THE UNIVERSITY OF TENNESSEE KNOXVILLE

Journal of Applied Sport Management

Volume 15 | Issue 2 Article 4

7-1-2023

Revisiting the Impact of Divisional Affiliation on Secondary Market Ticket Prices in the National Football League

Yohan Lee
Defiance College, ylee@defiance.edu

Moonsup Hyun
Utica University, mohyun@utica.edu

Stephen Shapiro
University of South Carolina, SHAPIRSL@mailbox.sc.edu

Alan Morse
University of Northern Colorado, alan.morse@unco.edu

Journal of Applied Sport Management
https://doi.org/10.7290/jasm-2023-V15-I2-0266
Vol. 15, No. 2
https://trace.tennessee.edu/jasm/vol15/iss2/4

Revisiting the impact of Divisional Affiliation on Secondary Market Ticket Prices in the National Football League

Yohan Lee
Defiance College
Moonsup Hyun
Utica University
Stephen L. Shapiro
University of South Carolina
Alan L. Morse
University of Northern Colorado

Abstract

With the emergence of demand-based ticket pricing, professional sport organizations and marketers will benefit from a thorough understanding of pricing in the demand-driven secondary market. Ticket pricing studies often take divisional affiliation as a control variable; little research has focused on and examined the importance of divisional affiliation for secondary market ticket prices. Different from work indicating consumers' preference for divisional games, this study revealed that higher ticket prices (i.e., consumer demand) accompanied non-divisional games. Additionally, the number of years between the away team's visit to the home team's stadium and the away team's current winning percentage each played a significant role (explained by roughly 49% of the variance) in higher ticket prices for non-divisional games in the National Football League.

Keywords: *secondary market ticket price, dynamic pricing, consumer demand, divisional affiliation, National Football League*

Please send correspondence to: Yohan Lee, ylee@defiance.edu

Introduction

Over the past two decades, demand-based pricing (e.g., variable ticket pricing and dynamic ticket pricing) has emerged as a primary strategy given that consumers value individual game differently. This trend was accelerated by the secondary ticket market, which is driven by demand-based pricing (Shapiro & Drayer, 2012). According to Drayer and Martin (2010), the secondary ticket market has gradually ballooned into a multibillion-dollar industry by acquiring legitimacy through official sponsorship with sport organizations. For example, StubHub has been valued at approximately $4 billion (Sisario, 2019). The secondary ticket market's dramatic expansion has compelled researchers and marketers to investigate price determinants based on factors influencing consumer demand in diverse sport industries. Scholars have examined team performance, individual performance, star players, the day of a game, and weather conditions in professional and collegiate sports across multiple countries (e.g., Drayer et al., 2012; Kemper & Breuer, 2015; Shapiro & Drayer, 2014; Shapiro et al., 2021).

Among common price determinants, divisional affiliation has consistently been identified as a significant factor in both consumer demand and secondary market ticket pricing. The importance of a game against an opponent in the same division (i.e., a divisional game or an intradivisional game) has been stressed along with rivalry and post-season games (e.g., Shapiro & Drayer, 2014; Welki & Zlatoper, 1999). Divisional games have also been heavily commercialized, as divisional rivalries increase ticket demand. In the NFL context, Shapiro and Drayer (2014) observed significantly higher ticket prices for divisional games, which constitute roughly 35% (i.e., 6 out of 17 games) of the regular season. Additionally, the importance of divisional affiliation in relation to scheduling was emphasized with recent changes to MLB scheduling policies. Starting in 2023, MLB announced fewer divisional games to let fans have diverse experiences with different teams and star players. Yet little is known about the relationship between ticket pricing and divisional affiliation despite fans potentially preferring a game against an opponent in a different division (i.e., a non-divisional game or interdivisional game; Tainsky, 2010). Moreover, Lee et al. (2023) uncovered the importance of non-divisional games with MLB games. This area warrants further investigation.

The purpose of this study is to consider the role of divisional affiliation (apart from as a control variable) in possibly helping sport organizations and marketers to maximize demand and revenue. As secondary market ticket prices represent consumer demand and resellers' perceived value (i.e., among primary market consumers), marketers can better understand NFL fans' preferences. This insight will contribute to marketing strategy development given the importance of scheduling. Specifically, marketers will be prepared to determine the games on which to focus and invest to maximize advertising exposure. The NFL can also consider schedule changes like those in the MLB.

