

# **Stadium Experience and Word-of-Mouth:**

## **A Panel Data Analysis of National A-Team Men's Football Matches in Denmark, 2013–17**

Tor Georg Jakobsen<sup>b</sup>, Rasmus K. Storm<sup>a, b\*</sup>, Nikolaj Schelde<sup>c</sup>

<sup>a</sup> Danish Institute for Sports Studies  
Frederiksgade 78 2. sal  
DK-8000 Århus

<sup>b</sup> *NTNU Business School*  
*Norwegian University of Science and Technology*  
*7491 Trondheim, Norway*

<sup>c</sup> *Danish Football Union*  
*DBU Allé 1*  
*Brøndby, Denmark*

*\*Corresponding Author*

## **Abstract**

### ***Rationale/Purpose***

In this paper we utilize unique spectator level data from fifteen Danish national men's A-team football matches in the period 2013–17.

### ***Design/methodology/approach***

We test both fixed effects models where we investigate the within-variation in persons who have attended several matches as well as random effects models that include those with only one match observation. Our dependent variable is a scale measuring each individual respondent's inclination to recommend national matches to friends and colleagues through word-of-mouth.

### ***Findings***

The regression models identify the players' contribution, atmosphere, and spectators' impression of the match stewards as the most important factors driving our word-of-mouth measure in a positive direction. Other factors such as food, drinks, and toilet facilities are positive but of less importance.

### ***Practical implications***

The results indicate that among strong predictors are variables which are within the reach of management. This is good news for the Danish Football Association which is responsible for national team matches in the sense that controlling the support and demand of national team matches is manageable.

### ***Research Contribution***

The paper adds to existing research on spectator demand by focussing on national A-team matches.

**Keywords:** National A-Team Games; Spectator Demand, Inclination to Recommend; Denmark

## **Introduction**

Spectators and fans' intention to (re-)purchase tickets to sport games is vital in the business of team sports (Kuenzel & Yassim, 2007). Facing significant competition from other parts of the leisure-time entertainment and event industry – for example social media, television, cinemas, theatres, museums, funfair parks, festivals and recreational resorts – organizations arranging sport spectator events are in constant need of optimizing their product (Biscaia, 2016; Gallagher, O'Connor, & Gilmore, 2016; Theodorakis, Alexandris, & Ko, 2011).

Recent research into the management of demand for sport games has found positive relationships between satisfaction related to the event experience and behavioural intention to (re-)purchase tickets for future events (Baker & Crompton, 2000; Tomas, Scott, & Crompton, 2002). This reveals a large potential in developing a satisfactory match-day experience (Biscaia, Correia, Rosado, Maroco, & Ross, 2012; Clemes, Brush, & Collins, 2011) and in managing spectator and fan engagement because it can give rise to 'extra role behaviour' (Yoshida, Gordon, Nakazawa, & Biscaia, 2014). Such behaviour characterises cases where fans not only attend, watch or read about sport, but also actively promote their team or sport to others by fan-to-fan communication – for example in fan communities (Fisher & Wakefield, 1998), by engaging in collaborative behaviour at events (De Ruyter & Wetzels, 2000), or sharing knowledge positively on their sport with others to help them better understand its qualities (Dietz-Uhler & Murrell, 1999).

One of the specific ways of attracting new as well as previous spectators to future games, is to have previous spectators advertising their satisfaction for the game product through 'word-of-mouth' (WOM), i.e. by recommending their own experiences to others.

Some scholars, for example Asasa and Ko (2016), and Murray (1991), argue that this is a very effective way to increase demand and thus revenue streams related to match-day attendance. Specifically in relation to service purchases, as can be argued to be the case here, Gremler (1994), Voyer & Ranaweera (2015), and Bigne, Andreu, Hernandez, & Ruiz (2018) point out that WOM seems to be one of the most important sources of reference people use when making (future) purchase decisions. Services are immaterial and not directly perceptible (*ex ante*), and in a pre-purchase context it is difficult to assess the utility and quality associated with these compared to material goods (Murray, 1991). This makes (potential) consumers of services inclined to seek information among peers to guide their choice and purchasing behaviour (Lutz & Reilly, 1974; Price & Lawrence, 1984).

This study aims to identify factors that determine the probability of spectators to Danish national men's A-Team games to recommend their experience to others. To sport managers with the responsibility of optimizing demand it is important to recognise those elements of spectator interest which can improve spectators' game experience such that they will communicate this positively. By identifying factors which raise positive WOM, relevant information on how to increase interest and revenue streams is provided to the benefit of organizations running spectator events.

We expand on existing research by investigating national A-team games. Recent research into spectator interest repurchase intentions, and management, has to the best of our knowledge, hitherto focused on club level sports – for example Biscaia et al. (2012) on Portuguese pro-football, Calabuig Moreno, Prado-Gascó, Crespo Hervás, Núñez-Pomar, and Añó Sanz (2015) on Spanish elite level basketball, and Clemens et al. (2011) on pro-Super 14 Rugby in New Zealand. This is a problem because there can be differences between club level factors determining demand and factors at play

regarding national A-team games where elements such as national pride – for example – can have an impact in relation to consumer experience. By utilising a unique database on respondents attending Danish men’s national A-team games in the period 2013–2017, we aim to help fill this gap in the literature by investigating the main determinants of positive WOM in a new setting.

The paper is structured as follows. First, we outline the conceptual framework of the paper including a review on existing research on WOM, which is the main proxy for interest and satisfaction in the paper. This is followed by a presentation of the data and methodology deployed where we utilize primary survey data on several regression models. Third, we present and discuss our results before concluding and outlining implications, limitations and future research perspectives raised in the analysis.

## **Conceptual Framework and Brief Literature Review**

According to Caruana (2002), establishing loyalty and satisfaction among consumers is of key importance for successful commercial organizations (Yoshida & James, 2010). Recruiting new customers is far more expensive than ensuring that existing ones return. Further, and as pointed out by Reicheld and Sasser (1990), through WOM existing customers can recommend the firm or product thus providing valuable marketing services without cost (Asada & Ko, 2016). An essential question is how we can understand the concept of WOM more specifically; another is what potential impact can this have on future purchase decisions.

Because our data were collected by the Danish Football Association prior to our study, the approach employed in the analysis is more or less determined by the form of the questions in the survey rather than the other way around – which would be the typical

academic procedure, that is identifying gaps in the literature and filling them by adapting new theoretical approaches and relevant empirical designs and examination. However, by outlining a conceptual understanding of WOM and reflecting on its potential impact on national A-team soccer matches, we can clarify the added value of the study.

### ***Conceptual understanding***

In this paper, we follow Harrison-Walker (2001) and Asada and Ko (2016), arguing that WOM is an (informal) communication between peers or non-commercial actors regarding a product, service, or brand. It can be carried out in many ways as, for example, face to face or through digital media such as chat forums, social media applications or similar (also known as “eWom”; see: Huete-Alcocer, 2017; Yang, Kim, Amblee, & Jeong, 2012). The outcome of this communication can be positive towards the product in question resulting in one of the peers recommending it to another (Liu, 2006). This is accordance with Anderson (1998) who argues that favourable WOM – among other things – includes “pleasant, vivid, or novel experiences, recommendations to others, and even conspicuous display” (p. 4). In principle, WOM can contribute to assisting others who are considering purchasing the product sometime in the future in evaluating a product, thus potentially increasing demand (Alexandris, Dimitriadis, & Kasiara, 2001).

