The Effect of Match Attendance on Team Performance in Basketball

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Abstract

Attending matches is a characteristic of spectator sports. Studies have investigated what effects team performances had on fans' decisions to attend a game, yet rather few research has been carried out in the opposite direction. This paper starts from a rule of thumb that the quantity (number of spectators at the game) and quality (atmosphere created in the stands) of a match attendance has got an impact on how the teams perform during the game. Positive (cheering for the favourite team) and negative (jeering against the opposition or against match officials) emotional influences can be discussed. For testing the conceptual model, a sample of 64 statistical observations ranging over five seasons of the Romanian men's national basketball league (LNBM) has been used, employing as variables the Performance Index Rating (PIR) – a basketball specific indicator for measuring in-game performances – and attendances at games played in the competition (independent variable x). An ANOVA Factor Analysis, a t-Test and a Regression Analysis ($\alpha = 0.05$, $p<0.05$) have been carried out in order to test the research hypothesis. Results show that match attendances have an influence over the quality of sporting performances on the court. Even though the relationship is only moderate (performances continue to be, most of the times, an outcome of sporting skills and decision-making of athletes), the research shows that, acknoweldgeing this influence is important for sports managers as they can better plan the strategies for the development of their teams and they can also approach winning matches in a better way if situational variables such as attendances are taken into account.

Keywords: *sports management, match attendance, team performance, spectatorship, basketball management*

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1. Introduction

Attending matches is a characteristic of professional ballsports and also represents a trait of the leisure economy (Derbaix, Decrop, 2011). Interest in watching sports is strongly related to the relaxation that people can draw from following a sporting event (Donald, Havighurst, 1959; Havighurst, 1957; Havighurst, Feigenbaum, 1959; Shamir, Ruskin, 1984; Smith, 1988; Whiteside, Hardin, 2011). Sports performances thus transform into consumptive experiences (Gilmour, Rowe, 2012; Hartmann et al., 2015; Joo, Pandya, 2015; Williams et al.,

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2012). As technology develops, consumption possibilities arise (Windrum, Birchenhall, 2005). Mediatization allows sports to be followed via satellite broadcasting or internet streaming (Fürtjes, 2016; Turner, 2013, 2017). However, even with the lavish availability of mass media, the foundation of sports consumption remains the live attendance at the venue.

Understanding the motivations for and implications of live attendance is essential for sports managers (Hall et al., 2010; Levin, 2009). Even outside the borders of professional sports, it has been generally demonstrated that live attendance has got a significant impact on the wellbeing or wealth of performing organizations (Frost, 2013; Roșca, 2018). Live attendance at sports events may have a psychological influence over athletes' performance, yet there has been little work to focus on this relationship, and even less within the Romanian milieu. The aim of this research is to supply a barometer for the reliability of the connection between live attendance at the arena and team performance on the court. To accomplish this aim, a sample of data concerning the two variables has been gathered from the men's Romanian National Basketball League (LNBM) for the past five seasons.

2. Live Attendance and Sports Performance

According to most demand models in the sports management literature, team performance has got an effect on match attendance (Pan et al., 1999; Wakefield, Sloan, 1995). While the capacity of a team to entertain is crucial for drawing fans (Gladden, Funk, 2001), rather few studies have questioned the opposite relationship as to whether live attendance has got any influence on athletic performance.

Performance in ballsports is commonly described as the set of on-court action-related variables that constitute a game (Taylor et al., 2010: 255). These variables make up the athletes' involvement and behavior on the ball in play-oriented situations (Côté, Hay, 2002; Côté et al., 2003) and include their playing skills, as well as their tactical creativity (Memmert, 2011, 2015) and tactical decision-making (Memmert, Perl, 2005, 2009; Memmert, Furley, 2007). Yet discrepancies in sports performances (i.e. why some teams perform better than others do) are to be examined and explained not only by the action-related variables, but also by the surroundings in which the performance occurs (Taylor et al., 2010: 256). The on-court behavior of athletes is affected by a set of situational variables that need to be taken into account when making an official evaluation of the performance of an athlete or of a sports team (James et al., 2002; Kormelink, Seeverens, 1999; Lago-Peñas, Dellal, 2010; Tucker et al., 2005). Situational variables may include match location, match status, quality of the oponent, refereeing, stage of the season etc. (Gómez et al., 2013; Terry et al., 1988).