Literature Review

The relationship between divisional affiliation and attendance gained attention from 1990s (e.g., Welki & Zlatoper, 1999). The authors identified a significant positive impact of divisional games on attendance and ticket prices. Shapiro and Drayer (2014) examined and observed higher ticket prices for divisional

games versus non-divisional games. Professional organizations could thus expect to see higher demand for divisional games. According to Welki and Zlaptoper (1999), sport fans seem to largely prefer games against intradivisional opponents for several reasons. First and most importantly, stronger demand is expected for games whose teams have a rivalry and an established history (Lemke et al., 2010). Divisional rivalry games heighten consumer demand due to being heavily promoted by sponsors and specialized broadcasts. Such games therefore garner closer attention from outgroups (e.g., general sport fans, the public, and sport media outlets; Tyler & Cobbs, 2017). Madrigal and Chen (2008) suggested fans exhibit greater emotional involvement in rivalry games because the result (i.e., a win or loss) can generate positive/negative feedback from outgroups.

Geographic and civic pride are also involved in division-based rivalries (Welki & Zlatoper, 1999). In the NFL, most teams within a division are proximally located. Unusual demand arises when teams in different divisions are also near one another, such as the New York Giants and the New York Jets or the Atlanta Falcons and the Tennessee Titans. Intradivisional games also draw more fans to the stadium due to the NFL's playoff structure (McDonald & Rascher, 2000). Teams in the same division compete against each other to enter the post-season. As such, NFL fans are generally willing to attend intradivisional games because these matchups are more important than non-divisional games.

The positive impacts of divisional games on consumer demand are well documented. However, a better understanding of the relationship between divisional affiliation and secondary market ticket prices based on the level of consumer demand is needed. As Lee et al. (2023) and Tainsky (2010) suggested, marketers should not always expect to witness higher demand for divisional games. The uncertain interim between two teams meeting (i.e., due to scheduling) could increase the perceived value of non-divisional games. Different from divisional games, teams in separate divisions do not compete annually in some sport leagues. Home team fans thus may need to wait several years to attend a game against a specific team in a different division. Therefore, non-divisional games can be attractive to a high number of fans. Limited opportunity to attend games against opponents who do not visit regularly could enhance perceived value.

Scarcity theory supports Tainsky's (2010) conjecture. Prior works (e.g., Lynn, 1991) has shown scarcity affects a product's value and price. A commodity's value exceeds its normal range under conditions of high scarcity. Most sport league schedules are based on divisional affiliation. Assessing secondary market ticket prices on the basis of divisional affiliation and related variables can improve understanding of consumer demand in the sport ticket market. The results of this study will provide more essential information to assist practitioners in broadening their marketing strategy options, such as by implementing different promotions and schedules for prime-time games (e.g., Monday Night Football and Thursday Night Football). Moreover, marketers could improve strategies to maximize the exposure of promotion and advertisements to more sporting events participants. Based on the conjecture of Tainsky (2010), the current study examines two hypotheses:

> Hypothesis 1: Secondary market sellers list higher ticket prices for non-divisional games compared to divisional games.

Hypothesis 2: The longer the intervals between meetings of two teams in different divisions, the higher the listed price in the secondary ticket market.

Methods

Sample and Data Collection

Eight NFL teams were randomly selected per each division in this study to evaluate the hypotheses during the 2019–2020 season. Although not all 32 teams were selected, one team was selected per division to enhance the generalizability of our findings. Compared with earlier pricing literature (e.g., Kemper & Breuer, 2015; Shapiro & Drayer, 2012; Shapiro et al., 2021), observations in this study contained relatively more teams, price points, and dates. Seat sections were then identified from each stadium's seating chart. Shapiro and Drayer (2012) indicated ticket prices for high-tier seats fluctuate frequently as a function of consumer demand and revenue management (i.e., high costs associated with unsold tickets). All chosen seats were in first-section rows (i.e., premium seats) behind the home team's bench. After finalizing teams and seats, StubHub was selected as the ticket price data source. This site is one of the largest secondary market platforms (Drayer et al., 2011). Ticket prices for each game were obtained from four days prior to a game day to an actual game day. In total, 33,195 observations were collected across 40 games.

