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Sangkyun Kim
Edith Cowan University

Ashlee Morgan
Edith Cowan University

Guy Assaker

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**Examining the Relationship between Sport Spectator Motivation, Involvement, and Loyalty:
A Structural Model in the Context of Australian Rules Football**

Abstract

This study examines the relationships between sport spectator motivation, involvement, and loyalty. It sought to validate a comprehensive motivation scale and test the interrelationships among these three concepts using a partial least squares structural equation model (PLS-SEM) analysis. Data were analysed from 585 surveys collected from match day attendees of Australian Rules football in South Australia. The findings suggest that a strong positive relationship was found between sport spectators' motivation and both socio-psychological involvement and behavioural involvement. Spectators' motivation displays a mediating (indirect) effect on their loyalty through both involvement constructs. However, non-significant relationships between motivation and loyalty were found. One of the strongest motivations we found for attending a football game was vicarious achievement, whereas behavioural involvement has the strongest effect on spectators' loyalty. This paper advances sport spectatorship scholarship and provides broader practical implications for practitioners, assisting in developing club's long-term community engagement and growth plans.

Keywords: Spectator motivation, involvement, loyalty, behaviour, community

Introduction

Research on sport spectator involvement and loyalty has important implications through all levels of the sport industry. As with the marketing of any product, when marketing sport it is important to satisfy the consumers' needs and develop loyalty (da Silva and Las Casas, 2017). To achieve this, the study of consumer psychology and understanding behavioural and attitudinal influences is imperative. While the majority of sport marketing and fan-based research focusses on professional elite-level sport, understanding supporter behaviour and connection is important for all tiers of competition. Sport clubs can benefit from having a loyal spectator base as they contribute to achieving organisational goals as well as developing further connection and value for the community. However, developing a devoted spectator base can be challenge as sport clubs cannot guarantee quality performance (Yoshida, Heere, and Gordon, 2015).

The health, social and community related benefits of sport clubs have been discussed in various contexts (e.g. Bloom, Grant, and Watt, 2005; Doherty and Misener, 2008; Doherty, Misener and Cuskelly, 2014; Donnelly and Kidd, 2003). Sport clubs contribute to community identity, sense of place and social interaction (Tonts, 2005). These benefits are not limited to active sport participants but extend to club volunteers, administrators and supporters. It has long been acknowledged that there is a sense of belonging that develops among sport team supporters (Funk and James, 2001). When discussing local sport clubs in particular, it is recognised that they act as a symbolic representation of social or community life (Heere and James, 2007). Specifically, the ability of clubs to generate social capital is well documented (Atherley, 2006; Doherty and Misener, 2008; Hoye and Nicholson, 2012; Tonts, 2005). Social capital is a collective resource available to all the group members and for sport clubs, it is a resource to draw on and leverage (Nichols, Tacon and Muir, 2012).

While the positive benefits of community sport clubs are evident, there are numerous challenges encountered. In the Australian sport context, financial and human resource constraints confront many clubs (Cuskelly, Taylor, Hoye, and Darcy, 2006). As recently discussed in the

Australian media, while the value of professional/elite sport continues to rise, numerous local and state-league clubs are struggling to survive (Hayes, 2018; West, 2016). As noted by West (2016), in past decades state league Australian Rules football matches would attract thousands of fans; whereas today stands are mostly empty. This is despite the professional Australian Rules Football League (AFL) being recognised as the most financially viable sport in Australia (Stensholt, 2018). For sport clubs to connect with the community and create a sustainable supporter base, it is important to understand consumer behaviour such as the antecedents to supporter loyalty. As such, this study examines the motivations, involvement and loyalty of attendees of a state-league Australian Rules football club.

In regards to consumer behaviour, the concept of involvement and its effectiveness in forecasting purchase decisions has been a focus of literature since the 1960s (Beatty, Kahle, and Homer, 1988). Despite the above effort, there has been still limited empirical examination of involvement in sport management (Beaton, Funk, Ridinger, and Jordan, 2011). As stated by Alexandris (2012, p. 58), ‘the identification of the antecedents of involvement is still an under-researched issue in the leisure and sport literature’. While there are exceptions to this (e.g., Funk, Ridinger and Moorman, 2004; Kyle, Absher, Hammitt, and Cavin, 2006), there remains a dearth of empirical research examining antecedents and outcomes of involvement particularly in regards to lower tier sport leagues and clubs. The present study contributes to the literature, by examining the relationships between three constructs: motivation; involvement; and, loyalty, given that to our knowledge previous research has not jointly explored these three concepts in relation to sport spectatorship.

Literature Review

Sport Spectator Motivation

Motivation 'reflects an internal desire to take a pathway because it provides opportunities to satisfy needs and receive benefits through acquisition' (Funk, Filo, Benton and Pritchard, 2009, p. 127). A range of sport spectator studies have examined motivational factors influencing sport spectator involvement and related behaviours (e.g., Choi, Martin, Park, and Yoh, 2009; Correia and Esteves, 2007; Funk and James, 2001; James and Ross, 2004; Mahony et al., 2002; Trail and James, 2001; Wang, Zhang, and Tsuji, 2011). Attention has also been given to why individuals do not attend sport events (Lock and Filo, 2012).

A range of theories explaining individual sport spectator motivation have been developed. Sloan (1989) presented five categories of sport motivation: salubrious effects; stress and stimulation seeking; catharsis and aggression; entertainment; and, achievement. A number of scales have subsequently been developed in this area. Pelletier et al. (1995) developed the sport motivation scale (SMS) which measures intrinsic (i.e., to know, to accomplish, and to experience stimulation) and extrinsic motivation (i.e., external regulation, introjection regulation, and identified regulation)

Wann (1995) introduced the Sport Fan Motivation Scale (SFMS), which includes the categorisation of eight motivations: eustress; self-esteem benefits; escape from everyday life; entertainment; economic factors; aesthetic qualities; group affiliation; and, family needs. Similarly, Milne and McDonald (1999) proposed a Motivations for Sport Consumer (MSC) scale, comprising twelve motivation constructs: risk taking; stress reduction; aggression; affiliation; social facilitation; self-esteem; competition; achievement; skill mastery; aesthetics; value development; self-actualisation. However, Trail and James (2001) noted psychometric limitations of these scales and questioned both the SFMS's and MSC's validity (refer to Trail and James [2001] for detailed review of these scales). Trail and James (2001) subsequently developed the Motivation Scale for Sport Consumption (MSSC). The MSSC measures nine motives: achievement; acquisition of knowledge; aesthetics; drama/eustress; escape; family; physical

attractiveness of participants; the quality of the physical skills of the participants; and, social interaction.

Zhang et al. (2001), adopted Sloan's (1989) original categorisation and developed the Scale of Attendance Motivation (SAM). These scholars examined the relationship between socio-motivational factors (stress and entertainment, achievement seeking, catharsis and aggression, salubrious effects, and community image) and attendance at minor league hockey games. They concluded that of the five major theories proposed by Sloan, three (salubrious effects, achievement seeking and entertainment) were relevant to attendance.

In a comprehensive and highly cited paper, Funk and James (2001) summarise the influences on individuals' choice of favourite sport or team. They highlight four motivational areas: hedonic motives (entertainment, escape, excitement); psychological features of a social situation (acceptance, achievement); physical features (stadium factors, access to technology, management); and, situational factors (special events, promotions, price discounts). Funk and James present the Psychological Continuum Model (PCM), which provides a vertical framework to analyse the psychological connection between individuals and sport/recreation. The PCM has been applied to consumer relationships with sport teams (Funk and James, 2006) and involvement in physical activity (Beaton et al., 2011; Filo, Funk and O'Brien, 2008).

