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Proceed to Checkout? The Impact of Time in Advanced Ticket Purchase Decisions

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Abstract

When purchasing tickets in advance, sports consumers are often faced with uncertainty. Most notably, in today's real-time environment, it can be challenging for consumers to determine how ticket prices and seat availability will change over time. Guided by the generic advanced-booking decision model, the current study investigated the role of time, ticket source (primary or secondary market), and team identification in advanced ticket purchasing by exploring a consumer's perceptions of ticket availability and finding a lower price. The results suggest the perceived likelihood of ticket availability and finding a lower priced ticket increased as the date of the game drew closer. Ticket source and team identification were also found to be statistically significant main effects factors, while ticket source significantly moderated consumer perceptions of finding a lower price over time. These outcomes both confirm and contradict various findings in the leisure literature and provide a strong foundation for future sport-related examinations.

Introduction

In an environment where several variables could impede a consumer from attending a sporting event (e.g., weather, mood, team performance), advanced ticket sales provide a sport organization with the security of guaranteed revenue. And while revenue from multimedia rights are at an all-time high, event attendance remains the largest revenue source for several professional leagues including Major League Baseball (MLB) and the National Hockey League (NHL; Fisher, 2010). As a result, advance selling has become a distinct marketing objective and ticketing strategy for many organizations looking to combat consumer sovereignty, uncertain event outcomes, and a highly competitive marketplace (Hendrickson, 2012).

The proliferation of the secondary ticket market, which provides consumers with multiple purchase options, has also been a function of the growing importance of advanced ticket sales in sport. Where ticket sources were once limited to the organization or ticket scalpers, the contemporary sport consumer now

has several advance ticket purchase options. For instance, one can obviously still purchase directly from the sport organization (primary market). However, if a sellout occurs, or even if tickets are still available directly from the team, secondary market platforms such as StubHub or eBay provide potential consumers additional purchase options. As a result, organizations in the primary market must adapt to an evolving marketplace and develop appropriate marketing strategies to ensure advanced purchases.

Further complicating advanced sales, and consumer behavior in general, are the varying levels of attachment associated with sport consumers (Koo & Hardin, 2008). Several researchers have suggested that sport organizations intentionally underprice their tickets at least in part to ensure that consumers maintain their positive feelings about the team (Coates & Humphreys, 2007; Fort, 2004; Krautmann & Berri, 2007). However, Drayer and Shapiro (2011) found that "fans who have stronger team identification or loyalty are willing to pay more to see the team play" (p. 396). Additionally, highly identified sport consumers are less affected by

fluctuations in team performance (Branscombe & Wann, 1991; Wann & Branscombe, 1993). That said, less-identified sport consumers are equally important to sport organizations, and despite more dramatic demand fluctuations based on team performance, teams must continually recruit and retain this group of potential consumers (Whitney, 1988). In the end, despite the difficulty in establishing different marketing strategies based on team identification, it has been established as a primary market segmentation strategy. Empirical research related to team identification and advance ticketing strategies is lacking.

In addition to ticket source and team identification, perhaps the most important variable in the advance sales equation is time. With several options from which to purchase, varying levels of team interest, and ultimately, multiple market factors related to ticket supply and demand, sport consumers are forced to speculate before acting. It is challenging for consumers to speculate how ticket prices and seat availability will change over time, not to mention the difficulty of speculating on the consumer utility factors listed above (e.g., weather, mood, and team record). Previous research on demand-based pricing in sport has provided evidence of price shifts based on both time and availability of tickets (Drayer & Shapiro, 2009; Shapiro & Drayer, 2012). However, consumer perceptions of these influences and how they affect purchase decisions within the context of sporting events have not been explored. Thus, guided by the generic advanced-booking decision model (Schwartz, 2000; 2006), this study systematically explored the role of time in an advanced-purchasing setting. In addition, the study examined ticket source (primary or secondary market) and team identification as potential moderators of the advanced sport ticketing process. Given the direct relationship between a consumer's advanced purchasing behavior and an organization's pricing decisions, it is believed that a more comprehensive understanding of the sport consumer decision making process in an advanced-sales setting will aid sport organizations in implementing more effective pricing and revenue management tactics.

Review of Literature

Ticketing Strategies and Sources

Traditional ticket pricing strategies used seat location as the primary factor in determining price differences between tickets. Around the turn of the millennium, several professional sports franchises introduced variable ticket pricing (VTP) which allowed them to use additional factors in setting prices such as opponent and day of the week. However, as these prices were set

before the start of the season, they still ignored the changes in consumer demand for these events over the course of the season. Subsequently, in 2009, the San Francisco Giants introduced dynamic ticket pricing (DTP) where prices changed daily based on fluctuating demand conditions. Over half of the teams in MLB along with several more in the NHL and National Basketball Association (NBA) have now adopted some form of DTP.

While understanding what factors to consider when setting prices on a daily basis is a difficult task, a wealth of previous literature has examined changes in consumer demand. For example, when considering the quality of the game, several researchers have focused on changes in attendance based on the expected outcome. Using a variety of measures including betting odds (Welki & Zlatoper, 1999), difference in league ranking (Garcia & Rodriguez, 2002), average number of games behind the first place team (Noll, 1974), and differences in games won (Price & Sen, 2003), these researchers examined how outcome (un)certainly may influence consumer demand for an event. There is no shortage of research on the factors influencing consumer demand (see Borland & McDonald, 2003, for a summary of such studies). However, these studies examined consumer demand based on fluctuations in attendance and did not consider how these factors may influence consumer attitudes and/or their willingness to pay for tickets. Further, DTP considers how these factors change over time suggesting that perhaps the importance of these factors may be influenced by time itself.

The evolution of primary market pricing strategies from a seat-location-based approach to VTP, and eventually DTP, coincides with the growth of the secondary market. With the ability of the Internet to quickly and conveniently facilitate transactions, this resale market has evolved into a legitimate, multi-billion dollar industry (Drayer & Martin, 2010). In this transparent, free-market environment, research has been conducted which has further illuminated customer preferences for tickets. For example, Drayer and Shapiro (2009) examined online auctions on eBay and determined that several factors, including home and visiting team performance, population, and day of the week influenced the amount customers were willing to bid for tickets. Additionally, they found the number of days before the game affected final auction prices. In other words, prices decreased as the event drew closer.

Shapiro and Drayer (2012) also compared dynamic prices in the primary market to secondary market prices on StubHub. They determined sellers in the primary market steadily increase prices over time while secondary market sellers were more inclined to lower prices over time. In this case, sellers' consideration of

the effect of time on consumers' willingness to pay is quite different. This suggests the phenomenon is in need of further examination.

The influence of time was also apparent in the work of Moe, Fader, and Kahn (2011), who found ticket sales were influenced by constantly fluctuating factors such as team performance and days before the game. As attractiveness of teams fluctuates based on performance, and the game date nears, ticket sales and seat location choices change. The authors concluded data-driven pricing decisions based on consumer demand are most likely to capture true value of the ticket as prices can change based on outcome uncertainty.