Variables

Listed ticket prices in the secondary market reflected the major variable of interest: *ln(TP)*. To investigate Hypothesis 1, divisional affiliation for each game was collected. Especially, to fully examine Hypothesis 2, previous findings regarding price determinants needed to be considered. Therefore, 13 control variables from six common categories of price determinants were considered in accordance with Shapiro and Drayer (2014): number of tickets available (*TA*), distance between home and away team (*DIS*), home team winning percentage (*HWP*), away team winning percentage (*AWP*), number of away team pro-bowl players (*ASTAR*), forecasted precipitation (*WP*), game week (*GW*), day of week (*WK; 0 = weekday, 1 = weekend*), conference affiliation (*CONF; 0 = same conference, 1 = difference conference*), and days prior to a game day (*FR: 4 days prior to a game day; TH: 3 days prior to a game day; TW: 2 days prior to a game day; ON: 1 day prior to a game day; GD: game day; 0 = no, 1 = yes*). We began collecting ticket prices from four days prior to a game day because most transactions occur during the last few days before an event (e.g., Burke, 2016; Huang & Huang, 2020).

Data Analysis

After organizing all observations, ticket prices were log transformed with natural log due to the skewness in its distribution. As a preliminary analysis, an independent sample *t*-test was performed in SPSS (N = 33,195) to examine price differences between divisional and non-divisional games after log-linearizing ticket prices (Hypothesis 1). Next, a multiple linear regression model was constructed to determine the impact of uncertain interim between two teams meeting for a non-divisional game (Hypothesis 2). Specifically, 20,151 non-divisional game samples were selected from the entire sample, which were analyzed through our regression model. Last, we investigated secondary market ticket price to the inclusion of home team fixed effect to account for unobserved heterogeneity across teams.

Results

For Hypothesis 1, a significant difference was observed in ticket prices for divisional and non-divisional games [$t(33, 193) = -40.3$, $p < .01$]. The results show higher average ticket prices (i.e., greater fan interest and demand) for non-divisional games. Specifically, in a departure from prior results concerning the relationship between consumer demand and divisional affiliation, the average ticket price for non-divisional games ($M = 5.69$, $SD = .44$) was significantly higher ($p < .01$) than that for divisional games ($M = 5.48$, $SD = .51$).

With the acceptance of Hypothesis 1, we proceed further analysis to Hypothesis 2. Table 1 displays descriptive statistics about the dependent variable, an independent variable, and selected control variables of regression model for non-divisional game. First, for an independent variable, the average *GAP* was approximately 6 years ($SD = 2.09$). Home team fans might thus need to wait more than 5 years to attend a game against a specific team in a different division. The average number of *TA* ($M = 202.73$, $SD = 95.06$) was fairly low with respect to NFL stadium capacity. The average *HWP* and *AWP* were above 50%; however, the average *HWP* ($M = 66.6\%$, $SD = 29.22$) was relatively higher than average *AWP* ($M = 57.24\%$, $SD = 19.08$). Additionally, the average *DIS* ($M = 1{,}502.0$, $SD = 835.18$) was considerably long. As indicated, most teams in different divisions reside in various regions of the United States. Lastly, most non-divisional games in our dataset occurred on the weekend and against an opponent in the same conference.

Table 1

Variables and Descriptive Statistics

	N	*M*	*SD*	*MIN*	*MAX*
ln(TP): Ticket price in the secondary market	20,151	5.69	.51	4.13	7.28
GAP: Number of years between the away team's visit	20,151	5.55	2.09	1	8
TA: Number of tickets available	20,151	202.73	95.06	23	469
DIS: Distance between home and away team	20,151	1502.03	835.18	206.80	2841.30
HWP: Home team's current winning percentage	20,151	66.60	29.22	14	100
AWP: Away team's current winning percentage	20,151	57.24	19.08	13	100
ASTAR: Number of away team pro-bowl players	20,151	3.43	2.01	0	8
WP: Forecast precipitation	20,151	25.51	33.14	0	100
GW: Game week	20,151	9.13	3.18	5	15
WK: Day of week (0 = weekday, 1 = weekend)	20,151	.96	.21	0	1
CONF: Conference affiliation (0 = same conference, 1 = different conference)	20,151	.28	.45	0	1
FR: 4 days prior to a game day (0 = no, 1 = yes)	20,151	.26	.44	0	1
TH: 3 days prior to a game day (0 = no, 1 = yes)	20,151	.25	.43	0	1
TW: 2 days prior to a game day (0 = no, 1 = yes)	20,151	.21	.41	0	1
ON: 1 day prior to a game day (0 = no, 1 = yes)	20,151	.17	.38	0	1
GD: Game day (0 = no, 1 = yes)	20,151	.11	.31	0	1