### ***Impact of WOM***

As mentioned above, especially in relation to services that are difficult to evaluate prior to purchase – as in this study – WOM can make a (positive) difference (Yannis, Dimitris, Athanasios, George, & Athanasios, 2014; Zeithaml, 1981). According to Murray (1991), purchasing a service – for example a ticket to a sports game – is a risky endeavour because the result and (thus) the total experience related to that service can vary widely depending on the final (ex post) result. Having others assist potential customers to better understand

the potential of the service prior to purchase is therefore imperative in reducing the complexity and perceived risk associated with the purchase decision (Liu, 2006).

The positive effect of such relationships is, for example, pointed out by Kuenzel and Yassim (2007) who, based on a study of cricket spectators, argue that there is a positive relation between satisfaction, WOM, and revisit intentions. Further, “In WOM research, Bansal and Voyer (2000) have empirically shown that a sender’s expertise is an indicator of WOM influence on the receiver’s purchase decision” (Asada & Ko, 2016, p. 194). Other researchers, for example Charlett, Garland, and Marr (1995), conducting an experiment with 60 students on the quality of personal computers, find that negative WOM regarding the product is not more influential on (future) purchase decisions than positive WOM, while Yi (1991) argues that there is empirical evidence that satisfied customers engage themselves in WOM, and not only those who are dissatisfied.

Utilizing data from studies of customer satisfaction within a broad selection of consumer areas in Sweden and the U.S., Anderson (1998) finds that dissatisfied customers are, in fact, more likely to engage in negative WOM. However, the common understanding of the size of the difference between satisfied and dissatisfied customers is exaggerated. This is broadly consistent with Richins (1983) who argues that dissatisfaction can be managed.

In this paper, we do not measure indicators of how well WOM is perceived by others due, for example, to interpersonal influence (Bearden & Etzel, 1982), how it is presented (Herr, Kardes, & Kim, 1991), how it influences long- or short-term judgements (Bone, 1995), or its specific effect on (re)purchase intentions by the surveyed population or their friends, family, and so forth. Instead, we use a WOM variable as a dependent variable of satisfaction in order to understand what determines this level of satisfaction. This is relevant because studies have shown that satisfied customers like to engage others

by talking to them about the experience (Kuenzel & Yassim, 2007). Such conversations are a powerful marketing tool because people today are becoming increasingly sceptical towards traditional advertising (Trosov, Bucklin, & Pauwels, 2009). In such cases, WOM can overcome this scepticism. The approach in this study assumes that the score on the WOM variable potentially affects other's purchasing intentions and thus actual behaviour.

It is important to understand that the study does not measure the specific impact of WOM in terms of the frequency (volume (Liu, 2006)) or qualitative form (valence (Chevalier & Mayzlin, 2006)) of WOM interactions since no information on these issues is available from the data. Instead, we follow the findings of the literature reviewed expecting that a high score on the dependent variable (the inclination to recommend the games to others) will most likely result in positive effects, thereby raising overall demand and the number of attendees to Danish national men's A-team matches. This is consistent with existing literature on the subject that for the vast majority looks at "behavioural attitudes or intention as opposed to actual attendance" (Y. Kim, Magnusen, Kim, & Lee, 2019, p. 119).

### ***Existing research***

Existing research on WOM has primarily focussed on industries other than sport. Sport is being studied, but not to the same degree. Some studies are published, for example Tsiotsou and Alexandris (2009) on Greek professional basketball, and Bush, Bush, Clark, and Bush (2005) on female sport fans and their engagement in WOM. Related to gender issues, Swanson, Gwinner, Larson, and Janda (2003), look at American professional and collegiate sporting events in order to identify the effect of WOM on event attendance. They specifically study gender differences related to subjects' self-reported patronage



behaviour and recommendation (of service) practices and argue that WOM is potentially more important today than ever because sports-related WOM is being spread rapidly via electronic media such as emails or web sites. They find WOM to be (positively) associated with game results. Further, they find that persons who are strongly affiliated with a group exercise have a higher frequency of WOM. These are more frequently women than men.

Theodorakis and Alexandris (2008), aim to measure the degree to which different dimensions of service quality predict attendees' behavioural intentions specifically as expressed by (positive) WOM (intentions to communicate positive images regarding a team and its services) and repurchase intentions (to watch a specific football team again). They study professional soccer in Greece and find that the service quality dimensions included in the study were able to predict "a significant amount of variance (30%) of spectator willingness to recommend the team and its services to other people" (p. 173). This clearly indicates that (positive) WOM is important to demand.

More recently Yannis et al. (2014) have studied WOM in relation to behavioural and repurchase intentions in professional soccer in Greece finding that while consumers felt they were getting value for money when attending soccer matches, they were not necessarily engaged in WOM when recommending future matches. These findings are in opposition to Koenig-Lewis, Asaad and Palmer (2018) who use a structural equation modelling (SEM) design on survey data from British Premier League soccer. They find that customer-to-customer interaction was associated with satisfaction and positive WOM intention. This indicates that WOM can potentially increase demand for future games in accordance with WOM research in other areas than sport.

Wakefield and Bennett (2018) studied electronic forms of WOM associated with

US professional sports in order to understand how consumers on ephemeral social media determine for how long they set the time span of their social media content. They found that “fans who had a positive experience or were broadcasting to a large audience are likely to share their content for a longer period of time” (p. 156). This also indicates, that satisfaction with the service – here, a sport game – is associated with positive WOM.

What emerges from the above is that while the body of literature on WOM related to sport and sport events are developing, no research on national A-team games exists. This is further confirmed by a recent meta study conducted by Kim et al. (2019). While their study encompasses a broad range of sport attendance issues related to sporting events, it is clear that existing research on sport demand related questions usually examines the club level. This is a problem because no information on how to optimize future demand for national A-team games can be obtained from contemporary research (Harrison-Walker, 2001).

Since it is reasonable to assume that club matches and national team matches attract different spectators, and that factors driving satisfaction and inclination to recommend future games vary between these two types of matches, research on national team games is imperative. Further, evidence from other industries cannot necessarily be generalized so as to apply to sport, or soccer specifically – which is the focus in this paper – for that matter. By looking at national A-team soccer matches, we aim to fill this gap in the literature. In the following, we present our data and the methodology used to reveal the parameters driving WOM related to national A-team soccer matches.

## **Presentation of Data and Methodology**

We employ data at the spectator level collected by the *Danish Football Association* (DBU) which has conducted surveys of spectators who bought tickets online for the

Danish national (male) A-team's home matches since 2013. The surveys were conducted by email. Because DBU collected the data prior to our examination, our analysis is constrained by the structure of the data set.<sup>1</sup> Therefore, the inclusion of variables in our models (see below) is mainly dictated by the available data strings – and not – as would be the typical procedure – derived (directly) from contemporary literature. However, in the variables section (see below) we reflect on how the included data assist our endeavor and are backed by existing research.

