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A multidimensional conceptualization of the sponsor-sponsee fit in sport

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ABSTRACT

The aims of the study were to identify the most relevant conceptualisation of the factor structure of the sponsor-sponsee fit in sport sponsorship using advanced statistical methods (bifactor model) recently introduced within the literature and examine which dimensions of the sponsor-sponsee fit construct were the strongest predictors of the overall sponsor-sponsee fit construct. A total of 270 participants from Iran completed a questionnaire on three sponsors of the Iranian national volleyball team. Indices-of fit and Yuan-Bentler likelihood ratio tests revealed that a model comprising nine dimensions of fit provided the best fit to the data across the three sponsors. Results of structural equation modelling analyses revealed that the specific dimension of explicitness was the strongest predictor of the overall measure of fit. Theoretical and managerial implications of the present results for the sport marketers have been discussed.

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Sponsor-sponsee fit; fit construct; schema-congruence theory; bifactor model

Fit is a salient issue because high fit sponsorships are consistent with what is expected from firms (Simmons & Becker-Olsen, 2006). The construct of fit refers to a match between an object and the schema it evokes (Clemente, Dolansky, Mantonakis, & White, 2014). This construct is of prime importance in sport settings because previous research has provided strong evidence of its influence on a wide variety of sponsorship positive outcomes, such as the ability to recognise/remember the sponsor or to generate a positive attitude toward the sponsorship and sponsor (Cornwell, Humphreys, Maguire, Weeks, & Tellegen, 2006; Roy & Cornwell, 2004). For instance, affective commitment (like attitude) has a greater effect on social standing and, by extension, social

standing has a greater effect on purchase intentions of supporters of clubs with high competitive performance in comparison to those of moderate or inferior performance (Koronios, Psiloutsikou, Kriemadis, & Kolovos, 2016a). Furthermore, Koronios, Psiloutsikou, Kriemadis, Zervoulakos, and Leivaditi (2016b) found that product fit can partially mediate the relationship between sponsor image and purchase intention. When developing a sponsorship strategy, managers need to evaluate the congruence or fit between their firm and the entity they are supporting. Fit between two entities “is high when the two are perceived as congruent (i.e. as going together), whether that congruity is derived from mission, products, markets, technologies, attributes, brand concepts, or any

other key association" (Simmons & Becker-Olsen, 2006, p. 155). This congruence between a sponsor and a sponsee is important because it supports memory building of the brand's (sponsor's) sponsorship activities in the minds of consumers. Good fit between the sponsor and the sponsee can facilitate other aspects of communication (Cornwell et al., 2006).

Literature review

Theoretical framework of the fit construct

Researchers generally use concepts such as similarity, congruity, match or relatedness to refer to the fit between an object and the schema it evokes (Clemente et al., 2014). Similarity seems to work well enough to support inductive inferences, categorisation and generalisations concerning learning, memory and transfer (Medin, Goldstone, & Gentner, 1993). One of the fit theories most used by researchers in sport settings is the Schema Congruity Theory (SCT; Papadimitriou, Kaplanidou, & Papa-charalampous, 2016). Schema is a category of mental structures that store and organise past experience and guides our subsequent perceptions and experiences. SCT appears to be a relevant lens to gauge an individual's assessment of sponsorship fit. In essence, a schema is a pre-conception, which has been developed through experiences (Fiske & Pavelchak, 1986). Based on SCT, new experiences can correspond with existing schema. If an experience matches with a schema, it is congruent. As a whole, SCT postulates that as the fit between a sponsor brand and a sport event brand increases, then assimilation effects take place that can transfer the quality of the event to the sponsor (Koo, Quarterman, & Flynn, 2006).

To our knowledge, no study has thus far examined sponsor-sponsee fit at national sport levels. It is an important issue because, regardless of club level, all people in a country are more or less related to their national team. National team sponsors have an extended target market and

the sponsoring of national teams has useful outcomes from spectator points of view. A country's general image is somewhat distinct from the perceived quality of products associated with a particular country (Pappu, Quester, & Cooksey, 2006). Because all of the sponsors of the Iran national volleyball team are Iranian brands, users of the sponsored products can participate in various regularly sponsored community activities, such as fan festivals and local meetups, which will help tie customers to the brand and the community.

Dimensionality of fit

Fit has most often been examined from an overall perspective using one-dimensional measures that ask respondents the logic of a particular brand sponsoring a particular object (i.e. organisation, cause, event or individual being sponsored) (Clemente et al., 2014; Olson & Thjømmøe, 2011). This can be problematic because a sponsor and a sponsee could have a high fit regarding some aspects and a low fit regarding others. When responding to a measure of fit, participants could possibly refer to different dimensions and not rate the same thing, creating issues of validity and findings interpretation for practitioners. As such, some researchers have adopted a multidimensional conceptualisation of the fit construct. Gwinner and Eaton (1999) early identified the two dimensions of image and functional fit and they found that when event and brand were matched on either an image or a functional basis, the transfer process was enhanced. Bigné, Currás-Pérez, and Aldas-Manzano (2012) studied the dual nature of social cause-brand fit by studying the influence of functional fit and image fit on the formation of consumer perceptions of brand corporate social responsibility. Results showed that functional and image fit might influence consumer perceptions of brand corporate social responsibility through different mechanisms (direct versus indirect mechanism; Bigné et al., 2012).

Other authors have identified a higher number of fit dimensions. Pentecost and Spence (2004) explored the six fit dimensions of targeting, image, location, typicality, clash and complementarity. Olson and Thjømøe (2011) used a qualitative cognitive mapping approach to uncover seven dimensions (use, prominence, audience similarity, geographic similarity, attitude similarity, image similarity and duration of sponsorship) that form the basis for an overall fit perception. In a follow-up study, the same authors showed that these dimensions could be used to positively manipulate fit perceptions. Similarly, Kim and Yongjae (2012) showed that the dimensions of geographical, audience, attitude similarity and duration of sponsorship were predictors of an overall measure of fit. Finally, Zdravkovic, Magnusson, and Stanley (2010) used a wide variety of fit dimensions between social causes and consumer brands including visibility, slogan, mission, target market, promotion, geographical, involvement, local, explicitness and colour. Of particular importance in the context of the present study, Zdravkovic et al. (2010) also highlighted that these specific dimensions of fit could be regrouped within two macro fit dimensions: (a) the prominence of the relationship between the brand and the cause; and (b) the marketing strategy. The former includes explicitness, visibility, colour, involvement and local, and refers to the manner in which the cause relationship is presented and explained to potential customers. The latter includes target market, mission, geographical, promotion and slogan, and deals with the partners' similarity in segmentation, targeting and positioning (Zdravkovic et al., 2010).

Several authors have suggested that the fit between a sponsor and a sponsee could be established along a wide range of dimensions (Olson & Thjømøe, 2011; Pentecost & Spence, 2004; Zdravkovic et al., 2010). This is in contrast to the traditional one-dimensional fit approach that has generally been used in the literature (Close & Russell, 2013; Speed & Thompson,

2000). In other words, compared to original research in advertising, where visuals were evaluated to explore match-up, research grounded within sponsorship relationships has indicated that match-up between a sponsor and a sponsee could follow a wide variety of dimensions that could ultimately be regrouped into macro-dimensions (general dimensions) of fit (Zdravkovic et al., 2010). Nevertheless, although the research community has acknowledged that the construct of fit could be conceptualised as a multidimensional construct, we did not find any research exploring several structures of the fit construct. Therefore, the first aim of the present study was to identify the best ways to examine the factor structure of the sponsor-sponsee fit in sport sponsorship using advanced methods recently introduced within the literature, such as the bifactor model. Moreover, this study aimed to identify the fit dimensions that were the strongest predictors of the overall fit construct. This would allow researchers and practitioners to establish better criteria to identify operational levers for developing appropriate fitting relationships between a brand and a sport team. We used as a starting point the scale from Zdravkovic et al. (2010) that was developed in the sport context to examine a wide range of fit dimensions.

Conceptual model

Confirmatory factor analysis models

Confirmatory factor analysis (CFA) is the traditional measurement model that has been used to examine factor structure of self-reported questionnaires over the last two decades. It fixes the cross-loadings (how strongly each measurement item loads on other factors) to zero and constrains the residuals (difference between the observed value of the dependent variable and the predicted value) uncorrelated. Nonetheless, CFA is considered to be too much theory-driven, and authors currently advise to explore other

models, such as bifactor models (Howard, Gagné, Morin, & Forest, 2018; Marsh, Morin, Parker, & Kaur, 2014).

Bifactor models

Bifactor models consist in exploring a multidimensional concept with one (or two) general dimension(s). In bifactor models, all items are assumed to simultaneously load on a global factor pertaining to all items forming the instrument and on specific factors representing each of the a priori subscales of the instrument. In bifactor models, the item loadings on the general factor and on one of the specific factors are freely estimated while their cross-loadings on the other specific factors are constrained to be zero. Moreover, factors are usually set to be orthogonal (i.e. the correlations between the specific factors and the general factor are all constrained to be zero) to facilitate interpretation. An orthogonal bifactor model thus partitions the total covariance among the items into a general factor underlying all items and multiple specific factors explaining the residual covariance not explained by the general factor. Given their greater flexibility, bifactor models usually present a greater degree of fit to the data than hierarchical models.

