Deutsche Sporthochschule Köln
German Sport University Cologne
Institut für Sportökonomie und Sportmanagement
Institute of Sport Economics and Sport Management

Location factors of elite sport coaches

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1. Background

- Coaches are critical to elite sport achievements (Digel et al., 2010)

- Increasing number of national coaches have emigrated despite various attempts to improve their working conditions (e.g. Coaching Initiative)

- Lack of data on location factors of elite sport coaches in international high performance sports

- Need for a complex analysis of the German labor market for coaches and the determinants of potential labor migration

Migration balance of national sport association

1) Number of partly or fully federally funded elite sport coaches who emigrated between 2000 and 2016 to work for a national sport association abroad.

2) Number of partly or fully federally funded elite sport coaches who migrated to a non-coaching job between 2000 and 2016 (e.g. sport club, private sector, politics, self employment, government sector).

3) Number of elite sport coaches who immigrated into Germany between 2000 and 2016 and were employed in a national sport association (partly or fully federally funded).

4) Total number of elite sport coaches employed since 2000 (partly or fully federally funded).

Migration balance of national sport association 2000-2016 (n=17)

	Number of coaches
1) Migration to foreign sport association	48
2) Transfer to different sector (e.g. private or government)	84
3) Immigration into Germany	28
4) Total number of individuals employed as elite sport coaches	389

Note: 14 national sport associations did not provide information upon request on the total number of coaches employed by the association since 2000.

2. Elite sport coaches' salaries in Germany
(Federal Office of Administration [BVA], 2015)

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Coaching salaries

Yearly gross salaries by type of coach (mean in €, n=672)

Type of coach	n	Total	n	Full-time[1]
Head coach/executive national coach	47	56,692	31	75,279
National coach	99	48,468	63	67,621
Federation coach	9	36,778	7	45,377
Discipline coach	142	35,317	75	58,924
National coach (youth development)	94	34,415	44	63,006
Diagnostics coach	7	31,094	n/a	n/a
Olympic training base coach	114	26,167	57	39,849
Special functions coach	28	25,374	12	47,943
Coach (not further specified)	50	21,782	16	45,884
Adjunct coach	20	9,816	n/a	n/a
Specialized instructor	13	9,591	n/a	n/a
Assistant coach	11	8,406	n/a	n/a
Honorary coach	33	4,249	n/a	n/a
Squad coach	5	1,900	n/a	n/a
Total	672	32,154	311	57,894

Note: [1] All coaches with a declared weekly workload of at least 35 hours;
n/a = not available or sample size too small

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Coaching salaries

Annual gross salaries by sport and funding source (mean in €)

Sport	n	Total	n	Full-time[2]
Summer Olympic	448	38,848	237	62,663
National coach	104	60,889	77	74,626
Winter Olympic	100	33,692	69	42,298
National coach	16	48,288	14	51,611
Non Olympic	124	6,730	5	47,061
National coach	26	13,760	n/a	n/a.
Funding source[1]				
Federal grant	544	31,251	277	52,153
Additional own funds	179	6,144	53	14,605
Additional third-party funds	32	22,684	30	24,076
Additional own & third-party funds	5	27,744	n/a	n/a
Sport and funding source				
Summer Olympic				
Federal grant	351	37,793	205	55,882
Own funds	95	9,768	48	14,793
Third party-funds	31	22,438	29	23,862
Own & third-party funds	4	19,895	n/a	n/a
Winter Olympic				
Federal grant	99	33,414	68	42,020
Own funds	n/a	n/a	n/a	n/a
Third-party	n/a	n/a	n/a	n/a
Own & third-party funds	n/a	n/a	n/a	n/a
Non Olympic				
Federal grant	94	4,546	4	33,303
Own funds	82	1,719	n/a	n/a
Third-party funds	n/a	n/a	n/a	n/a
Own & third-party funds	n/a	n/a	n/a	n/a

Note:
[1] Not specified for all coaches (share of funding not disclosed for all coaches); n/a = not available.
[2] Coaches working at least 35 hours per week.