One of the situational variables with high influence, but rather neglected in performance-oriented studies, is the live attendance of spectators at games. In professional sports, athletes and teams perform in front of crowds who manifest

their positive or negative emotions, able to produce powerful effects on team performance (Epting et al., 2011). Schwartz and Barsky (1977: 641-642) believe that crowd manifestations might be just as important as the sporting knowledge and skills of athletes and coaches upon influencing the end result of a game, with athletes being motivated to push harder when stimulated by a collective of people (Williams, Karau, 1991). Nevill and Holder (1999) observe that crowd attendance can either ameliorate the performance of the team enjoying consistent support against an opposite team lacking support, or influence match officials to unintendedly show partiality towards the team with most impactful fans. Having the support of fans can vitalize sports teams through recompense cheering of good plays, or through opponent intimidation (Pollard, 1986). Andreacci et al. (2002) prove that verbal encouragement leads to a meaningfully higher effort made by athletes during a game, while Boyd and Boyd (1998) highlight that pouring unsympathetic noise or abusive language over the opposing team can challenge their inter-player exchange of messages, by making it particularly arduous to communicate. Nevill et al. (1996) suppose that verbal noise against competitors can provoke rival atheletes into irresponsible and undisciplined behavior, which can lead to their team being penalized more often. Therefore, athletes performing in front of favourable crowds experience higher levels of positive psychological arousal than their opposing athletes (Carré et al., 2006; Jackson, 1995). When having to perform in front of a hostile audience, players may choke under pressure, losing attention on the tasks they have to execute during the game (Baumeister, Showers, 1986; Butler, Baumeister, 1998; Lewis, Linder, 1997; Wallace et al., 2005; Wang et al., 2004). Several recent studies across different sporting leagues in the world also identify a referee bias influenced by the crowd. When conducting games in front of large crowds, referees tend to take more disciplinary measures against visiting players than against home players, with home mobs being acknowledged as sources of tension and nervosity for match officials (Burnett et al., 2017; Goumas, 2014; Picazo-Tadeo et al., 2017).

It has also been demonstrated that indoor sports enjoy more of the situational effects of crowd attendance, mainly because the arena architecture enables closer spectator-athlete interactions than outdoor venues do, raising the emotional support for the cheered team and placing more pressure on the jeered opponents (Gayton et al., 1987; Mizruchi, 1985; Pollard, 1986; Schwartz, Barsky, 1977). Taking into consideration the number of fans in attendance as a determinant of team performance is of utmost importance for sports marketers to understand the marketability of a sports entertainment product as (i) the crowd manifestations during a game can have an influence on how players perform on the court; subsequently it can also (ii) have an influence on the end results of the game; and as (iii) not only the enthusiasm of fans, but also their numbers can influence the outcome of a game: the more of the fans, the more intense the atmosphere – supporting for the performance of the home side and daunting over the efficiency of opposite players.

3. Methodology

The purpose of this research is to examine whether match attendance has got any influence on team performances in professional basketball and, if so, to identify the related effects. The main difference to other researches investigating the effects of attendance on performance is that, in this paper, the latter variable is not expressed as the game outcome (final score), but is defined by a specific Performance Index Rating (PIR), a benchmark accepted by the European Basketball Federation (FIBA Europe) and currently used across most of Europe's basketball leagues in order to assess the overall performance of a player during a game. The PIR takes into account the factors of play that actively contribute to the production of the game result. The formula for calculation involves summing up the positive and negative factors each at a turn, then substracting the total of negative factors from the total of positive factors (Ionescu, 2016):

PIR = (Points Scored + Assists + Rebounds made + Steals + Blocks + Fouls Attracted)–
– (Missed Field Goals + Missed Foul Shots + Shots Blocked + Turnovers + Fouls Made)

Research objective and Research question: The research objective is to examine statistical data provided by the Romanian Basketball Federation (FRB) concerning the Romanian Men's National Basketball League (LNBM) in order to to determine the relationship between match attendance and team performance. The Research Question therefore asks if match attendance affects team performance or not?

