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Winter sports as an economic factor

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Summary

The German satellite account for sports in 2013 proved the economic significance of sport as a cross-sector industry. Alpine winter sports – in particular skiing and snowboarding – are relatively costly and practised by a large part of the population, and thus should be emphasised as an economic factor. Skiing, which actively involves 14% of the population, is one of the most popular sports.

In total, € 16.4 billion are spent on the various winter sports in Germany every year (data from 2010). This correlates to approximately 20% of the € 83.4 billion total consumer spending for active sports in Germany. Skiing, economically speaking, is by far the most significant sport in Germany: skiing alone constitutes 13% of the total consumer spending on sport. A significant contributing factor is the travel associated with winter sports. Almost twice as much is spent on skiing holidays as on holidays where other forms of sport are practised. Thus, despite the equipment being relatively expensive, it carries less weight in the total consumption pattern. On average, each active sportsman/woman spends almost € 915 on skiing in Germany each year. The travel involved to practise winter sports (excl. holidays) is also lengthier, and thus more costly, than it is for other sports. Apart from the travelling expenses, the consumption for ice hockey and ice skating can be considered on par with the average consumption pattern of all sports.

Despite skiing being the most significant sport in terms of population involved as well as the spending associated with it, the sponsorship of this sport only amounts to 0.6% of the € 3.2 billion total volume for sports sponsorship by German companies. In contrast, ice hockey – as a league sport with 2.6% or € 84 million – is among the top ten of sports that profit most from sponsorship.

In Germany, a total of approximately 950 kilometres of ski slopes, 3,000 km of cross-country tracks and almost 2,000 ski lifts are available for winter sportsmen and women. During operation, the personnel costs constitute a particularly high fraction of the total costs (personnel, operation, building investments) in comparison with other sports.
The cost of ski slopes must be particularly emphasised. On an "absorbed cost basis" the average cost per kilometre of ski slope per year amounts to approximately € 260.000. In total, the winter sports infrastructure constitutes only 1.8% of the total sports infrastructure costs of € 22.6 billion per year. Therefore, winter sports are not only economically highly significant, but also of great importance socio-economically, as the consumption is much higher than the infrastructure costs.

Definition of winter sports

Winter sports are types of sport that, with few exceptions, can be practised in winter conditions (natural or artificial winter conditions). This includes sports that can be practised primarily during the winter months on ice and snow. On the other hand, the definition refers to the definition of sports and sport-cluster by the University of Mainz (comparison Table 5 in appendix).

Sports such as ice diving, ice speedway, or polo on snow are not considered due to reasons of practicality. These sports are also not taken into consideration for socio-economic emphasis because they are not relevant in terms of quantity and value. Thus, the following sports are considered as part of winter sports as an economic factor:

- Skiing (Alpine, Nordic, cross-country, …),
- Snowboarding,
- Ice hockey,
- Ice skating (figure skating, speed skating),
- Biathlon,
- Sledding (luge, skeleton),
- Curling.

These sports are practised with the support of the following sports infrastructure:

- Ski lifts/cableways,
- Ski slopes,
- Cross-country ski-tracks,
- Halfpipes,
- Ski halls/cross-country halls,
- Snow parks, fun-slopes,
- Special biathlon tracks,
- Ski jumps,
- Bob sleigh runs,
- Ice rinks,
- Ice halls,
- Curling sheets,
- Sport occasions such as ski touring, snowshoe walking, or sledding on unmaintained tracks.

Winter sports as an economic factor

The economic significance of sport as a cross-sector industry was proven by the German satellite account for sport in 2013: The yearly sport-related gross added value amounts to € 73.1 billion and constitutes 3.3% of the GDP. In contrast, German vehicle construction constitutes 2.9% of the GDP[1]. Germany is thus not only an automobile nation, but also a sports nation.

Particular significance is given to winter sports because they differ substantially and in many ways from summer sports or other all-season sports.
Some of these are:

- Their own Olympic games, which shows particular appreciation for the comparatively few winter sports.
- Strong regional differentiation concerning the States or councils within Germany that benefit greatly from winter sports.
- Comparatively low degree of organisation on the level of clubs/associations. Winter sports are predominantly practised individually.
- Winter sports trigger substantial economic ripple effects such as tourism.

