

Journal of Issues in **Intercollegiate Athletics**

Quantifying the Impact of Adding a Proactive Outbound Ticket Sales Force on Revenues of NCAA Athletics Departments

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In an effort to improve generated revenue by selling more tickets, many NCAA Division I college athletics departments have hired proactive, outbound ticket sales personnel. Based on the tenants of Relationship Marketing Theory (RMT), it would be expected that athletics departments employing a ticket sales force to help cultivate two-way relationships with consumers would see greater long-term ticket profits, although such a relationship has yet to be tested empirically. Using longitudinal ticket and donation revenue figures, the researchers develop multiple mixed effects, within-subject regression models to determine whether the hiring of proactive, outbound sales teams has a significant impact on ticket revenue and donations for Football Bowl Subdivision (FBS) athletics departments. Thirteen years of panel data were collected, including several control variables, to conduct the analysis. The results suggest proactive, outbound ticket sales efforts result in increases of over \$1 million in both ticket revenue and donations, for each of the first three years after a ticket sales team is implemented. Number of home football games, prior year's football attendance, and total student enrollment were also significant control variables for both ticket revenue and donations.

National Collegiate Athletic Association (NCAA) member institutions have come under increasing scrutiny for their financial expenditures. The “collegiate arms race” phenomenon has been well-documented within the college athletics literature and has been blamed for much of the overspending found within college athletics (Tsitsos & Nixon, 2012; Weight, Navarro, Huffman, & Smith-Ryan, 2014; Weight, Weight, & Schneider, 2013). One implication of this “arms race” is a desire by college athletics administrators to grow existing revenues. According to a recent NCAA Revenues and Expenses report (Fulks, 2017), the current top primary sources of generated revenues for the largest NCAA departments--those in the Football Bowl Subdivision (FBS)--are Donations (17.3% of generated revenue) and Ticket Sales (16.9% of generated revenue). Thus, it is beneficial for both practitioners and academics to understand what factors impact revenue in these key areas.

Athletics marketers utilize numerous channels within the marketing mix to stimulate ticket sales, such as advertising, promotion, and pricing. One of the growing factors which may contribute to ticket revenue growth within college athletics departments, however, is the employment of personnel whose job it is to proactively solicit ticket sales. While all NCAA Division I athletic departments employ box office staff to take ticket orders and process ticket transactions, these positions are considered inbound sales positions, which rely on customers initiating the sales process. Proactive, outbound ticket sales staff, on the other hand, develop and call upon leads, then cultivate relationships with potential ticket buyers. Sales staffs then attempt to convert prospective buyers into consumers or raise the level of consumption by current ticket buyers, from perhaps an occasional attendee to a frequent attendee or even a season ticket holder. The financial success of buyer-seller relationship-building has been examined and explained through Relationship Marketing Theory (RMT). The tenants of RMT espouse that when modern salespeople nurture partnerships and long-term relationships with consumers (as opposed to emphasizing short-term, transactional-oriented relationships), consumers are more apt to increase purchasing levels (Berry, 1983; Weitz & Bradford, 1999). Within the sport industry, the investment in proactive, outbound ticket sellers who emphasize such customer partnerships have become more highly valued (Sutton, Lachowetz, & Clark, 2000) and are now common among North American professional sports teams (Pierce, Popp, & McEvoy, 2017).

Such ticket sales forces, however, appear far less frequently within major college athletics and are not (yet) considered a standard functionary unit among athletics departments. In other words, while every NCAA Division I athletics department employs compliance, marketing, and media relations personnel, not all departments hire proactive, outbound ticket sales representatives. While scant research has examined the reasons university athletics departments do not invest in outbound ticket sales (Popp & McEvoy, 2012), it is likely due to the heavy upfront costs associated with employing a sales force and the concern with whether such an investment will produce significant and timely results.

Interestingly, while numerous sport marketing researchers have examined factors impacting attendance at sporting events, particularly college football games (DeSchrivier & Jensen, 2002; Leonard, 2005; Falls & Natke, 2016; Price & Sen, 2003; Robinson, Trail, Dick & Gillentine, 2005; Simmons, Popp, McEvoy, & Howell, 2017; Wakefield & Sloan, 1995), none have considered the existence of a proactive, outbound ticket sales force in their analyses. Instead, prior studies typically have explored predictor variables such as athletic tradition, winning, star players, area population, school enrollment, television coverage, service quality,

and a variety of other factors. Also, nearly all prior college athletics spectator demand studies have used attendance rather than ticket revenue as the dependent variable. However, in-venue attendance and ticket revenue are two distinct metrics. Price elasticity studies suggest the college athletics ticket market falls in the elastic portion of the demand curve for regular season contests (Falls & Natke, 2016; Price & Sen, 2003), meaning attendance is likely to fluctuate upward when tickets are priced lower and downward when tickets are priced higher. In contrast, studies by Rishe, Reese and Boyle (2015) and Rishe, Mondello, and Boyle (2014) suggest ticket pricing for premier collegiate sporting events such as the Final Four and the Rose Bowl are more inelastic, suggesting differences between these contests and regular season college football games. In addition, the relationship between these two factors may not be linear in nature. A small change in ticket price could result in a large change in attendance, or vice versa. Therefore, factors which impact attendance may not necessarily affect ticket revenue to the same degree, as college athletics departments often inflate attendance figures for sporting events (Bachman, 2018), which can make it difficult to accurately assess change over time. Reported audited departmental ticket revenue would likely provide a more reliable dependent variable, but few sport organizations publicly share ticket revenue data. In the few studies which have examined the relationship between predictor variables and ticket revenue, researchers have either hypothesized total ticket revenue for a sport organization by multiplying a reported average ticket price by attendance (Rascher, McEvoy, Nagel, & Brown, 2007) or have gained exclusive access to a single professional sport team's ticket revenue data (Kelley, Harrolle, & Casper, 2014; Xu, Fader, & Veeraraghavan, 2015). Both of these approaches have shortcomings, however, as they lack a multi-organizational and longitudinal data set of audited ticket revenue figures.

In the case of college athletics, however, most ticket revenue data has become publicly available through Freedom of Information Act (FOIA) requests, allowing for the examination of relationships between specific variables and ticket income. In addition, most athletics departments require a donation for the right to buy prime tickets for popular sports, such as football and men's basketball. This practice allows athletics departments to assign a lower financial value to the actual tickets, while still generating significant revenue. By classifying these additional required ticketing funds as a donation, rather than a ticket cost, athletics departments are able to give buyers greater tax benefits, since some monetary gifts may be tax deductible, while sports ticket purchases are generally not. Recent federal changes to the tax code may impact this practice in the future (Rovell, 2017) although it is too early to determine the impact of the new law. Regardless, it would seem that if donations are required for ticket purchases and if outbound ticket sellers are effective at developing stronger relationships with consumers and, in turn, selling more tickets, athletics departments which employ ticket sellers would also see an increase in donations, as suggested anecdotally by DiFebo (2008). Therefore, the purpose of the current study is to examine the effectiveness of outbound ticket sales operations on Division I college athletics revenues, both in terms of ticket sales and ticket-related donations. Based on this purpose, the study is guided by the following research questions:

RQ1. Do athletics departments which utilize proactive, outbound ticket sales forces produce greater ticket revenue than schools which do not employ outbound ticket sales forces?

