

Economic Dimensions of Sport Consumption in Germany

Executive Summary

Background

This research project was funded by the Federal Institute of Sport Science (BISp) and the Federal Ministry of the Interior of Germany. Its aim was to determine empirically the sport-related consumption of private households in Germany for the reference year 2010. We present a snapshot of the dimensions of sport consumption and also analyse numerous relations between socio-demographic factors and sport consumption. The collected data is valuable in many ways for basic research in sport science and for economically oriented policy counselling. The study provides important data for establishing a sport satellite account as part of the national accounting system for Germany which was requested by the European Union working group “Sports & Economics” in the White Paper on Sport (2007).

Methodology

The calculation of sport consumption is split into two parts. First, we evaluate the number of people spending money on sport. Second, we determine the different consumption patterns, since clearly the amount spent depends on the frequency of practising sport as well as the type of sport. Finally, we multiply the hundreds of different consumption patterns by the number of consumers to get the overall consumption.

To determine the number of people actively involved in sport in Germany, how often they practise and what type of sport they are involved in, we surveyed a total of 7,031 people. The data were collected by using a representative Computer Assisted Telephone Interview (CATI) survey based on the Rösch telephone sample system (Rösch, 2009). This provided data on 71 types of sports, or more precisely ‘sport clusters’, since some ‘sport clusters’ include several different sports (for example, cycling includes mountain biking, road racing, artistic cycling, cycle ball, BMX, etc.) as shown in table 0-1.

Tab. 0-1: List of all forms of sport with relevance for this study

1. American Football	19. Fencing	37. Motorsports	54. Snowboarding
2. Badminton	20. Fitness	38. Nordic Walking	55. Acrobatics
3. Ballet	21. Football	39. Pilates/Qi Gong/ Tai Chi/Yoga	56. Sport Fishing
4. Baseball/Softball/ Cricket	22. Health Sports	40. Cycling	57. Yachting/Pleasure Craft
5. Basketball	23. Weight Lifting	41. Raskraftsport	58. Squash
6. Beach Volleyball	24. Hang-gliding/ Paragliding	42. Equestrian	59. Surfing
7. Alpine Climbing	25. Golf	43. Wrestling	60. Dancing
8. Biathlon	26. Gymnastics	44. Skate Sports	61. Diving
9. Billiard/Snooker	27. Handball	45. Rowing	62. Tennis
10. Bobsleigh/Luge	28. Hockey	46. Rugby	63. Table Tennis
11. Bodybuilding	29. Inline skating	47. Chess	64. Triathlon
12. Archery	30. Martial Arts	48. Shooting	65. Artistic Gymnastics
13. Bowling	31. Canoeing/Kayaking	49. Swimming	66. Ultimate Frisbee
14. Boxing	32. Rock Climbing	50. Aviation Sports	67. Volleyball
15. Curling	33. Running	51. Sailing	68. Hiking
16. Ice Hockey	34. Athletics	52. Skateboarding	69. Waterball
17. Ice Skating	35. Miniature Golf	53. Skiing	70. Water Skiing/ Wakeboarding
18. Parachuting	36. Modern Pentathlon		71. High Diving

In the next step we determined the amount of money spent on sports by the population living in Germany. This was done by conducting Computer Assisted Web Interviews (CAWIs) with members of an online panel, which has a population of more than 200,000 panel members. A total of 10,424 members with an affinity to sports were interviewed, at least 60 for each of the 71 types of sport. The survey took place over a period of 12 months, divided into three waves of around 3,500 interviews each. This made it possible to test and ultimately rule out seasonal variations or the effect of economic developments such as the 2008 financial crisis on sport-related consumption.

Since various forms of data cleaning and calibration had to be done in order to get plausible and well-matched consumption patterns, the results were calculated by using two scenarios. The first scenario shows the results of a 'realistic' calculation and the second gives very safe minimal results based on a 'conservative' calculation.

