

**WHO'S BETTING ON SPORTS? THREE ESSAYS ON UNDERSTANDING
SPORTS BETTING MOTIVATION AND ITS INFLUENCE ON
BETTING INTENTION AND BEHAVIOR**

A Dissertation
Submitted
to the Temple University Graduate Board

In Partial Fulfillment
of the Requirements for the Degree of
DOCTOR OF PHILOSOPHY

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May 2022

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ABSTRACT

Since the U.S. Supreme Court lifted the federal ban on sports gambling, the popularity of sports gambling continues to increase. This has left the sport industry, including academics, interested in examining the drivers of sports gambling participation and their influence on consumers' betting behavior. This dissertation includes three essays considering motivations to engage in sports gambling. While all focus on sports gambling, each of these three standalone essays embrace a different focus to explore sports gambling motivations and betting behavior. First, Essay One explores the differences in motivation and perception of skill versus luck between daily fantasy sports (DFS) and sports betting participants. Next, Essay Two investigates the interplay between motivations and game characteristics on betting intentions. Finally, Essay Three explores the effects of different marketing promotions and their fit with consumers' regulatory focus on consumers' betting behavior. Collectively, this research will provide insights and understandings of different drivers of sports gambling and their influence on consumer behavior regarding sports gambling.

TABLE OF CONTENTS

	Page
ABSTRACT.....	ii
LIST OF TABLES.....	vi
1. INTRODUCTION	1
2. ESSAY ONE: EXAMINING FACTORS AFFECTING CONSUMERS’ DFS AND SPORTS BETTING PARTICIPATION: COMPARING MOTIVATION AND PERCEPTION OF SKILL VERSUS LUCK.....	5
Literature Review.....	7
Motivations	8
Perception of Skill Versus Luck	12
Method	15
Participants.....	15
Measures	17
Results.....	21
Data Analysis	21
Discussion.....	23
Theoretical Implications	26
Managerial Implications	28
Limitations and Future Research	29
Conclusion	31
3. ESSAY TWO: THE EFFECTS OF INTERPLAY BETWEEN DIFFERENT GAME CHARACTERISTICS AND CONSUMER MOTIVATION ON LIKELIHOOD OF BETTING AND MAGNITUDE OF THE MONETARY WAGER	32
Literature Review.....	34
Self-Determination Theory	34

SDT and Gambling Motivation	36
Game Characteristics and Betting.....	38
Method	40
Attributes and Levels	40
Participants.....	42
Procedure	45
Measures	46
Data Analysis	47
Results.....	48
Likelihood of Placing the Bet	48
Magnitude of Betting Amount.....	50
Discussion	52
Theoretical Implications	54
Managerial Implications	55
Limitations and Future Research	56
Conclusion	58
4. ESSAY THREE: THE EFFECTS OF FIT BETWEEN PROMOTIONAL MESSAGE AND REGULATORY FOCUS ON CONSUMERS' BETTING BEHAVIOR	60
Literature Review.....	63
Sports Gambling	63
Regulatory Fit	65
Illusion of Control.....	67
Method	69
Participants.....	70
Experimental Stimuli	71
Procedure	72

Measures	73
Attention Check	78
Manipulation Check.....	78
Results.....	79
Data Analysis	79
Discussion.....	81
Theoretical Implications	83
Managerial Implications	84
Limitations and Future Research	85
Conclusion	86
5.CONCLUSION.....	88
REFERENCES	91
APPENDICES	
A EXPERIMENT STIMULI 1	112
B.EXPERIMENT STIMULI 2	113

LIST OF TABLES

Table	Page
1. Descriptive Statistics.....	17
2. Motivational Scale for Fantasy Football Participation	18
3. Correlation Matrix Between Motives	18
4. Commitment Scale.....	20
5. Social Desirability Scale	20
6. MANCOVA Results	23
7. Game Characteristics Attributes and Levels in Conjoint Analysis.....	42
8. Descriptive Statistics.....	45
9. Conjoint Analysis: Likelihood of Placing the Bet	49
10. Conjoint Analysis: Magnitude of Betting Amount.....	51
11. Descriptive Statistics.....	71
12. Regulatory Focus Scale.....	74
13. Illusion of Control Scale	76
14. Commitment Scale.....	77
15. Social Desirability Scale	78
16. MANCOVA Results	81

CHAPTER 1

INTRODUCTION

Sports gambling has continuously increased in global popularity and is expected to reach a market value of nearly US\$155 billion by 2024 (Killian, 2019). This expansion has been attributed at least in part to the recent legalization of sports gambling in the United States (U.S.) (Purdum, 2020). On May 14, 2018, the U.S. Supreme Court lifted the federal ban on sports gambling, allowing consumers to legally bet on sporting events in eligible states. As of February 2022, 33 states have legalized sports gambling (Reynolds, 2022). By 2024, it is estimated that approximately 40 states will allow sports gambling (Purdum, 2020; Rodenberg, 2020). This change in legislation led to an increase in the total revenue from sports gambling in the U.S. to US\$430 million in 2018, up more than 60% from 2017, and it is estimated that the total annual revenue will reach approximately US\$7.9 billion by 2024 (Woods, 2019).

Concurrently, casinos are taking advantage of this new opportunity by opening brick and mortar as well as online sportsbooks in eligible states (Hing et al., 2019). Approximately 300 retail sportsbooks currently operate in the U.S., and online sports betting platforms are growing exponentially (Legalsportsbetting, 2022). The state of Pennsylvania alone has 11 different online sports betting platforms offering wagering opportunities to consumers (Playpennsylvania, 2021). With the proliferation of both retail and online sportsbooks, these companies are competing for customers' time and money, and they are investing enormous amount of money in executing marketing strategies to attract potential customers (Smith, 2020). To effectively implement marketing strategies,

sport gambling organizations must understand consumer motivations, which is the crucial driver of engaging in specific activities or purchase decisions (Duggal, 2018).

Human motivation research focuses on exploring the drivers of individuals' behaviors (Ryan & Deci, 2019). Findings from motivation research provide a better understanding of individuals' driving forces behind their behaviors (Ryan & Deci, 2000). By having better understanding of consumer motivations, sport gambling organizations could develop marketing communication strategies that will increase the effectiveness to meet targeted consumers' wants and needs. Thus, this research, through three standalone essays, will further explore scholarly understanding of the different motives driving consumer behavior and their influence on sports gambling. In turn, these findings will provide insights as to which marketing and communication strategies should be pursued by sport gambling organizations to optimize their targeted marketing efforts, which will eventually lead to attracting more consumers to their sportsbook platforms. In addition, these findings would show the importance of collecting and leveraging consumer characteristics which would help the businesses build their consumer profile for their targeted marketing approach. Additionally, in conjunction with investigating consumer motivations, other factors (e.g., game characteristics, other consumer characteristics) that are critical in engaging sports gambling will be considered together in these three standalone essays.

Overall, there is a need among sport gambling stakeholders to better understand their consumers' betting motivation so that they can attract and retain consumers in an increasingly saturated, yet prosperous market. Therefore, this dissertation contains three essays that each seek to address this overarching purpose. Essay One focuses on

exploring the different factors that influence whether individuals participate in daily fantasy sports (DFS) or partake in sports betting. Motivation (i.e., intention) and perceived behavioral control are two significant predictors of behavior (Ajzen, 1991). In the context of gambling and fantasy sports, perception of skill vs. luck is considered as a crucial factor to impact consumers' engagement in these activities (Billings et al., 2017; Dwyer, 2011; Dwyer et al., 2019; Mercier et al., 2018; Pickering et al., 2016). Thus, this essay will explore the differences in motivation and perception of skill vs. luck between DFS and sports betting participants.

Essay Two focuses on examining the effects of the interrelatedness between different game characteristics (i.e., team quality, level of uncertainty, and TV coverage) and consumer characteristics (i.e., motivation) on consumers' betting intentions. Previous studies have exclusively focused on game characteristics when investigating consumers' betting behavior, overlooking the uniqueness of the individual bettors. Since Self-determination Theory (SDT) states that consumers display different behaviors based on their primary motives (i.e., intrinsic vs extrinsic) (Pelletier et al., 1998; Ryan & Deci, 2000), it will be used as a theoretical background to explore the impact of game characteristics on betting intentions depending on their main motivation.

Finally, Essay Three explores the effects of different marketing promotions (i.e., loss-related vs. gain-related) and their fit with consumers' regulatory focus on betting behavior, namely, one's likelihood of exploiting these two promotional offers and the magnitude of initial deposit amount. As per regulatory fit theory, when there is a fit between message framing (i.e., loss vs. gain) and consumers' regulatory focus (i.e., prevention vs. promotion), customers display increased motivation and performance

relative to message (Higgins, 2000; Hsu & Chen, 2014). Thus, the effects of the two most widely used “welcome offer” strategies, namely, risk-free bets (RFB) and bonus money (BM) offers (Newall et al., 2019), and their fit with consumer’s regulatory focus on one’s likelihood of exploiting these two welcome offers and the magnitude of initial deposit amount will be investigated. In addition, illusion of control, the belief that individuals possess specific skills that increase one’s chances of winning, impacts gambling behavior in skill based gambling games including sports betting (Steenbergh et al., 2002). Thus, this study examines how the interaction between regulatory fit and illusion of control may shape consumers betting intentions and behavior.