RQ2. Do athletics departments which utilize proactive, outbound ticket sales forces procure more donations than schools which do not employ outbound ticket sales forces?

By obtaining the answers to these two research questions, practitioners will be better equipped to make data-driven decisions. As administrators feel the burden of generating greater revenues to continue operating their athletics departments, they are constantly seeking ways to grow ticket sales and donations. Creating a ticket sales force appears to be one option available to college athletics marketers, and despite calls to implement such programs, the practice is not standard across NCAA departments, likely due to high startup costs (Popp & McEvoy, 2012, Sutton 2004; Wanless & Judge, 2014). To date, no academic research has been conducted to substantiate whether an investment in a proactive, outbound ticket sales force, which in turn would cultivate stronger relationships with consumers, would indeed produce additional revenue.

Literature Review

Sales Force Implementation and Relationship Marketing Theory

Marketers in nearly all industries have many tools at their disposal to stimulate product sales. Traditional mediums within the marketing mix have included advertising and promotional campaigns, product improvements, and pricing adjustments. Another tool available to firms and organizations to grow sales capacity is the implementation of a sales force, a strategy which can produce robust results but is also resource-intensive to establish. Prior academic work has suggested marketing managers find sales force activity to be a more effective tool than many other marketing techniques, despite its more conventional and unexciting nature (Biong & Selnes, 1997; Cross, Hartley, Rudelius, Vassey, 2001). When weighing the value of deploying a sales force (particularly as opposed to investing in other elements of the marketing mix), organizations must determine if the costs of doing so produces a positive ROI (Howick & Pidd, 1990). In fact, researchers such as Tansu Barker (1985) and LaForge, Cravens, and Young (1986) effectively argued decades ago for the use of more sophisticated analytic models and strategic analysis to determine sales force deployment decisions, utilizing a variety of approaches to examine variables which might impact the effectiveness of a sales force on firm profitability and sales growth. Their early research, and more recent work by Madhani (2015), suggested organizational factors such as firm age, territories available, market environment, and product attributes might all impact sales force saliency, yet many of the questions they posed and analyses for which they called, remain unanswered and unfulfilled, particularly among certain business sectors such as the sport industry.

Ultimately, any calculation determining the value of sales force development must rely on the theoretical underpinning of effective salesperson interactions. The primary reason sales force implementation can raise long-term revenue is the relationships developed between sales employees and prospective or current customers (Biong & Selnes, 1997; Castleberry & Tanner, 2019; Macintosh, Anglin, Szymanski & Gentry, 1992; Weitz & Bradford, 1999). Berry (1983) was the first researcher to articulate the tenants of RMT, defining it as “attracting, maintaining, and – in multi-service organizations – enhancing customer relationships” (p. 25). His work suggests organizations which invest in developing relationships and two-way communication between sellers and buyers will ultimately result in more products sold as buyers see greater benefits and sellers are able to establish higher levels of trust, as well as deliver products matching solutions to consumer needs (as opposed to firms and sellers pushing products toward customers who do not believe they have the consumers’ best interests in mind). Hunt, Arnett, and

Madhavaram (2006) astutely point out, implementation of authentic RMT comes at a price, both in terms of time and money, and organizations considering adoption must weigh the costs versus the benefits. Prior research within the sport management literature suggests sport managers subscribe to tenants of RMT, but either struggle to implement its principals or understand fully how to harness results from its implementation (Abeza, O'Reilly, & Reid, 2013; Stavros & Westberg, 2009; Stavros, Pope, & Winzar, 2008). From a practical standpoint, college athletics departments have frequently relied on team performance and traditional marketing techniques such as advertising and promotion to sell the sport product. However, as RMT has become more widely embraced in the sport business world (Sutton et al., 2000), and more professional sports teams have fully invested in ticket sales force training and deployment (Pierce, Popp, & McEvoy, 2017), more university athletics departments have considered doing likewise. Salespeople are the frontline conduits to buyer-seller partnerships as their job is to conduct one-on-one interactions to reveal consumer interests and product attributes. To date, however, no empirical evidence exists measuring whether the investment in the relationship marketing through sales force implementation results in greater revenue for departments.

Factors Impacting Demand for College Athletics

While the effect of utilizing a sales force on ticket revenue or attendance has yet to be empirically tested within the sport management literature, researchers have examined many other factors predicting demand among college football contests. For example, Price and Sen (2003) identified 18 variables that significantly predict college football attendance, with factors such as team success, visiting team performance, team tenure, rivalry, and school enrollment found to explain the greatest variance. In addition, the presence of a nearby NFL team had a negative impact on attendance. Similarly, Falls and Natke (2016) found weather conditions, outcome uncertainty, rivalries, team performance, and ticket price were all significant predictors of attendance. Goff, Wilson, Martin, and Spurlock (2015) found the transition of a football program from Football Championship Subdivision (FCS) status to Football Bowl Subdivision (FBS) status had a significant positive impact on attendance, while Chastain, Ghomann, and Stephenson (2017) found in-venue alcohol sales did not significantly impact college football attendance. Studies by Eddy, Rascher, and Stewart (2016) and Popp, Jensen, and Jackson (2017) examined factors affecting demand at neutral site college bowl games, with both finding several significant predictor variables, such as team success, home game attendance, and distance between game site and the participating teams' campuses.

One issue with nearly all sport demand studies, as evidenced in part by the examples above, is that attendance is typically operationalized as the dependent variable. However, attendance figures reported by sport organizations, particularly college athletics departments, may not be accurate (Bachman, 2018), as statisticians and administrators may be incentivized to exaggerate attendance to meet department goals or to make events appear more popular to team followers. For example, NCAA rules stipulate all FBS athletics departments must post an average football home attendance mark of 15,000 every other year to maintain their FBS affiliation (Kleps, 2015). Ticket revenue, particularly when examined longitudinally, is likely a more accurate measure of demand, but few researchers have investigated the impact of various factors driving ticket revenue, in large part because most sport organizations prefer to keep such data private. A small number of researchers have gained access to limited ticket revenue data for major league sports teams and have been able to investigate the relationship of various factors to

ticket income. Such studies include the relationship between dynamic pricing and ticket revenue in Major League Baseball (Rascher, McEvoy, Nagel, & Brown, 2007; Xu, Fader, & Veeraraghavan, 2015), the effect of promotions, opponent quality, day-of-week, and start times on single game ticket revenue for a National Hockey League team (Kelley, Harrolle, & Casper, 2014), the impact of official ticket reselling firm status on resale volume for NFL teams (Drayer, Frascella, Shapiro, and Mahan, 2014), and the impact of winning on match receipts for Australian League Football teams (Pinnuck, & Potter, 2006).

In studies examining college athletics, McEvoy, Morse, and Shapiro (2014) investigated factors affecting college athletics department revenues of FBS institutions. Their regression model explained 76.7% of the variance in overall department generated revenue, with BCS-affiliation, school enrollment, and football team success all significant predictors. Generated revenues in the study included ticket income, but it was not isolated as a single revenue stream. Donations, media contracts, conference distributions, and other revenue sources were also combined with ticket income to form a single variable in the analysis. Similarly, Chastain, Ghomann, and Stephenson (2017) found permitting alcohol sales within college football venues had no significant impact on football revenue within major college athletics programs, but again, the researchers used overall revenue figures rather than strictly ticket revenue data. Popp, McEvoy, and Watanabe (2017) did use ticket revenue as a dependent variable and determined growth in social media following, as measured by Twitter and Facebook followers, was not a significant predictor for college athletics departments, while team performance (in football and men's basketball), conference affiliation, and program history were all significant predictors of ticket revenue.