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Salaries in the public sector (full-time; in €)

Qualification	Salary group	Example	Annual income (gross) [1]	Monthly income (net) [1]
At least three years of vocational training	E8	Clerk; office manager	33,274	1,875
	E9	see above	44,256	2,191
University or applied university degree (Bachelor) or equivalent qualification	E10	Engineer (applied university)	50,099	2,409
	E11	Primary, secondary, and comprehensive school teacher. Teacher at secondary education level I (side entry)	53,823	2,562
	E12	Teacher at secondary education level II (side entry)	59,154	2,764
University degree (Master)	E13	Engineer (university); High school teacher; Uuniversity lecturer	60,469	2,812
	E14	see above	64,413	2,953
	E15	Senior physician	70,547	3,172

Note: [1] Labor agreement for public sector (TVöD Bund, collective bargaining round 2016) with the following characteristics: Experience level 5 (approx. 15 years) incl. additional supplies VBL, wage tax class IV, no church tax, incl. 1 child allowance.

3. Career paths of elite sport coaches

Coach survey career paths - method

Data collection

- Online survey of elite sport coaches (partly or fully federally funded)

- Collection of detailed data on career paths of elite sport coaches since 2000

- Survey period: 17 January – 17 September 2016

- Invitation email was distributed to coaches via the Coaching Academy Cologne, the German Olympic Sports Confederation (forwarded to the directors of Olympic training bases), and the directors of the national sport associations

- n=236 completed questionnaires → n=210 (after dropping coaches from rather commercialized sports)

Coach characteristics (mean or share in %)

	Total (n=210)	Migrants[1] (n=24)	Non-Migrants (n=186)	CA Graduates (n=97)
Gender (male; in %)	87.6	91.7	87.1	94.8
Nationality (German; in %)	96.7	79.2	98.9	96.9
Age (in years)	46.0	48.3	45.7	46.1
Experience (years as a coach)	18.2	22.0	17.7	18.3
Former elite athlete (in %)	70.5	54.2	72.6	69.1
University degree (in %)	62.4	54.2	63.4	54.6
No. of coaching positions (2000-early 2016)	2.5	4.9	2.2	2.7
No. of other positions (2000-early 2016)	0.6	0.9	0.5	0.7
Married/long-term relationship (in %)	87.6	75.0	89.3	90.7
Number of children under 18 years	0.9	0.9	0.9	0.9
No. of months unemployed (2000-early 2016)	1.6	4.9	1.1	1.7
Sole earner in household (in %)	32.4	62.5	28.5	31.2
Graduate CA Cologne (in %)	46.2	66.7	43.6	100.0

Note: [1] Coaches who held at least one position abroad between 2000 and 2016; CA = Coaching Academy Cologne.

Characteristics of coaching positions (mean or share in %), 2000-2016

| | | Full-time[1] | | CA Graduates |
| | Total | Domestic | Abroad | CA Graduates |
	(n=524)	(n=401)	(n=45)	(n=262)
Position abroad (in %)	11.3	---	100.0	15.6
Temporary contract (in %)	60.3	64.1	57.8	62.6
Contract duration (in years)	3.3	3.5	2.2	3.2
Target agreements part of contract (in %)	51.0	57.6	44.4	55.3
Monthly net income (in €)	2,199	2,294	3,406	2,331
Actual weekly workload (in hours)	47.7	52.9	53.0	50.8
Athletes' performance worldwide top 3 (in %)	38.9	45.6	11.1	39.3
Athletes' performance among top 5 (in %)	12.6	12.2	13.3	11.5
Athletes' performance among top 10 (in %)	20.8	21.9	28.9	19.5
Athletes' performance among top 15 (in %)	9.9	8.7	24.4	11.1
Athletes' performance not among top 15 (in %)	17.7	11.5	22.2	18.7

Note: [1] Full-time = at least 35 hours per week

Reasons for terminating the employment as a coach (multiple answers possible; share in %)

| Variable | Total (n=322) | Full-time[1] | | CA Graduates (n=176) |
		Domestic (n=225)	Abroad (n=39)	
More lucrative offer	31.1	30.7	20.5	28.7
Career change	19.6	18.2	23.1	18.4
Position change within association	12.1	16.0	0.0	10.9
No contract extension	9.3	7.1	20.5	13.2
Family commitments	9.0	8.4	17.9	9.2
Dispute with association	8.7	7.1	30.8	13.3
Dismissal	6.8	7.1	15.4	13.3
Performance expectations not met	2.2	2.2	5.1	1.7
Dispute with athletes	0.9	0.0	7.7	1.1
Other reasons (e.g. retirement, illness, pregnancy)	11.8	9.8	10.3	7.4

Note: [1] Full-time = at least 35 hours per week.

