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The determinants of consumer affection towards sports and athletes
– a cross-cultural study

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List of abbreviations

ANOVA	Analysis of variance
AVE	Average variance extracted
CHN	China
CFA	Confirmatory factor analysis
CFI	Comparative fit index
CR	Composite reliability
CSM	Center for Sports and Management
df	Degrees of freedom
e.g.	For example (Latin)
et al.	And others (Latin)
GER	Germany
GLM	Generalized linear model
i.e.	That is (Latin)
JAP	Japan
J-League	Japan Professional Football League
K-League	Korea Professional Football League
LPGA	Ladies Professional Golf Association
M	Mean
MANCOVA	Multivariate analysis of covariance
MANOVA	Multivariate analysis of variance
McFadden's R^2	McFadden's coefficient of determination
MLB	Major League Baseball
MG-CFA	Mutli-group confirmatory factor analysis
MSSC	Motivational Scale for Sport Consumption

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n	Sample size
NBA	National Basketball Association
NFL	National Football League
OLS regressions	Ordinary least squares regressions
p.	Page
PGA	Professional Golfers' Association of America
R ²	Coefficient of determination
RMSEA	Root mean square error of approximation
SABI	Scale of athlete brand image
SAE	Similarity-attraction effect
SD	Standard deviation
SKO	South Korea
SRMR	Standardized root mean square residual
STATA	Statistical software package by StataCorp
TV	Television
US	United States
USA	United States of America
USD	US dollars
vs.	Versus
VIF	Variance inflation factor
WHU	Wissenschaftliche Hochschule für Unternehmensführung

List of symbols

†	Statistical significance at the 10% level
*	Statistical significance at the 5% level
**	Statistical significance at the 1% level
***	Statistical significance at the .1% level
%	Per cent
χ^2	Chi-square
η^2	Eta-square
Δ	delta

1. Introduction

1.1 Background and motivation

Sport has become one of the most important and universal social institutions in modern society with considerable significance on a global level (Chadwick, 2009). Accordingly, sport brands have transcended geographical barriers by leveraging on the global appeal of sport (Muniz & O'guinn, 2001). Likewise, many well-known sport teams and leagues have expanded their global reach by establishing international offices or focusing on international branding efforts. For example, the German Bundesliga increased the television coverage of their football games to 204 countries ("Rupert Murdoch buys further Bundesliga broadcast rights," 2013). Similarly, the National Basketball Association (NBA) built a dedicated department to spread the NBA as a global brand (Forster, 2006). In their internationalization efforts, leagues and sport brands recognized the particular importance of athletes because they have an "enormous power to attract fans [...] and thus "provide powerful ways for brands to spread messages across a range of channels" (Desmarais, 2017, p. 12).

However, very little research has accounted for the interplay of national differences although authors such as Erdogan, Baker, and Tagg (2001) have suggested that "every country has its own culture(s), which may very well affect the importance of criteria [for selecting endorsers]" (p. 46). I attribute this dearth to three principal reasons. First, conducting a study in multiple countries usually requires higher financial investments than conducting a study in one single country. Thus, the financial burden of administering a study in a cross-national setting might represent an insurmountable obstacle for researchers interested in examining global consumers.

Second, research across different countries and/or cultures demands comparability or equivalence at each stage of the research process (Usunier, Lee, & Lee, 2005). Accordingly, cross-country research requires methodological rigor at the different levels of the research process, which is exacerbated by the methodological complexities inherent to some procedures and the challenge to achieve comparability of data and measures (Buil, Chernatony, & Martínez, 2012).

Third, the vast majority of contributions to international sport marketing stem from North America, Europe and Oceania (V. Ratten & Ratten, 2011). Hence, despite considerable expansion strategies of European and US teams and leagues to the emerging sport markets of East Asia, little is known about sport consumers in these markets (Goldman & Johns, 2009; Yoshida & Heere, 2015). Thus, empirical foundation and substantiation of sport consumer behavior is still limited.

The aim of my dissertation is thus to partially dispel these three limitations and deepen our understanding of global sport consumers. Regarding the first limitation of cross-national research, I am very fortunate to build upon a unique, country-representative data set from different countries and cultures. The data set includes 5,000 respondents from China, Germany, Japan, South Korea and the United States of America. To cope with the second challenge of establishing equivalence that allows for meaningful cross-country comparisons, I employ appropriate statistical measures (e.g., measurement invariance in the first and third article). To address the issue that most theories in sport marketing have been applied to predominantly Western societies, I include three East Asian markets (China, Japan, South Korea) in my investigations.

Taking together all the above, I aim to contribute to answering my overarching question for my dissertation: What determines international consumers' affection towards sports and athletes?

1.2 Research questions and theoretical relevance

First, in order to answer the question of what determines international consumers' affection towards sports, I will examine fans' motives to consume sport. Second, in order to investigate what determines international consumers' affection towards athletes, I differentiate between fans' similarity attributes to athletes and fans' brand images preferences of athletes. As a result, I will address these three subjects with three distinct research questions:

Research question 1: Do international consumers exhibit different motivational profiles when consuming sport?

Research question 2: Do similarity attributes influence international consumers' identification with athletes?

Research question 3: Which athlete brand images are important for international consumers?

Research question 1 is relevant because sport marketers need to identify the driving motives for fans' sport consumption in order to attract fans and to develop a loyal fan base. However, existing studies about consumers' motives to consume sport have predominantly examined single country and single sport samples. But to capture fans' motives on an international scale, it is decisive to understand if overarching sport consumption motives prevail across different countries or cultures (H. H. Kwon & Armstrong, 2002). Serving consumer motives can support increased customer retention,

which may alleviate ebbs and flows in attendance and team support (Bee & Havitz, 2010). No research to date has yet examined sport consumption motives using comparably exhaustive country-representative data in a cross-national context.

Research question 2 contributes to theory by enhancing our understanding of the influence of similarity attributes on identification within the context of the athlete/fan relationship. According to the similarity-attraction paradigm, individuals feel attracted by individuals or groups that are similar to themselves (Byrne, 1971). While the construct of similarity-attraction has been addressed in multiple dyadic relationships such as superior/subordinate (Tsui & O'Reilly, 1989) or mentor/protégé (Eby et al., 2013), little research exist on athlete/consumer dyads. Moreover, it remains unclear whether the influence of similarity attributes on identification bears country and culture-specific differences. To the best of my knowledge, no empirical study has yet examined similarity-attraction of athletes and fans within a cross-national environment.

Research question 3 is relevant because it adds to the understanding of athletes as human brands (Thomson, 2006). The concept of athlete brands is a comparatively recent research topic (Arai, Ko, & Ross, 2014; Carlson & Donovan, 2013; Kristiansen & Williams, 2015; Walsh & Williams, 2017) and accordingly benefits from additional studies to enhance its theoretical and practical depth. By advancing the model of the athlete brand image and applying it in a cross-national context, I intend to contribute to our understanding of athlete as brands and create an exploratory basis for further research on global brand images of athletes.

1.3 Data set and research approach

Although all three research questions are set within the context of global sport fans, they address exclusive and comprehensive aspects that warrant independent investigations. Thus, I will discuss them in one independent article each.

For all articles, I use data from a country-representative survey, which I developed from January 2016 until March 2016. The survey items were developed by means of a comprehensive literature review and regular feedback from Prof. Dr. Sascha L. Schmidt and Jun.-Prof. Dr. Dominik Schreyer as well as fellow doctoral students. As a result, the questionnaire comprises the required variables for addressing the outlined research questions. For article 1, an established measurement construct assessing fans' motives for consuming their favorite sport is included in the questionnaire (see table 4 in chapter 2). For article 2, multiple questions reflecting fans' identification with their favorite athlete are included (see table 12 in chapter 3). In addition, external demographic information about the fan's favorite athlete (nationality, age, gender) were collected using standard internet-based search-engines such as Google. For article 3, several questions pertaining to an athlete's brand image are included in the questionnaire (see table 21 in chapter 4).

In March 2016, I submitted the English original questionnaire to the market research company Nielsen Sports (formerly Repucom). Nielsen Sports ensured the translation and back-translation of the local language versions by native speakers and programmed the online survey of the questionnaire. Subsequently, the market research company recruited participants in the following five countries: China, Germany, Japan, South Korea and the United States of America.

The selected participants are representative of the country's respective online population in terms of age, gender and region in Germany, Japan, South Korea and the United States

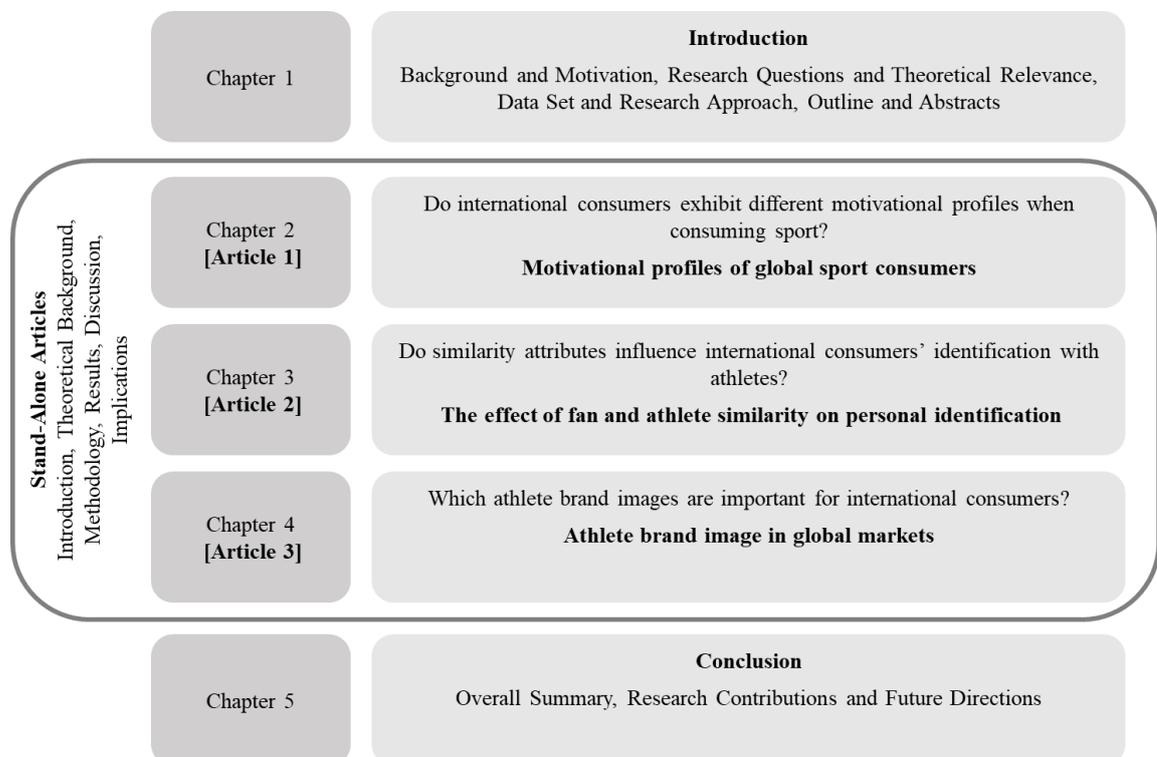
of America. In China, however, participants are representative of the country's total population because face-to-face interviews (instead of online survey) were conducted. Between April and May 2016, 5,000 respondents (1,000 in each of the above-stated countries) completed the questionnaire. For each article, I created a separate dataset from the survey data. The sample sizes are $n = 2,754$ (article 1), $n = 2,027$ (article 2), and $n = 2,027$ (article 3). The reduced sample sizes for each article stem from the representativeness of the country samples. Hence, people who do not consume sport (article 1) or did not name a favorite athlete (article 2 and article 3) were excluded from further analysis.

I analyze the data using a large repertoire of statistical methods. This includes descriptive analyses, correlation analyses, analysis of variance (ANOVA), multivariate analysis of variance (MANOVA) and multivariate regression analysis. For all three articles, I use the statistics software STATA 15. For article 1 and article 2, I apply Jöreskog's (1971) multi-group confirmatory factor analysis (MG-CFA) and conduct stepwise tests of the three most frequently distinguished types of measurement invariance, which include: configural, metric, and scalar measurement invariance (Rutkowski & Svetina, 2014; Steenkamp & Baumgartner, 1998). I therefore use the open-source statistic software R in article 1 and article 3 due to its superior capabilities to test for measurement invariance.

1.4 Outline and abstracts

The main part of this dissertation consists of five chapters. After the introduction in section 1, the subsequent chapters 2-4 comprise one stand-alone article each. All three articles independently provide an introduction, a theory section (including literature review and derivation of hypothesis or the purpose of the investigation), empirical analysis, presentation of results and discussion, as well as implications, limitations and directions for future research. Chapter 5 concludes the paper by outlining the contributions of this dissertation and providing an avenue for future research. Figure 1 gives an overview of the structure of my dissertation.

Figure 1: Structure of the dissertation



1.4.1 Article 1: Motivational profiles of global sport consumers

In the first study, I answer recent calls for research exploring sport consumption motives in a cross-cultural setting. Using unique country-representative survey data from China, Germany, South Korea, Japan and the USA, I investigate fans' motives for consuming their favorite sport. The results indicate that significant country differences in fans' sport consumption motives prevail. As such, the findings suggest that sport marketers need to account for fans' sport- and country-specific needs when developing marketing communication.

1.4.2 Article 2: The effect of fan and athlete similarity on personal identification

The second article examines the effect of similarity between consumer and athlete on consumers' personal identification in the context of sport. Drawing on the concepts of social identity theory and the similarity-attraction paradigm, I test whether actual and perceived similarity drive fans' identification with athletes. Using country-representative data from five countries, this study is among the first to explore the relation between similarity and personal identification in a cross-cultural, representative setting. For actual similarity, I find evidence for a negative effect of foreign athletes on fans' identification in Germany, South Korea and Japan and a positive effect in the USA. Having the same gender or age cohort as their favorite athlete appears to have mixed effects on fans' identification levels in the individual countries. For perceived similarity, I find a positive effect of perceived similarity on fans' degree of identification in all sampled countries. These findings extend existing research by providing empirical evidence on cross-cultural phenomena within the context of identification and similarity-attraction theories.

The paper is co-authored by Prof. Dr. Sascha L. Schmidt and Jun.-Prof. Dr. Dominik Schreyer. The paper has been submitted for publication.

1.4.3 Article 3: Athlete brand image in global markets

This study explores athlete brand image in global markets. In my empirical analysis, I draw upon unique country-representative survey data from Germany, USA, China, South Korea and Japan with more than 2,000 sport fans. The modified scale of the athlete brand image shows measurement invariance across the countries, allowing for a meaningful country-comparison. The results reveal that the athletic performance dimension is most salient among international sport fans. Intriguingly, we find considerable differences between fans from China, Japan and South Korea on all dimensions of the athlete brand image. In fact, Chinese fans reveal similar brand image preferences for athletes than US fans do. These findings have both implications for research and practice. Researchers could advance the scope of their analysis to cultural factors that influence how consumer perceive athlete brands. From a practitioner's perspective, the article suggest that athlete branding strategies for Asian countries require a more fine-grained approach, dismissing commonly held beliefs of the uniformity of consumer behavior in East-Asian countries.

The article is co-authored by Prof. Dr. Sascha L. Schmidt and has been submitted for publication in the special issue "Brand management research" of the European Sport Management Quarterly.

2. [Article 1] Motivational profiles of global sport consumers¹

2.1 Introduction

Sport consumption has become a global pastime for many sport fans around the globe. For example, more than a billion people worldwide watched the 2014 FIFA World Cup final between Germany and Argentina. Even around 160 million people follow the annual Super Bowl in US American football, drawing more than one third of its viewership from outside the US (Richter, 2018). Leagues and clubs capitalize on this internationally growing fan base to achieve economic and financial success. For example, European football clubs such as Real Madrid, Manchester United, Bayern Munich or FC Barcelona established local offices or conducted international marketing tours to further expand their revenues from international broadcasting rights outside the home markets (van Overloop, 2015). Similarly, the big US basketball or baseball leagues recognized the importance of developing an international fan base to profit from additional broadcasting and merchandise revenues. As such, the NBA hosted regular season games in Japan, London and Mexico City since 1990 and the MLB plans to commence its 2019 and 2020 seasons in Asia (Associated Press, 2017). It follows that leagues, clubs and sport marketers must serve the needs of inherently different fan groups. This spurs the question for clubs and global sport marketers whether to tailor their offerings according to fans' country-specific preferences or to follow a one-size fits all strategy.

Intriguingly, however, cross-cultural research in sport marketing exploring differences and similarities between international sport fans is limited (S. Kim, Andrew, & Greenwell, 2009; Won & Kitamura, 2007). The existing cross-cultural studies mostly compared US to Korean or Japanese sport consumption motives (Gau & Kim, 2011;

¹ Pääfgen, C. A. (2019). Motivational profiles of global sport consumers. Unpublished Manuscript.

James, Fujimoto, Ross, & Matsuoka, 2009; S. Kim et al., 2009), with a scarcity of insights on consumer motives in and between emerging markets (V. Ratten & Ratten, 2011). Moreover, prior studies have limited their comparative analysis of international sport consumers to one specific sport and have utilized student samples, which limited the generalizability of findings.

Thus, the present study attempts to overcome these limitations and to answer more recent calls for research on examining sport consumption motives in different countries and cultural contexts (Robinson & Trail, 2005; Wann, Grieve, Zapalac, & Pease, 2008). Accordingly, we draw upon data from representative respondent groups from China, Germany, Japan, South Korea and the US to explore potential country differences in sport consumption motives around the globe. As such, our research advances existing studies on sport consumption motives (Gau & Kim, 2011; James & Ross, 2004; S. Kim et al., 2009; H. H. Kwon & Trail, 2001; Wann et al., 2008; Won & Kitamura, 2007), providing an effective psychographic segmentation of sport consumer groups across the world. Our findings offer a rich picture of fans' specific needs that marketing efforts can build upon to design appropriate sport marketing communication strategies (McDonald, Milne, & Hong, 2002).

The remainder of this paper is structured as follows: in section 2.2, we outline existing cross-cultural studies on consumer sport motives while section 2.3 derives the rationale for the current investigation. Section 2.4 and 2.5 cover the research setup and describe the data and methodology. In section 2.6, we present the results, followed by a discussion, practical implications and limitations in the subsequent sections.

2.2 Theoretical background

2.2.1 Sport consumption motives

Motivation refers to an individual's activated state of mind that urges or drives a person toward goal directed behavior (Bayton, 1958; Mowen & Minor, 1998). More so, motivation acts as person's driving force that triggers action while providing purpose and guidance for the impelled behavior (Hawkins, Best, & Coney, 2004). For clubs, leagues and sport marketers it is vital to understand and serve sport fans' motivation for consuming sport events to initiate or sustain their game attendance and consumption.

Accordingly, in sport marketing research, motivation has been extensively studied to explore why fans consume sport (Funk et al, 2002; Kahle et al, 1996; Milne & McDonald, 1999; Sloan, 1989; Trail & James, 2001; Wann, 1995). Thus, researchers have identified an array of sport motives and have developed scales to measure the motives of sport consumers (Ballouli, Trail, Koesters, & Bernthal, 2016). The identified sport consumption motives include a vast variety of diverse attributes such as eustress, self-esteem, escape, entertainment, economic (gambling), aesthetic, group affiliation, and family (Wann, 1995); achievement, acquisition of knowledge, aesthetics, drama, escape, family, skill, physical attraction, social interaction (Trail & James, 2001), amongst many others. Based on these identified motives, researchers have developed multiple scales to measure sport consumer motivations.

Among the most established instruments to measure sport motives are the Sport Fan Motivation Scale (Wann, 1995), the Motivation Scale for Sport Consumption (MSSC) (Trail & James, 2001), or the Sport Interest Inventory (SII) (Funk, Mahony, & Ridinger, 2002). These scales measure fans' hedonic motives, which are experiential in nature and

include personal and subjective reaction towards the consumed sport (Funk, Filo, Beaton, & Pritchard, 2009).

2.2.2 Sport consumption motives across countries and cultures

Although many studies have derived a comparative understanding of spectator motives (e.g. by gender, race, type of sports) there is still a scarcity of research on how sport consumption motives differ across countries and cultures (S. Kim et al., 2009; Won & Kitamura, 2007). Typically, sport has been explored from an Anglo-American perspective that has influenced the way academics and practitioners addressed sport-related issues (Chadwick, 2007).

Most existing studies compared sport consumption motives between US sport fans and fans from other countries (most notably Japan and Korea) as well as between US and international (Asian) students (see table 1). For example, Kwon, H. H. and Trail (2001) compared American and international students' motivations by means of a market segmentation approach. The authors found only minor differences in sport consumption and concluded that separate marketing plans for both groups were unnecessary. Kim, S. et al. (2009) found differences between American and Korean sport spectators in their motivations to watch mixed martial arts. They showed that fans' sport interest, fighter interest and drama predicted media consumption for American fans, while sport interest, drama and adoration were significant predictors for the Koreans. A further study by James et al. (2009) compared sport consumption motives and identification levels between US and Japanese fans of professional baseball teams. They found significant differences on nine out of ten motives. Whereas US sport fans emphasized game aesthetics, players' skills and the drama of games, Japanese fans rated entertainment and the opportunity to enjoy games with family and friends highest. A study by Kaplan and Langdon (2012)

showed that the primary sport motive for Chinese fans was aesthetics, whereas entertainment was the most decisive fan motive for American fans. D. Han, Mahony, and Greenwell (2016) grouped sport fan motivations in collectivistic and individualistic motivations to evaluate if individualists (US fans) would have individualistic motivations, while collectivists (Korean fans) would have collectivistic sport fan motivations. However, with no significant findings, Han, D. et al. (2016) suggested that individualistic motives could be common motives for sport fans independent from their cultural value orientations.

In one of the few non-US comparative studies, Won and Kitamura (2007) found that Japanese and Korean football spectators were mainly motivated by three motives including drama, vicarious achievement and entertainment. Whereas Korean spectators rather attended a football game to socialize with friends, Japanese spectator attended the game alone or with family members.