Results – Sport participation and interest in sport in Germany

Some of the most important findings about the number of sport-consuming people who live in Germany are as follows:

- More than half of the population (55.5%) actively participate in sport.
- Almost two thirds (64.2%) of the population under 16 years actively participate in sport.
- More than half of all people under 16 years practise sport at least once a week.

- Almost one third of the population (29.7%) spend money because of their ‘interest in sport’ (for example on tickets for sports events, betting, memorabilia, and so on).
- More men (34.9%) than women (21.2%) spend money on ‘interest in sport’ (visiting sports events, watching pay TV, etc.).
- Of the population under 16 years, 39.6% spend money on their ‘interest in sport’.

Table 0-2 displays basic information about the top 10 most practised sports and their consumption based on ‘interest in sport’. Since many sports are practised irregularly, the different types of sport are displayed here in ‘sport units’, with one unit representing a single sport activity of around 45 to 90 minutes. Regarding the consumption based on ‘interest in sport’, it is noticeable that football induces expenditure by 20.4% of the adult population, making it number one among all analysed sports.

Tab. 0-2: Basic information on sports activity and sport-related consumption for the top 10 sports according to frequency of participation ‘realistic scenario’

Sport	Frequency of participation	Active participants		Degree of organisation in clubs	Interest in sport
	millions of units	% of the population		% of all active participants altogether	% of the population
	≥16 years	≥16 years	<16 years		≥16 years
1 Cycling	928,0	34	11	3,1	1,5
2 Running	680,0	25	4	6,4	1,2
3 Swimming	575,6	31	16	13,4	1,3
4 Fitness	518,5	17	<1	12,5	1,1
5 Hiking	419,9	27	1	4,4	0,4
6 Football	345,6	11	22	55,2	20,4
7 Gymnastics	295,5	14	1	45,6	0,6
8 Skiing	285,5	15	5	9,4	1,6
9 Nordic Walking	253,5	9	<0,1	9,9	0,3
10 Health Sport	202,4	14	<0,1	28,8	0,2

The sports at the top of the list (ranked 1 to 5) are individual sports that are not primarily practised at sports clubs. The top team sport is football, ranked 6th, with 55% playing this sport at clubs. Figure 0-1 shows this aspect of organisation in more detail. Almost three quarters (73%) of the active German adult population ≥16 years practise their sport in a self-organised manner, while the majority of the active population under 16 years practise their sport at clubs (58%).