McDonald, Milne and Hong (2002) attempted to offer a unified conceptual framework for motivation and sport spectatorship, and profile nine sports by motivational constructs, including basketball, football, tennis and golf. The results of their study revealed differences between sports, however motives that scored high across all nine sports studied were achievement, self-esteem and competition. The variety of measurement scales proves the complexity of sport spectator motivation, and the relative importance of individual motives to the context of different sport events such as the Women World Cup (Funk, 2001) and subsequent behaviours of the sport spectators in question (Lough and Kim, 2004; Mahony et al., 2002).

Profusion of measurement scales also bears its weaknesses, in relation to content, criterion and construct validity. Inaccurate wording of factors and items may also be seen as a source of extensive scales (Trail and James, 2001). The bulkiness of many scales and their low user friendliness for sport event organisers who are bound by deadlines and limited funding is an important limitation of many scales that is not widely addressed. However, Funk et al. (2009) provide practitioners with an effective and efficient tool to assess game attendance behaviour. Based on previously developed scales, they focused on five themes: socialisation, performance, excitement, esteem and diversion, (named SPEED). The results of this first attempt to implement SPEED revealed that esteem, excitement and performance are the most important motivation facets influencing behaviour and commitment (Funk et al., 2009).

Upon the review of the literature with the aforementioned limitations and weaknesses addressed by Trail and James (2001), the most frequently used motivational factors to operationalise sport spectator- or fan-related motivations adopted for this study are presented in Table A1 in the Appendix. As noted previously (e.g., Trail and James, 2001; Mahony et al., 2002), the terms, namely sport spectator, sport fan, or sport attendee motivations, are interchangeably used in the previous and current literature on this subject. Moreover, in the present study, sport spectators' motivation (overall motivation) is conceptualised as a higher-order formative construct formed/caused by the previously presumed nine spectators' motivation dimensions.

The choice of the formative scheme for the overall (multidimensional) motivation construct from a theoretical/conceptualisation viewpoint seem to be more appropriate, as changes in the direction or value of one motivation dimension (for example, interest in a particular player) does not necessarily result in changes in other motivation dimensions (socialising). For instance, in some situations, spectators could be interested in attending a game because of their specific interest in one player, not because they are necessarily interested in socialising or interacting with other players (see Jarvis et al., 2003). The conceptualisation of overall motivation as a formative construct is also upheld in previous studies, mainly education and tourism literature (see

Afthanorhan, 2014; Meeprom and Charoenrat, 2018; Poot et al., 2016) as well as sports literature (see Urich and Benkenstein, 2010) that have argued for the formative scheme for the overall motivation construct, which further supports the formative scheme for the multidimensional motivation construct in this study.

Sport Spectator Involvement

Involvement is an important construct when considering the behaviour of consumers (Bennett, Ferreira, Lee and Polite, 2009) and has long been discussed in regards to brand loyalty (Bloch and Richins, 1983). Involvement depends on needs, feelings of self-relevance, and personal responses to a product (Bennett, Härtel and McColl-Kennedy, 2005). In leisure-based research, 'involvement has usually been treated as a multifaceted construct including attraction, sign, centrality, and risk' (Havitz and Dimanche, 1999, p. 123).

Involvement is seen as a form of affective attachment, the strength of which depends on the ability of the product or service to reflect personal beliefs and offer intangible values. Beaton et al. (2011, p. 136) define sport involvement as 'a multifaceted construct that represents the degree to which participation in a sport activity becomes a central component of a person's life and provides both hedonic and symbolic value'. Moreover, in an investigation of sport brand architecture, involvement and loyalty, sport involvement was defined as 'a psychological state that can influence consumer loyalty toward both a team and league' (Kunkel, Funk and Hill, 2013, p. 181).

It is generally agreed that involvement consists of two aspects of consumer behaviour: psychological involvement and, behavioural consumption (Beatty et al., 1988). It has been suggested that these two aspects of sport involvement are critical when studying fan behaviour (Choi et al, 2009; Funk et al., 2004; Milne and McDonald, 1999). Funk et al. (2004) designed the Team Sport Involvement (TSI) scale to assess relationships among 18 items within two categories (individual characteristics and social situation), and three facets (attraction self-expression,

centrality to lifestyle, and risk) of psychological involvement in the context of professional sport team setting. They concluded that understanding psychological involvement provides valuable information for segmenting a supporter base and understanding their behaviour.

It is recognised that behavioural involvement is also critical to sport spectator research. Milne and McDonald (1999) stipulate that the behavioural aspects are crucial as an individual must participate (directly or indirectly) in an event to be considered a sport consumer. It is suggested that while psychological involvement represents emotional responses, behavioural involvement displays positive support for the team (Milne and McDonald, 1999). As such, the behavioural aspects of spectators can be used to predict behaviour as an outcome of psychological involvement (Choi et al., 2009).

Choi et al. (2009) used a modified version of the Sport Spectator Involvement Scale (SSIS) original developed by Kim (2003, cited in Choi et al., 2009). Choi et al.'s (2009) study included a total of 14 items covering both behavioural and socio-psychological involvement, and to test motivation, they applied Pease and Zhang's (2001) SMS (as discussed above). In the context of National Collegiate Athletic Association (NCAA) Division II basketball, these scholars found that three socio-motivational factors (fan identification, involvement opportunity, reference group) had a significant impact on overall sport spectator involvement. The spectators in this study had a higher level of socio-psychological involvement to attend games than behavioural involvement.

The Relationship between Motivation and Involvement

Scholars have suggested that motivation is an antecedent of involvement (Funk et al., 2004; Iwasaki and Havitz, 2004), however it is noted that the 'multidimensional interpretations of each construct complicate generalisation' (Kyle et al., 2006, p. 468). Kyle et al. (2006) is one of the few empirical studies to investigate the relationship between motivation and involvement. They examined motivation dimensions (escape, nature, bonding, learning, and social) and involvement dimensions (attraction, centrality, social bonding, identity affirmation, and identity expression) of

recreational campers, and found support that motivation is an antecedent of enduring involvement. Similarly, Alexandris (2012) found that intrinsic and extrinsic dimensions of motivation made significant contributions to involvement among recreational tennis players.

Based on our review of previous research, we predict that sport spectators' motivation (overall motivation) will have a positive direct impact on involvement and loyalty constructs (loyalty is discussed below). Thus, the following hypotheses will be tested:

- *H1*: The level of sport spectator motivation will have a positive effect on sport spectator socio-psychological involvement.
- *H2*: The level of sport spectator motivation will have a positive effect on sport spectator behavioural involvement.
- *H3*: The level of sport spectator motivation will have a positive effect on sport spectator loyalty.

Sport Spectator Loyalty

The construct of loyalty has also received notable attention in leisure and sport literature. There is general consensus that loyalty combines behavioural and attitudinal constructs, and has implications for continued participation and retention (Iwasaki and Havitz, 2004). It has been highlighted that the construct of loyalty is complex and multifaceted and spectator attendance cannot be the sole indicator of loyalty (Kolbe and James, 2000). Behavioural and attitudinal loyalty should be considered.

Behavioural loyalty and attitudinal loyalty are related yet distinct. Attitudinal loyalty is 'an attitude that strengthens the psychological connection to a specific team through a tendency towards resistance, persistence, influence on cognition, and impact on behavior' (Tachis and Tzetzis, 2015, p. 6). Behavioural loyalty refers to repeat purchasing (Leenheer, van Heerde, Bijmolt and Smidts, 2007), and in a sport context is often measured by frequency of attendance over time (Yoshida, et al., 2015). With the development of attitudinal loyalty it becomes more realistic to work on fostering behavioural loyalty. To measure the level of behavioural loyalty, it

is proposed to address frequency of attendance, frequency of relevant media consumption, and participation in team-related activities other than actual attendance (Gladden and Funk, 2001).