Although the literature on sport consumption motives converges on the fact that fans with dissimilar backgrounds differ in their motivational profiles, there is no consensus on the specific motives that prevail in individual countries or larger consumer groups, which warrants further investigations.

Table 1: Overview of comparative studies on sport consumption motives

Study	Study design (method, participants)	Countries/groups in scope	Determinant(s)	Dependent variable(s)	Method(s)
<i>Comparative studies on sport consumption motives between the USA and other countries</i>					
(H. H. Kwon & Trail, 2001)	Survey, 300 students	“International”, American	Market segments	Sport consumption motives (fan identification scale)	GLM – Multivariate procedure, univariate tests
(S. Kim et al., 2009)	Survey, 437 participants from one US and one Korean city	USA, Korea	Sport interest, drama, adoration, fighter interest	Fan motives: drama, escape, aesthetic qualities, vicarious achievement, socializing, national pride, economic factor, adoration, violence, sport interest, fighter interest, organizational interest; sport media consumption	CFA, ANOVA, backward regression analysis
(James et al., 2009)	Survey, 683 spectators (US) and 690 spectator (Japan)	USA, Japan	Country, team identification	Achievement, aesthetics, drama, entertainment, escape, family, knowledge, physical skill, social interaction, team affiliation, team identification	MANOVA

[Article 1] Motivational profiles of global sport consumers
Theoretical background

Study	Study design (method, participants)	Countries/groups in scope	Determinant(s)	Dependent variable(s)	Method(s)
(Gau & Kim, 2011)	Survey, 359 students	Korea, Taiwan, USA	Country	Four items extracted from James and Ross' (2002) Psychological Connection to Team (PCT) scale	ANOVA
(Kang, Lee, & Bennett, 2014)	Survey, 229 American and 203 Asian international students	American and Asian international students	American and Asian international sample	Interest in football, interest in players, bonding with friends, socialization, drama, interest in team, school pride, role model, bonding with family, aesthetics, customer service, excitement, entertainment value, sport knowledge, vicarious achievement, wholesome environment, escape, future behavior	CFA, MANOVA, stepwise multiple regression
(Li-Wen Hsieh, Chien-Hsin Wang, & Yoder, 2011)	Survey, 213 US living within a 50-mile radius of the local professional baseball ballparks, 202 Taiwanese	USA, Taiwan	Family influence, achievement motive, aesthetic motive, escape motive, knowledge motive, social affiliation motive, gender, age, marital status, travel time	Games attended, games watched on TV, team identification, baseball fandom	Chi-square and independent t-analyses, stepwise multiple regression, 2-group path analysis

[Article 1] Motivational profiles of global sport consumers
Theoretical background

Study	Study design (method, participants)	Countries/groups in scope	Determinant(s)	Dependent variable(s)	Method(s)
(Kaplan & Langdon, 2012)	Survey, 250 Chinese, 260 Americans	USA, China	Country	Fan motives: aesthetics, affiliation, stimulation, entertainment, self-esteem, escape, family, economic	MANOVA, ANOVA
(D. Han et al., 2016)	Survey, 351, American students, 310 Korean students	USA, Korea	Nationality	Sport fan motivations: aesthetics, entertainment, escape, self-esteem, stimulation seeking/eustress/drama, community pride, player attachment, team attachment, family bonding, and group affiliation	MANCOVA
<i>Comparative studies on sport consumption motives between Asian countries</i>					
(Won & Kitamura, 2007)	Survey, 1,104 spectators from K-League and J-League games in Korea and Japan	Korea, Japan	Country	Spectator motives: interest in player, community, entertainment, drama, escape, physical skills, social, family, vicarious achievement	CFA, MANOVA

2.3 The current investigation

Although previous cross-national studies (see table 1) contributed to the identification of country differences in sport consumption motives, these studies encounter several limitations that the present study attempts to dispel. First, the studied samples include college students (Gau & Kim, 2011; Kang et al., 2014; H. H. Kwon & Trail, 2001) or on-site sport spectator (James et al., 2009; S. Kim et al., 2009; Mahony, Nakazawa, Funk, James, & Gladden, 2002; Won & Kitamura, 2007). In contrast, the present study employs country-representative samples, which enable a broader generalization of findings. Second, previous efforts mostly focused on the US and examined country differences in sport consumption motives between the US and other countries. In addition to the US, we investigate fans' sport motives to consume their favorite sport in five different countries from all over the world, including non-Western countries such as China, Japan and South Korea. To the best of the authors' knowledge, there is no comparable study yet that has examined sport consumption motives on such a global scale. Because the popularity of sport differs in international markets (i.e. football is more popular in Germany, whereas baseball is more popular in Japan), research also needs to account for potential differences regarding the consumption of different sports. Indeed, researchers have found that fans of different sports exhibit distinctly divergent motivational profiles (James & Ross, 2004; McDonald et al., 2002; Wann et al., 2008; Wann, Schrader, & Wilsen, 1999). For example, Wann et al. (1999) showed that consumers who preferred individual sports to team sports were substantially more attracted by aesthetics motives than by any other sport consumption motive. Similarly, Wann et al. (2008) explored differences between three dichotomous pairs of sport types: individual/team sports, aggressive/non-aggressive

sports and stylistic/non-stylistic sports. In line with other studies², the authors showed that fans' motives for consuming the different sport types varied significantly.

Accordingly, in the current investigation, we first compare consumers' motivational differences for consuming different sports within the individual countries followed by a comparison of one specific sport across all countries.

2.4 Data and methodology

2.4.1 Sample and procedure

We use data from a representative survey conducted between April and May 2016 in five countries, including Germany, USA, South Korea, Japan and China. The English questionnaire was taken from the well-established Motivation Scale for Sport Consumption (MSSC) (Trail & James, 2001). The market research company Nielsen sports conducted the translation and back-translation of the local language versions by native speakers into Mandarin, Japanese, Korean, and German. They coded the online survey in the local language versions and recruited the participants in the selected countries. In total, 5,000 participants (1,000 per country) were recruited to complete the questionnaire. Respondents in Germany, USA, South Korea and Japan were representative of the respective country's online population regarding age, gender, and geographic location. In China, however, a local market research agency administered by Nielsen Sports conducted face-to-face interviews to account for a comparatively lower

² McDonald et al. (2002) found substantial motivational differences across diverse sports such as auto racing, college baseball, professional baseball, college basketball, professional basketball, college football, professional football, golf, and ice hockey. For example, James and Ross (2004) explored fans' motivational patterns for three non-revenue college sports including baseball, softball and wrestling. The authors found that the motives achievement, drama and family were substantially higher for fans of wrestling than for fans of baseball and softball.

online population and potentially distorted response behavior in online polls. Thus, the Chinese sample is representative of the country's total population.

Of the 5,000 respondents in the five countries, 3,886 respondents selected or named their favorite sport to watch and subsequently answered questions related to their sports motives³. The other respondents indicated that they do not watch sports and were excluded from this study. In order to have sufficiently comparable sample sizes, we only considered favorite sports, which had at least 30 respondents per country. Accordingly, our sample consists of 2,754 respondents (see table 2).

The respondents' mean age in the country samples varies from 37.20 years (China) to 44.40 years (Japan). The percentage of female respondents ranges from 36.75% (USA) to 52.77% (Japan). The large majority of respondents is married and works as an employee (see table 3).

Table 2: Overview of favorite sports per country

Sports	CHN	GER	JAP	SKO	USA
Football	172	382	101	215	76
Basketball	205	-	-	30	107
Baseball	-	-	188	386	112
American Football	-	-	-	-	266
Figure Skating	-	-	60	-	-
Tennis	-	-	52	-	-
Volleyball	-	-	69	-	-
Dancing	-	52	-	-	-
Motorsports (cars)	-	50	-	-	-
Swimming	-	30	-	-	-
Track & Field	-	36	-	-	-
Golf	-	-	-	44	-

³ Respondents were asked to select their favorite sport to watch from a pre-defined list of sports or to name their favorite sport in an open field if the preferred sport was not listed. Subsequently, respondents answered questions related to the motives for watching their favorite sport (see measurement for details).

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Sports	CHN	GER	JAP	SKO	USA
Badminton	64	-	-	-	-
Table Tennis	57	-	-	-	-

Note: Sports with n >= 30; Country abbreviations: CHN = China, GER = Germany, JAP = Japan, SKO = South Korea, USA = Unites States of America

Table 3: Profile of respondents

	CHN	GER	JAP	SKO	USA
n	498	550	470	675	561
Gender					
Female	36.75%	42.55%	52.77%	39.41%	40.29%
Male	63.25%	57.45%	47.23%	60.59%	59.71%
Age					
Mean (years)	37.20	41.83	44.40	41.14	39.68
Below 25	8.03%	11.45%	3.62%	6.96%	9.80%
25 - 34	34.74%	23.82%	23.40%	30.22%	36.01%
35 - 44	16.06%	19.64%	18.51%	18.81%	18.89%
45 - 59	24.10%	33.27%	43.83%	38.81%	23.35%
Above 59	8.03%	11.82%	10.64%	5.21%	11.94%
Marital status					
Single	15.86%	33.45%	35.74%	31.56%	27.99%
Married	70.48%	37.64%	59.36%	57.48%	63.99%
Living with partner	9.44%	28.91%	4.89%	10.96%	8.02%
No answer	4.22%	-	-	-	-
Occupation					
Pupil/ student	5.02%	13.09%	1.28%	10.07%	4.63%
Employee	63.86%	56.18%	47.45%	54.52%	46.34%
Business owner	13.45%	8.00%	11.49%	14.52%	15.51%
Housewife/househusband	2.01%	1.64%	4.47%	4.89%	0.71%
Pensioner	7.23%	3.83%	15.96%	8.30%	4.81%
Unemployed	1.20%	12.55%	1.70%	1.19%	9.09%
Other	7.17%	4.72%	17.66%	6.52%	18.89%

Note: Country abbreviations: CHN = China, GER = Germany, JAP = Japan, SKO = South Korea, USA = Unites States of America

2.5 Measurements

2.5.1 Sport consumption motives

We employed the Motivation Scale for Sport Consumption (MSSC) initially developed by Trail and James (2001) to examine which motives are most salient among international sport consumers because good properties of the scale have been confirmed in previous studies (Ballouli et al., 2016; Gau, James, & Kim, 2009; James & Ross, 2004). The scale showed good construct reliability, criterion validity, discriminant validity and internal consistency (Fink, Trail, & Anderson, 2002; Robinson & Trail, 2005; Robinson, Trail, & Kwon, 2004; Trail & James, 2001). The instrument assesses eight different sports spectator motives including vicarious achievement, knowledge, aesthetics, drama, escape, physical attraction, skills and social. Each subscale contained three items and was measured using 7-point Likert-type scales ranging from strongly disagree to strongly agree.

Vicarious achievement

The vicarious achievement motive refers to fans who feel good when their favorite teams perform well. Fans derive a feeling of identification and belongingness from vicarious achievement, which results in increased self-esteem (Wann, 1995). Thus, fans who score high on the vicarious achievement motive consume sports to watch their favorite team win, which in turn enhances their self-esteem.

Knowledge

The knowledge motive refers to fans' wish to increase their knowledge about the sports they consume. It incorporates the degree to which individuals consume sports because of their particular interest in sports-related knowledge and strategies (Trail & James, 2001).

Aesthetic

The aesthetic motive refers to an individual's wish to spectate sports because of the artistic beauty and grace of the sports (Wann, 1995). Commonly, artistic sports such as gymnastic, dancing or figure skating exhibit high aesthetic appeal because of the athletes' artistic expression. However, the aesthetic motive is not confined to fans of artistic or stylistic sports (Sargent, Zillmann, & Weaver, 1998), but is also applicable to fans of other sports (e.g. appreciation of a distinctive move).

Drama

The drama motive refers to fans' desire to consume sports to feel excitement and stimulation (Wann, Melnick, Russell, & Pease, 2001). Accordingly, spectators motivated by drama enjoy watching close games with an uncertain outcome because the uncertainty provides them with positive stress and arousal (Trail & James, 2001).

Escape

The escape motive refers to sports spectating as a diversion away from the rest of one's life (Sloan, 1988). Accordingly, by consuming sports, individuals can temporarily forget their troubles related to their private life or work life. Thus, particularly in personally difficult or stressful times, sport consumption can serve as an individual's escape (Wann et al., 1999).

Physical attraction

The physical attraction motive refers to fans' motivation to consume sports because they find the athleticism and sex appeal of the athletes appealing. The effect of physical attributes has been traditionally appropriated in advertising, where endorsers' physical

attractiveness has been shown to positively influence the sale of products (Klug & Vigar-Ellis, 2012).

Skill

The skill motive refers to fans' desire to watch sports because of the appreciation of the physical prowess and athletic talent of the athletes. Fans enjoy watching exceptional executions of moves and athletic brilliance of the athletes. Moreover, spectators often relate the perceived superior ability of athletes to their own self-concept, which provides them with inherent satisfaction and increased self-worth (Fink, Parker, Brett, & Higgins, 2009).

Social

The social motive refers to fans' desire to consume sports as an opportunity to socialize with others. Fans strong on the social motive enjoy developing relationships with others and being part of a group when consuming sports. They appreciate sports as a platform where individuals from various backgrounds can unite in their mutual interests (Cornelissen, 2007).

2.6 Data analysis

First, we conduct confirmatory factor analysis to test the reliability and validity of the Motivation Scale for Sport Consumption (MSSC) in each of the country samples. Second, we assess measurement invariance of the measurement scales by means of the package lavaan (Rosseel, 2012) in R 3.3.1 (R Development Core Team, 2017). Third, based on the factor means for each country, multivariate analysis of variance (MANOVA) was used to test if there are significant differences between sport consumption motives among the different sports in each of the five countries. Lastly, MANOVA is used to determine

potential cross-national motivational differences when consuming a common target sport (football). The obtained results are described subsequently.

2.7 Results

2.7.1 Measure validity and reliability

The confirmatory factor analysis on the MSSC in the individual countries confirms good fit. The factor loadings exceed the suggested threshold of 0.70 (Hair, Black, Babin, Anderson, & Tatham, 1998) in all countries with the exception of one item within the physical attraction subscale, which is slightly below the threshold in China, South Korea and Japan. Table 4 shows that the coefficient alphas of the sub dimensions of the MSSC all are above the recommended level of 0.7 (Nunnally, 1978). Moreover, the average variances extracted for the subscale range from 0.526 to 0.945 and are higher than the threshold of 0.5 suggested by Dillon and Goldstein (1984), indicating convergent validity. In addition, discriminant validity was determined by means of the test suggested by Fornell and F. Larker (1981). A scale exhibits discriminant analysis if the average variance extracted by the underlying latent variable exceeds the shared variance (i.e. squared correlations) of the respective latent variable with another latent variable (see appendix A - 1 for details). In the country samples of the US, Germany and Japan, no squared correlation is larger than the average variance extracted, indicating discriminant validity. In the South Korean and Chinese sample, minor violations of discriminant validity occurred for the dimensions of physical attraction (South Korea and China), knowledge (China) and drama (China). However, the composite reliability exceeds the suggested threshold of 0.7 (Bagozzi & Yi, 2012) across all constructs and countries. Thus, we can confirm validity and reliability of the MSSC in the selected countries.

Table 4: CFA results: Latent variable loadings and reliability

Latent variable loading and reliability	CHN	GER	JAP	SKO	USA
Vicarious achievement					
It increases my self-esteem	.857	.987	.914	.904	.972
It enhances my sense of self-worth	.891	.957	.913	.910	.973
It improves my self-respect	.857	.972	.940	.931	.971
Cronbach's alpha	.901	.981	.944	.938	.981
Average variance extracted	.754	.945	.851	.837	.945
Composite reliability	.902	.981	.945	.939	.981
Knowledge					
I can increase my knowledge about the activity	.771	.900	.874	.803	.920
I can increase my understanding of the strategy by watching the game	.846	.903	.912	.825	.896
I can learn about the technical aspects by watching the game	.783	.851	.867	.813	.924
Cronbach's alpha	.839	.914	.914	.854	.938
Average variance extracted	.641	.782	.783	.662	.835
Composite reliability	.842	.915	.915	.855	.938
Aesthetics					
I enjoy the artistic value	.837	.898	.888	.853	.943
I like the beauty and grace of the sport	.910	.811	.918	.873	.897
It is a form of art	.854	.904	.890	.853	.944
Cronbach's alpha	.899	.903	.927	.895	.949
Average variance extracted	.752	.760	.807	.739	.861
Composite reliability	.900	.904	.923	.895	.949
Drama					
I prefer "close" games rather than "one-sided" games	.816	.720	.897	.833	.810
I like games where the outcome is uncertain	.817	.834	.708	.879	.815
A tight game between two teams is more enjoyable than a blowout	.805	.822	.903	.865	.821
Cronbach's alpha	.854	.833	.865	.893	.856
Average variance extracted	.661	.630	.707	.738	.665
Composite reliability	.854	.837	.876	.894	.856
Escape					
It provides me with an opportunity to escape the reality of my daily life for a while	.815	.920	.857	.834	.916

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Latent variable loading and reliability	CHN	GER	JAP	SKO	USA
I can get away from the tension in my life	.878	.845	.872	.854	.888
It provides me with a distraction from my daily life for a while	.842	.943	.873	.867	.892
Cronbach's alpha	.881	.928	.902	.888	.926
Average variance extracted	.714	.817	.753	.725	.808
Composite reliability	.882	.923	.902	.888	.926
Physical attraction					
I enjoy watching players who are physically attractive	.867	.723	.777	.838	.867
The main reason I watch is because I find the players attractive	.847	.912	.822	.897	.972
An individual player's "sex appeal" is a big reason why I watch	.668	.856	.548	.634	.952
Cronbach's alpha	.828	.864	.762	.818	.951
Average variance extracted	.638	.699	.526	.636	.868
Composite reliability	.840	.873	.773	.837	.952
Skills					
I enjoy watching the skill of the players	.822	.908	.944	.848	.882
Watching the performance of the players is something I enjoy	.904	.906	.896	.720	.923
Watching the athleticism of the players is something I enjoy	.857	.769	.898	.829	.853
Cronbach's alpha	.892	.889	.937	.833	.914
Average variance extracted	.742	.745	.833	.641	.684
Composite reliability	.895	.897	.937	.840	.917
Social					
I like to socialize with others	.886	.910	.912	.868	.938
I like having the opportunity to interact with other people	.931	.872	.918	.907	.943
I enjoy talking to other people	.869	.906	.912	.916	.923
Cronbach's alpha	.923	.924	.940	.925	.954
Average variance extracted	.803	.802	.839	.805	.786
Composite reliability	.924	.924	.940	.925	.954

Note: All results are standardized. Robust standard errors and chi-square statistics are estimated using the Satorra-Bentler procedure (Satorra & Bentler, 1994) Country abbreviations: CHN = China, GER = Germany, JAP = Japan, SKO = South Korea and USA = United States of America.

China: $\chi^2=409.085$ (224); $\chi^2/df=1.826$; RMSEA=.041; CFI=.972; SRMR=.032.

Germany: $\chi^2=392.035$ (224); $\chi^2/df=1.750$; RMSEA=.037; CFI=.981; SRMR=.043.

Japan: $\chi^2=425.021$ (224); $\chi^2/df=1.897$; RMSEA=.044; CFI=.974; SRMR=.043.

South Korea: $\chi^2=492.007$ (224); $\chi^2/df=2.196$; RMSEA=.042; CFI=.970; SRMR=.043.

USA: $\chi^2=333.691$ (224); $\chi^2/df=1.490$; RMSEA=.030; CFI=.99; SRMR=.026.

2.7.2 Measurement invariance across countries

One essential component in cross-country research is to ensure that survey constructs are equally comprehended and measured across countries. Accordingly, constructs need to exhibit measurement invariance across countries to make inferences about differences between the national subsamples. Thus, we applied tests for measurement invariances to show that mean differences evolve from different responses to the underlying constructs and are not due to measurement differences or scaling artifacts (Steenkamp & Baumgartner, 1998). More specifically, we conducted a stepwise, hierarchically ordered test of three types of measurement invariance, including configural, metric and scalar invariance.

First, we tested for configural invariance, which is commonly defined as pattern invariance and shows if the factor loadings exhibit similar patterns in all studied countries (Steenkamp & Baumgartner, 1998). Table 5 shows that the RMSEA value is well below the recommended threshold of 0.08 (MacCallum, Browne, & Sugawara, 1996), revealing a good fit. The χ^2/df value is 2.486 and meets the recommended cut-off values of three to five (Little & Kline, 2016; Wheaton, Muthen, Alwin, & Summers, 1977). Moreover, the CFI value exceeds the suggested threshold of 0.95 (Hu & Bentler, 1999). All factor loadings in the countries are significant and reveal similar patterns across the countries. Thus, we can establish configural invariance across the five countries.

Second, we assessed full metric invariance, which requires the similarity of response patterns across the countries. Accordingly, a scale's one-unit change needs to underlie the same meaning in all nations (Jilke, Meuleman, & van de Walle, 2015). We determined full metric variance by assessing if the configural invariance model with freely estimated loadings on all country samples fits significantly better than the full metric invariance

model, which has constrained equal factor loadings across all nations. As shown in table 5, the full metric variance fits the data well. RMSEA (0.039) and CFI (0.978) are above the recommended cut-off value (Hu & Bentler, 1999). The Δ CFI of 0.002 is below the proposed cut-off value of 0.01 (Cheung & Rensvold, 2002), indicating full metric invariance.