Ticket Sales Force Utilization

Several researchers have noted the importance of having a robust and well-trained ticket sales team in growing ticket revenue for sport organizations (Irwin & Sutton, 2011; Mullin, Hardy, & Sutton, 2014; Pierce, Popp, & McEvoy, 2017; Wanless & Judge, 2014). While team success, popular athletes, or a new venue can all impact ticket sales in a positive manner, a trained sales force is frequently more reliable and can help buoy sales when teams and athletes are not performing well or a venue becomes dated (Spoelstra, 2010). Irwin and Sutton (2011) provide a clear depiction of what resources and strategies are necessary to develop a strong ticket sales force within sport organizations. Based on this work, Wanless and Judge (2014) and Popp (2014) followed with papers depicting the benefits of a proactive outbound sales team within college athletics and how administrators can work towards developing effective sales departments, a sentiment first expressed by Sutton (2004) and Difebo (2008) over a decade ago. Not all college athletics administrators have followed this playbook. Bouchet, Ballouli, and Bennett (2011) analyzed one of the first college athletics departments to implement a proactive, outbound ticket sales force and unearthed several reasons the sales team was unsuccessful and unsustainable. Attributes contributing to this failed operation included: (a) frequent turnover of senior staff, (b) limited ticket sales experience of senior staff, (c) poor communication, (d) resources diverted to facility improvements, (e) reluctance to pay commission, and (f) inconsistency in departmental strategy. Since that time, however, numerous ticket sales teams have found success within college athletics departments (Carter and Meitin, 2014; Difebo, 2008; Popp, 2014, Smith, 2012). Some of these sales forces have been managed internally, while others have been managed by external vendors (Madkour, 2018; Smith, 2011).

Few studies have examined the performance of these sales forces, despite the call by Wanless and Judge (2014) to do so. Lee, Oh, and Juravich (2016) examined the relationship between employees of a third-party ticket sales company and administrators from the college athletics department which hired the company. Findings suggested the athletics department closely monitored the sales team, likely in hopes of learning needed organizational expertise. The physical location of the sales force on campus and the relationships developed between both parties also played in key role in organizational efficiency. Their study, however, did not examine actual job performance, but rather used social networking analysis to map both formal and informal relationships between ticket sellers and administration. Recently, some major college athletics departments which hired third-party vendors to manage outbound ticket sales efforts have ended the relationship and moved ticket sales efforts internally after not seeing the results they wanted or because of a desire to maintain greater managerial control over operations (Blount, 2018; Davis, 2016). Again, however, little empirical analysis has been conducted examining the financial impact of developing an outbound ticket sales effort within college athletics departments.

Popp, Simmons, and McEvoy (2017) surveyed ticket sellers and managers within college athletics departments and unearthed links between the amount of time spent in sales training and measures of sales achievement, operationalized in their study by percent of sales goal achieved, rather than actual ticket revenue. In a similar study, the authors also linked sales training to measures of job satisfaction and turnover intent among college athletics ticket sellers (Popp, Simmons, & McEvoy, 2018), but again fell short of linking a proactive, outbound sales force and ticket revenue. Anecdotally, Carter and Meitin (2014) suggested a change in proactive, outbound ticket sales strategy produced a 250% increase in season ticket sales and a 50% increase in group ticket sales at Arizona State University. Similarly, DiFebo (2008) indicated a \$4.5 million increase in football ticket revenue over a three-year period after initializing a new ticket sales force at the University of Central Florida.

Proactive, Outbound Sales and Development

Many athletics departments require buyers to make a donation in order to purchase season tickets. Results of prior college athletics donor motivation studies suggest a dichotomous split in motives; those who give for altruistic reasons and those who give transactionally (Popp, Barrett & Weight, 2016). Transactional motives for donors typically revolve around desired benefits related to ticket purchases, such as better seat locations or parking passes. In fact, ticket-related benefits were the highest-rated motivation for respondents in several studies (Mahony et al., 2003; Stinson & Howard, 2008; Wells, Southall, Stotlar, & Mundfrom, 2005). Smith (1989) found 92% of donors in her study indicated the ability to obtain sport tickets as one of the most important factors in their decision to donate. Non-alumni donors in the Smith study frequently said the ability to purchase tickets was the only reason they gave. Similarly, Stinson and Howard (2010) suggested athletics donors typically made their initial gifts solely to secure tickets, with more philanthropic giving occurring later in the donor's lifetime.

If the implementation of a ticket sales force results in stronger buyer-seller relationships and greater ticket sales, a logical consequence would be an increase in donor giving levels for athletics departments. While several prior college athletics donor studies have examined factors leading to increases in financial gifts to college athletics departments, none have considered the impact of ticket sales force deployment. Variables which have a positive relationship with

increased giving or donor retention include: winning (Koo & Dittmore, 2014; Meer & Rosen, 2009; Stinson & Howard, 2008; Tucker, 2004; Turner, Meserve, & Bowen, 2001), football bowl appearances and NCAA basketball tournament appearances (Humphries & Mondello, 2007; Rhoades & Gerking, 2000; Wanless, Jensen, & Poliakoff, 2018), and donor involvement (Shapiro & Ridinger, 2011; Tsiotsou, 2004). Anecdotally, DiFebo (2008) suggested the launch of a proactive, outbound ticket sales force at the University of Central Florida netted over \$1 million in new and elevated donations, but did not account for other variables which may have affected his reported results. Stinson and Howard (2010), meanwhile, suggest in order for transactional donors to give more, athletic department staff must cultivate and leverage relationships with donors, a suggestion echoing the principles of RMT. Such evidence would suggest a strong link between the addition of an outbound ticket sales force and an increase in donor activity, despite a lack of multi-institutional empirical study confirming such a notion.

Literature Summary

Prior literature suggests many factors impact demand for live college sports consumption. In essentially all of these studies, attendance is utilized as the variable of interest. Attendance at college sporting events, however, is not always reported accurately (Bachman, 2018). Additionally, in today's college athletics climate, the burden of generating revenue is exerting enormous pressure on college athletics administrators. Few studies have examined factors predicting significant increases in ticket revenue, although certain factors have shown to have no impact, such as alcohol sales (Chastain et al., 2017) and social media following (Popp et al., 2017). One factor that would seem to have an impact on ticket revenue generation would be the hiring of a dedicated outbound ticket sales force to nurture buyer-seller relationships, as espoused by RMT (Berry, 1983). While sport management researchers have examined components of collegiate ticket sales force management such as structure, recruitment, and training (Bouchet et al., 2011; Irwin & Sutton, 2011; Lee et al., 2016; Popp et al., 2017; Wanless & Judge, 2014), none have attempted to directly link sales force deployment with actual changes in revenue streams. In addition, many college athletics departments have attached a required donation to prime season ticket purchases, which would suggest athletics departments developing stronger two-way relationships between buyers and sellers would see an increase in donation levels.