CHAPTER 2

ESSAY ONE: EXAMINING FACTORS AFFECTING CONSUMERS' DFS AND SPORTS BETTING PARTICIPATION: COMPARING MOTIVATION AND PERCEPTION OF SKILL VERSUS LUCK

In 2015, fantasy sport participation saw an unprecedented explosion, increasing over the course of the year by more than 15 million participants. This substantial increase was attributed to the popularity of daily fantasy sports, which would go on to generate more than US \$350 million in revenue in 2019 (“Daily Fantasy Sports”, 2021). Unlike traditional fantasy sports (TFS), DFS allows participants to create new fantasy teams daily by drafting different players each day to play in different daily competitions across different sports such as football, basketball, golf, and soccer (Billings et al., 2017). Though TFS and DFS are both forms of fantasy sport, they differ with respect to payouts and wagers; DFS offers the possibility for daily wagers and payouts, whereas TFS relies mainly on seasonal wagers and payouts. Among the different platforms that offer DFS, DraftKings and FanDuel have dominated the industry since its emergence, accounting for approximately 90% of the U.S. DFS industry market share (Delventhal, 2020).

When, on May 14, 2018, the U.S. Supreme Court lifted the federal ban on sports betting, states became free to determine their own laws in regard to sports betting. As of February 2022, 33 states have legalized sports gambling (Reynolds, 2022). To capitalize on this new opportunity, FanDuel and DraftKings have entered the realm of sports betting and now operate online sports betting platforms in some of the legalized states, including Pennsylvania and New Jersey (Sherman, 2019). With the creation of emerging sports betting markets, companies are making efforts to better understand the characteristics of both DFS and sports betting consumers and develop effective marketing strategies to

target each consumer segment. Given the ongoing legalization of sports betting in many U.S. states, it is timely to investigate sports gambling behavior, specifically the reason why consumers are engaging in the two different activities (i.e., DFS vs. sports betting). In other words, this study investigates a behavior on a macro level, by focusing on a group comparison between DFS and sports betting activities than focusing on behavioral differences between individual bets.

When investigating behavior, there are two significant predictors: intention (i.e., motivation) and perceived behavioral control (Ajzen, 1991). Given that motivation is the vital driver of consumers' purchase decisions (Duggal, 2018), companies that have a better understanding of this influence can likely develop more effective marketing and communication strategies. Motivational research in sport management has evolved from initially investigating sports consumption (e.g., attendance, media consumption) (Funk et al., 2012; Funk et al., 1994; Funk et al., 2002; Seo & Green, 2008) to TFS (Dwyer & Kim, 2011; Farquhar & Meeds, 2007; Lee et al., 2013), and to most recently DFS (Drayer et al., 2019; Kota et al., 2019; Phelan & Hern, 2016; Weiner & Dwyer, 2017). The current study will continue this evolution in motivation research by considering sports betting, a newly legalized in the U.S. and thus newly available sport behavior. This study will examine the three most notable motivation factors that have found in previous fantasy sports and sports betting literatures (Dwyer & Kim, 2011; Dwyer & Weiner, 2018; Fang & Mowen, 2009; Farquhar & Meeds, 2007; Lamont & Hing, 2018; Lee et al., 2013; Weiner & Dwyer, 2017): entertainment, social interaction, and financial gain.

In addition to motivation, perceived behavioral control, which refers to one's perception of ability to perform a given behavior, with consideration of the difficulty or

ease of a particular task (Ajzen, 1991), influences behavior. In the context of gambling and fantasy sports, perception of skill vs. luck has been the focus of several studies and is considered a vital driver to engage in different activities (Billings et al., 2017; Dwyer, 2011; Dwyer et al., 2019; Mercier et al., 2018; Pickering et al., 2016). Thus, this research will explore the differences in motivation and perception of skill vs. luck between DFS and sports betting participants.

The existing literature on comparing motivation and perceived behavioral control between DFS and sports betting participants is limited despite their importance in explaining behavior. Instead, prior scholarship has largely focused on comparing these factors between DFS and TFS players (Billings et al., 2017; Weiner & Dwyer, 2017). However, by overlooking sports betting, existing scholarship omits a popular sports betting behavior that generates lots of revenue. Because of the dissimilarities in the formats of DFS and sports betting, it is anticipated that there will be differences in consumers' motivation and perceived behavioral control between engaging in DFS and sports betting.

Literature Review

Consumer behavior depends on both motivation (i.e., intention) and perceived behavioral control (Ajzen, 1991). Higher motivation (i.e., intention) leads to higher chances of performing the actual behavior, and higher perceived behavioral control, or one's perception of their ability to perform a given behavior, increases the likelihood of performing the actual behavior (Ajzen, 1991; Kang et al., 2006). Thus, when investigating behavior, it is important to consider both motivation and perceived behavioral control. As such, this study's main focus is on exploring factors that directly

influence behavior. For this study, behavior will be considered at the macro level (i.e., why people choose to play DFS or wager on sports) rather than the micro level (i.e., why people choose to place a specific bet).

Motivations

There are a variety of motivations driving both fantasy sports and sports betting participation including self-esteem enhancement, social interaction, entertainment, winning money, excitement, escape, challenge, heightened involvement, cultural influences, and habit inducements (Dwyer & Kim, 2011; Dwyer & Weiner, 2018; Fang & Mowen, 2009; Farquhar & Meeds, 2007; Lamont & Hing, 2018; Lee et al., 2013; Weiner & Dwyer, 2017). Among the different motivational factors, there are three factors that have been constantly found in the fantasy sports and sports betting literature: entertainment, social interaction, and financial gain. The remaining motivational factors are inconsistently identified among previous studies. Thus, this paper will focus on these three motivations to investigate the differences between DFS and sports betting participants.

Entertainment. Existing literature has found entertainment to be an important motivation for engaging in fantasy sports and sports gambling (Drayer et al., 2019; Farquhar & Meeds, 2007; Weiner & Dwyer, 2017). Weiner and Dwyer (2017) found that TFS and DFS participants exhibited no statistical difference with regard to the motive of entertainment. This could be attributed to format similarities between TFS and DFS (i.e., that participants are drafting different players for their fantasy team); however, since DFS and sports betting make use of different formats, it is expected that there will be a

statistical difference in entertainment motivation between DFS and sports betting participants.

The typical format of DFS has participants pay an entry fee to join the contest and creates a line up (i.e., roster) from a pool of players (e.g., NBA, NFL, and MLB players) who are scheduled to play. Most of the time, each DFS participant forms their “fantasy team” by selecting different players while staying under an agreed-upon salary cap. Different players will have different price tags depending on their skill level (e.g. Lebron James costs \$6,000, while Danny Green is valued at \$2,000) (Wiley et al., 2020). After choosing their line-ups, participants can win prizes based on how their selected players perform compared to those of the other DFS participants who participate.

For DFS participants, setting line-ups while staying under their salary cap could be a stressful process which requires a high level of time and effort. In other words, playing fantasy sports could be a “stress-inducer” – specifically, these participants could experience symptoms of stress, or anxiety while playing fantasy sports (Bogdanich & Williams, 2015; Dwyer & Weiner, 2018). Increased levels of stress lead to low levels of enjoyment engaging in a certain activity (Dunker et al., 2020). On the other hand, unlike TFS and DFS where participants need to draft different players to engage in the activity, the format of sports betting commonly involves wagering (i.e., putting money) on the outcome of sporting events (LaPlante et al., 2014). Even though it requires money to partake in sports betting, people engage in sports betting for intrinsic reasons so that they could increase the level of one’s interest and add excitement to watching the sporting events (Nelson et al., 2007; Wann et al., 2015). Having a stake in the game makes

sporting events more entertaining and exciting. Therefore, it is anticipated that sports betting participants will exhibit higher intrinsic motivation compared to DFS participants.

H1: Sports betting participants are more motivated by entertainment than DFS participants.

Social Interaction. Previous studies suggest that social interaction motivation is a crucial driver of participation in both DFS and TFS (Dwyer et al., 2018; Weiner & Dwyer, 2017). One of the defining features of DFS is that DFS participants can set up a free league or contest to play with their close friends and family members (Klinski, 2017; Tepper, 2016). This feature of DFS provides participants a platform to interact with one another in your private league or contest (Klinski, 2017). This aspect of DFS resembles a virtual community where individuals are connected through online platforms to share interest and build relationships (Ku, 2011). These individuals are drawn to the virtual community because of social interaction aspects (Ku, 2011; Lin, 2008).

Sports betting, on the other hand, is mostly performed by wagering on sporting events whether it's a single game or multiple games together. For these bets, the payoff is often based on the outcome of the game and does not change relative to other bettors' performances. While sport bettors can go to sportsbooks at casinos or they can access online sports betting platforms to wager money on sporting events, minimal to no human interaction is required to participate in sports betting. Thus, compared to DFS participation, sports betting exhibits less of a social interaction component when performing its activities. Therefore, the following hypothesis is proposed:

H2: DFS participants are more motivated by social interaction than sports betting participants.

Financial Gain. According to Weiner and Dwyer (2017), participants who solely play DFS exhibit higher levels of financial motivation compared to participants who solely play TFS. The most distinguishing characteristic of DFS is that participants can draft a new team, wager money on different leagues, and collect winnings immediately following the competition every single day. In other words, flexibility in participation, enticement of financial gain, and instantaneous winnings are distinct features of DFS (Kota et al., 2019). Because of this daily feature of DFS, DFS motivation research puts more attention on how the financial aspect potentially influences participants compared to TFS research (Drayer et al., 2018; Kota et al., 2019; Weiner & Dwyer, 2017).

DFS is similar to lotteries because it has an extremely low probability of winning. The 6/49 lotto, which is a national lottery game in Canada has a one in 14 million probability of winning (Ariyabuddhiphongs, 2011). Also, Powerball has a one in 11.16 million chance of winning \$1 million (Goldstein, 2018). Similarly, DFS has a low probability of winning the contest as there is a one in 294,117 chance of winning \$1 million. However, in sports betting, although the winnings are small, individuals could win money betting on low odds with a higher probability of winning. For example, you could wager on the heavy favorites with the odds of -500, which has 83.3% probability that the favorite will win (Boyd, n.d).