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Non-coaching position characteristics (mean/share in %), 2000-2016

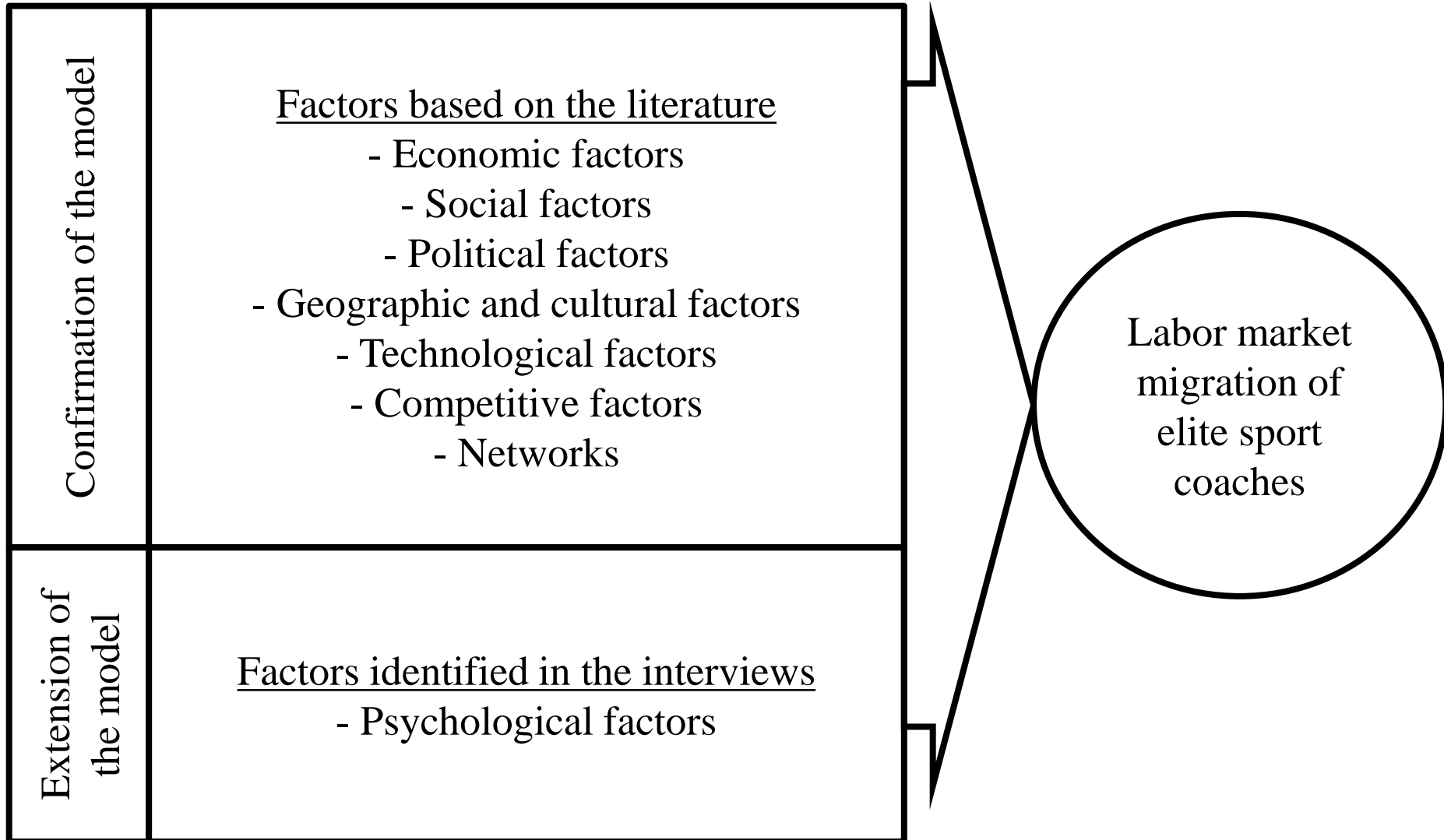| Variable	Total (n=123)	Full-time[1] (n=74)	CA Graduates (n=67)
Position abroad (in %)	14.6	9.5	20.9
Temporary contract (in %)	28.5	25.7	29.9
Contract duration (in years)	2.9	2.8	2.2
Monthly net income (in €)	1,959	2,489	2,161
Actual weekly workload (in hours)	34.7	46.0	37.4

