commercial sport spending. The latter is directed either to the Commercial Non-Sport sector or overseas. This distribution is determined from the Input-Output tables.

Sales of capital inputs to other sectors: They are related to the capital expenditure of the Local Government, Commercial Sector and Voluntary sectors.

Commercial non-sport expenditure

Wages: Spending on wages is calculated as a percentage of total income accruing to the sector. This income can be expressed as wages, profits, or imports (before tax and investment decisions). The part of turnover directed towards wages can be estimated from a SIRC model based on the Annual Business Survey (regional data).

Imports: They are estimated using the same method as above (wages).

Corporation tax: It is derived from the profits accruing to the sector (factor surplus, estimated as above) and the tax rate, estimated from the National Accounts (Blue Book).

Rates: The estimate is based on the value added generated in the sector and a model estimating rates as a percentage of value added for the two commercial sectors.

Sponsorship and advertising: They are estimated using non-official statistics and a SIRC model.

Lottery awards: They are estimated using data from DCMS and the Lottery Fund Accounts of the Sports Council.

Central government income

Income accruing to the central government is mainly in the form of taxation. These estimates are determined from the tax rates and the flows within the SIRC model.

Central government expenditure

Grants via Sports Council: Data are provided by the Sports Council's annual accounts.

Wages: Estimates are provided from the Sport Council's annual accounts.

Support for local government expenditure: It is determined in the local government income below.

Local government income

Fees and charges: The estimates are based on the Scottish Local Government Financial Statistics and on a SIRC model for the sector.

Sales of equipment: This is derived from a part of consumer spending on sport equipment above.

Grants from central government: Using the HM Treasury Budget Report, an estimate of grants from central government as a percentage of Local Authority receipts is derived. This is then applied to local government expenditure categories.

Rates: This is tax income received from the voluntary, commercial sport and commercial non-sport sectors. The estimates are derived from the flows of the SIRC model.

Local government expenditure

Total expenditure on sport services: This is derived from the Scottish Local Government Financial Statistics and a SIRC model for processing the data. This is then distributed into wages and other inputs.

Education: Spending on Education is derived from the Blue Book and the Government's Expenditure Plans (DES).

Capital expenditure: This is based on statistics from the Blue Book (table 5.3.7).

A4: Definitions

1. National Income Accounting

The concepts of National Income Accounting were developed for macro-economic analysis in the 1930s and 1940s. The basic principle is that there is accounting equality between total output, total income and total expenditure. The most common definitions of total output in the economy as a whole are the Gross Domestic Product (GDP) and Gross Value Added (GVA). For example, assume that the total output in a factory producing football boots is £100m. This is equivalent to the income generated as wages (say £60m) as profits (say £10m) and as flow to the companies, selling inputs (£30m) required in the production. In this example, GVA is the sum of wages and profits. Further, total income will also be identical to total expenditure because output that is not sold in the current financial year is treated as investment expenditure.

2. Gross Value Added (GVA)

GVA is the difference between total output (based on wages and profits) and the cost of inputs used in the production process (raw materials and services). Alternatively, it can be expressed as:

$GVA = GDP - \text{taxes on products} + \text{subsidies on products}.$

GVA shows the contribution of the sports sector to the economy as a whole.

3. Sport

We follow the definition employed in the publication Sport Market Forecasts². Sport is divided into the following sectors: Sport clothing and footwear, Sport equipment, Health and fitness, other participant sports, Boats, Spectator sports, Sport gambling, Sport TV and video, Sport related publications and sport related travel.

4. Employment

This is full time equivalent (FTE) jobs. In this case two half-time jobs are measured as one full time equivalent.

² Sport Market Forecasts, 2011-2015, SIRC.