Even though both DFS and sports betting involve a financial gain component, the odds involved are different. Specifically, because the chance of winning is so low in DFS, participants may be engaging in this activity because of other features including private groups and competition against other people. However, since sports betting involves a higher probability of winning compared to DFS, participants are more

motivated by financial gain with the higher expectation of winning the money. Thus, due to the variety of available options to wager money and having higher possibility of winning money compared to DFS, sports betting participants are more financially motivated than DFS participants. Therefore, it is anticipated that sports betting participants will exhibit higher financial gain motivation compared to DFS participants.

H3: Sports betting participants are more motivated by financial gain than DFS participants.

Overall, motivation affects behavior and motivation is likely to differ between DFS and sports betting participants (Ajzen, 1991). While motivation is important, perceived behavioral control must also be considered to compare the differences between DFS and sports betting participants.

Perception of Skill Versus Luck

Perceived behavioral control refers to one's perception of ability to perform a given behavior, with consideration of the difficulty or ease of a particular task (Ajzen, 1991). Notably, research suggests that perceived behavioral control impacts behavior. In the context of gambling and fantasy sports, perception of skill vs. luck has been the focus of several studies and is considered as a vital driver to engage in different activities (Billings et al., 2017; Dwyer, 2011; Dwyer et al., 2019; Mercier et al., 2018; Pickering et al., 2016). Because of the influence perceived behavioral control has on behavior, the distinction between perception of games of skill and games of luck has been the focus of traditional fantasy sport (TFS), daily fantasy sports (DFS), and sports gambling research (Billings et al., 2017; Dwyer, 2011; Dwyer et al., 2019; Mercier et al., 2018; Pickering et al., 2016). Previous studies indicate that some gambling games are predominantly

perceived as games of chance or luck (e.g. lotteries and slot machines), whereas other gambling activities are mainly perceived as game of skills (e.g. horserace betting, poker, and sports betting) (Chantal & Vallerand, 1996).

In fantasy sports, beginners are attracted by the perceived skill aspect of fantasy sports (Dwyer & LeCrom, 2013). Moreover, when fantasy football games are perceived as more skill than chance, the participant's level of involvement increased (Dwyer, 2011). In their DFS research, Billings et al. (2016) examined the perceptions of fantasy sports as a game of skill or chance among two different groups of fantasy sports participants (i.e., TFS participants vs. those who played both TFS and DFS). The authors observed that participants of both TFS and DFS indicated that fantasy sports are more of a game of skill than luck.

In gambling research, previous studies indicate that individuals who gamble on games of skill activities (e.g. sports betting, horse racing betting, poker) exhibit higher level of erroneous perception in comparison with individuals who prefer gambling on games of chance activities (e.g. lottery, slot machines) (Myrseth et al., 2010; Toneatto et al., 1997). This is because skill-game gamblers exhibit higher levels of perception of control, with the belief that their skills can influence the outcome of the betting. In other words, the skill component of the game misleads gamblers to falsely perceive that they have greater control of the game than they do in reality (Myrseth et al., 2010). In addition, Mitrovic and Brown (2009) have examined the false perception of control on problem gambling in poker players. The authors posit that problem gambling is distinctly related to false perception of control in poker players who consider poker as a game of

skill. Thus, in the domain of fantasy sports and sports betting, whether a given activity is considered a game of luck or a game of skill can impact the gamblers behavior.

DFS and sports betting are perceived as games of skill since both require a level of relevant knowledge for successful participation. However, DFS requires more relevant knowledge than sports betting because of the additional amount of knowledge required to be successful (Dib, 2018; Pickering et al., 2016). For DFS participation requires a granular level of knowledge including knowing player specific information as well as an understanding of salary caps as participants have to draft players daily who have different price tags while staying under their salary cap set by the DFS platform (e.g., DraftKings and FanDuel; Wiley et al., 2020). On the other hand, sports betting requires less granular knowledge than DFS because it only requires knowing team rankings and dynamics rather than individual player statistics and salary cap management.

DFS resembles the game of poker in that it requires tactical and strategic decisions to be successful (Bouju et al., 2013; Dib, 2018; Pickering et al., 2016). When the game involves making strategic and tactical decisions like poker, people will have a perception that you need a higher level of skills to engage in the activity. The format of DFS involves multifaceted and detailed gameplay that requires players to make numerous calculated decisions to increase their probability of winning the prize money (Dib, 2018). Therefore, it is anticipated that perceptions of required skill level for DFS participation will be higher than for sports betting participation.

H4: Perceptions of required skill level for DFS participation will be higher than for sports betting participation.

Method

To examine motivational and perception of skill vs. luck differences of individuals who participate in DFS and those who partake in sports betting, a quantitative survey was conducted.

Participants

Participants were recruited through Amazon's Mechanical Turk. Using geographic sampling of Amazon's Mechanical Turk, participants were restricted to individuals who live in the United States. Respondents were rewarded \$0.95 (USD) for a completed survey. To ensure respondents are active participants of sports betting and DFS, respondents were asked to answer seven screening questions: three about sports betting and four about DFS. For DFS, participants were asked "Have you played daily fantasy sports in the past 12 months?" (Yes or No), followed by three True/ False questions: "When playing Daily Fantasy Sports, you keep your same roster throughout the season" (correct answer: False), "In Daily Fantasy Sports, you can draft the same players that your opponents have drafted" (correct answer: True), "In Daily Fantasy Sports, when drafting players, you need to stay under the salary cap set by DFS site (e.g., DraftKings and FanDuel)" (correct answer: True). Participants who played DFS in the past 12 months and answered the three screening questions correctly were included in the DFS segment. For sports betting, participants were asked "Have you placed a bet on a sporting event(s) in the past 12 months?" with the options of Yes or No and followed by two multiple choice questions: "How much do you profit (only the net win), if you bet \$10 on +100 odds?" (correct answer: \$10), "Philadelphia Eagles are favored to win the game by 6 points against Dallas Cowboys, what is the point spread of the game?" (correct

answer: Eagles -6). For the sport betting participants, based on the results of the sports betting screening questions, only participants who placed a bet on sporting events in the past 12 months and answered the two screening questions correctly were included in the study.

In this study, 522 potential respondents started the survey through Amazon's Mechanical Turk. However, 273 respondents failed the screening questions. Moreover, 9 respondents failed the attention check questions, leaving a sample of 240 adults (sports betting-only = 118, DFS-only = 105, Hybrid (engaged in both sports betting and DFS = 17). For the purpose of this study, responses of hybrid participants were removed from the data analysis, resulting in a final sample of 223 participants. According to the Fantasy Sports & Gaming association, active participants of fantasy sports and sports betting are mostly male (80 % male), and the average age is approximately 37 ("Industry Demographics," n.d.). Thus, this sample is representative of the target population. Subgroup characteristics are summarized in Table 1.

Table 1. *Descriptive Statistics*

Variable	Category	DFS (<i>n</i> = 105)	Sports Betting (<i>n</i> = 118)	Hybrid (<i>n</i> = 17)
Gender	Male	71.7%	78.2%	88.2%
	Female	28.3%	21.8%	11.8%
Income (annual)	Less than \$25,000	3.8%	2.5%	5.9%
	\$25,000-\$50,000	20.8%	24.4%	41.2%
	\$50,001-\$75,000	34.9%	40.3%	29.4%
	\$75,001-\$100,000	32.1%	23.5%	23.5%
	\$100,001-\$125,000	5.7%	7.6%	0%
	\$125,001-\$150,000	2.8%	0.8%	0%
	More than \$150,000	0%	0.8%	0%
Education	Less than High School	0.0%	0.0%	0.0%
	High School/GED	0.9%	1.7%	5.9%
	Some College	3.8%	1.7%	0%
	2-year college degree	1.9%	1.7%	0%
	4-year college degree	67.0%	64.7%	58.8%
	Master's degree	23.6%	30.3%	29.4%
	Doctoral degree	0.9%	0.0%	5.9%
	Professional degree	1.9%	0.0%	0.0%
Age	Mean	38.4	34.6	32.24
	Standard Deviation	11.07	10.09	8.05

Measures

Motivation. To measure motivations to engage in DFS and sports betting, three motivational factors (i.e., entertainment, financial gain, and social interaction) from Dwyer and Kim's (2011) Motivational Scale for Fantasy Football Participation (MSFFP) were adapted. Responses are measured on a 7-point Likert scale ranging from 1 (strongly disagree) to 7 (strongly agree). Based on previous literature (Weiner and Dwyer, 2017; Drayer et al., 2019), these measures of financial gain, entertainment, and social dimensions were reliable, as their Cronbach's alpha values were above .80, which falls above the accepted value ($\alpha = .80$; George & Mallery, 2019; Nunally & Bernstein, 1978).

Table 2 shows a complete list of items, means, standard deviations, and Cronbach's alphas. In addition, correlations between the three motives are reported in Table 3.