Table 5: Measurement invariance across countries

	Configural invariance model	Full metric invariance model	Full scalar invariance model	Partial scalar invariance model
	(1)	(2)	(3)	(4)
Fit				
χ^2	2826.2	3025.1	4295.7	3553.2
df	1120	1184	1248	1224
χ^2/df	2.523	2.555	3.442	2.903
RMSEA	.037	.039	.054	.045
CFI	.981	.978	.955	.969
Measurement				
Model comparison		2 vs. 1	3 vs. 1	4 vs. 1
Δ CFI		.002	.023	.009
Decisions	Model	Model accepted	Model rejected	Model accepted
Freely estimated loadings/ intercepts				
Vicarious achievement				
Esteem	all/all	-/all	-/-	-/-
Self-worth	all/all	-/all	-/-	-/all
Respect	all/all	-/all	-/-	-/-
Knowledge				
Know	all/all	-/all	-/-	-/-
Understand	all/all	-/all	-/-	-/-
Learn	all/all	-/all	-/-	-/all
Aesthetics				
Artistic	all/all	-/all	-/-	-/all

	Configural invariance model	Full metric invariance model	Full scalar invariance model	Partial scalar invariance model
	(1)	(2)	(3)	(4)
Beauty	all/all	-/all	-/-	-/-
Art	all/all	-/all	-/-	-/-
Drama				
Close	all/all	-/all	-/-	-/-
Uncertain	all/all	-/all	-/-	-/-
Tight	all/all	-/all	-/-	-/-
Escape				
Escape	all/all	-/all	-/-	-/-
Tension	all/all	-/all	-/-	-/-
Distraction	all/all	-/all	-/-	-/all
Physical attraction				
Attractive	all/all	-/all	-/-	-/-
Attractive 2	all/all	-/all	-/-	-/all
Sexappeal	all/all	-/all	-/-	-/all
Skill				
Skill	all/all	-/all	-/-	-/all
Performance	all/all	-/all	-/-	-/-
Athletic	all/all	-/all	-/-	-/-
Social				
Social	all/all	-/all	-/-	-/-
Others	all/all	-/all	-/-	-/-
Talk	all/all	-/all	-/-	-/-

Third, we determined scalar invariance, which relies on metric invariance and requires that the item intercepts are also equivalent across the countries. If scalar invariance is confirmed, the latent variables means' can be compared across countries (Jilke et al., 2015). To assess full scalar invariance, all item intercepts were constrained to be equal across all countries. The Δ CFI of 0.023 shows that the full scalar invariance model fits

the data significantly worse than the full metric invariance model, exceeding the recommend cut-off value of 0.01. However, as noted by Steenkamp and Baumgartner (1998) cross-national studies extremely rarely demonstrate full scalar variance. Thus, we tested for partial scalar invariance by freeing seven intercepts from its invariance constraints. RMSEA (0.051) and CFI (0.976) show that the partial scalar invariance model fits the data well. In addition, the Δ CFI of (0.009) meets the cut-off value proposed by Cheung and Rensvold (2002). Accordingly, partial scalar variance across the five countries was determined, confirming the applicability of the Motivational Scale for Sport Consumption (MSSC) across different countries and cultural backgrounds.

2.7.3 Motivational profiles across different sports and countries

We conduct Multivariate Analysis of Variance (MANOVA) to determine if different sport consumption motives prevail among different target sports. The target sport served as the grouping variable and the eight motivation sub dimensions functioned as multiple dependent variables. MANOVA was employed for each country sample separately. Table 6 shows means and standard deviations for each motive in the respective country. The results from the MANOVA⁴ show significant multivariate effects for the country samples in Germany⁵ (Wilk's Lambda (32, 1985.6) = 5.29, $p < 0.001$), Japan⁶ (Wilk's Lambda (32, 1690.6) = 5.43, $p < 0.001$), South Korea⁷ (Wilk's Lambda (24, 1926.4) = 2.21, $p < 0.001$)

⁴ Given the significant multivariate effects in four of the five countries, separate univariate tests were conducted for each of the eight motives. The favorite target sports again functioned as grouping variables and univariate analysis were employed for each motive and in each of the four countries with significant MANOVA results. Subsequently, post-hoc comparison tests using the Bonferroni correction were applied.

⁵ In Germany, univariate tests revealed significant between subject effects on the motivation subscales knowledge (F (4, 545) = 4.42, $p < 0.002$), aesthetics (F (4, 545) = 8.30, $p < 0.001$), drama (F (4, 545) = 10.23, $p < 0.001$) and physical attraction (F (4, 545) = 3.05, $p < 0.05$).

⁶ In Japan, univariate tests showed significant between subject effects on the motivation subscales vicarious achievement (F (4, 465) = 3.00, $p < 0.05$), aesthetics (F (4, 465) = 12.95, $p < 0.001$), physical attraction (F (4, 565) = 4.11, $p < 0.05$) and skill (F (4, 565) = 5.26, $p < 0.001$).

⁷ In South Korea, univariate tests showed significant between subject effects on the motivation scales vicarious achievement (F (3, 671) = 4.96, $p < 0.05$), knowledge (F (3, 671) = 2.84, $p < 0.05$) and physical attraction (F (3, 671) = 4.74, $p < 0.05$).

and the USA⁸ (Wilk's Lambda (24, 1595.8) = 4.01, $p < 0.001$). For the Chinese subsample, MANOVA showed no significant motivational patterns between the different target sports. Post-hoc analyses reveal that there are significant differences regarding the consumption of individual and team sports across the countries.

Table 6: Means and standard deviations for the MSSC motives by target sport and country

Target sport per country	VIC	KNO	AES	DRA	ESC	PHY	SKI	SOC	n
China									
Football	4.04 (1.58)	4.61 (1.47)	4.07 (1.74)	5.03 (1.47)	4.13 (1.76)	4.21 (1.71)	4.79 (1.57)	4.47 (1.66)	172
Basketball	4.19 (1.61)	4.77 (1.41)	4.32 (1.64)	5.43 (1.42)	4.30 (1.66)	4.41 (1.66)	5.16 (1.57)	4.72 (1.62)	205
Table tennis	4.04 (1.42)	4.43 (1.37)	4.28 (1.61)	5.05 (1.44)	4.32 (1.52)	4.30 (1.55)	4.82 (1.52)	4.57 (1.45)	57
Badminton	3.81 (1.34)	4.55 (1.49)	4.38 (1.55)	4.88 (1.57)	4.23 (1.75)	4.31 (1.37)	4.64 (1.52)	4.35 (1.59)	64
Germany									
Football	3.45 (1.77)	4.95 ^a (1.43)	3.90 ^a (1.61)	5.43 ^{a,b} (1.22)	5.41 (1.37)	2.72 ^a (1.68)	4.89 (1.38)	5.34 (1.32)	382
Dancing	3.94 (1.86)	4.24 ^a (1.57)	5.26 ^{a,b,c} (1.58)	4.33 ^{a,c} (1.64)	5.15 (1.41)	3.25 (1.51)	4.63 (1.65)	5.38 (1.38)	52
Motorsports (cars)	3.25 (1.80)	4.72 (1.33)	3.85 ^c (1.50)	5.23 ^c (1.53)	5.25 (1.43)	2.77 (1.91)	4.61 (1.47)	4.87 (1.42)	50
Track & Field	3.58 (1.82)	4.47 (1.36)	4.05 ^b (1.79)	5.00 (1.22)	5.18 (1.42)	3.02 (1.85)	5.11 (1.34)	4.97 (1.30)	36
Swimming	4.21 (2.04)	4.23 (1.88)	4.03 (1.76)	4.56 ^b (1.93)	4.74 (2.01)	3.66 ^a (2.02)	4.87 (1.84)	5.39 (1.35)	30

⁸ In the USA, univariate tests showed significant between subject effects on the motivation subscales vicarious achievement ($F(3, 557) = 21.71, p < 0.05$), knowledge ($F(3, 557) = 4.30, p < 0.05$), aesthetics ($F(3, 557) = 16.38, p < 0.001$), escape ($F(3, 557) = 4.85, p < 0.05$), physical attraction ($F(3, 557) = 18.35, p < 0.001$) and social ($F(3, 557) = 8.08, p < 0.001$).

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Target sport per country	VIC	KNO	AES	DRA	ESC	PHY	SKI	SOC	n
Japan									
Football	3.21 (1.35)	4.24 (1.43)	4.34 (1.41)	4.90 (1.53)	4.22 (1.43)	3.58 ^a (1.39)	5.04 ^b (1.36)	3.76 (1.50)	101
Baseball	3.50 ^a (1.57)	4.33 (1.48)	4.09 ^a (1.53)	4.83 (1.45)	4.35 (1.49)	3.64 (1.37)	5.18 ^a (1.38)	3.90 (1.41)	188
Figure skating	2.86 ^a (1.48)	4.12 (1.46)	5.57 ^{a,b,c} (1.35)	4.35 (1.30)	3.98 (1.47)	4.21 ^{a,b} (1.47)	5.88 ^{a,b,c} (1.21)	3.68 (1.50)	60
Tennis	3.49 (1.33)	4.36 (1.30)	4.70 ^b (1.33)	4.97 (1.28)	4.17 (1.18)	3.67 (1.20)	5.41 (1.32)	3.96 (1.30)	52
Volleyball	3.08 (1.38)	3.94 (1.41)	4.15 ^c (1.48)	4.87 (1.41)	3.85 (1.45)	3.24 ^b (1.41)	4.90 ^c (1.45)	3.54 (1.45)	69
South Korea									
Football	4.49 ^b (1.19)	4.80 ^b (1.13)	4.57 (1.20)	5.28 (1.12)	5.03 (1.16)	4.01 ^b (1.31)	5.04 (1.02)	4.99 (1.10)	215
Basketball	4.83 (1.14)	4.89 (1.00)	4.68 (1.12)	5.26 (1.18)	5.26 (1.00)	4.71 ^{a,b} (1.28)	5.41 (1.04)	5.22 (0.85)	30
Baseball	4.43 ^a (1.15)	4.82 ^a (1.06)	4.40 (1.13)	5.31 (1.11)	5.17 (1.00)	3.86 ^a (1.30)	5.05 (0.98)	4.95 (1.13)	386
Golf	5.08 ^{a,b} (1.09)	5.30 ^{a,b} (1.00)	4.74 (1.10)	5.38 (0.90)	5.12 (1.04)	4.19 (1.18)	5.33 (0.80)	5.16 (1.23)	44
USA									
Football	5.36 ^b (1.8)	5.99 (1.16)	5.68 ^b (1.34)	5.96 (1.04)	5.82 (1.21)	4.42 ^b (2.31)	6.01 (1.05)	5.97 ^{a,c} (1.32)	76
Basketball	5.31 ^{a,c} (1.77)	5.91 (1.18)	5.69 ^{a,c} (1.32)	5.85 (1.05)	5.85 (1.21)	4.80 ^{a,c} (2.07)	6.04 (1.10)	5.78 ^b (1.33)	107
Baseball	4.00 ^{b,c} (1.95)	5.62 (1.21)	4.80 ^c (1.74)	5.69 (1.24)	5.34 (1.42)	3.38 ^c (2.06)	5.72 (1.14)	5.04 ^{b,c} (1.70)	112
American football	3.88 ^{a,b} (2.07)	5.52 (1.35)	4.61 ^{a,b} (1.80)	5.88 (1.13)	5.38 (1.47)	3.21 ^{a,b} (2.13)	5.83 (1.15)	5.32 ^a (1.54)	266

Notes: Standard deviations appear in parentheses below each mean. MSSC subscale scores range from 1 to 7. VIC = vicarious achievement, KNO = knowledge, AES = aesthetics, DRA = drama, ESC = escape, PHY = physical attraction, SKI = skills, SOC = social. Means sharing a common superscript are significantly different at $p < 0.05$.

Because there are different motivational profiles for sport consumption depending on the target sport in four of the five countries, we selected a common target sport, for which fans' motives were compared across countries. Football was among the favorite sports in all our sampled countries, allowing for a motive comparison across all countries. To assess cross-country differences in fans' motivational profiles to consume sport, we performed a multivariate analysis of variance (MANOVA). The means of the motivation subscales served as dependent variables while the country variable functioned as independent variable. The results reveal highly significant multivariate effects (Wilk's Lambda (32, 3446) = 22.43, $p < 0.001$). Thus, a series of eight separate univariate tests were conducted⁹ (see results in table 7).

Table 7: Means and standard deviations for the MSSC motives for consuming football by country

	CHN ^a	GER ^b	JAP ^c	SKO ^d	USA ^e	F (4, 941)	Partial η^2	Post-hoc comparisons (Bonferroni)
Vicarious achievement	4.04 (1.58)	3.45 (1.77)	3.21 (1.35)	4.49 (1.19)	5.36 (1.88)	36.32**	0.13	(a,e) (b,e) (c,e) (d,e) (a,c) (a,b) (b,d) (c,d)
Knowledge	4.61 (1.47)	4.94 (1.43)	4.42 (1.43)	4.24 (1.43)	5.99 (1.16)	20.34**	0.08	(a,e) (b,e) (c,e) (d,e)
Aesthetics	4.07 (1.74)	3.90 (1.61)	4.34 (1.41)	4.57 (1.20)	5.68 (1.34)	25.00**	0.10	(b,c) (h,d) (c,d) (a,e) (b,e) (c,e) (d,e) (a,d) (b,d)
Drama	5.03 (1.47)	5.43 (1.22)	4.90 (1.53)	5.27 (1.12)	5.96 (1.04)	10.43**	0.10	(a,e) (b,e) (c,e) (d,e) (a,b) (b,c)

⁹ Whenever Levene's test for homogeneity of variance was significant at the $p < 0.01$ level, nonparametric statistics (Kruskal-Wallis) were used to confirm the effects obtained via the MANOVAs and univariate analyses. If the same effects prevailed, only parametric results were reported. As shown in table 7, significant country differences ($p < 0.01$) with regard to the motives for consuming football were found in every motivation subscale. Post-hoc comparison analyses using the Bonferroni correction confirmed several pairwise differences.

	CHN ^a	GER ^b	JAP ^c	SKO ^d	USA ^e	F (4, 941)	Partial η^2	Post-hoc comparisons (Bonferroni)
Escape	4.13 (1.76)	5.41 (1.37)	4.22 (1.21)	5.03 (1.15)	5.82 (1.21)	39.02**	0.14	(a,e) (c,e) (d,e) (a,b) (a,d) (b,c) (b,d)
Physical attraction	4.21 (1.71)	2.72 (1.68)	3.58 (1.39)	4.01 (1.31)	4.42 (2.31)	41.06**	0.15	(a,e) (b,e) (c,e) (a,b) (a,c) (b,c) (b,d)
Skills	4.79 (1.57)	4.89 (1.38)	5.04 (1.36)	5.04 (1.02)	6.01 (1.05)	13.02**	0.05	(a,e) (b,e) (c,e) (d,e)
Social	4.47 (1.66)	5.34 (1.32)	3.76 (1.50)	4.99 (1.10)	5.97 (1.32)	42.77**	0.15	(a,e) (b,e) (c,e) (d,e) (a,b) (a,c) (a,d) (b,c) (b,d) (c,d)

Notes: Standard deviations appear in parentheses below each mean. ** p<0.01

2.8 Discussion

The goal of the present study was to explore differences in motivational profiles of global sport consumers. To allow for a meaningful cross-national comparison of spectator motives, we confirmed the applicability of the MSSC in international markets by demonstrating measurement invariance of the construct. We found that across the countries, the motivational profiles for consuming a target sport are particularly influenced by the type of sport. For South Korean fans of team ball sports such as football, basketball and baseball, the motives drama, escape and skills are most salient for consumption. Likewise, Chinese basketball and football fans show similar motivational profiles, with a preference for drama, skills and knowledge. Also, within the US sample, basketball, baseball and American football exhibit highest scores on the same motives, namely skills, drama and knowledge. These results confirm Wann et al.'s (2008) study by showing that the type of sport (e.g. team vs. individual sports), as well as the form (e.g. stylistic vs. non-stylistic sports) drive motivational differences for sport consumption. As such, scores for aesthetic motivation were higher for artistic sports such as dancing or

figure skating compared to non-artistic or non-stylistic sports. In fact, the aesthetic motive was among the most salient motives for watching figure skating (Japan) or dancing (Germany). Accordingly, it appears that aesthetic aspects such as artistic value, grace and beauty are decisive for fans' motivation to consume stylistic sports. Although the motive physical attraction ranked among the less salient motives for consuming a favorite target sport, it was significantly more pronounced for sports with a focus on body types such as swimming and figure skating.

Regarding the motive vicarious achievement, we obtained conflicting results in Japan and South Korea. In Japan, the desire to enhance one's self-esteem or self-worth was more prevalent as a motive for consuming baseball than for consuming figure skating. Wann et al. (2008) explained a similar finding in their study by arguing that sport fans follow a team (e.g. baseball team) for many years, which in turn results in high levels of identification. On the contrary, according to Wann et al. (2008), rooting for a figure skater is less likely to result in high identification because individual athletes usually compete for much shorter time spans than teams. However, this explanation is contradictory to the results in South Korea, where vicarious achievement was more prominent for consuming golf, an individual sport, than for consuming the team sports of baseball and football. Potential explanations for this finding could be related to the huge popularity of golf players in South Korea and the comparably long career duration of golf players. In fact, some golfers play at competitive levels for more than 20 years. For example, golfer K. J. Choi is a South Korean superstar, who has been competing in the PGA Tour since 1999 and has endorsed continuous support from a loyal fan base.

Finally, we found empirical evidence that country-differences prevail in fans' motivational profiles for consuming the same target sport (football). Within the German

sample, the most important motives for consuming football correspond to entertainment-related aspects. German fans watch football to “have an opportunity to escape the reality of their life for a while”, “socialize with others” or experience excitement in a game “where the outcome is uncertain” (see table 4, for full survey questions). It appears that within the very mature German football market, fans’ sport consumption motives are comparable to motives for consuming non-sports entertainment. In fact, a study on the determinants of the TV demand for German football games suggested that the game outcome uncertainty “may shape spectator demand for some but not all sporting products market” (Schreyer, Schmidt, & Torgler, 2018, p. 157). Intriguingly, the motives that were most prevalent for consuming football in the other country samples were besides drama, skills and knowledge. For Japan and South Korea, our results contradict findings from Won and Kitamura (2007), who found that for spectators of the respective national football league (K-League and J-League) the motives skills and knowledge play a subordinate role. However, our results show that the motive skills is among the most salient motives and in fact reveals the same score in both countries. Accordingly, we diverge from Won and Kitamura’s (2007) estimation that Korean football fans are not interested in the game of football itself. On the contrary, it appears that football fans from South Korea and Japan are strongly interested in the skills and performance of the players. Yet, Japanese fans are significantly more motivated to acquire knowledge of the sport than South Koreans are and want to learn more about strategic and technical aspects of the game. In fact, given that within the US and Chinese sample the motives knowledge and skills are likewise most relevant for football consumption, increasing interest for the game of football can be assumed for these countries. One explanation could be derived from the fact that our country-representative samples showed that football is the most popular sport in Germany, whereas in the other four countries other sports are more

popular (e.g. basketball in China, baseball in South Korea and Japan and American football in the US). Thus, sport fans in these countries might be interested in learning more about players and football itself.

2.8.1 Practical implications

The present study offers valuable insights for international sport marketers to understand motivational profiles of global sport consumers. Drawing upon a wide array of different sports and using unique country-representative samples, the study's findings help to develop sport and country-specific marketing campaigns. First, the MSSC is a viable tool for sport marketers around the world to identify and understand sport consumer motives. Second, the result of the study provides sport marketers with a more detailed understanding on how to adapt their marketing campaigns to sport consumption motives that are salient for fans of different target sports in different countries. Given that across the countries, motivational differences were most prevalent among different types of sports, sport marketers should particularly account for the nature of the sport when designing their offerings. Third, the empirical results indicate that for a same target sport, sport marketers need to tailor their marketing strategies to fans' country-specific sport consumption motives. In the case of football, sport marketers can tap into consumers' thirst for information about players, game tactics and strategies in those markets, where football is still less popular than other sports. In saturated football markets like Germany, however, marketers need to ensure that fans do not consider football as just another entertainment offering. Thus, football leagues and clubs should focus on serving fans' motives to experience drama and excitement by fostering a league's competitive balance.

2.8.2 Limitations and future research scope

Lastly, some limitations should be noted, which can pave the way for future research endeavors. First, respondents had to indicate their motives for watching their favorite sport independent from a specific consumption situation. Accordingly, their motives could be related to watching a game of their favorite sport at home, in a stadium or in public. As a result, some sport consumption motives might be more salient in specific consumption situations (e.g. when watching a game in the stadium). Thus, future studies could examine if different consumption sites have an impact on fans' consumption motives. Second, although the present study showed that country differences prevail when watching the same target sport, we did not explore which cultural dimensions could have an impact. Thus, future research could draw on established cross-cultural frameworks such as Hofstede's cultural dimension theory (Hofstede, 1984) or Schwartz' culture model (Schwartz & Bilsky, 1990) to identify which specific cultural dimensions alter fans' consumption motives. In addition, we compared one specific target sport, football, across the countries. Additional sports could be included in a cross-country comparison to provide more insights into other sports. Third, previous research (Robinson et al., 2004; Robinson & Trail, 2005; Trail, Robinson, Dick, & Gillentine, 2003; Woo, Trail, Kwon, & Anderson, 2009) showed that sport consumption motives' are strongly related to fans' identification with multiple point of attachments such as players, teams or coaches. The present study, however, does not account for fans' identification levels when examining their motives for consuming their favorite sport. Future studies should explore how identification levels alter fans' consumption motives within a wide variety of sports and cultural backgrounds.

3. [Article 2] The effect of fan and athlete similarity on personal identification¹⁰

3.1 Introduction

Consumers often feel strongly attached to professional sport athletes. Almost 300 million people follow athlete superstars such as Cristiano Ronaldo, Neymar and Lionel Messi on Instagram and take part in their daily life (Influencer DB, 2018) Through social media, athletes have an enormous power to attract coveted demographics (e.g. young adults) and spread messages across a range of channels in international markets (Jin & Phua, 2014). A resulting emotional bond or connection between consumer and celebrity forms the basis for the celebrity's appeal (Escamilla, Cradock, & Kawachi, 2000; Johnson, 2005; Till, Stanley, & Priluck, 2008). This connection can be described as identification, or the overlap between the consumer's schema and the entity's schema (Bergami & Bagozzi, 2000). However, it remains unclear what makes consumers connect (i.e. identify) with one celebrity (i.e. athlete) and not another (Carlson & Donovan, 2013).