Higher-order CFA models are unlikely to hold in most research settings (Reise, 2012) or to make sense theoretically (Gignac, 2016), thus positioning bifactor models as the most robust modelling procedure. Jennrich and Bentler (2011) showed that while bifactor models were able to properly recover true higher order factor structures, higher-order factor models could not always properly recover true bifactor structures. Bifactor models should thus be preferred over higher-order models unless strong theoretical reasons are presented to support the need to model the relations between the indicators and the global factors as indirect, and the presence of the implicit proportionality constraints (Gignac, 2016). The

bifactor model could be suitable in the context of the fit construct because an overall general dimension of fit, and/or the two macro dimensions of marketing strategy and prominence proposed by Zdravkovic et al. (2010), could possibly be supported using a bifactor model approach in addition to the nine sub-dimensions of fit.

Compared to the widely used second-order models, the bifactor models have several potential advantages, particularly when researchers are interested in the predictive relations between group factors and external criteria over and above the general/second-order factor (Chen & Zhang, 2018). First, a bifactor model can be used as a less restricted baseline model to which a second-order model can be compared, given that the second-order model is nested within the bifactor model (Yung, Thissen, & McLeod, 1999). Yuan and Bentler likelihood ratio test (YB-LRT; Yuan & Bentler, 2000) can be used to distinguish the two models. Second, the bifactor model can be used to study the role of domain factors that are independent of the general factor. Third, in the bifactor model, we can directly examine the strength of the relationship between the domain factors and their associated items, as the relationships are reflected in the factor loadings, whereas such relationships cannot be directly tested in the second-order factor model, as the domain factors are represented by disturbances of the first-order factors (Chen & Zhang, 2018). We do not wish to imply that a bifactor model is more applicable than second-order models under all conditions. If the general factor is the main focus of the research, the second-order factor model may be more parsimonious. Moreover, the bifactor and second-order representations are not mutually exclusive, and they can coexist in different parts of the same complex model.

Most of the studies exploring the factorial structure of fit have used CFA or exploratory factor analysis and provided evidence for the reliability and validity of their fit scores (Bigné

et al., 2012; Fleck & Quester, 2007; Speed & Thompson, 2000; Zdravkovic et al., 2010). To our knowledge, no studies have used a bifactor model approach to explore the factorial structure of the sponsor-sponsee fit. Such a study could provide new insights on the theoretical understanding of the fit concept, as well as its conceptualisation and measurement, and could ultimately help practitioners in selecting the best criteria to use in choosing the most fitting relationships partner, whether a sponsor brand or a sponsee.

According to the bulk of studies that used a one-dimensional conceptualisation of the fit construct, the fit construct has most typically been evaluated using nonspecific overall measures to allow respondents to answer on whatever fit basis they consider (Speed & Thompson, 2000). In the present research, it is of prime importance to examine the role of specific fit dimensions in predicting an overall measure of fit. To date, only two studies (Olson & Thjømmøe, 2011; Pentecost, 2007) have examined which of the sub-dimensions of fit significantly predicted an overall fit measure. Olson and Thjømmøe (2011) showed that four of the seven specific dimensions of fit (i.e. audience similarity, geographic similarity, attitude similarity and use by participants) significantly predicted the overall fit. Pentecost's results showed that benefit/usage and attribute dimensions (but not the image dimension) were significant predictors of overall fit.

The present study

The aims of the present study were to (a) identify the best way to examine the factor structure of the sponsor-sponsee fit in sport sponsorship exploring more subtle statistical methods, namely bifactor models; and to (b) identify which dimensions of the sponsor-sponsee fit construct were the strongest predictors of the overall dimension of fit. Based on the postulates of the SCT framework (Papadimitriou et al., 2016) and on the aforementioned results (Olson & Thjømmøe, 2011; Zdravkovic et al.,

2010), we hypothesised that (a) a bifactor model would provide the best fit to the data; and (b) the two macro-dimensions of prominence and marketing strategy would be significant predictors of overall fit.

Methods

Case study

The Iran national volleyball team

Volleyball is the second most popular sport in Iran and the national team has been the best sports team in Iran over the last decade. According to the 2017 International Federation of Volleyball ranking, this team was first in Asia and 11th in the world. The best positions of this team were 3rd, 4th, 5th, 6th, and 8th in the 2017 World Grand Champions Cup, 2014 World League, 2016 Olympic Games, 2014 World Championship, and 2015 World Cup, respectively. Because of these remarkable performances on the world stage, numerous Iranian fans follow the team and its performances, and thus many companies are interested in sponsoring it for visibility at national and international levels. During this research, the men's national volleyball team of Iran had three main sponsors from three different industry sectors—Hamrah-e-Aval, a mobile operator; Merooj, a sport product manufacturer; and Day Bank, a bank—that were all used in our study. It is noteworthy that all three of the sponsors are Iranian company brands.

Participants

A total of 300 questionnaires was distributed to undergraduate students recruited from a major university in Iran. Thirty questionnaires with incomplete observations were discarded, resulting in 270 participants retained for the final sample (118 females and 154 males; $M_{age} = 22.86 \pm 3.69$ years). Each respondent evaluated the three sponsors separately (Day Bank, Hamrah-e-Aval, Merooj). It is noteworthy that 52.5% of respondents had been playing

volleyball for 4.1 years on average ($SD = 3.5$) and 27.5% very often watched the national volleyball team's games (almost all the matches of the national volleyball team), while 36.6% often watched (one match per month), 24.7% sometimes watched (one match in two months), 7.8% rarely watched (one match in six months) and 3.4% almost never watched the team's games. Also, 2.3% of participants very often informed themselves about the national volleyball team using media (several times per day), 37% often (one time per day), 37.71% sometimes (one time per week), 11.5% rarely (one time per month) and 2.2% almost never.

Measures

A Persian version of the fit questionnaire used by Zdravkovic et al. (2010) was used to measure the multidimensional construct of fit. Nine three-item subscales were used to measure visibility, slogan, mission, colour, target, promotion, geography, involvement and explicitness. The translation of the questionnaire into Persian was conducted according to a standardised back-translation procedure. Consistent with previous studies (e.g. Zdravkovic et al., 2010), the macro-dimensions of prominence (colour, involvement, visibility, explicitness) and marketing strategy (target market, mission, slogan, geographical, promotion) were also assessed in the present study. Participants responded on a 7-point Likert-type scale with values ranging from 1 (totally disagree) to 7 (totally agree). The questionnaire can be found in [Appendix 1](#).

Three items taken from Simmons and Becker-Olsen (2006) were used to measure the overall measure of fit. Participants responded on a 7-point Likert-type scale with values ranging from 1 (totally disagree) to 7 (totally agree).

Procedure

The research was conducted in accordance with international ethical guidelines. Student

participation was voluntary, and written informed consent was obtained before the data collection. With the agreement of their professors, students completed multidimensional measures of fit and the overall measure of fit at their university or during university courses.

Estimation and specification

A series of CFA and bifactor models was conducted on MPlus Version 7.3 using robust maximum likelihood estimator (Muthén & Muthén, 2008). Even if the required sample size depends on model complexity, most researchers recommend using sample sizes of at least 200 cases and/or from 5 to 10 cases for each variable (Kline, 2011). As such, the sample size of the present study was acceptable. CFA models were specified according to theory expectations (Zdravkovic et al., 2010); each item loaded on their target factor. Based on the literature using an overall dimension of fit, we also computed a hierarchical CFA model with one second-order dimension of fit encompassing all nine first-order fit dimensions. Based on the results of Zdravkovic et al. (2010), a hierarchical CFA model with the two higher-order dimensions of prominence and marketing strategy was also computed. It is noteworthy that higher-order factors do not explain any unique variance over and above what was already explained by the first-order factors. For this reason, the first-order factors in a higher-order CFA model reflect a combination of the variance explained by the higher-order factor and the variance uniquely attributable to each first-order factor (Morin, Arens, & Marsh, 2016). An alternative and far more flexible model involves the use of a bifactor representation, in which all items are used to define their respective fit subscales while also being used to directly define a global fit factor (or two global fit factors) that represents the continuum (Reise, 2012). Thus, in comparison to higher-order CFA models, bifactor models provide a way to explicitly separate the variance attributable to specific factors from the variance

attributable to the global general factor(s) (Howard et al., 2018). In the present study, each item loaded on both a specific factor and a general factor. Moreover, the correlations between the specific factors and the general factor were all constrained to be zero to facilitate interpretation. Nevertheless, the specific dimensions of fit were free to correlate together. Based on the aforementioned rationale, two bifactor models were computed: (a) a bifactor model with one general dimension of fit; and (b) a bifactor model with the two general dimensions of prominence and marketing strategy. An overview of the several structural models tested is presented in Figure 1.

