

FACTORS INFLUENCING CONSUMER PURCHASES OF AUXILIARY ITEMS IN  
ENTERTAINMENT VENUES

by

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Honors Thesis

Appalachian State University

Submitted to the Department of Management  
and The Honors College  
in partial fulfillment of the requirements for the degree of

Bachelor of Science

December, 2016

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### **Abstract**

This study examines factors that contribute to an individual's decision to make purchases inside collegiate football stadiums. Specifically, this study focuses on the relationship between industry standard elevated prices for auxiliary items, such as concessions and merchandise, and the consumers' willingness to pay elevated rates for these items. Results are mixed, but suggest that game and environmental factors, as well as gender, contributed to higher willingness to pay. Results also indicated that consumption of alcoholic beverages before a game is very likely, and that regardless of alcohol consumption before the game, respondents were still likely to purchase alcohol once inside the stadium.

### **Introduction**

Within the live entertainment industry, it is generally understood that prices of auxiliary items, such as concessions, are typically elevated beyond normal levels. Elevated prices for auxiliary items have become customary in the industry. As a result, consumers may anticipate these higher prices and either avoid purchasing these items, or avoid attending events altogether. While some people accept paying higher prices in these types of environments, many are turned away, resulting in lost sales. There may exist lost revenue to the entertainment venue due to elevated prices pushing people away. This study examines the factors that contribute to an individual's decision to make purchases inside collegiate football stadiums. By discovering these factors, venue managers may be able to more accurately predict situational variables in a particular event, and adjust prices accordingly to maximize revenue.

Specifically, this study focuses on consumers' level of fanaticism, time of day variables, in-game components, availability of alcohol, group size, ability to use credit cards, demographics, and anticipated spending as they relate to the individual's merchandise and concessions purchases. Findings from this study could be applied to entertainment venues as a whole, and are not necessarily limited to collegiate football games. The results of this study could be used to better understand patterns of consumer spending in these environments, and would allow managers to better predict these patterns to maximize revenue.

### **Literature Review**

#### **Satisfaction with Price**

In the sports and entertainment industry consumers are generally satisfied with their ticket purchase (Palmero & Price, 2015). Consumers are however generally dissatisfied with prices of merchandise and concessions at sporting events (Palmero & Price, 2015). Specifically, in the collegiate sports setting, Hardin, Ruihley, and Veraldo found that 14.96% of complaints were about the price of concessions, while 3.46% of responses were about the concessions items themselves (Hardon, Ruihley, & Veraldo, 2013). The effects of consumer dissatisfaction with price can be damaging and should be corrected to sustain attendance at sporting events (Palmero & Price, 2015). Perceptions of unfairness may exist where price inflation exists above normal levels (Bolton, Warlop, & Alba, 2003). Consumers may also see prices as unfair regardless of the quality of product being provided (Bolton, Warlop, & Alba, 2003). In Situations of higher than average price inflation, consumers also estimated high margins, which subsequently led to skepticism and feelings of unfairness.

### **Factors Affecting Spending**

Paul (2003) studied attendance patterns at NHL hockey games, and found that divisional match ups and more fights actually increased attendance at games. On the other hand, higher scores actually decreased attendance (Paul, 2003). In short, well matched teams and high intensity games increase attendance (Paul, 2003). Attendance at sporting events is also positively associated with regional income for professional sporting events (Lera-López, Ollo-López, & Rapún-Gárate, 2012). Attendance at amateur sporting events, however, were less associated with income, and more associated with social interactions, motivation, children at home, sports participation, and Internet usage at a regional level (Lera-López, Ollo-López, & Rapún-Gárate, 2012). Lee and Trail (2011) studied purchasing patterns of team licensed merchandise. Research revealed several factors contributing to intent to purchase team licensed merchandise, including personal values, team identification, attitude toward brand, attitude toward product, satisfaction, perceived product attributes, satisfaction, past experience, and the role of expectancy disconfirmation (Lee, & Trail, 2011). Other research has studied impulse purchasing of team merchandise among students within university athletics, and found that identification with the team was the strongest factor influencing purchase, followed by money availability (Kwon & Armstrong, 2002). In another study on a different NHL team, Kelley, Harrolle, and Casper (2014) found that attendance was higher when opportunity cost for attending the game was lower. Additionally, a lack of excitement in the season contributed to a decrease in merchandise sales (Kelley, Harrolle, & Casper, 2014). Day and opportunity cost also influenced concessions sales, such that concessions sales were higher when game times fell during typical dinner times, or immediately after the work day (Kelley, Harrolle, & Casper, 2014). Research by Funk,

Beaton, and Alexandris (2012) on the use of self-determination theory to understand consumer behavior found that sport consumer motivation explained 61% of the variance in purchasing team related merchandise.

### **Social Factors**

Research by Fink, Trail, and Anderson (2002) on environmental factors and consumer behavior found gender differences at basketball games. Spectators at women's basketball games were found to be more loyal to their team, and thus spend more on merchandise (Fink, Trail, & Anderson, 2002). Also, spectators at women's basketball games were more likely to be influenced by friends in attendance decisions (Fink, Trail, & Anderson, 2002). Research by Gardete (2015) on social effects in the in-flight marketplace found that conformity plays a role in the decision to make purchases. The research also found that purchases by a direct, adjacent neighbor had little to no influence on an individual's purchasing (Gardete, 2015). Additional research on social spending during sporting events revealed that a sense of community was the only variable to have a direct effect on social spending at a sporting event (Xiaoyan, Chalip, & Green, 2014).