Table 2 indicates significant results for the multiple linear regression model [$F(21, 20{,}129) = 927.62$, $p < .01$]. The model explained 49% of the variance in logarithm of ticket prices in the secondary market. Eleven of the 13 control variables significantly influenced log(ticket price), including the independent variable: *GAP*. To understand the impact of each variable on ticket prices, we exponentiated the coefficients of the regression results. Specifically, one-unit changes in the number of year(s) increased listed prices by approximately 8% (i.e., B = .08; $e^{.08} = 1.08$). In light of the importance of this interim on ticket prices for non-divisional games, an *AWP* plays a significant role shaping prices for secondary market sellers: when *AWP* increased by one-unit, secondary market ticket prices rose by 1% (i.e., B = .01; $e^{.01} = 1.01$). Regarding team performance variables, the *HWP* demonstrated a surprising effect. Different from earlier efforts (e.g., Drayer & Shapiro, 2009; Shapiro et al., 2021), the *HWP* had no significant impact on non-divisional game ticket prices.

Table 2

Linear Regression Results (Dependent Variable = ln(TP)

Independent variable	*B*	*β*	*SE*	*t-statistic*
Constant	4.28**		.07	63.31
GAP	.08**	.34**	.00	28.63
TA	.00	-.02	.00	-1.90
DIS	.00**	.17**	.00	14.01
GW	-.02**	-.11**	.00	-8.27
WK	.36**	.14**	.02	16.91
WP	-.00**	-.16**	.00	-18.01
HWP	-.00	-.05	.00	-1.50
AWP	.01**	.41**	.00	41.23
ASTAR	.01**	.03**	.00	3.26
CONF	-.20**	-.17**	.01	-13.98
TH	-.04**	-.04**	.01	-5.76
TW	-.10**	-.08**	.01	-12.27
ON	-.15**	-.11**	.01	-16.25
GD	-.25**	-.15**	.01	-20.92
df	21, 20,129			
F-statistic	927.62**			
R^2 (Adjusted R^2)	.49 (.49)			

Note. GAP = number of years between the away team's visit to home team's stadium; TA = number of tickets available; DIS = distance between home and away teams; GW = game week; WK = day of a game (0 = weekday, 1 = weekend); WP = forecasted precipitation percentage; HWP = home team's current winning percentage; AWP = away team's current winning percentage; ASTAR = number of away team's pro-bowl players; CONF = conference affiliation (0 = same conference, 1 = difference conference); TH = three days prior to a game day (0 = no, 1 = yes); TW = two days prior to a game day (0 = no, 1 = yes); ON = one day prior to a game day (0 = no, 1 = yes); GD = game day (0 = no, 1 = yes)

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

Individual performance—*ASTAR*—exerted a significant positive effect on ticket prices. However, this impact (*standardized ß* = .03, *SD* = .00) was relatively lower than that of other examined variables. Echoing previous studies, the ticket prices for weekend games were significantly higher than for weekday games. Resellers also lowered their ticket prices when the precipitation forecast suggested a high chance of rain. Distance was positively related to ticket prices, and game week had a negative correlation with pricing. Finally, non-divisional ticket prices were higher for a game against an opponent in the same conference. Specifically, when the home team had a non-divisional and interconference game, ticket prices decreased by approximately 18% (i.e., B = -.2; $e^{-.2} = 0.82$).

Discussion and Implications

This study investigated the impact of divisional affiliation on ticket prices. Results can inform marketing strategies based on consumer demand as reflected by secondary market ticket prices (Shapiro & Drayer, 2012). Also, as resellers are customers in the primary ticket market, ticket price determination can provide more understandings on various types of consumers in the market. This study therefore offers additional insight into customers' perspectives on divisional affiliation.

First, NFL fans prefer to attend non-divisional games (vs. divisional games) as indicated by ticket price differences. This result contradicts previous findings (e.g., Shapiro & Drayer, 2012). Based on the results of this study, marketers can expect to maximize revenue by concentrating on promoting non-divisional games. In other words, in the NFL, divisional rivalry games are no longer the most important element to consider. Among non-divisional games, findings indicated that intraconference games were more highly valued than interconference games. Between two general categories of non-divisional games (i.e., intraconference and interconference games), intraconference games elicited higher demand and greater fan interest.