Of course, consumers' perceptions of the *source* of these tickets may also influence consumers' perception of the ticket being offered. The studies mentioned previously focus primarily on sellers' price setting strategies and ignore how consumer perceptions of the product may influence these consumption decisions. There is a wide array of research suggesting that consumers' perception of a product goes beyond the extrinsic characteristics and may be influenced by other intrinsic attributes such as perceived trustworthiness of the seller and experience with similar transactions in the past (i.e., reference transactions). For example, Xia, Monroe, and Cox (2004) found that transaction similarity and buyer-seller relationship influenced consumer attitudes. Within the tourism and hospitality literature, several studies have considered consumers' perceptions of the seller. However, given that the product is guaranteed to be the same across all platforms, third party websites' formalized relationships with hotels. Several studies have focused primarily on the fairness of sellers' pricing strategies (Choi & Mattila, 2005; Kimes, 2003; Wirtz & Kimes, 2007).

There are, however, differences between tourism and sport. Specifically, third party sellers (i.e., secondary market sellers) are not supplied with tickets from sport organizations through any contractual relationship, meaning that consumers may be uncertain about the authenticity of the ticket. One of the unique features of the secondary market is that perceptions of the industry have been affected by previous instances of unethical business practices and the existence of laws in many states that makes ticket resale illegal (Drayer & Martin, 2010). Thus, consumers' perceptions may be affected by not only the price of the ticket but also their perception of the source. However, to date, no research has explored how ticket source affects consumers' attitudes and purchase intentions. In the advanced ticket purchase setting, ticket source may be an intriguing and timely variable as sport consumers are no longer strictly limited to a team's pricing structure.

Team Identification

Identification refers to the roles an individual plays within a network of social relationships (Stryker & Burke, 2000). Identities are organized and conceptualized through social interactions, and these identities can influence behavior (Stryker, 1968, 1980). Social interactions not only affect the development of identification, but these interactions impact the salience of these identities. This is the foundation of identity theory proposed by Stryker (1968, 1980).

Various facets of identity theory have been examined in social-science research providing significant evidence of the role identity plays in the decision making process. Within the context of sport marketing, there is a wealth of literature on the role of identification and its relationship with other aspects of sport consumer behavior (Lock, Taylor, Funk, & Darcy, 2012; Fink, Trail, & Anderson, 2002; Trail, Anderson, & Fink, 2000; Wann & Branscombe, 1993; Zillman, Bryant, & Sapolsky, 1989). According to Wann and Branscombe (1993), team identification can be used not only to understand the interaction between sport consumers and teams, but to gauge the level of consumer behavior. In essence, team identification can help predict sport consumption.

Some of the early research on sport and identification claimed spectator sport provides an opportunity for individuals to establish a sense of belonging and develop relationships with other sport consumers who identify highly with a team (Zillman et al., 1989). High levels of identification with a team have been shown to enhance one's allegiance to that team regardless of performance (Branscombe & Wann, 1991). This is an important point of emphasis, as the literature on demand in sport has consistently identified a positive relationship between team performance and attendance (Hansen & Gauthier, 1989; Lemke, Leonard, & Tlhokwane, 2010; Noll, 1974; Whitney, 1988). In general, consumers attend fewer games when a team does not perform well. In the case of highly identified consumers, however, team performance is less of a factor (Branscombe & Wann, 1991; Wann & Branscombe, 1993).

Additionally, team identification has been shown to influence consumption within a variety of contexts beyond event attendance. Wann and Branscombe (1993) found highly identified sport consumers tend to invest more time and resources into their favorite team. Subsequent examinations have supported these findings. Wakefield (1995) found a positive relationship between team identification and re-patronage, providing some of the first evidence that a consumer's attachment to team can have an effect on future intentions. Trail et al. (2000) and Trail, Fink, and Anderson

(2003) found highly identified sport consumers are more likely to attend games. Additionally, Trail et al. (2003) discovered these consumers purchase more team-related merchandise.

In terms of team identification moderating various attitudes and behavior within the context of sport, the research is limited. Trail et al. (2012) examined whether team identification moderated the relationship between vicarious achievement and basking in reflected glory (BIRGing) or cutting off reflective failure (CORFing). There were no interacting effects found for the moderating models. However, Wann and Branscombe (1993) suggest this moderated relationship could exist based on the fact that individuals with high team identification would be more likely to support the team and less likely to reject them regardless of outcome. The extent to which a relationship between time and ticket purchase decisions might be influenced by attachment to a team is unknown.

Although there is strong support for the relationship between team identification and consumption, little is known regarding the level of team identity and the ticket purchase process. In the current demand-based pricing environment, where the price and number of tickets available are constantly changing, it is important to understand the role identification may play in a sport consumer's decision to purchase a ticket at a given time before a game. This information becomes

more important as consumers begin to fully understand the process of DTP and the secondary ticket market, where prices may fluctuate daily making it difficult to determine the optimal purchase time and/or price. The role of team identification in this process should not be understated.

Theoretical Background

The generic advanced-booking decision model (Schwartz, 2000; 2006) served as the theoretical foundation for this study as it is grounded in the consumer decision making process. This model was developed and validated in the field of travel and tourism with the particular aim at understanding the process of hotel reservations. In general, the literature on advanced selling comes almost exclusively from the field of travel and tourism (e.g., airlines & hotels) where price discrimination and yield management strategies have been found to provide competitive advantages for gaining market share, ensuring capacity fulfillment, and ultimately, creating profitability (Gale & Holmes, 1992; Shugan & Xie, 2000; 2005; Xie & Shugan, 2001).

However, the extension of this particular theory to the field of sport marketing is both logical and needed (Gibson, 1998). First, several similarities exist in the experiences of sport consumers and tourists with respect to product and service consumption. For