Data analyses

The model comparisons were conducted according to a wide range of goodness-of-fit values: the

comparative fit index (CFI), the Tucker-Lewis index (TLI), the root mean square error of approximation (RMSEA) and its confidence interval (90% CI), the standardised root mean square residual (SRMR) and the chi-square test of model fit (Marsh, Trautwein, Lüdtke, Köller, & Baumert, 2005). A good fit refers to CFI and TLI greater than .95 and RMSEA and SRMR smaller than .05; an acceptable fit refers to CFI and TLI greater than .90 and a RMSEA and SRMR smaller than .08. The Akaike information criterion (AIC), Bayesian information criterion (BIC) and adjusted BIC (ABIC) were used for comparison with alternative models (MacCallum & Austin, 2000). Based on the rationale that traditional chi-square difference tests are not acceptable for comparing models in using robust maximum likelihood estimation, likelihood ratio tests with Yuan-Bentler adjustments (YB-LRT;

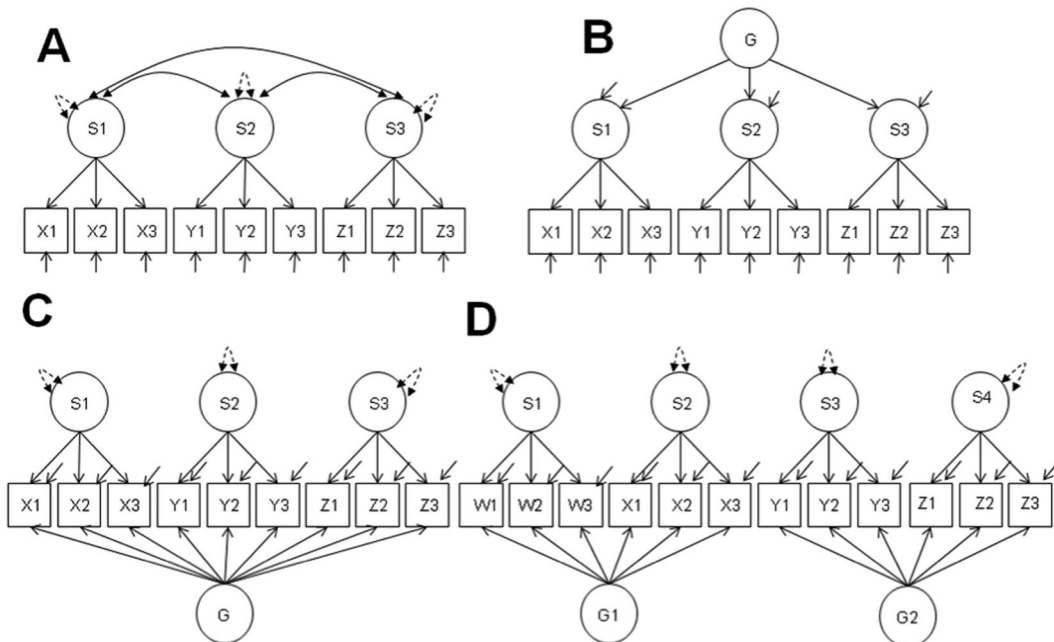


Figure 1. Graphical representation of models considered in this study.

Note: A = CFA model; B = hierarchical 1-factor CFA model; C = bifactor model with one general factor; D = bifactor model with two general factors; W1-W3, X1-X3, Y1-Y3, and Z1-Z3 = items; S1-S4 = specific factors for CFA models and bifactor model; G = higher-order factor in CFA model and global factor in a bifactor model. These models have been provided as sample illustration in using 3 or 4 specific factors whereas in the present research, we have 9 specific factors.

Yuan & Bentler, 2000) were used to compare nested models in the present study. To explore discriminant validity, we computed the confidence intervals (\pm two standard errors of the correlations between latent variables) for the correlations between latent variables and they should not include 1.0 to support discriminant validity for constructs (Anderson & Gerbing, 1988). Discriminant validity is the extent to which a latent variable discriminates from other latent variables. Discriminant validity means that a latent variable is able to account for more variance in the observed variables associated with it than (a) measurement error or similar external, unmeasured influences; or (b) other constructs within the conceptual framework (Fornell & Larcker, 1981). Reliability was

explored using Cronbach's alpha, average variance extracted (AVE) and composite reliability (ρ) values. Finally, a series of SEM analyses was used for examining the ability of the specific dimensions of the fit construct (using the measurement model which fitted better in the aforementioned analyses) to predict the overall measure of fit.

Results

Measurement models

Descriptive statistics and reliability scores for all the study variables are shown in Table 1. Correlations between specific dimensions of fit, macro dimensions of fit and the overall (one-

Table 1. Cronbach's Alphas, Composite Reliability Values, AVE and Descriptive Statistics.

	dimensions	α	ρ	AVE	M	SD	
Merooj	Visibility	.78	.79	.55	3.22	1.31	
	Slogan	.78	.79	.55	3.37	1.23	
	Mission	.74	.74	.48	3.84	1.30	
	Colour	.70	.72	.43	3.82	1.23	
	Target market	.73	.73	.47	3.93	1.33	
	Promotion	.68	.68	.42	3.71	1.27	
	Geographical	.67	.67	.41	3.94	1.29	
	Involvement	.66	.62	.35	3.95	1.21	
	Explicitness	.70	.71	.45	3.32	1.13	
	Overall fit	.66	.67	.41	3.73	1.26	
	Prominence	.84	.84	.45	3.58	.93	
	Marketing strategy	.90	.93	.47	3.76	1.00	
	Hamrah-e-Aval	Visibility	.83	.83	.62	4.08	1.53
		Slogan	.84	.83	.61	4.13	1.53
Mission		.78	.76	.52	4.19	1.32	
Colour		.79	.79	.55	4.27	1.37	
Target market		.67	.69	.42	4.35	1.25	
Promotion		.73	.74	.48	4.22	1.28	
Geographical		.75	.75	.51	4.07	1.31	
Involvement		.71	.72	.46	4.28	1.37	
Explicitness		.83	.83	.62	4.14	1.41	
Overall fit		.67	.66	.43	4.17	1.32	
Prominence		.89	.95	.56	4.20	1.14	
Marketing strategy		.91	.94	.51	4.19	1.02	
Day bank		Visibility	.84	.84	.65	4.18	1.52
		Slogan	.83	.84	.63	4.21	1.52
	Mission	.79	.80	.57	4.17	1.36	
	Colour	.78	.78	.55	4.23	1.35	
	Target market	.73	.74	.49	4.31	1.31	
	Promotion	.76	.76	.52	4.20	1.33	
	Geographical	.77	.78	.54	4.11	1.34	
	Involvement	.75	.75	.50	4.27	1.41	
	Explicitness	.78	.78	.55	4.26	1.41	
	Overall fit	.69	.69	.52	4.24	1.33	
	Prominence	.89	.95	.56	4.23	1.14	
	Marketing strategy	.92	.96	.50	4.20	1.07	

Notes. ρ = Composite reliability values; α = Cronbach's alpha coefficients, AVE = Average Variance Extracted.

dimensional) measure of fit for the three sponsors, as well as upper limits of the discriminant confidence interval scores are shown in [Table 2](#). Except for the estimated correlation between the latent variables of visibility and slogan for brands of Merooj, Hamrah-e-Aval and Day Bank ($\phi = 1.03, 1.02, 1.00$, respectively), confidence intervals for the latent variables are less than 1 and provided evidence for discriminant validity for the sub-dimensions of fit construct. Thus, results from the confirmatory factor analysis revealed that the measurement model was appropriate.

[Table 3](#) presents the goodness-of-fit indices for all the measurement models. Concerning the CFA measurement models, the correlated CFA model and hierarchical CFA models (hierarchical 1-factor CFA and hierarchical 2-factor CFA models) provided acceptable fit to the data for the three sponsors (CFI and TLI $\geq .94$ for most of the models; RMSEA and SRMR $\leq .06$). Although the bi-factor model with one general factor did not converge for one sponsor (Day Bank), goodness of fit indices of this structural model provided acceptable fit to the data for the two other sponsors (Merooj and Hamrah-e-Aval). The bi-factor model with two general factors provided acceptable fit to the data for Merooj, as well as good fit to the data for Hamrah-e-Aval and Day Bank. YB-LRT difference tests were then used to compare data fit across the several measurement models ([Table 3](#)). For Merooj, YB-LRTs indicated no significant difference between the bifactor with two general factors model and the correlated CFA model, whereas the correlated CFA model fitted the data significantly better than hierarchical 1-factor and 2-factor CFA models (YB-LRT (27) = 44.17 and YB-LRT (26) = 41.45, respectively, all $p_s > .05$). For Hamrah-e-Aval, the correlated CFA model fitted the data significantly better than hierarchical 1-factor and 2-factor CFA models (YB-LRT (27) = 123.24 and YB-LRT (26) = 99.97, all $p_s < .01$), whereas the correlated CFA fitted the data significantly better than bifactor with two

factors model, hierarchical 1-factor and 2-factor CFA models (YB-LRT (17) = 27.74, YB-LRT (44) = 142.75 and YB-LRT (43) = 120.35, respectively, all $p_s > .05$). For Day Bank, the correlated CFA model fitted the data significantly better than hierarchical 1-factor and 2-factor CFA models (YB-LRT (27) = 85.18 and YB-LRT (26) = 69.29, respectively, all $p_s > .01$) and the bifactor with two factors model (YB-LRT (17) = 42.51, $p_s > .05$), the bifactor with two factors model fitted the data significantly better than hierarchical 1-factor and 2-factor CFA models (YB-LRT (44) = 127.71 and YB-LRT (43) = 111.75, respectively, all $p_s > .01$). As a whole, across the three sponsors, the model that fitted the data the best was the correlated CFA model. As such, the subsequent SEM analyses were conducted using this measurement model.