When sport administrators establish specific goals, the question arises if they focus on turning casual observers into regular spectators, or regular spectators into loyal fans. Trail et al. (2000), and Pease and Zhang (2001) have found that among fans it is 'fair-weather' fans, not 'die-hard' fans, who cause fluctuations in attendance. Identification with a team's achievement, satisfaction of the need for social prestige, and self-esteem are directly related to this distinction. The stronger fans identify themselves with a team, the higher their level of satisfaction when the team wins, and the higher their level of disappointment when the team loses (Trail et al., 2000).

The Relationship between Involvement and Loyalty

In leisure research it has been shown that leisure involvement and loyalty are distinct but related concepts (Iwasaki and Havitz, 1998; 2004). Iwasaki and Havitz (2004) examined involvement and loyalty in a recreation centre setting and found a positive relationship between enduring involvement and loyalty. These scholars highlighted the complexity of the relationship between the two constructs and the need for future research in this area.

The level of attraction that an individual has for a team or club is closely aligned to the construct of involvement. Funk and James (2001, p. 131) note that 'Having sport consumers complete items measuring the facets of involvement could enable researchers to distinguish between different levels of psychological connection to a sport or team.' As stated by Tachis and Tzetzis (2015, p. 3), 'research on the relationship between involvement and loyalty with regard to sport fans is very limited'.

Upon review of the literature on socio-psychological and behavioural involvement, we hypothesise that sport spectators' involvement will have a positive direct impact on the loyalty construct. Thus, we will test the following hypotheses:

- *H4*: The level of sport spectators' socio-psychological involvement will have a positive effect on sport spectators' loyalty.
- *H5*: The level of sport spectators' behavioural involvement will have a positive effect on sport spectators' loyalty.

The Proposed Structural Model

This study examines spectator motivation, involvement and loyalty in an Australian Rules football context. The professional Australian Rules football league (AFL) is commercially successful, recognised as the most financially viable sport in Australia (Stensholt, 2018). In 2018, the AFL ranked fourth in the world for game attendance; behind the National Football League, Bundesliga and the Premier League (Graves, 2018). However, as previously noted, there is often quite a disparity between the AFL and the lower tiers of Australian Rules football (i.e. state and local leagues; Hayes, 2018; West, 2016). Given the competitiveness of the Australian sport landscape (for example, there are four football codes), leagues and clubs are vying for spectator and sponsor attention. Thus, development of fan loyalty is crucial for club growth and in some cases, survival, especially at the local and state-based levels.

For the purposes of this research, the measurements and the interrelationships of the three constructs (motivation, involvement and loyalty) are proposed in Figure 1. The development of the scale used in this study was based on the theoretical frameworks and scales presented by previous studies

Sport spectators' motivation is hypothesised as a second order formative construct determined by nine first-order motivation dimensions. These first order factors (vicarious achievement, aesthetic, socialisation, escape, drama, bonding with family, interest in a particular player, entertainment, and sport knowledge) are found to represent the overall level of motivation achieved by sport spectators/participants (see Analysis of Results section, particularly the exploratory factor analysis sub-section).

INSERT FIGURE 1 ABOUT HERE**Research Methods****Research Design, Data Collection, and Participants' Characteristics**

The current research adopted two separate data collection methods: an on-site face-to-face survey and a self-completion postal survey. The former specifically targeted non-members, whereas the latter was used to collect research data among the members of a South Australian National Football League (SANFL) team. A series of on-site surveys were conducted at the chosen team's home field on game days, following a match: 6 and 28 April, 4 May, and 1 June 2013.

Convenience sampling was used as participants were randomly approached based on their close proximity to the surveyor at the home ground of the chosen SANFL team; no systematic selection process was used. An additional 800 survey forms were posted to randomly selected members of the team on 13 March 2013.

A total of 618 questionnaires were collected: 393 from on-site surveys and 225 from postal surveys. Missing data in more than 25% of answered questions resulted in 33 surveys being screened out. Therefore, a pool of 585 usable responses was available for data analyses.

Information was gathered about individuals' social demographics (in particular, age, current employment, and household income) as well as spectators' motivation to attend the game, involvement, and loyalty. Of the 585 collected surveys, the majority were non-members (61.5%), male (72.5%), and 40–54 years old (35%); other age groups were evenly distributed. The majority of the respondents (members and non-members) were full-time workers (55%). Finally, almost half of the respondents (48%) earn \$60,000 or more annually.

Measurement Scales

Sport spectators' motivation. As justified previously, in the present study, we initially included a batch of 33 motivation variables (see Table A1). These 33 items were assumed to

measure previously identified, adopted and tested dimensions of sport spectators' motivation (overall motivation), namely: vicarious achievement, aesthetic, socialisation, escape, drama, bonding with family, interest in team, interest in a particular player, entertainment, national/community pride, and sport knowledge. Respondents were asked to indicate their 'motivation for attending the game today' related to each item on a scale ranging from 1 (strongly disagree) to 6 (strongly agree).

Socio-psychological and behavioural involvement. In a similar vein, seven mostly used items of each in the previous studies were adopted to measure the spectators' socio-psychological and behavioural involvement. These items were rated on similar scales as those used for the motivation items (1 = strongly disagree; 6 = strongly agree). These two scales were adapted from previous works in sport spectators' studies; a modified Sport Spectator Involvement Scale (SSIS) developed by Kim (2003, cited in Choi et al., 2009) which was later adopted by Choi et al. (2009).

Sport spectators' loyalty. Six items, originally adapted from Zeithaml, Berry and Parasuraman (1996) and mostly used in other previous research on sport spectators (e.g., Wang et al., 2011), were used to measure loyalty. These items represented both attitudinal (e.g., 'I would defend SAFC publicly, even if it caused controversy') and behavioural loyalty (e.g., 'I would attend more SAFC games if I could afford the time and money'). They were also rated on six-point scales ranging from 1 (strongly disagree) to 6 (strongly agree).

Data Analyses

As the focus of this study was on sport spectators' motivation (overall motivation) measured via an EFA, a principal component analysis (PCA) was included on the motivation items dataset with an orthogonal (VARIMAX) rotation to confirm a satisfactory factor structure for these variables (Hurley et al., 1997). In this way, we could verify whether the dataset (related to the 33 motivation variables) produces satisfactory factor structures as hypothesised.

After the EFA, we tested the unidimensionality of each construct (the motivation dimensions/factors validated earlier in the EFA as well as the two involvement and loyalty dimensions) by conducting a block factor analysis and reliability analysis for each construct. This verified whether each construct was sufficient to influence the set of indicators identified from previous literature and proposed in the context of this study.

Only when the unidimensionality and internal consistency of each factor/dimension were verified did we move on to examine the structural relationships among the various factors (as hypothesised in Figure 1) using a partial least squares structural equation model (PLS-SEM) analysis. We adopted PLS-SEM due to the higher-order formative conceptualisation for the sport spectators' motivation (overall motivation) factor (see Hulland, Ryan and Rayner, 2010), which caused our model to be empirically under-identified under the traditional covariance-based structural equation model (CB-SEM [Byrne, 2001; Kline, 2004]). Thus, PLS-SEM was used, which is an alternative approach and generates similar results to CB-SEM when the assumptions of the latter (in this case, higher-order formative model) are not met (e.g., Assaker, Huang and Hallak, 2012). In particular, the PLS-SEM analysis centred on two steps: 1) validating the outer model and 2) fitting the inner model (Chin, 1998).

Analysis of Results

Exploratory Factor Analysis

Principal component analysis (PCA) was conducted for the 33 spectators' motivation measures on the entire unstandardised dataset by running an orthogonal (i.e., Varimax) rotated analysis in order to arrive at an interpretable factor structure for these variables.