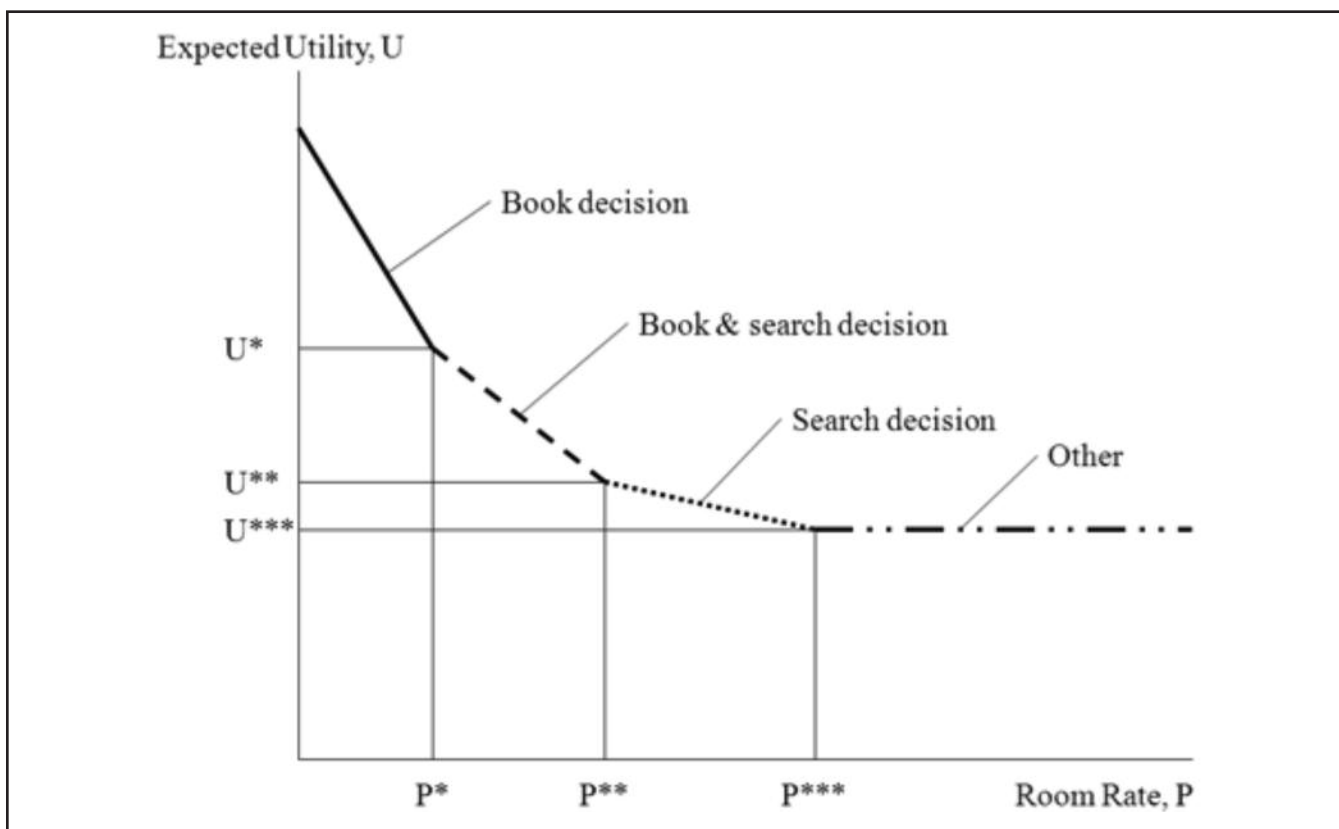


Figure 1. Generic Advanced-Booking Decision Model (Schwartz, 2000; 2006) Rates and Optimal Zones

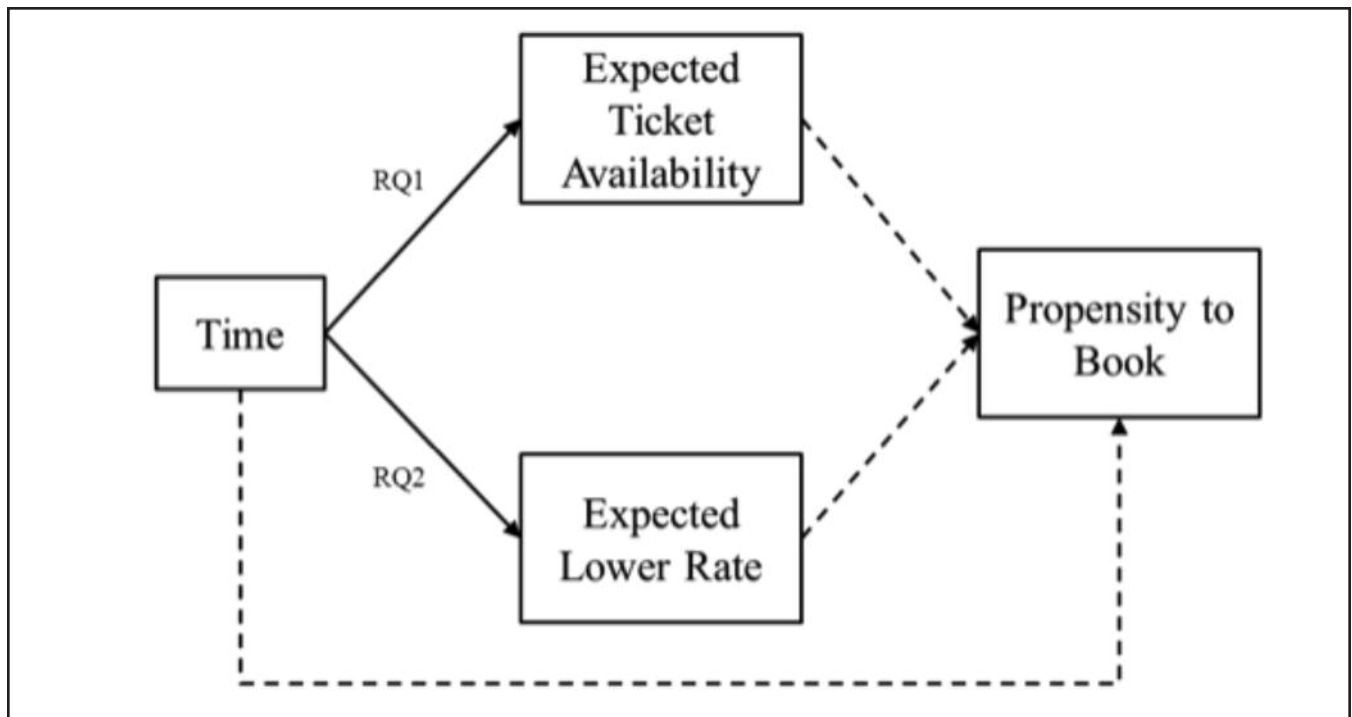


Figure 2. Conceptual Model for Research Questions 1 & 3

instance, similar to staying in a hotel, attending a sporting event is a perishable experience driven by the intersection of tickets available (hotel rooms available), ticket price (room rate), and consumer demand. Second, purchasing a ticket or reserving a room in advance have similar uncertainties related to availability as limited information about alternatives is readily accessible. Lastly, due the similarities between the tourist and sport consumer experiences, there is a growing need to bridge theoretical gaps between the two fields (Gibson, 1998).