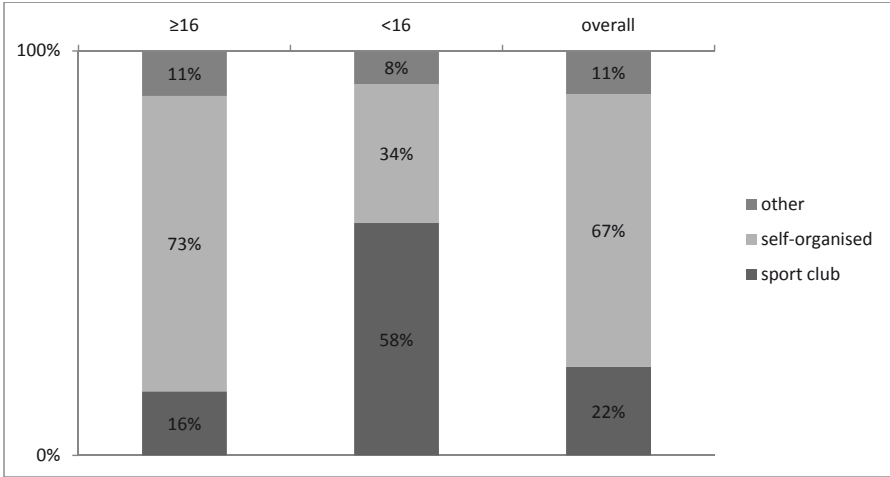


Fig. 0-1: Form of organisation of sport activities – all types of sport

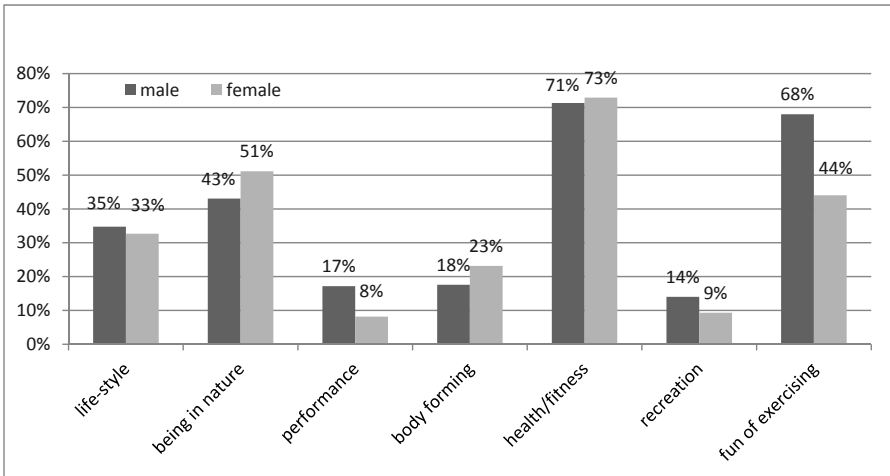


Fig. 0-2: Reasons for practising sports – all types of sport

The reasons for active participation in sport are shown in figure 0-2. The three main reasons are ‘health/fitness’, ‘fun of exercising’ and ‘being in nature’. There are some significant differences by gender, the most noticeable difference being that ‘being in nature’ is more important to women than to men and that ‘fun of exercising’ is more important to men.

As part of this project we also analysed the kind and number of injuries that were caused by participation in sport and treated by medical doctors. In the 'realistic scenario' 11.2 million people had consulted a physician because of a sports injury in 2010, involving costs of € 15.47 billion. Further, 9.9 million people ≥ 16 years and 1.3 million people < 16 years had suffered on average two injuries in that year, with both injuries potentially being a result of the same accident. These consultations lead to direct and measurable economic effects since money is spent on the treatment and the rehabilitation. However, it should be noted that this study did not take into account the effects of sport and exercise in preventing illness and reducing common injuries. These effects also have an economic impact by creating some relief for the health system, but they cannot be measured through investigation into sport-related consumption.

Results – Sport-related consumption by private households (realistic scenario)

Another important question investigated by this study was how much money was spent on sport-related activities by private households in Germany in 2010. This included consumption in the context of being active and participating in sport as well as the money being spent because of an 'interest in sport' without actively participating in it. The calculated consumption patterns are based on the broad Vilnius definition of sport (SpEA, 2007), which means that, for example, all expenses for the individual sport organisation and for transport to practise sport are included. Beyond this, the definition also includes all categories of expenditure that need sport as an input in advance, for example media and information technology reporting about the sport. In this study 'sport' was distinguished by inquiring about 71 sports or 'sport clusters', which means that not every physical activity (such as gardening, housework, etc.) is factored in. Further, all expenses for very expensive consumption goods such as racehorses, sport boats or motorsport vehicles are also not included in the calculation.

Figure 0-3 shows the realistic scenario for all sport-related consumption by all private households in Germany actively participating in sport in the year 2010. The total expenses of € 112.6 bn include € 33.7 bn (30%) for transport to and from sport practice or competitions, € 22.4 bn (19,9%) for sport holidays and travel including training camps, and € 15.3 bn (13,6%) for sport shoes and clothing.