Alpine winter sports, especially skiing and snowboarding, are relatively costly and also practised by a large part of the population. They can thus be seen as an economic factor to be emphasised. In the following section, the most important results for winter sports are presented as a special release of figures for the sub-project of the German satellite account for sport: Consumption related to winter sports, sponsorship, as well as sports facility construction and operation.[2]

Winter sports are mass sports

55% of the population practises sport (Preuß et al., 2012). Skiing, which actively involves 14% of the population, is one of the most popular sports (6th place, see Table 1). Despite skiing being practised predominantly in winter, it is practised to a comparable extent as other top sports (8th place in terms of hours) – implying that when it is practised, it occurs often and for long stretches of time.

1 Ahlert, G. (2013).

2 **Note on the interpretation of the numbers: The basic data is predominantly drawn** from the sub-project of the German satellite account for sport. In this connection, the main focus of the research was the creation of a database for reliable socio-economic performance measures.

In addition, 6.4% of people living in Germany regularly go ice skating, 2.8% go snowboarding, and 2.3% go sledding. Ice hockey, bob sleigh, curling and biathlon are, in contrast, not practised by the broad masses.

Table 1: German population actively participating in winter sports in 2010 as percentages, absolute numbers and according to units_(time invested in practising the sport in hours) in comparison to other sports (top 10). Source: Preuß, H., Alfs, C. & Ahlert, G. (2012).

	Sport types Top10 and winter sports	Active population	
		in %	in million
1	Cycling	31.0 %	25.03
2	Swimming	28.5 %	23.33
3	Hiking	22.8 %	18.64
4	Running	22.0 %	17.88
5	Fitness	14.9 %	12.16
6	**Skiing**	**13.8 %**	**11.20**
7	Bowling	13.6 %	11.13
8	Gymnastics	12.2 %	9.97
9	Football	12.8 %	9.91
10	Health sports	11.6 %	9.47
…			
18	**Ice skating**	**6.4 %**	**5.16**
…			
32	**Snowboarding**	**2.8 %**	**2.33**
…			
37	**Sledding**	**2.3 %**	**1.91**
…			
55	**Ice hockey**	**0.8 %**	**0.62**
…			
57	**Curling**	**0.6 %**	**0.45**
…			
58	**Biathlon**	**0.2 %**	**0.16**

	Sport types Top10 and winter sports	Population ≥ 16 years
		Number of hours (p. a. in million)
1	Cycling	928
2	Running	680
3	Swimming	576
4	Fitness	518
5	Hiking	420
6	Football	346
7	Gymnastics	295
8	**Skiing**	**285**
9	Nordic Walking	253
10	Health sports	202
…		
23	**Ice skating**	**60**
…		
28	**Snowboarding**	**48**
…		
44	**Sledding**	**22**
…		
51	**Ice hockey**	**11**
…		
56	**Biathlon**	**7**
…		
58	**Curling**	**5**

Winter sports consumer spending

The amount spent on winter sports is clearly much higher when compared to the part of the population that actively practises this sport. Skiing amounts to € 10.8 billion and takes the 2nd place amongst the highest consumption sports, right behind football (see Table 2). When subtracting the large part of football consumption due to passive sport interest (€ 7.7 billion), then skiing is by far the most economically significant sport in Germany. In total, € 16.4 billion is spent on winter sports every year in Germany (data from 2010). This corresponds to approximately 20% of the € 83.4 billion total consumer spending for active sports in Germany. Skiing alone constitutes 13% of the total consumer spending on sport. A significant factor contributing to this is the travel associated with winter sports. Every year, € 4.9 billion is spent on skiing holidays and snowboarding holidays in Germany alone. In contrast, the expenditure on hiking holidays, in 2nd place, amounts to only € 2.6 billion. Cycling is the only comparable sport to skiing due to its similar consumption pattern (higher-than-average quantity of equipment and volume of travel) and very wide diffusion amongst the population.