According to the model, prospective consumers have four different generic decision options as they respond to a price quoted by a hotel: (1) reserve the hotel room, (2) reserve the room and continue searching for a better rate, (3) not reserve and continue searching for a better rate, or (4) disregard the hotel entirely and consider alternatives. Placed on an expected utility-rate plane, as depicted in Figure 1, one can see three strategic switching points where one must choose between the rate quoted by the hotel and the other options. The model assumes risk neutral consumers that choose the action in which their expected utility is maximized. Several variables are at play in the determination of the switching points including the search cost, the discount the consumer expects the hotel will offer in the future, the probability the hotel will sell out, the probability that a discounted rate will be offered after a given number of periods of search, and the penalty for canceling the reservation. From the hotel's perspective,

it is preferable that the consumer choose option one followed by option two, three, and four.

Clearly, the options available to sport consumers are not exactly the same as it is not an accepted practice to reserve a ticket while searching for alternatives. Most ticket transactions are final. However, with the emergence of the secondary ticket market, opportunities exist to resell tickets purchased in advance to recoup some or all of the cost. In the case of a high-demand event, selling a ticket on secondary ticket market may even result in a substantial profit. Regardless, the specific options available to sport consumers as compared to hotel consumers are not of particular importance in this context. In general, advance-booking consumers, sport or otherwise, have several options when quoted a price, and it is the incorporation of timing within the advanced-booking model that makes the extension cogent.

In 2008, Schwartz extended the generic advanced-booking model to include time as a variable claiming the options available to consumers are not static over time. In other words, holding all other factors constant, the decision to reserve a hotel depends somewhat on how far out the purchase decision was from the date of stay. Two specific variables in the model were identified as important factors in the decision making process as they relate to time. First, to ensure occupied rooms, it has become common for hotels to change prices as the date of stay nears based on supply and demand. As mentioned above, DTP strategies that account for fluctuating demand have emerged in professional sports as a means to more effectively manage

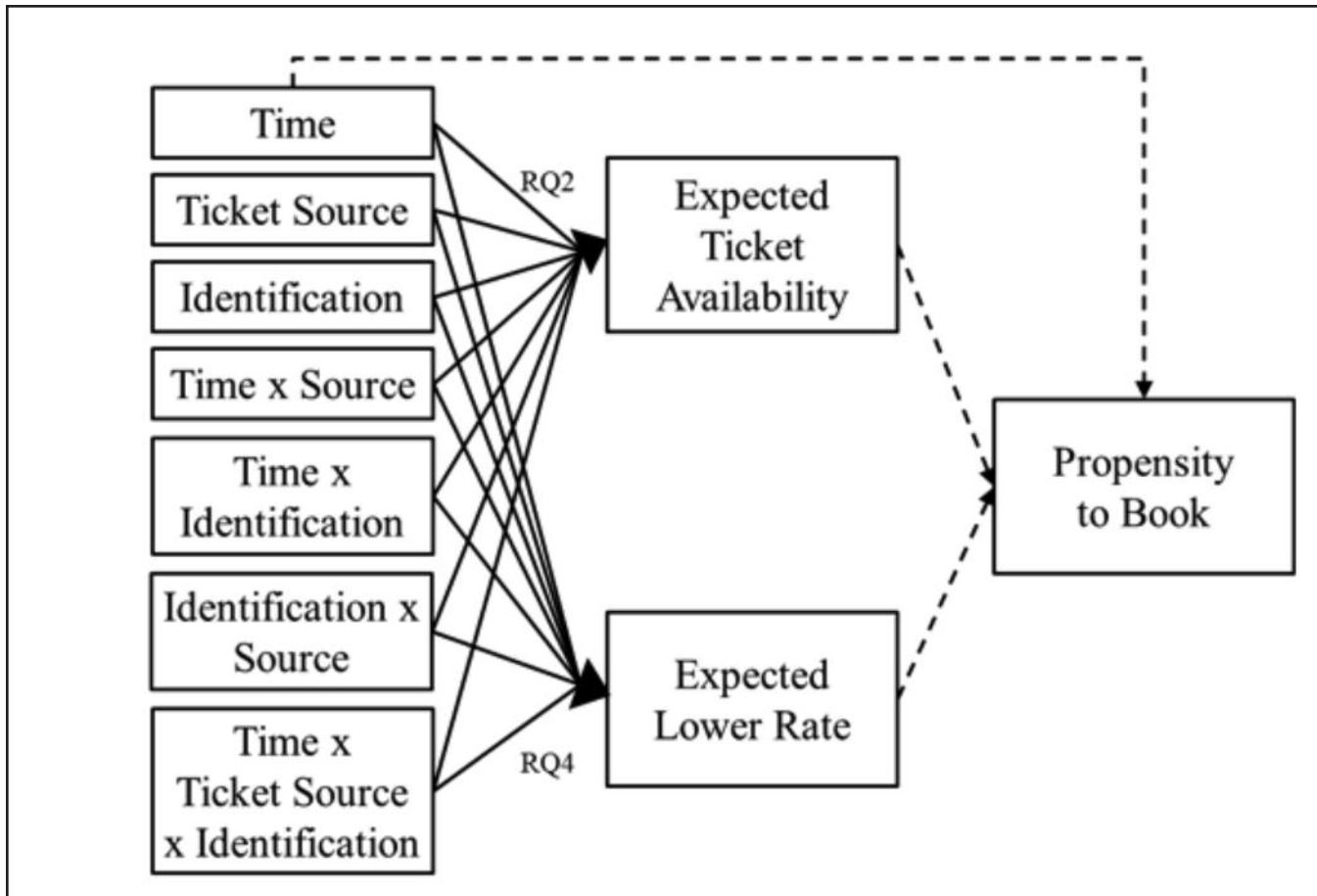


Figure 3. Generic Advanced-Booking Decision Model (Schwartz, 2000; 2006) Rates and Optimal Zones

revenue. Thus, the probability that a discounted price will be offered in the future (Expected Lower Rate [ELR]) is an important variable in the advanced-booking decision process. Second, the supply of hotel rooms and sporting event tickets is limited; thus, the probability the hotel or game will sell out (Expected Ticket Availability [ETA]) is an important variable in the purchasing process.

Schwartz (2008) argued for the testing of this time-related extension of the advanced-booking model. It was proposed that testing of the impact of time in a booking decision would provide organizations a better understanding of the time-related shifts in consumer perception and propensity to book. As a result, organizations could practice more effective revenue management strategies. Chen and Schwartz (2008b) tested the impact of time on ELR and ETA related to hotel booking decisions and found that consumer perceptions and expectations about variables related to advanced booking changed as the date of stay neared. The change patterns were more complicated than hypothesized, and as a result, the authors suggested further research. In particular, the authors recommended investigations should focus on the final 21 days before the intended hotel stay.

Similar empirical research in the field of sport management and marketing is lacking despite the fact that understanding time-related shifts in demand would provide vital revenue management information. Thus, the current study explored the role of time in the advanced-ticket purchasing decisions by first measuring the impact of time on a sport consumer's expectations of ticket availability (ETA) and finding lower priced tickets (ELR) with respect to a given professional sporting event. Second, given the potential importance of team identification and ticket source, these variables were examined as moderators of the time, ELR, and ETA relationship. Moderating relationships were hypothesized for team identification and ticket source because relationships between time, ELR, and ETA have been established in the travel and tourism literature, and similar relationships were hypothesized for this study.