Table 2. *Motivational Scale for Fantasy Football Participation (Dwyer & Kim, 2011)*

Motivation Type	Items	M	SD	α
Financial gain		5.36	.94	.81
	The amount of money wagered determines how much I follow sports [DFS team].	5.40	1.16	
	I engage in sports wagering [DFS] to win money.	5.44	1.16	
	Given the opportunity, I would prefer to watch and wager on a game [wager money on DFS] rather than only watch a game [play at no cost].	5.24	1.24	
Entertainment		5.42	.92	.87
	I engage in sports wagering [DFS] because it makes watching sports more enjoyable.	5.43	1.18	
	I engage in sports wagering [DFS] because it is a fun way to spend my time.	5.48	1.15	
	I engage in sports wagering [DFS] because it provides an entertaining escape from my day-to-day activities.	5.37	1.27	
Social interaction		5.18	.96	.83
	Sports wagering [Playing DFS] provides an excellent opportunity to get together with, or stay in contact with, my family and friends.	5.24	1.26	
	One of the main reasons I engage in sports wagering [DFS] is that doing so allows me to belong to a group of my peers.	5.13	1.24	
	An important reason for engaging in sports wagering [DFS] is the ability it gives me to interact with my co-workers, friends, family, and/or significant other.	5.17	1.22	

Table 3. *Correlation Matrix Between Motives*

Variable	1	2	3
1. Financial gain	–		
2. Entertainment	.605	–	
3. Social interaction	.528	.544	–

Perception of Skill Versus Luck. To measure perceptions of whether the game is based on skill or luck, the following single item measure was taken from Drayer, Dwyer, and Shapiro's (2019) study: "To what extent do you think winning at daily fantasy football [sports betting] is based on luck or skill?" Responses were measured on an 11-point Likert scale (0 = luck to 10 = skill).

Control Variables. Previous studies have found that age, gender, and income affected consumers' gambling intentions and expenditure (Castrén et al., 2018; Hing et al., 2014; Moore & Ohtsuka, 1997). Thus, age, gender, and income were collected and used as control variables. In addition, the frequency of engaging in DFS (sports betting), and the amount of money spent on DFS (sports betting) per month were collected and used as control variables. The frequency of engagement was assessed by asking respondents "How frequently do you place [play] a bet on sporting events [DFS]?" The amount of money spent per month on sports betting and DFS was assessed by asking participants, "On average, how much money do you spend on sports betting [DFS] per month?"

Also, since commitment influences sport consumption behavior, such as game attendance and media consumption (Kim et al., 2013), commitment was measured as a control variable using a scale adapted from Pritchard, Havitz, and Howard (1999). This 3-item instrument was measured using a 7-point Likert ranging from 1 (strongly disagree) to 7 (strongly agree). Prior research (e.g., Doyle et al., 2013; Kim et al., 2012) has found this measure of commitment reliable; their Cronbach's alpha values are both above .80 (George & Mallery, 2019; Nunally & Bernstein, 1978). Table 4 shows a complete list of items, means, standard deviations, and Cronbach's alphas.

Lastly, social desirability was measured using Haghghat's (2007) 4-item scale. It consists of four binary questions (i.e., Yes or No). "Yes" is a socially desirable answer and given a score of 1. Likewise, "No" is not a socially desirable answer and given a score of 0. Thus, the sum of the scores reflects respondent's social desirability tendency as the higher scores specify a tendency to provide socially desirable answers. Table 5 shows a complete list of items, means, standard deviations, and Cronbach's alphas.

Table 4. *Commitment Scale (adapted from Pritchard, Havitz, and Howard, 1999)*

Type	Items	M	SD	α
Commitment		5.32	.92	.83
	To change my preferences for following sports that I regularly bet on would require major rethinking	5.32	1.15	
	Even if close friends recommended following other activities, I would not change my preference for following sports that I regularly bet on	5.35	1.19	
	My preference for following sports that I regularly bet on would not willingly change	5.30	1.27	

Table 5. *Social Desirability Scale (Haghghat, 2007)*

Type	Items	M	SD
Social desirability		2.77	.87
	Do you always practice what you preach to others?	.70	.46
	Would you ever lie to people?	.59	.49
	Would you smile at people every time you meet them?	.79	.41
	If you say to people that you will do something, do you always keep your promise no matter how inconvenient it might be?	.70	.46

Attention Check. This study included an attention check question that read "Please select strongly disagree in this question." to measure participants' attention level. 9 Respondents who failed to answer attention check questions were removed from the sample.

Results

Data Analysis

Before testing the proposed hypotheses, multiple one sample t-test were conducted to see whether the mean values of three different motivations and perception of skill vs. luck differ statistically from the mean value of the measures (e.g., motivation: 4.0, perception of skill vs. luck: 5) for both the DFS and sport betting groups. The DFS group scored significantly higher means than the mean value of 4.0 on entertainment ($M = 5.42, SD = .95, t(105) = 15.37, p = .000$), social interaction ($M = 5.36, SD = .76, t(105) = 18.39, p = .000$), Financial gain ($M = 5.41, SD = .88, t(105) = 16.51, p = .000$). In addition, DFS group scored significantly higher means than mean value of 5.0 on perception of skill vs. luck ($M = 7.75, SD = 1.51, t(105) = 18.77, p = .000$). Similarly, the sports betting group scored significantly higher means than the mean value of 4.0 on entertainment ($M = 5.43, SD = .89, t(118) = 17.36, p = .000$), social interaction ($M = 5.01, SD = 1.08, t(118) = 10.19, p = .000$), financial gain ($M = 5.31, SD = .99, t(118) = 14.42, p = .000$). Additionally, the sports betting group scored significantly higher means than the mean value of 5.0 on perception of skill vs. luck ($M = 7.61, SD = 1.81, t(118) = 15.62, p = .000$). In sum, both DFS and sport betting groups average responses exceeded the mid-points on all four scales. This shows that three motivational factors are indeed driving the participants to engage in respective activities. It also shows that both DFS and sports betting participants perceive respective activities as games of skill rather than luck.

To test the hypotheses, Multivariate Analysis of Covariance (MANCOVA) was conducted. There were statistically significant differences between sports betting and DFS groups on combined dependent variables after controlling for age, gender, income,

frequency of engaging in DFS (sports betting), amount of money spent per month, commitment, and social desirability; $F(4, 211) = 2.510, p < .05$; Wilk's $\Lambda = .955, \eta^2 = .045$. With regards to control variables, three variables were significant; commitment ($F(4, 211) = 73.98, p < .05$; Wilk's $\Lambda = .416, \text{partial } \eta^2 = .084$), social desirability ($F(4, 211) = 4.261, p < .05$; Wilk's $\Lambda = .925, \text{partial } \eta^2 = .075$), and amount of money spent per month ($F(4, 211) = 3.128, p < .05$; Wilk's $\Lambda = 0.944, \text{partial } \eta^2 = .056$). The rest of the control variables were not significant; age ($F(4, 211) = .266, p > .05$; Wilk's $\Lambda = .995, \text{partial } \eta^2 = .005$), gender ($F(4, 211) = .543, p > .05$; Wilk's $\Lambda = .990, \text{partial } \eta^2 = .010$), income ($F(4, 211) = .345, p > .05$; Wilk's $\Lambda = .994, \text{partial } \eta^2 = .006$), and frequency of engaging in DFS/sports betting ($F(4, 211) = .710, p > .05$; Wilk's $\Lambda = .987, \text{partial } \eta^2 = .013$).

Pairwise comparisons were carried out to assess group differences across the dependent variables. The sports betting group ($M = 5.53, SE = .06$) scored higher ($F = 4.60; p = .03$) on the entertainment motivation than the DFS group ($M = 5.34, SE = .06$). Thus, H1 was supported. The effect size for difference in entertainment motivation was relatively small ($\text{partial } \eta^2 = .02$, Cohen, 1988). The DFS group ($M = 5.29, SE = .07$) scored higher ($F = 4.02; p = .04$) on the social interaction motivation than the sports betting group ($M = 5.08, SE = .07$). Thus, H2 was supported. The effect size for difference in social interaction motivation was relatively small ($\text{partial } \eta^2 = .02$, Cohen, 1988). There was no difference ($F = 0.37; p = .54$) between the DFS ($M = 5.33, SE = .07$) and sports betting groups ($M = 5.39, SE = .07$) on the financial gain motivation. Thus, H3 was not supported. Finally, there was no difference ($F = 0.02; p = .87$) between the DFS ($M = 7.69, SE = .16$) and sports betting ($M = 7.68, SE = .15$) groups in

perception of skill versus luck. H4 was thus not supported. Table 6 summarizes the MANCOVA results.

Table 6. *MANCOVA Results*

Dependent Variables	Means		<i>p</i> -value	Partial η^2
	DFS	Sports Betting		
Entertainment*	5.35	5.53	.046	.020
Social interaction*	5.29	5.08	.039	.020
Financial gain	5.33	5.39	.577	.001
Perception of skill vs. luck	7.69	7.68	.950	.000

$F(4, 211) = 2.510, p < .05; \text{Wilk's } \Lambda = .955, \eta^2 = .045$

Notes. Entertainment, Social interaction, and financial gains items are measured using a 7-point Likert Scale from “Strongly Disagree” to “Strongly Agree”. Perception of skill vs. luck item is measured using a 11-point scale from 0 = luck to 10 = skill. * $p < .05$

Discussion

The primary purpose of this study was to explore the differences in motivation and perceived behavioral control between DFS participants and sports betting participants. Results point to similarities and differences between the groups with regard to motivations and perception of skill versus luck. Specifically, given the observed significant differences in two out of the three primary motivations investigated in this study, DFS and sports betting groups can be considered two distinct consumer segments in the domain of sports gambling.

The results revealed that sports betting participants are more motivated by entertainment than DFS participants, supporting H₁. In other words, sports betting participants have more desire to increase their enjoyment and excitement when consuming sporting events by having stake in the game compared to DFS participants. These findings suggest that sports betting participants are more intrinsically motivated

than DFS participants, as intrinsic motivation refers to engaging in an activity for its own sake (e.g., enjoyment, excitement, Deci et al., 1996).