One intuitively appealing determinant of consumer/celebrity identification is the similarity between two individuals (Maccoby & Wilson, 1957; Slater & Rouner, 2002). Individuals find others, who are actually similar or perceived to be similar to them (e.g., physically, in background, interests, and personality) attractive because they are more familiar (Byrne, 1971). In fact, a large body of empirical and anecdotal evidence suggested that similarity "breeds attraction" (Montoya, Horton, & Kirchner, 2008, p. 890). The similarity effect has been analyzed in various dyads such as superior/subordinate (Tsui & O'Reilly, 1989), mentor/protégé (Eby et al., 2013), married couples (M. T. Rogers, 1999; R. J. H. Russell & Wells, 1991) or consumer/celebrity

¹⁰ Pääfgen, C. A., Schmidt, S. L., Schreyer, D. (2019). The effect of fan and athlete similarity on personal identification. Unpublished Manuscript.

(Chang, 2008). In the context of sport, studies show that fans are attracted by teams that reveal strong similarity to their own actual or ideal self (Carlson, Todd, & Cumiskey, 2009; Fink & Parker, 2009; Madrigal & Chen, 2008).

Despite the fact that celebrity athletes are one of the most used endorser category in advertising worldwide (Desmarais, 2014), the influence of similarity attributes on individuals' identification in the consumer/athlete dyad is still unexplored. One reason for this scarcity is that the few studies expounding on athlete identification treat athletes as just another point of attachment for fans and consider the construct as an extension of team identification (S.-H. Wu, Tsai, & Hung, 2012). Moreover, the cultural robustness of similarity as a driver for identification has not been addressed before. Given that global marketing practitioners aim at designing messages with universal appeal across several markets (Desmarais, 2017), this shortage is rather intriguing.

In the present study, we therefore attempt to close this gap and investigate the impact of actual (age, gender, nationality) and perceived similarity attributes on consumers' identification with athletes in a cross-cultural setting. For the first time, to our knowledge, this subject is explored using country-representative respondent groups from Germany, USA, South Korea, Japan and China with more than 2,000 respondents. These data enable us to specifically answer our research question: How do similarity attributes influence consumers' level of identification with athletes? By answering this question, we aim to advance our understanding of the role of similarity between consumers and athletes in the identification process. Moreover, we account for cross-cultural and country-specific differences by testing the cultural robustness of the effects.

The rest of this article is organized as follows: In section 3.2 we outline the concept of identification and develop hypotheses to explore the role of similarity attributes on consumers' identification. The similarity attributes include actual similarity in the form

of nationality, age and gender and perceived similarity. Section 3.3 describes the data and the methods used in our analyses. Section 3.4 reports our findings. Section 3.5 discusses the results and section 3.6 concludes the paper.

3.2 Theoretical background and hypotheses

3.2.1 Consumer identification

In the marketing literature, social identity theory has been used to describe consumers' identification with celebrities (Cohen, 2001; Fraser & Brown, 2002; Jin & Phua, 2014). Social identity theory (Brewer, 1991; Tajfel & Turner, 1985) postulates that in expressing their self-worth, individuals usually thrive beyond their personal identity to develop a social identity. Social identity is defined as "that part of an individual's self-concept which is derived from his knowledge of his membership in a social group (or groups) together with the value and emotional significance attached to that membership" (Tajfel, 1978, p. 63). Thus, when an individual socially identifies with an individual or a group, the psychological separation diminishes, leading to a feeling of perceived oneness with one's social group (A. Aron, Aron, & Smollan, 1992). Accordingly, consumers who identify with a celebrity define parts of their identities based on being a fan of the celebrity (Johnson, 2005). As a result, the illusion of interactivity is created, which facilitates the celebrity to exert social influence on the fan (Rubin, Perse, & Powell, 1985).

The theoretical construct of identification describes the process of social influence through which consumer adopt values and behavior of celebrities (Fraser & Brown, 2002). Various scholars, including Burkes' dramatism theory (1950), Kelmans' theory of opinion change (1961) and Banduras' social cognitive theory (1986), have outlined theories of identification. According to Burke (1950), identification transpires when an individual shares the interests of another individual or believes that the other person

shares the interests. Kelman (1961) considered identification as a process of persuasion and proposed three processes of social influence: compliance, identification and internalization. In his theory of opinion change, Kelman (1961) established the idea that identification occurs when an individual impersonates another person because he or she perceives a satisfying self-defining relationship with that other person. Put simply, identification has happened when an individual enjoys being or acting like another person. According to Bandura's social cognitive theory (1986), an individual's likelihood to adopt another person's behavior depends on that individual's identification with the model. Bandura (1986) proposed that when a person perceives him or herself as similar to the model, the person is more likely to imitate the model's behavior. Accordingly, when individuals consider celebrities as similar to themselves, they are more likely to imitate the celebrity's behavior by purchasing a product endorsed by the celebrity.

In order to identify with others, individuals (i.e. consumers) should perceive other individuals (i.e. celebrities) as similar to themselves with regard to actually observable similarity attributes and subjectively experienced similarity attributes (E. M. Rogers & Bhowmik, 1970). Actual similarity attributes can include demographic characteristics such as age, occupation, gender, race or education (Lazarsfeld & Merton, 1954). Because demographics characteristics are usually visible or easily available after a short examination of another person (Crosby, Evans, & Cowles, 1990), individuals cling to demographics particularly when information about deep-level traits of others is unknown (Harrison, Price, & Bell, 1998; Kulik & Ambrose, 1992). When consumers face advertisements that spotlight celebrities, they presumably are initially not familiar with the athletes' deep-rooted personality traits (e.g. attitudes, perceptions, and values). Hence, consumers will most likely draw on demographic characteristics of the celebrity when forming their individual perception of the celebrity. The more demographic similarity

than dissimilarity persists, the higher the chances are that the individual will positively relate to the other person (Tajfel, 1982). This results from the fact that demographically similar individuals tend to have more common beliefs and life experiences. They consequently perceive interactions more positively reinforcing (Byrne & Clore, 1967) and less stressful (Vecchio & Bullis, 2001), resulting in a sense of comfort (Cable & Turban, 2001) and supportive behavior towards others (Tsui, Xin, & Egan, 1995). Subjectively experienced similarity attributes can include for example attitudes (evaluation of a particular object (Montoya & Horton, 2004)) or personality traits (e.g. character, achievement potential, intellectual modes (Carli, Ganley, & Pierce-Otay, 2016)).

In the present study, we focus on consumers' identification with athletes rather than celebrities from the film or music industry for the following two reasons. First, professional athletes are "some of the most recognizable, revered and imitated celebrities of all" (Shanklin & Miciak, 1997, p. 1) who provide universal popularity and clean images (Boyd & Shank, 2004). Second, fans' attachment feelings to athletes are much stronger than comparable bonds with actors or other celebrities (McCutcheon, Lange, & Houran, 2002) evolving from a strong endorsement depth (K. Hung, Chan, & Caleb, 2011). Therefore, in the following, we derive hypotheses regarding the similarity effect of actual similarity attributes (nationality, age and gender) on fans' identification with their favorite athlete. In addition, we derive hypotheses regarding the effect of fans' perceived similarity on their identification.

3.2.2 Similarity measures

Nationality similarity

According to social identity theory, national identity is one important cue for individual's self-categorization (Ma, Wang, & Hao, 2012) because it "provides focus for developing and maintaining the group's distinctive culture, religion, and way of life" (Kelman & Fisher, 2016, p. 105). Consumers from the same home country share similar values and search for cues to distinguish their national social identity from individuals from other countries. Consequently, individuals tend to consider others from a similar culture as in-group whereas others from a dissimilar culture as out-group (Ma et al., 2012). Within marketing research, studies have shown that advertisements, which are congruent with a society's cultural norm, tend to be more persuasive than advertisements that do not align with the society's cultural values (Cho, Kwon, Gentry, Jun, & Kropp, 1999; S.-P. Han & Shavitt, 1994).¹¹ Given that interaction with similar others tends to be more predictable (Berger & Calabrese, 1974) and decreases uncertainty (Thibaut & Kelley, 1959) we expect that cultural similarity or dissimilarity also influences individuals' identification levels. More precisely, we hypothesize that fans who selected athletes from the same country to identify more with the athlete than fans who named an athlete from a foreign country.

H1a: Fans identify more with athletes that come from their home country.

¹¹ Studies by Lantz and Loeb (1996); Sharma, Shimp, and Shin (1995) have shown that individuals prefer products from countries regarded as culturally similar to their home country over products from more culturally dissimilar countries. In a same vein, Laroche, Bergeron, Heslop, and Papadopoulos (2003) suggest that individuals from a subculture assess products more positively that originate from countries they culturally associate with.

Age similarity

When individuals categorize themselves by age, affect towards others will be higher if age similarity exists (McNeilly & Russ, 2000). Within celebrity research, there are some initial attempts at investigating the impact of age similarity between consumer and celebrity on consumers' attitudes. For example, Roy, Guha, and Biswas (2015) found that celebrity-consumer chronological age congruency increased consumers' evaluations including purchase intentions and attitude towards an advertisement. Similarly, Chang (2008) showed that age congruence between a consumer and a celebrity lead to a stronger connection to the celebrity. Within mass media research, Harwood (1999) showed that college students preferred TV shows with media figures of similar age because identifying with those media characters provided them with social identity gratifications and improved self-concepts. In an organizational context, Wagner, Pfeffer, and O'Reilly (1984) found that managers, who were more dissimilar in age compared to managers in the top executives group, were more likely to quit the organization. Furthermore, Tsui and O'Reilly (1989) found that in a superior/subordinate dyad, large age dissimilarity lead to higher perceived role ambiguity for subordinates. However, some studies also reported contrary findings with respect to the effect of age similarity on e.g. turnover rates (O'Reilly, Caldwell, & Barnett, 1989). Within the relational demographic literature, demographic differences are presumed to be symmetrical (Perry, Kulik, & Zhou, 1999). Thus, individuals will react negatively to demographic dissimilarity regardless of the direction of the difference (i.e. non-directional age difference) (Pfeffer, 1985). Although prior studies on age similarity within celebrity, mass media or organizational research did not explicitly study its impact on individual's identification, we build on the notion that age similarity induces positive connection. Hence, we expect that age similarity also has a positive impact on fans' identification levels.

H2a: Fans identify more with athletes who are of similar age to themselves.

Gender similarity

According to Banduras' social cognitive theory (1986), gender similarity can influence behavior adaption. In other words, individuals are more likely to emulate the behavior of others of the same gender. Individuals can determine the gender from other's physical appearance and utilize it as a nonverbal visual cue to assess one's similarity (Crijs, Claeys, Cauberghe, & Hudders, 2017; Dwyer, Orlando, & Shepherd, 1998). Celebrity research showed that gender similarity had an influence on people's active involvement with the celebrity (Shefner-Rogers, Rogers, & Singhal, 1998). Similarly, Tom et al. (1992) found that if other information are missing, individuals are more likely to emulate attitudes of same-gendered celebrity spokesperson if that person is of the same gender than of the opposite gender. Moreover, Klaus and Bailey (2008) found that females preferred female celebrity endorser over male celebrity endorser. Other studies, however, showed that female viewers identify equally well with characters of the same gender and the opposite gender but that male viewers identified stronger with same-gender characters (Lonial & van Auken, 1986; Widgery & McGaugh, 1993). In addition, Bocarnea (2001) showed that gender similarity had less importance than other factors (e.g. the modeled role). In a recent study by Brumbaugh (2009), three quasi-experimental studies showed that gender similarity had no effect on consumer's identification with a character depicted in an ad. Within the organizational literature, many studies have attested a positive effect of same-gender dyads on the buyer/seller relationship (Smith, 1998) or the supervisor/subordinate relationship (Bakar & McCann, 2014; Foley, Linnehan, Greenhaus, & Weer, 2016). For example, Bakar and McCann (2014) reported that gender similarity in the context of supervisor and subordinate lead to higher job satisfaction and

commitment to the work group. In addition, a study by Foley et al. (2016) showed that gender similarity had positive effects on protégé liking in a mentor-protégé dyad.

We argue that in the present study, based on findings from social psychology, gender similarity has a positive effect on identification. More precisely, we expect that having the same gender as the self-selected favorite athlete will positively influence a fan's degree of identification with the athlete.

H3a: Male fans identify more with male athletes whereas female fans identify more with female athletes.

Perceived similarity

Whereas demographic similarity reflects actual similarity (the degree to which one is actually similar to another individual), researchers have also studied the concept of perceived similarity. Perceived similarity refers to the degree to which an individual believes another person to be similar to him or herself (Montoya et al., 2008). Researchers have suggested that the most decisive factor for predicting attraction is in fact “that individuals believe their partners are similar, regardless of whether the partner is actually similar to them” (Montoya et al., 2008, p. 892). One explanation for this behavior is that individuals regard themselves favorably and accordingly implicitly assume that others with perceived similarities must show desirable characteristics (Pelham, Carvallo, & Jones, 2016). Within celebrity research, Choi and Rifon (2012) showed that the effect of celebrities in product endorsement is particularly strong when consumers perceive the celebrity's personality as congruent with their ideal self-concept. Moreover, research has also found that perceived similarity is related to the wish to emulate the behavior and characteristics of others (Bandura, 1986; Hoffner & Cantor). Accordingly, in the context of consumer/athlete dyads, athletes can act as role models that support fans in their self-

definition and self-categorization. More specifically, fans can identify with the athlete, if they perceive some similarity to themselves in terms of, for example, attitudes and behaviors (Foote, 1951; Kagan, 1958). Thus, we expect that perceived similarity in the fan/athlete dyad also has an effect on identification level and thus hypothesize:

H4a: The more a fan believes his or her favorite athlete to be similar to him or her the more she/he identifies with her/him.

Moreover, given that perceived similarity includes the evaluation of one-self to another person, the influence of perceived similarity should be greater than that of a person who is perceived as similar to others. Consequently, we expect that perceived similarity to oneself has a larger effect on identification than perceived similarity with others.

H5a: The effect of perceived similarity on a fan's identification is greater if the fan believes his or her favorite player to be similar to him/her than if he/she believes the player to be similar to others.

3.2.3 Cultural robustness of relationship between similarity attributes and identification

A decisive question when examining any psychological phenomenon is whether it manifests in a similar way across different cultures (Norenzayan & Heine, 2005). Within the literature on the similarity-attraction effect (SAE), multiple studies have confirmed the existence of the SAE in non-Western cultures. Studies among Japanese (Fujimori, 1980; Okuda, 1993, 2000), Indians (Shaikh & Kanekar, 1994) or Singaporeans (Singh & Ho, 2000) found that individuals prefer other people whose attitudes are more similar than dissimilar. However, few studies explored the phenomenon cross-culturally. Existing studies have revealed mixed results, questioning the generalizability of the SAE across cultures as noted by Heine, Foster, and Spina (2009) claiming "there was sufficient

ambiguity in the cross-cultural literature to warrant a more thorough investigation into the SAE” (Heine et al., 2009, p. 249). Although these studies have dealt with attraction rather than identification, we expect the underlying mechanism to function similarly as attraction is deemed a necessary antecedent to identification. Yet, we admit that our understanding of the effect of similarity attributes on identification across cultures is still of exploratory nature. Nevertheless, based on related literature on the SAE in other cultures, we expect the effect of actual similarity and perceived similarity on fans’ identification to be robust over the country samples. Thus, we hypothesize that:

H1b: The effect of nationality similarity on fans’ identification is robust over different countries and cultural backgrounds.

H2b: The effect of age similarity on fans’ identification is robust over different countries and cultural backgrounds.

H3b: The effect of gender similarity on fans’ identification is robust over different countries and cultural backgrounds.

H4b: The effect of perceived similarity self on fans’ identification is robust over different countries and cultural backgrounds.

H5b: The stronger effect of perceived similarity self than perceived similarity other on fans’ identification is robust over different countries and cultural backgrounds.

3.3 Data and methods

3.3.1 Sample and data collection

The sample includes country representative data from five different countries, including Germany, USA, South Korea, Japan and China. Overall, 5,000 participants completed the questionnaire in May 2016. Respondents in Germany, USA, South Korea and Japan were representative of the respective country’s online population in terms of age, gender, and geographic location. In China, due to conducting face-to-face interviews¹², respondents are representative of the country’s total (rather than the country’s online) population. Using a standard forward-backward translation procedure, the English language version of the questionnaire was translated into Mandarin, Japanese, Korean, and German by a professional translation agency. The survey was then administered online through Nielsen Sports (Cologne, Germany) and took between 15 and 20 minutes to complete.

Table 8: Sample characteristics

Country	n	Male (%)	Female (%)	Mean Age (Years)	Min	Max
United States	384	63.02%	36.98%	39.28	16	65
	(1,000)	(49.9%)	(50.1%)	(40.66)	(16)	(65)
Japan	338	52.37%	47.63%	45.32	16	65
	(1,000)	(49.8%)	(50.2%)	(44.21)	(18)	(65)
Germany	333	62.16%	37.84%	39.02	16	65
	(1,000)	(50.7%)	(49.3%)	(41.35)	(16)	(65)
South Korea	557	58.89%	41.11%	41.02	17	65
	(1,000)	(50.9%)	(49.1%)	(41.01)	(17)	(65)
China	415	62.89%	37.11%	36.14	18	69

¹² In China, face-to-face interviews were conducted in order to account for a comparatively lower online population and potentially distorted behavior in online polls.

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Country	n	Male (%)	Female (%)	Mean Age (Years)	Min	Max
	(1,000)	(51.2%)	(48.8%)	(39.26)	(16)	(69)

Note: Values outside brackets show sample characteristics of respondents, who named a professional sport athlete. Values in brackets represent full sample characteristics.

Our data contains the names of 2,027 athletes. Every respondent was asked to name his or her favorite professional sport athlete without any restriction on the sport disciplines, gender, age or origin. This approach is superior to most existing studies that provide respondents with a pre-defined list of celebrities because when individuals are free to choose a person they can associate with, they tend to select a person that shares some similarity (Burt and Reagans, 1997). Of the 5,000 respondents, 2,027 were able to provide a favorite athlete. From the 2,027 athletes, 640 unique athletes were identified.

We find statistically significant age and gender differences between the full sample and the reduced (respondents who named a favorite athlete) country samples. Regarding the age of the full sample and the reduced sample, there is a statistically significant mean age difference in the German sample (respondents with a favorite athlete are on average 2 years younger than respondents without a favorite athlete) and the Chinese sample (respondents with a favorite athlete are on average 3 years younger than respondents without a favorite athlete). Regarding the gender of the full sample and the reduced sample, there is a statistically significant gender difference in the USA, Germany, South Korea and China. In these countries, comparatively more male respondents than female respondents named a favorite athlete. This finding is in line with prior studies that showed that men are more interested in sports than women are (Gantz & Wenner, 1991; Wenner & Gantz, 1998).

Interestingly, the majority of respondents selected a favorite athlete that has the same nationality as themselves. More specifically, in the USA, 73.96% of the respondents

named an US citizen as their favorite athlete, whereas 26.04% picked a non-US athlete. In Japan, 80.18% selected a favorite athlete with Japanese nationality. This percentage presents the largest share of selected athletes with the same nationality among all of the studied countries. In Germany, 62.16% of the respondents selected a German athlete as their favorite athlete. Within the South Korean sample, 73.61% named a Korean as their favorite athlete. In China, 55.18% mentioned a Chinese athlete as their favorite athlete, while 44.82% named a non-Chinese athlete. In fact, this is the highest share of foreign athletes among all of the countries included in the analysis.

Table 9: Overview top 5 athletes per country (USA and Japan)

USA					Japan			
Rank	Athlete	Nationality	Gender	Age ¹	Athlete	Nationality	Gender	Age ¹
1.	Lionel Messi	Argentina	Male	28	Kei Nishikori	Japan	Male	26
2.	Peyton Manning	USA	Male	40	Ichiro Suzuki	Japan	Male	42
3.	Tom Brady	USA	Male	38	Mao Asada	Japan	Female	25
4.	Lebron James	USA	Male	31	Yuzuru Hanyu	Japan	Male	21
5.	Cristiano Ronaldo	Portugal	Male	31	Saori Kimura	Japan	Female	29

¹Age at 01.06.2016

Table 10: Overview top 5 athletes per country (Germany and South Korea)

Germany					South Korea			
Rank	Athlete	Nationality	Gender	Age ¹	Athlete	Nationality	Gender	Age ¹
1.	Thomas Müller	Germany	Male	26	Lee Seung-yuop	South Korea	Male	39
2.	Manuel Neuer	Germany	Male	30	Lionel Messi	Argentina	Male	31
3.	Mats Hummels	Germany	Male	27	Son Heung-min	South Korea	Male	23
4.	Bastian Schweinsteiger	Germany	Male	31	Dae-ho Lee	South Korea	Male	33
5.	Lionel Messi	Argentina	Male	31	Kim Yuna	South Korea	Female	25

¹Age at 01.06.2016

Table 11: Overview top 5 athletes per country (China)

China				
Rank	Athlete	Nationality	Gender	Age ¹
1.	Yao Ming	China	Male	35
2.	Kobe Bryant	USA	Male	37
3.	Lin Dan	China	Male	32
4.	Lionel Messi	Argentina	Male	31
5.	Cristiano Ronaldo	Portugal	Male	31

¹Age at 01.06.2016

Concerning the selection of athletes with the same or opposite gender, there is clear preference for male athletes independent of the respondent's gender. Within the full sample, 96.8% of the male respondents and 86.2% of the female respondents named a

male athlete as their favorite athlete. Within the country-specific samples, Japan shows the highest share (24.8%) of female respondents who selected a female favorite athlete as well as the largest share (7.3%) of male respondents with a female favorite athlete.

With respect to age similarity between favorite athlete and respondent, the average age difference in the full sample is -6.97 years, meaning that on average respondents selected an athlete who is 7 years younger than they are. The average age difference is highest in the Japanese sample (-13.83 years) and lowest in the Chinese sample (-0.93 years).