### **Methodology**

#### **Focus Group**

The topic of this study is subject to a wide variety of opinions based on differing experiences in entertainment venues. Additionally, there are many misconceptions among the general public about how funds in the entertainment industry are allocated, which cause differing opinions about pricing, and in turn, purchasing patterns. To address these issues, and to assist in the development of this survey, it was decided that a focus group should be

conducted. The focus group consisted of six people; four females and two males. Focus group questions were determined by findings in the literature review, as well as general research questions. Focus group questions included those regarding the important aspects of attending a collegiate football game, fairness and reasoning for higher prices, spending behavior, and situational questions.

The first theme from this focus group was a general feeling of unfairness with regard to merchandise and concessions prices inside a college football stadium, as well as a general feeling that prices are only elevated to take advantage of the customer. Participants in this focus group also reported that they would be extremely likely to purchase something from the concession stand at a game, regardless of other situational variables. Participants were likely to attend a game with a group, and were more likely to purchase concessions or merchandise if a game was less exciting.

### **Survey Design**

After conducting the focus group, themes and comments from the participants were used, in combination with findings from the literature review, to construct a survey. It was decided to use an online survey, as to allow for ease of distribution, and to ensure the survey was simple to take. Qualtrics survey software was used to administer, distribute, and collect data on the survey. The survey consisted of 46 questions, and was organized into five sections:

1. The fanaticism scale developed by Caron et al. (2007). This scale was measured utilizing a 5-point Likert scale (1=*strongly disagree*; 5=*strongly agree*).

2. Questions regarding consumers' willingness to spend on concessions items, under differing circumstances. This scale was measured utilizing a 5-point Likert scale (1=*strongly disagree*; 5=*strongly agree*).
3. Situational type questions intended to measure respondents purchasing behaviors in specific scenarios. This scale was measured utilizing a 5-point Likert scale (1=*extremely unlikely*; 5=*extremely likely*).
4. Questions on a variety of topics relating to concessions purchase intentions and price expectations. These questions were measured using multiple choice response options unique to each question.
5. Demographic questions, including the participant's average attendance at college football games in one season.

### **Data Collection**

An email list of 1,000 students was provided by the office of Institutional Research, Assessment and Planning at Appalachian State University. This sample was emailed the survey through the Qualtrics survey software, and responses were recorded within the Qualtrics system. A second email was sent to the sample after one week of data collection, due to low response rates. The survey was closed one week after the second distribution. This survey collected 226 responses. Of those responses, 161 were females (71.24%), and 65 were males (28.76%). Additionally, responses included 25 freshmen (11.16%), 27 sophomores (12.05%), 53 juniors (23.66%), 73 seniors (32.59%), 31 graduate students (13.84%), and 15 respondents that were not enrolled (6.70%).

## Results

The first portion of the survey contained the fanaticism scale developed by Caron et al. (2007). Individual questions from the fanaticism scale were divided to form three fanaticism sub-scale variables. These factors were emotional, analytical, and social, and are detailed in *figure 1*.

Factor	Question
Emotional ( $\alpha=0.861$ )	I shout at the TV when there is a bad call made against my favorite team
	I shout at the TV when my favorite team is losing
	If I am watching my favorite sports team on TV and they are losing, I express my opinion to others as to what my team should do
	When I am watching my team live, I shout when there is a bad call against them
	I get angry after my team loses
	When my favorite team is on TV and the network goes to another program, I become very angry or upset
	My voice is often hoarse after watching my favorite team at a live game
Social ( $\alpha=0.805$ )	My voice is often hoarse after watching my favorite team on TV
	Being a sports fan has interfered with my social relationships
	I judge a person's worth by their knowledge of sports
	My life revolves around sports
Analytical ( $\alpha=0.960$ )	I know more about my favorite sports' players than about my family
	Talking about sports is my favorite topic of conversation
	I will analyze my favorite team's performance after the game
	I will analyze my favorite team's performance after they lose
	I will analyze my favorite team's performance after they win

*Figure 1: Fanaticism scale questions*

All of the fanaticism sub-scale factors were found to be reliable, as all alpha levels were above  $\alpha=0.600$ .

A factor analysis was conducted and revealed three additional factors contributing to a significant amount of the variance in responses. These variables were labeled alcohol, game spend, and environment spend, and included the questions presented in *figure 2*.

Factor	Question
Alcohol ( $\alpha=0.867$ )	I would likely purchase alcohol inside the stadium, if I am 21 or older If you are 21 or older and are attending a college football game with a group, how likely are you to drink alcohol before the game, if you know alcohol is UNAVAILABLE inside the stadium? If you are 21 or older and are attending a college football game with a group, how likely are you to drink alcohol before the game, if you know alcohol is AVAILABLE inside the stadium? If you are 21 or older and alcohol is available inside the stadium, how many drinks would you anticipate purchasing?
Game Spend ( $\alpha=0.792$ ).	I would be more likely to purchase concessions if my favorite team was winning I would be more likely to purchase concessions if the game was exciting
Environment Spend ( $\alpha=0.654$ )	I would be willing to pay more for concessions while watching my favorite team If the price of admission to a particular college football game was higher than normal, I would be willing to spend more on concessions/merchandise once inside the stadium Being around other fans encourages me to make purchases inside the stadium

*Figure 2: Alcohol, Game Spend, and Environment Questions*

These three factors were all found to be reliable, as all alpha levels were above  $\alpha=0.600$ .