The standardised factor loadings of CFAs and bi-factor models are presented in the Appendix ([Tables A2, A3 and A4](#)) whereas the correlations between the specific dimensions of fit for the bifactor models are presented in [Appendices 2 and 3](#). For the three CFA models, factor loadings were acceptable for all 27 items (range = .55–.86). For the bi-factor with one general factor model, the specific factor loadings were acceptable (range = .25–.99), except for items 1 and 2 of colour for Merooj brand ($\lambda = .01$ and .08). For the bi-factor model with two general factors, the specific factor loadings were acceptable (range = .26–.99), except for item 3 of slogan for Merooj brand ($\lambda = .17$). Confirming the two macro dimensions of marketing strategy and prominence (Zdravkovic et al., 2010), the standardised factor loadings of these two general factors were remarkably high (range = .65–.96).

Reliability of fit scores

The alpha coefficients indicated that the reliability of each of the nine fit subscales was acceptable, with Cronbach's alpha coefficients ranging from .66 to .92. To further assess the internal reliability of the fit subscales, ρ and

Table 2. Correlation and discriminant validity between sub-dimensions and macro dimensions of fit for three sponsors.

	Dim	Vis		Slg		Mis		Col		Tgt		Pro		Geo		Inv		Exp		Over		Pne	
		cor	val	cor	val	cor	val	cor	val	cor	val	cor	val	cor	val	cor	val	Cor	val	cor	val	cor	val
Merooj	Slg	.90	1.03																				
	Mis	.46	.58	.58	.70																		
	Col	.39	.51	.52	.64	.66	.77																
	Tgt	.39	.50	.51	.62	.59	.69	.60	.70														
	Pro	.34	.47	.41	.53	.48	.60	.59	.71	.60	.73												
	Geo	.34	.47	.43	.56	.44	.56	.47	.58	.50	.62	.47	.60										
	Inv	.45	.59	.55	.69	.56	.59	.50	.64	.54	.67	.46	.60	.51	.65								
	Exp	.43	.58	.43	.58	.39	.55	.47	.63	.48	.64	.40	.56	.45	.61	.41	.59						
	Over	.38	.50	.41	.51	.56	.69	.49	.60	.40	.53	.42	.55	.47	.61	.53	.67	.64	.78				
	Pne	.75	.87	.79	.89	.68	.76	.77	.85	.66	.74	.59	.69	.58	.68	.77	.88	.74	.90	.66	.80		
Mkt	.62	.74	.75	.86	.80	.88	.73	.80	.83	.91	.76	.86	.73	.83	.68	.79	.55	.71	.58	.70	.85	.90	
Hamrah-e-Aval	Slg	.90	1.02																				
	Mis	.36	.48	.44	.56																		
	Col	.51	.63	.51	.69	.60	.80																
	Tgt	.38	.50	.44	.56	.58	.60	.58	.79														
	Pro	.34	.45	.37	.48	.52	.63	.51	.71	.67	.81												
	Geo	.41	.54	.48	.59	.56	.68	.44	.64	.53	.66	.59	.71										
	Inv	.51	.63	.50	.65	.41	.57	.48	.63	.52	.70	.50	.66	.56	.73								
	Exp	.67	.87	.61	.73	.40	.53	.45	.58	.42	.55	.41	.53	.49	.63	.58	.72						
	Over	.39	.51	.45	.60	.44	.57	.42	.55	.41	.56	.48	.60	.56	.60	.49	.61	.50	.62				
	Pne	.84	.95	.79	.89	.55	.63	.75	.89	.58	.68	.54	.62	.59	.69	.79	.95	.84	.97	.56	.69		
Mkt	.62	.75	.71	.86	.79	.95	.67	.80	.82	.98	.80	.96	.81	.97	.64	.73	.60	.75	.60	.71	.78	.93	
Day bank	Slg	.89	1.0																				
	Mis	.41	.53	.49	.60																		
	Col	.58	.70	.58	.72	.59	.74																
	Tgt	.42	.54	.48	.58	.59	.70	.59	.74														
	Pro	.34	.46	.39	.49	.58	.68	.53	.67	.65	.77												
	Geo	.39	.50	.46	.56	.59	.69	.48	.62	.58	.69	.64	.74										
	Inv	.47	.60	.46	.57	.45	.58	.51	.62	.55	.68	.56	.68	.61	.74								
	Exp	.61	.75	.55	.66	.44	.56	.43	.54	.40	.52	.42	.54	.48	.60	.57	.69						
	Over	.39	.52	.43	.54	.43	.55	.44	.55	.42	.54	.50	.61	.59	.70	.52	.64	.55	.65				
	Pne	.83	.94	.78	.87	.59	.67	.77	.91	.61	.70	.57	.65	.60	.68	.79	.90	.81	.92	.59	.70		
Mkt	.62	.73	.71	.83	.81	.94	.70	.79	.82	.95	.82	.94	.82	.94	.66	.74	.58	.69	.60	.72	.79	.90	

Notes: cor = correlation; val = upper limit of the discriminant confidence interval scores; dim = dimensions; Vis = Visibility; Slg = Slogan; Mis = Mission; Col = Colour; Tgt = Target market; Pro = Promotion; Geo = Geographical; Inv = Involvement; Exp = Explicitness; Pne = Prominence; Mkt = Marketing strategy, Over = Overall fit; All correlations are significant at $p < .05$

Table 3. Goodness of Fit Statistics and Information Criteria of Confirmatory Factor Analysis (CFA) models and Bifactor with one and two general factors models and model comparisons using YB-LRT tests

	Model	χ^2	df.	CFI	TLI	AIC	BIC	ABIC	RMSEA	90%CI RMSEA	SRMR	Comparison with M1		
												χ^2	df	
Merooj	M1	380.91	288	.95	.94	23541.57	23962.58	23591.61	.035	.024 .044	.046	–	–	
	M2	424.91	315	.94	.94	23552.78	23876.63	23591.27	.036	.027 .044	.050	44.17*	27	
	M3	422.55	314	.94	.94	23551.33	23878.78	23590.25	.036	.026 .044	.051	41.45*	26	
	M4	404.23	261	.93	.90	23518.65	24036.82	23580.25	.045	.036 .053	.039	18.80	27	
	M5	396.19	271	.94	.92	23564.91	24047.09	23622.22	.041	.032 .050	.090	3.83	17	
Hamrah-e-Aval	M1	385.70	288	.96	.95	23972.96	24393.98	24023.01	.035	.026 .044	.044	–	–	
	M2	519.75	315	.91	.90	24125.07	24448.93	24163.57	.049	.041 .056	.066	123.24**	27	
	M3	490.56	314	.92	.91	24079.64	24407.10	24118.57	.046	.038 .053	.062	99.97**	26	
	M4	335.70	261	.97	.96	23926.15	24444.32	23987.74	.033	.021 .042	.038	46.02*	27	
	M5	357.01	271	.97	.95	23947.56	24429.75	24004.88	.034	.024 .044	.074	27.74*	17	
Day bank	M1	365.38	288	.96	.95	24398.36	24819.38	24448.41	.032	.020 .041	.043	–	–	
	M2	456.30	315	.94	.93	24483.19	24807.05	24521.69	.041	.032 .049	.060	85.18**	27	
	M3	438.03	314	.95	.94	24455.85	24783.30	24494.77	.038	.029 .046	.056	69.29**	26	
	M4						<i>This model did not converge</i>							
	M5	320.25	271	.98	.97	24363.32	24845.51	24420.64	.026	.011 .037	.043	42.51*	17	

Notes. M1: Correlated CFA, M2: Hierarchical 1-factor CFA, M3: Hierarchical 2-factor CFA, M4: Bifactor with one general factor, M5: Bifactor with 2 general factors, χ^2 = Yuan & Bentler likelihood ratio test (YB-LRT tests); df = degree of freedom, * $p < .05$.

AVE values were provided as well. A ρ value of .70 or greater indicates an acceptable reliability. ρ values ranged between .62 and .96, suggesting acceptable reliability for the scores of the nine specific and two macro dimensions of fit. AVE describes the variance captured by measurement errors as opposed to the variance attributable to the latent factors. A value of .50 or greater indicates an acceptable reliability as the variance of the construct is greater than the error variance (Martinent, Guillet-Descas, & Moiret, 2015). AVE values ranged between .42 and .62 for Hamrah-e-Aval ($M_{AVE} = .52$), between .49 and .65 for Day Bank ($M_{AVE} = .55$), and between .35 and .55 for Merooj ($M_{AVE} = .45$). As a whole, the results of Cronbach's Alphas, ρ and AVE values suggest acceptable reliability for the scores of the nine specific and two macro dimensions of fit.