Methods

In order to investigate the research questions posed in this study, a fixed-effects model isolating within-subject change over time was utilized. This type of model is appropriate when the goal is to isolate whether a significant relationship exists between the predictor variable of interest, in this study whether or not an athletic department employed a proactive outbound ticket sales force, and changes in the dependent variables of ticket revenue and donations over a period of time. Because fixed-effects models isolate within-subject change over time, they assist researchers in arguing for causality, or that their key variable of interest caused a change in the dependent variable (Pearl, 2009). In addition, the predictor variable (i.e., a change to an outbound sales force) was lagged in two subsequent models in order to investigate whether the effects may vary in the second and third year after the change.

The employment of proactive, outbound tickets sales forces within college athletics is a fairly recent phenomenon (DiFebo, 2008; Madkour, 2018; Smith, 2012; Sutton, 2004), with virtually no universities employing a ticket sales force prior to 2006. Using longitudinal, panel data and a within-subjects approach helps to isolate the potential impact of a change in the variable of interest (i.e., the existence of a ticket sales force) on the dependent variable in the years where the predictor variable shifted from no sales force to sales force. In addition, including other variables based on the literature (Eddy et al., 2016; Falls & Natke, 2016; Popp et al., 2017; Price and Sen, 2003), may impact the dependent variable. Thus the current model accounted for many of the common significant variables found in prior college sport demand studies, such as team success, prior year's football attendance, university enrollment, number of home football games, and local population, effectively controlling for any year-over-year changes to these variables during the term of the study. A list of all control variables utilized and how the variables were defined can be found in Table 1.

Table 1
List of variables and their definition

Independent Variable	Definition
Outbound	Dichotomous variable indicating an athletics department employed a proactive, outbound ticket sales force
Control Variables	Definition
TV Population	Annual number of tv homes in designated market areas (DMA's) as compiled by Nielsen
Enrollment	Number of students enrolled in each institution
Prior Year Attendance	Per game football attendance during the season directly prior to the current season, as reported to the NCAA
Number of Home Games	Total number of home football contests during a given season
Winning Percentage	The final football winning percentage of a team during a given season
Dependent Variables	Definition
Ticket Revenue	Sales of admissions to athletics events as reported to USA Today
Donations	Amounts received from individuals, corporations, associations, foundations, clubs, or other organizations for the operations of the athletics program as reported to USA Today

A total of thirteen years of panel data (2004-05 through 2016-17 academic years) were collected for all public, FBS institutions. Ticket revenue and donation data were scraped from the College Athletics Financial Database compiled by *USA Today* (Berkowitz & Schnaars, n.d.). In order to determine whether universities employed a proactive, outbound sales force and to determine the exact year in which they began utilizing that sales force, data were gathered from athletics departments' and third-party ticket sales management firms' websites. For universities

in which it was not clear from the information available on websites regarding ticket sales force employment status or initial year of implementation, email requests and phones calls were made to marketing and ticketing managers at select institutions. Control variables were captured from various websites, including NCAA.org, individual athletics departments, and Nielsen.

The total number of FBS schools fluctuated over the span for which data were collected. In the final year of data, there were 129 FBS institutions, but researchers were unable to confirm data for three of the schools and had to remove them completely from the dataset. In addition, only public school data was available within the *USA Today* dataset, reducing the total number of schools to 105 in the final year of the dataset. Overall, 1,200 observations were made during the statistical analysis. Reflective of the aforementioned growth in the practice during the term of the study, among 116 total FBS institutions in the year 2004-05, only one athletics department employed a proactive, outbound ticket sales force (0.9%). In the final year of the dataset, among 126 total schools observed, 95 schools employed a proactive, outbound ticket sales force (75.4%). Year by year results are depicted in Table 2.

Table 2
Number of proactive outbound sales programs

Year	N	No Outbound	Pct.	Outbound	Pct.
2016-17	126	31	24.6%	95	75.4%
2015-16	126	32	25.4%	94	74.6%
2014-15	125	36	28.8%	89	71.2%
2013-14	122	44	36.1%	78	63.9%
2012-13	118	52	44.1%	66	55.9%
2011-12	118	66	55.9%	51	43.2%
2010-11	117	88	75.2%	29	24.8%
2009-10	117	100	85.5%	17	14.5%
2008-09	116	106	91.4%	10	8.6%
2007-08	116	110	94.8%	6	5.2%
2006-07	116	113	97.4%	3	2.6%
2005-06	116	115	99.1%	1	0.9%
2004-05	116	115	99.1%	1	0.9%

Among schools for which ticket revenue were available, overall means rose every year in the dataset. In general, annual donation amounts also rose relatively consistently, with a few minor exceptions. Annual ticket revenue and donation amounts are depicted in Table 3.

Table 3
Annual Mean Ticket Revenue and Donations

Year	<i>N</i>	Ticket Revenue	Donations
2015-16	105	\$14,307,553	\$14,549,511
2014-15	105	\$14,168,255	\$14,203,845
2013-14	102	\$13,430,880	\$14,617,511
2012-13	98	\$13,183,031	\$13,469,391
2011-12	97	\$12,841,635	\$12,937,764
2010-11	97	\$12,555,958	\$11,816,747
2009-10	97	\$11,919,284	\$11,932,863
2008-09	95	\$11,440,578	\$10,464,471
2007-08	95	\$10,595,317	\$10,872,707
2006-07	95	\$10,120,591	\$ 9,452,724
2005-06	95	\$ 8,938,478	\$ 10,721,722
2004-05	95	\$ 8,546,884	\$ 7,669,266

Results

The first model focuses on an investigation of the year-over-year impact of the employment of an outbound sales organization on ticket sales revenue (RQ1), and is summarized in Table 3. The model predicts a significant amount of the variance in change in ticket revenue, $F(6,1076) = 68.89, p < .001$. The r-squared measure ($R^2 = .6143$) indicates that the model predicts 61.4% of the variance in ticket revenue. The model utilizes a binary independent variable indicating which organizations employ an outbound ticket sales organization, and includes several control variables that help to isolate its effect. These include the number of television households in the market in which the organization resides (a proxy for local population), student enrollment of the institution, the prior year's football attendance on a per game basis, the number of home games that season, and the program's winning percentage in each football season. Collinearity was not an issue in the model, as the mean variance inflation factor (VIF) was 1.38 (the largest was 2.0), well below the minimum threshold of 10 recommended by Kennedy (1992), Hair et al. (1995), and Mason et al. (1989). The coefficient for the outsource variable is positive and statistically significant, $t = 6.07, p < .001$, with the unstandardized coefficient indicating an outbound sales force produces an effect equal to \$1,340,581 on a year-by-year basis ($B = 1340581$). Control variables in the model suggesting positive year-over-year change include enrollment, $t = 0.42, p < .001$, attendance, $t = 6.87, p < .001$, and number of home games, $t = 7.74, p < .001$. The unstandardized coefficients of these variables indicate each student enrollee is equal to an effect of \$358 in revenue ($B = 358.31$), each attendee in the prior season is worth \$120 ($B = 120.51$), and each home game is worth \$1.09 million in revenue ($B = 1094634$). There was no evidence of year-over-year change in television households or winning percentage. The model's Spearman's rank correlation coefficient, Spearman's rho, (.8841) indicates that more than 88% of the variance in the model is between-subject, with 11.6% of the variance within-subject.