The final model structure was found to explain 75.12% of the variance. Table 1 also reports the eigenvalues after the rotation, showing the effectiveness of the Varimax method in adequately splitting the total variance among the nine motivation dimensions/factors with eigenvalues > 1 . In particular, the EFA results confirmed the assignment of the motivation

measures to nine dimensions: 1) vicarious achievement, 2) aesthetic, 3) socialisation, 4) escape, 5) drama, 6) bonding with family, 7) interest in a particular player, 8) entertainment, and 9) sport knowledge. All measures were assumed to calculate these dimensions with high loadings (> 0.5) (Hair, Black, Babin, Anderson, and Tatham, 2010) on their respective dimensions (see Table 2).

However, two initially hypothesised motivation dimensions, interest in team and national/community pride, could not be validated because the three items assumed to measure interest in team and two of the three items assumed to measure national/community pride loaded highly on the vicarious achievement dimension, suggesting that those two dimensions (interest in team and national/community pride) do not represent separate motivation dimensions of their own. As a result, the respective items of these two dimensions were all assumed to measure the vicarious achievement dimension as well.

Finally, the third national/community pride item (namely, my connection to the community is why I like the team) showed cross-loadings on at least three of the nine validated factors. As such, this item does not belong to any of the previously validated dimensions, nor does it represent a separate dimension of its own; thus, it was subsequently removed from the analysis. The nine extracted motivation dimensions/factors and their corresponding indicators/variables (see Table 2) were used in the rest of the analysis (block factor analysis and PLS-SEM).

INSERT TABLE 1 and TABLE 2 ABOUT HERE

Exploratory Block Factor and Reliability Analysis

After determining the EFA results for the motivation dimensions, the analysis tested the dimensionality of each construct using a PCA of the unstandardised data of the 12 blocks of variables (nine motivation, two involvement, and one loyalty dimensions/factors; see Table 3). All constructs were unidimensional, with each represented by one factor with an eigenvalue greater than 1. In addition, all loadings performed well inside each block (loadings > 0.7 , see Table 4),

further supporting the unidimensionality of the blocks (Kaiser, 1974). Finally, Cronbach's alpha and Dillon-Goldstein's rho for all constructs were robust and well above the lower limit of 0.7 (Nunnally and Bernstein, 1994), indicating high-scale reliability and further supporting the unidimensionality and reflective scheme of these factors (see Table 3).

Based on this analysis, all indicators hypothesised to measure their underlying constructs appear to belong well together (Raykov and Marcoulides, 2000). The PLS-SEM analysis was then conducted to (1) further confirm how well these indicators load on their underlying constructs and (2) examine the hypothetical relationships across the constructs as defined by their set of indicators and as hypothesised earlier in this paper.

INSERT TABLE 3 ABOUT HERE

Partial Least Square Analysis

PLS-SEM using XLSTAT software (Addinsoft, 2011) was run on the full dataset of the unstandardised data, using mode A (reflective scheme) for the nine first-order motivation dimensions and the two involvement and loyalty constructs and mode B for the higher-order sport spectators' motivation construct. The centroid scheme is also indicated for the estimation of inner weights.

Outer Model Analysis. First, the formative and reflective measurement models were analysed. PLS-SEM makes no distributional assumptions; thus, only non-parametric tests can be used to evaluate the explanatory model (Chin, 1998). The quality of the reflective measures was assessed using the convergent validity and the discriminant validity of the 12 latent constructs. Because formative indicators cause their constructs, they do not have to be highly correlated with one another; therefore, the higher-order motivation construct was evaluated according to its content validity rather than traditional measures of convergent and discriminant validity.

The convergent validity of the constructs was supported as all factor loadings exceeded the 0.7 threshold (Table 4); thus, more than 50% of the variance in the observed variable was due to the underlying construct (Chin, 1998). Furthermore, the bootstrap test showed high significance levels for all loadings (the bootstrap-based empirical 95% confidence interval does not include zero; Table 4). The average variance extracted (AVE), which measures the amount of variance in the indicators accounted for by the construct relative to the amount due to the measurement error, achieved values of .527, .689, .691, .766, .696, .851, .859, .815, and .825 for the nine motivation dimensions (vicarious achievement, aesthetic, socialisation, escape, drama, bonding with family, interest in a particular player, entertainment, and sport knowledge, respectively) and .585, .648, and .701 for the socio-psychological involvement, behavioural involvement, and loyalty constructs, respectively. Because AVE exceeded the required 0.5 threshold, more than 50% of the indicators' variance can be captured by the construct (Chin, 1998).

Discriminant validity is supported when the average shared variance of a construct and its indicators exceed the shared variance with every other construct of the model (Fornell and Larcker, 1981). This was the case in the present study's model (see Table 5), in which the AVE for each construct was greater than the squared correlation coefficient of that construct with every other construct of the model.

The sport spectators' motivation construct is assumed to be a higher-order formative construct caused by reflective lower-order dimensions/factors, so its *content validity* was evaluated at both individual and construct levels. At the individual level, the results of the bootstrap tests showed high significance levels for eight of the nine lower-order motivation factors (the bootstrap-based empirical 95% confidence interval does not include zero, see Table 4) on the higher-order (overall) motivation construct (see Table 4). Moreover, the variance inflation factor (VIF) for each of the nine motivation factors was lower than 2.0, suggesting that these dimensions are not highly correlated to one another. Therefore, the nine first-order motivation factors were all retained in the outer model measurement model.

However, at the construct level, the achieved explained variance (R^2) of the endogenous higher-order (overall) motivation construct was primarily used to determine whether a theoretically sound formative specification for the spectators' motivation construct was appropriate. The results of the R-square (R^2 , see Figure 2) showed that 99% of the variations in perceived quality construct could be explained by its determining first-order dimensions, further supporting the content validity of this measure.

INSERT TABLE 4, TABLE 5, TABLE 6 ABOUT HERE

Inner Model Analysis. The second step of the analysis considered the inner model. The R^2 results of the tested model demonstrated that an acceptable part of the variance of the endogenous latent constructs could be explained by the model (Figure 2). In particular, the cross-sectional regressions (for socio-psychological involvement, behavioural involvement, and loyalty: 0.389, 0.432, and 0.672, respectively) provided an explained variance of greater than the threshold of 30% (Chin, 1998). These results concur with the threshold proposed by Chin (1998); as such, the nomological validity of the model is considered to be satisfactory.

Another assessment of the structural model involved computing the Stone-Geisser Q^2 values (referred to as cross-validated redundancy measures; see Jöreskog and Wold, 1982), which are used to measure predictive relevance in terms of the indicators, not just the constructs, for each of the endogenous constructs in the model. The Stone-Geisser Q^2 values for the socio-psychological involvement, behavioural involvement, and loyalty variable indicators were computed using blindfolding procedures and were found to be larger than zero, suggesting predictive relevance in explaining the endogenous latent variables under evaluation.

Path Estimates and Hypothesis Testing. The path coefficients among the higher-order motivation construct, the two involvements, and the loyalty construct were examined using bootstrapping with 1,000 iterations of resampling (Davison and Hinkley, 1997). Figure 2 depicts

the results of the inner model with the results of the bootstrapping, indicating that four of the five hypotheses were supported.