Table 2: German consumer spending related to winter sports 2010 in total and for sport travel in comparison to other sports (top 10). Source: Preuß, H., Alfs, C. & Ahlert, G. (2012), conservative model.

	Sport types Top10 und winter sports	Total consumer spending in billion €
1	Football	12.9
2	**Skiing**	**10.8**
3	Cycling	8.6
4	Swimming	5.1
5	Fitness	4.0
6	Hiking	3.9
7	Horse riding	3.7
8	Running (Jogging)	3.7
9	Motor sport	3.2
10	Handball	2.7
…		
13	**Snowboarding**	**2.0**
…		
21	**Ice-hockey**	**1.4**
…		
23	**Ice-skating**	**1.3**
…		
46	**Sledding**	**0.5**
…		
51	**Biathlon**	**0.2**
…		
60	**Curling**	**0.1**
	Winter sports in total	**16.4**

	Sport types Top10	Sport travel spending in billion €
1	**Skiing**	**3.5**
2	Hiking	2.6
3	**Snowboarding**	**1.4**
4	Diving	1.4
5	Mountaineering	1.3
6	Sport fishing	1.2
7	Cycling	1.1
8	Canoeing	1.0
9	Sailing	0.6
10	Sport boating	0.6

Bob sleighs, skis, skiing holidays - the winter sports consumption pattern

The active sport consumption is made up of various parts. Each individual sport features characteristic “consumption patterns”. Consumption patterns describe the composition of the spending areas. The consumption pattern for winter sports is disproportionately influenced by travel and sports holidays, especially the consumption patterns of widely popular winter sports such as skiing and snowboarding (see Illustration 1). Almost double is spent on sports holidays for skiing, in comparison with other sports. Thus, the equipment, despite being relatively expensive, carries less weight in the total consumption pattern. Travel involved in order to practise the sport (excl. holidays) is also lengthier and thus more costly for winter sports, when compared to other sports. Apart from that, the consumption for ice hockey and ice skating almost corresponds to the average consumption pattern for all sports.

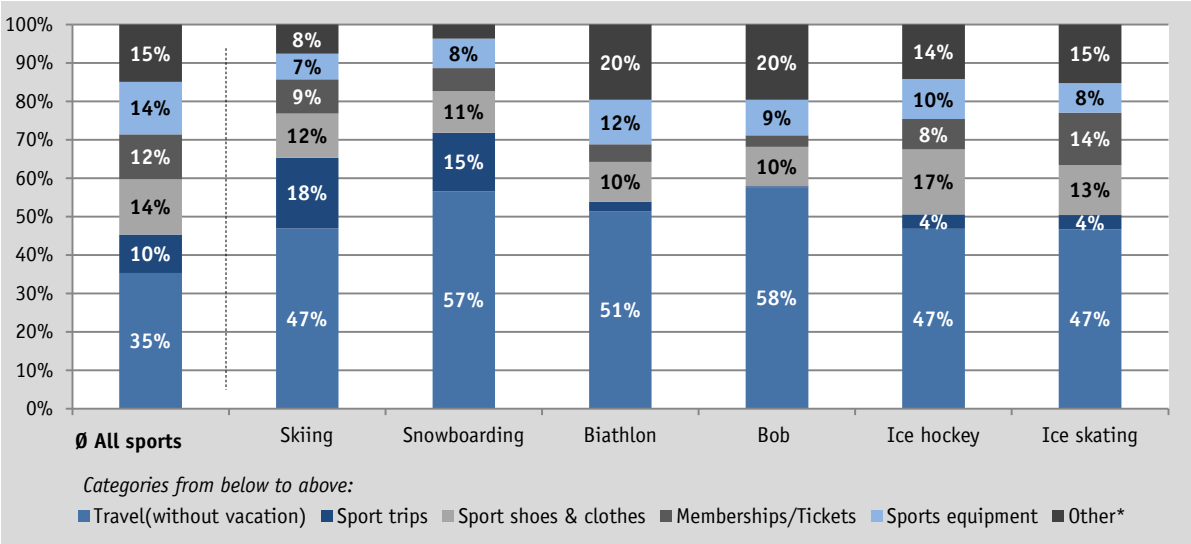


Illustration 1: Consumption patterns for winter sports. Benchmark: Average consumption patterns of all sports. Source: Preuß, H., Alfs, C. & Ahlert, G. (2012), conservative model. Presentation: 2hm.