Note: [1] Full-time = at least 35 hours per week.

4. Labor migration among elite sport coaches

4.1 Determinants of labor migration

Theoretical model of labor market migration

Confirmation of the model

Factors based on the literature
- Economic factors
- Social factors
- Political factors
- Geographic and cultural factors
- Technological factors
- Competitive factors
- Networks

Extension of the model

Factors identified in the interviews
- Psychological factors

Labor market migration of elite sport coaches

Coach interviews

- Ten face-to-face interviews were conducted between November and December 2014 with elite sport coaches from ten different sports

- Coaches were contacted via the Coaching Academy Cologne (CA) (Mr. Nordmann)

- Semi-structured interviews

- All interviews were recorded and transcribed (72 pages of text)

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Coach interviews

Key results

- Relatively low compensation in relation to the workload and lack of social recognition identified as potential drivers of labor migration

- Social aspects/family represent important determinants for decision making

- Pursuit of new challenges and disputes within the association favor increase the likelihood of migration

- Sport-related aspects (performance level of athletes) hardly play a role

➜ Slight adjustments made to previously developed, literature based theoretical model

4.2 Migration probability of elite sport coaches

Coach survey migration - method

Data collection

- Online survey of elite sport coaches (criterion: partly or fully federally funded)

- Survey period: 17 July - 17 August 2015

- Invitation email was distributed to coaches via Professional Association of Coaches in German Sport (BVTDS) and the German Olympic Sports Confederation (who forwarded it to national sport associations and directors of Olympic training bases)

- Monetary incentive to participate €50

- n=186 completed questionnaires

- After dropping rather commercialized sports (e.g. soccer, handball): n=170

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Scenario variables

Variables	Description
Migration probability	Probability to accept job offer (0=very unlikely; 10=very likely)
SC Income	Percentage of current income (-20%, -10%, equal, +20% , +40%, +100%)
SC Contract	Contract duration (1 year, 2 years, 4 years, permanent)
SC Workload	Percentage of current workload (-20%, -10%, equal, +10%, +20%)
SC Personnel responsibility	Personnel responsibility (1=yes)
SC Reputation	Social recognition of coaching job compared to Germany (lower, equal, higher)
SC Perspective	Career perspectives compared to Germany (lower, equal, higher)
SC Success	Performance of coach's athletes (worldwide top 15, top 10, top 5, top 3)
SC Flight time	Flight time from Germany in hours (26, 11, 9, 3, 2)
SC Language	Primary working language (German, English, Russian, Norwegian, Mandarin, French)

- 216,000 theoretically possible scenarios (conjoint design)

- Unrealistic scenarios were dropped upfront (e.g. language and flight time)

- 129,600 scenarios left for analysis

- Ten randomly chosen scenarios presented to each coach

Coach survey migration - method

Example

In the following, ten coaching position openings will be presented to you. Please take your time and carefully think how likely it would be that you accept the respective job offer. Please try to answer as honest as possible.

How likely is it that you would accept the following coaching position opening?