For analysis, we have data on 1749 persons who have attended two or more national A-team matches, resulting in a total of 4,704 observations. The data are from 15 home matches which took place at the national stadium *Telia Parken* (see Table 1). Thus, we have very good panel data with a solid  $N$  on individual football supporters where each unit is measured at more than one point in time. This results in an unusual classic panel design with large number of units observed at two to fourteen different matches.<sup>2</sup> In our analysis, we present both fixed effects (FE) and random effects (RE) models.

---Table 1 about here ---

By employing panel data, we are able to analyse changes from game to game for each spectator, thus obtaining a better estimate of the effect of the explanatory variables. For our first model we employ fixed effects modelling as we have repeated observations per unit. This strategy enables us to control for time-invariant variables and – as pointed out

---

<sup>1</sup> DBU asked the authors to provide the examination following their (prior) data collection. This means that we haven not had any influence on how the surveys were formed.

<sup>2</sup> We note that two of the matches were non-competitive (friendlies) – played against Sweden in 2014 and France in 2015. However, we chose to include these in the analysis as the opponents are very important to Denmark. Sensitivity models excluding these two matches (not reported, but available upon request) yielded substantially similar results to our main analysis.

by Mehmetoglu and Jakobsen (2016) – to get rid of many of the problems associated with spurious relationships “as we get a purer relationship between  $x_{it}$  and  $y_{it}$  in our regression output” (p. 248). FE-models are also the best and most consistent models if we suspect that the error term is correlated with one or more of the explanatory variables. To check this, we performed a Hausman (1978) test which indicated that we should use fixed effects rather than random effects modelling.

One problem with FE-models is that we can only estimate variables which vary between matches since the match-invariant variables are omitted in the estimation procedure (Mehmetoglu & Jakobsen, 2017). As such, we do not include variables such as *Gender*, *Age category*, or *Region of the respondent*. We also focus on individual-level variables and exclude match-specific variables such as *Attendance* and *Result*. Both time-invariant and match-level variables have been previously explored by way of multilevel modelling using the same dataset although focussing on other variables (see: Storm, Jakobsen, & Schelde (2019)).

### ***Dependent variable***

As previously mentioned, we investigate variables associated with the spectator’s personal experience in and around the stadium, and their effect on the dependent variable *Recommend friends by WOM* (Kuenzel & Yassim, 2007). This variable is an 11 point Likert (1932) scale ranging from 0–10, where the value 0 indicates that the respondent is unlikely to recommend Denmark’s home matches to a friend or colleague, and the value 10 that the respondent is very likely to do so. As touched upon above, it is important to understand that our use of WOM as a proxy for satisfaction and positive (re)purchase intention is relatively simplistic. We do not conduct a detailed analysis of how WOM works in practice, i.e. whether the respondent’s inclination to recommend their experience to others in fact raises (future) demand. We have no data at hand to do so. However, the

measure and our approach is in accordance with Danaher and Rust (2018) and Biscaia et al. (2012) who argue that positive WOM is connected to positive (re)purchase intentions, and thus higher potential demand. In other words, if the respondents are satisfied with their stadium experience, we anticipate them to be more likely to communicate this to their friends – which is likely to raise over-all spectator demand for Danish national A-team matches.

### ***Independent variables***

The independent variables include a broad set of factors based on the available provided data. We chose to include those which potentially could affect the dependent variable. We structure these variables as on-stadium-factors and off-stadium-factors.

#### *On-stadium-factors*

‘On-stadium-factors’ refers to variables which measure the impact of experiences encountered by the respondent at the stadium on match day. The first variable is *Players proud* (1–5) where high values indicate that the respondent agrees that the Danish players exhibit pride over representing Denmark. As mentioned in the introduction, national pride can theoretically be associated with a kind of feel-good factor in sport and thus affect the consumer experience (Haut, Prohl, & Emrich, 2016; Storm & Jakobsen, 2019). Observing national team players expressing pride in wearing the national team shirt with the colours of the Danish flag could invoke satisfaction with the match experience and thus a tendency to recommend national A-team matches to others. We have no evidence at hand to support this assumption because no research has examined this aspect due to missing national A-team matches research – meaning that we include the variable with the aim of testing the assumption raised.

As pointed out by Borland and Macdonald (2003), and Kim et al. (2019), various additional factors can affect spectator demand such as *Atmosphere* (1–5) where the value 5 means that the spectator found the atmosphere of the match very good. Atmosphere is mainly related to liveliness at the stadium where large crowds and their cheering adds to the match experience (Solberg & Mehus, 2014). This is our second independent variable associated with factors experienced at the stadium. In accordance with Biscaia et al. (2012), we expect that when respondents are happy with the atmosphere experienced, they will then use WOM to recommend the national games to others.

It is known from several studies that the service encountered between customer and sales personnel can have an effect on customer pleasure (Söderlund & Rosengren, 2004) and that disappointment can result in negative WOM (Zeelenberg & Pieters, 2004). Further, the role of stadium employees (for example, security personnel, ticket issuers, ushers, and concession clerks) on satisfaction and re-purchase intentions – and thus potentially WOM – has received increased attention in the literature on sport spectator demand over the latest years (e.g. Bamford & Dehe, 2016; Byon, Zhang, & Baker, 2013; Theodorakis, Alexandris, Tsigilis, & Karvounis, 2013). We therefore include several variables which reflect the various aspects of service respondents experience on match day at the stadium in order to understand their effect on our dependent variable. *Stall service* (1–5) refers to satisfaction with the staff at the stadium food/supporter stalls. In accordance with Caruana (2002) Tsuji, Bennett, and Zhang, (2007), and Bouldin et al. (1993), we expect that service encounters such as good stall service will have a positive effect on the dependent variable. This is also the case in encounters with *Stewards* (1–5) where high values denote satisfaction with the stewards encountered during the game. As above, we expect this variable to be positively associated with the spectator's probability to recommend Denmark's home matches to friends or colleagues because a good

perception of the service in question is linked to consumer loyalty (Theodorakis & Alexandris, 2008).

Finally, good *Food and drinks* (1–5), decent *Toilets* (1–5), and good *Entertainment* (1–5), are all aspects which could potentially affect WOM positively (Borland & Macdonald, 2003), and where high scores on these variables indicate that the spectator was pleased with the respective service at the stadium.

#### *Off-Stadium-factors*

In addition to the On-stadium-factors, respondents are also exposed to factors that affect them prior to the match or on the way to the stadium. The first is *Buying online* (1–5) and refers to the experience of purchasing a ticket online. As this is done several days or weeks before match-day, we do not expect this to have any notable effect on the dependent variable. Concerning *Match-day information* (1–5), which registers how well the respondents receive the total information they acquired on relevant issues related to the match (how to get to the stadium, security and so forth), this could have a greater effect on the dependent variable since it adds to the total experience. *Parking* (1–5) is expected to affect the dependent variable more significantly. Other studies have found this factor to be important, for example Henao and Marshall (2013) and Kim and Trail (2010) since it can be stressful to locate a parking space before kick-off. At national games in Telia Parken, parking is not very easy because there are very few parking lots in the vicinity of the stadium. Finally, we add a variable, *Public transport* (0–1) to control for whether the respondents arrived at the match using public transport.