Table 4
Fixed effects model analyzing the effects of outbound sales on ticket revenue

Variable	Coefficient	Coefficient <i>t</i> -statistics	Significance
Outbound	1340581	6.07	.000 ^a
TV Population	166.8	0.42	.677
Enrollment	358.3	9.80	.000 ^a
Prior Year Attendance	120.5	6.87	.000 ^a
Number of Home Games	1094634	7.74	.000 ^a
Winning Percentage	267931.8	0.57	.568
		<i>F</i> -statistic	68.89
		Significance	.000 ^a
		<i>R</i> ²	.614

^aSignificant at the .01 level

As stated, the outbound variable was lagged in two additional models, in order to investigate the impact of outsourcing in the two subsequent years. The interpretation of the unstandardized coefficient of the outsource variable lagged by one year indicates the effect of outsourcing is diminished in the second year. Specifically, the effect is reduced by more than \$250,000 in the second year ($B = 1070775$). However, the effect of outsourcing on ticket sales is still statistically significant in the second year, $t = 4.80$, $p < .001$, and results in an effect equal to more than \$1 million. A third model included an outbound variable lagged by two years, in order to investigate the effects in the third year. In this third model, the coefficient of the outbound variable ($B = 1156266$) indicates in the third year the effects are similar to those in the second year, an effect of approximately \$1.15 million. Once again the effects of an outbound sales force in the third year are positive and statistically significant, $t = 5.22$, $p < .001$.

A second series of models designed to investigate RQ2 utilizes contributions as a dependent variable. The first model predicts a significant amount of variance in revenue from contributions $F(6,1087) = 11.65$, $p < .001$, with the r-squared measure ($R^2 = .1703$) indicating the model is predicting 17% of the variance in contributions. Once again, collinearity was not an issue, as the mean VIF was 1.39 (the largest was 2.02). The only control variable reflecting a significant year-over-year change is enrollment, $t = 6.04$, $p < .001$, while the other control variables (TV households, prior year's attendance, home games, and winning percentage) were all nonsignificant. The unstandardized coefficient for the outbound sales force variable indicates the effects of outbound sales on contributions is equal to more than \$1.52 million in the first year ($B = 1523902$) and it is statistically significant, $t = 2.39$, $p = .017$. With respect to RQ2, this result provides ample evidence an outbound sales force increases contributions on a year-by-year basis. Full results of this model are depicted in Table 5.

Table 5

Fixed effects model analyzing the effects of outbound sales on contributions

Variable	Coefficient	Coefficient <i>t</i> -statistics	Significance
Outbound	1523902	2.39	.017 ^b
TV Population	309.2	0.27	.786
Enrollment	640.1	6.04	.000 ^a
Prior Year Attendance	29.2	0.58	.565
Number of Home Games	307101.4	0.75	.452
Winning Percentage	-592869.8	-0.44	.662
		<i>F</i> -statistic	11.65
		Significance	.000 ^a
		<i>R</i> ²	.170

^aSignificant at the .01 level^bSignificant at the .05 level

Similar to the investigation of RQ1, the outsource variable was also lagged in two subsequent models to determine whether the effect differs in the two years following the decision to employ an outbound sales force. The effect is diminished slightly in the second year, with the unstandardized coefficient indicating that the positive effect of an outbound sales force on contributions is \$1.44 million ($B = 1447076$). The effect in the second year is again statistically significant, $t = 2.04$, $p = .041$. The positive effect in the third year is significantly higher, more than \$1 million more than in year two and equal to an effect of nearly \$2.5 million ($B = 2480476$). The effect of an outbound sales force in the third year after the implementation is highly significant, $t = 4.33$, $p < .001$.

Discussion

Gazing through the lens RMT, the purpose of this study was to determine the impact of adding a proactive, outbound ticket sales force on ticket revenue and donations within FBS athletics departments. When organizations such as athletics departments desire to increase revenue, one option is to deploy a proactive sales force to improve buyer-seller relationships. According to RMT, such a strategy is effective because the role of the modern salesperson is to create two-way, mutually beneficial interactions with consumers, which will show greater value and position products as solutions to consumer needs (Biong & Selnes, 1997). While past research examining RMT within sport organizations has suggested sport managers are not always sure how to foster these stronger relationships (Abeza, O'Reilly, & Reid, 2013; Stavros & Westberg, 2009), employing a proactive, outbound ticket sales force is a clear investment in marketing relationship management, and has been shown to improve profitability in other industries (Weitz & Bradford, 1999). Sales force deployment, however, requires a significant initial investment. For researchers and administrators interested in the revenues of college athletics departments, how quickly and how significantly investment in the initiation of such relationship builders pay dividends is of primary concern.

The results of the current study indicate schools adding a ticket sales force within their departmental structure are likely to see a significant increase in ticket revenue and donations,

often soon after sales force deployment. Based on the current results, FBS athletics departments not using an outbound ticket sales team are missing an opportunity to generate significant revenue; in excess of \$2 million to \$3 million annually when ticket and donation incomes are combined. The current study is unique, and the findings particularly notable, because of the longitudinal nature of the data analysis. Utilizing a within-subjects, fixed effects model, the researchers were able to isolate and examine the impact of adding an outbound sales team to yearly financial results for multiple years after initiating a sales program. These results take into account the impact of adding a sales force may be seen in the first year after forming, or may be seen two or three years after the initial sales program has been implemented, a slight surprise when considering most RMT literature suggests the results of such a strategy typically take longer to emerge (Hunt et al., 2006; Weitz & Bradford, 1999). Overall, results suggest adding a ticket sales team is effective in increasing ticket revenue and donations in years one, two, and three, after inception.

Proactive, outbound sales efforts take many forms within college athletics. Some departments employ dozens of sales representatives, while others only utilize one or two sellers (Carter & Meintin, 2014; DiFebo, 2008; Popp 2014). In addition, some departments manage all ticket sales efforts internally, while others outsource this function to third-party vendors such as *IMG Learfield Ticket Solutions* and *The Aspire Group*. Finally, not all sales forces have access to the same resources and training (Popp, Simmons, & McEvoy, 2017). Yet despite these differences, it appears the effort to develop relationships with consumers and proactively solicit ticket sales from those prospective buyers, as espoused by RMT, rather than rely on marketing efforts and team performance, is relatively effective. With total ticket revenue for FBS athletics departments ranging from \$8 million to just over \$14 million during the span of the study, an average bump of more than \$1 million in annual ticket revenue is a considerable escalation, representing an average increase of nearly 10% of revenue for many of the athletics departments in the study.

Adding a robust sales force to any firm requires a significant financial commitment, as noted extensively in the RMT literature (Hunt et al., 2006). DiFebo (2008) suggested to start a sales program at the University of Central Florida, it cost the athletics department \$250,000 in start-up expenses. Annual salaries and benefits for entry-level sellers will likely cost a department \$40,000 to \$65,000 per employee, while sales managers would demand even greater remuneration. In addition, athletics departments must expend resources to provide office space, computers, customer relationship management (CRM) software, and other equipment, plus provide human resource-related costs such as recruitment, hiring, and training (Wanless & Judge, 2014). Still, even after incurring such costs, the addition of a proactive, outbound ticket sales force seems to provide a strong financial return on investment. Prior work has suggested such results would occur (DiFebo, 2008; Sutton, 2004; Wanless & Judge, 2014), but the current study is the first attempt to calculate the precise financial gain seen by athletics departments, mimicking the analysis of sales force deployment called for by researchers such as Barker (1985) and LaForge et al. (1986).