Independent T-tests were performed to determine the relationship between gender and the three fanaticism sub-scale factors, alcohol factors, game spend factors, and environment spend factors. *Figure 3* displays T-test results.

Independent Samples T-test				
Variable	Male Mean	Female Mean	t	Sig.
Emotional	3.137	2.846	2.337	0.662
Social	1.714	1.396	3.175	0.000
Analytical	3.472	2.402	6.447	0.363
Alcohol	3.542	3.231	1.967	0.983
Game Spend	2.592	2.531	0.433	0.848
Environment Spend	2.056	2.197	-1.255	0.104

*Figure 3: T-test results*

Equal variances were assumed for emotional and analytical factors, but not for social factors. The mean for males was found to be  $n=1.7138$ , while the mean for females was  $n=1.3963$ . This difference in means shows that males had a more social connection to watching sports than females did. The standard deviation for males was  $s=0.74244$ , while the standard deviation for females was  $s=0.49572$ . The larger standard deviation for males indicates that males in this study had more varying opinions on the social factor of fanaticism

than did females. Equal variances were assumed for alcohol, game spend, and environment spend factors. There was no statistically significant difference in gender among these factors.

### **Descriptive Statistics**

Frequency analysis were conducted for each of the six factors discussed. 53.54% of responses within the emotional factor (see *appendix A, figure 7*) were between 2.50 and 3.50 (on a 5.00 point Likert scale). The majority of responses within the emotional factor reported moderate levels of emotional attachment to sports. 62.10% of respondents fell between 1.00 and 1.40 on the social factor (see *appendix A, figure 8*). The social factor was skewed towards lower responses overall. Responses to the analytical factor (see *appendix A, figure 9*) were interestingly clustered around whole numbers. This suggests that people reported consistent levels of analysis across the different questions pertaining to the analytical factor. The standard deviation for the emotional factor was  $s=0.85365$ ; the standard deviation for the social factor was  $s=0.59354$ ; and the standard deviation for the analytical factor was  $s=1.22712$ . The relatively low standard deviation for the social factor supports the observation that responses were grouped at lower levels. The relatively high standard deviation for the analytical factor also suggests that responses were varied for this factor. 74.90% of responses for the alcohol variable (see *appendix A, figure 4*) fell between 2.50 and 4.50. Respondents indicated that they were generally very likely to drink alcohol before and during a collegiate football game. 80.18% of responses for the game spend factor (see *appendix A, figure 5*) fell between 2.00 and 4.00. Response frequencies for the environment spend variable (see *appendix A, figure 6*) were mixed, however only 2.60% of responses

were above 3.67, on a four-point scale. Environmental factors had a wide variety of effects on spending.

Descriptive statistics were also analyzed for individual survey items. Question two contained ten sub-questions and were ranked on a five point Likert scale (1=*strongly disagree*; 5=*strongly agree*). Question 2-1 stated “I believe that concessions prices at college football games are fair,” and returned a mean response of 2.09. This mean indicated that on average, people were disagreed with the idea that concessions at college football games are priced fairly. Question 2-5 stated “If the price of admission to a particular college football game was higher than normal, I would be willing to spend more on concessions/merchandise once inside the stadium,” returned a mean response to this question was 1.77, and the maximum response was 4. This result indicated that ticket price may potentially be negatively related to willingness to spend on concessions or merchandise. Question 2-6 “Being around other fans encourages me to make purchases inside the stadium,” returned a mean response of 2.52 and a maximum response of 4. This result indicated an overall neutral response to the influence of groups on purchases, however there were no responses of “strongly agree.” Question 2-7 stated “I would likely purchase alcohol inside the stadium, if I am 21 or older,” and returned a mean of 3.49. This response indicated that on average people are generally likely to purchase alcohol inside the stadium if it is made available. Questions 2-7 and 2-9 read “I intend to use a credit/debit card for any purchases I make inside the stadium,” and “If vendors inside the stadium do not accept cards, I will not purchase anything.” Means for the two questions were 3.62 and 3.17 respectively, demonstrating that credit card purchases may account for a significant portion of concessions and merchandise sales.

Question three contained seven situational type questions ranked on a five point Likert scale (1=*extremely unlikely*; 5=*extremely likely*). Question 3-1 stated “You are at a college football game with one other person. How likely are you to stop by the concessions stand at any point in the game?” and recorded a mean response of 3.44. Question 3-2 and 3-3 stated “A college football game you plan on attending begins at 6:00 PM. How likely are you to eat dinner before coming to the game?” and “A college football game you plan on attending begins at 6:00 PM. How likely are you to eat dinner in the stadium?” Means for these two questions were 4.07 and 2.38 respectively, indicating that respondents were more likely to eat before coming to the stadium if the game time was 6:00 PM. Questions 3-4 and 3-5 stated “A college football game you plan on attending begins at 2:00 PM. How likely are you to eat lunch before coming to the game?” and “A college football game you plan on attending begins at 2:00 PM. How likely are you to eat lunch in the stadium?” Means for these questions were 4.30 and 2.18 respectively, indicating that on average respondents were more likely to eat lunch before coming in to the stadium if the game time was 2:00 PM. Means for all four of these questions supported the idea that respondents were more likely to eat before entering the stadium for a game.