In support of Hypotheses 1 and 2, a strong positive relationship was found between sport spectators' motivation and spectators' socio-psychological involvement from one side ($\beta = .638, p < .05$) and sport spectators' motivation and spectators' behavioural involvement from the other side ($\beta = .664, p < .05$), with motivation explaining 39% and 43% of the socio-psychological and behavioural involvements, respectively. In support of Hypotheses 4 and 5, both spectators' socio-psychological and behavioural involvements were positively related to loyalty ($\beta = .144, p < .05$; $\beta = .675, p < .05$, respectively), with behavioural involvement having the strongest relationship with loyalty. Finally, Hypothesis 3 was not supported, indicating non-significant relationships between sport spectators' motivation with loyalty, with sport spectators' motivation having a mediating (indirect) effect on spectators' loyalty through both involvement constructs. These findings are further discussed in the following sections.

Discussions, Implications, and Limitations

The present study makes four key contributions to the available literature on the topic of sport spectators' behaviour and loyalty. First of all, it aimed to validate the dimensions of sport spectators' motivation in the context of second tier Australian Rules football based on a complete battery of items (33 variables) covering all motivational dimensions developed and used by previous studies in the contexts of various sports including baseball, basketball and football (e.g., Correia and Esteves, 2007; Funk, 2001; Funk et al., 2009; Funk et al., 2004; James and Ridinger, 2002; James and Ross, 2004; Mahony et al., 2002; McDonald et al., 2002; Robinson et al., 2004; Trail and James, 2001; Wang et al., 2011, Wann et al., 1999; Won and Kitamura, 2006). In particular, conducting an EFA on a sample of 585 spectators at one of the South Australian Football Clubs' home games helped reduce the 33 items into nine motivation dimensions found to influence spectators' motivation to attend club matches. In this case, spectators' motivation was

assumed to be a higher-order factor/construct formed by the nine dimensions extracted from the 33 motivation items. As such, in validating a higher-order construct for motivation, this study helps identify the dimensions with the greatest influence on motivations and subsequently detected the main drivers of spectator motivations for attending a game.

In this regard, it identified nine motivation dimensions (i.e., vicarious achievement, aesthetic, socialisation, escape, drama, bonding with family, interest in a particular player, entertainment, and sport knowledge) that were all significant in influencing spectators' motivation to attend games (e.g., all nine dimensions had significant loadings on spectators' overall motivation factor, $p < .05$). Specifically, the results indicated that vicarious achievement (the extent to which an individual is interested in the team because of the heightened sense of personal and collective self-esteem and psychological association with the team), escape (desire to get away or to be part of something different from the normal routine), and entertainment (the degree of affordability that contributes to attendance) are the major reasons behind spectators' motivation for attending a football (sporting event) game, with respective standardised loadings of .259, .216, and .299 on the overall motivation factor/construct. Moreover, the results indicated that bonding with family (opportunity to spend time with one's family at a game) and sport knowledge (understanding of the game, rules, strategies, technical aspects, etc.) represent the lowest motives.

Our nine dimensions of motivation provide support for Trail and James' (2001) nine factor Motivation Scale for Sport Consumption. Seven of the nine dimensions directly correlate with those proposed by Trail and James (achievement, aesthetic, socialisation, escape, drama, family, and knowledge). However, other two dimensions (interests in a player and entertainment) differed from their final two motives (physical attraction and physical skills). Our finding of Entertainment as a motivation is perhaps indicative of the changing *product* of a sport event. It is evident that spectators are motivated by the entertainment value of the event experience holistically, as opposed to the pure sporting contest. This is an important finding for theoretical development of

fan motivation models and for practitioners seeking to maximise game attendance and attract new members.

Secondly, the results from the structural equation model demonstrated that motivation to attend a game does not display a direct influence on the degree of sport spectators' loyalty (standardised regression coefficient = .031). However, spectators' motivation is statistically significant in estimating both socio-psychological and behavioural involvements (standardised regression coefficients = .638 and .664, respectively), which in turn were found to be statistically significant in influencing sport spectators' loyalty. Thus, spectators' motivation displays a mediating (indirect) effect on their loyalty through both involvement constructs. The strength of these relationships between motivation and spectators' involvement is not surprising based on previous research findings, which revealed that motivation is a major driver of sport spectators' involvement. However, it is proposed that this will help sports clubs develop effective strategies for fostering and strengthening loyalty to their club. This may consequently increase brand awareness and lead to consistent event attendance regardless of fluctuating team performance. As noted by Tachis and Tzetzis (2015), given the heterogeneous nature of sport and varied on-field performances, a loyal supporter base is critical for club survival.

Thirdly, this study confirms the multidimensionality of spectator motivations and involvement (Beaton et al., 2011; Choi et al., 2009; Funk et al., 2004). As noted above, one of the strongest motivations we found for attending a football game was vicarious achievement. Interestingly, Kim and Trail (2010, p. 205) in their investigation of spectators at a women's professional basketball game, found that the 'lack of a need for vicarious achievement seems unlikely to be a constraint' to involvement. Thus, it is potentially the contextual difference to our study (a second-tier football league) that lead to this discrepant finding.

Finally, the results of this study revealed that behavioural involvement has the strongest effect on spectators' loyalty (standardised regression coefficients = .675, compared to .144 for the effect of socio-psychological involvement on loyalty). The strong relationship between

behavioural involvement and loyalty is not unexpected, given that previous research has noted this, for example in a tennis spectator context, Bee and Havitz (2010) concluded that involvement was a precursor to becoming a loyal supporter. In particular, involvement only results in a purchase when values of a person's self-image are engaged by a decision-making situation; as such, one can expect that affective or socio-psychological involvement does not translate into a consumption whereas behavioural intention does transmute into future game attendance.

The findings from this study have several practical implications for sport event managers in general, and South Australian National Football League (SANFL) administrators, in particular, in terms of how to enhance future attendance at clubs' games. The findings from the present study revealed that the main reasons spectators attended the sport event was vicarious achievement, escape, and entertainment, indicating the need for sport club managers to ensure that spectators are even more entertained and vicariously engaged before and during the game. As vicarious achievement refers to a heightened sense of personal and collective self-esteem, it is suggested that clubs find ways to further the group interactions and relationships among the fan base. If group identification is important to fans, then clubs should create supporter groups, facilitate fan functions and stimulate interaction among fans online as well as during live attendance. This relates to the sense of belonging and social capital that sport clubs generate. As previously noted by Nichols et al. (2012), this presents a lucrative resource for clubs to leverage and draw on.

To allow spectators to escape from their regular routines, clubs should consider providing engaging opportunities in something they usually do not have a chance to do. It is crucial for sport club administrators to focus their fan engagement strategies on spectators' chances to get away and escape their day-to-day routine.

Organising events that encourage spectator and team interaction is also recommended to enable deeper connections between the supporters and players. This can involve traditional 'meet and greet' activities, as well as the provision of player information and statistics online. Providing

opportunities for fans to form bonds with individual players, through online platforms is recommended.

It is also vital for sport managers to promote the team and the game to the current spectators as part of their community pride. This could bring out a stronger sense of team/community pride and support and could subsequently enhance the spectators' psychological association with the team. As noted by Tonts (2005), sport clubs contribute to community identity, so for club survival, attention should be on strengthening community connection.

Some limitations and recommendations for future research are noted. First, a limitation of the present study is that results are based on a pooled sample consisting of both member and non-member spectators. Future research could include multi-group analyses conducted on the two groups separately, as defined by their membership status (e.g., members versus non-members) or their demographic characteristics (e.g., age, gender), which could help identify specific combinations of motivations relevant to different spectators' groups. This should provide sport event managers with additional details about the specificities of each group and how to enhance each group's involvement and loyalty (future attendance) based on the multi-group results.

Second, the research population (sample) was drawn from one type of sport event and one specific location in South Australia, thereby limiting the generalisability of the findings. Future research could include administering a more diversified sample to other complementary contexts, such as different types of sport activities/events, as well as populations in other countries, which could help further endorse the findings from the present study. In a cultural comparison study, Kaplan and Langdon (2012) found that major motivations for Chinese sport consumers were aesthetic and based on their favourite athlete, while America consumers focused on entertainment and their teams. This disparity highlights the need to examine different cultural contexts, in order to expand understanding of sport fan motivations, involvement and loyalty.