*Other: Media & information technology; Personal care; Self-financed training incl. performance diagnostics; Sports food; Insurances; Medical services & products for prevention.

Table 3: Skiing consumption patterns. Source: Preuß, H., Alfs, C. & Ahlert, G. (2012), conservative model. Own presentation.

Consumption categories	Spending on skiing (p. a., in €)
Sports shoes	43.82
Sports clothes	61.83
Sports equipment	31.42
Rental costs for sports equipment	10.37
Sports equipment care and maintenance	14.49
Reparation costs incl. spare parts	4.95
Public sports facilities	0.00
Private sports facilities	80.83
Self-financed training incl. performance diagnostics	24.42
Books & magazines	0.87
Computer & gaming software	2.28
Sports food	5.86
Personal care	6.32
Medical services	2.58
Internet use for the active practise of sport	7.69
Contributions to clubs/associations	0.49
Sports vacation/training camps	168.14
Trips to regular sports practise	380.06
Trips to sports competitions in Germany	34.39
Trips to sports competitions outside of Germany (fraction in D)	14.69
Insurance costs	18.86
Average spending per person per year	**914.30 €**

Skiing, in relation to the average yearly spending, is one of the expensive sports for the individual sportsman/woman. As an example, the costs of the skiing consumption pattern are broken down in detail in Table 3. On average, each active sportsman/woman in Germany spends almost € 915 on skiing. The costs can be lower – but also much higher – in specific cases. In comparison: € 1,430 is spent on average every year on horseback riding and € 320 on cycling.

Sponsorship

Despite skiing being by far the most significant winter sport, in terms of diffusion amongst the population as well as the spending connected with it, the sponsorship of this sport only amounts to € 0.6% of the 3.2 billion total volume for sport sponsorship by German companies (Stand 2010[3]). Skiing, because of its regional and seasonal limitations (among other reasons) ranks lower than the sponsoring volume of other big individual sports such as running (1.4%), cycling (1.2%), and swimming (0.9%). In contrast, ice hockey – as a league sport, with 2.6% or € 84 million – is among the top ten sports that benefit the most from sponsorship (see Illustration 1). However, ice hockey only amounts to approximately 37% of the handball sponsorship volume. This is due to the sponsorship of broad-base companies (primarily companies with revenues below € 2 million), which probably, as in the case of skiing, give more support to all-season sports. In contrast, the revenue of DEL and HBL show less difference (in the 2010/11 season, € 79.2 million DEL resp. € 84.4 million HBL exclusive of transfer income[4]).
In addition, it should be considered that winter sports also benefit from significant multi-sport sponsors such as Adidas and Audi, which, in this case, fall into the category of "more than 10 sports". The sponsorship of the other winter sports (other than ice hockey and skiing) is insignificant from a socio-economic perspective.