Respondents that were twenty-one or older reported that they would purchase, on average, 2.41 alcoholic drinks if they were made available. Average reported group size among respondents was three to four people. Average anticipated spending once inside the stadium was \$24.40.

### Correlation Analysis

Correlations were run between all facets of the survey. A moderate positive relationship ( $r=0.438$ ,  $p=0.01$ ) was discovered between the emotional factor and Question six (How many articles of team specific apparel/merchandise do you own?). A moderate positive relationship ( $r=0.436$ ,  $p=0.01$ ) was also found between the emotional factor and question ten (On average, how many college football games do you attend in a season?). Additionally, weak relationships were found between question 2-2 (I would be willing to pay more for concessions while watching my favorite team) ( $r=0.230$ ,  $p=0.01$ ), question 2-3 (I would be more likely to purchase concessions if my favorite team was winning) ( $r=0.235$ ,  $p=0.01$ ), and question 2-8 (I will spend less while watching my favorite team play in an opposing team's stadium) ( $r=0.257$ ,  $p=0.01$ ), and emotional factors.

Analytical factors had a moderate negative relationship with gender ( $r=-0.396$ ,  $p=0.01$ ), indicating that males were more likely to rank higher on analytical factors. A weak positive relationship ( $r=0.220$ ,  $p=0.01$ ) was found between analytical factors and question 10 (On average, how many college football games do you attend in a season?). A weak positive relationship ( $r=0.219$ ,  $p=0.01$ ) was also found between analytical factors and question 6 (How many articles of team specific apparel/merchandise do you own?).

Social factors had a weak negative relationship ( $r=-0.243$ ,  $p=0.01$ ) with gender, indicating that males were more likely to report higher levels of social factors. Social factors also had a weak positive relationship ( $r=0.208$ ,  $p=0.01$ ) with question 10 (On average, how many college football games do you attend in a season?), and ( $r=0.247$ ,  $p=0.01$ ) with question 6 (How many articles of team specific apparel/merchandise do you own?).

Alcohol factors had a weak positive relationship ( $r=0.216$ ,  $p=0.01$ ) with emotional factors, and ( $r=0.133$ ,  $p=0.05$ ) with social factors. Alcohol factors also had weak positive relationships with question 10 (On average, how many college football games do you attend in a season?) ( $r=0.288$ ,  $p=0.01$ ), question 6 (How many articles of team specific apparel/merchandise do you own?) ( $r=2.93$ ,  $p=0.01$ ), question 5 (When you go to college football games, about how many people do you go with?) ( $r=0.270$ ,  $p=0.01$ ), and question 2-9 (I intend to use a credit/debit card for any purchases I make inside the stadium) ( $r=0.261$ ,  $p=0.01$ ).

Game spend factors had a weak positive relationship ( $r=0.203$ ,  $p=0.01$ ) with emotional factors. Within the emotional factors, game spend factors also had a weak positive relationship ( $r=0.377$ ,  $p=0.01$ ) with question 2-2 (I would be willing to pay more for concessions while watching my favorite team).

Environment spend factors had a moderate positive relationship ( $r=0.408$ ,  $p=0.01$ ) with question 2-3 (I would be more likely to purchase concessions if my favorite team was winning). Environment spend factors also had a weak positive relationship with question 2-4 (I would be more likely to purchase concessions if the game was exciting) ( $r=0.314$ ,  $p=0.01$ ), question 2-8 (I will spend less while watching my favorite team play in an opposing team's stadium) ( $r=0.321$ ,  $p=0.01$ ), and question 2-1 (I believe that concessions prices at college football games are fair) ( $r=0.384$ ,  $p=0.01$ ).

A weak positive relationship ( $r=0.345$ ,  $p=0.01$ ) was found between question 7 (On average, how much money do you anticipate spending after you enter the stadium for a game?) and question 3-3 (A college football game you plan on attending begins at 6:00 PM. How likely are you to eat dinner in the stadium?). A moderate positive relationship ( $r=0.433$ ,

$p=0.01$ ) was found between question 6 (How many articles of team specific apparel/merchandise do you own?) and question 10 (On average, how many college football games do you attend in a season?). Question 5 (When you go to college football games, about how many people do you go with?) also had a moderate positive relationship ( $r=0.417$ ,  $p=0.01$ ) with question 10 (On average, how many college football games do you attend in a season?). Question 4 (If you are 21 or older and alcohol is available inside the stadium, how many drinks would you anticipate purchasing?) had a strong positive relationship ( $r=0.570$ ,  $p=0.01$ ) with question 3-6 (If you are 21 or older and are attending a college football game with a group, how likely are you to drink alcohol before the game, if you know alcohol is UNAVAILABLE inside the stadium?), and a moderate positive relationship ( $r=0.459$ ,  $p=0.01$ ) with question 3-7 (If you are 21 or older and are attending a college football game with a group, how likely are you to drink alcohol before the game, if you know alcohol is AVAILABLE inside the stadium?). Questions 3-6 (If you are 21 or older and are attending a college football game with a group, how likely are you to drink alcohol before the game, if you know alcohol is UNAVAILABLE inside the stadium?), and 3-7 (If you are 21 or older and are attending a college football game with a group, how likely are you to drink alcohol before the game, if you know alcohol is AVAILABLE inside the stadium?) both had strong positive relationships ( $r=0.630$ ,  $p=0.01$ ) ( $r=0.550$ ,  $p=0.01$ ) with question 2-7 (I would likely purchase alcohol inside the stadium, if I am 21 or older).