Another key finding of the current study was the significant, positive relationship seen between adding a proactive, outbound ticket sales force and an increase in donations. Such a relationship had not been examined in prior literature, although several studies have suggested many college athletics donors are indeed motivated to give transactionally (Mahony et al., 2003; Wells et al., 2005). One reason for this result is likely the greater rapport and understanding built between sales force staff and consumers, a founding principle of RMT. As more interactions take

place between salespeople and buyers, consumers are more likely to see all benefits and purchase/donate in greater amounts based on elevated levels of comfort and trust with the selling organization (Abeza et al., 2013; Berry, 1983). Prior donor motivation research has shown that greater involvement with an athletics program is related to greater donation levels by stakeholders (Shapiro & Ridinger, 2011; Stinson & Howard, 2010; Tsotsou, 2004).

Through the use of lagged panel data, the results also revealed a significant increase in contributions in the third year of outbound ticket sales force implementation. In the first year after implementing a sales team, donations increased \$1.52 million, and in year two, they increased \$1.44 million compared to the year prior to starting the sales program. However, in the third year, contributions jumped to \$2.48 million. This yearly spike was surprising and somewhat difficult to rationalize based on the literature and analysis. The sales literature suggests initial investment in a sales force takes time to show results (Howick & Pidd, 1990), but in the current study, significant results were seen immediately, then grew exponentially in the third year. One potential explanation may be that many athletics departments which initiate an outbound ticket sales force may also aggressively market introductory ticket packages. These packages are likely comprised of lower priced inventory available in non-prime locations, and often do not require a donation to procure. Perhaps athletics marketers and sellers use these packages to entice first-time season-ticket buyers to sample the product and eventually the sales staff are able to upsell those customers to more attractive ticket packages which do require a donation. If this is true, perhaps this conversation shows up more frequently in the third year of the outbound sales team lifecycle. Another possible explanation could be that this finding is more reflective of the type of athletics department which adds a ticket sales force rather than a direct impact of the sales team itself. Departments which add outbound sales teams may be more revenue aggressive in their strategies and are more likely to follow up bolstered ticket sales efforts with major capital and facilities fund-raising campaigns.

A final notable finding of the current study was the relationship of control variables on the outcome measures. Prior football season attendance and number of home football games in a season both had significant, positive relationships with ticket revenue. An explanation for these relationships is rational. Sport attendance for one season has been found to be a good predictor of attendance for the ensuing season (Borland & Lye, 1992; Coates & Humphreys, 2010), while home football schedules which include additional home football games would logically generate greater ticket revenue (in this study, over \$1 million per additional game). University student enrollment also had a significant, positive relationship with ticket revenue, but would likely not be impactful to athletics administrators as most FBS universities have relatively stable enrollment and athletics marketers can do little to change this. Perhaps the most intriguing finding among control variables, however, was a lack of significance in the relationship between current season football winning percentage and ticket revenue. Prior college football demand studies indicated a connection between team performance and attendance (DeSchriver & Jensen, 2002; Natke & Falls, 2016; Price & Sen, 2003), but in the current study, the relationship between team performance and ticket revenue was absent. This finding suggests administrators would be wise to not rely strictly on football team performance to drive revenue, but also to invest in building relationships with their fan base to drive marketing results, as evidenced by prior RMT and sales effectiveness literature (Weitz & Bradford, 1999) and recommended within the sport management literature (Sutton et al, 2000; Pierce et al., 2017). The deployment of a dedicated sales force seems to be an effective way to achieve such results.

Limitations and Future Research

The current study examined FBS athletics departments. The addition of outbound ticket sales teams, however, has not been confined to only FBS schools. The practice does appear to be prevalent within FCS and non-football schools as well. The findings of this study may be different for non-FBS institutions and future studies should examine additional populations. Data used in this study was also self-reported by the athletics departments within the population. This data was assumed to be accurate, but since it was secondary data, we were not able to confirm its veracity. Also, the current study did not differentiate departments which hired outsourced ticket sales companies and those which managed sales forces internally. Future studies should also examine whether differences exist between these two groups. Another consideration related to the current results may be the effect of the 2018 Tax Cut and Jobs Act, which eliminates tax benefits related to donations tied to sport ticket purchases. Future studies could replicate the current study and compare results to determine whether this federal regulation has a significant impact on revenue streams within college athletics. Finally, the current study did not capture ticket pricing data. Price is certainly an important component of the marketing mix, but can be difficult to capture due to departments having many price points for home football and basketball games and because many season tickets for major college football and basketball games also require a mandatory donation, which is not reflected in the face value of the ticket. Perhaps future studies will be better able to capture such information for analysis.

References

- Abeza, G., O'Reilly, N., & Reid, I. (2013). Relationship marketing and social media in sport. *International Journal of Sport Communication*, 6, 120-142.
- Bachman, R. (2018, Aug. 30). College football's growing problem: Empty seats. *Wall Street Journal*. Retrieved Sept. 18, 2018 from: <https://www.wsj.com/articles/college-footballs-growing-problem-empty-seats-1535634001>
- Berkowitz, S. & Schnaars, C. (2018). NCAA finances. *USA Today*. Retrieved Aug. 28, 2018 from: <http://sports.usatoday.com/ncaa/finances/>
- Berry, L. L. (1983). Relationship marketing, in Berry, L. L., Shostock, G. L. and Upah, G. D. (Eds), *Emerging Perspectives on Services Marketing*, American Marketing Association, Chicago, IL, 25-28.
- Biong, H., & Selnes, F. (1997). The strategic role of the salesperson in established buyer-seller relationships. *Journal of Business-to-Business Marketing*, 3(3), 39-78.
- Blount, R. (2018, Aug. 27). How plunging ticket sales have changed Gophers sports. *Minneapolis Star Tribune*. Retrieved Aug. 28, 2018 from: <http://www.startribune.com/how-plunging-ticket-sales-have-changed-gophers-sports/491766811/>
- Borland, J., & Lye, J. (1992). Attendance at Australian rules football: A panel study. *Applied Economics*, 24(9), 1053-1058.
- Bouchet, A., Ballouli, K., & Bennett, G. (2011). Implementing a ticket sales force in college athletics: A decade of challenges. *Sport Marketing Quarterly*, 20(2), 84-92.
- Carter, A., & Meitin, M. (2014). Filling the house. *Athletic Management*, 26, 22-26.
- Castleberry, S., & Tanner, J. (2014). *Selling: Building Partnerships* (9th ed.). Boston: McGraw Hill.
- Chastain, A. J., Gohmann, S. F., & Stephenson, E. F. (2017). Beer availability and college football attendance: Evidence from mid-major conferences. *Journal of Sport Economics*, 18(6), 592-600.
- Coates, D. & Humphreys, B. R. (2010). Week to week attendance and competitive balance in the National Football League. *International Journal of Sport Finance*, 5, 239-252.
- Cross, J., Hartley, S. W., Rudelius, W., & Vassey, M. J. (2001). Sales force activities and marketing strategies in industrial firms: relationships and implications. *Journal of Personal Selling & Sales Management*, 21(3), 199-206.
- Davis, B. (2016, June 27). Texas opting out of ticketing contract with The Aspire Group. *Austin American-Statesman*. Retrieved August 27, 2018 from: <https://www.hookem.com/story/texas-opting-ticketing-contract-aspire-group/>
- DeSchraver, T. D., & Jensen, P. E. (2002). Determinants of spectator attendance at NCAA Division II football contests. *Journal of Sport Management*, 16(4), 311-330.
- DiFebo, M. (2008). A great start. *Athletic Management*, 20, 41-46.
- Drayer, J., Frascella, V. P., Shapiro, S. L., & Mahan III, J. E. (2014). Examining the relationship between legitimacy-building strategies and firm revenues. *European Sport Management Quarterly*, 14(5), 464-484.
- Eddy, T., Rascher, D., & Stewart, R. (2016). Where is Everyone? An Examination of Attendance at College Football Bowl Games. *International Journal of Sport Finance*, 11(1), 26-45.
- Falls, G. A., & Natke, P. A. (2016). College football attendance: A panel study of the Football Championship Subdivision. *Managerial and Decision Economics*, 37(8), 530-540.