Study design: since researches have demonstrated that performance in professional sports is a variable of situational-related factors next to action-related factors, it can be assumed that a connection might exist between attendance figures and team performance on the court, yet testimony of this linkage is ambiguous. To establish whether this connection is true or false, performance was chosen as the dependent variable (y) and attendance as the independent variable (x). Secondary data provided by the FRB website (www.frbaschet.ro) was collected for all the basketball teams that have competed in LNMB during five competitional seasons ranging between 2012/2013 and 2016/2017 (t=5), with the exception of Concordia Chiajna in 2013/2014, for which no attendance data existed. 16 teams have competed in the 2012/2013 season of the league, 14 in 2013/2014 (minus the aforementioned exception), 13 in 2014/2015, 12 in 2015/2016 and 10 in 2016/2017, adding up to a sample of 64 statistical observations made for this research (n=64). The research operated with average values for each of the two variables, collected for each of the 64 entries: the average number of spectators per home game had by a team during the respective season, and the average Performance Index Rating of a team for a season. A team PIR per game is also calculated by adding up all the individual indexes of the team's players for that game. A whole-season PIR is also computed by adding up all the singulary game PIR's of a team in a season, while the average is made by dividing the grand total PIR for the season to the number of matches played by the team during that season.

Given that the national basketball championship consists of a regular season round followed by a playoff round played as an eliminatory tournament where the best competitior in each head-to-head fixture advances to the next stage, the number of matches played by each club can vary depending on how far it advances into the competition and on how many rematches are needed to determine the winner of a 'best-of' series. Given that the number of matches played by each team varied, this reasearch has chosen to use the average team PIR/season for alignment purposes.

Data sample: the analyzed data sample consisted of 64 observations accumulated over five years of competition (2012-2017) in the Romanian Men's Basketball League. A list of the teams participating in each season was composed and the two variables data were collected for each team. Even if some of the teams have participated in more or even all of the season, each participation per season was counted as one separate entry (i.e. a team that has participated in all seasons accounted for five distinct entries of the total 64), as data values differed from season to season (differente average PIR's different average attendances in each season). The rationale behind chosing five seasons as an observational period was to avoid short-term casualty influencing study outcomes, and to test whether a habit can be identified in what concerned the influence of attendance over performance.

Null Hypothesis: The Null Hypothesis (H_0) claims that the independent variable (x = average attendance) has got no influence on the dependent variable (y = average performance).

Statistical analyses: **(a)** Three tests were performed in order to verify the Null Hypothesis (H_0): a single factor one-way analysis of variance (ANOVA), a F-Test Two-Sample for Variances, and a t-Test: Two-Sample Assuming Unequal Variances. All the tests were conducted at an alpha significance level of ($\alpha = 0.05$). **(b)** A standard regression analysis, with a degree of significance applied at $p<0.05$, was performed in Microsoft Excel with the goal to examine if and how much of the basketball team performances in LNMB are explained by the situational variable of match attendances. The regression was made for the 64 observations altogether. **(c)** A Correlation Analysis was also used to determine the strength of the relationship between the variables.

4. Results

The three tests employed to verify H_0 indicated that there is sufficient statistical evidence to reject the Null Hypothesis. The F-Test of the ANOVA Single Factor Analysis (Table 1) invalidates the Null Hypothesis by higher value of F compared to the F Critical one-tail value ($115.74 > 3.91$), as well as through the P-value lower than the alpha value ($0.00000000151 < 0.05$).

Table 1. ANOVA Single Factor Analysis

Groups	Count	Sum	Average	Variance
Av. Eff.	64	5439.88	84.99813	127.5815
Av. Att.	64	66691.27	1042.051	506320.9

ANOVA

Source of Variation	*SS*	*df*	*MS*	*F*	*P-Value*	*F crit*
Between Groups	29310412	1	29310412	115.7488	0.00000000151	3.916325
Within Groups	31906256	126	253224.3			
Total	61216668	127				

Source: Own computations

The descriptive statistics of the ANOVA Analysis also show that the total number of spectators who attended the matches played in LNBM across the five seasons between 2012 and 2017 was 66,691, which accounts for an average of 1042 spectators per game. The Average Team PIR for the same interval was 84.99. In the F-Test Two-Sample for Variances (Table 2), the rejection of H_0 is confirmed by the larger value of F in comparison to the F static (3968.60>1.51).

Table 2. F-Test Two-Sample for Variances

	Av. Att.	Av. Eff.
Mean	1042.051094	84.99813
Variance	506320.9248	127.5815
Observations	64	64
df	63	63
F	3968.606391	
P(F<=f) one-tail	1.99815E-96	
F Critical one-tail	1.518326329	

Source: Own computations

The t-Test: Two-Sample Assuming Unequal Variances (Table 3) confirms the findings of the previous tests, the lower value of t stat in comparison to the negative t Critical two tail (10.75<-1.99) declining H_0.