Figure 2 provides the conceptual model for the first aim of the study, and Figure 3 provides the conceptual model for the second. The solid lines denote relationships examined in the current study where the dotted lines were established by Schwartz (2000) or Chen and Schwartz (2008a). The following research questions were developed to guide the research:

RQ1: Does a consumer's expectation of ticket availability with respect to an upcoming professional sporting event differ over time?

RQ2: Is the relationship between consumer expectation of ticket availability and days before the event moderated by ticket source and/or team identification?

RQ3: Does a consumer's expectation of finding lower priced tickets with respect to an upcoming professional sporting event differ over time?

RQ4: Is the relationship between consumer expectation of lower priced tickets and days before the event moderated by ticket source and/or team identification?

Method

Sample and Procedures

Through a partnership with the Philadelphia Inquirer, the research team had access to a panel of over 2,300 Philadelphia area sports fans. As a result, a Philadelphia Flyers' home game against the Montreal Canadiens was chosen as the context for the investigation. Participants were solicited electronically via three date-specific email blasts prior to a March 24th game. Within each email, a brief message and link were provided to an online questionnaire. The online questionnaire was hosted by Qualtrics. An incentive was provided to entice participation. Subjects who agreed to participate were provided one of two written, imaged-enhanced scenarios: (1) an opportunity to purchase a ticket from the Flyers website, or (2) an opportunity to purchase the same ticket from StubHub.com, the largest secondary ticket market website (see appendix). According to the scenario, the participant and a friend decided to attend the Saturday evening game, and the participant volunteered to find tickets. They (according to the scenario) went directly to the Flyers' website or StubHub.com and found a pair of lower level tickets for \$165 each. The arena seating chart was provided as was an image of the view from the seat. After reading the scenario, the subjects were asked to answer two questions estimating the probability of future events (the two dependent variables). Team identification and demographic information was collected as well.

Variables

Independent variable. The independent variable was time, specifically the number of days before the hockey game. Three levels were chosen based on previous travel research and secondary data provided by StubHub. While purchasing tickets in advance may occur any time after the season schedule is released, the volume of secondary market transactions that occurred within

the last three weeks leading up to the event was substantial enough to warrant a shorter range of dates. In addition, the time related work of Chen and Schwartz (2008b) resulted in greater variability within this range. As a result, six, 13, and 19 days prior to the game were selected. Participants were randomly assigned to one of the three treatments via email solicitation.

Dependent variables. The two dependent variables for this study were ETA, a participant's assessment of the expected availability of the same or similar ticket between the scenario date and the game, and ELR, a participant's assessment of finding a similar priced ticket between the scenario date and the game. Both variables were measured by percentage expectation between 0 and 100. Similar measures were used in Chen and Schwartz's (2008b) study of hotel room rates and time.

Moderating variables. Ticket source, either primary (Flyers.com) or secondary (StubHub.com), was added as a moderating variable given the possibility that the secondary ticket market may influence consumer behavior (Carter, 2012). Subjects were randomly assigned one of two ticket sources and grouped as such. In addition, team identification was examined as a potential moderator to investigate the importance of team fandom as a function of time, ETA, and ELR. Team identification was assessed through Trail, Robinson, Dick, and Gillentine's (2003) team attachment items from their larger Points of Attachment Index. The three item scale used a seven point Likert type (7=strongly agree; 1=strongly disagree). Participants were placed into one of two groups (high and low) based on their mean attachment score. A score of less than four was deemed low and four or greater was deemed high.

Statistical Tests

A multivariate analysis of variance (MANOVA) was conducted to determine the overall differences in the mean likelihoods between groups. A MANOVA is the appropriate statistical test to conduct when there are multiple dependent variables that are moderately correlated (Tabachnick & Fidell, 2007). Two 3x2x2 factorial analyses of variance (ANOVA) were then conducted to determine if there were any differences in the mean assessments for each treatment. The main effects results were analyzed for time to answer research questions one and three while the interaction effects were assessed for ticket source and time and, team identification and time, and ticket source, team identification, and time to answer research questions two and four. A post hoc test (Tukey) was also conducted to see which time treatment differed from the others. Additionally, due to the use of the same

Table 1
Sample Demographics

Age	33.674, Mean 11.792, SD
Ethnicity	92.0%, Caucasian 5.7%, Other 2.3%, Did not specify
Education	6.4%, High School 41.1%, Bachelor's Degree 18.0%, Graduate Degree 16.5%, Professional Degree 7.7%, Other 9.0%, Did not specify
Gender	79.2%, Male 14.9%, Female 5.9%, Did not specify
Household Income	12.3%, Less than \$50K 30.1%, \$50K-\$99K 24.7%, \$100K-\$150K 6.1%, More than \$150K 16.8%, Did not specify

dependent variables in two separate procedures, a Bonferonni adjustment was made. The significance value was set at .025 for all main effects.

Results

A total of 415 Philadelphia area sports fans responded to the email solicitation with 389 fully completing the survey resulting in a response rate of 16.9%. Table 1 provides demographic information for the sample. Table 2 shows the number of observations in each of the three time treatments as well as the averages and standard deviations for each of the two dependent variables (ELR and ETA). Respondents who were solicited 19 days before the hockey game estimated the likelihood of the same or similar tickets being available sometime during the next 18 days to be 35.9%. At 13 days, the respondents estimated the ticket availability to be 47.1%, and the respondents at six days estimated the availability to be 52.5%. With regard to lower ticket prices, the respondents at 19 days estimated the likelihood of finding the same or similar tickets at a lower price during the next 18 days to be 31.1%. The respondents at 13 days out estimated the probability to be 43.6%, and at six days, the respondents estimated the probability to be 48.6%. In general, as the game drew

Table 2
Expected ticket availability (ETA) and expected lower rate (ELR) by days before the event

Days Before the Game	Number of Observations	Expected Ticket Availability		Expected Lower Rate	
		Average (%) ^a	SD	Average (%) ^b	SD
6	119	52.5	24.7	48.6	26.5
13	135	47.1	30.5	43.6	28.2
19	135	35.9	27.4	31.3	28.8

^a Main effects result, $p < .001$
^b Main effects result, $p < .001$

Table 3
Expected ticket availability (ETA) and expected lower rate (ELR) by ticket source

Ticket Source	Number of Observations	Expected Ticket Availability		Expected Lower Rate	
		Average (%) ^a	SD	Average (%) ^b	SD
Flyers Website	193	36.7	26.5	32.5	27.5
StubHub.com	196	52.7	27.2	49.9	27.6