Linking specific dimensions of fit to the overall measure of fit

The first step was to examine whether the nine specific dimensions of fit were significantly correlated with the overall one-dimensional measure of fit. Correlational analyses showed that all sub-dimensions were significantly correlated with the overall measure of fit for each of the three sponsors (Table 2). The demonstration that specific dimensions of fit could be related to the general one-dimensional measure of fit controlling for all the other specific dimensions of fit could provide salient information regarding the strongest predictor(s) of an overall one-dimensional measure. As a result, in step 2, we moved beyond the zero-order correlations and examined which specific dimensions of fit were significant predictors of the overall

measure when all the specific dimensions of fit were simultaneously entered as independent variables using a series of SEM based on the best fitting measurement model of the fit construct identified in previous analyses (i.e. correlated CFA model).

Table 4 presents the goodness-of-fit indices for SEM using the best-fitting measurement model. Acceptable fit to the data (CFI and TLI $\geq .94$ for most of the models; RMSEA and SRMR $\leq .05$) emerged for all the SEMs for the three sponsors. Table 5 presents the predictions of overall fit by specific dimensions of fit for the three sponsors. Results showed that explicitness significantly predicted overall fit for Merooj and Day Bank ($\beta = .53, p < .05; \beta = .53, p < .05$, respectively), and other specific dimensions did not have significant effect on predicting overall fit. But for Hamrah-e-Aval, none of the specific dimensions significantly predicted overall fit. For more clarity, these results are presented in Figure 2.

Table 5. Prediction of Overall fit by Specific Dimensions of Fit using SEM Analyses

	Merooj		Hamrah-e-Aval		Day bank	
	correlated CFA		correlated CFA		correlated CFA	
	SPLV	P	SPLV	P	SPLV	P
Visibility	-.21	.31	-.04	.94	-.27	.14
Slogan	-.03	.96	.10	.93	.22	.18
Mission	.38	.63	-.26	.60	-.43	.14
Colour	-.26	.76	.16	.44	.39	.26
Target	-.36	.34	.30	.69	-.24	.45
Promotion	.28	.63	-.31	.64	-.01	.98
Geographical	.04	.98	.34	.41	.61	.09
Involvement	.22	.87	-.13	.68	.15	.58
Explicitness	.53*	.03	.07	.93	.53*	.02

Notes: SPLV = Standardized Paths between Latent Variables; * $p < .05$, ** $p < .01$; For the dependent variable of overall measure of fit for three sponsors, we used the scale of Olson & Thjørmøe, 2011.

Table 4. Results of the Structural Equation Modeling of the Overall Measure of Fit.

Brand	Model	χ^2	df	CFI	TLI	AIC	BIC	RMSEA	90% RMSEA	SRMR
Merooj	M6	501.59	360	0.94	0.92	26173.01	26658.80	0.038	0.030 0.046	0.047
Hamrah-e-Aval	M6	484.59	360	0.95	0.94	26827.45	27313.24	0.036	0.027 0.044	0.044
Day bank	M6	460.58	360	0.96	0.95	27180.10	27665.88	0.032	0.023 0.041	0.043

Notes. χ^2 = Yuan & Bentler likelihood ratio test (YB-LRT tests); df = degree of freedom; M6: SEM for correlated CFA.

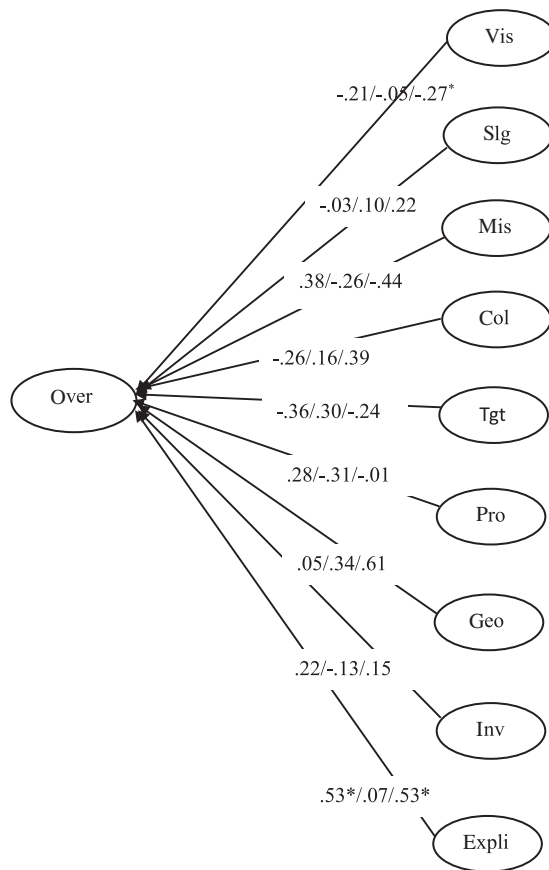


Figure 2. Structural equation modelling testing the prediction of overall fit by the specific dimensions of fit (Model 6). Notes. Vis = Visibility; Slg = Slogan; Mis = Mission; Col = Colour; Tgt = Target market; Pro = Promotion; Geo = Geographical; Inv = Involvement; Exp = Explicitness; Over = Overall fit; For simplicity, only the latent variables are illustrated (the manifest variables are not presented; ^a * $p < .05$).

Discussion

The aims of the present study were to examine the best way to represent the factor structure of fit scores using advanced methodological techniques recently introduced within the literature, and to examine which specific dimensions of fit were the strongest predictors of an overall one-dimensional measure of fit. To date, only the CFA approach has been used. Examining this issue with bifactor models allows addressing substantive research questions, such as the multidimensionality of the construct of fit or the existence of one or two general dimensions of fit, in addition to the several specific dimensions of fit.

Factor structure of fit scores

The results of measurement model analyses showed: (a) acceptable fit to the data for the one and two hierarchical CFA models and the bifactor with one general factor model; and (b) good fit to the data for the correlated CFA model and the bifactor model with two general factors. For Merooj and Day Bank brands, results of the YB-LRT difference tests showed that the correlated CFA model and the bifactor with two general factors model best fitted the data. Moreover, results highlighted that there is no significant difference between these two measurement models for

Merooj brand. As correlated CFA model is the most parsimonious model in comparison to the bifactor model with two general dimensions, the correlated CFA model emerged as the best measurement model. The acceptable indices of fit emerging for the CFA models were in line with the results of traditional CFA analytic strategy used in previous studies (Bigné et al., 2012; Fleck & Quester, 2007; Ko, Kim, Claussen, & Kim, 2008; Zdravkovic et al., 2010).

Contrary to the results of Zdravkovic et al. (2010), results of the present study did not provide evidence for the relative superiority of the bifactor model with two general factors in comparison to the correlated CFA model. Rather, these results and those of correlational analyses provided evidence that the nine specific dimensions postulated by Zdravkovic et al. (2010) are tapping unique (except visibility and slogan for three brands), yet correlated, dimensions of the construct of fit.

Researchers have previously concluded that sponsor-sponsee fit can be conceptualised as a multidimensional concept in using first- and second-order CFA models (Olson & Thjømmøe, 2011; Zdravkovic et al., 2010). Although these previous studies examined multidimensionality to some extent, they did not explore distinct sources of multidimensionality in terms of the simultaneous estimation of global and specific factors. By using a bifactor approach (Morin et al., 2016), we extended previous research on the factor structure of the fit. Although many researchers within the literature have assumed that the issue of representing aspects of construct with different degrees of generality could be examined using a hierarchical CFA methodological approach (Gustafsson & Aberg-Bengtsson, 2010), recent studies have suggested that a bifactor approach provides an excellent framework for studying how measures containing heterogeneous item content still can be understood as assessing both specific and general underlying constructs (Reise, 2012). The rationale for explaining the

usefulness of the bi-factor with two general factors focuses on the presence of the general dimensions of prominence and marketing strategy (in addition to the 9 specific dimensions). In particular, Zdravkovic et al. (2010), showed the predictive power of the two macro-dimensions of prominence and marketing strategy in the prediction of sponsorship outcomes. It is why in the present study, in addition to examining the multidimensionality of the fit construct, we also explored whether the several specific dimensions of fit can be grouped in a logical fashion. Results of hierarchical CFAs and bifactor models provided evidence for the existence of general dimensions of fit. First, given that the fit of a second-order model cannot be better than the fit of an equivalent first-order structure (Nicolas, Vacher, Martinent, & Mourot, 2019), the only marginally lower fit values of the hierarchical CFA models in comparison to the correlated CFA model suggested that the nine specific dimensions of fit could reasonably be regrouped in one general or two general dimensions of fit. However, despite that correlated CFA model could have some limitations in comparison to bifactor model, the correlated CFA model has been preferred in the context of the present study based on the rationale that correlated CFA model is the most parsimonious model in comparison to the bifactor model with two general dimensions.

Predicting overall fit based on specific dimensions of fit

Results of the present study, grounded within an Iranian context, showed that fit dimension related on brand features (colour and visibility) did not significantly predict the overall fit of the three sponsors. Explicitness significantly predicted the overall one-dimensional measure of fit across Merooj and Day bank brands. Although Decarlo (2005) mentioned that explicitness of commercial messages might influence perceptions about the advertiser's motives and shows commercial motivation

of that brand, our participants estimated that it has a significant influence on the overall fit. It is possible that fans have the intention to purchase the products of their favourite team and sponsors even when they are not generally interested in the respective product category (Koronios et al., 2016b), and for awareness, explicitness seems mandatory.