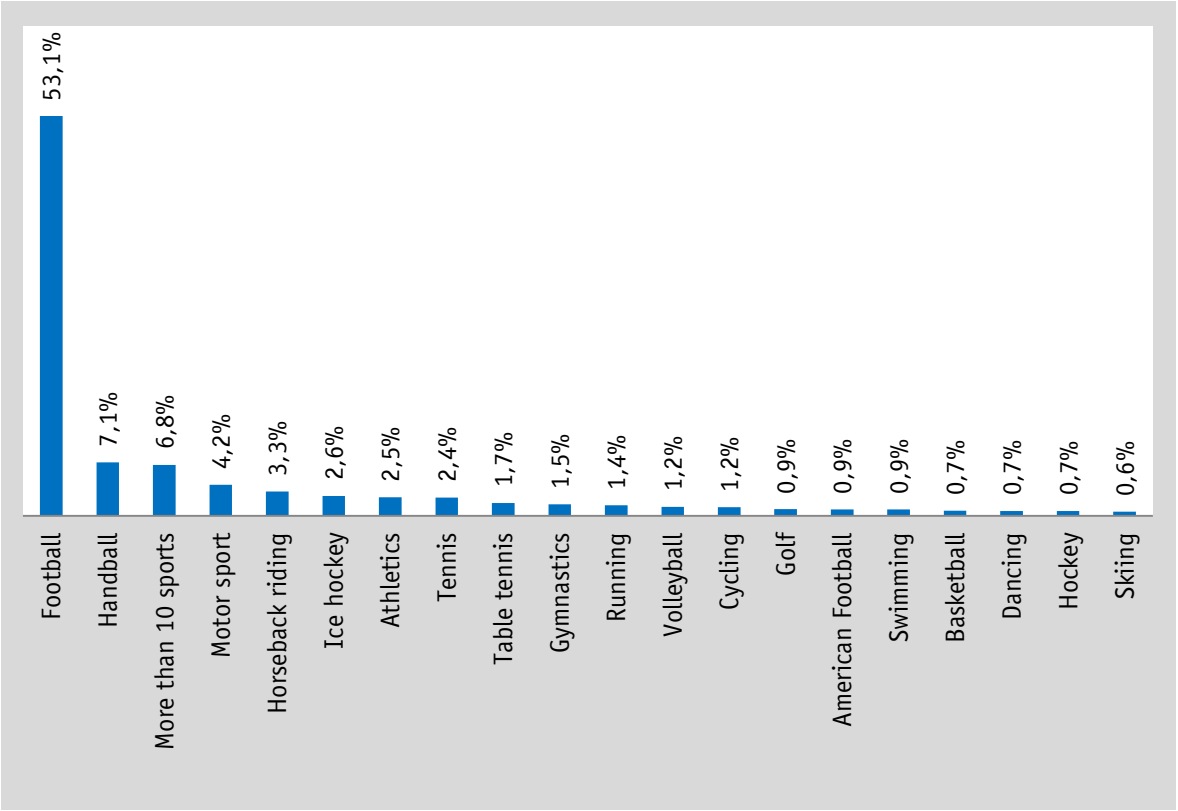


Illustration 1: **Sponsorship to sport organisations in 2010 in Germany; Distribution according to sports (top 20). Source: 2hm & Associates. Own calculation and presentation.**

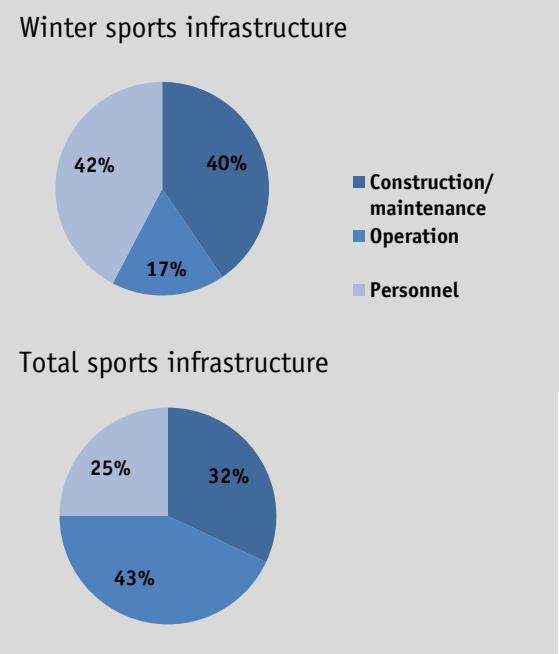
[3] An der Heiden, I., Meyrahn, F. & Ahlert, G. (2012a)

[4] Source: Deloitte & Sponsors: Financial report of German professional sport leagues.