#### ***Specifications and regression approach***

Four fixed effect models are presented, one of which includes those variables with the most solid response rate, and three where we test the variables *Entertainment*, *Match-day*

*information*, and *Parking* respectively with the other variables. The reason for this is that these variables reduce the total  $N$  in the model. The first model is formally stated as:

$$[1] \quad y_{it} = \beta_{0W} + \beta_{1W}X_{1it} + \beta_{2W}X_{2it} + \beta_{3W}X_{3it} + \beta_{4W}X_{4it} \\ + \beta_{5W}X_{5it} + \beta_{6W}X_{6it} + \beta_{7W}X_{7it} + \beta_{8W}X_{8it} + \alpha_i + \varepsilon_{it},$$

Models 2, 3, and 4 can be denoted as:

$$[2] \quad y_{it} = \beta_{0W} + \beta_{1W}X_{1it} + \beta_{2W}X_{2it} + \beta_{3W}X_{3it} + \beta_{4W}X_{4it} \\ + \beta_{5W}X_{5it} + \beta_{6W}X_{6it} + \beta_{7W}X_{7it} + \beta_{8W}X_{8it} + \beta_{9W}X_{9it} + \alpha_i + \varepsilon_{it}$$

The FE models provide unique and very good data in terms of causal analysis of respondents who have repeated attendance at Denmark's home games. It is nevertheless reasonable to assume that repeat spectators overall are more satisfied with match experiences than those who have only attended one game. This becomes clear when we look at the descriptive statistics from the different subgroups for the dependent variable (see Table 2). In order to utilise information from all the sampled spectators we chose to run the same models also as random effects.

--- **Insert Table 2 about here** ---

For the purpose of this article, we test the same models with both the FE and RE estimators. The drawback of the RE estimates is that the issue of causality is more difficult to determine (For more on this, see Mehmetoglu and Jakobsen (2017)). However, on the positive side we are able to test the independent variables using a more representative sample of match-goers as this includes those who have attended only one match. The RE estimator is a weighted average of the FE and the between-effects (BE) estimators. Those



spectators (the majority) who have only attended one match contribute through the BE-estimator (Petersen, 2004). Model 5 can be formally stated as:

$$[3] \quad y_{it} = \beta_{0RE} + \beta_{1RE}X_{1it} + \beta_{2RE}X_{2it} + \beta_{3RE}X_{3it} + \beta_{4RE}X_{4it} \\ + \beta_{5RE}X_{5it} + \beta_{6RE}X_{6it} + \beta_{7RE}X_{7it} + \beta_{8RE}X_{8it} + v_i + e_{it},$$

and models 6, 7, and 8 are denoted as:

$$[4] \quad y_{it} = \beta_{0RE} + \beta_{1RE}X_{1it} + \beta_{2RE}X_{2it} + \beta_{3RE}X_{3it} + \beta_{4RE}X_{4it} \\ + \beta_{5RE}X_{5it} + \beta_{6RE}X_{6it} + \beta_{7RE}X_{7it} + \beta_{8RE}X_{8it} + \beta_{9RE}X_{9it} + v_i + e_{it}$$

## Results and discussion

From Table 3, Model 1, we see that the strongest predictors for *Recommendation friends* are *Players proud*, *Stewards*, and *Atmosphere* (in that order), which are all positive and significant at the one percent level. For repeated match-goers, the better the atmosphere and effort by the home team, the more likely spectators are to recommend matches to friends and colleagues.

In addition, the impression given by the stewards is of considerable importance for people's match-day experience. This is in accordance with our expectations. According to Harrison-Walker (2001), people are more likely to engage with many other people (negatively) through WOM (activity) if they have had a negative service-quality experience than when they are happy (WOM praise). As mentioned earlier, this means that it is of great importance to deliver a good service because it is easier to get negative recommendations than positive ones through WOM.

The other variables in Model 1 are not significant. Of these, *Public transport* and *Food and drinks* are closest to the .10% limit. The insignificant results, especially in

relation to *the first factor*, are inconsistent with our expectations because – as mentioned in the Data and Methodology section – it is likely that good *Food and drinks* would lead to positive WOM. Instead, it seems that these are not particularly important factors.

--- Insert Table 3 about here ---

Due to the low *N* associated with the variables *Entertainment*, *Match-day information*, and *Parking* (and especially when these are combined),<sup>3</sup> we ran separate models for each of these (Models 2 to 4). Both *Entertainment* and *Match-day information* were positive and significant at the 5%-level and are thus placed in a category of the second most important predictors of recommending game attendance after *Players proud*, *Atmosphere*, and *Stewards* – all results that are in accordance with expectations.

The variable *Parking* is positive but not significant, which is not that surprising given that this variable has some time-constant characteristics (even though parking facilities vary from venue to venue). The inclusion of parking and its positive (non-significant) effect contributes to *Public transport* becoming negative. That is, if spectators use public transport they are less likely to recommend going to matches to friends and neighbours. It must nevertheless be kept in mind that this model has a limited *N*.

The results from Table 4, which include both repeated match-goers and those who have only attended one game show the same signs as the models in Table 2 (except for *Public transport* which becomes positive and is not significant in Model 7 in Table 4). However, the effects are generally stronger due to the variation between individuals

---

<sup>3</sup> Some questions were not asked in all matches.

which adds to the within-effect. The standard errors are smaller where the increased  $N$  also plays an important part.

The sum of this means that more variables are statistically significant. The strongest effects are still found with the variables *Players proud*, *Atmosphere*, and *Stewards*, but now also *Food and drinks*, *Stall service*, and *Toilets* are positive and significant at the 1%-level.

The same is true for *Entertainment* and *Match-day information*, which are placed below the three strongest predictors but above *Food and drinks*, *Stall service*, and *Toilets*. *Public transport* is negative and significant at the 5% and 10%-levels except in Model 7. In the RE-model, *Parking* becomes significant at the 1%-level, but its effect is still the weakest in the model apart from *Public transport*.

--- **Insert Table 4 about here** ---

To sum up the results, the variables are grouped into four categories based on their significance and substantial effect on *Recommend friends*. It is relatively straight forward to interpret the substantial effect, both through standardized scores, but also since all the explanatory variables have the same number of response categories (1–5), *Public transport* excepted. As already mentioned, the variables *Players proud*, *Atmosphere*, and *Stewards* can be stated to be strong predictors of the inclination to spread the word about Denmark's home games.

The effects of these variables are between two and three times the strength of those that fall into our second category, *Medium predictors*. These include *Entertainment* and *Match-day information*. We place *Food and drinks*, *Toilets*, and *Buying online* as *low predictors*, while *Public transport* and *Parking* fall into the *weak predictors* category. An overview of the different categories is presented in Table 5.

--- Insert table 5 about here ---

## **Conclusion, Implications and Future Research**

### ***Summary***

This paper has aimed at providing an understanding of the determinants of positive WOM associated with attendance at national men's team football games. Positive WOM is important because consumers of service products rely on WOM to make purchase decisions (Harrison-Walker, 2001). By employing multivariate panel regression techniques in the analysis of a unique database consisting of surveys sent to spectators who attended the games, their probability of recommending the game experience to others through WOM has been studied. Several positive predictors of WOM are identified with the players showing pride, the atmosphere at the stadium, and the impression of the stewards encountered being the strongest.