We recognise the relatively narrow demographic scope of our sample. That is, the majority of surveyed fans were middle-aged men. While this sample was indicative of the attendees at the

sport in question, this is not representative of broader society. So while this presents as a limitation to the current study, it raises a number of questions. Firstly for practitioners, how can communication and community engagement activities be extended to ensure a broader cross-section of society are interested in game attendance? Secondly, it raises concerns over potential exclusion of more diverse communities groups from attending second-tier football matches. While research has examined the difference in fan motivation between male and female fans (e.g., James and Ridinger, 2002), there is a scope and room for further understanding of motivations, involvement and loyalty of individuals from diverse demographic, cultural and ethnic backgrounds.

Lastly, the current study attempted to examine the underlying relationships between sport spectator's motivation, involvement and loyalty only due to the application of a complete battery of 33 items covering all necessary sport spectator's motivational dimensions developed and used by previous studies. Future studies will be much appreciated to investigate antecedents and consequences of sport spectator's involvement more holistically by including the other 18 antecedents suggested by Funk et al. (2004). Further empirical studies will thus enhance our current understanding of structural models of fan involvement and its antecedents and consequence, which will then lead to developing more effective strategies for fostering and strengthening loyalty to sport clubs.

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Table 1
Total Variance Explained

Component	Eigenvalues from PROMAX Rotation		
	Total	% Variance	Cumulative %
1	10.35	31.37	31.37
2	3.70	11.20	42.57
3	2.05	6.22	48.79
4	1.93	5.84	54.64
5	1.79	5.43	60.07
6	1.52	4.61	64.68
7	1.35	4.10	68.78
8	1.06	3.21	71.99
9	1.03	3.12	75.12

Note. Extraction Method: Principal Component Analysis. Rotation Method: Promax with Kaiser Normalization.

Table 2
Rotated EFA Factor Solution

Label	Attributes/Items	Sport Spectators' Motivation Dimensions								
		Vicarious Achievement	Interest in a Particular Player	Bonding with Family	Entertainment	Sport Knowledge	Escape	Socialization	Drama	Aesthetic
MOT_1	I feel a sense of accomplishment when my team wins.	0.71								
MOT_2	I feel proud when the team plays really well.	0.76								
MOT_3	When my supporting team wins, I feel like I have won.	0.64								
MOT_4	There is a certain natural beauty to the game.									0.68
MOT_5	I enjoy the gracefulness associated with the sport.									0.74
MOT_6	Successful plays and strategies by the coach are an important component of the game being enjoyable									0.54
MOT_7	I enjoy interacting with other spectators and fans when attending games.							0.72		
MOT_8	Games gave me a chance to meet other people with similar interests as myself.							0.74		
MOT_9	I like to talk with other people sitting near me at games.							0.75		
MOT_10	For me, sport games are an escape my day-to-day activities.						0.76			
MOT_11	I enjoy team name Games because they are a great change from what I regularly do.						0.70			
MOT_12	I like going to Games because when I'm there I forget about all my troubles and cares.						0.76			
MOT_13	I prefer watching a close game rather than a one-side game.								0.87	
MOT_14	I like Games where the outcome is uncertain.								0.78	
MOT_15	A close game between two teams is more enjoyable than a blowout.								0.85	
MOT_16	Being with my family is why I enjoy sport			0.88						

	games.			
MOT_17	The opportunity to spend time with my family is something I like about attending games.		0.91	
MOT_18	I enjoy team name Games because they are a good family activity.		0.77	
MOT_19	I consider myself a fan of the whole team more than a fan of a single player.	0.65		
MOT_20	I come to game to support the whole team.	0.73		
MOT_21	I am a fan of the entire team.	0.73		
MOT_22	I watch the games because of individual players more than of the team.		0.90	
MOT_23	I am more of a fan of individual players than I am of the entire team.		0.92	
MOT_24	The main reason why I attend is to cheer for my favorite player.		0.88	
MOT_25	The main reason I like team name games is because sport is good entertainment.			0.79
MOT_26	I like going to team name Games because watching sport is fun.			0.85
MOT_27	Team name Games are a fun way to spend my time.			0.81
MOT_28	When my city's team wins, I feel proud to be a citizen.	0.55		
MOT_29	I attend Games to support the city's team.	0.70		
MOT_30	My connection to the community is why I like the team.	0.38	0.39	0.33
MOT_31	Knowing the rules the games helps me to enjoy the games.			0.80
MOT_32	I enjoy the Games because I know a lot about the game.			0.87
MOT_33	I feel my understanding of the game adds to my enjoyment of watching the team.			0.87

Note. Extraction Method: Principal Component Analysis. Absolute loading values less than .4 are not shown. Rotation Method: Promax with Kaiser Normalization.

Bold item represents cross-loadings on several dimensions as such it was removed from the analysis

Table 3

Factor Matrix, Cronbach's α , Composite Reliability, and Eigenvalues by Variable Blocks with Component Analysis Extraction Method

Constructs	Variables	Factor 1	Cronbach's α	D.G. rho (CR)	Critical value	Eigenvalues
Vicarious Achievement	MOT_1	0.78	0.87	0.90	1	4.52
	MOT_2	0.78				0.96
	MOT_3	0.76				0.65
	MOT_19	0.69				0.63
	MOT_20	0.73				0.47
	MOT_21	0.70				0.37
	MOT_28	0.70				0.23
	MOT_29	0.76				0.16
Aesthetic	MOT_4	0.85	0.77	0.87	1	2.07
	MOT_5	0.84				0.54
	MOT_6	0.79				0.40
Socialization	MOT_7	0.88	0.77	0.87	1	2.08
	MOT_8	0.89				0.65
	MOT_9	0.72				0.27
Escape	MOT_10	0.88	0.85	0.91	1	2.30
	MOT_11	0.87				0.36
	MOT_12	0.87				0.34
Drama	MOT_13	0.86	0.78	0.87	1	2.09
	MOT_14	0.80				0.52
	MOT_15	0.84				0.39
Bonding with Family	MOT_16	0.93	0.91	0.95	1	2.55
	MOT_17	0.95				0.32
	MOT_18	0.88				0.12
Interest in a Particular Player	MOT_22	0.92	0.92	0.95	1	2.58
	MOT_23	0.95				0.26
	MOT_24	0.91				0.16
Entertainment	MOT_25	0.86	0.89	0.93	1	2.45
	MOT_26	0.94				0.38
	MOT_27	0.91				0.18
Sport Knowledge	MOT_31	0.86	0.89	0.93	1	2.47
	MOT_32	0.92				0.37
	MOT_33	0.94				0.16
Socio-psychological Involvement	INV_1	0.77	0.88	0.91	1	4.10
	INV_2	0.69				0.89
	INV_3	0.85				0.68
	INV_4	0.72				0.46
	INV_5	0.84				0.36
	INV_6	0.70				0.29
	INV_7	0.80				0.22
Behavioural involvement	INV_8	0.86	0.91	0.93	1	4.54

	INV_9	0.83				0.76
	INV_10	0.88				0.50
	INV_11	0.79				0.45
	INV_12	0.76				0.30
	INV_13	0.84				0.26
	INV_14	0.69				0.20
Loyalty	LOYALTY_1	0.79	0.91	0.93	1	4.21
	LOYALTY_2	0.86				0.59
	LOYALTY_3	0.91				0.43
	LOYALTY_4	0.88				0.35
	LOYALTY_5	0.73				0.28
	LOYALTY_6	0.84				0.13