Ski slopes, cross-country tracks, artificial snow production - winter sports infrastructure

The German population largely practises Alpine winter sports outside of Germany (especially in Austria, Switzerland, France and Italy). Below, only the German infrastructure is considered. Here, a total of approximately 950 kilometres of ski slopes, 3,000 km of cross-country tracks and almost 2,000 ski lifts are available for winter sportsmen and women. The German winter sports infrastructure distinguishes itself by having been widely expanded many years ago and thus only requires maintenance. During operation, the personnel costs, in comparison with other sports facilities, are particularly high (see Illustration 3).
The cost of slopes is to be highlighted. On an "absorbed cost basis", the average cost per kilometre of ski slope and per year amount to approximately € 260,000.

Illustration 2: Distribution of yearly costs for sports infrastructure in total and for winter sports according to cost type. Source: 2hm & Associates. Own calculation and presentation.



Altogether, the winter sports infrastructure constitutes only 1.8% of the total sports infrastructure costs of € 22.6 billion per year (see Table 4).
This, in comparison to the yearly consumer spending described above, is particularly remarkable: The winter sports share constitutes 20% of all consumer spending. Therefore, winter sports are not only economically highly significant, but also of particular socio-economic value.

Table 4: Costs of individual, selected sports facilities in million € (construction, operation and personnel) in comparison to total infrastructure costs. Own calculation and presentation.

	Sports facilities-top 10 and winter sports	Yearly costs for construction/operation and personnel (in million €)
1	Sports halls	5,176
2	Swimming pools (outside/inside)	4,417
3	Sports grounds	3,566
4	Fitness centres	2,420
5	Cycle lanes	922
6	Stadiums	736
7	Horse riding facilities	652
8	Shooting sports facilities	648
9	Tennis courts (outside + inside)	586
10	Hotel swimming pools	428
…		
19	**Ski lifts/cableways**	**142**
…		
21	**Ice rinks**	**116**
…		
23	**Ski slopes**	**105**
…		
30	**Ski halls**	**31**
…		
37	**Bob-sleigh runs**	**5**
…		
43	**Cross-country tracks**	**3**
	Total sports infrastructure	**22,595**
	Total winter sports	**402**
	Winter sports share	**1.8 %**

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Appendix

Table 5: List of 71 types of sport (common research group of University of Mainz), winter sports are highlighted in bold/cursive. Own presentation.

Sport types (alphabetical)	
American football	Modern pentathlon
Badminton	Motor sport (Automobile, Motor cycle, Kart, ...)
Ballet	Nordic Walking
Baseball/Softball/Cricket	Pilates/Qi Gong/Tai Chi/Yoga
Basketball	Cycling (BMX, Racing cycle, Mountain bike, Artistic cycling, Cycle ball, Cycle polo, Unicycle hockey)
Beach volleyball	Track and Field
Mountaineering	Horse riding (Vaulting, Dressage, Military, Show jumping, ...)
Biathlon	Wrestling
Billiards	Roller skating (Roll hockey)
Sledding (luge, skeleton)	Rowing
Bodybuilding	Rugby
Archery	Chess
Bowling	Sport shooting
Boxing	Swimming (including DLRG – German Lifeguard Association, Synchronised swimming)
Curling	Sailing
Ice hockey	Skateboarding
Ice skating	***Skiing (Alpine, Nordic, Cross-country, ...)***
Skydiving	***Snowboarding***
Fencing	Sport acrobatics
Fitness	Sport fishing
Aviation(Gliding, Motor flying)	Sport boating
Football	Squash
Health sport (back exercises, fall prophylaxis, heart sports, lung sports, ...)	Dancing
Weightlifting	Diving
Hang gliding	Tennis
Golf	Table tennis
Gymnastics	Triathlon
Handball	Gymnastics
Hockey	Ultimate Frisbee
Inline skating	Volleyball
Martial Arts (Aikido, Karate, Judo, Ju Jutsu, Taekwondo, Kickboxing, ...)	Hiking
Canoeing	Water polo
Rock climbing	Water skiing/Wakeboarding
Running (Jogging)	High diving
Athletics	Windsurfing/Surfing
Mini golf	

We help sports ...

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