Table 3. t-Test: Two-Sample Assuming Unequal Variances

	Av. Eff.	Av. Att.
Mean	84.998125	1042.051
Variance	127.5815425	506320.9
Observations	64	64
Hypothesized Mean Difference	0	
df	63	

	Av. Eff.	Av. Att.
t Stat	-10.75866326	
P(T<=t) one-tail	3.34103E-16	
t Critical one-tail	1.669402222	
P(T<=t) two-tail	6.68205E-16	
t Critical two-tail	1.998340543	

Source: Own computations

The Multiple R value (0.45) of the Regression Analysis indicates a moderate positive relationship between the two variables. The same is visually confirmed by the scatterplot graph pertaining to the correlation analysis (Figure 1). The trendline presents an ascendent movement starting from the left to the right, which points out that there is a positive relationship between match attendance and team performance. However, the dots indicate moderate effects. Attendance support has got most effects on team performance up to around an average value of 1500 supporters per game. Beyond that figure, the influence of fan support diminishes. Albeit not a perfect relationship, the Multiple R value shows that the strength of the relationship is keeping within reasonable limits, being coherent enough to explain the existence of predetermination between variables.

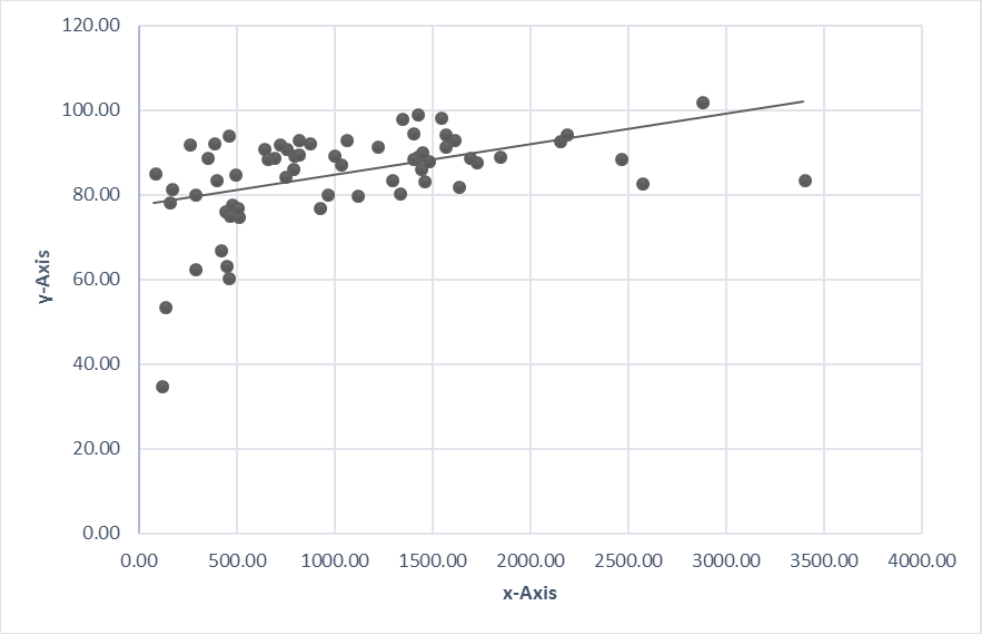

Figure 1. Scatterplot for correlation analysis between Average Attendance (x-Axis) and Average Team Performance (y-Axis)

Source: Own representation

The Significance F value in the Regression ANOVA test ($0.00016 < \alpha = 0.05$) provides further proof for the rejection of H_0 and for the statistical relevancy of the regression analysis (Table 4), same as the P-values of the regression do (again, smaller than the α level) (see Table 5).

Table 4. Regression ANOVA statistics

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	1658.128163	1658.128	16.11471	0.000163334
Residual	62	6379.509012	102.8953		
Total	63	8037.637175			

Source: Own computations

The R Square value of 0.20 indicates that 20% of the variations in basketball team performance are explained by the match attendance values.

Table 5. Regression coefficients

	Intercept	**Av. Att.**
Coefficients	77.4851	0.00721
Standard Error	2.260636	0.001796
t Stat	34.2758	4.014313
P-value	5.22E-42	0.000163
Lower 95%	72.96615	0.00362
Upper 95%	82.00405	0.0108
Lower 95.0%	72.96615	0.00362
Upper 95.0%	82.00405	0.0108

Source: Own computations

The Intercept value (= 77.4851) shows that, if the predictor variable equals zero, i.e. if there are no spectators attending a game, then the average team performance index ratio per game is situated at 77.48. At the same time, for each unit increase in Av. Att. (P-Value = $0.000163 < \alpha = 0.05$), the average team PIR increases by 0.00721. Considering that the average attendance in LNBM between 2012-2017 was 1042, then having this average attendance figure at a game would influence Average Team Performance with 7.51282.