Other, weaker predictors include the *Entertainment* enjoyed on match-day, the *Match-day information* and (low predictors) *Food and drinks*, *Toilets*, and the experience of *Buying the tickets online*. The weakest predictors are shown to be *Parking* and the experience of taking *Public transport*.

### ***Implications***

The results indicate that among strong predictors are variables which are within the reach of management. This is good news to DBU in the sense that controlling the support and demand of national team matches is relatively easy. For example, instructing the national team players to express pride in playing for the national team, attempting to create a good atmosphere at the stadium, and informing stewards to deliver a high level of service when

they encounter spectators is manageable compared to other factors known from other studies to affect satisfaction since such factors can be outside the direct control of management (for example, the weather and the game result (Nielsen, Storm, & Jakobsen, 2019)).

Improving medium- and low-impact predictors regarding *Entertainment*, *Match day information*, *Food and drinks*, *Toilets* and the experience of *Buying online* are also within management control. Regarding the weak predictors, *Parking* and *Public transport*, dialogue with the public authorities to improve the experience of these factors are long-term management issues and while optimizing all potential aspects that can affect WOM, they might not be areas to prioritize – at least in the short term.

In total, the implications for sport managers working on optimizing demand are that they should implement service programs involving players and stadium service staff who take these findings into consideration. More specifically, DBU needs to implement a program that helps players to express their pride. This can be done not only on the field but also in other settings, for example in the press or through social media platforms – for example on DBU or player profiles – where players post pre-game messages on how proud they are when playing for the national team.

Further, initiatives to create a lively atmosphere at the stadium are imperative. This can be done by instructing fans to cheer in certain situations and have people use instruments like drums to make the spectators feel they are part of a spectacular show. Of course, there is always a problem that inauthentic, imposed attempts to push any of the mentioned determinants of WOM in a positive direction may fail. However, experimenting with such initiatives are still critical to increase future demand.

Finally, all personnel providing a service to spectators at the stadium should be enrolled in a service program teaching them the importance of service towards the spectators and how they can help make the match a better experience. This would very probably improve satisfaction among spectators and lead to positive WOM affecting overall demand.

### ***Limitations and Future research***

This study contains some limitations that provide a basis for future research. First, it is important to understand that our sample is limited to online buyers of tickets to national team home games and even though it is a very good sample with a fruitful structure and many observations, it would have been relevant to perform our modelling on a broader set of respondents.<sup>4</sup> Future studies should thus aim to extend data collection to include a broader set of respondents in order to establish whether the results apply to all spectators or only those who purchased their ticket online.

Second, this paper does not distinguish between – for example – WOM *Praise* and WOM *Activity*, both of which are shown to be important when organizations want to become more strategic in the marketing process related to a certain product. As pointed out above, one dimension is to have spectators praising national league games to their peers or others; another is to have them doing it with a high frequency. Normally, people engage more actively (with a higher frequency, i.e. (negative) WOM Activity) when they

---

<sup>4</sup> In some sense this study expresses the usefulness of cooperating with industry partners on collecting data for research to the benefit of both. On the one hand the data provides a unique research opportunity for scientists to understand how specific areas of the sport management industry work. On the other hand, the industry can use a research partner to get deeper into their data than would have been possible without the corporation. In terms of limitations, future research partnerships should aim to work together on forming the data collection process as well to reach a broader set of spectators thereby strengthening the findings.

are dissatisfied with a given service (or product) than when they are satisfied. Managing such problems would benefit any kind of strategic marketing plan because bad publicity could be curbed, and positive WOM could be enhanced if the determinants of WOM, Praise and Activity, were better understood more so than has been possible in this study. Future studies should thus look more into determinants of each of these two elements of WOM so as to provide improved promotion issues related to purchase intentions and decisions.

Third, more research on national A-team games is needed. While there are studies on other issues – such as hooliganism and other types of fan behaviour, to the best of our knowledge virtually no studies on WOM in the context of national A-team matches exist and more is required to be done. National A-team games are a business for national soccer federations, and even though the highest amount of income today is generated through the sale of television rights (Storm & Solberg, 2018), income from match-day is still significant. Filling the spectator stands creates a lively atmosphere and could spark higher demand generated by WOM. In order to assist management in national soccer federations, studies like this should be carried out in other nations.

### **Disclosure Statement**

Authors Rasmus K. Storm and Tor Georg Jakobsen declare that they have no relevant or material financial interests related to the research described in this paper. Author Nikolaj Schelde does not have a direct material or financial interest related to the research presented but is employed by the Danish Football Association which has provided the data. The paper is one of several by the authors which examine different dimensions of an exhaustive data set where new national games are added as they are played.

## Funding

The research presented here has not received funding from any source.

## References

- Alexandris, K., Dimitriadis, N., & Kasiara, A. (2001). The behavioural consequences of perceived service quality: An exploratory study in the context of private fitness clubs in Greece. *European Sport Management Quarterly*, *1*(4), 280–299.  
<https://doi.org/10.1080/16184740108721903>
- Anderson, E. W. (1998). Customer Satisfaction and Word of Mouth. *Journal of Service Research*, *1*(August), 5–17.
- Asada, A., & Ko, Y. J. (2016). Determinants of word-of-mouth influence in sport viewership. *Journal of Sport Management*, *30*(2), 192–206.  
<https://doi.org/10.1123/jsm.2015-0332>
- Baker, D. A., & Crompton, J. L. (2000). Quality, Satisfaction and Behavioral Intentions. *Annals of Tourism Research*, *27*(3), 785–804.  
<https://doi.org/10.1103/PhysRevA.93.032136>
- Bamford, D., & Dehe, B. (2016). Service quality at the London 2012 games – a paralympics athletes survey. *International Journal of Quality and Reliability Management*, *33*(2), 142–159. <https://doi.org/10.1108/IJQRM-05-2014-0058>
- Bearden, W. O., & Etzel, M. J. (1982). Reference Group Influence on Product and Brand Purchase Decisions. *Journal of Consumer Research*, *9*(2), 183.  
<https://doi.org/10.1086/208911>
- Bigne, E., Andreu, L., Hernandez, B., & Ruiz, C. (2018). The impact of social media and offline influences on consumer behaviour. An analysis of the low-cost airline industry. *Current Issues in Tourism*, *21*(9), 1014–1032.  
<https://doi.org/10.1080/13683500.2015.1126236>