Sport marketing–related organizations need to understand what increases attendance demand in stadiums to enlarge exposure to their advertisements, brands, and products. Moreover, sport teams can expect to boost profits through ticket sales as well as in-stadium revenue streams (Zhang et al., 2004), including food, drinks, and parking fees. Sold-out games on the primary market and season ticket waitlists do not guarantee that a stadium will reach full capacity; some ticket holders sell on the secondary ticket market when they cannot attend. Therefore, to ensure revenue generation, sport organizations must implement efficient marketing strategies for non-divisional games—particularly intraconference games. In addition to focusing on divisional games and rivalries due to playoff potential, marketers should also attend to the importance of non-divisional games for consumers.

It is similarly necessary for marketers to acknowledge the factors driving consumer demand for non-divisional games. First, marketers should be mindful of the length of time between an away team's visit to a home team's stadium in terms of boosting demand for non-divisional games. The NFL schedule does not guarantee games against specific teams in different divisions each year. Fans have opportunities to attend 8–9 home games per season, three of which are against same-division teams. Home team fans have few chances to attend a game against a specific team and to meet players in a different division. This phenomenon exemplifies scarcity. The identified positive and significant relationship between this inter-

im and secondary market ticket prices confirms Tainsky's (2010) assumption. Marketers, including TV broadcasters, advertisers, and sponsors, can maximize profits when two teams have not played each other in quite some time.

A team's current winning percentage also merits scrutiny. Different from the home team's current winning percentage, that of the away team was found to have a significantly positive on secondary market ticket prices based on the number of year(s) between teams meeting. Fans enjoy attending non-divisional games against teams that have not visited the home team's stadium for a long time. Such games are thought to be high-quality. Current winning percentages further indicate team and game quality. Despite research (e.g., Késenne, 2000) demonstrating the power of the home team's quality in raising ticket prices and consumer demand, the away team's quality is also important for non-divisional games. Additionally, even with the positive role of the number of pro-bowl players for different divisional opponents, marketers should emphasize overall team quality over individual players.

Marketers also should focus on weekend games to maximize revenue. Researchers of various sport leagues have observed greater demand for weekend games due to higher opportunity costs versus weekday games (Buraimo et al., 2009; Feehan, 2006). Yet unlike other major sport leagues, weekday games (e.g., Monday Night and Thursday Night Football) are "prime-time" opportunities in the NFL and feature high demand (e.g., due to divisional rivalries and teams that appeared in the previous season's playoffs). Sponsors and marketers hence invest heavily in weekday games (e.g., Welki & Zlatoper, 1994). However, this study indicates that greater revenue can be generated from non-divisional weekend games.

In closing, the results of this study suggest that marketers should focus more on non-divisional game especially with length of time between an away team's visit to a home team's stadium. In the NFL, broadcasters and advertisers mostly concentrate on divisional rivalry games to get more attention from NFL fans. Despite the importance of divisional and rivalry games, they should start to focus on the rarity of non-divisional game against the specific team to maximize fan's interests. Moreover, when the most marketers focus on the importance of divisional games, non-divisional game participants can be a great niche market for broadcaster and advertiser.

Limitations and Future Research

Compared with other scholarship on ticket pricing and consumer demand, this study explored a relatively larger number of data points based on the most common price determinants, which explained approximately 50% of the variance. However, this model was limited to one team per division. Subsequent research should include numerous types of variables and teams. Future studies should also examine secondary market ticket prices for divisional and non-divisional games. Each sport league has different scheduling policies, and fans' characteristics can vary by league. Marketing strategies might need to be tailored accordingly.

References

Buraimo, B., Forrest, D., & Simmons, R. (2009). Insights for clubs from modelling match attendance in football. *Journal of the Operational Research Society*, *60*(2), 147–155.

Burke, K. (2016, June 12). *Last-minute tickets to baseball games is replacing happy hour down at the pub*. MarketWatch. Retrieved March 5, 2022, from https://www.marketwatch.com/story/why-attending-a-baseball-game-is-replacing-happy-hour-2016-06-10

Drayer, J., & Martin, N. T. (2010). Establishing legitimacy in the secondary ticket market: A case study of an NFL market. *Sport Management Review*, *13*(1), 39–49.