5. Discussions

The aim of this research was to examine if match attendance had any influence on team performances in professional basketball. Research up to date had produced ambiguous information, mainly because it looked at the influence of attendance on match outcome (final result), and not on the actual performance during the game. Performance in ballsports has been presented as being composed

by action-related and situational-related variables, the effects of the latter ones being rather less familiar (Taylor et al., 2010). Moreover, studying the influences of situational variables on athletic performance is, to a certain degree, a prerogative of scientific researchers, the actual decision-makers in sports (coaches, agents, managers etc.) being more interested in investigating the action variables. Yet, it is of uttermost importance that people deciding in the sports business understand what makes a team perform better or worse, as ultimately this leads to revenue streams: supporters, sponsors, broadcasters and other key stakeholders will come closer to the teams that can offer them better performances which, in the modern sports industry, is equivalent to more entertainment, thus having direct influence over how much wealth a team is able to generate.

The results of this study indicate that, whilst only a moderate relationship, there is enough statistical evidence to answer the research question in the positive, namely that match attendance is a situational variable that affects how basketball players perform during a game and, consequently, also affects the overall team performance. However, attendance is not a crucial component of player and team performance, hence why only the mild impact. Most of a sports team's performance continues to be mainly influenced by the action-related variables, such as player skills, tactical indications, creativity etc. Irrespective if performing in front of empty seats or sold-out venues, professional athletes continue to practice their game at the best that they know. The goal of athletes and coaches is to win the game regardless of the surroundings (e.g. spectators, refereeing, match location etc.), while selling out the places in the arena is a business objective falling under the responsibility the marketing directors of a sports club. Smith (2003) believes that the influence of the crowd support has gradually eroded as sports has become more of a show-business. Players have been distanced from supporters through behemoth wages, free agency and a rapid churn rate, opting for the best offerings instead of the local team. The feeling of community and identification with the public suffers a disruption: as players come and leave after short spells, it is difficult to create a feeling of identification. Yet Smith (2005) himself acknowledges, although at a lesser extent, that teams can still reap the benefits of being backed up by fans, with crowd noise being identified as the primary component of home advantage. Hence, a certain influence of the match audience does not have to be ignored. The results of the analysis have shown that up to a fifth of how a team performs during a basketball game can be explained through the influence exerted by the spectators in attendance (R Square = 0.20).

Players' discourse and media narratives often depict the desires of athletes to perform in front of fans, with the players more than aware of the importance that fans and group identity play in sports. The presence of fans can influence the emotional mood of athlets or coaches. In a study carried on a sample of two hundred coaches in the Iranian basketball leagues, Azizi et al. (2017) demonstrate that psychological well-being has got a positive and significant impcat on decision-making and performance, while Matsui et al. (1987) and Williams et al. (1989) point out that, as human beings, athletes can reach their goals easier if they can

count on the support of peers rather than being left by themselves. A similar perception is true for fans. A study by Wolfson et al. (2005) revealed that supporters felt obligated to support their favourite team to victory, as well as to disturbe competitors and provoke them and referees into poor decision-making.

6. Conclusions

The findings of this research can prove valuable for decision-makers in sports management. Understanding the factors that influence team performances on the court can help in better planning and strategy development. This research has set out from the idea that the performance of a sports team is not only a result of the athletic skills of its players, but also of contextual influences coming from its surroundings, such as the number of spectators attending a game or the atmosphere that they create. Performing in front of crowds leads to manifestations of emotions – of cheering or of jeering – that can have psychological impact over how athletes perform in a ballgame. Wanting to find out if match attendance had any influence over team performance, the research has chosen the Romanian basketball league as a case study.

Results show that match attendance has indeed got an influence over team and player performances, although only moderate. Most of the sports performance is still made up by athletic attributes, but, at the same time, it has been shown that, for each unit increase in average attendance, the average Performance Index Rating also grew.