Concerning Merooj products, despite the sport origin of its slogan, participants did not recognise it as having a significant influence on overall fit. For Day Bank, possibly because it is related to the credit industry, participants did not recognise it as a predictor of overall fit.

Brand mission did not have any role in predicting overall fit across the three sponsors. Merooj mission is about the quality of sport products and this mission seems congruent with sport teams. Nevertheless, because Iranian people do not seem to know this brand well, they are probably not familiar with its mission either. In contrast, the Hamrah-e-Aval's mission is about good digital communication and Day Bank's mission refers to creating value through financial solutions, which do not seem particularly congruent with the sport context. Similarly, promotion activities did not have any role in predicting the overall fit across the three sponsors. The greatest part of a sport spectator's attention is occupied by the sport event, leaving only a small amount of attention for the sponsors' brand promotions (Breuer & Rumpf, 2011). Moreover, promotion activities of the Hamrah-e-Aval brand are wide and some of them are related to other national sport teams, which could create confusion or at least non-differentiation. Perhaps sponsors could consider separate promotional events or some other type of publicity that would highlight such a connection; being a general support to the team may not be sufficient (Koronios et al., 2016a). The involvement dimension indicates how sponsor brands encourage consumers to take an active role in supporting teams. Because only a few national team sports (not individual

sports) demonstrate good sporting performance at the world level in Iran, and the volleyball team is one of them, people know it and are relatively well involved with their national team. Even though sport is intimately tied to issues of national pride and has the potential to transcend some local divisions in countries, consumers did not recognise the involvement dimension as a significant predictor of overall fit in the present study for Day Bank. The geographical dimension was not a significant predictor of the overall measure of fit for Day Bank. According to Carrilat, d'Astous, and Davoine (2013), when geographical match is strong, event-sponsor fit is critical for sponsorship success. This bank is a major sponsor of the national volleyball team, people know that they support the team in Iran and geographical fit seems important, and yet it was not a significant predictor of fit. Finally, target market was not a significant predictor of the overall fit for the Merooj brand. This might be a gap between what marketers, fans and consumers perceive. People who buy sport products and participate in different events and activities are probably influenced by sport event according to sport context of this sponsor. Hence, key clients of sport brand products and sport events can represent a valued social network. Kinra (2006) found that consumers in developing countries generally perceived foreign brands to be of a higher quality than domestic brands. In developing countries, foreign brands, especially brands originated in Western countries, are considered highly correlated with status and esteem, enhancing the emotional reward that a consumer can obtain by using those brands (Kinra, 2006). Affluent Iranian consumers, compared to their counterparts, tend to purchase brands that convey status and power. However, even poor Iranian consumers display a tendency toward conspicuous consumption. This phenomenon may depend upon the country, product and target market (Lee, Knight, & Kim, 2008). This understanding of consumer brand choice behaviour

will benefit both global companies and domestic companies in developing and implementing appropriate strategies for their target consumers. Because Day Bank does not have foreign rivals, and the main rival of Hamrah-e-Aval is a bi-national brand with most of its shares for Iranian companies, it does not matter for them.

Olson and Thjørmøe (2011) conceptualised the construct of fit using seven dimensions. They showed that four dimensions (use, audience, geographic and attitude similarity) were significant predictors of overall fit, as sponsor and object are based on some logical thoughts (Olson & Thjørmøe, 2011). Using a three-dimension conceptualisation of the fit construct, Pentecost (2007) showed that benefit/usage and attribute dimensions (but not the image dimension) were significant predictors of overall fit. In our study using nine specific dimensions of fit, results of SEMs showed that only explicitness across Merooj and Day Bank brands was a significant predictor of overall fit. One explanation of this rather surprising result could be related to the number of latent variables designed to predict the overall fit score within the SEM models (nine dimensions for the correlated factors CFA model).

Limitations

Given the specificity of our sample, the present results might not be fully generalisable to other types of segments and populations. Another limitation relates to the survey methodology that only involved self-reported questionnaires. As all variables used in the present study were measured using a single source of data (self-reported questionnaires), common method bias cannot be fully excluded. Future research should complement self-reported data with informant-ratings. As an Iranian sample was used in the present study, some results might be attributed to this specific context, either cultural or sporting. Thus, it is suggested to replicate this study in other

countries with good performance at the national volleyball team level for exploring culture-related differences.

Conclusion

Notwithstanding these limits, this research can encourage future studies to use a different measurement model than the overall one-dimensional measure of sponsor-sponsee fit generally used within the sport context. Results of the present study provided evidence that the nine specific dimensions of fit could be used by researchers examining relationships between specific dimensions of fit and other concepts or outcomes (providing a more in-depth assessment of the fit construct).

For sport sponsors, efforts should be directed toward ensuring that the target audience has a positive image of their firm. A positive image prior to sponsorship may be especially important for firms looking to enter the Iranian market or similar markets. Therefore, firms sponsoring sports should consider using other marketing activities, such as public relations, advertising and celebrity endorsements, prior to and during any Iranian sponsorship venture so as to build or enhance a positive image among involved consumers (Bachleda, Fakhar, & Elouazzani, 2016).

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Appendices

Appendix 1

Table A1. questionnaire used in the present study.

		Totally disagree		not agree not disagree			Totally agree	
Visibility	1.The relationship between X and IRAN national volleyball team is visible.	1	2	3	4	5	6	7
	2.The relationship between X and IRAN national volleyball team is obvious.	1	2	3	4	5	6	7
	3. The relationship between X and IRAN national volleyball team is clear.	1	2	3	4	5	6	7
Slogan	4. X's slogan(YYY) is a good fit with IRAN national volleyball team.	1	2	3	4	5	6	7
	5. X's slogan(YYY) works well with IRAN national volleyball team.	1	2	3	4	5	6	7
	6. X's slogan(YYY) is a clever play on words incorporating IRAN national volleyball team.	1	2	3	4	5	6	7
Mission	7. X's slogan(YYY) is relevant to IRAN national volleyball team.	1	2	3	4	5	6	7
	8. X's mission or product (XXX) is a good fit with IRAN national volleyball team.	1	2	3	4	5	6	7
	9. X 's mission or product (XXX) evokes similar feelings to that of IRAN national volleyball team.	1	2	3	4	5	6	7
Colour	10. X's mission or product (XXX)seem relevant, in terms of function, to IRAN national volleyball team.	1	2	3	4	5	6	7
	11. X's use of colour or visual attributes have good fit with IRAN national volleyball team.	1	2	3	4	5	6	7
	12. X's use of colour or visual attributes are similar to colors/ images associated with IRAN national volleyball team.	1	2	3	4	5	6	7
Target	13. X's use of colour or visual attributes are complementary with IRAN national volleyball team.	1	2	3	4	5	6	7
	14. X's target market or users are a good fit with IRAN national volleyball team.	1	2	3	4	5	6	7
	15. X's target market or users are similar to the people served by IRAN national volleyball team.	1	2	3	4	5	6	7
Promotion	16. X's target market or users remind you of the people associated with IRAN national volleyball team.	1	2	3	4	5	6	7
	17. X's promotional activities are a good fit with IRAN national volleyball team.	1	2	3	4	5	6	7
	18. X's promotional activities use spokespeople/celebrities who are associated with IRAN national volleyball team.	1	2	3	4	5	6	7
Geography	19. X's promotional activities endorse events which seem complementary to IRAN national volleyball team.	1	2	3	4	5	6	7
	20. The location(s) associated with brand X has a good fit with IRAN national volleyball team.	1	2	3	4	5	6	7
	21. The location(s) associated with brand X is similar to the location(s) associated with IRAN national volleyball team.	1	2	3	4	5	6	7
Involvement	22. The location(s) associated with brand X matches with the location in which IRAN national volleyball team operates.	1	2	3	4	5	6	7
	23. The brand X encourages consumers to get involved with IRAN national volleyball team.	1	2	3	4	5	6	7
	24. The X's mission is conducive to involvement with IRAN national volleyball team.	1	2	3	4	5	6	7
	25. The X contributes to greater involvement of consumers with IRAN national volleyball team.	1	2	3	4	5	6	7
Explicitness	26. Please indicate how well the relationship between the X and IRAN national volleyball team is explained on the advertisement.	Ambiguous					complete	
	27. Please indicate how well the relationship between the X and IRAN national volleyball team is explained on the advertisement.	1	2	3	4	5	6	7
	28. Please indicate how well the relationship between the X and IRAN national volleyball team is explained on the advertisement.	Vague					In details	
Overall fit	29. Please indicate how well the relationship between the X and IRAN national volleyball team is explained on the advertisement.	1	2	3	4	5	6	7
	30. Please indicate how well the relationship between the X and IRAN national volleyball team is explained on the advertisement.	Bad					good	
	31. Please indicate the degree of overall fit or match between brand X and IRAN national volleyball team.	1	2	3	4	5	6	7
	32. Please indicate the degree of overall fit or match between brand X and IRAN national volleyball team.	Dissimilar					similar	
		1	2	3	4	5	6	7

36. Please indicate the degree of overall fit or match between brand X and IRAN national volleyball team.	Low fit	high fit
	1 2 3 4 5 6 7	
37. Please indicate the degree of overall fit or match between brand X and IRAN national volleyball team.	Does not make sense	Makes sense
	1 2 3 4 5 6 7	

Notes: All of sub-dimensions were taken from Zdravkovic et al. (2010); overall fit was taken from Simmons and Becker-Olsen (2006). X: sponsors, YY: sponsor's slogan, ZZZ: sponsor's mission.