### **Discussion**

The first objective of this study was to determine if there is even a problem. In other words, do consumers perceive prices of auxiliary items at entertainment venues as too high. Responses indicated that overall people do not believe that concessions prices are fair. Responses indicated that consumers do expect prices inside a stadium to be higher than outside a stadium, but acknowledgement of that price differential did not relate to perceived fairness. Despite results indicating a general perception of unfairness in concessions prices, responses were more varied than expected. This variation could be attributed to the use of fairness as a measure instead of satisfaction with price. Regardless, results of this study indicated a general perception of unfairness towards concessions prices inside college football stadiums. Of note, however, is the weak positive relationship found between perceived fairness and intended purchases. When intent to purchase food inside the stadium was indicated, respondents were more likely to report higher levels of perceived fairness of price. The overall perceived unfairness in price indicates that there is indeed a problem, from a consumer point of view, with inflation of auxiliary items in entertainment venues.

Responses to this study indicated an acknowledgement of customary pricing of concessions and merchandise in the industry. Elevated prices in entertainment venues are indeed seen as a norm, and contribute to perceptions of price fairness, and in turn consumer spending. While some consumers may account for these customary prices as a part of the overall experience, those that do not may feel swindled, and as a result may limit their purchases. Deviation from elevated customary prices may increase perceptions of price fairness and lead to increased purchases of auxiliary items.

The second objective of this study was to determine what factors contribute to peoples' willingness to purchase auxiliary items, assuming prices for said items are elevated as they are in most entertainment venues.

Among elements of fanaticism, this study found that males were more affected socially by their favorite sports teams. Additionally, males were more likely to report analyzing the performance of their favorite sports team. Analytical factors were found to have a positive relationship with the number of games attended in a season, as well as ownership of team specific articles of clothing or apparel. Social factors also had a positive relationship with number of games attended in a season and ownership of team specific articles of clothing or apparel. Based on these findings, it is possible that males will not only be willing to spend more on apparel at college football games, but will also attend more games overall, creating increased opportunity for additional sales.

Another interesting variable was group size. Results found a positive relationship between group size and number of games attended in a season. This suggests that people who attend games with a group are more likely to attend more games in a season. Despite this, group size was not found to have a significant effect on spending patterns. Responses did however indicate that consumers were likely to stop by the concessions stand at some point in the game if they were at the game with one or more other people. Average reported group size in this study was three to four people. This study measured reported purchase intentions, leaving way for additional research on group variables and actual spending patterns.

Respondents who reported higher levels of emotional factors also reported willingness to pay more on concessions while watching their favorite team, and when their favorite team is winning. They also reported that they would spend less while watching their

team play in an opposing team's stadium. Teams that are able to create more of an emotional tie within their fan base will likely sell more concessions during their home games, particularly if their teams have a winning record.

The environment within the stadium during a game also influenced perceptions of price fairness. When environmental factors within the stadium were more favorable, people were more likely to perceive concessions prices as fair. Environmental factors that could influence this are the teams that are playing, the magnitude of the game itself, and the presence of other fans. Ensuring that these factors are satisfying to fans may decrease consumers' inhibitions about making purchases in the stadium.

Also of interest was if the start time of an event had any effect on concessions purchases inside the stadium. Results indicated that if a game was scheduled to start at 6:00 PM, people were more likely to eat dinner before coming in to the stadium, as opposed to purchasing dinner once inside. The same theme was evident for a game that was scheduled for 2:00 PM. Overall, respondents to this survey were more likely to eat outside the stadium, and avoid purchasing meals after they have entered the stadium. It is important to note however that respondents that indicated that they would eat once inside the stadium also anticipated spending more money. This study revealed an aversion to purchasing meals inside a football stadium. This could be due to an understanding that prices for food inside a stadium are going to be significantly higher than from elsewhere. Decreasing prices on meal-type food items may promote significantly more spending on these items, as meal convenience relative to game time could encourage consumers to purchase meals inside the stadium.

Some of the most interesting findings from this study were on the topic of alcohol. The majority of respondents indicated that they were likely or very likely to purchase alcohol in the stadium. Additionally, responses indicated that consumers would purchase an average of 2.41 alcoholic beverages in the stadium over the course of a college football game. Both social and emotional factors had a positive relationship with alcohol factors as well. Alcohol factors also had a positive relationship with the average number of games attended in a season. Respondents also reported that they were likely to drink alcohol before entering the stadium for a game, regardless of whether or not alcohol is available inside the stadium. The theme here is that alcohol sells. Based on data from this study, there is little incentive to entertainment venues to lower prices for alcohol. There is incentive however for entertainment venues that do not sell alcohol to consider beginning to sell it. There are of course other concerns that arise with the sale of alcohol, however strictly from a profitability perspective, selling alcohol makes sense.

There is a perception in the sports and entertainment industry that prices of auxiliary items are unfair to the consumer. Elevated prices may cause consumers to feel swindled, and could cause them to limit their purchases of auxiliary items, or discourage them from attending events at all. Understanding the factors that lead to purchases in these environments could help venue managers to make informed decisions on prices of auxiliary items, and ultimately increase their revenue from these items.

### **Limitations**

A limitation to this study is the age of the sample. The respondents surveyed were students from Appalachian State University and may not be representative of football attendees as a whole. Additionally, females comprised the majority of the sample; about 70%. The survey instrument was distributed online, which could potentially prevent those without internet access from participating.