Moreover, the results indicated that DFS participants are more motivated by social interaction than sports betting participants, supporting H₂. Based on one sample t-test against the mean value of 4.0, the findings suggest that both DFS and sports betting participants are motivated by social interaction with having the means scores above 5.0 on 7-point scale, which is consistent with prior literature (Dwyer et al., 2018; Weiner & Dwyer, 2017). However, social interaction is a significantly more important motivational factor for DFS participants compared to sports betting participants. This is likely because the design of DFS, having private contests (i.e., participants playing with their close friends and family members), facilitates social interaction.

Additionally, this result could be attributed to the proliferation of online sports betting platforms and their increasing popularity. Before the advent of online sports betting, people had wagered on sporting events in person at a physical sportsbook, where people could interact with one another. Nowadays, sports betting is increasingly shifting to online settings (Bell, 2021; Parry, 2019). In 2019, more than 80 percent of wagering in sporting events were placed through internet in the state of New Jersey (Parry, 2019). In addition, according to Bell (2021), 45% of sports betting is occurring through online platforms and 7.6 million people stated that they are willing to place a bet on sporting events using online sportsbooks. Consequently, people are increasingly wagering on sporting events online, which requires minimal to no human interaction. Therefore, compared to DFS participants, sports betting participants are less motivated by social interaction aspect.

While DFS and Sports betting participants exhibited differences in their level of motivation with respect to entertainment and social interaction, they did not differ in terms of the motivation for financial gain. Based on one sample t- test against the mean value of 4.0, both groups scored high means (DFS = 5.33, sports betting = 5.39) on the financial gain motivation, which may indicate that winning money is a common driver across both DFS and sport betting.

These findings are consistent with previous motivation studies on DFS and sports betting that both DFS and sports betting participants displayed financial gain motivation (Drayer et al., 2018; Fang & Mowen, 2009; Kota et al., 2019; Lamont & Hing, 2018; Wann et al., 2015; Weiner & Dwyer, 2017). Sports betting provides a wide array of options to wager, including betting opportunities that feature low odds and high probability of winning. Because of these characteristics, sports betting participants are motivated by the potential financial gain to engage in the activity. On the other hand, DFS is more similar to a lottery in terms of its payoff structure, chance of winning, and size of winnings. Based on the existing literature (Ariyabuddhiphongs, 2011; Forrest et al., 2002), winning the jackpot (i.e., prize money) is the main motivation driving consumers to engage in lotteries. Thus, it is possible that the potential for financial gain drew individuals to DFS. In sum, despite different incentive structure (e.g. pay offs and chance of winning) of DFS and sports betting, the findings suggest that people are equally motivated by financial gain to engage in both activities. In other words, the motivation for financial gain is a driver for both activities, for which there is no significant statistical difference between DFS and sports betting groups.

Lastly, there was no significant statistical difference in perception of required skill level between DFS and sports betting groups; Thus, H₄ was not supported. Based on one sample t- test against the mean value of 5.0, both DFS and sports betting groups scored high means (DFS = 7.69, sports betting = 7.68), which were measured on a 11-point scale (0 = luck to 10 = skill). The findings suggest that both DFS and sports betting groups perceive respective activities require more skill than luck, which is consistent with prior literature (Billings et al., 2017; Drayer et al., 2019). Even though sports betting requires less granular knowledge to engage in the activity compared to DFS, sports betting participants have a perception that sports betting is a game of skills which involves detailed knowledge such as analyzing past game information, matchups, and other aspects of sport. On the other hand, as expected, DFS participants perceive that DFS participation involves relevant skills, which includes a great deal of relevant knowledge in relation to player specific information and salary cap. Therefore, there was no significant statistical difference in the perceived required skill level between DFS and sports betting groups.

Theoretical Implications

These findings make important contributions to theory. This study contributes to the sports gambling literature by incorporating two primary factors (e.g., motivation and perception of skill vs. luck), which are two most significant predictors of actual behavior (i.e., why people choose to play DFS or wager on sports) (Ajzen, 1991; Kang et al., 2006). In addition to simultaneously considering motivation and perceived behavioral control, this study also compared DFS and sports betting participants. Unlike previous scholarship which has focused on comparing these factors between DFS and TFS

participants (Billings et al., 2017; Weiner & Dwyer, 2017), this research found evidence of differences and similarities between DFS and sports betting participants; thus extending this line of research in the domain of sports gambling.

In terms of motivation, this study investigated three factors often found in the fantasy sports and sports betting literatures: entertainment, social interaction, and financial gain (Dwyer & Kim, 2011; Dwyer & Weiner, 2018; Fang & Mowen, 2009; Farquhar & Meeds, 2007; Lamont & Hing, 2018; Lee et al., 2013; Weiner & Dwyer, 2017). The findings from this study offer a new perspective that DFS and sports betting participants can be considered two independent consumer segments. Even though there were similarities in financial gain motivation, these two groups showed differences in two other main motivations that were investigated in this study. Given DFS and sports betting have a financial gain component to it, it is reasonable to accept that these two groups showed similarities in financial gain motivation both scoring high means. On the other hand, DFS participants scored higher mean on social interaction motivation and lower mean on entertainment motivation compared to sports betting participants. This difference may indicate that these two groups have different drivers to participate in respective activities.

Lastly, the findings from this study indicate that both DFS and sports betting participants perceive that their respective activities require more skill than luck. This may suggest that these individuals may experience false perception of control that skills can influence outcome of the DFS play and sports betting. This may raise concern that both DFS and sports betting participants could be susceptible to developing gambling problem since false perception of control is positively related to cognitive distortions and

also gambling problems are positively correlated with cognitive distortions (Drayer et al., 2019; Myrseth et al., 2010). Therefore, sports gambling organizations and policymakers should thoroughly think about the potential risks that could arise from participating in both DFS and sports betting.

Managerial Implications

From a managerial perspective, this study offers critical implications for sports gambling organizations. The findings provide insights for the development of effective marketing approaches by not only DFS giants (e.g., DraftKings and FanDuel) but also casinos that offer sport wagering on-site and/or online. Incorporating consumer motivation into marketing communication strategy enables companies to improve their chances to meet their consumer needs and wants (Duggal, 2018). Thus, as previously mentioned, the social interaction and entertainment motivation differences between DFS and sports betting groups are distinct that different marketing strategies focusing on their main motivation should be implemented to target these two unique consumer segments. Specifically, marketers of DFS platforms should highlight the social interaction component of DFS in their promotional messages to align with consumers' needs and wants. Currently, DFS platforms focus heavily on the financial gain component of DFS, with examples of common promotional messages including "Paying out \$75 million a week", "Win \$1 million", and "\$50,000 total prizes." However, for DFS platforms to maximize their marketing efforts, findings from this study suggest that they should incorporate social interaction aspects into their promotional messages.

Moreover, DFS platforms should make an effort to improve the social interaction aspect of DFS offerings. Currently, FanDuel and DraftKings offer private contests that

people can play with their close friends and family members. In order to promote social interaction offerings, they could develop chat functions that participants in the private league or contest can interact with one another. Previous literature suggests that social interaction aspect of game-like apps or platforms positively affects attitudes towards the provider and enhance engagement level of consumers, which ultimately leads to positive behavioral outcomes (De-Marcos et al., 2016; Hamari & Koivisto, 2015). Thus, this chat feature would improve the social interaction aspect of DFS which would potentially meet the needs and wants of DFS consumers, and ultimately attracting more consumers.

As for sports betting organizations, the findings suggest that the entertainment aspect should be emphasized in their promotional messages. Currently, similar to DFS advertising, sports betting providers focus on potential financial gain in their marketing efforts. The example includes “Risk-Free Bet up to \$500” and “First deposit match bonus up to \$250”. Sports betting organizations looking to optimize their marketing efforts should incorporate the entertainment aspect into their promotional messages, highlighting having a stake in the sporting events makes the game more entertaining, enjoyable, and exciting.

Limitations and Future Research

Although this study provides meaningful implications, it is subject to some limitations. First, this study utilized screening questions to recruit actual DFS and sports betting participants from Amazon’s Mechanical Turk over other recruiting strategies, such as recruiting active participants from the different DFS and sports betting platforms. While the sample appears generalizable by having similar demographic as active participants of fantasy sports and sports betting (“Industry Demographics,” n.d.), future

research should consider recruiting active participants from various DFS and sports betting platforms to increase generalizability.

Second, the primary purpose of this study was to investigate motivational and perception of skill versus luck differences between DFS and sports betting participants. With DFS and sports betting possesses similarities (e.g., financial gain opportunities) and differences (e.g., game format), comparing these two groups promises valuable insights. From our sample of 240 adults, only 7 percent engaged in both DFS and sports betting activities together (i.e., hybrid participants). With such a limited number of hybrid participants, this study excluded the hybrid group from the analysis. Given the increasing popularity of sports betting around the world and the status of 43 states currently legalized DFS and 33 states legalized sports betting in the United States (Reynolds, 2022; “Daily Fantasy Sports”, 2021), there may soon be a dramatic increase in the number of consumers who engage in both DFS and sports betting. Thus, future research should include hybrid participants when examining differences in motivations and perceptions of skill vs luck to better consider this emerging consumer segment in relation to existing groups.

Lastly, future research should consider exploring behavioral differences including different types of media consumption (e.g., traditional broadcast, social media) and attendance at sporting events between these two groups. The findings from this study may provide sports media company and sports teams with valuable suggestions how to effectively target two distinct groups in order to improve TV ratings and attendance.