Table A2. Standardized Factor Loadings and Residuals for the Correlated and Hierarchical CFA Models and Bifactor with 2 General Factors for Merooj brand.

Items	M1		M2		M3		M4			M5				
	λ	δ	λ	δ	λ	δ	G (λ)	S (λ)	δ	G1 (λ)	G2 (λ)	S (λ)	δ	
1.Vis					1.Vis									
Item 1	.64	.59	.64	.60	Item 1	.64	.60	.45	.51	.54		.58	.58	.32
Item 2	.83	.31	.83	.32	Item 2	.83	.31	.67	.48	.31		.68	.54	.24
Item 3	.75	.44	.75	.44	Item 3	.75	.44	.63	.38	.45		.74	.35	.33
2.Slg					2.Slg									
Item 1	.70	.50	.71	.50	Item 1	.70	.50	.52	.57	.40		.63	.19	
Item 2	.80	.36	.80	.36	Item 2	.80	.36	.64	.43	.40		.80	.26	.29
Item 3	.72	.48	.72	.48	Item 3	.72	.48	.58	.37	.53		.76	.17	.39
3.Mis					3.Mis									
Item 1	.68	.54	.69	.52	Item 1	.69	.52	.60	.31	.54		.49	.60	.39
Item 2	.70	.51	.71	.49	Item 2	.71	.49	.60	.37	.49		.56	.52	.41
Item 3	.71	.49	.68	.53	Item 3	.68	.53	.61	.34	.50		.61	.43	.43
4.Col					4.Col									
Item 1	.67	.54	.67	.55	Item 1	.67	.55	.66	.10	.56		.49	.58	.42
Item 2	.69	.52	.69	.52	Item 2	.69	.52	.69	.08	.51		.60	.45	.44
Item 3	.60	.63	.61	.62	Item 3	.61	.62	.60	.99	.63		.51	.43	.54
5.Tgt					5.Tgt									
Item 1	.68	.54	.68	.53	Item 1	.68	.53	.47	.52	.51		.47	.59	.42
Item 2	.70	.51	.70	.51	Item 2	.70	.51	.54	.38	.60		.53	.51	.45
Item 3	.68	.54	.67	.54	Item 3	.67	.54	.43	.57	.48		.43	.60	.45
6.Pro					6.Pro									
Item 1	.70	.51	.71	.50	Item 1	.71	.50	.62	.32	.51		.47	.61	.40
Item 2	.59	.65	.58	.66	Item 2	.58	.66	.49	.37	.62		.33	.58	.55
Item 3	.65	.57	.65	.58	Item 3	.65	.57	.59	.26	.57		.50	.48	.51
7.Geo					7.Geo									
Item 1	.69	.52	.70	.50	Item 1	.71	.50	.64	.19	.55		.50	.61	.37
Item 2	.63	.61	.61	.63	Item 2	.61	.62	.56	.30	.60		.48	.47	.54
Item 3	.59	.65	.60	.64	Item 3	.60	.64	.54	.25	.64		.53	.36	.59
8.Inv					8.Inv									
Item 1	.62	.61	.61	.62	Item 1	.62	.61	.31	.75	.34		.39	.61	.48
Item 2	.60	.63	.60	.64	Item 2	.59	.64	.48	.31	.67		.56	.36	.55
Item 3	.55	.69	.56	.68	Item 3	.57	.68	.42	.36	.70		.39	.52	.58
9.Exp					9.Exp									
Item 1	.66	.57	.65	.57	Item 1	.65	.58	.51	.36	.61		.39	.74	.31
Item 2	.65	.57	.65	.57	Item 2	.65	.57	.53	.25	.65		.60	.35	.53
Item 3	.69	.52	.69	.52	Item 3	.69	.52	.52	.65	.30		.42	.59	.47
1.Fit					1. Mkt									
Vis			.65	.57	Slg	.81	.34							
Slg			.81	.34	Mis	.91	.17							
Mis			.91	.16	Tgt	.93	.13							
Col			.93	.14	Pro	.89	.21							
Tgt			.94	.11	Geo	.85	.27							
Pro			.89	.20	11. Pne									
Geo			.86	.26	Vis	.64	.59							
Inv			.93	.14	Exp	.70	.51							
Exp			.72	.48	Inv	.91	.17							
					Col	.92	.16							

Notes. M1: Correlated CFA M2: Hierarchical 1-factor CFA, M3: Hierarchical 2-factor CFA, M4: Bifactor with one general factor, M5: Bifactor with 2 general factors. G = general factor; S = specific factor; Vis = Visibility; Slg = Slogan; Mis = Mission; Col = Colour; Tgt = Target market; Pro = Promotion; Geo = Geographical; Inv = Involvement; Exp = Explicitness; Pne = Prominence; Mkt = Marketing Strategy, Over = Overall fit.

Table A3. Standardized Factor Loadings and Residuals for the Correlated and Hierarchical CFA Models and Bifactor with 2 General Factors for Hamrah-e-Aval brand.

Items	M1		M2		M3		M4				M5			
	λ	δ	λ	δ	λ	δ	G (λ)	S (λ)	δ	G1 (λ)	G2 (λ)	S (λ)	δ	
1.Vis					1.Vis									
Item 1	.82	.32	.81	.34	Item 1	.64	.60	.45	.51	.54		.58	.58	.32
Item 2	.81	.35	.83	.30	Item 2	.83	.31	.67	.48	.31		.68	.54	.24
Item 3	.73	.46	.72	.48	Item 3	.75	.44	.63	.38	.45		.74	.35	.33
2.Slg					2.Slg									
Item 1	.80	.36	.80	.36	Item 1	.70	.50	.52	.57	.40		.63	.63	.19
Item 2	.78	.39	.78	.36	Item 2	.80	.36	.64	.43	.40		.80	.26	.29
Item 3	.77	.40	.77	.40	Item 3	.72	.48	.58	.37	.53		.76	.17	.39
3.Mis					3.Mis									
Item 1	.66	.57	.68	.54	Item 1	.69	.52	.60	.31	.54		.49	.60	.39
Item 2	.74	.44	.74	.45	Item 2	.71	.49	.60	.37	.49		.56	.52	.41
Item 3	.76	.43	.75	.44	Item 3	.68	.53	.61	.34	.50		.61	.43	.43
4.Col					4.Col									
Item 1	.72	.48	.72	.48	Item 1	.67	.55	.66	.10	.56		.49	.58	.42
Item 2	.75	.44	.73	.46	Item 2	.69	.52	.69	.08	.51		.60	.45	.44
Item 3	.76	.42	.77	.40	Item 3	.61	.62	.60	.99	.63		.51	.43	.54
5.Tgt					5.Tgt									
Item 1	.67	.55	.68	.54	Item 1	.68	.53	.47	.52	.51		.47	.59	.42
Item 2	.65	.57	.64	.58	Item 2	.70	.51	.54	.38	.60		.53	.51	.45
Item 3	.63	.60	.62	.61	Item 3	.67	.54	.43	.57	.48		.43	.60	.45
6.Pro					6.Pro									
Item 1	.70	.50	.70	.51	Item 1	.71	.50	.62	.32	.51		.47	.61	.40
Item 2	.67	.54	.68	.54	Item 2	.58	.66	.49	.37	.62		.33	.58	.55
Item 3	.71	.49	.71	.49	Item 3	.65	.57	.59	.26	.57		.50	.48	.51
7.Geo					7.Geo									
Item 1	.68	.55	.67	.55	Item 1	.71	.50	.64	.19	.55		.50	.61	.37
Item 2	.75	.44	.75	.44	Item 2	.61	.62	.56	.30	.60		.48	.47	.54
Item 3	.71	.50	.70	.50	Item 3	.60	.64	.54	.25	.64		.53	.36	.59
8.Inv					8.Inv									
Item 1	.70	.51	.68	.53	Item 1	.62	.61	.31	.75	.34		.39	.61	.48
Item 2	.70	.51	.72	.48	Item 2	.59	.64	.48	.31	.67		.56	.36	.55
Item 3	.63	.60	.63	.60	Item 3	.57	.68	.42	.36	.70		.39	.52	.58
9.Exp					9.Exp									
Item 1	.82	.33	.80	.36	Item 1	.65	.58	.51	.36	.61		.39	.74	.31
Item 2	.78	.39	.80	.37	Item 2	.65	.57	.53	.25	.65		.60	.35	.53
Item 3	.76	.42	.76	.41	Item 3	.69	.52	.52	.65	.30		.42	.59	.47
1.Fit					1. Mkt									
Vis			.67	.55	Slg	.81	.34							
Slg			.73	.47	Mis	.91	.17							
Mis			.83	.30	Tgt	.93	.13							
Col			.82	.32	Pro	.89	.21							
Tgt			.94	.12	Geo	.85	.27							
Pro			.87	.25	11. Pne									
Geo			.85	.28	Vis	.64	.59							
Inv			.84	.29	Exp	.70	.51							
Exp			.72	.48	Inv	.91	.17							
					Col	.92	.16							

Notes. M1: Correlated CFA M2: Hierarchical 1-factor CFA, M3: Hierarchical 2-factor CFA, M4: Bifactor with one general factor, M5: Bifactor with 2 general factors. G = general factor; S = specific factor; Vis = Visibility; Slg = Slogan; Mis = Mission; Col = Colour; Tgt = Target market; Pro = Promotion; Geo = Geographical; Inv = Involvement; Exp = Explicitness; Pne = Prominence; Mkt = Marketing strategy, Over = Overall fit.