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**Appendix A**

**Figures 4-10**

<b>Alcohol</b>					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1.00	15	6.6	6.6	6.6
	1.25	6	2.6	2.7	9.3
	1.50	4	1.8	1.8	11.1
	1.75	5	2.2	2.2	13.3
	2.00	4	1.8	1.8	15.0
	2.25	9	4.0	4.0	19.0
	2.50	14	6.2	6.2	25.2
	2.75	11	4.8	4.9	30.1
	3.00	16	7.0	7.1	37.2
	3.25	11	4.8	4.9	42.0
	3.50	23	10.1	10.2	52.2
	3.75	19	8.4	8.4	60.6
	4.00	25	11.0	11.1	71.7
	4.25	32	14.1	14.2	85.8
	4.50	19	8.4	8.4	94.2
	4.75	10	4.4	4.4	98.7
	5.00	2	0.9	0.9	99.6
	5.25	1	0.4	0.4	100.0
	Total	226	99.6	100.0	
Missing	System	1	0.4		
Total		227	100.0		

*Figure 4: Frequency analysis for Alcohol*

Game Spend					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1.00	31	13.7	13.7	13.7
	1.50	7	3.1	3.1	16.8
	2.00	62	27.3	27.4	44.2
	2.50	25	11.0	11.1	55.3
	3.00	50	22.0	22.1	77.4
	3.50	19	8.4	8.4	85.8
	4.00	26	11.5	11.5	97.3
	4.50	5	2.2	2.2	99.6
	5.00	1	0.4	0.4	100.0
	Total	226	99.6	100.0	
Missing	System	1	0.4		
Total		227	100.0		

Figure 5: Frequency analysis for Game Spend

Environment Spend					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1.00	33	14.5	14.6	14.6
	1.33	15	6.6	6.6	21.2
	1.67	28	12.3	12.4	33.6
	2.00	50	22.0	22.1	55.8
	2.33	22	9.7	9.7	65.5
	2.67	23	10.1	10.2	75.7
	3.00	33	14.5	14.6	90.3
	3.33	16	7.0	7.1	97.3
	3.67	4	1.8	1.8	99.1
	4.00	2	0.9	0.9	100.0
	Total	226	99.6	100.0	
Missing	System	1	0.4		
Total		227	100.0		

Figure 6: Frequency analysis for Environment Spend

		<b>Emotional</b>			
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1.00	10	4.4	4.4	4.4
	1.13	3	1.3	1.3	5.8
	1.25	2	0.9	0.9	6.6
	1.38	2	0.9	0.9	7.5
	1.50	2	0.9	0.9	8.4
	1.63	5	2.2	2.2	10.6
	1.75	2	0.9	0.9	11.5
	1.88	2	0.9	0.9	12.4
	2.00	5	2.2	2.2	14.6
	2.13	6	2.6	2.7	17.3
	2.25	8	3.5	3.5	20.8
	2.38	7	3.1	3.1	23.9
	2.50	11	4.8	4.9	28.8
	2.63	14	6.2	6.2	35.0
	2.75	13	5.7	5.8	40.7
	2.88	15	6.6	6.6	47.3
	3.00	16	7.0	7.1	54.4
	3.13	10	4.4	4.4	58.8
	3.25	13	5.7	5.8	64.6
	3.38	12	5.3	5.3	69.9
	3.50	17	7.5	7.5	77.4
	3.63	8	3.5	3.5	81.0
	3.75	10	4.4	4.4	85.4
	3.88	9	4.0	4.0	89.4
	4.00	9	4.0	4.0	93.4
	4.13	3	1.3	1.3	94.7
4.25	5	2.2	2.2	96.9	
4.38	1	0.4	0.4	97.3	
4.50	1	0.4	0.4	97.8	
4.63	4	1.8	1.8	99.6	
4.75	1	0.4	0.4	100.0	
	Total	226	99.6	100.0	
Missing	System	1	0.4		
	Total	227	100.0		

*Figure 7: Frequency analysis for Emotional*

<b>Social</b>					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1.00	84	37.0	37.2	37.2
	1.20	34	15.0	15.0	52.2
	1.40	23	10.1	10.2	62.4
	1.60	22	9.7	9.7	72.1
	1.80	13	5.7	5.8	77.9
	2.00	19	8.4	8.4	86.3
	2.20	10	4.4	4.4	90.7
	2.40	5	3.3	2.2	92.9
	2.60	4	1.8	1.8	94.7
	2.80	1	0.4	0.4	95.1
	3.00	5	2.2	2.2	97.3
	3.20	3	1.3	1.3	98.7
	3.40	2	0.9	0.9	99.6
	4.00	1	0.4	0.4	100.0
		Total	226	99.6	100.0
Missing	System	1	0.4		
Total		227	100.0		

Figure 8: Frequency analysis for Social

<b>Analytical</b>						
		Frequency	Percent	Valid Percent	Cumulative Percent	
Valid	1.00	46	20.3	20.4	20.4	
	1.33	2	0.9	0.9	21.2	
	1.67	6	2.6	2.7	23.9	
	2.00	45	19.8	19.9	43.8	
	2.33	3	1.3	1.3	45.1	
	2.67	7	3.1	3.1	48.2	
	3.00	33	14.5	14.6	62.8	
	3.33	12	5.3	5.3	68.1	
	3.67	12	5.3	5.3	73.5	
	4.00	43	18.9	19.0	92.5	
	4.33	1	0.4	0.4	92.9	
	4.67	4	1.8	1.8	94.7	
	5.00	12	5.3	5.3	100.0	
		Total	226	99.6	100.0	
	Missing	System	1	0.4		
Total		227	100.0			