Conclusion

This research sought to extend existing sports gambling literature by investigating motivational and perception of skill versus luck differences between DFS and sports betting participants. The results from this study indicate that there are differences and similarities between DFS and sports betting participants. Thus, the findings from this research provide meaningful insights that DFS and sports betting participants may be regarded as two independent consumer segments. Managerially, this research offers important implications for sport gambling platforms in terms of developing effective marketing strategies. Specifically, entertainment aspect could be highlighted in the marketing communication to target sports betting participants whereas social interaction aspect could be emphasized to effectively target DFS participants.

CHAPTER 3

ESSAY TWO: THE EFFECTS OF INTERPLAY BETWEEN DIFFERENT GAME CHARACTERISTICS AND CONSUMER MOTIVATION ON LIKELIHOOD OF BETTING AND MAGNITUDE OF THE MONETARY WAGER

Since the U.S. Supreme Court lifted the federal ban on sports wagering in 2018, consumers have wagered \$17 billion on sports in the United States (O'Brien, 2020). As the popularity of sports gambling continues to increase, this has left the sport industry, including academics, interested in examining the factors that influence consumers' betting behavior. One factor that could impact consumers' betting behavior are game characteristics. Game characteristics capture the unique features of sport games, such as their TV coverage, the quality of the teams facing each other, the date of the game, and the level of game uncertainty. Previous studies suggest that game characteristics impacted sport consumers including game satisfaction, future revisit intentions, and willingness to pay for sport event tickets (Carmon & Ariely, 2000; Shapiro et al., 2016; Yoshida & James, 2010). Since sports gambling could be considered one form of sport consumption (Humphreys et al., 2013), it is intriguing to examine the influence of game characteristics on consumers' betting behavior. Researchers have considered the impact of various game characteristics on betting volume, finding that the closeness of the game, TV coverage, and team quality all positively impact betting volume (Humphreys et al., 2013; Paul & Weinbach, 2010).

Aforementioned game characteristics (i.e., team quality, level of uncertainty, and TV coverage) that have positively impacted betting volume are factors related to enhancing enjoyment and excitement of consuming sporting events (Humphreys et al., 2013; Paul & Weinbach, 2010). Hence, these characteristics are related to intrinsic

motivation factors based on the SDT framework. On the other hand, given that the gambling context introduces financial stakes inherent to gambling participation, extrinsic motivation (e.g., financial gain) cannot be overlooked when examining consumers' betting behavior. Thus, the influences of game characteristics on betting behavior could differ across consumers, with distinct motivations based on SDT framework.

The existing gambling literature suggests that numerous forms of motivation inform consumers' attitudes and behavior (Lamont & Hing, 2018; Lee et al., 2013; Rodriguez et al., 2014). Relevant studies considering the impacts of different types of motivation on consumers' attitudinal and behavioral outcomes have drawn upon SDT as a theoretical background. According to SDT, consumers exhibit distinct behaviors depending on whether intrinsic vs. extrinsic motivation is driving their participation in a given activity (Pelletier et al., 1998; Ryan & Deci, 2000). Effectively, when engaging in a certain activity, individuals can be motivated intrinsically, extrinsically, or by a combination of both, with their motivation varying from high to low (Drayer et al., 2019).

When examining consumer behavior, experience should be explored holistically by considering multiple factors rather than investigating through one lens (Bem & Funder, 1978; Funk, 2017). However, previous studies have solely focused on the context (e.g., game characteristics), while omitting the uniqueness of the individual bettors (e.g., consumer characteristics), specifically the motivations driving consumers' betting behavior. Therefore, this research will consider both game characteristics and consumer characteristics (i.e., motivation) and examine how the interplay between the two impacts consumers' betting intentions.

To date, no studies have investigated the effects of game characteristics on consumers' betting behavior by considering the motivations of different consumer segments (e.g., highly motivated: both high in intrinsic and extrinsic motivation; less motivated: both low in intrinsic and extrinsic motivation; intrinsic; extrinsic). To address this gap, this paper explores how three game characteristics (i.e., team quality, level of uncertainty, and TV coverage) – all of which impacted betting volume – influence diverse consumers' likelihood of betting and willingness to bet on a game based on their motivations. This research will employ an experimental design involving a choice-based conjoint analysis to examine the relative importance of game characteristics on betting intentions among different consumer segments based on their primary motivations.

Literature Review

Self-Determination Theory

SDT was originated and gained popularity in psychology as a theory of human motivation. Subsequently, SDT has been used to examine motivation in a variety of disciplines, including healthcare, education, businesses and organizations, sports and physical activity, and technology (Ryan & Deci, 2019; Ryan et al., 2019). Early formulations of SDT focused mainly on intrinsic motivation, shifting the focus of motivational studies from conventional behaviorist metapsychology to intrinsic motivation (Ryan & Deci, 2019; Ryan et al., 2019). Behaviorist metapsychology research has posited that external sources of motivation, such as environmental reinforcement and punishment, can control behavior (Overskeid, 2018; Ryan et al., 2019; Ryan & Deci, 2019). However, other research suggests that an emphasis on external sources of motivation underappreciates the process by which the actions are more naturalistically

organized within individuals (Ryan & Deci, 2019). Thus, SDT's basic focus is the *self*, which is understood as an active integrative procedure (Ryan & Deci, 2019). However, current formulations of SDT also incorporate extrinsic motivation, allowing researchers to analyze individual motivational differences in more detailed fashion (Gagné & Deci, 2014; Ryan & Deci, 2019).

In its current application, SDT broadly characterizes motivation into two types: intrinsic and extrinsic. Intrinsic motivation captures the motivation of engaging in an activity solely for its own enjoyment rather than the pursuit of any rewards, and is considered the highest form of motivation (Ryan & Deci, 2000; Van den Broeck et al., 2016). One of the main factors that leads to acquisition of a self-determined status is intrinsic motivation. Intrinsic motivations may be identified as interest, enjoyment, and a sense of satisfaction felt when engaged in a certain activity (Deci et al., 2017). Thus, individuals who have an innate interest fueling their enjoyment and subsequent feeling of gratification while engaged in a gambling activity will be self-determined. Because of the internalized nature of intrinsic motivation, it is thought to be the more sustained type of motivation and as such more likely to result in prolonged behavior (Ryan & Deci, 2000, 2019). On the other hand, extrinsic motivation refers to partaking in an activity for reward or to avoid consequences (Van den Broeck et al., 2016). Examples of extrinsic motivations include praise, fame, and obtaining a financial reward (Deci et al., 1996; Gagné et al., 2014; Ryan & Deci, 2000, 2019). Within the gambling literature, extrinsic motivation mainly relates to improving one's financial status. Extrinsically motivated gamblers are partaking in an activity with the intention of winning money (Chantal et al., 1995; Drayer et al., 2019).

A mix of these two types of motivation can also drive individuals to engage in an activity (Drayer et al., 2019; Ryan & Deci, 2000). According to Drayer et al. (2019), “Individuals can be motivated intrinsically or extrinsically. They can also be motivated by a combination of intrinsic and extrinsic elements, or in some cases, these elements play no role at all” (p. 40). In examining cognitive and behavioral differences among daily fantasy sports (DFS) participants, Drayer et al. (2019) segmented DFS participants into four groups segments (e.g., highly motivated: both high in intrinsic and extrinsic motivation; less motivated: both low in intrinsic and extrinsic motivation; intrinsic; extrinsic) based on SDT framework. Following this approach, this study explores these different segments to investigate the effects of certain game characteristics on betting intentions.

Previously mentioned game characteristics (team quality, level of uncertainty, and TV coverage) that have positively impacted betting volume are the factors that are related to enhancing enjoyment and excitement of consuming sporting events (Humphreys et al., 2013; Paul & Weinbach, 2010). Hence, these characteristics are related to intrinsic motivational factors based on SDT framework. However, in the gambling context, as there exist inherent financial stakes in gambling participation, extrinsic motivation (e.g., financial gain) cannot be overlooked. Thus, the influences of game characteristics on betting intentions could differ across consumers with distinct motivations based on the SDT framework.

SDT and Gambling Motivation

Relevant studies on the impacts of different motivations on consumers’ behavioral outcomes have drawn upon SDT as a theoretical background. Research on gambling has

revealed that various types of motivation can drive different consumer attitudes and behaviors (Chantal et al., 1995; Lamont & Hing, 2018; Lee et al., 2013; Rodriguez et al., 2014). Chantal et al. (1995) found that people who are intrinsically motivated demonstrate stronger gambling involvement, whereas those who are extrinsically motivated tend to be less drawn to gambling but more likely to display a gambling problem if they are involved. Furthermore, Rodriguez et al. (2014) examined the relationship between motivational orientation and the severity of problem gambling based on the SDT framework using 252 American college students. Findings indicated that stronger self-determined motivation (i.e., among individuals who were intrinsically motivated) was negatively associated with problem gambling. Stronger non-self-determined motivation (i.e., among individuals who were extrinsically motivated) correlated with higher levels of problem gambling (Rodriguez et al., 2014). Additionally, Lee et al. (2013) examined the relationship between two types of passion (harmonious vs. obsessive) and motivation (intrinsic vs. extrinsic) and their consequences (positive vs. negative). Results showed that intrinsically motivated online sports bettors (e.g., those pursuing excitement, challenge, or escape) expressed harmonious passion, which led to positive consequences (e.g., lower stress and arousal). Conversely, extrinsically motivated bettors (e.g., those focused on winning money) displayed obsessive passion, which led to negative consequences (e.g., anxiety and guilt). More recently, Lamont and Hing (2018) adopted SDT as a theoretical framework to assess what motivates men between 18 and 34 years old to participate in sports betting (Lamont & Hing, 2018). Results suggested that controlled motivation (i.e., extrinsic motivation) compelled young men to engage in sports betting.