Note. PCA with Rotation Method: Varimax with Kaiser Normalization

Table 4

Results of the Outer Model: First-Order Latent Variables with Reflective Indicators and Formative Higher-Order Sport Spectator's Motivation

Latent variable	Manifest variables Label	Standardized loadings	Standardized loadings (Bootstrap)	Critical ratio (CR)	Lower bound (95%)	Upper bound (95%)	Average Variance Extracted (AVE)
Vicarious Achievement	MOT_1	0.795	0.792	27.694	0.714	0.849	0.527
	MOT_2	0.789	0.786	29.795	0.723	0.836	
	MOT_3	0.774	0.768	31.042	0.708	0.816	
	MOT_19	0.644	0.654	14.318	0.570	0.748	
	MOT_20	0.706	0.713	16.173	0.626	0.800	
	MOT_21	0.603	0.636	4.395	0.422	0.837	
	MOT_28	0.707	0.708	23.659	0.633	0.764	
	MOT_29	0.763	0.763	27.719	0.706	0.806	
Aesthetic	MOT_4	0.856	0.852	53.317	0.820	0.883	0.689
	MOT_5	0.838	0.837	42.829	0.799	0.875	
	MOT_6	0.794	0.795	34.844	0.737	0.836	
Socialization	MOT_7	0.898	0.898	87.365	0.873	0.919	0.691
	MOT_8	0.911	0.913	95.500	0.891	0.933	
	MOT_9	0.661	0.749	4.673	0.493	0.908	
Escape	MOT_10	0.872	0.872	51.449	0.817	0.903	0.766
	MOT_11	0.879	0.880	58.868	0.848	0.913	
	MOT_12	0.874	0.875	76.302	0.850	0.898	
Drama	MOT_13	0.844	0.841	37.656	0.784	0.889	0.696
	MOT_14	0.835	0.834	35.876	0.781	0.877	
	MOT_15	0.824	0.821	31.013	0.760	0.873	
Bonding with Family	MOT_16	0.929	0.928	104.788	0.905	0.945	0.851
	MOT_17	0.945	0.944	133.081	0.926	0.960	
	MOT_18	0.892	0.890	62.861	0.860	0.915	
Interest in a Particular Player	MOT_22	0.912	0.918	59.459	0.881	0.950	0.859

MOTIVATION, INVOLVEMENT, LOYALTY

	MOT_23	0.939	0.942	75.055	0.913	0.969	
	MOT_24	0.929	0.921	40.253	0.846	0.945	
Entertainment	MOT_25	0.858	0.860	41.123	0.816	0.896	0.815
	MOT_26	0.938	0.939	123.165	0.919	0.950	
	MOT_27	0.911	0.913	76.871	0.876	0.935	
Sport Knowledge	MOT_31	0.864	0.865	51.281	0.815	0.901	0.825
	MOT_32	0.919	0.918	81.464	0.893	0.946	
	MOT_33	0.939	0.939	132.578	0.921	0.952	
Socio-psychological Involvement	INV_1	0.755	0.757	32.751	0.701	0.796	0.585
	INV_2	0.664	0.668	20.965	0.598	0.733	
	INV_3	0.834	0.837	52.215	0.803	0.867	
	INV_4	0.729	0.731	31.427	0.678	0.780	
	INV_5	0.831	0.833	52.585	0.800	0.863	
	INV_6	0.714	0.715	31.086	0.672	0.761	
	INV_7	0.811	0.813	39.426	0.756	0.856	
Behavioral involvement	INV_8	0.860	0.859	64.802	0.827	0.883	0.648
	INV_9	0.828	0.829	52.130	0.798	0.862	
	INV_10	0.880	0.878	90.622	0.858	0.902	
	INV_11	0.794	0.793	48.021	0.758	0.830	
	INV_12	0.769	0.770	37.264	0.722	0.810	
	INV_13	0.836	0.836	56.324	0.805	0.876	
	INV_14	0.646	0.647	22.451	0.584	0.705	
Loyalty	LOYALTY_1	0.800	0.800	45.365	0.756	0.835	0.701
	LOYALTY_2	0.854	0.853	44.727	0.799	0.886	
	LOYALTY_3	0.907	0.907	97.467	0.884	0.922	
	LOYALTY_4	0.879	0.879	69.397	0.845	0.908	
	LOYALTY_5	0.729	0.730	28.407	0.669	0.783	
	LOYALTY_6	0.843	0.843	51.055	0.800	0.874	
Sport Spectator's Motivation	Vicarious Achievement	0.259	0.257	9.905	0.211	0.302	-
	Aesthetic	0.153	0.152	6.513	0.122	0.182	
	Socialization	0.154	0.157	6.464	0.127	0.187	

Escape	0.216	0.212	7.274	0.172	0.254
Drama	0.112	0.111	5.473	0.083	0.134
Bonding with Family	0.109	0.109	5.246	0.085	0.134
Interest in a Particular Player	0.144	0.085	5.742	-0.146	0.164
Entertainment	0.299	0.297	7.518	0.240	0.344
Sport Knowledge	0.108	0.108	4.686	0.079	0.136

Table 5

Results of Discriminant Validity: First-Order Latent variables with Reflective Indicators (Squared Correlations for any Pair of Latent Variables < AVE)

	Vicarious Achievement	Aesthetic	Socialization	Escape	Drama	Bonding with Family	Interest in a Player	Entertainment	Sport Knowledge	Socio- Psychological Involvement	Behavioural Involvement	Loyalty	Mean Communa- lities (AVE)
Vicarious Achievement	1	0.309	0.238	0.289	0.033	0.108	0.014	0.249	0.216	0.283	0.299	0.317	0.527
Aesthetic	0.309	1	0.218	0.228	0.058	0.051	0.007	0.167	0.224	0.174	0.195	0.102	0.689
Socialization	0.238	0.218	1	0.209	0.031	0.119	0.010	0.095	0.061	0.111	0.154	0.095	0.691
Escape	0.289	0.228	0.209	1	0.042	0.105	0.004	0.306	0.126	0.266	0.310	0.256	0.766
Drama	0.033	0.058	0.031	0.042	1	0.092	0.009	0.034	0.040	0.016	0.005	0.001	0.696
Bonding with Family	0.108	0.051	0.119	0.105	0.092	1	0.051	0.099	0.031	0.045	0.052	0.022	0.851
Interest in a Player	0.014	0.007	0.010	0.004	0.009	0.051	1	0.003	0.003	0.002	0.003	0.011	0.859
Entertainment	0.249	0.167	0.095	0.306	0.034	0.099	0.003	1	0.132	0.383	0.375	0.314	0.815
Sport Knowledge	0.216	0.224	0.061	0.126	0.040	0.031	0.003	0.132	1	0.073	0.081	0.060	0.825
Socio- Psychological Involvement	0.283	0.174	0.111	0.266	0.016	0.045	0.002	0.383	0.073	1	0.658	0.507	0.585
Behavioural Involvement	0.299	0.195	0.154	0.310	0.005	0.052	0.003	0.375	0.081	0.658	1	0.661	0.648
Loyalty	0.317	0.102	0.095	0.256	0.001	0.022	0.011	0.314	0.060	0.507	0.661	1	0.701
Mean Communalities (AVE)	0.527	0.689	0.691	0.766	0.696	0.851	0.859	0.815	0.825	0.585	0.648	0.701	0