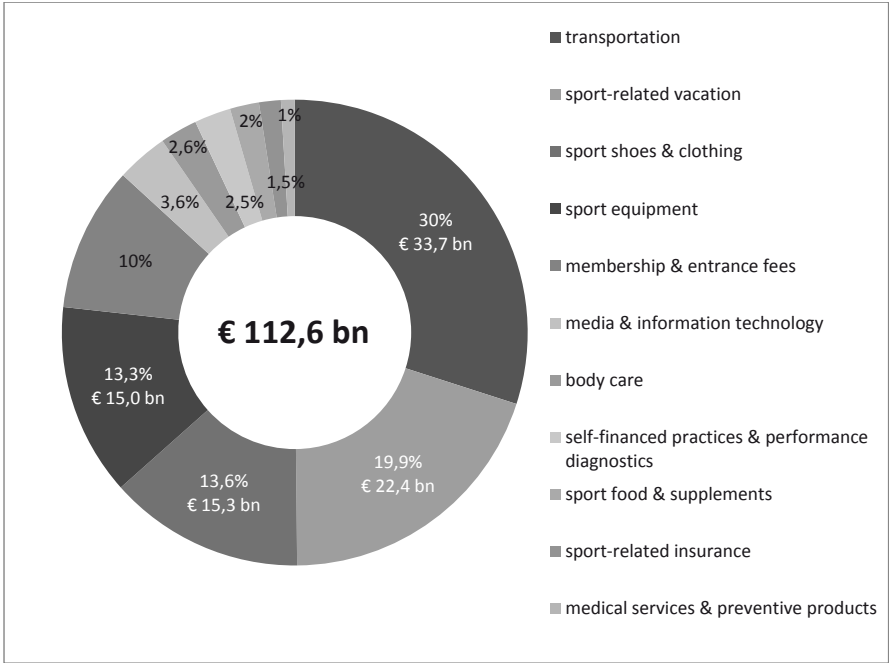


Fig. 0-3: Consumption by actively participating households in Germany, ‘realistic scenario’

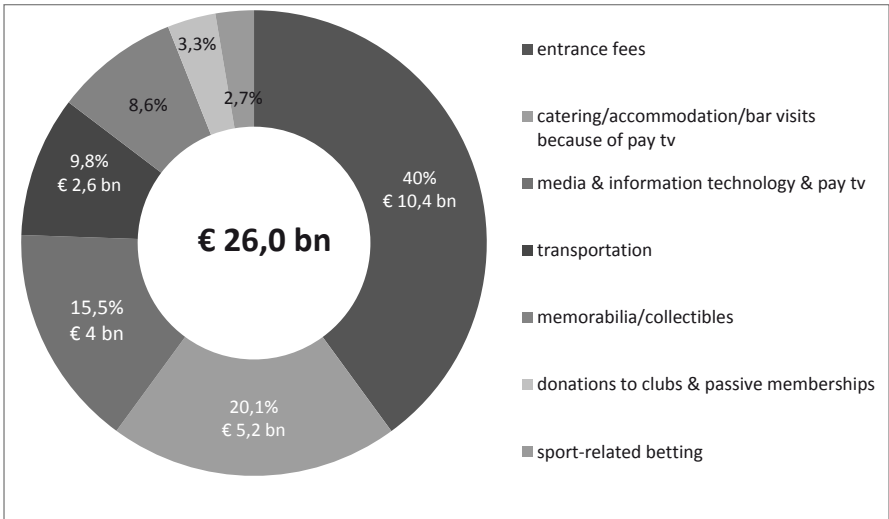


Fig. 0-4: Consumption by households in Germany interested in sports, ‘realistic scenario’

Figure 0-4 shows the consumption pattern of the German population interested in sport, which amounts to a total of € 26 billion in the year 2010. The most significant categories are ‘entrance fees’ for league games and sports events with € 10.4 bn (40%), ‘catering/accommodation/bar visits because of sport TV’ with € 5.2 bn (20.1%), and ‘media & information technology and pay TV’ with € 4 bn (15.5%). The calculated consumption by the population under 16 years amounts to € 914 million.

Results – Sport-related consumption by private households (conservative scenario)

Looking at the results of the conservative model, it turns out that the total sport-related consumption by private households in Germany is € 103.2 bn and consists of € 83.4 bn induced by active participation in sports and another € 19.8 bn by ‘interest in sport’ without active participation. The most relevant categories for the participation-related consumption are ‘transportation’ (€ 29,4 bn; 35.3%), ‘sport shoes and clothing’ (€ 12 bn; 14.4%), ‘sport equipment’ (€ 11.3 bn; 13.6%) and ‘membership & entrance fees’ (€ 9.8 bn; 11.7%). For ‘interest in sport’ the relevant categories are ‘entrance fees’ (€ 7.9 bn; 40%), ‘catering/accommodation/bar visits because of pay TV’ (€ 4 bn; 20.1%) and ‘media & information technology & pay TV’ (€ 3.1 bn; 15.5%). Figures 0-5 and 0-6 illustrate these consumption patterns for the two types (‘actively participating’ and ‘interested in sport’) in the conservative scenario in this study.