- Biscaia, R. (2016). Revisiting the Role of Football Spectators' Behavioral Intentions and its Antecedents. *The Open Sports Sciences Journal*, 9(1), 3–12.  
<https://doi.org/10.2174/1875399X01609010003>
- Biscaia, R., Correia, A., Rosado, A., Maroco, J., & Ross, S. (2012). The effects of emotions on football spectators' satisfaction and behavioural intentions. *European Sport Management Quarterly*, 12(3), 227–242.  
<https://doi.org/10.1080/16184742.2012.679949>
- Bone, P. F. (1995). Word-of-mouth effects on short-term and long-term product judgments. *Journal of Business Research*, 32(3), 213–223.  
[https://doi.org/10.1016/0148-2963\(94\)00047-I](https://doi.org/10.1016/0148-2963(94)00047-I)
- Borland, J., & Macdonald, R. (2003). Demand for Sport. *Oxford Review of Economic Policy*, 19(4), 478–502.  
<https://doi.org/http://oxrep.oxfordjournals.org/content/by/year>
- Boulding, W., Kalra, A., Richard S., & Zeithaml, V. A. (1993). A dynamic process model of service quality: From expectations to Behavioral Intentions. *Journal of Marketing Research*, 30(1), 7–27.
- Bush, V. D., Bush, A. J., Clark, P., & Bush, R. P. (2005). Girl power and word-of-mouth behavior in the flourishing sports market. *Journal of Consumer Marketing*, 22(5), 257–264. <https://doi.org/10.1108/07363760510611680>
- Byon, K. K., Zhang, J. J., & Baker, T. A. (2013). Impact of core and peripheral service quality on consumption behavior of professional team sport spectators as mediated by perceived value. *European Sport Management Quarterly*, 13(2), 232–263.  
<https://doi.org/10.1080/16184742.2013.767278>
- Calabuig Moreno, F., Prado-Gascó, V., Crespo Hervás, J., Núñez-Pomar, J., & Añó Sanz, V. (2015). Spectator emotions: Effects on quality, satisfaction, value, and

- future intentions. *Journal of Business Research*, 68(7), 1445–1449.  
<https://doi.org/10.1016/j.jbusres.2015.01.031>
- Caruana, A. (2002). Service loyalty: The effects of service quality and the mediating role of customer satisfaction. *European Journal of Marketing*, 36(7/8), 811–828.  
<https://doi.org/10.1108/03090560210430818>
- Charlett, D., Garland, R., & Marr, N. (1995). How damaging is negative word of mouth. *Marketing Bulletin*, 6, 42–50. Retrieved from  
<http://www.marketplanet.ru/filestore/0016/0031/593/199506r01.pdf>
- Chevalier, J. A., & Mayzlin, D. (2006). The effect of word of mouth on sales: Online book reviews. *Journal of Marketing Research*, 43(3), 345–354.  
<https://doi.org/10.1509/jmkr.43.3.345>
- Clemes, M. D., Brush, G. J., & Collins, M. J. (2011). Analysing the professional sport experience: A hierarchical approach. *Sport Management Review*, 14(4), 370–388.  
<https://doi.org/10.1016/j.smr.2010.12.004>
- Danaher, P. J., & Rust, R. T. (2018). Indirect Financial Benefits from Service Quality. *Quality Management Journal*, 3(2), 63–75.
- De Ruyter, K., & Wetzels, M. (2000). With a little help from my fans - Extending models of pro-social behaviour to explain supporters' intentions to buy soccer club shares. *Journal of Economic Psychology*, 21(4), 387–409.  
[https://doi.org/10.1016/S0167-4870\(00\)00010-6](https://doi.org/10.1016/S0167-4870(00)00010-6)
- Dietz-Uhler, B., & Murrell, A. (1999). Examining Fan Reactions to Game Outcomes: A Longitudinal Study of Social Identity. *Journal of Sport Behavior*, 22(1), 15.
- Fisher, R. J., & Wakefield, K. (1998). Factors leading to group identification: A field study of winners and losers. *Psychology and Marketing*, 15(1), 23–40.  
[https://doi.org/10.1002/\(SICI\)1520-6793\(199801\)15:1<23::AID-MAR3>3.0.CO;2-](https://doi.org/10.1002/(SICI)1520-6793(199801)15:1<23::AID-MAR3>3.0.CO;2-)

## P

- Gallagher, D., O'Connor, C., & Gilmore, A. (2016). An exploratory examination of the strategic direction of the Gaelic Athletic Association via the application of sports marketing segmentation bases. *Marketing Intelligence and Planning*, 34(2), 203–222. <https://doi.org/10.1108/MIP-09-2014-0188>
- Gremler, D. D. (1994). Word-of-Mouth about Service Providers: An Illustration of Theory Development in Marketing. In W. Park & D. C. Smith (Eds.), *Marketing Theory and Applications* (pp. 62–70). Chicago: American Marketing Association.
- Harrison-Walker, L. J. (2001). The Measurement of Word-of-Mouth Communication and an Investigation of Service Quality and Customer Commitment As Potential Antecedents. *Journal of Service Research*, 4(1), 60–75. <https://doi.org/10.1177/109467050141006>
- Hausman, J. A. (1978). Specification Tests in Econometrics. *Econometrica*, 46(6), 1251–1271. <https://doi.org/10.2307/1913827>
- Haut, J., Prohl, R., & Emrich, E. (2016). Nothing but medals? Attitudes towards the importance of Olympic success. *International Review for the Sociology of Sport*, 51(3), 332–348. <https://doi.org/10.1177/1012690214526400>
- Henao, A., & Marshall, W. (2013). Parking at sporting event stadiums in Denver, Colorado. *Transportation Research Record*, (2359), 17–26. <https://doi.org/10.3141/2359-03>
- Herr, P. M., Kardes, F. R., & Kim, J. (1991). Effects of Word-of-Mouth and Product-Attribute Information on Persuasion: An Accessibility-Diagnosticity Perspective. *Journal of Consumer Research*, 17(4), 454. <https://doi.org/10.1086/208570>
- Huete-Alcocer, N. (2017). A literature review of word of mouth and electronic word of mouth: Implications for consumer behavior. *Frontiers in Physiology*, 8(JUL), 1–4.

- <https://doi.org/10.3389/fpsyg.2017.01256>
- Kim, Y. K., & Trail, G. (2010). Constraints and Motivators: A New Model to Explain Sport Consumer Behavior. *Journal of Sport Management*, 24(2), 190–210.  
<https://doi.org/10.1123/jsm.24.2.190>
- Kim, Y., Magnusen, M., Kim, M., & Lee, H.-W. (2019). Meta-Analytic Review of Sport Consumption: Factors Affecting Attendance to Sporting Events. *Sport Marketing Quarterly*, 28(3), 117–134. <https://doi.org/10.32731/smq.283.092019.01>
- Koenig-Lewis, N., Asaad, Y., & Palmer, A. (2018). Sports events and interaction among spectators: examining antecedents of spectators' value creation. *European Sport Management Quarterly*, 18(2), 193–215.  
<https://doi.org/10.1080/16184742.2017.1361459>
- Kuenzel, S., & Yassim, M. (2007). The effect of joy on the behaviour of cricket spectators: The mediating role of satisfaction. *Managing Leisure*, 12(1), 43–57.  
<https://doi.org/10.1080/13606710601056497>
- Likert, R. (1932). A Technique for the Measurement of Attitudes. *Archives of Psychology*, 22, 5–55.
- Liu, Y. (2006). Word of mouth for movies: Its dynamics and impact on box office revenue. *Journal of Marketing*, 70(3), 74–89. <https://doi.org/10.1509/jmkg.70.3.74>
- Lutz, R. J., & Reilly, P. J. (1974). An Exploration of the Effects of Perceived Social and Performance Risk on Consumer Information Acquisition. *NA - Advances in Consumer Research*, 01, 393–405. Retrieved from <http://acrwebsite.org/volumes/5672/volumes/v01/NA-01>
- Mehmetoglu, M., & Jakobsen, T. G. (2017). *Applied Statistics Using Stata: A Guide for the Social Sciences*. Los Angeles: Sage Publications.
- Murray, K. B. (1991). A Test of Services Marketing Theory: Consumer Information