^a Main effects result, $p < .001$
^b Main effects result, $p < .001$

Table 4
Expected ticket availability (ETA) and expected lower rate (ELR) by team identification

Level of Team Identification	Number of Observations	Expected Ticket Availability		Expected Lower Rate	
		Average (%) ^a	SD	Average (%) ^b	SD
Low	171	40.7	26.0	36.6	28.0
High	218	47.7	29.1	44.8	28.8

^a Main effects result, $p = .01$
^b Main effects result, $p = .003$

Table 5
Expected lower rate (ELR) and expected availability (EA) by days before the event and ticket source interaction

Days Before the Game	Ticket Source	Number of Observations	Expected Ticket Availability		Expected Lower Rate	
			Average (%) ^a	SD	Average (%) ^b	SD
6	Flyers Website	57	42.8	23.9	37.5	24.6
	StubHub.com	62	56.3	23.9	54.5	26.5
13	Flyers Website	68	35.1	26.5	35.2	26.7
	StubHub.com	67	57.1	30.1	54.4	28.2
19	Flyers Website	68	32.2	28.2	22.6	26.6
	StubHub.com	67	42.7	25.5	39.1	28.8

^a Main effects result, $p = .041$
^b Main effects result, $p = .018$

closer, the respondents' perceived probability of both ticket availability and finding lower ticket prices increased with the biggest jump occurring between 19 days out and 13.

The MANOVA test was significant $F(4,770) = 6.25$, $p < .001$ suggesting the participants in each time period differed in regard to their assessments of ETA and ELR. Based on the MANOVA results, the subsequent factorial ANOVAs were conducted. The main effects results of the ETA factorial ANOVA with regard to time suggest that the respondents' estimate of ticket availability differed between the treatments $F(2,377) = 13.50$, $p < .001$. The Tukey HSD post hoc test indicated that the respondents' estimate of ticket availability at 19 days was significantly lower than the respondents at 13 and six days. No difference existed between the groups at 13 and six days. The main effects results of ETA with regard to ticket source $F(1,377) = 30.05$, $p < .001$ and team identification $F(1,377) = 6.69$; $p = .010$ also resulted in statistically significant differences. Respondents provided with the StubHub.com scenario felt the probability the same or similar ticket would be available between the scenario date and the date of the game was higher than those provided with the

Flyers.com scenario. Meanwhile, those with a higher level of team identification felt there was a better probability the same or similar ticket would be available between the scenario date and the date of the game than those with a lower level of team identification. Tables 3 and 4 provide the main effects results for ticket source and team identification.

The interaction effect results with regard to moderating influence of ticket source and time was significant $F(2,377) = 3.20$; $p = .008$. As can be seen in Table 5, 19 days before the game, respondents provided with the StubHub.com purchasing scenario felt there was a higher probability the same or a similar ticket would be available in the days leading up to the game compared to those provided with the Flyer's website scenario. The same interaction effect was true for the respondents presented with the differing scenarios 13 days out and six days out. The other possible moderators of ETA (time x team identification, source x team identification, time x source x team identification) did not result in a statistically significant interaction effect.

The main effects results of the ELR factorial ANOVA with regard to time was also statistically significant indicating a difference between the treatments $F(2,377)$

= 5.58; $p = .004$. Similar to the ETA results, the post hoc findings indicate the respondents' estimate of finding lower ticket prices 19 days out was lower than the groups at 13 and six days. No difference resulted between the groups at 13 and six days prior to the game. Statistically significant differences resulted for the main effects of ticket source $F(1,377) = 36.44$, $p < .001$ and team identification $F(1,377) = 9.23$, $p = .003$ with regard to ELR. Once again similar to the ETA results, respondents provided with the StubHub.com scenario felt the probability of finding a similar ticket at a lower price between the scenario date and the date of the game was higher than those provided with the Flyers.com scenario. In addition, those with a higher level of team identification felt there was a better probability of finding a lower priced ticket compared to those with lower identification levels.

The interaction effect between time and ticket source was once again statistically significant $F(2,377) = 2.33$, $p = .023$ suggesting respondents provided the StubHub.com scenario at each time interval felt there was better probability of finding a similar ticket for a lower price than those provided the Flyer website scenario. The other possible moderators of ELR (time x team identification, source x team identification, time x source x team identification) did not result in a statistically significant interaction effect.

Discussion

The purpose of this study was to systematically investigate the impact of time in the advanced-booking setting of a professional hockey game. Ticket source and team identification were also examined as potential moderating variables between time before the event and a consumer's estimation of ticket availability and finding lower priced tickets. The results suggest that as time before the event decreased, a consumer's estimation of ticket availability and finding a lower ticket price increased significantly. In addition, respondents provided with the secondary ticket source (StubHub) had a higher estimation of ticket availability and finding a lower ticket price than those presented with the primary source (Flyers' website) scenario. Respondents with a higher level of team identification also had higher estimations for both dependent variables than the respondents with a lower level attachment to the Flyers.

With respect to previous applications of the generic advanced-booking decision model, the results appear to mildly parallel the impact of time on consumer perceptions of availability and price (Chen & Schwartz, 2008b). However, the results soundly confirm the impact of time as an influential variable within the consumer decision process, as statistically significant differences existed with respect to consumer probabili-

ty over time (Chen & Schwartz, 2008a; 2008b).

Therefore, the future application of the theoretical model in the field of sport marketing should include data from different points in time. Preferably, the inclusion of several points of time may provide more insight to the specific influence of time. In addition, a more complete understanding as to *why* consumers perceive ticket prices will decrease and availability will increase or stay constant as time before the event decreases is needed. Howard and Crompton (2004) suggested the sport industry was headed towards more consumer focused pricing strategies as opposed to previous regimes' aim at covering organizational costs. In that case, further empirical research related to the impact of time, consumer perceptions, and the advanced booking process is strongly suggested. A more complete understanding of consumer perceptions of ticket price and availability over time will provide for more effective pricing strategies, revenue management tactics, and ultimately, less empty seats in the stadium.

Additionally, these findings are consistent with previous sport literature stating the effect of time on price, which has focused on consumer demand for tickets (Moe et al., 2011; Shapiro & Drayer, 2012). Moe et al. (2011) found that in addition to team performance, time played a significant role in ticket sales numbers. Ticket sales appear to fluctuate more rapidly as the game draws closer. This finding was also supported by Shapiro and Drayer's (2012) examination of San Francisco Giants ticket prices during the first full year of DTP implementation. In the primary market ticket prices gradually increased as the game drew closer, where in the secondary market, ticket prices rose initially (approximately a month before the game) and then dropped considerably leading up to game time. These examinations focused on actual ticket sales and price data. The current study supports the impact of time in terms of the consumer's perception of price and availability, suggesting a global influence from both the organization and consumer perspective.