Table A4. Standardized Factor Loadings and Residuals for the Correlated and Hierarchical CFA Models and Bifactor with 2 General Factors for Day bank brand.

Items	M1		M2		M3		M4			M5				
	λ	δ	λ	δ	λ	δ	G (λ)	S (λ)	δ	G1 (λ)	G2 (λ)	S (λ)	δ	
1.Vis					1.Vis									
Item 1	0.83	0.30	0.84	0.30	Item 1	.64	.60	.45	.51	.54		.58	.58	.32
Item 2	0.85	0.28	0.86	0.26	Item 2	.83	.31	.67	.48	.31		.68	.54	.24
Item 3	0.72	0.47	0.70	0.51	Item 3	.75	.44	.63	.38	.45		.74	.35	.33
2.Slg					2.Slg									
Item 1	0.81	0.34	0.82	0.33	Item 1	.70	.50	.52	.57	.40	.63		.63	.19
Item 2	0.79	0.38	0.79	0.37	Item 2	.80	.36	.64	.43	.40	.80		.26	.29
Item 3	0.78	0.38	0.78	0.39	Item 3	.72	.48	.58	.37	.53	.76		.17	.39
3.Mis					3.Mis									
Item 1	0.78	0.38	0.80	0.35	Item 1	.69	.52	.60	.31	.54	.49		.60	.39
Item 2	0.73	0.46	0.73	0.47	Item 2	.71	.49	.60	.37	.49	.56		.52	.41
Item 3	0.74	0.46	0.72	0.48	Item 3	.68	.53	.61	.34	.50	.61		.43	.43
4.Col					4.Col									
Item 1	0.72	0.47	0.71	0.50	Item 1	.67	.55	.66	.10	.56		.49	.58	.42
Item 2	0.73	0.47	0.74	0.45	Item 2	.69	.52	.69	.08	.51		.60	.45	.44
Item 3	0.76	0.42	0.76	0.42	Item 3	.61	.62	.60	.99	.63		.51	.43	.54
5.Tgt					5.Tgt									
Item 1	0.67	0.55	0.66	0.56	Item 1	.68	.53	.47	.52	.51	.47		.59	.42
Item 2	0.70	0.52	0.69	0.52	Item 2	.70	.51	.54	.38	.60	.53		.51	.45
Item 3	0.72	0.48	0.73	0.47	Item 3	.67	.54	.43	.57	.48	.43		.60	.45
6.Pro					6.Pro									
Item 1	0.73	0.47	0.74	0.45	Item 1	.71	.50	.62	.32	.51	.47		.61	.40
Item 2	0.73	0.46	0.74	0.45	Item 2	.58	.66	.49	.37	.62	.33		.58	.55
Item 3	0.70	0.50	0.68	0.53	Item 3	.65	.57	.59	.26	.57	.50		.48	.51
7.Geo					7.Geo									
Item 1	0.73	0.47	0.72	0.48	Item 1	.71	.50	.64	.19	.55	.50		.61	.37
Item 2	0.75	0.44	0.75	0.44	Item 2	.61	.62	.56	.30	.60	.48		.47	.54
Item 3	0.72	0.48	0.73	0.47	Item 3	.60	.64	.54	.25	.64	.53		.36	.59
8.Inv					8.Inv									
Item 1	0.76	0.42	0.76	0.42	Item 1	.62	.61	.31	.75	.34		.39	.61	.48
Item 2	0.68	0.53	0.69	0.52	Item 2	.59	.64	.48	.31	.67		.56	.36	.55
Item 3	0.68	0.53	0.68	0.54	Item 3	.57	.68	.42	.36	.70		.39	.52	.58
9.Exp					9.Exp									
Item 1	0.72	0.47	0.72	0.47	Item 1	.65	.58	.51	.36	.61		.39	.74	.31
Item 2	0.77	0.40	0.77	0.41	Item 2	.65	.57	.53	.25	.65		.60	.35	.53
Item 3	0.72	0.47	0.74	0.46	Item 3	.69	.52	.52	.65	.30		.42	.59	.47
1.Fit					1. Mkt									
Vis			0.63	0.60	Slg	.81	.34							
Slg			0.74	0.45	Mis	.91	.17							
Mis			0.86	0.26	Tgt	.93	.13							
Col			0.80	0.35	Pro	.89	.21							
Tgt			0.89	0.20	Geo	.85	.27							
Pro			0.88	0.22	11. Pne									
Geo			0.87	0.24	Vis	.64	.59							
Inv			0.81	0.33	Exp	.70	.51							
Exp			0.73	0.46	Inv	.91	.17							
					Col	.92	.16							

Notes. M1: Correlated CFA M2: Hierarchical 1-factor CFA, M3: Hierarchical 2-factor CFA, M4: Bifactor with one general factor, M5: Bifactor with 2 general factors. G = general factor; S = specific factor; Vis = Visibility; Slg = Slogan; Mis = Mission; Col = Colour; Tgt = Target market; Pro = Promotion; Geo = Geographical; Inv = Involvement; Exp = Explicitness; Pne = Prominence; Mkt = Marketing strategy, Over = Overall fit.

Appendix 2. Correlation between sub-dimensions of fit in bifactor with one general factor model for three sponsors.

	dim	Vis	Slg	Mis	Col	Tgt	Pro	Geo	Inv
Merooj	Slg	.43*							
	Mis	.39*	.49*						
	Col	.07	.45*	.88**					
	Tgt	.35	.53*	.80**	.86**				
	Pro	.26	.29	.72**	.87**	.87**			
	Geo	.31	.32*	.50**	.60**	.66**	.72**		
	Inv	.42*	.64*	.84**	.66**	.90**	.79**	.81**	
	Exp	.32*	.16	.40*	.46**	.52**	.49**	.48**	.49**
Hamrah-e-Aval	Slg	.43**							
	Mis	.36*	.65**						
	Col	.48**	.42*	.75**					
	Tgt	.40*	.65**	.81**	.77**				
	Pro	.34	.48**	.65**	.66**	.95**			
	Geo	.36	.47**	.69**	.47*	.75**	.79**		
	Inv	.57**	.46*	.51**	.54**	.68**	.60**	.74**	
	Exp	.80**	.37*	.40**	.52**	.51**	.41*	.54*	.67*
Day bank	<i>This model didn't converge</i>								

Notes. dim = dimensions; Vis = Visibility; Slg = Slogan; Mis = Mission; Col = Colour; Tgt = Target market; Pro = Promotion; Geo = Geographical; Inv = Involvement; Exp = Explicitness.

* $p < .05$, ** $p < .01$.

Appendix 3. Correlation between sub-dimensions of fit in bifactor with two general factors model for three sponsors.

	dim	Vis	Slg	Mis	Col	Tgt	Pro	Geo	Inv
Merooj	Slg	.40*							
	Mis	.40*	.51*						
	Col	.05	.42	.86**					
	Tgt	.34	.50**	.78**	.84**				
	Pro	.23	.30	.64**	.84**	.85**			
	Geo	.29	.28	.48*	.57**	.69**	.69**		
	Inv	.39*	.61*	.82**	.62**	.87**	.74**	.79**	
	Exp	.34*	.12	.42**	.43**	.55**	.51**	.50**	.50**
Hamrah-e-Aval	Slg	.37*							
	Mis	.30*	.63**						
	Col	.40**	.40**	.76**					
	Tgt	.34**	.62**	.80**	.76**				
	Pro	.26	.45**	.65**	.67**	.94**			
	Geo	.25	.42**	.67**	.46**	.72**	.78**		
	Inv	.58**	.47**	.53**	.52**	.67**	.61**	.75**	
	Exp	.74**	.30*	.37**	.45**	.48**	.37**	.48**	.69**
Day bank	Slg	.06							
	Mis	.26*	.65**						
	Col	.42**	.52**	.71**					
	Tgt	.24*	.50**	.69**	.72**				
	Pro	.21*	.56**	.69**	.59**	.89**			
	Geo	.23*	.55**	.69**	.48**	.70**	.85**		
	Inv	.33**	.33**	.53**	.54**	.65**	.70**	.74**	
	Exp	.37**	.23	.46**	.26*	.35**	.50**	.56**	.64**

Notes. dim = dimensions; Vis = Visibility; Slg = Slogan; Mis = Mission; Col = Colour; Tgt = Target market; Pro = Promotion; Geo = Geographical; Inv = Involvement; Exp = Explicitness. * $p < .05$, ** $p < .01$.