Sports managers should aknowledge this and understand that attracting spectator to the stands can have not only a direct impact on the revenues of the club (through ticketing), but also on how players perform during games and, hence, on the long-term stability of the team. Sports managers should seek to implement marketing campaigns and try to reach sell-out crowds for as many games as possible: not only will this fire up the host team, but it will also fire against the opposing team, as fans can create intimidating experiences for visiting teams next to supportive attitudes towards their beloved team. Next to match ticketing, season ticketing campaigns should also be considered, since they allow better strategical planning for the entire competitional season.

References

1. Andreacci, J. L., Lemura, L. M., Cohen, S. L., Urbansky, E. A., Chelland, S. A., Duvillard, S. P. V. (2002): "The effects of frequency of encouragement on performance during maximal exercise testing", *Journal of Sports Sciences*, 20(4), pp. 345-352.
2. Azizi, R., Esmaelzadeh, M. R., Sargolzae, N. (2017): "Relationship between psychological well-being with creativity and performance of male coaches of Iran' basketball league", *International Journal of Sport Studies*, 7(2), pp. 140-144.

3. Baumeister, R. F., Showers, C. J. (1986): "A review of paradoxical performance effects: Choking under pressure in sports and mental tests", *European Journal of Social Psychology*, 16(4), pp. 361-383.
4. Boyd, D. W., Boyd, L. A. (1998): "The home field advantage: Implications for the pricing of tickets to professional team sporting events", *Journal of Economics and Finance*, 22(2-3), pp. 169-179.
5. Burnett, A. M., Bishop, D. T., Ashford, K. J., Williams, A. M., Kinrade, N. P. (2017): "Decision-making of English Netball Superleague umpires: Contextual and dispositional influences", *Psychology of Sport and Exercise*, 31, pp. 52-60.
6. Butler, J. L., Baumeister, R. F. (1998): "The trouble with friendly faces: skilled performance with a supportive audience", *Journal of Personality and Social Psychology*, 75(5), pp. 1213-1230.
7. Carré, J., Muir, C., Belanger, J., Putnam, S. K. (2006): "Pre-competition hormonal and psychological levels of elite hockey players: relationship to the 'home advantage' ", *Physiology & Behavior*, 89(3), pp. 392-398.
8. Côté, J., Hay, J. (2002): "Children's involvement in sport: A developmental perspective". In J. M. Silva and D. E. Stevens (Ed.), *Psychological Foundations of Sport* (pp. 484-502), Boston, MA: Allyn & Bacon.
9. Côté, J., Baker, J., Abernethy, B. (2003): "From play to practice. A Developmental Framework for the Azquisition of Expertise in Team Sports". In J.L. Starkes and K.A. Ericsson (Ed.), *Expert Performance in Sports: Advances in Research on Sport Expertise* (pp. 89-113), Champaign, IL: Human Kinetics.
10. Derbaix, C., Decrop, A. (2011): "Colours and scarves: an ethnographic account of football fans and their paraphernalia", *Leisure Studies*, 30(3), pp. 271-291.
11. Donald, M. N., Havighurst, R. J. (1959): "The meanings of leisure", *Social Forces*, 37(4), pp. 355-360.
12. Epting, L. K., Riggs, K. N., Knowles, J. D., Hanky, J. J. (2011): "Cheers vs. Jeers: Effects of Audience Feedback on Individual Athletic Performance", *North American Journal of Psychology*, 13(2), pp. 299-312.
13. Frost, L. (2013): "Australian rules football in a commercial Era: Catering for theatregoers and tribals [Book Review]", *Sporting Traditions*, 30(2), pp. 112-114.
14. Fürtjes, O. (2016): "Football and its continuity as a classless mass phenomenon in Germany and England: rethinking the bourgeoisification of football crowds", *Soccer & Society*, 17(4), pp. 588-609.
15. Gayton, W. F., Mutrie, S. A., Hearns, J. F. (1987): "Home advantage: Does it exist in women's sports", *Perceptual and Motor Skills*, 65(2), pp. 653-654.
16. Gladden, J. M., Funk, D. C. (2001): "Understanding brand loyalty in professional sport: Examining the link between brand associations and brand loyalty", *International Journal of Sports Marketing and Sponsorship*, 3(1), pp. 54-81.