Based on the preceding review of literature on sports gambling motivations and their effects, consumers appear to demonstrate distinct attitudes and behaviors depending on their main motivation (i.e., intrinsic vs extrinsic) to participate in sports betting. However, research has overlooked investigating the impacts of various game characteristics on individuals' betting behavior among different consumer motivation segments.

Game Characteristics and Betting

Several researchers have noted that consumers' sports betting behavior is affected by major game attributes such as quality of teams and level of game uncertainty (Humphreys et al., 2013; Paul & Weinbach, 2010). Paul and Weinbach (2010) examined how game characteristics, specifically TV coverage, the quality of teams facing each other (as measured by each team's winning percentage), day of the week, time of day, and the month of the season, influenced sports betting volume. Findings indicated that when the game featured high-quality teams and was televised, sports fans wagered more money compared to games that featured lesser quality teams and were not broadcasted on television. Humphreys et al. (2013) later examined the determinants of betting volume by including TV coverage, the extent of outcome uncertainty (captured by point spread), team quality (captured by leagues' top 25 ranking), and total score as independent variables in a regression model. After aggregating more than 3,000 men's college basketball games during the 2008–2009 season, results found that betting volume depended on the expected closeness of the game (i.e., the level of game uncertainty), TV coverage, and team quality (Humphreys et al., 2013). In other words, both Paul and Weinbach (2010) and Humphreys et al. (2013) found that betting volume increased for

games that featured high-quality teams, were televised on major networks, and were evenly matched.

While these findings offered meaningful implications regarding the effects of specific game characteristics on sports bettors' preferences, these studies failed to capture the uniqueness of the individual bettors particularly individuals' different motivating factors to engage in the sports gambling. Given that different types of motivation can result in different consumer attitudes and behaviors (Chantal et al., 1995; Lamont & Hing, 2018; Lee et al., 2013; Rodriguez et al., 2014), more research is needed to explore how these game characteristics interplay with consumer characteristics, especially motivations to influence betting behavior at the individual level among sports gambling participants.

Several scholars suggest that consumer experience should be explored comprehensively by considering multiple factors including the sport user and context under a single investigation, rather than focusing on only the user or the context (Bem & Funder, 1978; Funk, 2017). The motivation scholarship addresses the sport user (i.e., their unique motivations), but it overlooks other elements, especially the context (i.e., game characteristics), that make up the sport experience. In other words, existing gambling literature has focused on either the user (i.e., their unique motivations) or the context (i.e., game characteristics), but often failed to capture both in a single investigation. This paper will overcome that shortcoming by considering game characteristics and motivation together. Specifically, the primary objective of this paper is to examine the effects of game characteristics and their relative importance in consumers' betting intentions—namely one's likelihood of betting and the magnitude of

their monetary wager—based on different motivations (intrinsic vs. extrinsic). To do so, the following research question is addressed:

RQ1: How do game characteristics (e.g., team quality, game uncertainty, and TV coverage) influence likelihood of betting among consumer motivation segments?

RQ2: How do game characteristics (e.g., team quality, game uncertainty, and TV coverage) influence the magnitude of betting among consumer motivation segments?

Method

To answer the proposed research questions, choice-based conjoint analysis was performed. Conjoint analysis is a research method that measures consumers' preferences in relation to different levels of attributes that products and services offer when making decisions (Schaupp & Bélanger, 2005). Since the current study's objectives are to investigate the effects of game characteristics and their relative importance on consumers' betting intentions based on consumers' motivations, conjoint analysis is an appropriate method for this study. Specifically, this study adopted choice-based conjoint analysis which allows respondents to evaluate entire product attributes and their levels simultaneously (Kaiser et al., 2019). Thus, the features present choice options in a particularly realistic manner that resembles decision-making processes in everyday life.

Attributes and Levels

Previous studies have investigated the influence of game characteristics, such as TV coverage, team quality (as measured by each team's winning percentage), day of the week, time of day, and month of the season, on betting volume (Humphreys et al., 2013; Paul & Weinbach, 2010). Findings suggest that betting volume increases for games that feature high-quality teams, are televised on major networks, and feature evenly matched

opponents. Consequently, this study includes three game characteristics that have impacted betting volume in previous research (e.g., Humphreys et al., 2013; Paul & Weinbach, 2010): TV coverage, quality of teams, and game uncertainty. As for TV coverage, since most games are televised through either National and regional broadcast or league-wide, on-demand coverage (e.g., NBA League Pass), it was operationalized by participants having access to watch the TV broadcast or not – namely, no access to watch TV broadcast and access to watch TV broadcast. Following Paul and Weinbach’s (2010) precedent, quality of teams was operationalized using team winning percentage. Specifically, quality team and non-quality team status was defined by their standings in the conference and winning percentage (i.e., quality team: top four teams in the conference standing with above 60% winning percentage; non-quality team: bottom four teams in the conference standing with below 40% winning percentage). There are three potential combinations of team quality for a given game: quality vs quality, quality vs non-quality, and non-quality vs non-quality. Finally, game uncertainty was operationalized by providing a point spread of the game as per Humphreys et al.(2013) Pick’em game (e.g. evenly matched game) which represent the greatest level of uncertainty will be one element, whereas point spread of 11 which represents low level of game uncertainty having 83.3% probability that favorite team will win will be the other component within game uncertainty attribute (Paul & Weinbach, 2013). In sum, 12 (3x2x2) choice sets were considered. These characteristics and their levels are outlined in **Table 7**.

Table 7. *Game Characteristics Attributes and Levels in Conjoint Analysis*

Attributes	Levels
Quality teams (captured by standings in the conference and winning percentage)	<ol style="list-style-type: none"> 1. Quality team vs Quality team 2. Quality team vs Non-quality team 3. Non-quality team vs Non-quality team
TV coverage	<ol style="list-style-type: none"> 1. Access to watch TV broadcast 2. No access to watch TV broadcast
Game uncertainty (captured by point spread)	<ol style="list-style-type: none"> 1. Pick'em game (i.e., evenly matched) 2. 11-point spread

Participants

Survey participants were recruited and rewarded through Amazon's MTurk (\$1.00 per participant). Only participants who live in the United States and who have a high approval rating (>95%) in relation to other Amazon's MTurk tasks were included in the survey. To ensure participants are 'real sports gamblers,' respondents were asked screening questions, beginning with "Have you placed a bet on a sporting event(s) in the past 12 months?" with the options of Yes or No. If the respondent indicated that they had placed a bet in the prior 12 months, they were presented with the following two multiple choice questions: "How much do you profit (only the net win), if you bet \$10 on +100 odds?" (correct answer: \$10), and "The Philadelphia Eagles are favored to win the game by 6 points against Dallas Cowboys, what is the point spread of the game?" (correct answer: Eagles -6). Based on the results of the screening questions, only participants who placed a bet on sporting events in the past 12 months and answered the two screening questions correctly were included in the study.

For the purpose of this study, participants were segmented into four groups based on their intrinsic and extrinsic motivations as per the SDT framework. Drayer et al.

(2019) posited that individuals can be motivated intrinsically, extrinsically, or a combination of both, with their motivation varying from high to low when engaging in a certain activity (Drayer et al., 2019). Consequently, the authors used a dual-route methodology to segment participants into four groups depending on their participation motivation (e.g., highly motivated: high in both intrinsic and extrinsic motivation; less motivated: low in both intrinsic and extrinsic motivation; intrinsic: high in intrinsic motivation, but low in extrinsic; and extrinsic: high in extrinsic motivation, but low in intrinsic). Following the approach and precedent of Drayer et al. (2019), this study segmented participants into four groups based on their sports gambling motivation as per the SDT framework.

A heuristic was used to determine a reasonable sample size in performing conjoint analysis (Orme, 2010).

$$N \geq (500 * C) / T * A,$$

Where N is the number of respondents, T is the number of tasks, A is the number of alternatives per task, and C is the largest product of levels of any two attributes. When we apply this formula to current study, we have T = 12 choice sets (3x2x2), A = 3 alternatives (Game uncertainty, TV access, and Quality teams), and C = 6 (3x2, Quality team has 3 levels and both game uncertainty and TV access have 2 levels). Thus,

$$N \geq (500 * 6) / 12 * 3 = 84$$

Based on this calculation, a minimum of 84 respondents (21 per each segment) are needed.

In this study, 778 potential respondents started the survey through Amazon's Mechanical Turk. However, 574 respondents failed the screening questions. Moreover, 8

respondents failed the attention check questions, leaving a sample of 196 adults. Since the choice set scenarios include actual NBA team names, we excluded 53 respondents who indicated that they are fans of the teams in the scenarios from the analysis to control for fandom. Thus, the final sample was 143. According to the Fantasy Sports & Gaming association and industry demographics, active participants of sports betting are male dominant (80% male), more than 60 % hold a bachelor's degree or higher, and the average age is approximately 37 ("American Sports Bettors", 2020; "Industry Demographics," n.d.). Thus, the sample, which is detailed in Table 8, is representative of the target population.

Table 8. *Descriptive Statistics*

Variable	Category	Respondents (<i>n</i> = 143)
Gender	Male	71.7%
	Female	28.3%
Income (annual)	Less than \$25,000	2.1%
	\$25,000-\$50,000	21.7%
	\$50,001-\$75,000	34.3%
	\$75,001-\$100,000	21.7%
	\$100,001-\$125,000	11.9%
	\$125,001-\$150,000	6.3%
	More than \$150,000	2.1%
Education	Less than High School	0.0%
	High School/GED	1.4%
	Some College	4.9%
	2-year college degree	0%
	4-year college degree	53.1%
	Master's degree	38.5%
	Doctoral degree	0%
Age	Professional degree	2.1%
	Mean	37.46
	Standard Deviation	10.68

Procedure

First, participants were asked to answer the three screening questions. Only participants who passed the screening questions were included in the study to ensure the reliability of the sample. Participants were assigned to complete the choice-based conjoint analysis. Each participant was presented a combination of 12 possible choice sets consisting of three attributes and three levels on one attribute (e.g., quality team), two levels on other two attributes (e.g., TV coverage and game uncertainty). A sample of a single choice set is available in Appendix A. Participants were presented with questions

related to betting behavior and were instructed to make a decision based on the choice set they were just presented with. After completing the choice task, participants were asked to answer motivation questions in relation to engaging in sports gambling followed by demographics questions.