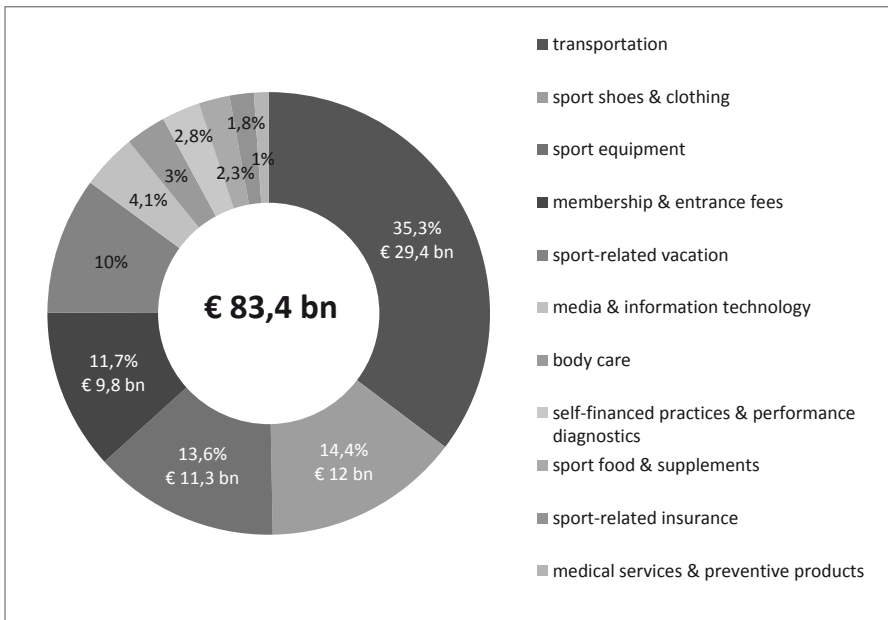


Fig. 0-5: Consumption by actively participating households in Germany, ‘conservative scenario’

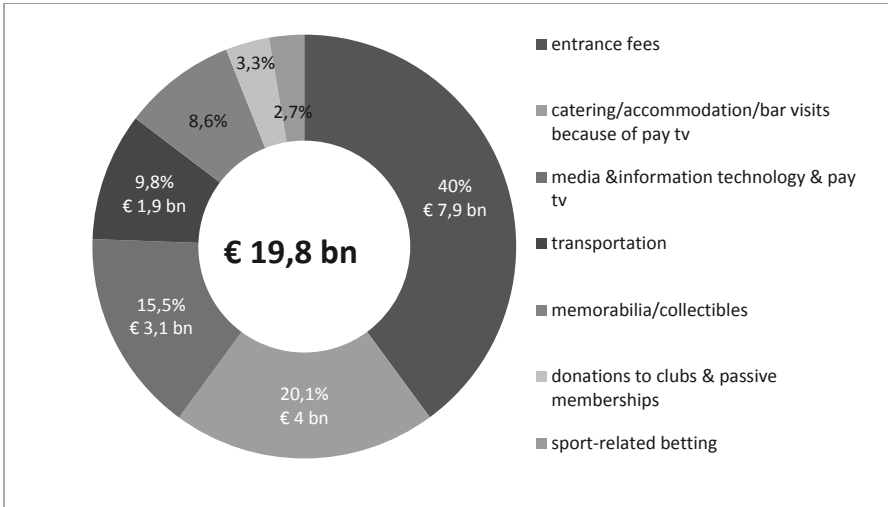


Fig. 0- 6: Consumption by households in Germany interested in sports, 'conservative scenario'