Table 12: Measurement of survey variables

Survey variables	Item description
Identification (adapted from Mael & Ashforth, 1992)	Average of the following questions: <ul style="list-style-type: none"> • When someone criticizes my favorite athlete, it feels like a personal insult. • I am very interested in what others think about my favorite athlete. • When I talk about my favorite athlete, I usually say “we” rather than “they.” • My favorite athlete’s successes are my successes. • When someone praises my favorite athlete, it feels like a personal compliment. • If a story in the media criticized my favorite athlete, I would feel embarrassed. (5-point Likert scale: 1=strongly disagree; 5=strongly agree)
Favorite athlete	Please name your favorite athlete.
Perceived similarity self based on (Dix, Phau, & Pougnet, 2010; Rich, 1997)	My favorite athlete shows the behavior that I try to imitate. (5-point Likert scale: 1=strongly disagree; 5=strongly agree)
Perceived similarity other based on (Dix et al., 2010; Rich, 1997)	Other people try to imitate the behavior of my favorite athlete. (5-point Likert scale: 1=strongly disagree; 5=strongly agree)
Sport activity	Sum of the weekly hours of sport activity: How many hours do you on average play / undertake the following sports per week? (List of all common sports + opportunity to add other sports)
Sport consumption	Sum of the weekly hours of sport consumption:

Survey variables	Item description
	How many hours do you on average watch the following sports per week? <i>(List of all common sports + opportunity to add other sports)</i>
Education	Categorization based on country-individual education level 1 = Low (Completed some high school, High school graduate), 2 = Middle (Completed some college, College degree, Completed some postgraduate) 3 = High (Master's degree, Doctorate, law or professional degree)
Net income	Categorization based on country-individual monthly or yearly income level 1 = Low 2 = Middle 3 = High
Years of fandom	How long have you been a fan of your favorite athlete? (in years)

3.3.2 Measures

In table 12, we outline the survey variables used in the present study. Table 13 summarizes the descriptive statistics for all measures. Identification with the favorite athlete is the dependent variable for the employed regression analyses. Dependent and independent variables as well as control variables are described in detailed in the consecutive sections.

Identification. The dependent variable *Identification* measures the extent to which an individual identifies with another individual. It is based on an established reflective construct composed of an average of six items measuring the extent to which an individual identifies with an organization or sport team (Bhattacharya, Rao, & Glynn, 1995; Mael & Ashforth, 1992; Ngan, Prendergast, & Tsang, 2011). We applied the construct on an individual level to reflect questions or statements like “When someone praises my favorite athlete, it feels like a personal compliment”, assessed on a 5-point Likert scale. The construct is sufficiently reliable (Churchill Jr., 1979) in every of the

country samples with the following Cronbach's alpha values: USA (0.94), Japan (0.92), Germany (0.94), South Korea (0.93) and China (0.90).

Demographic similarity. For determining the demographic similarity between respondent and his or her favorite athlete, several demographic attributes of the professional athletes were collected. Based on the respondent-provided names of the professional athletes, data from 641 unique athletes was gathered. Information such as nationality, age and gender was researched using standard internet-based search-engines such as Google. Subsequently, each respondent's similarity with the self-selected athletes was assessed based on the attributes of age, nationality and gender. For example, if a German respondent chose a German athlete as his or her favorite athlete, the measure of *Nationality Similarity* was labelled 1. In contrast, if a German respondent named a non-German athlete, the measure was labelled 0. Similarly, the measure of *Gender Similarity* was coded 1 (same gender) or 0 (opposite gender). For the *Age Similarity*, the measure was based on the age difference between the athlete and the respondent (+/- 5 years of age difference for age similarity coded as 1).

Perceived similarity. In order to measure the degree to which a fan perceives his favorite athlete to be similar to him or her as well as to others, two items based on Rich (1997) were used for the variables *Perceived Similarity Self* and *Perceived Similarity Others*. *Perceived Similarity Self* ("My favorite athlete shows the behavior that I try to imitate") assesses whether a fan tries to imitate the behavior of his or her favorite athlete. The item *Perceived Similarity Other* ("Other people try to imitate the behavior of my favorite athlete") assesses whether others try to imitate the behavior of the respondent's favorite athlete. Both items, which have been operationalized in the context of sport earlier by Dix

et al. (2010) and Hoegel, Schmidt, and Torgler (2014) and were evaluated by means of a 5-point Likert scale.

Control variables. The control variables include information about demographics and fan-specific measures. First, to factor for the potential influences of demographic characteristic on identification levels, we control for respondents' *Education* and *Net Income*. Given that measuring the respondents' educational and household income level is challenging in a cross-country study, we follow Nielsen's proven standard method building three educational and income groups namely low, medium and high education/income. For example, in the USA, a respondent's educational level was classified as low, medium and high if the individual completed some high school, graduated from high school and completed at least some college, respectively. Similarly, a US respondent's yearly income level was classified as low, medium and high if s/he specified a household net income of up to USD 34,999, between USD 35,000 and 69,999, and above USD 70,000+, respectively. Although these demographics do not classify as driver of identification, they potentially account for other factors that cannot be assessed. Second, fan-specific measures such as *Sport Activity* and *Sport Consumption* as well as *Years of Fandom* are included to account for fans' domain involvement. Previous research shows that fans with higher domain involvement tend to have higher levels of team identification (R. J. Fisher & Wakefield, 1998; Gwinner & Swanson, 2003). Correspondingly, higher domain involvement may also lead to higher levels of identification with athletes. Therefore, *Sport Activity* measures respondents' average weekly sport activity in hours while *Sport Consumption* measures respondents' average weekly sport consumption (i.e. sport on TV, online-streams, event attendance) in hours. Given that buyer involvement in a product category has an impact on customer loyalty and satisfaction (Olsen, 2007; Shaffer & Sherrell, 1997), we also account for the number

of years the fan actively follows his or her favorite athlete with the measure *Years of Fandom*.

3.3.3 Methods

We empirically test the influence on actual and perceived similarity on fans' identification with athletes in two steps. First, we conduct bivariate analyses and calculate Spearman's rank correlations. In doing so, we derive an initial understanding of the relation between *Identification* and the independent variables. Second, multivariate analyses are conducted using ordinary least squares (OLS) regressions with standard control variables. In order to reduce eventual bias from heteroscedasticity we calculate robust errors. Standardized regression coefficients (betas) are used to allow for effect size comparisons while variance inflation factors (VIFs) are calculated to account for issues with multicollinearity.

We conduct our analyses for each of the five obtained country samples. Accordingly, we can investigate how the hypothesized relationships between identification and the independent variables hold in the individual countries.

Table 13: Descriptive statistics of measures

	USA		JAP		GER		SKO		CHN		Min	Max
	(n=384)		(n=338)		(n=333)		(n=557)		(n=415)			
Dependent Variable	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD		
Identification	3.191	1.240	2.211	1.007	2.250	1.165	3.094	.928	3.169	1.051	1	5
Independent variables												
Nationality	0.740	0.439	0.802	0.399	0.621	0.486	0.736	0.441	0.552	0.498	0	1
Similarity ^a												
Age	-4.70	15.84	-13.80	16.65	-7.25	16.45	-8.71	13.76	-0.925	14.00	-49	53
Similarity ^b												
Gender Similarity ^a	0.646	0.479	0.604	0.490	0.628	0.484	0.630	0.483	0.665	0.472	0	1
Perceived	3.880	1.143	3.299	1.154	2.745	1.332	3.443	0.934	3.123	1.314	1	5
Similarity Self												
Similarity	4.073	1.042	3.680	1.021	3.243	1.231	3.397	0.957	3.448	1.236	1	5
Perceived Other												
Control Variables												
Sport Activity (in h per week)	8.384	11.979	2.720	4.813	4.498	5.138	5.375	8.404	1.424	2.791	0	80 (USA) 30 (JAP) 30 (GER)

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	USA (n=384)		JAP (n=338)		GER (n=333)		SKO (n=557)		CHN (n=415)		Min	Max
	Mean	SD										
Sport Consumption (in h per week)	4.893	4.999	2.919	3.889	3.706	4.371	5.010	5.905	2.924	3.910	0	73 (SKO) 21 (CHN) 30 (USA) 21 (JAP) 25 (GER) 36 (SKO) 35 (CHN)
Education	2.075	0.593	1.731	0.617	2.030	0.518	1.916	0.561	2.005	0.666	1	3
Net Income	2.172	0.862	1.808	0.724	2.153	0.701	2.066	0.598	2	0.771	1	3
Years of fandom	7.388	6.337	8.527	8.621	6.270	5.906	5.817	4.769	6.077	4.668	0	50 (USA) 50 (JAP) 45 (GER) 40 (SKO) 30 (CHN)

^a Binary /Dummy-variable: 0 = Non-similarity, 1 = Similarity; ^b Age difference between athlete and respondent in years

3.4 Results

3.4.1 Bivariate results

Spearman's rank correlations between the variables (all country-specific correlation models can be found in the appendix B - 2 – B - 6) support hypothesis 1a in the country samples of Germany, South Korea and Japan. According to hypothesis 1a, fans' *Identification* is positively affected when the favorite athlete originates from their home country. We find statistically significant correlations ($p < 0.01$) between *Identification* and *Nationality Similarity* in those countries. Contrary to our expectations, *Nationality Similarity* negatively influences fans' *Identification* in the USA. In China, however, we find no statistically significant correlation between the dependent variable and national similarity.

According to hypotheses 2a and 3a, the fan's similarity with respect to the athlete's age and gender should positively influence his or her identification. We find a significant and positive correlation of gender similarity in the US sample whereas the other country samples show no significant effect of gender similarity. With regard to age similarity, we only find a significant and negative correlation in the US sample. Hypothesis 4a states that fans' perceived similarity to themselves positively influences fans' identification with their favorite player. The bivariate results confirm these assumptions in all of the five country samples with statistically significant correlations between *Perceived Similarity Self* and *Identification*. Hypothesis 5a posits that a fan's *Identification* is higher when he/she perceives the favorite athlete to be similar to her/himself than if she/he perceives the favorite to be similar to others. This hypothesis is supported in the country samples of Germany, USA, Japan and China, where the correlation between *Perceived*

Similarity Self and *Identification* each is stronger than between *Perceived Similarity Other* and *Identification*.

The results from the bivariate analysis confirm most of the assumptions regarding the fan-specific control variables. *Sport Activity* is positively correlated with *Identification* in all of the five countries. *Sport Consumption* has a significant positive effect on fans' identification in the USA, Germany, South Korea and China. However, the *Years of Fandom* only show significant positive correlations in China.

Table 14: Effect of actual and perceived similarity on identification - USA

Country: USA Variables	Model 1a (n = 384)			Model 1b (n = 384)		
	b	Beta	VIF	b	Beta	VIF
Independent Variables						
Nationality Similarity ^a	-0.443*** (0.113)	-0.157	1.04	-0.390** (0.115)	-0.138	1.12
Age Similarity	-0.017*** (0.003)	-0.221	1.04	-0.013*** (0.003)	-0.163	1.16
Gender Similarity ^a	0.189* (0.109)	0.073	1.03	0.144 (0.108)	0.056	1.07
Perceived Similarity Self	0.358*** (0.056)	0.330	1.40	0.341*** (0.056)	0.315	1.46
Similarity Perceived Other	0.249*** (0.056)	0.330	1.37	0.224*** (0.057)	0.189	1.41
Control Variables						
Sport Activity				0.014*** (0.005)	0.133	1.26
Sport Consumption				0.002 (0.011)	0.009	1.18
Education				-0.233** (0.083)	-0.111	1.09
Net Income				0.225*** (0.063)	0.157	1.13
Years of fandom				0.003 (0.008)	0.016	1.05
Constant	1.075			1.05		
Adjusted R ²	0.383			0.430		

^a Binary variable: 0 = Non-similarity, 1 = Similarity; Note. b = unstandardized regression coefficient with robust errors in parentheses; beta = standardized regression coefficient;

VIF = variance inflation factor=1/tolerance. †p<0.1, *p<0.05, **p<0.01, ***p<0.001.

Table 15: Effect of actual and perceived similarity on identification - Japan

Country: Japan	Model 1a (n = 338)			Model 1b (n = 338)		
	b	Beta	VIF	b	Beta	VIF
Independent Variables						
Nationality Similarity ^a	0.464*** (0.116)	0.184	1.01	0.487*** (0.118)	0.193	1.04
Age Similarity	-0.002 (0.003)	-0.025	1.10	-0.002 (0.003)	-0.031	1.19
Gender Similarity ^a	0.196† (0.105)	0.095	1.04	0.173 (0.109)	0.084	1.14
Perceived Similarity Self	0.243*** (0.066)	0.279	1.71	0.239*** (0.066)	0.274	1.72
Similarity Perceived Other	-0.008 (0.069)	-0.008	1.66	-0.006 (0.070)	-0.006	1.68
Control Variables						
Sport Activity				0.022† (0.011)	0.106	1.09
Sport Consumption				-0.008 (0.015)	-0.030	1.10
Education				0.062 (0.083)	0.038	1.05
Net Income				0.081 (0.076)	0.059	1.05
Years of fandom				-0.004 (0.007)	-0.033	1.19
Constant	0.970			0.716		
Adjusted R ²	0.124			0.141		

^a Binary variable: 0 = Non-similarity, 1 = Similarity; Note. b = unstandardized regression coefficient with robust errors in parentheses; beta = standardized regression coefficient;

VIF = variance inflation factor=1/tolerance. †p<0.1, *p<0.05, **p<0.01, ***p<0.001.

Table 16: Effect of actual and perceived similarity on identification - Germany

Country: Germany	Model 3a (n = 333)			Model 3b (n = 333)		
	b	Beta	VIF	b	Beta	VIF
Independent Variables						
Nationality Similarity ^a	0.260* (0.114)	0.108	1.10	0.265* (0.114)	0.111	1.11
Age Similarity	0.000 (0.003)	0.004	1.13	0.000 (0.003)	0.001	1.19
Gender Similarity ^a	0.034 (0.107)	0.014	1.04	-0.018 (0.112)	-0.008	1.11
Perceived Similarity Self	0.430*** (0.048)	0.491	1.37	0.425*** (0.048)	0.486	1.43
Similarity Perceived Other	0.109* (0.047)	0.115	1.29	0.103* (0.048)	0.108	1.33
Control Variables						
Sport Activity				-0.004 (0.012)	-0.016	1.14
Sport Consumption				0.022 (0.015)	0.082	1.10
Education				-0.120 (0.105)	-0.053	1.19
Net Income				-0.041 (0.080)	-0.025	1.17
Years of fandom				0.010 (0.010)	0.050	1.08
Constant	0.534			0.804		
Adjusted R ²	0.330			0.343		

^a Binary variable: 0 = Non-similarity, 1 = Similarity; Note. b = unstandardized regression coefficient with robust errors in parentheses; beta = standardized regression coefficient;

VIF = variance inflation factor=1/tolerance. †p<0.1, *p<0.05, **p<0.01, ***p<0.001.

Table 17: Effect of actual and perceived similarity on identification - South Korea

Country: South Korea	Model 3a (n = 557)			Model 3b (n = 557)		
	b	Beta	VIF	b	Beta	VIF
Independent Variables						
Nationality Similarity ^a	0.273** (0.078)	0.130	1.04	0.258** (0.080)	0.123	1.08
Age Similarity	0.003 (0.002)	0.038	1.01	0.030 (0.002)	0.043	1.03
Gender Similarity ^a	-0.032 (0.062)	-0.016	1.03	-0.030 (0.063)	-0.015	1.06
Perceived Similarity Self	0.307*** (0.044)	0.309	1.89	0.295*** (0.044)	0.297	1.95
Similarity Perceived Other	0.386*** (0.044)	0.398	1.89	0.400*** (0.041)	0.406	1.92
Control Variables						
Sport Activity				0.006† (0.003)	0.056	1.03
Sport Consumption				0.013** (0.005)	0.080	1.06
Education				-0.063 (0.057)	-0.038	1.17
Net Income				-0.040 (0.052)	-0.026	1.18
Years of fandom				-0.004 (0.005)	-0.021	1.05
Constant	0.524			0.676		
Adjusted R ²	0.448			0.461		

^a Binary variable: 0 = Non-similarity, 1 = Similarity; Note. b = unstandardized regression coefficient with robust errors in parentheses; beta = standardized regression coefficient;

VIF = variance inflation factor=1/tolerance. †p<0.1, *p<0.05, **p<0.01, ***p<0.001.

Table 18: Effect of actual and perceived similarity on identification - China

Country: China	Model 3a (n = 415)			Model 3b (n = 415)		
	b	Beta	VIF	b	Beta	VIF
Independent Variables						
Nationality Similarity ^a	0.048 (0.085)	0.023	1.23	0.066 (0.086)	0.031	1.31
Age Similarity	0.004 (0.004)	0.051	1.11	0.003 (0.003)	0.040	1.22
Gender Similarity ^a	-0.125 (0.088)	-0.051	1.13	-0.118 (0.088)	-0.053	1.16
Perceived Similarity Self	0.342*** (0.040)	0.427	1.44	0.331*** (0.040)	0.413	1.48
Similarity Perceived Other	0.280*** (0.040)	0.323	1.44	0.270*** (0.040)	0.318	1.46
Control Variables						
Sport Activity				0.028* (0.012)	0.074	1.07
Sport Consumption				-0.001 (0.010)	-0.003	1.11
Education				0.020 (0.062)	0.012	1.33
Net Income				0.004 (0.057)	0.003	1.22
Years of fandom				0.014 (0.007)	0.063	1.07
Constant	1.189			1.073		
Adjusted R ²	0.451			0.459		

^a Binary variable: 0 = Non-similarity, 1 = Similarity; Note. b = unstandardized regression coefficient with robust errors in parentheses; beta = standardized regression coefficient;

VIF = variance inflation factor=1/tolerance. †p<0.1, *p<0.05, **p<0.01, ***p<0.001.

3.4.2 Multivariate results

We argued in hypothesis 1a, that *Nationality Similarity*, corresponding nationality between respondent and favorite athlete, has a positive influence on a fan's degree of identification. For each of the countries Japan, Germany and South Korea, both regression models (without and with control variables) support hypothesis 1a and yield statistically highly significant positive effects (Japan: $p < 0.001$, Germany $p < 0.05$, South Korea: $p < 0.001$) of *Nationality Similarity* on Identification (see table 15, 16, 17). In the USA, however, both regression models show a highly significant negative effect ($p < 0.001$) of *Nationality Similarity* on Identification (see table 14). For the Chinese sample, having the same nationality as the favorite athlete appears to have no significant effect on the fan's level of identification (see table 18). In hypothesis 1b, we posited that the effect of nationality similarity on fans' identification is robust over the country samples. However, running seemingly unrelated estimations for every country pair reveals statistical differences between the coefficient estimate of nationality similarity in the US sample and the coefficient estimate of nationality similarity in the other country samples¹³.

For hypothesis 2a, only the regression model in the US sample shows a significant result ($p < 0.001$) with regard to the effect of *Age Similarity* on Identification. A negative effect of similarity in age on US fans' identification can be reported. In hypothesis 2b, we posited that the effect of *Age Similarity* on fans' identification is robust over the country samples. However, seemingly unrelated estimations for every country pair show a statistical difference between the coefficient estimate of age similarity in the US sample

¹³ (USA / JAP: $\chi^2=29.30$, $p < 0.001$; USA / GER: $\chi^2=16.84$, $p < 0.001$; USA / SKO: $\chi^2=22.19$, $p < 0.001$; USA / CHN: $\chi^2=10.45$, $p < 0.01$)

and the coefficient estimate of age similarity in the other country samples. Yet, within all other country comparisons, the difference is not statistically significant.¹⁴

For hypothesis 3a, none of the individual country regressions models shows significant results with regard to the effect of *Gender Similarity* on *Identification*. Similar to the findings in the bivariate analysis, the results are contrary to our expectations. The non-significant findings are, however, robust over the country samples, as the seemingly unrelated estimations show no statistical difference between the country pairs.

The results of both regression models (without and with controls) in the individual countries support hypothesis 4a and show a statistically highly significant effect ($p < 0.001$) of *Perceived Similarity Self* on *Identification*. That is, in the USA, Japan, Germany and China, *Perceived Similarity Self* has the highest standardized regression coefficient (beta) of all variables in both regression models. In hypothesis 4b, we posited that the effect of perceived similarity self on fans' identification is robust over the country samples. Indeed, running seemingly unrelated estimations for every country pair reveals no statistical differences between the coefficient estimates of *Perceived Similarity Self* in the country samples. Thus, we can confirm hypothesis 4b.

The regression models in the country samples of the USA, Germany, Japan and China also give support to hypothesis 5a. In the country regression models (without and with controls) of the USA, Germany and China, the beta coefficient is each respectively greater for *Perceived Similarity Self* than for *Perceived Similarity Other*. In Japan, *Perceived Similarity Other* is not significant, whereas *Perceived Similarity Self* has the highest beta coefficient of all variables in both models. The latter thus seems to have a larger effect on

¹⁴ (USA / JAP: $\chi^2=5.97$, $p < 0.05$; USA / GER: $\chi^2=7.41$, $p < 0.01$; USA / SKO: $\chi^2=15.87$, $p < 0.001$; USA / CHN: $\chi^2=12.17$, $p < 0.01$)

fans' identification with athletes. In South Korea, both perceived similarity measures have a positive effect on fans' identification, though the beta coefficient of *Perceived Similarity Other* is greater than *Perceived Similarity Self*. In hypothesis 5b, we posited that the effect of *Perceived Similarity Other* on fans' identification is robust over the country samples. However, running seemingly unrelated estimations for every country pair reveals mixed results.¹⁵ Thus, we can only partially confirm hypothesis 5b.

Although some regressors are somewhat correlated, multicollinearity does not appear to be an issue. In all country models (without and with controls), all variance inflation factors (VIFs) are below the critical value of 2.5 (Allison, 1999) for determining multicollinearity.

3.4.3 Robustness analyses

In order to improve the robustness of our results, ordered probit models were calculated (see appendix B - 7). For the ordered probit models, the sum of the six Likert-scale items measuring fans' identification with the favorite athlete was calculated. The results obtained from the ordered probit models in the individual countries are very similar to the results from the OLS regressions.