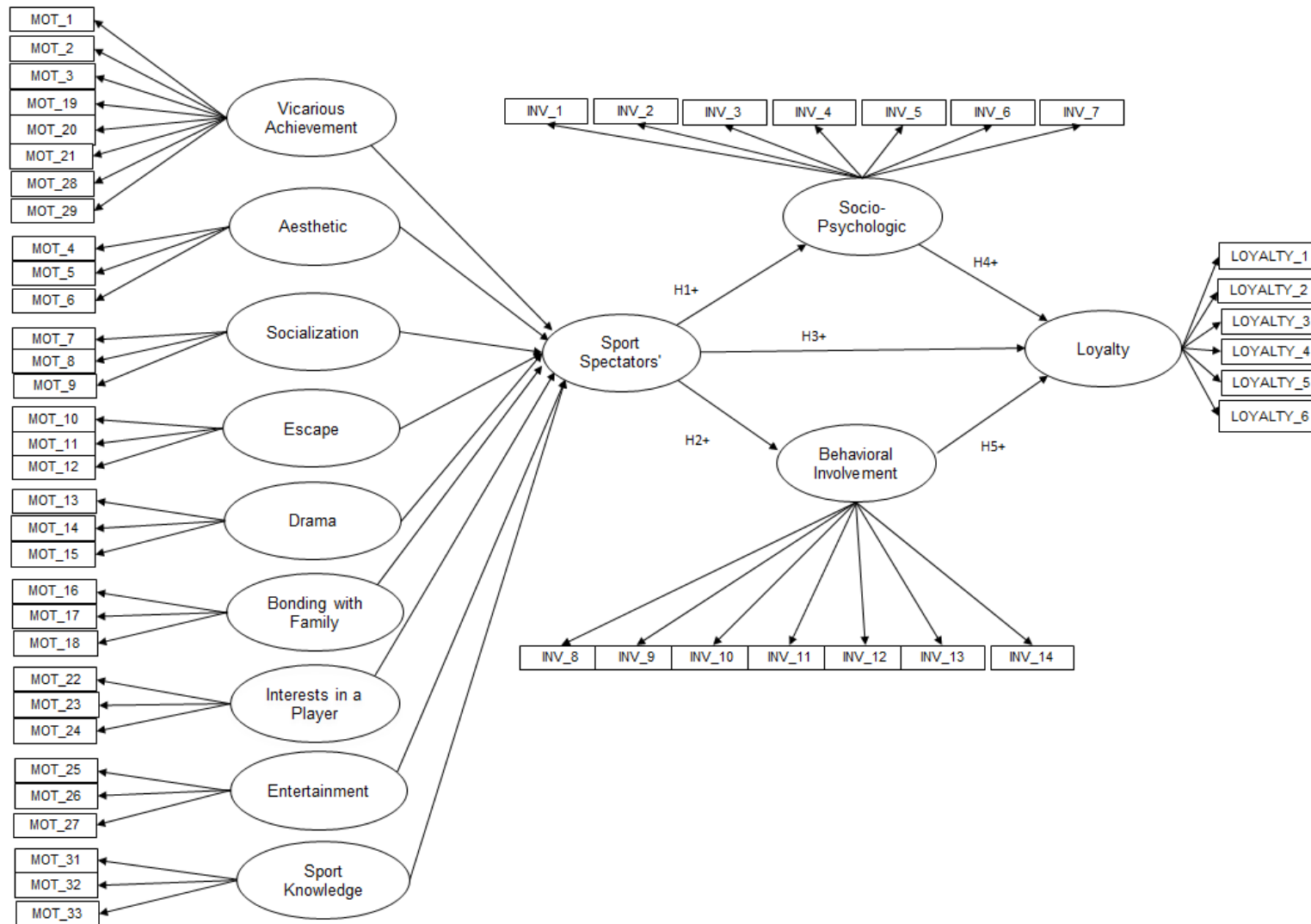


Figure 1. The Proposed Hypothesized Hierarchical Model of Sport Spectators' Motivation, Involvement and Loyalty.



Figure 2. Results of Proposed Hypothetical Hierarchical Model of Sport Spectators' Motivation, Involvement and Loyalty with the Standardized Solution for Inner Model from PLS-SEM using XLSTAT. All Estimates are Significant at the .05 Level Except for Those Designated "n.s.," Which are not Significant.

Appendix

Table A1
Scales and Measures of Motivation

Scales	Description	Authors
Vicarious achievement (VIC)	<ul style="list-style-type: none"> - I feel a sense of accomplishment when my team wins. - I feel proud when the team plays really well. - When my supporting team wins, I feel like I have won. 	Funk, 2001; Funk et al., 2004, 2009; James and Ridinger, 2002; James and Ross, 2004; Mahony et al., 2002; McDonald et al., 2002; Robinson et al., 2004; Trail and James, 2001; Wang et al., 2011, Won and Kitamura., 2006
Aesthetic (AES)	<ul style="list-style-type: none"> - There is a certain natural beauty to the game. - I enjoy the gracefulness associated with the sport. - Successful plays and strategies by the coach are an important component of the game being enjoyable. 	Mahony et al., 2002; Wann et al., 1999
Socialization (SOC)	<ul style="list-style-type: none"> - I enjoy interacting with other spectators and fans when attending games. - Games gave me a chance to meet other people with similar interests as myself. - I like to talk with other people sitting near me at games. 	McDonald et al., 2002; Pease and Zhang, 2001; Trail and James, 2001; Wann et al., 1999; Wann et al., 2008
Escape (ESC)	<ul style="list-style-type: none"> - For me, sport games are an escape my day-to-day activities. - I enjoy team name games because they are a great change from what I regularly do. - I like going to games because when I'm there I forget about all my troubles and cares. 	Gladden and Funk, 2001; Wann et al., 1999; Won and Kitamura, 2006
Drama (DRA)	<ul style="list-style-type: none"> - I prefer watching a close game rather than a one-side game. - I like games where the outcome is uncertain. - A close game between two teams is more enjoyable than a blowout. 	Correia and Esteves, 2006; Trail and James, 2001
Bonding with family (FAM)	<ul style="list-style-type: none"> - Being with my family is why I enjoy sport games. - The opportunity to spend time with my family is something I like about attending games. - I enjoy team name games because they are a good family activity. 	Han, Mahony and Greenwell, 2016; McDonald et al., 2002; Trail and James, 2001; Wann et al., 1999
Interest in team (TEM)	<ul style="list-style-type: none"> - I consider myself a fan of the whole team more than a fan of a single player. - I come to game to support the whole team. - I am a fan of the entire team. 	Funk, 2001; Funk et al., 2004; James and Ross, 2004; Mahony et al., 2002; Robinson et al., 2004; Wang et al., 2011; Won et al., 2006
Interest in player (PLA)	<ul style="list-style-type: none"> - I watch the games because of individual players more than of the team. - I am more of a fan of individual players than I am of the entire team. - The main reason why I attend is to cheer for my favourite player. 	Funk, 2001; Funk et al., 2004; Mahony et al., 2002; Robinson et al., 2004; Trail et al., 2001; Wang et al., 2011; Won and Kitamura, 2006
Entertainment (ENT)	<ul style="list-style-type: none"> - The main reason I like team name games is because sport is good entertainment. - I like going to team name games because watching sport is fun. - Team name games are a fun way to spend my time. 	Pease and Zhang, 2001; Ross and James, 2004; Trail and James, 2001; Wann et al., 1999
National/community pride (COM)	<ul style="list-style-type: none"> - When my city's team wins, I feel proud to be a citizen. - I attend games to support the city's team. - My connection to the community is why I like the team. 	Lough and Kim, 2004; Mahony et al., 2002; Pease and Zhang, 2001
Sport knowledge (KNW)	<ul style="list-style-type: none"> - Knowing the rules the games helps me to enjoy the games. - I enjoy the games because I know a lot about the game. - I feel my understanding of the game adds to my enjoyment of watching the team. 	Kim and Trail, 2010; Trail and James, 2001; Zhang et al., 2010