Figure 9: Frequency analysis for Analytical

	N	Minimum	Maximum	Mean	Std. Deviation
Q17_1 - I shout at the TV when there is a bad call made against my favorite team	226	1	5	3.23	1.266
Q17_2 - I shout at the TV when my favorite team is losing	226	1	5	3.05	1.216
Q17_3 - If I am watching my favorite sports team on TV and they are losing, I expre...	226	1	5	3.35	1.150
Q17_4 - When I am watching my team live, I shout when there is a bad call against t...	226	1	5	3.48	1.248
Q17_5 - I get angry after my team loses	226	1	5	2.83	1.107
Q17_6 - When my favorite team is on TV and the network goes to another program, I b...	226	1	5	2.81	1.213
Q17_7 - My voice is often hoarse after watching my favorite team at a live game	226	1	5	2.75	1.392
Q17_8 - My voice is often hoarse after watching my favorite team on TV	226	1	5	1.93	0.959
Q17_9 - I will analyze my favorite team's performance after the game	226	1	5	2.70	1.267
Q17_10 - I will analyze my favorite team's performance after they lose	226	1	5	2.75	1.286
Q17_11 - I will analyze my favorite team's performance after they win	226	1	5	2.67	1.250
Q17_12 - Being a sports fan has interfered with my social relationships	226	1	4	1.51	0.750
Q17_13 - I judge a person's worth by their knowledge of sports	226	1	4	1.38	0.657
Q17_14 - My life revolves around sports	226	1	5	1.58	0.897
Q17_15 - I know more about my favorite sports' players than about my family	226	1	4	1.27	0.606
Q17_16 - Talking about sports is my favorite topic of conversation	226	1	5	1.70	0.987
Q17_17 - I consider myself a die-hard fan of a particular sports team	226	1	5	2.23	1.404
Q2_1 - I believe that concessions prices at college football games are fair	226	1	5	2.09	0.905
Q2_2 - I would be willing to pay more for concessions while watching my favorite t...	226	1	4	2.17	1.025
Q2_3 - I would be more likely to purchase concessions if my favorite team was winn...	226	1	5	2.49	1.016
Q2_4 - I would be more likely to purchase concessions if the game was exciting	226	1	5	2.61	1.095
Q2_5 - If the price of admission to a particular college football game was higher...	226	1	4	1.77	0.799
Q2_6 - Being around other fans encourages me to make purchases inside the stadium	226	1	4	2.52	1.120
Q2_7 - I would likely purchase alcohol inside the stadium, if I am 21 or older	226	1	5	3.49	1.304
Q2_8 - I will spend less while watching my favorite team play in an opposing team'...	226	1	5	2.83	1.066
Q2_9 - I intend to use a credit/debit card for any purchases I make inside the sta...	226	1	5	3.62	1.052
Q2_10 - If vendors inside the stadium do not accept cards, I will not purchase anyt...	226	1	5	3.17	1.063

Q3_1 - You are at a college football game with one other person. How likely are yo...	226	1	5	3.44	1.053
Q3_2 - A college football game you plan on attending begins at 6:00 PM. How likely...	226	1	5	4.07	1.030
Q3_3 - A college football game you plan on attending begins at 6:00 PM. How likely...	226	1	5	2.38	1.110
Q3_4 - A college football game you plan on attending begins at 2:00 PM. How likely...	226	1	5	4.30	0.950
Q3_5 - A college football game you plan on attending begins at 2:00 PM. How likely...	226	1	5	2.18	1.129
Q3_6 - If you are 21 or older and are attending a college football game with a gro...	226	1	5	3.79	1.381
Q3_7 - If you are 21 or older and are attending a college football game with a gro...	226	1	5	3.59	1.334
Q4 - If you are 21 or older and alcohol is available inside the stadium, how man...	226	1	6	2.41	1.084
Q5 - When you go to college football games, about how many people do you go with...	226	1	5	3.11	0.971
Q6 - How many articles of team specific apparel/merchandise do you own?	226	1	5	3.21	1.306
Q7 - On average, how much money do you anticipate spending after you enter the s...	226	1	4	1.22	0.545
Q8 - You are looking at the menu of a concessions stand during a college footbal...	226	1	4	1.87	0.697
Q9 - How much would you be willing to pay for a hot dog and drink at a restauran...	226	1	3	1.39	0.549
Q10 - On average, how many college football games do you attend in a season?	226	1	5	2.99	1.254
Q11 - What is your age?	226	1	4	1.71	0.567
Q12 - What is your gender?	226	1	2	1.71	0.454
Q13 - What is your highest level of education?	226	1	4	2.32	0.722
Q14 - If you are currently a college student, what is your class?	224	1	6	3.46	1.359
Q15 - What is your annual household income?	224	1	5	2.64	1.509
Emotional	226	1.00	4.75	2.9298	0.85365
Analytical	226	1.00	5.00	2.7094	1.22712
Social	226	1.00	4.00	1.4876	0.59354
Alcohol	226	1.00	5.25	3.3208	1.08268
Game Spend	226	1.00	5.00	2.5487	0.96140
Environment Spend	226	1.00	4.00	2.1563	0.76151
Valid N (listwise)	222				