Table 0-3 shows the top 12 sports according to the overall consumption per sport. The sport interest-based consumption by the population under 16 (€ 914 million) is not included in this table. Besides the overall consumption per sport (last column), the table also shows consumption based on active participation and 'interest in sport' (≥ 16 years). The average individual expenses of people actively participating as well as of the people who are just interested are based throughout this study on the overall number of people who actually spent something for that particular sport. For example, if many people interested in football spend on average only a little, while a few people interested in skiing spend on average a lot (e.g. in travelling to the competitions and for accommodation), then the mean expenditure is higher for football than for skiing.

The consumption resulting from active participation in sport constitutes a substantially larger share of the whole sport-related consumption than the consumption resulting from 'interest in sport'. Football is the only exception to this, since the consumption resulting from interest in the sport (€ 10.2 bn) is almost twice as high as the consumption resulting from active participation (€ 5.3 bn).

Tab. 3: Consumption per active/interested person and extrapolated differentiated by the sports(clusters), 'realistic scenario'

Form of sport	Expenditure/ year/person participation in €	Expenditure/ year/person ≥16 years interest in €	Expenditure/ year participation in m €	Expenditure/ year ≥16 years interest in m €	Overall* in m €
1 Football	538	716	5,333	10,210	15,543
2 Skiing	1,102	584	12,341	637	12,978
3 Cycling	426	477	10,657	486	11,142
4 Hiking	368	n. s.	6,837	n. s.	6,837
5 Swimming	246	378	5,752	333	6,085
6 Fitness	334	533	4,051	391	4,442
7 Riding	1,555	818	3,539	892	4,431
8 Motorsports	1,666	536	3,124	1,272	4,396
9 Running	223	267	3,982	227	4,209
10 Alpine Climbing	978	n. s.	3,692	n. s.	3,692
11 Handball	704	415	2,004	1,430	3,434
12 Snowboarding	1,468	1,392	3,277	117	3,393
...
Overall (71 sports)	--	--	112.597	25.131*	137.727*

* not including the sport interest-based consumption of the population under 16 (€ 914 million)

n. s. : not surveyed

According to this study, some sports such as hiking or alpine climbing do not generate any significant turnover based on 'interest in sport'. As a consequence, consumption for these forms of sport was not considered in the calculation of both scenarios.

The results of the 'realistic scenario' calculation show the turnover caused by consumers living in Germany in 2010. The total sport-related consumption amounts to € 138.6 bn and can be divided into

- ⇒ consumption resulting from active sport participation: € 112.6 bn;
- ⇒ consumption resulting from 'interest in sport': € 26 bn.
- ⇒ equals 9.7% of total private consumption of € 1,423 bn in 2010 (7,2% when transportation is not factored in)

In the 'conservative scenario' calculation the consumption was approximately 25% lower. The total turnover caused by sport consumption in Germany in 2010 was € 103.2 bn and consists of

- ⇒ consumption caused by active sport participation: € 83.4 bn;
- ⇒ consumption caused by 'interest in sport': € 19.8 bn.
- ⇒ equals 7.2% of total private consumption of € 1,423 bn in 2010 (5.1% when transportation is not factored in)

Future perspectives

This study provides an important part of the database needed to construct a sport satellite account for Germany, as requested by the European Commission White Paper on Sport. To obtain this data, the sport-related private household consumption of the population living in Germany was determined in great detail. Even though we included two scenarios we were often conservative in our assumptions. Overall, this study shows the economic dimension of sport-related consumption in Germany. With its broad variety of ways to calculate and present results (differentiated, for example, by forms of sport, age groups, federal states, and gender) this study provides a basis for simulations of future developments.



<http://www.springer.com/978-3-658-00732-4>

Sport als Wirtschaftsbranche

Der Sportkonsum privater Haushalte in Deutschland

Preuß, H.; Alfs, C.; Ahlert, G.

2012, XIX, 203 S. 15 Abb., Softcover

ISBN: 978-3-658-00732-4