17. Gilmour, C., Rowe, D. (2012): "Sport in Malaysia: National imperatives and western seductions", *Sociology of Sport Journal*, 29(4), pp. 485-505.
18. Goumas, C. (2014): "Home advantage and referee bias in European football", *European Journal of Sport Science*, 14(Supplement1), pp. S243-S249.
19. Gómez, M. A., Lorenzo, A., Ibañez, S. J., Sampaio, J. (2013): "Ball possession effectiveness in men's and women's elite basketball according to situational variables in different game periods", *Journal of Sports Sciences*, 31(14), pp. 1578-1587.
20. Hall, J., O'Mahony, B., Vieceli, J. (2010): "An empirical model of attendance factors at major sporting events", *International Journal of Hospitality Management*, 29(2), pp. 328-334.
21. Hartmann, B. J., Wiertz, C., Arnould, E. J. (2015): "Exploring consumptive moments of value-creating practice in online community", *Psychology & Marketing*, 32(3), pp. 319-340.
22. Havighurst, R. J. (1957): "The leisure activities of the middle-aged", *American Journal of Sociology*, 63(2), pp. 152-162.
23. Havighurst, R. J., Feigenbaum, K. (1959): „Leisure and life-style", *American Journal of Sociology*, 64(4), pp. 396-404.
24. Ionescu, D. (2016): "Study regarding the efficiency of the female players from the BCM Danzio Timișoara basketball team", *Timisoara Physical Education and Rehabilitation Journal*, 9(16), pp. 17-24.
25. Jackson, S. A. (1995): "Factors influencing the occurrence of flow state in elite athletes", *Journal of Applied Sport Psychology*, 7(2), pp. 138-166.
26. James, N., Mellalieu, S. D., Hollely, C. (2002): "Analysis of strategies in soccer as a function of European and domestic competition", *International Journal of Performance Analysis in Sport*, 2(1), pp. 85-103.
27. Joo, R., Pandya, S. (2015): "On the cultural politics of Asian American sports", *Amerasia Journal*, 41(2), ix-xx.
28. Kormelink, H., Seeverens, T. (1999): "*Match analysis and game preparation*", Reedswain Publishing, Spring City, PA.
29. Lago-Peñas, C., Dellal, A. (2010): "Ball possession strategies in elite soccer according to the evolution of the match-score: the influence of situational variables", *Journal of Human Kinetics*, 25, pp. 93-100.
30. Levin, M. A. (2009): "The value of competition: competitive balance as a predictor of attendance in spectator sports", *International Journal of Sports Marketing and Sponsorship*, 11(1), pp. 2-19.
31. Lewis, B. P., Linder, D. E. (1997): „Thinking about choking? Attentional processes and paradoxical performance", *Personality and Social Psychology Bulletin*, 23(9), pp. 937-944.
32. Matsui, T., Kakuyama, T., Onglatco, M. U. (1987): "Effects of goals and feedback on performance in groups", *Journal of Applied Psychology*, 72(3), pp. 407-415.
33. Memmert D. (2011): "Sports and Creativity". In M.A. Runco and S.R. Pritzker (Ed.), *Encyclopedia of Creativity*, Second Edition, vol. 2 (pp. 373-378), San Diego, CA: Academic Press.
34. Memmert, D. (2015): "*Teaching tactical creativity in sport: Research and practice*", Routledge, Oxon/New York.