- Fulks, D. L. (2017). *Revenues and expenses 2004-2016*. Indianapolis, IN: NCAA.
- Goff, B., Wilson, D. P., Martin, W. C., & Spurlock, B. (2015). Attendance effects of FBS transition and membership. *Journal of Sport Management, 29*(4), 398-407.
- Hair, J. F. Jr., Anderson, R. E., Tatham, R. L. & Black, W. C. (1995). *Multivariate Data Analysis*, 3rd ed. New York: Macmillan.
- Howick, R. S., & Pidd, M. (1990). Sales force deployment models. *European Journal of Operational Research, 48*(3), 295-310.
- Humphreys, B. R., & Mondello, M. (2007). Intercollegiate athletic success and donations at NCAA Division I institutions. *Journal of Sport Management, 21*(2), 265-280.
- Hunt, S. D., Arnett, D. B., & Madhavaram, S. (2006). The explanatory foundations of relationship marketing theory. *Journal of Business & Industrial Marketing, 21*(2), 72-87.
- Irwin, R. L., & Sutton, W. A. (2011). Ticket Sales Coaching Innovation: A Few Pages from Paul Brown's Playbook. *Sport Marketing Quarterly, 20*(2), 103-111.
- Kelley, K., Harrolle, M. G., & Casper, J. M. (2014). Estimating consumer spending on tickets, merchandise, and food and beverage: A case study of a NHL team. *Journal of Sport Management, 28*(3), 253-265.
- Kennedy, P. (1992). *A Guide to Econometrics*. Oxford: Blackwell.
- Koo, G., & Dittmore, S. W. (2014). Effects of intercollegiate athletics on private giving in higher education. *Journal of Issues in Intercollegiate Athletics, 7*(1), 1-16.
- Kleps, K. (2015, Sept. 13). NCAA's 'out of date' football attendance mandate makes it difficult on the likes of Akron and Kent State. *Crain's Cleveland Business*. Retrieved Aug. 16, 2018 from: <http://www.crainscleveland.com/article/20150913/NEWS/309139997/ncaas-out-of-date-football-attendance-mandate-makes-it-difficult-on>
- LaForge, R. W., Cravens, D. W., & Young, C. E. (1986). Using contingency analysis to select selling effort allocation methods. *Journal of Personal Selling & Sales Management, 6*(2), 19-28.
- Lee, S., Oh, N., & Juravich, M. (2016). Formal and informal relationship between client and agency in the case of ticket sales outsourcing in intercollegiate sport. *Journal of Relationship Marketing, 15*(1-2), 62-80.
- Leonard, J. M. (2005). The geography of visitor attendance at college football games. *Journal of Sport Behavior, 28*(3), 231-253.
- Macintosh, G. Anglin, K. A., Szymanski, D. M., & Gentry, J. W. (1992). Relationship development in selling: A cognitive analysis. *Journal of Personal Selling & Sales Management, 12*(4), 23-34.
- Madhani, P. M. (2015). Managing salesforce compensation during the growth stage: A financial modelling approach. *Compensation and Benefits Review, 47*(5-6), 240-254.
- Madkour, A. (2018, July 16). How Aspire changed college sports. *SportsBusiness Journal*. Retrieved Aug. 21, 2018 from: <https://www.sportsbusinessdaily.com/Journal/Issues/2018/07/16/Colleges/Aspire-Group.aspx>
- Mahony, D. F., Gladden, J. M., & Funk, F. C. (2003). Examining Athletic Donors at NCAA Division I Institutions. *International Sports Journal, 7*(1), 9-25.
- Mason, R. L., Gunst, R. F. & Hess, J. L. (1989). *Statistical Design and Analysis of Experiments: Applications to Engineering and Science*. New York: Wiley
- McEvoy, C. D., Morse, A. L., & Shapiro, S. L. (2014). Factors influencing collegiate athletic department revenues. *Journal of Issues in Intercollegiate Athletics, 6*, 249-267.

- Meer, J. & Rosen, H. S. (2009). The impact of athletic performance on alumni giving: An analysis of microdata. *Economics of Education Review*, 28(3), 287-294.
- Mullin, B. J., Hardy, S., & Sutton, W. (2014). *Sport Marketing 4th Edition*. Champaign, IL: Human Kinetics.
- Pearl, J. (2009). Causal inference in statistics: An overview. *Statistics Surveys*, 3, 96–146.
- Pierce, D., Popp, N., & McEvoy, C. D. (2017). *Selling in the Sport Industry*. Dubuque, IA: Kendall Hunt.
- Pinnuck, M. & Potter, B. (2006). Impact of on-field football success on the off-field financial performance of AFL football clubs. *Accounting and Finance*, 46, 499-517.
- Popp, N. (2014). Ticket sales in college athletics. *Athletics Administration*, 49(8), 26-31.
- Popp, N., Barrett, H., & Weight, E. (2016). Examining the relationship between age of fan identification and donor behavior at an NCAA Division I athletics department. *Journal of Issues in Intercollegiate Athletics*, 9, 107-123.
- Popp, N., Jensen, J., & Jackson, R. (2017). Maximizing visitors at college football bowl games. *International Journal of Event and Festival Management*, 8(3), 261-273.
- Popp, N. & McEvoy, C. (2012). *Factors Affecting NCAA Programs' Decisions To Institute Outbound Ticket Sales*, Sport Marketing Association Conference, Orlando, Fla.
- Popp, N., McEvoy, C., & Watanabe, N. (2017). Do college athletics marketers convert social media growth into ticket sales? *International Journal of Sports Marketing and Sponsorship*, 18(2), 212-227.
- Popp, N., Simmons, J., & McEvoy, C. D. (2017). Sport Ticket Sales Training: Perceived Effectiveness and Impact on Ticket Sales Results. *Sport Marketing Quarterly*, 26(2), 99-109.
- Popp, N., Simmons, J., & McEvoy, C. (2018). Effects of employee training on job satisfaction outcomes among sport ticket sellers. *International Journal of Sport Management and Marketing*, 18(6), 453-465.
- Price, D. I., & Sen, K. C. (2003). The demand for game day attendance in college football: an analysis of the 1997 Division 1-A season. *Managerial and Decision Economics*, 24(1), 35-46.
- Rascher, D. A., McEvoy, C. D., Nagel, M. S., & Brown, M. T. (2007). Variable ticket pricing in major league baseball. *Journal of Sport Management*, 21(3), 407-437.
- Rhoads, T. A., & Gerking, S. (2000). Educational contributions, academic quality, and athletic success. *Contemporary Economic Policy*, 18(2), 248-258.
- Rishe, P. J., Mondello, M., & Boyle, B. (2014). How Event Significance, Team Quality, and School Proximity Affect Secondary Market Behavior at March Madness. *Sport Marketing Quarterly*, 23(4).
- Rishe, P., Reese, J., & Boyle, B. (2015). Secondary market behavior during College Football's postseason: Evidence from the 2014 Rose Bowl and BCS Championship Game. *International Journal of Sport Finance*, 10(4), 357.
- Robinson, M. J., Trail, G. T., Dick, R. J., & Gillentine, A. J. (2005). Fans vs. Spectators: An Analysis of Those Who Attend Intercollegiate Football Games. *Sport Marketing Quarterly*, 14(1), 43-53.
- Rovell, D. (2017, Dec. 20). Tax reform nixes season-ticket donation deductions; Schools scramble into action. *ESPN.com*. Retrieved Aug. 16, 2018 from: http://www.espn.com/college-football/story/_/id/21827570/tax-reform-bill-removes-deduction-donations-season-tickets-forcing-universities-make-other-plans