*Figure 10: Descriptive statistics*

**Appendix B**

**Survey Instrument**

**Information to Consider about this Research  
The Effects of Auxiliary Item Price Inflation at Entertainment Venues on  
Consumer Spending**

Principal Investigator: Alan Singer

Department: Undergraduate Honors Thesis- Management

Contact Information: Alan Singer singerap@appstate.edu 919-667-6959

Dr. Dana Clark (Faculty Advisor) clarkjd@appstate.edu

You are invited to participate in a research study about consumer spending patterns at entertainment venues; specifically, at collegiate football games. If you agree to be part of the research study, you will be asked to complete the following survey honestly, and to the best of your ability. There are no foreseeable Risks and discomforts that may be a result of participating in this study. Participating in this study is completely voluntary. Even if you decide to participate now, you may change your mind and stop at any time. You may choose not to answer any survey question for any reason. If you have questions about this research study, you may contact Alan Singer, or Dr. Dana Clark. The Appalachian State University Institutional Review Board (IRB) has determined that this study is exempt from IRB oversight. By continuing to the research procedures, I acknowledge that I am at least 18 years old, have read the above information, and agree to participate.

- I Agree
- I Disagree

Q17 Please rate your agreement with each of the following statements

	Strongly Disagree	Disagree	Neither agree nor disagree	Agree	Strongly Agree
I shout at the TV when there is a bad call made against my favorite team	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I shout at the TV when my favorite team is losing	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
If I am watching my	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>





I consider myself a die-hard fan of a particular sports team	<input type="radio"/>				
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Q2 Please rank your agreement with the following statements

	Strongly Disagree	Disagree	Neither agree nor disagree	Agree	Strongly Agree
I believe that concessions prices at college football games are fair	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I would be willing to pay more for concessions while watching my favorite team	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I would be more likely to purchase concessions if my favorite team was winning	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I would be more likely to purchase concessions if the game was exciting	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
If the price of admission to a particular college football game was higher than normal, I would be willing to spend more on concessions/merchandise once inside the stadium	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Being around other fans encourages me to make purchases inside the stadium	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I would likely purchase alcohol inside the stadium, if I am 21 or older	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I will spend less while watching my favorite team play in an opposing team's stadium	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

I intend to use a credit/debit card for any purchases I make inside the stadium	<input type="radio"/>				
If vendors inside the stadium do not accept cards, I will not purchase anything	<input type="radio"/>				

Q3 Please rate how likely you would be to participate in the following scenarios

	Extremely unlikely	Somewhat unlikely	Neither likely nor unlikely	Somewhat likely	Extremely likely
You are at a college football game with one other person. How likely are you to stop by the concessions stand at any point in the game?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
A college football game you plan on attending begins at 6:00 PM. How likely are you to eat dinner before coming to the game?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
A college football game you plan on attending begins at 6:00 PM. How likely are you to eat dinner in the stadium?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

<p>A college football game you plan on attending begins at 2:00 PM. How likely are you to eat lunch before coming to the game?</p>	○	○	○	○	○
<p>A college football game you plan on attending begins at 2:00 PM. How likely are you to eat lunch in the stadium?</p>	○	○	○	○	○
<p>If you are 21 or older and are attending a college football game with a group, how likely are you to drink alcohol before the game, if you know alcohol is UNAVAILABLE inside the stadium?</p>	○	○	○	○	○
<p>If you are 21 or older and are attending a college football game with a group, how likely are you to drink alcohol before the game, if you know alcohol is AVAILABLE inside the stadium?</p>	○	○	○	○	○

Q4 If you are 21 or older and alcohol is available inside the stadium, how many drinks would you anticipate purchasing?

- 0
- 1
- 2
- 3
- 4
- Over 4

Q5 When you go to college football games, about how many people do you go with?

- 0
- 1-2
- 3-4
- 5-6
- Over 6

Q6 How many articles of team specific apparel/merchandise do you own?

- 0
- 1-2
- 3-4
- 5-6
- Over 6

Q7 On average, how much money do you anticipate spending after you enter the stadium for a game?

- \$0-\$20
- \$21-\$40
- \$41-\$60
- \$61-\$80
- \$81-\$100
- Over \$100

Q8 You are looking at the menu of a concessions stand during a college football game. If you were to purchase a hot dog and a drink, what would you expect that to cost?

- \$5 or less
- \$6-\$10
- \$11-\$15
- \$16-\$20
- Over \$20

Q9 How much would you be willing to pay for a hot dog and drink at a restaurant?

- \$5 or less
- \$6-\$10
- \$11-\$15
- \$16-\$20
- Over \$20

Q10 On average, how many college football games do you attend in a season?

- 0
- 1-2
- 3-4
- 5-6
- Over 6

Q11 What is your age?

- Under 21
- 21-41
- 41-60
- Over 60

Q12 What is your gender?

- Male
- Female

Q13 What is your highest level of education?

- High School Degree
- Some College
- College Degree
- Graduate/Professional Degree

Q14 If you are currently a college student, what is your class?

- Freshman
- Sophomore
- Junior
- Senior
- Graduate Student
- N/A

Q15 What is your annual household income?

- Under \$25,000
- \$25,000-\$50,000
- \$50,000-\$75,000
- \$75,000-\$100,000
- Over \$100,000