- Acquisition Activities. *Journal of Marketing*, 55(1), 10.  
<https://doi.org/10.2307/1252200>
- Nielsen, C. G., Storm, R. K., & Jakobsen, T. G. (2019). The impact of English Premier League broadcasts on Danish spectator demand: a small league perspective. *Journal of Business Economics*, 89(6), 633–653. <https://doi.org/10.1007/s11573-019-00932-7>
- Petersen, T. (2004). Analyzing Panel Data: Fixed- and Random-Effects Models. In M. A. Hardy & A. Bryman (Eds.), *Handbook of Data Analysis* (pp. 332–346). London: Sage Publications.
- Price, L. L., & Lawrence, F. F. (1984). No The Role of Interpersonal Sources in External Search: an Informational Perspective. *NA - Advances in Consumer Research*, 11, 250–255.
- Reichheld, F., & Sasser, W. E. (1990). Zero Defections: Quality Comes to Services. *Harvard Business Review*, 68(5), 105–111.
- Richins, M. L. (1983). Negative Word-of-Mouth by Dissatisfied Consumers: A Pilot Study. *Journal of Marketing*, 47(1), 68. <https://doi.org/10.2307/3203428>
- Söderlund, M., & Rosengren, S. (2004). Dismantling “Positive Affect” and its effects on Customer Satisfaction: an Empirical examination of Custumor Joy in a Service Encounter. *Journal of Consumer Satisfaction, Dissatisfactions and Complaining Behavior*, 17, 27–41.
- Solberg, H. A., & Mehus, I. (2014). The Challenge of Attracting Football Fans to Stadia? *International Journal of Sport Finance*, 9, 3–19.
- Storm, R. K., & Jakobsen, T. G. (2019). National pride, sporting success and event hosting: an analysis of intangible effects related to major athletic tournaments. *International Journal of Sport Policy and Politics*, 00(00), 1–16.

<https://doi.org/10.1080/19406940.2019.1646303>

Storm, R. K., Jakobsen, T. G., & Schelde, N. (2019). Spectator Interest in Attending Future Live Danish National Team Soccer Games: A Multilevel Analysis. *Working Paper*. Retrieved from [https://www.researchgate.net/publication/335061512\\_Spectator\\_Interest\\_in\\_Attending\\_Future\\_Live\\_Danish\\_National\\_Team\\_Soccer\\_Games\\_A\\_Multilevel\\_Analysis\\_Working\\_Paper](https://www.researchgate.net/publication/335061512_Spectator_Interest_in_Attending_Future_Live_Danish_National_Team_Soccer_Games_A_Multilevel_Analysis_Working_Paper)

Storm, R. K., & Solberg, H. A. (2018). European Club Capitalism and FIFA Redistribution Models: An Analysis of Development Patterns in Globalised Football. *Sport in Society, Accepted*, 1–16. <https://doi.org/10.1080/17430437.2018.1424136>

Swanson, S., Gwinner, K., Larson, B., & Janda, S. (2003). Motivations of college student game attendance and word-of-mouth behavior: the impact of gender differences. *Sport Marketing Quarterly*, 12(3), 151–162.

Theodorakis, N. D., & Alexandris, K. (2008). Can service quality predict spectators' behavioral intentions in professional soccer? *Managing Leisure*, 13(3–4), 162–178. <https://doi.org/10.1080/13606710802200852>

Theodorakis, N. D., Alexandris, K., & Ko, Y. J. (2011). A service quality framework in the context of professional football in Greece. *International Journal of Sports Marketing and Sponsorship*, 12(4), 57–71. <https://doi.org/10.1108/IJSMS-12-04-2011-B005>

Theodorakis, N. D., Alexandris, K., Tsigilis, N., & Karvounis, S. (2013). Predicting spectators' behavioural intentions in professional football: The role of satisfaction and service quality. *Sport Management Review*, 16(1), 85–96. <https://doi.org/10.1016/j.smr.2012.05.004>

- Tomas, S. R., Scott, D., & Crompton, J. L. (2002). An investigation of the relationships between quality of service performance, benefits sought, satisfaction and future intention to visit among visitors to a zoo. *Managing Leisure, 7*(4), 239–250.  
<https://doi.org/10.1080/136067102100005589>
- Trosov, M., Bucklin, R. E., & Pauwels, K. (2009). Effects of Word-of-Mouth Versus Traditional Marketing: Findings from an Internet Social Networking Site. *Journal of Marketing, 73*, 90–102. <https://doi.org/https://doi.org/10.1509/jmkg.73.5.90>
- Tsiotsou, R., & Alexandris, K. (2009). Delineating the outcomes of sponsorship: Sponsor image, word of mouth, and purchase intentions. *International Journal of Retail and Distribution Management, 37*(4), 358–369.  
<https://doi.org/10.1108/09590550910948583>
- Tsuji, Y., Bennett, G., & Zhang, J. (2007). Consumer Satisfaction with an Action Sports Event. *Sport Marketing Quarterly, 16*(4), 199.
- Voyer, P. A., & Ranaweera, C. (2015). The impact of word of mouth on service purchase decisions: Examining risk and the interaction of tie strength and involvement. *Journal of Service Theory and Practice, 25*(5), 636–656.  
<https://doi.org/10.1108/JSTP-04-2014-0070>
- Wakefield, L. T., & Bennett, G. (2018). Sports fan experience: Electronic word-of-mouth in ephemeral social media. *Sport Management Review, 21*(2), 147–159.  
<https://doi.org/10.1016/j.smr.2017.06.003>
- Yang, J., Kim, W., Amblee, A., & Jeong, J. (2012). The heterogeneous effect of WOM on product sales: Why the effect of WOM valence is mixed? *European Journal of Marketing, 46*(11), 1523–1538. <https://doi.org/10.1108/03090561211259961>
- Yannis, T., Dimitris, G., Athanasios, P., George, T., & Athanasios, S. (2014). Investigating the effects of value on word of mouth and repurchase intentions in