3.5 Discussion

3.5.1 Interpretation of empirical results

The objective of this empirical analysis was to 1) determine if actual and subjective similarity attributes between fans and their favorite athlete drive fans' identification and 2) to examine if the effects are culturally robust. Accordingly, we examined the effects

¹⁵ (USA / JAP: $\chi^2=6.79$, $p<0.01$; USA / SKO: $\chi^2=5.96$, $p<0.05$; JAP / SKO: $\chi^2=25.30$, $p<0.001$; JAP / CHN: $\chi^2=12.21$, $p<0.001$; GER / SKO: $\chi^2=22.12$, $p<0.001$; GER / CHN: $\chi^2=7.47$, $p<0.05$; SKO / CHN: $\chi^2=4.71$, $p<0.05$)

of actual demographic similarity attributes including (1) nationality, (2) age and (3) gender as well as perceived similarity (4) on a fan's identification with his or her favorite athlete in five different countries.

In hypothesis 1a, we posited that a fan identifies more with his or her favorite athlete when the athlete stems from the same country as the fan. The results obtained in three of the five countries strongly support this hypothesis. In Japan, Germany and South Korea positive effects of similarity in nationality on identification were found. On the contrary, a negative effect of matching nationalities was reported in the US while the Chinese sample showed no significant results. It seems that in the countries of Japan, Germany and South Korea, individuals cling more to athletes with the same nationality and thus relate more strongly to athletes that share a common background. For US fans, however, identification appears to be higher for athletes with non-US nationality. One reason for this finding could be related to different cultural norms within the individual countries. In fact, many researchers aim to verify cultural frameworks developed in Western countries by testing them in Eastern cultures (Bellis, Hildebrand, Ito, & Herrmann, 2015). As a result, East-West comparisons have frequently treated individuals from different East Asian countries as homogenous subjects of one largely identical group (Lehman, Chiu, & Schaller, 2004). However, individuals from different East Asian countries reveal substantial differences on some cultural dimensions. For example, Chinese differ substantially from Japanese and South Korean consumers on the cultural dimension of uncertainty avoidance (Bellis et al., 2015). Uncertainty avoidance refers to the degree to which a country's residents deal with uncertainty regarding a future environment (Hofstede, 2009). Accordingly, consumers in countries with high (vs. low) uncertainty prefer conservative to adventurous choices and are more averse to ambiguities. Similar to Japanese and South Korean consumers, German consumers score much higher on the

uncertainty avoidance scale than consumers from the US and China. Indeed, rooting for a foreign athlete might require a fan to endure more uncertainty than rooting for an athlete from the same country. Thus, fans from uncertainty-avoiding countries tend to identify more with athletes from the same home country. In addition, conducting seemingly unrelated estimations revealed significant differences regarding the effect of nationality similarity on fans' identification between the US and the other four countries. Accordingly, we cannot establish the generalizability of the relationship over different cultures, paving the way for future research to examine the subject in different settings.

In hypothesis 2a we argued that a fan's similarity in age to his or her favorite athlete would drive his or her identification with the athlete. The results of our empirical analysis demonstrate evidence against hypothesis 2a as the US regression model yields significant negative results while the other countries show non-significant results. A possible explanation pertains to the age of the athletes. Most well-known athletes are within the age range of 20 – 40 years. In this particular age range, however, a fan's team identification is presumed to be lowest (Bergmann, Schmidt, Schreyer, & Torgler, 2016). Bergmann et al. (2016) attribute this to the fact that "individuals in their midlife phase often have less discretionary time, stronger family commitments and higher opportunity costs" [...] which "may negatively affect identification" (p. 719). Thus, fans who are of similar age than their favorite athletes are mostly in their midlife phase, in which identification levels might be less elaborated.

Moreover, none of the country-individual regression models (with controls) shows significant results for hypothesis 3a. It was predicted that gender similarity between fan and favorite athlete would drive a fan's level of identification. However, this result can be traced to the low number of female athletes within our samples. In fact, 96.8% of the

male respondents in the full sample named a male athlete. Similarly, 86.2% of the female respondents named a male athlete. Thus, it appears that in the public perception, the prevalence of male sport stars is so overarching that gender similarity or dissimilarity is not decisive for identification processes. In addition, we find the non-significant effect to be robust over the countries. The result adds to recent findings within celebrity advertising research that show that gender similarity had no effect on consumers' identification (Bocarnea, 2001; Brumbaugh, 2009).

In hypothesis 4a, we reasoned that a fan's perceived similarity to his or her favorite athlete has a positive effect on a fan's identification. The results reinforce this relationship. Indeed, no other variable in our country-specific multivariate analyses has a larger effect on fans' identification level. This finding confirms recent studies, claiming that believing the other person to be similar to oneself is in fact more important than actual similarity (Montoya et al., 2008). In addition, we find the effect to be cross-culturally robust, allowing for a generalizability of the relationship. Moreover, there is partial empirical evidence for hypothesis 5a. It was argued that a fan's perceived similarity to his or her favorite athlete has a stronger effect on identification than if the fan perceives the athlete to be similar to others. Accordingly, it seems that a fan's perceived congruence to his or her favorite athlete has more weight in the fan/athlete relationship than how others perceive the fan's favorite athlete. However, the cultural robustness of the finding entails reservations.

Finally, the results of the control variables accounting for fans' domain involvement as driver of identification are only relevant concerning general domain involvement but not relevant to specific domain involvement reflected by fans' years of fandom.

3.5.2 Practical implications

The empirical results of this study provide important implications for global marketing practitioners, as consumer identification is the key factor for the effectiveness of celebrity advertising (Biswas, Guha, & Roy, 2015; Kelman, 1961). Consumers who strongly identify with athletes often alter their consumption behavior (Mahony et al., 2002). This includes for example increased spendings (H. H. Kwon & Armstrong, 2002; Lichtenstein, Drumwright, & Braig, 2004), larger viewership (Carlson et al., 2009), higher purchase intention (Gwinner & Bennett, 2008) or increased event attendance (Bhattacharya et al., 1995). Thus, companies might consider selecting athletes who exhibit nationality similarity to their target consumers to trigger identification. More specifically, marketing managers in Germany, Japan and South Korea should preferably sign athlete endorsers who match their home market's nationality. In turn, consumers might show increased supportive behavior toward a brand endorsed by an athlete with the same nationality. Other demographic similarity characteristics, however, show less salience for fans' identification. In fact, fans do not necessarily identify more or less with athletes of the same gender or age (except for US sample). Thus, people in the celebrity endorsement business (i.e. advertisers) might select appropriate athlete endorsers of many different age cohorts and both genders. Intriguingly, fans' perceived athlete similarity is the single most important similarity attribute to drive identification across the countries. Accordingly, advertisers should invest in activities that exemplify an athlete's personality or interests. These characteristics should in turn preferably match those of the target audience to facilitate consumers' identification.

3.5.3 Limitations and future research directions

This paper contributes to the similarity-attraction and identification literature by providing evidence on the effect of celebrity/consumer congruence on identification. However, the results entail some limitations that pave the way for future research endeavors. First, it focuses exclusively on professional athletes. It would be intriguing to explore if comparable results can be obtained by replicating the study in other domains resorted for celebrity endorsement such as acting, music, or politics.

Second, the paper does not address specific outcomes of marketing communications such as purchase intention or attitude toward a specific advertisement. Rather, it is set within the higher concept of consumer identification. Although research has confirmed that consumer identification is an important predisposition for behavioral outcomes, actual behavior might nevertheless alter in a specific advertising situation. Accordingly, future studies could complement the present identification measures and explore the effect of celebrity/consumer similarity on consumption-related variables such as purchase intent.

Third, nationality similarity is modelled as a binary construct. Accordingly, it does not account for potentially different degrees of similarity between individuals from culturally similar countries. To further advance the present findings, future studies could explore the effect of similarity measures on identification with respect to the level of cultural similarity between individuals from different countries.

Fourth, the similarity measures in this paper focus only on a selection of possible similarity variables. Thus, other similarity measures might provide stronger explanatory power to the construct of identification than the selected variables. Future research could focus on additional variables such as race, interests or background.

3.6 Conclusion

This study contributes to the identification and similarity-attraction literature by advancing our understanding of the importance of similarity attributes for consumer/celebrity identification in different cultures and countries. More specifically, we explored the effect of actual and perceived similarity between fans and their favorite professional sport athlete on fans' degree of identification. The hypotheses are tested with country-representative samples from five countries including the United States, Japan, Germany, South Korea and China. Our empirical results show that actual similarity with regard to nationality has a positive effect on a fan's identification in Japan, Germany and South Korea, while it has a negative effect in the US. Gender similarity between a fan and his or her favorite athlete seems to have no influence on a fan's identification with the athlete. Moreover, age similarity affected fans' identification negatively in the US sample, while it seemed to have no effect in the other countries. Perceived similarity with the favorite athlete has the strongest influence on fans' degree of identification in all of the studied countries. Regarding the cultural robustness of the similarity effect on fans' identification, we find mixed effects, questioning the generalizability of the relationship and paving the way for future investigations.

4. [Article 3] Athlete brand image in global markets¹⁶

4.1 Introduction

Today, many professional athletes have internalized the importance to develop their individual brand. For example, tennis player Rafael Nadal successfully created his own brand, which features a stylized bull logo and is prominently represented in his tennis academy, foundation and own clothing line. Similarly, other prominent athletes like David Beckham, LeBron James, Serena Williams or Yao Ming have successfully converted their athletic abilities into unique brands, operating fashion lines, perfume labels or sport academies.

Establishing a distinctive athlete brand has many benefits for individual athletes. Well-branded athletes receive price premiums on their salary and transfer fees as well as uphold fan support even in times of poor athletic performance (Gladden & Funk, 2001). Because athletes are constantly at risk for unexpected and tedious injuries or performance drops, a strong personal brand may bypass potential losses from forfeited prize money through endorsement deals. Moreover, athletes with a well-established athlete brand image have the chance to leverage their sport career for an entry into non-sport related sectors and industries (Rein, Kotler, & Shields, 2006). Thus, brand management is of increasing importance for athletes to maximize their marketing value by developing their individual brand equity (Arai, Ko, & Kaplanidou, 2013).

Despite the rising importance, marketing scholars have only recently started to explore the antecedents and consequences of athlete brands (Arai et al., 2013; Arai et al., 2014; Kristiansen & Williams, 2015; Walsh & Williams, 2017). For example, Arai et al. (2013)

¹⁶ Pääffgen, C. A., & Schmidt, S. L. (2019). Athlete brand image in global markets. Unpublished Manuscript.

developed the scale of athlete brand image to examine the brand image of individual athletes by proposing the dimensions of athletic performance, attractive appearance and marketable lifestyle. Kristiansen and Williams (2015) explored how LPGA golfer Suzann Pettersen created and established their personal brand through organization produced and controlled brand communication strategies. Eventually, Walsh and Williams (2017) investigated the factors that influence perceived fit and attitudes toward athlete brand extensions. Yet, such previous research on athlete brands has so far refrained from exploring the concept in a cross-cultural context. However, it is crucial to understand athlete brand image in light of consumers' socio-cultural background (Arai et al., 2014) because culture is believed to be central to an individual's cognitive structure (Steenkamp, ter Hofstede, & Wedel, 1999). More specifically, the same marketing campaign illustrating an athlete's brand image might evoke preferential consumer responses in one market while receiving negative acclaim in the other due to cultural differences. In order to understand those potential cultural roadblocks, research across different national markets is needed (Erdogan et al., 2001; Hofstede, 1984).

The purpose of this study is thus twofold. First, we test the psychometric properties of a modified version of the athlete brand image scale (Arai et al., 2014) among country representative respondent groups from Germany, China, Japan, South Korea and the United States of America. Second, we explore potential country differences in the importance that fans attach to the dimensions of the athlete brand image to obtain a holistic picture on how to brand individual athletes in global markets.

The remainder of this study is structured as follows. In section 4.2 we provide an overview of the theoretical background, which has led to the conceptual development of the athlete brand image. We also outline prior research efforts on the athlete brand image and

develop our hypotheses. Section 4.3 describes measurements, data and various methods used in our empirical analysis. Section 4.4 reports our results. In section 4.5, we discuss our findings, provide practical implications and outline limitations and further research scope.

4.2 Theoretical background and hypotheses

4.2.1 Athletes as human brands

Celebrities, including athletes, can be defined as human brands because they can be professionally managed and possess additional associations and features of a brand (Thomson, 2006). Given an athlete's individual personality, distinctive appearance and unique name paired with his own symbolic meaning and value (Arai et al., 2014), athletes can be considered as brands in and of themselves (Walsh & Williams, 2017). For example, former football star David Beckham has established itself as a human brand conveying a level of authenticity and compelling cultural meaning that non-human brands cannot match. Compared to product and service brands that lack the ability to directly communicate with consumers, human brands can interact with consumers and thereby create emotional bonds (Saboo, Kumar, & Ramani, 2016). A resulting "seeming face-to-face" (D. Horton & Wohl, 1956, p. 215) relationship between consumers and human brands features similar emotions, expectations and behavior that prevail in natural relationships between individuals. Accordingly, human brands have the power to leave consumers with feelings of appreciation, empowerment and autonomy, leading to a strong emotional tie to the brand (Thomson, 2006). Thus, consumers frequently regard human brands as friends or companions (Cole & Leets, 1999). By acknowledging professional athletes as individual brands, athletes and their stakeholder (e.g. teams, sponsors, agencies) can specifically influence consumers' perceptions of the athlete's brand and

thus strengthen the relationship between consumer and athlete (Kristiansen & Williams, 2015).

4.2.2 Brand equity and brand image

Marketing scholars often discuss branding with regard to the creation, management and measurement of brand equity (Aaker, 1996; Ross, 2006). Brand equity is defined as consumers' perceived added value attached to a brand name that is accumulated by the brand beyond its tangible or functional value (Aaker, 1991; Ambler, 2003; Keller, 1993; Simon & Sullivan, 1993). Specifically, consumers demand intangible benefits from a brand, ranging from status, image and lifestyle to personality and success (Brahmbhatt & Shah, 2017). For consumers, brands with high equity reduce the consumers' need to think, decrease their perceived risk and increase their utility from the brand (Erdem & Swait, 1998). Accordingly, brand management scholars have found many positive benefits of brand equity. For example, studies showed that brand equity has a positive impact on consumers' perception of product quality (Dodds, Monroe, & Grewal, 1991); consumer preference and purchase intention (Cobb-Walgren, Ruble, & Donthu, 1995); market share (Agarwal & Rao, 1996); stock market returns (Aaker & Jacobson, 1994) or market value (Rego, Billett, & Morgan, 2009).

Among the most influential works within the brand equity literature are Aaker's brand equity framework (1991) and Keller's customer-based brand equity model (CBBE) (1993). In his framework, Aaker (1991) defined brand equity to be composed of brand awareness, perceived quality, brand associations and brand loyalty. Following a different approach, Keller (1993) explains the concept of brand equity through an associative memory network model based on the consumer's brand knowledge. Brand equity develops when consumers possess a strong brand image fueled by unique brand

associations and great familiarity and awareness with the brand. Accordingly, to establish brand equity, brand managers need to establish a brand image (J. Lucy Lee, James, & Kim, 2014). With a distinctive brand image, consumers can differentiate one brand from another. Thus, brand image is a decisive antecedent of brand equity (Aaker & Biel, 1993). Brand image, or interchangeably referred to as brand association (Bauer, Sauer, & Exler, 2005; A. Biswas & Sherrell, 1993) describe consumers' emotional or reasoned perception they attach to a particular brand (Arai et al., 2014; Dobni & Zinkhan, 1990). Keller (1993) identified three distinctive categories of brand association, including brand benefits, brand attitudes and brand attributes. First, brand benefits refer to the consumers' reasoning about what benefits the product or service can fulfil. Second, brand attitudes describe consumers' affective reaction toward a product or service, frequently resulting in attitudinal loyalty (Lutz, 1980). Lastly, brand attributes depict features of products or services that consumers associate with its purchase or consumption (Keller, 1993). They include product-related attributes such as essential ingredients for performing the product or service function and non-product-related attributes such as external aspects of the product or service. Because we want to examine how fans associate with athletes, we focus on the attribute features of athlete brands. Thus, we follow Arai et al. (2014) understanding of an athlete's brand image as consumers' perception about athlete brand attributes.

4.2.3 Athlete brand image

Arai et al. (2014) developed the conceptual model of athlete brand image, consisting of the three dimensions athletic performance, attractive appearance and marketable lifestyle. They draw their dimensions from Keller's brand knowledge schema (1993) to classify brand attributes in product-related and non-product-related attributes. In the context of

athlete brands, the athlete's individual performance on the field is considered a product-related attribute because athletes usually gain their brand status through their performance on the field (Andrews & Jackson, 2001). Conversely, attractive appearance and marketable lifestyle are classified as non-product related attributes because they are usually not related to the sportive performance of the athlete but contribute to the creation of the athlete brand image. Arai et al. (2014)'s work provides an initial theoretical understanding of the athlete brand image. However, we follow the authors' claim to "further modify and improve the quality of the measurement scale" (Arai et al., 2013, p. 399). Thus, the proposed umbrella dimensions of athletic performance, attractive appearance and marketable lifestyle form the basis for our understanding of the athlete brand image.

Related literature on celebrity endorsement and team branding serves as a theoretical backbone to understand the constituents of the athlete brand image. Compared to endorsement studies, which aim at identifying the right endorser to sell a product, research on celebrity branding (e.g. athletes) tries to understand the celebrity as a brand to develop marketing strategies mainly for the celebrities and their management (Arai et al., 2014). However, because "athletes' self-branding activities also include a self-endorsement perspective" (Arai et al., 2014, p. 99), insights from celebrity endorsement are also applicable to the athlete brand image. Within the celebrity endorsement literature, most theoretical work has been conducted in realm of the celebrity source effects established by the work of Hovland and colleagues (Hovland, Janis, & Kelley, 1953; Hovland & Weiss, 1951) and McGuire (1985). This research assesses how celebrity endorsers (i.e. athlete endorser) exercise influence on consumers through source factors including credibility, attractiveness and liking. It has been assumed that celebrities who are perceived as credible, attractive and well liked evoke positive brand evaluations by

consumers (Bergkvist & Zhou, 2016). Within the context of athletes, Braunstein and Zhang (2005) identified five athletic star power factors including likeable personality, social attractiveness, professional trustworthiness, characteristic style, and athletic expertise by means of exploratory surveys. These constituents of star power were developed to represent a star worthy athlete (French, Raven, & Cartwright, 1959). In a recent study, Hoegel, Schmidt, and Torgler (2016) explored the effect of a fan's gender and age on the preferences regarding specific characteristics of star football players. They accommodated characteristics from business executives from strategic management literature to football players clustered into four broader categories including experience, personality, exemplary behavior and skills. Within a team branding context, Gladden and Funk (2001) assessed brand associations of sport teams by means of the team association model (TAM). They isolated 16 brand association dimensions including, product-related attributes, non-product-related attributes, symbolic benefits, experiential benefits and attitude. In a similar vein, Ross (2006) developed the team brand association scale challenging the proposed dimensions by Gladden and Funk. By means of a free-thought listing technique and confirmation of the dimension's validity, they identified 11 dimensions including success, history, stadium, team characteristics, logo, concessions, socialization, rivalry, commitment, organizational attribute and non-player personnel.

Using Arai et al.'s (2014) umbrella dimensions of the athlete brand image, we adopted dimensions from the described literature on (athlete) celebrity endorsement and the team sport branding to test the model. Accordingly, we hypothesize that:

H1: The scale of the athlete brand image shows good psychometric properties in different countries and cultures.

4.2.4 Culture as antecedent to athlete brand image

Cultural values are considered influential factors on brand image (Roth, 1992, 1995). Besides cultural values, other national characteristics such as the level of economic development and geographic distance affect consumers' brand image perception (Hsieh, 2002). Accordingly, brand image needs to account for consumers' different needs across countries and cultures (Roth, 1995). Still, multinational companies tend to use standardized global brand image strategies in their marketing campaigns and often ignore cultural differences in the local target market (Gregory & Munch, 1997). Establishing a globally consistent brand image while at the same time adapting to local cultural characteristics is a challenging task for the development of brand image strategies (Park & Rabolt, 2009). Just like traditional brands, human brands such as athletes face the challenge of positioning their brand image according to the peculiarities of the target market.

However, cross-cultural research within the celebrity endorsement literature, which has led to the conceptual development of the athlete brand image, is scarce (Bergkvist & Zhou, 2016). In fact, there is a particular paucity of research on how consumers perceive celebrity endorsement in different cultures (Bergkvist & Zhou, 2016; S. Biswas, Hussain, & O'Donnell, 2009). The limited number of studies show that the endorsement process is based on cultural values and that consumers' response to celebrity endorsement differs from one nation to another (Desmarais, 2014). For example, in a study on Indian and American consumers, Biswas, S. et al. (2009) found different attitudes to celebrity advertising among respondents. Indian consumers showed preference for the celebrity's status and glamour whereas American consumers revealed preferences for expertise and achievement. The authors suggest that the contextually of the culture (high (India) vs. low (US)) influenced how local audiences processed the celebrity advertisements. In another

study, Paek (2005) showed that how consumers associate celebrity endorser and product involvement differed significantly across different cultural contexts. Desmarais (2014) explored how the athlete endorser's selection process is formed by national contexts from the perspective of advertising practitioners. He found that several cultural pressures linked to the sporting traditions within each country influence the selection of athlete endorsers.

Regarding the brand image of athletes, no study to date explored the subject from a cross-cultural standpoint. Yet, given the global appeal of athletes, it is crucial to understand, which aspects of brand images resonate with consumers from different countries. In the more general branding literature, the influence of culture on consumption and marketing has received increasing attention (Soares, Farhangmehr, & Shoham, 2007). For example, Phau and Lau (2000) found that the meanings of brand personality dimensions varied between members of collectivistic and individualistic cultures. They assert that brand personality traits that align with independent self-construals such as achievement, competition and independence resonate with members of individualistic cultures. Members from individualistic cultures tend to see themselves as independent from others and act according to their individual and personal attitudes and preferences. Conversely, individuals from collectivistic cultures emphasize brand personality traits that are in line with interdependent self-construals such as dependency, peacefulness and harmony. Members from collectivistic cultures, however, tend to see themselves as interdependent with others and act according to socially accepted norms. Comparatively, Pankhania, Lee, and Hooley (2007) found that collectivistic cultures attach more importance to a brand's social value than individualistic cultures do. Considering the influence of culture on brand images of traditional brands and on the perception of celebrity endorsement, we expect

that culture also has an impact on consumers' relationship with athletes. Thus, we hypothesize that:

H2: Fans attach different importance to the dimensions of the athlete brand image depending on their home country.