Drayer, J., Irwin, R., & Martin, N. (2011). 'You couldn't pay me enough': Understanding consumer valuations and ticket price efficiency for the southern heritage classic. *International Journal of Sport Management*, *12*(4), 429–443.

Drayer, J., Rascher, D. A., & McEvoy, C. D. (2012). An examination of underlying consumer demand and sport pricing using secondary market data. *Sport Management Review*, *15*(4), 448–460.

Drayer, J., & Shapiro, S. L. (2009). Value determination in the secondary ticket market: A quantitative analysis of the NFL playoffs. *Sport Marketing Quarterly*, *18*(1), 5–13.

Feehan, P. (2006). Attendance at sports events. In: Andreff,W., & Szymanski, S. (Eds.), *Handbook on the Economics of Sport* (pp. 90-99). Edward Elgar Publishing Limited, Cheltenham.

Huang, F., & Huang, H. (2020, March). Event ticket price prediction with deep neural network on spatial-temporal sparse data. In *Proceedings of the 35th Annual ACM Symposium on Applied Computing* (pp. 1013–1020). https://doi.org/10.1145/3341105.3373840

Kemper, C., & Breuer, C. (2015). What factors determine the fans' willingness to pay for Bundesliga tickets? An analysis of ticket sales in the secondary market using data from ebay. de. Sport Marketing Quarterly, 24(3), 142–158.

Késenne, S. (2000). Revenue sharing and competitive balance in professional team sports. Journal of Sports Economics, 1(1), 56–65.

Lee, Y., Morse, A., Hyun, M., Shapiro, S. L., & Drayer, J. (2023). Does time matter? How major league baseball secondary market sellers make ticket pricing decisions. Sport, Business and Management: An International Journal, 13(3), 397-415.

Lemke, R. J., Leonard, M., & Tlhokwane, K. (2010). Estimating attendance at Major League Baseball games for the 2007 season. Journal of Sports Economics, 11(3), 316–348.

Lynn, M. (1991). Scarcity effects on value: A quantitative review of the commodity theory literature. Psychology & Marketing, 8(1), 43–57.

McDonald, M., & Rascher, D. A. (2000). Does bat day make cents? The effect of promotions on the demand for baseball. Journal of Sport Management, 14(1), 8–27.

Madrigal, R., & Chen, J. (2008). Moderating and mediating effects of team identification in regard to causal attributions and summary judgments following a game outcome. Journal of Sport Management, 22(6), 717–733.

Shapiro, S. L., & Drayer, J. (2012). A new age of demand-based pricing: An examination of dynamic ticket pricing and secondary market prices in Major League Baseball. *Journal of Sport Management*, *26*(6), 532–546.

Shapiro, S. L., & Drayer, J. (2014). An examination of dynamic ticket pricing and secondary market price determinants in Major League Baseball. *Sport Management Review*, *17*(2), 145–159.

Shapiro, S. L., Schulte, A., Popp, N., & Bates, B. (2021). An examination of secondary ticket market pricing trends and determinants at the NCAA Football Bowl subdivision level. *Journal of Issues in Intercollegiate Athletics, 14*, 194–213.

Sisario, B. (2019, November 25). StubHub sold to smaller rival Viagogo for over $4 Billion. *The New York Times.* Retrieved June 30, 2022, from https://www.nytimes.com/2019/11/25/business/stubhub-viagogo-ebay-sale.html

Tainsky, S. (2010). Television broadcast demand for National Football League contests. *Journal of Sports Economics*, *11*(6), 629–640.

Tyler, B. D., & Cobbs, J. (2017). All rivals are not equal: Clarifying misrepresentations and discerning three core properties of rivalry. *Journal of Sport Management*, *31*(1), 1–14.

Welki, A. M., & Zlatoper, T. J. (1994). US professional football: The demand for game-day attendance in 1991. *Managerial and Decision Economics*, *15*(5), 489–495.

Welki, A. M., & Zlatoper, T. J. (1999). US professional football game-day attendance. *Atlantic Economic Journal, 27*(3)*,* 285–298.

Zhang, J. J., Connaughton, D., & Vaughn, C. E. (2004), The role of special programmes and services for season ticket holders in predicting game consumption. *International Journal of Sports Marketing and Sponsorship*, *6*(2), 22–39.