- the sport spectators' context in soccer. *Journal of Physical Education and Sport*, 14(4), 581–586. <https://doi.org/10.7752/jpes.2014.04090>
- Yi, Y. (1991). A Critical Review of Consumer Satisfaction. In V. A. Zeithaml (Ed.), *Review of Marketing* (pp. 68–123). Chicago, IL: American Marketing Association.
- Yoshida, M., Gordon, B., Nakazawa, M., & Biscaia, R. (2014). Conceptualization and measurement of fan engagement: Empirical evidence from a professional sport context. *Journal of Sport Management*, 28(4), 399–417. <https://doi.org/10.1123/jsm.2013-0199>
- Yoshida, M., & James, J. D. (2010). Customer satisfaction with game and service experiences: Antecedents and consequences. *Journal of Sport Management*, 24(3), 338–361. <https://doi.org/10.1123/jsm.24.3.338>
- Zeelenberg, M., & Pieters, R. (2004). Beyond valence in customer dissatisfaction: A review and new findings on behavioral responses to regret and disappointment in failed services. *Journal of Business Research*, 57(4), 445–455. [https://doi.org/10.1016/S0148-2963\(02\)00278-3](https://doi.org/10.1016/S0148-2963(02)00278-3)
- Zeithaml, V. A. (1981). How consumer evaluation processes differ between goods and services. *Marketing of Services*, 9(1), 186–190. Retrieved from <http://scholar.google.com/scholar?hl=en&btnG=Search&q=intitle:How+consumer+evaluation+processes+differ+between+goods+and+services#0>



**Table 1. List of international matches**

Opponent	Year	Date	Result	Spectators
<b>Armenia</b>	2013	June 11	0–4	14,284
<b>Italy</b>	2013	October 11	2–2	35,305
<b>Malta</b>	2013	October 15	6–0	11,479
<b>Sweden</b>	2014	May 28	1–0	27,872
<b>Armenia</b>	2014	September 7	2–1	20,141
<b>Portugal</b>	2014	October 14	0–1	36,562
<b>Serbia</b>	2015	June 13	2–0	30,887
<b>Albania</b>	2015	September 4	0–0	35,648
<b>France</b>	2015	October 11	1–2	18,145
<b>Sweden</b>	2015	November 17	2–2	36,051
<b>Armenia</b>	2016	September 4	1–0	21,795
<b>Montenegro</b>	2016	October 11	0–1	20,852
<b>Kazakhstan</b>	2016	November 11	4–1	18,901
<b>Poland</b>	2017	September 1	4–0	34,570
<b>Romania</b>	2017	October 8	1–1	36,084

**Table 2. Descriptive statistics for different subgroups on *Recommend friends* (0–10)**

<b>Group</b>	<b>Observations</b>	<b>Mean</b>	<b>Std. dev.</b>	<b>Skewness</b>	<b>Kurtosis</b>
<b>1 game</b>	9771	7.211	2.534	-0.921	3.336
<b>&gt; 1 game</b>	4704	7.660	2.400	-1.115	3.882
<b>Full sample</b>	14,475	7.357	2.500	-0.980	3.468

*Note: A normal distribution has a skewness value of 0 and a kurtosis value of 3.*

**Table 3. Fixed-effect models of *recommend friends* (0–10)**

<i>Variables</i>	(1)	(2)	(3)	(4)
<b>Intercept</b>	2.190*** (0.408)	2.118*** (0.511)	1.664*** (0.560)	1.774*** (0.638)
<b>Players proud</b>	0.594*** (0.051)	0.654*** (0.064)	0.607*** (0.070)	0.676*** (0.082)
<b>Stewards</b>	0.351*** (0.049)	0.254*** (0.067)	0.370*** (0.067)	0.393*** (0.082)
<b>Atmosphere</b>	0.360*** (0.049)	0.340*** (0.059)	0.404*** (0.068)	0.343*** (0.0677)
<b>Public transport</b>	-0.154 (0.094)	-0.092 (0.118)	-0.010 (0.137)	-0.340** (0.147)
<b>Food and drinks</b>	0.080 (0.053)	0.072 (0.070)	0.012 (0.075)	0.072 (0.081)
<b>Stall service</b>	0.017 (0.041)	-0.021 (0.053)	-0.052 (0.063)	-0.001 (0.065)
<b>Toilets</b>	0.008 (0.051)	-0.077 (0.062)	0.022 (0.071)	-0.024 (0.074)
<b>Buying online</b>	0.003 (0.050)	0.054 (0.065)	-0.042 (0.073)	0.024 (0.080)
<b>Entertainment</b>	---	0.164** (0.064)	---	---
<b>Match-day information</b>	---	---	0.158** (0.073)	---
<b>Parking</b>	---	---	---	0.030 (0.058)
<b>R-squared (within)</b>	0.151	0.174	0.176	0.176
<b>N</b>	4704	2988	2536	2110
<b>Groups</b>	1749	1126	1000	826

*Note: Coefficients with standard errors in parentheses. \*significant at 10%, \*\*significant at 5%, and \*\*\*significant at 1%. The units are clustered using Huber-White robust standard errors (Huber, 1967; White, 1980). High values on the independent variables refers to a large degree of satisfaction with the different services in and around the stadium, as well as the home players' match effort.*

**Table 4. Random effect models of *recommend friends* (0–10)**

<i>Variables</i>	(5)	(6)	(7)	(8)
<b>Intercept</b>	-1.351*** (0.154)	-1.364*** (0.179)	-1.870*** (0.212)	-1.750*** (0.207)
<b>Players proud</b>	0.682*** (0.024)	0.686*** (0.028)	0.628*** (0.032)	0.674*** (0.033)
<b>Stewards</b>	0.391*** (0.025)	0.311*** (0.032)	0.386*** (0.031)	0.410*** (0.033)
<b>Atmosphere</b>	0.577*** (0.025)	0.527*** (0.029)	0.564*** (0.035)	0.602*** (0.034)
<b>Public transport</b>	-0.086** (0.038)	-0.081* (0.044)	0.005 (0.051)	-0.102* (0.057)
<b>Food and drinks</b>	0.161*** (0.023)	0.121*** (0.027)	0.143*** (0.030)	0.124*** (0.030)
<b>Stall service</b>	0.086*** (0.020)	0.091*** (0.024)	0.072** (0.028)	0.084*** (0.028)
<b>Toilets</b>	0.134*** (0.022)	0.094*** (0.025)	0.135*** (0.030)	0.137*** (0.029)
<b>Buying online</b>	0.197*** (0.023)	0.207*** (0.028)	0.152*** (0.034)	0.236*** (0.033)
<b>Entertainment</b>	---	0.249*** (0.027)	---	---
<b>Match-day information</b>	---	---	0.247*** (0.036)	---
<b>Parking</b>	---	---	---	0.084*** (0.021)
<b>R-squared (overall)</b>	0.279	0.300	0.269	0.289
<b>N</b>	14,475	10,431	8131	7957
<b>Groups</b>	11,520	8569	6595	6673

*Note: Coefficients with standard errors in parentheses. \*significant at 10%, \*\*significant at 5%, and \*\*\*significant at 1%. The units are clustered using Huber-White robust standard errors (Huber, 1967; White, 1980). High values on the independent variables refers to a large degree of satisfaction with the different services in and around the stadium, as well as the home players' match effort.*

**Table 5. Predictor categories according to their effect on *Recommend friends***

	Variables	FE	RE
<b><i>Strong predictors</i></b>	Players proud, Atmosphere, Stewards	***	***
<b><i>Medium predictors</i></b>	Entertainment, Match-day information	**	***
<b><i>Low predictors</i></b>	Food and drinks, Toilets, Buying online	--	***
<b><i>Weak predictors</i></b>	Public transport, Parking	--	mixed