4.3 Data and methodology

4.3.1 Sample

The data sample includes country representative data from five different countries, including Germany, USA, South Korea, Japan and China. Overall, 5,000 participants completed the questionnaire between April and May 2016. Using a standard forward-backward translation procedure, the English language version of the questionnaire was translated into Mandarin, Japanese, Korean, and German by a professional translation agency. The market research company Nielsen Sports administered the survey and recruited respondents in the respective countries. Respondents in Germany, USA, South Korea and Japan were representative of the respective country's online population in terms of age, gender, and geographic location. In China, however, face-to-face interviews were conducted to account for the comparatively lower online population (and potentially distorted response behavior in online polls). Accordingly, respondents in China were representative of the country's total population.

Every respondent was asked to name his or her favorite professional sport athlete without any restriction on a sport discipline. Subsequently, respondents had to assess how important specific characteristics were for selecting his or her favorite professional athlete. Moreover, the questionnaire included several questions regarding demographic information, sport consumption and sport activity of the respondents. Of the 5,000

respondents, 2,027 respondents were able (or willing) to name a professional athlete and thus are considered for further analysis. From the 2,027 professional athletes, 641 unique athletes were identified. The most frequently named athlete in the overall sample was Lionel Messi (4.98%), followed by Kobe Bryant (3.26%) and Cristiano Ronaldo (3.16%). Table 19 shows the key characteristics of the country samples. The percentage of female respondents varies from 36.98% (USA) to 47.63% (Japan). The mean age of the respondents in the country samples ranges from 36.14 years (China) to 45.32 years (Japan). In all country samples, most respondents are married and work as employees.

Table 19: Profile of respondents

	CHN	GER	JAP	SKO	USA
n	415	333	338	557	384
Gender					
Female	37.11%	37.84%	47.63%	41.11%	36.98%
Male	62.89%	62.16%	52.37%	58.89%	63.02%
Age					
Mean (years)	36.14	39.02	45.32	41.02	39.28
Below 25	18.80%	17.12%	5.03%	8.98%	12.76%
25 - 34	37.59%	25.23%	20.41%	27.29%	34.90%
35 - 44	15.18%	23.12%	18.34%	20.11%	16.41%
45 - 59	22.17%	24.92%	42.31%	38.42%	24.48%
Above 59	6.27%	9.61%	13.91%	5.21%	11.46%
Marital status					
Single	19.76%	30.03%	33.73%	31.24%	28.91%
Married	66.51%	35.74%	60.36%	58.35%	63.54%
Living with partner	10.84%	34.23%	5.92%	10.41%	7.55%
No answer	2.89%	-	-	-	-
Occupation					
Pupil/ student	5.78%	16.52%	1.18%	12.21%	5.47%

Employee	63.62%	56.76%	47.34%	54.57%	44.54%
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Country abbreviations: CHN = China, GER = Germany, JAP = Japan, SKO = South Korea and USA = United States of America

4.3.2 Measurement

To explore the question whether consumers from different countries and cultures attach different importance to an athlete's brand image, we adopted the umbrella dimensions including athletic performance, attractive appearance and marketable lifestyle from Arai et al. (2013)'s scale of athlete brand image (SABI). However, "scale development requires overtime modification, which means that the sub dimension must be modified and tested with a variety of samples" (Arai et al., 2013, p. 399). Accordingly, we first examined sub dimensions with low discriminant validity and items with low factor loadings. Second, we consulted literature on (athlete) celebrity endorsement and team branding to identify further elements of the athlete brand image. We collected items from Hoegle et al.'s (2016) list of football player characteristics, the scale of athletic star power (Braunstein & Zhang, 2005), the team brand association scale (Ross, James, & Vargas, 2006), the team association questionnaire (Gladden & Funk, 2001, 2002), the brand personality construct (Carlson & Donovan, 2013), the celebrity image scale (Choi & Rifon, 2007) and the source's attractiveness model (Ohanian, 1991). In table 20, we present an overview of the selected characteristics and their related concepts in the literature. The number of items per sub dimension was reduced to make the scale more administrable. Respondents had to assess the items related to their favorite athlete on a 5-point Likert-scale (1= strongly disagree, 5= strongly agree).

Athletic performance refers to the attributes related to the actual sportive performance of the athlete and includes three items. Accordingly, it includes the athlete's performance on the field ("My favorite athlete shows exceptional performances on the pitch"), his or

her competition style (“My favorite athlete has a spectacular style of play”) and sportsmanship (“My favorite athlete is acting in an exemplary way on the field”). Sportive performance usually results in sportive success, which has been identified as one of the decisive factors for developing brand equity (Gladden, Milne, & Sutton, 1998). The athlete’s competition style describes the athlete’s individual playing style. Athletes with distinctive playing styles are more widely recognizable, which can enhance fans’ identification and result in behavioral loyalty (Arai et al., 2014). Sportsmanship refers to the athlete’s exemplary behavior on the field and includes aspects of fair play and respect for the game as well as others (Sessions, 2004). Although sportsmanship is not essentially engrained in competitive sports, it is an important element for branding athletes because it transports ethical virtues commonly associated with sport (Arai et al., 2013). As the present study includes athletes from team sports, the sub dimension rivalry from the SABI is omitted because it focuses on the athlete’s competitive relationship with other athletes.

Attractive appearance refers to the athlete’s attractive appearance in terms of attractive external look and attractive personality and includes physical attractiveness (“My favorite athlete is good-looking”), charisma (“My favorite athlete has a charismatic appeal”) and likeable appearance (“My favorite athlete has a likeable appearance”). Physical attractiveness refers to an athlete’s physical appearance. Research has shown that physically attractive endorsers receive more positive consumer responses than unattractive endorsers (Ohanian, 1991). However, the understanding of attractiveness is not confined to physical attractiveness “but includes any number of virtuous characteristics that consumers might perceive in a celebrity endorser for example, intellectual skills, personality properties, lifestyles, or athletic prowess.” (Erdogan, 1999, p. 299). Moreover, the source attractiveness model contends that the effectiveness of celebrity endorser also depends on the source’s likeability (McCracken 1989). Similarly,

Braunstein and Zhang (2005) identified likeable personality as one of the five dimension of star power. Accordingly, we incorporate the sub dimensions of likeable appearance and charismatic appeal into the attractive appearance dimension of the athlete brand image.

Marketable lifestyle refers to the athlete's behavior off the field and includes the items role model ("My favorite athlete shows social engagement"), exemplary behavior ("My favorite athlete behaves in an exemplary way outside the game") and relationship effort ("My favorite athlete is down-to-earth and approachable"). Role model describes the athlete's social engagement towards society. It refers to the athlete's charitable behavior and adherence to social norms and addresses off-field attributes related to trustworthiness (Ohanian, 1991). However, given that in the SABI "life story was not confirmed as a predictor of marketable lifestyle" (Arai et al., 2013, p. 399), we replaced this particular dimension with exemplary behavior off the field. Exemplary behavior refers to the athlete's off-field behavior that consumers regard worth emulating. Relationship effort refers to the athlete's effort to interact and communicate with fans, which is decisive to build a connection with fans (Thomson, 2006).

Table 20: Related concepts in the literature

Athlete Brand Image	Characteristics in literature
Athletic Performance	Arai et al. (2014)
Athletic expertise /performance	Effort (Hoegel et al., 2016) Performance (Hoegel et al., 2016) Success (Carlson & Donavan, 2013) Success (Gladden & Funk, 2002)
Competition style	Style of playing (Hoegel et al., 2016) Skillful (Desmarais, 2017) Excitement (Choi & Rifon, 2007) Superior skills (Braunstein & Zhang, 2005)
Sportsmanship	Exemplary behavior on the field (Hoegel et al., 2016)
Attractive Appearance	Arai et al. (2014)
Physical attractiveness	Attractiveness (Ohanian, 1991) Physically attractive (Braunstein & Zhang, 2005)
Charisma	Charisma (Braunstein & Zhang, 2005) Charisma (Hoegel et al., 2016)
Likeable appearance	Likeable appearance (Hoegel et al., 2016) Likeable personality (Braunstein & Zhang, 2005)
Marketable Lifestyle	Arai et al. (2014)
Role model	Socially responsible (Choi & Rifon, 2007) Serves the community (Braunstein & Zhang, 2005) Charitable (Braunstein & Zhang, 2005)
Exemplary behavior off the field	Exemplary behavior off the field (Hoegel et al., 2016) Trustworthiness (Ohanian, 1990)
Relationship effort	Down-to-earth (Braunstein & Zhang, 2005) Spends time with fans (Braunstein & Zhang, 2005) Personable (Braunstein & Zhang, 2005) Ability to connect with fan base (Braunstein & Zhang, 2005) Social interaction (Ross et al., 2006)

4.4 Empirical strategy and results

First, we assessed both the reliability and validity of the three measurement scales. Second, we conducted a measurement invariance test by means of the package lavaan (Rosseel, 2012) in R 3.3.1 (R Development Core Team, 2017). Third, based on the factor means for each country, we employed analysis of variance (ANOVA) to determine whether there are significant differences across countries in the three dimensions of the athlete brand image. Although some research notes that marketing managers should account for cultural diversity within countries as well as between countries (because culture spans across many boundaries such as ethnicity, religion, generation, industry or occupation (Brannen et al., 2004)), nationality is still the most applicable measurement for culture. This is reasoned with the fact that members of the same nation usually have the same understanding of its institutional systems and share an identity and a common understanding of the world (Hofstede, 2009). The results of the measurement of the constructs, the measurement invariance and the ANOVA results are described subsequently.

4.4.1 Measure validity and reliability

We examined the scales measuring the athlete brand image using confirmatory factor analysis. The factor loadings for all items were above the threshold of 0.70 (Hair et al., 1998). Table 21 shows that the coefficient alphas of the athletic performance, attractive appearance and marketable lifestyle scales all exceed the suggested threshold of 0.7 (Nunnally, 1978). In addition, the composite reliability was above the suggested threshold of 0.7 (Bagozzi & Yi, 2012) across all constructs. Accordingly, reliability of the constructs can be established. The average variance extracted for the given measures ranges from 0.608 to 0.820 and thus above the threshold of 0.5 recommended by Dillon

and Goldstein (1984), indicating convergent validity. In addition, we assessed the discriminant validity by means of the test suggested by Fornell and F. Larker (1981). Following their criteria, a scale exhibits discriminant analysis if the average variance extracted by the underlying latent variable is greater than the shared variance (i.e. squared correlations) of the respective latent variable with another latent variable. Table 22 shows evidence of discriminant validity as none of the squared correlation is larger than the average variance extracted.

Table 21: CFA results: Latent variable loadings and reliability

Latent variable loading and reliability	CHN	GER	JAP	SKO	USA
[SELF-SELECTED ATHLETE] is my favorite athlete because he/she....					
Athletic Performance					
is acting in an exemplary way on the field	.867	.936	.936	.779	.835
shows exceptional performances on the pitch	.882	.904	.904	.802	.772
has a spectacular style of play	.840	.835	.835	.757	.830
Cronbach's alpha	.896	.919	.930	.822	.853
Average variance extracted	.745	.797	.820	.608	.661
Composite reliability	.813	.872	.817	.770	.850
Attractive Appearance					
has a charismatic appeal	.827	.939	.939	.810	.894
has a likeable appearance	.910	.870	.870	.804	.914
is good-looking	.840	.820	.820	.782	.749
Cronbach's alpha	.891	.901	.911	.840	.884
Average variance extracted	.738	.770	.779	.638	.732
Composite reliability	.820	.865	.845	.770	.843
Marketable Lifestyle					
shows social engagement	.853	.860	.860	.816	.813
behaves in an exemplary way outside the game	.834	.921	.921	.868	.848

Latent variable loading and reliability	CHN	GER	JAP	SKO	USA
is down-to-earth and approachable	.854	.881	.881	.770	.819
Cronbach's alpha	.884	.918	.924	.858	.866
Average variance extracted	.717	.788	.805	.671	.684
Composite reliability	.802	.821	.871	.765	.783

Note: All results are standardized. Robust standard errors and chi-square statistics are estimated using the Satorra-Bentler procedure (Satorra & Bentler, 1994); Country abbreviations: CHN = China, GER = Germany, JAP = Japan, SKO = South Korea and USA = United States of America.

China: $\chi^2=37.904$ (24); $\chi^2/df=1.580$; RMSEA=.037; CFI=.992; SRMR=.027.

Germany: $\chi^2=39.570$ (24); $\chi^2/df=1.649$; RMSEA=.044; CFI=.992; SRMR=.031.

Japan: $\chi^2=42.074$ (24); $\chi^2/df=1.753$; RMSEA=.047; CFI=.992; SRMR=.047.

South Korea: $\chi^2=49.198$ (24); $\chi^2/df=2.050$; RMSEA=.043; CFI=.987; SRMR=.027.

USA: $\chi^2=31.743$ (24); $\chi^2/df=1.323$; RMSEA=.029; CFI=.995; SRMR=.030.

Table 22: Squared correlations between latent variables

	CHN			GER			JAP			SKO			USA		
	AP	AA	ML												
AP	<i>.745</i>			<i>.797</i>			<i>.820</i>			<i>.608</i>			<i>.661</i>		
AA	.279	<i>.738</i>		.106	<i>.770</i>		.165	<i>.779</i>		.246	<i>.638</i>		.121	<i>.732</i>	
ML	.207	.461	<i>.717</i>	.115	.259	<i>.788</i>	.071	.230	<i>.805</i>	.159	.174	<i>.671</i>	.142	.273	<i>.684</i>

Notes: Squared correlations between latent variables. Italicized numbers on the diagonal show the average variance extracted. AP = Athletic Performance, AA = Attractive Appearance, ML = Marketable Lifestyle; Country abbreviations: CHN = China, GER = Germany, JAP = Japan, SKO = South Korea and USA = United States of America.

4.4.2 Assessing measurement invariance across countries

One of the key challenges in cross-country research is to demonstrate measurement invariance of the applied constructs. An equivalent comprehension and measurement of constructs across different cultures is necessary to make inferences about differences between the national subsamples. More specifically, tests for measurement invariances are required to show that differences in scale means actually evolve from different responses to the underlying constructs and not from measurement or scaling artifacts (Steenkamp & Baumgartner, 1998). The cross-national invariance of the scales is

determined by conducting a stepwise, hierarchically ordered test of three differentiated forms of measurement invariance including configural, metric, and scalar invariance.

First, configural invariance is tested. Configural invariance is often referred to as pattern invariance and means that the factor loadings exhibit similar patterns in all country samples (Steenkamp & Baumgartner, 1998). As shown in table 23, the RMSEA value is below the suggested threshold of 0.08 (MacCallum et al., 1996), indicating a good fit. The χ^2/df value is 1.895 and thus below the suggested cut-off values of three to five (Little & Kline, 2016; Wheaton et al., 1977). In addition, the CFI value is above the suggested threshold of 0.95 (Hu & Bentler, 1999). From these fit statistics, configural invariance across the five countries can be inferred.

Table 23: Measurement invariance across countries

	Configural invariance model	Full metric invariance model	Full scalar invariance model	Partial scalar invariance model
	(1)	(2)	(3)	(4)
Fit				
χ^2	227.35	275.69	489.02	357.83
df	120	144	168	160
χ^2/df	1.895	1.915	2.911	2.236
RMSEA	.040	.042	.065	.051
CFI	.989	.985	.958	.976
Measurement				
Model comparison		2 vs. 1	3 vs. 1	4 vs. 1
ΔCFI		.004	.027	.009
Decisions	Model	Model accepted	Model rejected	Model accepted
Freely estimated loadings/ intercepts				
Athletic Performance				
Talent	all/all	-/all	-/-	-/-
Performance	all/all	-/all	-/-	-/all
Skill	all/all	-/all	-/-	-/-

	Configural invariance model	Full metric invariance model	Full scalar invariance model	Partial scalar invariance model
	(1)	(2)	(3)	(4)
Attractive Appearance				
Look	all/all	-/all	-/-	-/-
Likeable	all/all	-/all	-/-	-/all
Charisma	all/all	-/all	-/-	-/-
Marketable Lifestyle				
Social	all/all	-/all	-/-	-/-
Exemplary	all/all	-/all	-/-	-/-
Down-to-earth	all/all	-/all	-/-	-/-

Second, full metric invariance is determined. It evaluates the similarity of response patterns across the countries such that, for example, a one-unit change has the same meaning in all nations (Jilke et al., 2015). Full metric variance is assessed by testing if the configural invariance model with freely estimated loadings on all country samples has a significantly better fit than the full metric invariance model with constrained equal factor loadings across all nations. Table 23 shows that the full metric variance fits the data well, given that the values for the RMSEA (0.042) and CFI (0.985) are above the suggested threshold (Hu & Bentler, 1999). The Δ CFI of 0.004 is below the proposed cut-off point of 0.01 (Cheung & Rensvold, 2002), indicating full metric invariance of the construct.

Third, scalar invariance is assessed. It builds upon metric invariance and requires that also the item intercepts are equivalent across the countries. If scalar invariance is established, the means of the latent variables can be compared across the nations (Jilke et al., 2015). For full scalar invariance, all item intercepts in one model are constrained to be equal across all countries. The full scalar invariance model fits the data significantly worse than the full metric invariance model, with a Δ CFI of 0.027, which is higher than the suggested

cut-off point of 0.01. However, Steenkamp and Baumgartner (1998) note that cross-national studies extremely rarely achieve full scalar variance. Accordingly, a partial scalar invariance model is tested by freeing two intercepts from its invariance constraints. The partial scalar invariance model fits the data well with RMSEA (0.051) and CFI (0.976). The Δ CFI of 0.009 meets the cut-off requirements by Cheung and Rensvold (2002), indicating that partial scalar variance across the five nations has been achieved. Thus, we can confirm hypothesis 1 that the proposed measurement constructs of the athlete brand image are applicable across different countries and cultural backgrounds.

4.4.3 Analysis of variance results

To explore cross-national differences in athlete brand image, analysis of variance (ANOVA) was performed. The factor means of the dimensions of athlete brand image represented the dependent variable while the country variable functioned as independent variable. As shown in table 24, the results reveal that respondents differed significantly ($p < 0.01$) in the importance they attach to the dimensions of the athlete brand image. Moreover, the post-hoc comparison test confirmed several pairwise differences regarding the athletic performance, attractive appearance and marketable lifestyle of the athlete brand image. Thus, we can confirm hypothesis 2.

Table 24: ANOVA results

	USA ^a	JAP ^b	GER ^c	SKO ^d	CHN ^e	F (2,2002)	Partial η^2	Post-Hoc Comparisons (Bonferroni)
Athletic Performance	4.45 (0.67)	4.18 (0.80)	4.30 (0.80)	3.75 (0.70)	4.40 (0.76)	71.79**	0.12	(a,b) (a,d) (b,d) (b,e) (c,d) (d,e)
Attractive Appearance	4.00 (0.95)	3.62 (0.91)	3.85 (0.95)	3.67 (0.77)	4.01 (0.97)	16.41**	0.03	(a,b) (a,d) (b,c) (b,e) (c,d) (d,e)
Marketable Lifestyle	4.13 (0.86)	3.37 (1.01)	3.86 (0.94)	3.63 (0.79)	3.95 (0.93)	40.30**	0.07	(a,b) (a,c) (a,d) (a,e) (b,c) (b,d) (b,e) (c,d) (d,e)

Notes: Values outside the brackets represent the countries' means; values in the brackets represent the corresponding standard deviations. * $p < 0.05$; ** $p < 0.01$; Country abbreviations: CHN = China, GER = Germany, JAP = Japan, SKO = South Korea and USA = United States of America.

The results indicate that athletic performance was the most important dimension of the athlete brand image for all country subsamples. Still, analysis of variance showed significant country differences on the athletic performance dimension, $F((2, 2002) = 71.79, p < 0.01)$. The size of the effect was considered moderate (Partial $\eta^2 = .12$), indicating that 12% of the variance was explained by the country variable. Post hoc tests using the Bonferroni correction showed a statistically significant difference in the emphasis of the athletic performance meaning, where the US fans ($M = 4.45$; $SD = .67$) emphasized it more than the Japanese ($M = 4.18$; $SD = .80$) and Korean fans did ($M = 3.75$; $SD = 0.70$). Moreover, South Korean fans' mean score for athletic performance is significantly lower than that of German ($M = 4.30$; $SD = 0.80$), Japanese and Chinese fans ($M = 4.40$; $SD = 0.76$) ($p < 0.05$).

On the attractive appearance dimension, analysis of variance showed significant country differences, $F((2, 2002) = 16.41, p < 0.01)$. The size of the effect was considered weak for the athletic performance dimension (Partial $\eta^2 = .03$), indicating that 3% of the variance

in the meaning of the dimension was explained by the country variable. Post hoc tests using the Bonferroni correction showed that Japan ($M = 3.62$; $SD = 0.91$) had a significantly lower mean score on the attractive appearance dimension than Germany ($M = 3.85$; $SD = 0.95$), China ($M = 4.01$; $SD = 0.97$) and the US ($M = 4.00$; $SD = 0.95$). Chinese and US fans attached significantly more importance to the attractive appearance dimension than South Korean fans ($M = 3.67$; $SD = 0.77$), while the difference between the former two was not statistically different.