The distinct impact of ticket source as both a main effects and moderating effect on a consumer's perception of price and availability is a finding new to both the tourism and sport literature. Obviously, the number of studies in this area is small, but statistically significant differences in consumer estimations by ticket source were present. Similarly, the differences between the primary source-participants expanded as time before the game decreased, as the respondents with the primary source scenario felt less likely to find lower priced tickets and less likely the seats would remain available. Several possible explanations may exist as to why this phenomenon is occurring. For instance, per-

haps consumers perceive the prices offered on StubHub are more fluid than prices offered by the Flyers, or perhaps the same perception exists with regard to the number of options for similar tickets on StubHub compared to the team's website. It could also be a function of the general consumer's lack of awareness of DTP from a team's perspective. Obviously, these are just suggested possibilities, as the answers to these propositions go far beyond the scope of the current results, but it is important to note that the probabilities were different based on ticket source and ticket source and time; thus, several questions remain. For instance, what do these results have to do with the popularity of secondary ticket market and/or consumer familiarity with these platforms? In addition, are these results unique to sport or is it unique to secondary markets? Further research in this area is highly-advised.

Team identification was not found to be a moderating variable as hypothesized, but it was determined to be an influential variable within the advanced-purchasing process. The inclusion of this variable was based partly on the uniqueness of sport in eliciting a one-of-a-kind connection between a consumer and the product. Previous research had already established the importance of team identification in association with consumption and event attendance (Trail et al., 2000; Trail et al., 2003; Wakefield, 1995). Therefore, as a result of this bond, there was a possibility highly-identified consumers would behave irrationally with respect to time and estimations of price and availability. However, the results suggested no significant relationship with time and the dependent variables existed, and highly-identified consumers actually indicated higher estimations of ticket availability and finding a lower price. Perhaps highly-identified consumers are not only more attached to the team, but also more knowledgeable of the advanced ticketing process. That is, these consumers may be more aware of the ticket market and price fluctuations through DTP and the secondary market. Research related to team identification and consumer knowledge is sparse. Wann and Branscombe (1995) found a relationship between team identification and objective/subjective knowledge of the sports team, but the study focused more on fandom than consumer knowledge. Thus, there is an opportunity for more empirical research in this area, as well.

From a practitioner's perspective, the results related to time and advanced purchases are essential especially with the supreme importance of advanced sales for revenue management (Hendrickson, 2012). There are practical considerations related to time and market segmentation. Target markets are typically segmented based on simple descriptors such as gender, age, geography, and frequency of purchase. However, one the

most unique features of DTP is that it allows the seller to consider changes in consumer demand over time. In previous research, time has been an important factor in predicting final sale prices (Drayer & Shapiro, 2009; Moe et al., 2011). The results of the current study indicate that, similar to the tourism and hospitality industries, sport marketers may be able to segment consumers based on time. The findings of the current study suggest that greater uncertainty exists the further back the ticket sales pitch occurs. Sport marketers may be able to capitalize on this sense of urgency and continue to push customers to purchase tickets well in advance of an event.

Interestingly, Drayer and Shapiro (2009) found that secondary market prices in an auction environment (where consumers determined the ultimate sale price) tended to decline over time. Further, Drayer, Shapiro, and Lee (2012) suggested that consumers who were educated about DTP might ultimately be able to manipulate the market by waiting for prices to fall over time. In this case, sport properties can be reassured that there still exists a sense of urgency over time. Although this phenomenon is still in need of further examination, DTP creates an opportunity for sport marketers to segment consumers based on time. Shapiro and Drayer (2012) found the dynamic ticket prices in the primary market slowly increased over time. While sport organizations may do this in order to protect the integrity of their ticket prices and encourage advanced sales, this strategy may ignore consumers' expected evaluation of the ticket market over time. Ultimately, sport marketers must continue to balance traditional pricing strategies with an understanding of consumer response to specific pricing stimuli.

Limitations & Future Research

While the study was grounded in sound theory, it was essentially an exploratory study within the field of sport. As a result, the findings only compare differences in consumer estimation at specific points in time. It does not, however, explain how or why these patterns formed. As indicated, more research is needed examining time as a variable within sport consumer decision making. For instance, as suggested by Chen and Schwartz (2008a), more research within the final 21 days before the event may be beneficial. The current study only examined three distinct points within this period, but perhaps a less restrictive investigation of several points or perhaps even all points of time between day 21 and game day would provide additional insight about this volatile segment of time.

Another potential limitation of this study was the context of professional hockey. While still considered a mainstream sport by many, it is obviously less popular

than the National Football League, the National Basketball Association, and Major League Baseball, to the average consumer. The population selection of general Philadelphia area sports fans as opposed to only Flyers or even only hockey enthusiasts helps the study's generalizability, but it also makes it hard to assess the impact of the context on the variables under examination. For instance, would the results differ from an investigation of another league? In addition, the researchers selected a Saturday evening game late in the season against a somewhat premium opponent (Montreal Canadiens). How much did these specifics of the game impact the results? The study also included real-life, time-specific details in the scenarios provided to the participants in an attempt to create a quasi-experimental research setting. As a result, several constraints could have limited a participant's interest in attending the Flyers game. For example, participants may have already had plans for the weekend or perhaps even already had tickets to the game.

Along the same line, there is a need in the field for additional longitudinal studies on sport consumers. Too often, a cross section of individual attitudes and behaviors are studied with respect to a given phenomenon. However, as this study shows, consumers are dynamic and fluid. Thoughts and actions change over time, and while methods (as employed in this study) accounting for the influence of time may require more work upfront, the potential for more impactful results subsist.

Lastly, as mentioned throughout the discussion section, several possible extensions of this study exist for future examination. For instance, a closer look at how and why participants believed ticket prices would decrease, yet availability would increase as time before the event decreased is a logical follow-up. In addition, inquiry related to team identification and other forms of consumer knowledge would be an enticing extension. Investigating other sport-related factors that are likely to interact with time within the advanced-purchasing process would also be fruitful. For example, stadium location, team and opponent quality, or even number of seats needed could interact with the time variable. Consumer familiarity with both primary and secondary markets in conjunction with time, perceived fairness, and perceived value would also be an interesting line of research. In all, the examination these distinct attitudinal patterns over time is of great importance to the field, as they may provide a more clear understand of consumer behavior in an advanced-purchasing setting.