Length of contract:	**4 years**
Monthly net income:	**5000 Euros per month**
Sporting performance of athletes (international):	**Top 3**
Weekly workload:	**50 hours**
Distance from residence in Germany:	**26 flight hours**
Predominant job language:	**English**
Reputation of coaching job:	**Higher than in Germany**
Responsibility for personnel:	**Yes**
Career perspectives:	**Comparable to Germany**

0	1	2	3	4	5	6	7	8	9	10
○	○	○	○	○	○	○	○	○	○	○

very
unlikely   very
                                                                                                 likely

Coach characteristics (mean or share in %)

	Total (n=170)	Full-time[1] (n=149)
Gender (male; in %)	78.8	82.6
Nationality (German; in %)	95.9	95.3
Age (in years)	43.0	43.8
Experience (years as a coach)	17.4	18.1
Previously worked abroad (in %)	13.5	14.8
Previously had an offer from abroad (in %)	54.7	59.1
University degree (in %)	58.8	60.4
Monthly net income (in €)	2,755	2,957
Temporary contract (in %)	65.9	67.8
Actual weekly workload (in hours)	48.8	53.5
Married/long-term relationship (in %)	84.7	86.6
Coach has children under the age of 18 (in %)	41.2	40.9
Performance of coach's athletes among top 5 (in %)	58.8	59.7
Performance of coach's athletes among top 10 (in %)	22.9	23.5
Performance of coach's athletes among top 15 (in %)	18.3	16.8

Note: [1] Full time = at least 35 hours/week

➔ Average migration probability: 24%

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Determinants of migration probability (n=1,700)

Variable	Effect	Variable	Effect
Gender (male)	n.s.	SC Workload equal	REF
Nationality (German)	++	SC Workload +10%	n.s.
Age	n.s.	SC Workload +20%	n.s.
Age^2	n.s.	SC Personnel responsibility	+
Experience (years as a coach)	n.s.	SC Reputation lower	--
International experience	+++	SC Reputation equal	REF
University degree	n.s.	SC Reputation higher	n.s.
Monthly net income	n.s.	SC Perspective lower	--
Temporary contract	n.s.	SC Perspective equal	REF
Actual weekly workload	-	SC Perspective higher	n.s.
Married/long-term relationship	n.s.	SC Success top 15	n.s.
Children under 18	---	SC Success top 10	n.s.
Ratio coaches/positons	n.s.	SC Success top 5	n.s.
Athletes under top 15	n.s.	SC Success top 3	REF
Athletes under top 10	n.s.	SC Flight time 26 hrs	---
Athletes under top 5	REF	SC Flight time 11 hrs	---
SC Income -20%	---	SC Flight time 9 hrs	---
SC Income equal	REF	SC Flight time 3 hrs	n.s.
SC Income +20%	+++	SC Flight time 2 hrs	REF
SC Income +40%	+++	SC German	REF
SC Income +100%	+++	SC English	n.s.
SC Contract 1 year	---	SC Russian	n.s.
SC Contract 2 years	--	SC Norwegian	n.s.
SC Contract 4 years	REF	SC Mandarin	n.s.
SC Contract permanent	+	SC French	n.s.
SC Workload -20%	n.s.	SC Language known	+++
SC Workload -10%	n.s.	SC Order	n.s.

Note: Results of regression analysis; Probability of error (p): +++/--- = p<0.01; ++/-- = p<0.05; +/- = p<0.1; n.s. = not significant (p>0.1); REF = Reference category; Model controls for type of sport.

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5. Conclusion

- Some coaches hold multiple positions at the same time (up to four positions simultaneously)

- Predominantly temporary contracts (over 60% of coaching positions)

- Actual workload markedly exceeds tariff standard workloads

- Reasons for contract termination are manifold

- Average income (full-time) is within public sector incomes in Germany

- Domestic and foreign coaching positions differ in terms of income, target agreements, and contract duration

5. Conclusion

- Migration decision is a complex decision process

- Combination of push (=current situation of coaches) and pull factors (=attractiveness of other labor market) at work

- Personal (already experience abroad; children under the age of 18) as well as professional factors represent relevant determinants of migration probability (prospect of higher income, longer contract duration, personnel responsibility)

- Sporting performance of current athletes and prospect of sporting success has no impact on migration probability

Thank you for your attention!

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