35. Memmert, D., Furley, P. (2007): "I spy with my little eye!": Breadth of attention, inattentional blindness, and tactical decision making in team sports", *Journal of Sport and Exercise Psychology*, 29(3), pp. 365-381.
36. Memmert, D., Perl, J. (2005): "Game intelligence analysis by means of a combination of variance-analysis and neural networks", *International Journal of Computer Science in Sport*, 4(1), pp. 29-38.
37. Memmert, D., Perl, J. (2009): "Game creativity analysis using neural networks", *Journal of Sports Sciences*, 27(2), pp. 139-149.
38. Mizruchi, M. S. (1985): "Local sports teams and celebration of community: A comparative analysis of the home advantage", *The Sociological Quarterly*, 26(4), pp. 507-518.
39. Nevill, A. M., Newell, S. M., Gale, S. (1996): "Factors associated with home advantage in English and Scottish soccer matches", *Journal of Sports Sciences*, 14(2), pp. 181-186.
40. Nevill, A. M., Holder, R. L. (1999): "Home advantage in sport", *Sports Medicine*, 28(4), pp. 221-236.
41. Pan, D. W., Zhu, Z., Gabert, T. E., Brown, J. (1999): "Team performance, market characteristics, and attendance of Major League Baseball: A panel data analysis", *The Mid-Atlantic Journal of Business*, 35(2/3), 77-91.
42. Picazo-Tadeo, A. J., González-Gómez, F., & Guardiola, J. (2017): "Does the crowd matter in refereeing decisions? Evidence from Spanish soccer", *International Journal of Sport and Exercise Psychology*, 15(5), pp. 447-459.
43. Pollard, R. (1986): "Home advantage in soccer: A retrospective analysis", *Journal of Sports Sciences*, 4(3), pp. 237-248.
44. Roșca, V.I. (2018): „*Branding în fotbal*", Editura ASE, București.
45. Schwartz, B., Barsky, S. F. (1977): "The home advantage", *Social Forces*, 55(3), pp. 641-661.
46. Shamir, B., Ruskin, H. (1984): "Sport participation vs. sport spectatorship: Two modes of leisure behavior", *Journal of Leisure Research*, 16(1), pp. 9-21.
47. Smith, G. J. (1988): "The noble sports fan", *Journal of Sport and Social Issues*, 12(1), pp. 54-65.
48. Smith, D. R. (2003): "The home advantage revisited: Winning and crowd support in an era of national publics", *Journal of Sport and Social Issues*, 27(4), pp. 346-371.
49. Smith, D. R. (2005): "Disconnects between popular discourse and home advantage research: What can fans and media tell us about the home advantage phenomenon?", *Journal of Sports Sciences*, 23(4), pp. 351-364.
50. Taylor, B. J., Mellalieu, D. S., James, N., Barter, P. (2010): "Situation variable effects and tactical performance in professional association football", *International Journal of Performance Analysis in Sport*, 10(3), pp. 255-269.
51. Terry, P. C., Walrond, N., Carron, A. V. (1998): "The influence of game location on athletes' psychological states", *Journal of Science and Medicine in Sport*, 1(1), pp. 29-37.
52. Tucker, W., Mellalieu, D. S., James, N., Taylor, B. J. (2005): "Game location effects in professional soccer: A case study", *International Journal of Performance Analysis in Sport*, 5(2), pp. 23-35.

53. Turner, M. (2013): "Modern 'live'football: moving from the panoptican gaze to the performative, virtual and carnivalesque", *Sport in Society*, 16(1), pp. 85-93.
54. Turner, M. (2017): "Modern English football fandom and hyperreal,'safe','all-seater'stadia: examining the contemporary football stage", *Soccer & Society*, 18(1), pp. 121-131.
55. Wakefield, K. L., Sloan, H. J. (1995): "The effects of team loyalty and selected stadium factors on spectator attendance", *Journal of Sport Management*, 9(2), pp. 153-172.
56. Wallace, H. M., Baumeister, R. F., Vohs, K. D. (2005): "Audience support and choking under pressure: A home disadvantage?", *Journal of Sports Sciences*, 23(4), pp. 429-438.
57. Wang, J., Marchant, D., Morris, T., Gibbs, P. (2004): "Self-consciousness and trait anxiety as predictors of choking in sport", *Journal of Science and Medicine in Sport*, 7(2), pp. 174-185.
58. Whiteside, E., Hardin, M. (2011): "Women (not) watching women: Leisure time, television, and implications for televised coverage of women's sports", *Communication, Culture & Critique*, 4(2), pp. 122-143.
59. Williams, J., Heiser, R., & Chinn, S. J. (2012): "Social media posters and lurkers: The impact on team identification and game attendance in minor league baseball", *Journal of Direct, Data and Digital Marketing Practice*, 13(4), pp. 295-310.
60. Williams, K. D., Nida, S. A., Baca, L. D., Latané, B. (1989): "Social loafing and swimming: Effects of identifiability on individual and relay performance of intercollegiate swimmers", *Basic and Applied Social Psychology*, 10(1), pp. 73-81.
61. Williams, K. D., Karau, S. J. (1991): "Social loafing and social compensation: The effects of expectations of co-worker performance", *Journal of Personality and Social Psychology*, 61(4), 570-581.
62. Windrum, P., Birchenhall, C. (2005): "Structural change in the presence of network externalities: a co-evolutionary model of technological successions", *Journal of Evolutionary Economics*, 15(2), pp. 123-148.
63. Wolfson, S., Wakelin, D., Lewis, M. (2005): „Football supporters' perceptions of their role in the home advantage", *Journal of Sports Sciences*, 23(4), pp. 365-374.
64. ***http://www.frbaschet.ro/campionat-masculin/liga-nationala-de-baschet/statistici-echipe/