On the marketable lifestyle dimension, analysis of variance showed significant country differences, $F(2, 2002) = 40.30$, $p < 0.01$. The size of the effect was considered weak for the marketable lifestyle dimension (Partial $\eta^2 = .07$), indicating that 7% of the variance in the meaning of the dimension was explained by the country variable. Post hoc tests using the Bonferroni correction revealed that US fans ($M = 4.13$; $SD = .86$) had a significantly higher mean score on the marketable lifestyle dimension than Japanese ($M = 3.37$; $SD = 1.01$), South Korean ($M = 3.63$; $SD = 0.79$) and German fans ($M = 3.86$; $SD = 0.94$). Moreover, Japanese fans' mean score for marketable lifestyle is significantly lower than that of all country samples ($p < 0.05$). Lastly, German and Chinese fans attached significant more importance to the marketable lifestyle dimensions than South Korean fans.

4.5 Discussion

In this study, we explore cross-cultural differences in athlete brand image by comparing sport fans from China, Germany, Japan, South Korea and the USA. According to our first hypothesis, we expected that the modified measurement construct of the athlete brand image showed sound psychometric properties in different countries and cultures. First, the modified scales of the athlete brand image showed good reliability and validity with

statistically significant factor loadings and supportive goodness-of-fit results. Second, hierarchically ordered test of measurement invariance (configural, metric and scalar) showed the applicability of the measurement scale of the athlete brand image in different countries and cultures, confirming our first hypothesis.

By means of analysis of variance, we find support for our second hypothesis that there are significant country differences regarding the importance sport fans attach to the dimensions of the athlete brand image. The athletic performance dimension is considered most salient among international sport fans, though country-differences prevail. This finding is in line with other studies that show that success, which commonly equates with athletic performance, is one of the most essential elements for creating brand equity (Gladden et al., 1998). Intriguingly, we find considerable differences between China, Japan and South Korea on all dimensions of the athlete brand image. Whereas South Korean fans attach significantly more importance to the athlete's marketable lifestyle, Japanese fans value the athlete's performance significantly more than South Korean fans do. Moreover, Chinese fans' athlete brand image preferences differ substantially from Japanese and South Korean fans and resemble much more US fans. Indeed, US and Chinese sport fans differ only on the importance of the marketable lifestyle dimension, which US fans value slightly more ($p < 0.05$). These findings are considerable given that "East Asian societies have often been viewed as one culture" (Schmitt, 2015, p. 262) and treated accordingly in many cross-cultural studies.

4.5.1 Practical implications

The insights from the present study provide at least four valuable insights for athletes and marketing managers in developing global and regional branding strategies for athletes. First, the empirical results indicate that depending on the target market, different branding

strategies are required. Athletes and their brand manager need to recognize the differences in cultural and consumption values across markets and understand which athlete brand characteristics are most salient to consumers. Thus, standardized brand image strategies need to be adapted and modified according to the preferences of the local target market (Park & Rabolt, 2009). Second, our results reveal that fans in China, South Korea and Japan differ substantially in their appreciation of the dimensions of athlete brand image. In fact, Chinese fans resemble much more fans from the United States than fans from their closer neighbors in Japan and South Korea. Thus, athlete-branding strategies for Asian countries require a much more nuanced approach with a “one size fits all”-branding strategy deemed to fail. Third, the overarching salience of the athletic performance dimension among all countries shows that despite the widespread notion of over-commercialization of non-sports related activities, the athlete’s sportive performance on the field is still the focus of fans’ attention. Fourth, the concept of athlete brand image is a viable tool for athletes and brand managers around the world to identify strengths and weaknesses of the athlete as a brand. Eventually, marketing an athlete is “all about selling an (brand) image” (Cordiner, 2001, p. 13).

4.5.2 Limitations and future research scope

Although this paper provides important contributions to the understanding of athlete brand image in global markets, it bears, like any other study, some limitations. First, respondents were free to name their favorite professional athlete with no restrictions on individual or team sports. Thus, fans’ team associations might influence the evaluations of athletes in team sports. However, given the still infant stage of the research, combining athletes from individual and team sports to explore the concept of athlete brand image seems viable. Further studies could evaluate how the athlete brand image differs between

individual and team-based sport athletes. Second, our study does not explore cross-cultural differences in the perception of an athlete's brand image but focuses on the importance of the dimensions of the athlete brand image in different countries. Accordingly, further studies could consider how fans from different countries and culture perceive the brand image of the same athlete. Third, although our results show that country differences prevail among the salience of the dimensions of athlete brand image, we did not evaluate which specific cultural dimensions trigger the difference. Therefore, future research should test which cultural dimensions based on cross-cultural frameworks such as Hofstede's cultural dimension theory (Hofstede, 1984) or Schwartz' culture are decisive.

5. Conclusion

5.1 Overall summary

The aim of this dissertation was to advance our understanding of the determinants for international consumers' affection towards sports and athletes. I addressed the dissertation's overarching topic by analyzing the three following distinct research questions:

Research question 1: Do international consumers exhibit different motivational profiles when consuming sport?

Research question 2: Do similarity attributes influence international consumers' identification with athletes?

Research question 3: Which athlete brand images are important for international consumers?

I investigated each research question in one empirical stand-alone article. In each article, country samples of China, Germany, Japan, South Korea and the USA form the basis for my analysis. All three articles provide a detailed discussion of the results and offer managerial implications for sport marketers such as teams, leagues and athlete managers. Hence, in the following, I will outline the main findings from each article.

In the first article, I addressed research question 1 by examining differences between fans' sport consumption motives in international markets. Three main findings can be highlighted. First, the employed Motivational Scale for Sport Consumption (MSSC) showed good psychometric properties in all the investigated countries as well as measurement invariance, which allowed for meaningful country comparisons. Second,

sport consumption motives vary between different target sports in four (Germany, Japan, South Korea and USA) out of five countries. Whereas fans watch physical sports such as figure skating or dancing for aesthetic reasons, they watch team sports such as basketball, baseball or football to experience drama and skills and to acquire knowledge. Third, when consuming a same target sport (football), fans from different countries exhibit different motivational profiles. Regarding the consumption of football, fans from mature football markets such as Germany watch the sport to feel excitement, uncertainty or escape their daily lives. On the contrary, in countries with less football popularity, fans are interested in watching the skills of the players and learning about the game's strategies and tactics. These findings can provide useful cues for the internationalization efforts of sports leagues. For example, the US National Football League (NFL) created a Chinese website to teach and educate about strategy and rules of American football. Still, the "sport's rapid growth and youthful fan base have exposed a shortage of Mandarin-speaking commentators" (Li & Cadell, 2017). Thus, it is decisive for sport marketers to understand the development stage of the sports in the selected target market to tailor their offering according to the needs of the target market.

In the second article, I investigated the influence of similarity attributes on a fan's identification with his or her favorite athlete. The inclusion of demographic and perceived similarity measures enabled to account for a distinction between individuals' actual and seeming similarity. It offers two principal insights. First, actual similarity in terms of nationality similarity between athlete and fans has a positive impact on fans' identification in Germany, South Korea and Japan. Similarity in age and gender, however, appears not to influence a fan's level of identification except for the US sample (age). Second, perceived similarity has a strong impact of fans' identification with their favorite athletes in all of the studied countries. This result is in line with recent studies that suggest

that perceived similarity is more important for identification than actual similarity. For sport marketers, the results suggest promoting campaigns that exemplify an athlete's personality or interests, which match the characteristics of the target audience.

In the third article, I explored which dimensions of the athlete brand image are most salient among international fans. Three main findings can be reported. First, the proposed measurement construct of the athlete brand image showed sound psychometric properties in different countries and cultures. Second, the results indicate that fans particularly value an athlete's athletic performance. This finding is consistent over the examined countries and in line with previous literature (Gladden et al., 1998). Accordingly, despite ongoing debates about the over commercialization of sports, the athletic performance remains at the center of fans' attention. Second, fans from the East Asian countries of China, Japan and South Korea exhibit substantially different preferences regarding an athlete's brand image. Whereas South Korean fans value an athlete's marketable lifestyle more than Japanese fans do, the latter attach significantly more importance to the athlete's performance than South Korean fans do. Chinese fans, however, resemble much more to US fans. Thus, these findings contribute to calls from academia on developing a more nuanced understanding of consumers in Asia, avoiding the fallacy of treating the countries of Asia as one common target market (Schmitt, 2015).

Overall, each article offers specific answers to its respective research question. First, international fans exhibit different motivational profiles for consuming a same target sport. Second, the influence of similarity attributes on fan's identification level is country-specific with perceived similarity having a positive impact in all examined countries. Third, international consumers appreciate different dimensions of the athlete brand image, though athletic performance dominates.

5.2 Research contribution and future directions

The approach undertaken in all three articles makes useful steps towards detangling the determinants of international consumers' affection towards sports and athletes. In particular, this dissertation makes important contributions to two streams of existing research. First, it advances the research stream on fans' sport consumption motives and answers calls for research on international and culturally diverse samples. Second, it offers new impulses on studying the relationship between fans and athletes. Regarding fans' identification with athletes, it sheds light on the importance of similarity attributes. With respect to the concept of the athlete brand image, it contributes to recent research on athletes as brands by characterizing international fans' appeal to specific athlete characteristics.

The insights and limitations from the three articles pave the way for future research. First, the articles' results indicated that fans from different countries differ in the way they relate to sports and athletes. Accordingly, future research could draw on established cross-cultural frameworks such as Hofstede's cultural dimension theory (Hofstede, 1984) or Schwartz' culture model (Schwartz & Bilsky, 1990) to examine which specific cultural dimensions (e.g. individualism/collectivism or power distance) explain the country differences. In addition, future studies could assess potential differences within countries to explain which sport consumption motives or athlete characteristics resonate with distinct populations (e.g. Generation Y, best ager or females).

Second, longitudinal data on fans' relationship with athletes could benefit the generalizability of the results. Thus, future research could explore whether fans' appeal to athletes changes over time. For example, studies could investigate if similarity

attributes become salient for fans' identification when an athlete is involved in a media scandal; shows deteriorating sportive performance or retires from the sport.

Third, the findings of this study are based on survey-data. Hence, in spite of methodological rigor in survey design, participants' selection and statistical counter-measures, the results are not free from potentially socially desirable response patterns. Thus, I recommend further research methods to study the relationship between fan and athletes, e.g. including qualitative research, which offers explanations of complex phenomena that cannot be reduced to a certain set of variables (Gephart, 2004).

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7. Appendix

Table A - 1: Squared correlations between latent variables

	China								Germany							
	VIC	KNO	AES	DRA	ESC	PHY	SKI	SOC	VIC	KNO	AES	DRA	ESC	PHY	SKI	SOC
VIC	.754								.945							
KNO	.543	.641							.181	.782						
AES	.410	.576	.752						.278	.246	.760					
DRA	.274	.524	.428	.661					.016	.204	.055	.630				
ESC	.478	.514	.595	.428	.714				.138	.326	.181	.197	.817			
PHY	.422	.489	.527	.481	.659	.638			.164	.024	.158	.000	.003	.699		
SKI	.375	.552	.463	.601	.552	.697	.742		.174	.428	.311	.190	.363	.070	.745	
SOC	.353	.481	.443	.425	.525	.572	.553	.803	.112	.193	.117	.140	.224	.025	.214	.802

	Japan								South Korea							
	VIC	KNO	AES	DRA	ESC	PHY	SKI	SOC	VIC	KNO	AES	DRA	ESC	PHY	SKI	SOC
VIC	.851								.837							
KNO	.253	.783							.618	.662						
AES	.195	.330	.807						.471	.485	.739					
DRA	.024	.212	.106	.707					.199	.363	.163	.738				
ESC	.235	.477	.253	.234	.753				.387	.437	.293	.443	.725			
PHY	.286	.419	.365	.076	.334	.526			.398	.361	.433	.126	.234	.636		

Appendix

Appendix A: Discriminant analyses

	Japan							South Korea								
SKI	.096	.451	.423	.259	.317	.407	.833		.390	.637	.449	.474	.520	.351	.641	
SOC	.193	.204	.156	.062	.171	.238	.133	.839	.374	.419	.351	.314	.355	.278	.440	.805

USA								
	VIC	KNO	AES	DRA	ESC	PHY	SKI	SOC
VIC	<i>.945</i>							
KNO	.268	<i>.835</i>						
AES	.576	.436	<i>.861</i>					
DRA	.078	.268	.169	<i>.665</i>				
ESC	.351	.434	.410	.216	<i>.808</i>			
PHY	.504	.122	.348	.033	.163	<i>.868</i>		
SKI	.122	.529	.317	.303	.387	.057	<i>.786</i>	
SOC	.350	.310	.422	.162	.284	.218	.275	<i>.803</i>

Notes: Italicized numbers on the diagonal show the average variance extracted; VIC = vicarious achievement, KNO = knowledge, AES = aesthetics, DRA = drama, ESC = escape, PHY = physical attraction, SKI = skills, SOC = social.

Table B - 2: Correlations between measures: USA

	1	2	3	4	5	6	7	8	9	10	
Dependent variable											
1	Identification										
Independent variables											
2	Nationality similarity ^a	-0.27**									
3	Age similarity	-0.32**	0.09								
4	Gender similarity ^a	0.15**	0.01	-0.07							
5	Perceived similarity self	0.50**	-0.13	-0.15**	0.16**						
6	Similarity perceived other	0.43**	-0.12	-0.18**	0.05	0.53**					
Control variables											
7	Sport activity	0.41**	-0.24**	-0.36**	0.13**	0.23**	0.20**				
8	Sport consumption	0.14**	0.11	0.03	0.19**	0.17**	0.11	0.23**			
9	Education	0.03	-0.15**	0.05	-0.00	0.14**	0.09	0.16**	0.02		
10	Net income	0.32**	-0.18**	-0.17**	0.05	0.18**	0.17**	0.26**	0.06	0.20**	
11	Years of fandom	0.05	0.08	-0.07	0.11	0.00	0.06	0.02	0.11	0.03	-0.01

Note. Correlations with ** are significant at the $p < 0.01$ level (two tailed). ^a Binary variable: 0 = Non-similarity, 1 = Similarity

Appendix
Appendix B: Additional analyses

Table B - 3: Correlations between measures: Japan

	1	2	3	4	5	6	7	8	9	10
Dependent variable										
1 Identification										
Independent variables										
2 Nationality similarity ^a	0.18**									
3 Age similarity	-0.07	-0.08								
4 Gender similarity ^a	0.10	0.01	-0.19**							
5 Perceived similarity self	0.26**	0.01	-0.21**	0.02						
6 Similarity perceived other	0.12	0.05	-0.07	-0.07	0.62**					
Control variables										
7 Sport activity	0.21**	0.03	-0.00	0.12	0.10	0.08				
8 Sport consumption	0.02	0.12	0.02	0.10	-0.05	-0.03	0.19**			
9 Education	0.06	-0.04	-0.10	0.10	0.03	-0.00	0.06	-0.00		
10 Net income	0.04	-0.11	-0.01	0.08	-0.01	0.00	0.07	0.01	0.15**	
11 Years of fandom	0.01	-0.01	-0.30**	0.25*	0.18**	0.18**	0.05	0.02	0.06	0.01

Note. Correlations with ** are significant at the p<0.01 level (two tailed). ^a Binary variable: 0 = Non-similarity, 1 = Similarity

Appendix
Appendix B: Additional analyses

Table B - 4: Correlations between measures: Germany

	1	2	3	4	5	6	7	8	9	10
Dependent variable										
1 Identification										
Independent variables										
2 Nationality similarity ^a	0.16**									
3 Age similarity	-0.05	0.28**								
4 Gender similarity ^a	0.10	-0.04	-0.10							
5 Perceived similarity self	0.55**	0.08	-0.16**	0.18**						
6 Similarity perceived other	0.34**	0.02	0.01	0.11	0.45**					
Control variables										
7 Sport activity	0.13	-0.05	-0.14**	0.12	0.21**	0.15**				
8 Sport consumption	0.12	0.03	0.06	0.18**	0.11	0.02	0.21**			
9 Education	-0.10	-0.04	-0.07	-0.05	-0.06	-0.10	0.19**	0.06		
10 Net income	-0.00	0.02	0.16**	0.05	0.08	0.01	0.18**	0.08	0.30**	
11 Years of fandom	0.07	-0.12	-0.09	0.18**	0.07	0.18**	0.02	-0.02	-0.10	-0.06

Note. Correlations with ** are significant at the $p < 0.01$ level (two tailed). ^a Binary variable: 0 = Non-similarity, 1 = Similarity

Appendix
Appendix B: Additional analyses

Table B - 5: Correlations between measures: South Korea

	1	2	3	4	5	6	7	8	9	10
Dependent variable										
1 Identification										
Independent variables										
2 Nationality similarity ^a	0.14**									
3 Age similarity	0.03	0.11**								
4 Gender similarity ^a	-0.01	-0.16**	-0.02							
5 Perceived similarity self	0.57**	0.05	-0.02	0.05						
6 Similarity perceived other	0.58**	0.00	0.01	0.04	0.65**					
Control variables										
7 Sport activity	0.14**	-0.02	0.09	-0.01	0.15**	0.12**				
8 Sport consumption	0.14**	0.08	-0.02	0.10	0.08	0.09	0.23**			
9 Education	-0.01	0.03	0.06	0.11	0.05	0.07	0.04	0.15**		
10 Net income	0.00	-0.07	0.08	-0.02	0.01	0.13**	0.07	0.05	0.34**	
11 Years of fandom	0.08	0.11**	-0.03	0.03	0.13**	0.15**	0.12**	0.13**	0.15**	0.12**

Note. Correlations with ** are significant at the p<0.01 level (two tailed). ^a Binary variable: 0 = Non-similarity, 1 = Similarity

Appendix
Appendix B: Additional analyses

Table B - 6: Correlations between measures: China

	1	2	3	4	5	6	7	8	9	10
Dependent variable										
1 Identification										
Independent variables										
2 Nationality similarity ^a	0.03									
3 Age similarity	0.08	0.31**								
4 Gender similarity ^a	-0.02	0.31**	-0.00							
5 Perceived similarity self	0.60**	0.02	0.02	0.07						
6 Similarity perceived other	0.56**	0.06	0.03	0.02	0.55**					
Control variables										
7 Sport activity	0.14**	0.03	0.05	-0.05	0.13**	0.10				
8 Sport consumption	0.09	0.28**	0.04	0.19**	0.13**	0.10	0.05			
9 Education	-0.00	0.20**	-0.29**	-0.00	0.00	-0.00	0.17**	0.10		
10 Net income	0.08	0.13	-0.10	-0.00	0.11	0.08	0.22**	0.07	0.41**	
11 Years of fandom	0.20**	0.07	0.07	0.13**	0.20**	0.20**	-0.01	0.10	-0.07	-0.05

Note. Correlations with ** are significant at the $p < 0.01$ level (two tailed). ^a Binary variable: 0 = Non-similarity, 1 = Similarity

Appendix
Appendix B: Additional analyses

Table B - 7: Ordered probit models with identification_sum as dependent variable

Variables	USA		JAP		GER		SKO		CHN	
	Model 1a	Model 1b	Model 2a	Model 2b	Model 3a	Model 3b	Model 4a	Model 4b	Model 5a	Model 5b
Independent variables										
Nationality similarity ^a	-.39** (.12)	-.36** (.12)	.52*** (.14)	.54*** (.214)	.30* (.13)	.30* (.13)	0.36** (.11)	.34* (.11)	.05 (.20)	.08 (.11)
Age similarity	-.02*** (.00)	-.01*** (.00)	-.00 (.00)	-.00 (.00)	-.00 (.01)	-.00 (.00)	0.00 (.00)	.00 (.00)	-.01 (.01)	.00 (.00)
Gender similarity ^a	.14 (.11)	.10 (.12)	.19 (.12)	.17 (.12)	.01 (.12)	-.04 (.12)	-.06 (.09)	-.06 (.09)	-.34† (.21)	-.14 (.11)
Perceived similarity self	.37*** (.06)	.36*** (.06)	.28*** (.07)	.28*** (.07)	.43*** (.06)	.43*** (.01)	.47*** (.07)	.46*** (.07)	.81*** (.10)	.45*** (.05)
Similarity perceived other	.27*** (.06)	.25*** (.06)	-.04 (.08)	-.04 (.08)	.17** (.05)	.18** (.01)	.55*** (.06)	.57*** (.06)	.67*** (.10)	.34*** (.06)

Appendix
Appendix B: Additional analyses

Variables	USA		JAP		GER		SKO		CHN	
	Model 1a	Model 1b	Model 2a	Model 2b	Model 3a	Model 3b	Model 4a	Model 4b	Model 5a	Model 5b
Control variables										
Sport activity	.01*		.02*			-.01		.01†		.03†
	(.01)		(.01)			(.01)		(.01)		(.02)
Sport consumption	.01		-.01			.03†		.02*		-.01
	(.00)		(.02)			(.02)		(.01)		(.01)
Education	-.22*		.06			-.10		-.10		.03
	(.09)		(.09)			(.12)		(.08)		(.08)
Net income	.23**		.08			-0.7		-0.07		-.01
	(.12)		(.08)			(.08)		(.07)		(.08)
Years of fandom	.00		-.01			.01		-.01		.02†
	(.01)		(.01)			(.01)		(.01)		(.01)
Pseudo R	.07	.08	.02	.03	.07	.07	.98	.10	.10	.10

^a Binary variable: 0 = Non-similarity, 1 = Similarity Note. b = unstandardized regression coefficient with robust errors in parentheses. †p<0.1, *p<0.05, **p<0.01, ***p<0.001. Country abbreviations: CHN = China, GER = Germany, JAP = Japan, SKO = South Korea and USA = United States of America.

8. Statutory Declaration

Name: Päßgen Vorname: Caroline Alexandra

Eidesstattliche Erklärung

nach §12 Abs. 1 Nr. 6 der Promotionsordnung der WHU vom 20.05.2015

Ich erkläre hiermit an Eides Statt, dass ich die bei der Wissenschaftlichen Hochschule für Unternehmensführung (WHU) -Otto-Beisheim-Hochschule-, vorgelegte

Dissertation

selbständig und ohne Benutzung anderer als der angegebenen Hilfsmittel angefertigt habe. Die Arbeit wurde bisher in gleicher oder ähnlicher Weise keiner anderen Prüfungsbehörde vorgelegt.

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