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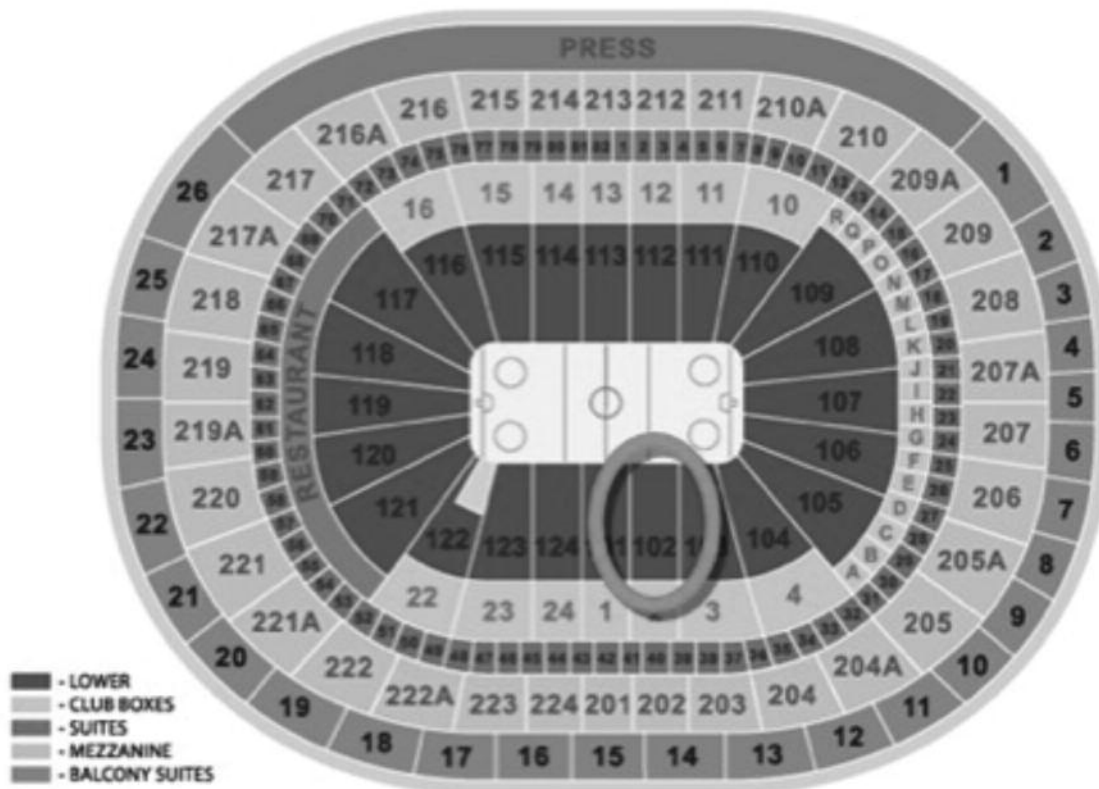
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Appendix

Flyers.com Scenario

Consider the following scenario: a good friend suggested going to a Philadelphia Flyers game on Saturday, March 24th, 2012 (7 p.m.) where the Flyers play the Montreal Canadiens. You went directly to the Flyers' website (www.flyers.nhl.com) and found two tickets in the middle of section 102 (see Seating Chart and View from the Section) for \$165 each.

WELLS FARGO CENTER – SEATING CHART



Please answer the following questions after carefully considering all of the facts outlined in this scenario.

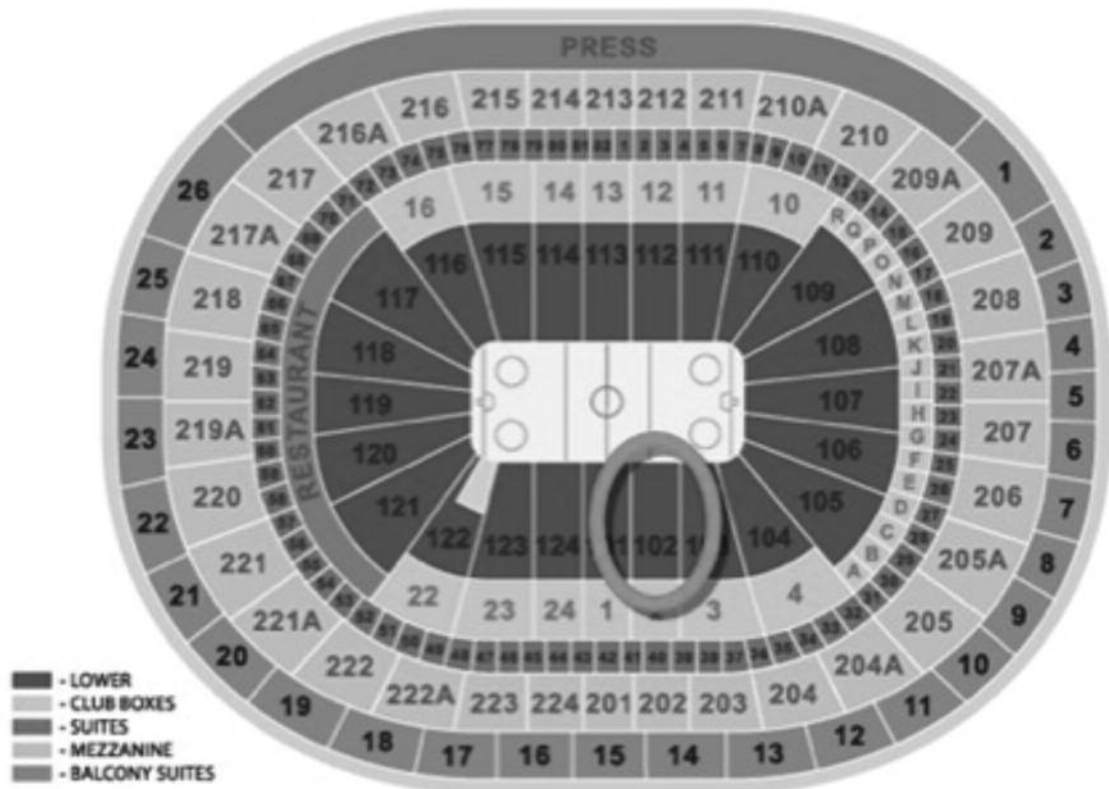
I believe the chance the same or very similar tickets will be available between tomorrow (DATE) and Saturday, March 24th is ____%. (Please indicate a number between 0 and 100).

I believe the chance that I could find the same or very similar tickets somewhere else at a price lower than \$165 each between tomorrow (DATE) and Saturday, March 24th is ____%. (Please indicate a number between 0 and 100).

StubHub.com Scenario

Consider the following scenario: a good friend suggested going to a Philadelphia Flyers game on Saturday, March 24th, 2012 (7 p.m.) where the Flyers play the Montreal Canadiens. You went directly to the StubHub website (www.stubhub.com) and found two tickets in the middle of section 102 (see Seating Chart and View from the Section) for \$165 each.

WELLS FARGO CENTER – SEATING CHART



Please answer the following questions after carefully considering all of the facts outlined in this scenario.

I believe the chance the same or very similar tickets will be available between tomorrow (DATE) and Saturday, March 24th is _____. (Please indicate a number between 0 and 100).

I believe the chance that I could find the same or very similar tickets somewhere else at a price lower than \$165 each between tomorrow (DATE) and Saturday, March 24th is _____. (Please indicate a number between 0 and 100).