- Shapiro, S. L., & Ridinger, L. L. (2011). An analysis of donor involvement, gender, and giving in college athletics. *Sport Marketing Quarterly*, 20(1), 22-32.
- Simmons, J., Popp, N., McEvoy, C., & Howell, S. (2017). Tomorrow's Fans Gone Today: Assessing Constraints to Student Attendance at College Football Games. *Journal of Applied Sport Management*, 9(3), 13-23.
- Smith, J. (1989). Athletic fund-raising: Exploring the motives behind private donations. (Unpublished master's thesis). The University of North Carolina at Chapel Hill, Chapel Hill, NC.
- Smith, M. (2011, Jan. 17). IMG adds DiFebo Co. to collegiate arsenal. *SportsBusiness Journal*. Retrieved Aug. 21, 2018 from: <https://www.sportsbusinessdaily.com/Journal/Issues/2011/01/17/Colleges/IMG.aspx>
- Smith, M. (2012, April 23). Cal gives ticketing the old college try. *SportsBusiness Journal*. Retrieved Aug. 21, 2018 from: <https://www.sportsbusinessdaily.com/Journal/Issues/2012/04/23/Colleges/Cal.aspx>
- Spoelstra, J. (2010, Dec. 6). A three-step strategy to sell out a stadium, absent a superstar. *SportsBusiness Journal*. Retrieved Aug. 16, 2018 from: <https://www.sportsbusinessdaily.com/Journal/Issues/2010/12/06/From-The-Field-Of/Athree-Step-Strategy-To-Sell-Out-A-Stadium-Absent-A-Superstar.aspx>
- Stavros, C., Pope, N. K. L., & Winzar, H. (2008). Relationship marketing in Australian professional sport: an extension of the Shani framework. *Sport Marketing Quarterly*, 17(3).
- Stavros, C., & Westberg, K. (2009). Using triangulation and multiple case studies to advance relationship marketing theory. *Qualitative Market Research: An International Journal*, 12(3), 307-320.
- Stinson, J. L., & Howard, D. R. (2008). Winning does matter: Patterns in private giving to athletic and academic programs at NCAA Division I-AA and I-AAA institutions. *Sport Management Review*, 11(1), 1-20.
- Stinson, J. L., & Howard, D. R. (2010). Intercollegiate athletics as an institutional fundraising tool: An exploratory donor-based view. *Journal of Nonprofit & Public Sector Marketing*, 22(4), 312-334.
- Sutton, W. A. (2004, June 28). Enroll sales reps on your campus. *SportsBusiness Journal*. Retrieved Aug. 28, 2018 from: <https://www.sportsbusinessdaily.com/Journal/Issues/2004/06/28/Opinion/Enroll-Sales-Reps-On-Your-Campus.aspx>
- Sutton, W. A., Lachowetz, T., & Clark, J. (2000). Eduselling: The role of customer education in selling to corporate clients in the sport industry. *International Journal of Sports Marketing & Sponsorship*, 2(2), 145-158.
- Tansu Barker, A. (2001). Salespeople characteristics, sales managers' activities and territory design as antecedents of sales organization performance. *Marketing Intelligence & Planning*, 19(1), 21-28.
- Tsiotsou, R. (2004). The role of involvement and income in predicting large and small donations to college athletics. *International Journal of Sports Marketing and Sponsorship*, 6(2), 40-46.
- Tsitsos, W., & Nixon, H. L. (2012). The Star Wars arms race in college athletics: Coaches' pay and athletic program status. *Journal of Sport and Social Issues*, 36(1), 68-88.

- Tucker, I. B. (2004). A reexamination of the effect of big-time football and basketball success on graduation rates and alumni giving rates. *Economics of Education Review*, 23(6), 655-661.
- Turner, S. E., Meserve, L. A., & Bowen, W. G. (2001). Winning and giving: Football results and alumni giving at selective private colleges and universities. *Social Science Quarterly*, 82(4), 812-826.
- 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), 153-172.
- Wanless, L., Jensen, J. A., & Poliakoff, P. (2018). New applications of survival analysis modeling: Examining intercollegiate athletic donor relationship dissolution. *Journal of Sports Analytics*, 5, 1-12.
- Wanless, E., & Judge, L. W. (2014). Improving collegiate ticket sales: The importance of a trained sales staff. *Journal of Facility Planning, Design, and Management*, 2(2), 137-142.
- Weight, E., Navarro, K., Huffman, L., & Smith-Ryan, A. (2014). Quantifying the psychological benefits of intercollegiate athletics participation. *Journal of Issues in Intercollegiate Athletics*, 7, 390-409.
- Weight, E. A., Weight, M. A., & Schneider, R. (2013). Confronting the arms race: Conference commissioner perspectives on spending within intercollegiate athletics. *International Journal Of Sport Management*, 14(4), 441-461.
- Weitz, B. A. & Bradford, K. D. (1999). Personal selling and sales management: A relationships marketing perspective. *Journal of the Academy of Marketing Science*, 27(2), 241-254.
- Wells, D. E., Southall, R. M., Stotlar, D., & Mundfrom, D. J. (2005). Factors related to annual fund-raising contributions from individual donors to NCAA Division I-A institutions. *International Journal of Educational Advancement*, 6(1), 3-10.
- Xu, J., Fader, P., & Veeraraghavan, S. (2015). *Evaluating the effectiveness of dynamic pricing strategies on MLB single-game ticket revenue*. Paper presented at 9th Annual MIT Sloan Sports Analytics Conference, Boston.