Measures

Betting Intentions. Behavioral intention is a direct predictor of actual behavior and has been used as a reliable proxy (Ajzen, 1991; Drayer et al., 2018; Grewal et al., 1998; Kwon et al., 2007). Two measures were collected pertaining to betting intentions, namely, likelihood of betting and magnitude of betting amount. When presented with each choice set, participants were asked to respond to “Please rate the likelihood of betting on this game” to capture their likelihood of betting. A 100-point sliding semantic differential scale will be used, anchored at each end by not at all likely to place a bet and extremely likely to bet. Then, participants were asked to answer, “If you had a budget of \$200 to bet on this specific matchup, how much would you bet on it?” to capture magnitude of betting amount. Participants wrote down the amount they would want to wager.

Motivation. Following Drayer et al.’s (2019) approach, this study adapted the scales from Dwyer and Kim’s (2011) Motivational Scale for Fantasy Football Participation (MSFFP). Extrinsic motivation (e.g., financial gain) was measured by adapting three items from this scale: “The amount of money wagered determines how much I follow sports.”, “I engage in sports wagering to win money.”, and “Given the opportunity, I would prefer to wager money on sports than only watch or attend games.” For intrinsic motivation, the following three items were adapted from the MSFFP scale: “I engage in sports wagering

because it makes watching sports more enjoyable.”, “I engage in sports wagering because it is a fun way to spend my time.”, and “I engage in sports wagering because it provides an entertaining escape from my day-to-day activities.” Based on previous literature (Drayer et al., 2019; Weiner & Dwyer, 2017), reliability of entertainment and financial gain dimensions were assessed using Cronbach’s alpha, and they were both above .80, which falls above the accepted value ($\alpha = .80$; George & Mallery, 2019; Nunally & Bernstein, 1978).

Attention Check. Respondents who failed to answer attention check questions, submitted inconsistent responses in relation to measured variables, and spent considerably less time finishing respective experimental design studies (Oppenheimer et al., 2009; Sato et al., 2016). Thus, this study included an attention check question that read “Please select strongly disagree in this question.” to measure participants’ attention level. 8 respondents who failed to answer attention check questions were removed from the sample.

Data Analysis

Conjoint analysis was used to investigate the individual and interrelated effects of game characteristics and consumer characteristics on consumers’ betting behavior. This analysis identifies the relative importance of the three attributes (i.e., game characteristics) and estimates the utilities of each level within each attribute among the four groups segmented by motivation. By evaluating the utilities, relative importance within each attribute can be identified and analyzed to better understand consumer preferences among the four motivation segments. Higher utility scores reflect greater preference within each attribute. To estimate the relative importance among three attributes, utility range will be calculated first by subtracting the minimum utility value

from the maximum utility values for each attribute. Then, each utility range will be divided by the sum of all attribute ranges to estimate the relative importance among three attributes. The larger utility range corresponds to greater preferences. This is presented as the importance percentage in Tables 9 and 10. In sum, higher utility scores and importance percentage shows greater relative preference.

Results

Likelihood of Placing the Bet

Table 9 provides conjoint analysis results for likelihood of placing the bet for the four different motivational groups. In terms of relative importance percentage among the three different attributes, all four motivational groups indicated that quality team was the most important attribute in terms of likelihood of placing the bet, followed by game uncertainty, and then TV coverage. Within the quality team attribute, the intrinsically motivated group preferred the quality team versus quality team games whereas the extrinsically motivated group preferred the non-quality team versus non-quality team games. As for less motivated and highly motivated groups, they preferred the games between quality and non-quality teams. For the game uncertainty attribute, both the intrinsically and extrinsically motivated groups indicated that they preferred pick'em game. Finally, for the TV coverage attribute, all four groups preferred in games that they have access to TV broadcast.

Table 9. *Conjoint Analysis: Likelihood of Placing the Bet (N=143)*

	Less motivated (n=45)		Intrinsic (n=27)		Extrinsic (n=21)		Highly motivated (n=50)	
	Importance %	Utility estimates	Importance %	Utility estimates	Importance %	Utility estimates	Importance %	Utility estimates
Quality Teams	48		44.14		50.14		49.12	
Q vs. Q		0.05		1.38		-1.28		-0.65
Q vs. NQ		1.21		0.60		0.49		1.2
NQ vs. NQ		-1.26		-1.98		0.79		-0.55
Game Uncertainty	27.32		31.12		29.3		28.48	
Pick'em game		-0.27		1.43		0.17		-0.38
11-point spread		0.27		-1.43		-0.17		0.38
TV Coverage	24.68		24.73		20.28		22.40	
TV Access		0.15		0.72		1.61		0.25
No Access		-0.15		-0.72		-1.61		-0.25

Notes: Q = quality team; NQ = non-quality team

Magnitude of Betting Amount

Table 10 presents results of the conjoint analysis for the magnitude of betting amount by the four different motivational groups. Consistent with the result of the likelihood of placing a bet, all four motivational groups indicated that quality team was the most important attribute in terms of placing more money on sporting events. As for intrinsic, extrinsic, and highly motivated groups, TV coverage was the second most important factor followed by game uncertainty. Contrary to these three groups, the less motivated group had game uncertainty as second most important attribute followed by TV coverage. Within quality team attribute, both the intrinsically and extrinsically motivated group preferred the quality team versus quality team games whereas less motivated and highly motivated groups preferred games between quality and non-quality teams. For the game uncertainty attribute, both the intrinsically and extrinsically motivated groups indicated that they preferred pick'em game, whereas less motivated and highly motivated group preferred 11-point spread game. Finally, for the TV coverage attribute, all four groups preferred games where they had access to TV broadcasts.

Table 10. *Conjoint Analysis: Magnitude of Betting Amount (N=143)*

	Less motivated (n=45)		Intrinsic (n=27)		Extrinsic (n=21)		Highly motivated (n=50)	
	Importance %	Utility estimates	Importance %	Utility estimates	Importance %	Utility estimates	Importance %	Utility estimates
Quality Teams	42.93		48.61		51.01		53.47	
Q vs. Q		-1.34		2.12		1.94		0.20
Q vs. NQ		6.71		-3.81		-3.21		0.81
NQ vs. NQ		-5.37		1.69		1.27		-1.01
Game Uncertainty	29.52		25.54		23.62		22.60	
Pick'em game		-0.3		3.5		2.9		-2.45
11-point spread		0.3		-3.5		-2.9		2.45
TV Coverage	27.55		25.85		25.37		23.93	
TV Access		1.14		4.86		5.53		2.1
No Access		-1.14		-4.86		-5.53		-2.1

Notes: Q = Quality team; NQ = non-quality team

Discussion

The purpose of the current study was to investigate the relative importance of three game characteristics on consumers' betting intentions. The current study provides three meaningful findings. First, among the three game characteristics considered, the quality of teams was by far the most important attribute in relation to likelihood and magnitude of betting regardless of betting motivation. In other words, participants in sports betting, whether they are less motivated, intrinsically, extrinsically, or highly motivated, consider quality teams as the most important factor that positively affects their likelihood of betting and wagering amount. Previous literature suggest that quality of teams, game uncertainty, and TV coverage are the factors that positively affect the betting volume (Humphreys et al., 2013; Paul & Weinbach, 2010). Based on the result of the current study, it is likely that quality of teams was the major factor that may have attributed to positively affecting betting volume. Further, the findings from the current study extend the sports gambling literature that among three game characteristics that have positively affected betting volume (e.g., quality of teams, game uncertainty, and TV access), sports bettors consider which team is playing against each other the most. The findings add to existing knowledge of sports gambling behavior that team quality information is the most crucial element influencing the likelihood of betting as well as the magnitude of the wager.

Another main purpose of this study was to investigate relative importance of three attributes and different levels within each attribute among the four groups segmented by motivation. In terms of different levels within three attributes, the less motivated group members indicated that they were both more likely to place bets and more likely to wager

more money on games that featured high-quality teams (i.e., top four teams in the conference standing with above 60% winning percentage) playing against low-quality teams (i.e., bottom four teams in the conference standing with below 40% winning percentage). Also, this group was more likely to bet and wager more money on games that are overwhelmingly favored by one team to win the game (i.e., low level of game uncertainty). Likewise, the highly motivated group displayed a similar relative preference to the less motivated group. Extrinsic group members indicated that they were more likely to bet on games that featured low-quality teams (i.e., bottom four teams in the conference standing with below 40% winning percentage) playing against each other and on games with a high level of uncertainty (i.e., evenly matched). As for the magnitude of betting amount, extrinsic group members exhibited preference for games that featured two high-quality teams (i.e., top four teams in the conference standing with above 60% winning percentage) playing against each other and high level of game uncertainty (i.e., evenly matched).

One of the main findings from the conjoint analysis was the result of intrinsically motivated group. The respondents from this group indicated that they preferred games between high quality teams (i.e., quality team vs. quality team), games that featured high level of uncertainty (i.e., pick'em game), and games that they have access to via TV broadcast in terms of both likelihood of betting and magnitude of betting amount. These game characteristics are consistent with the factors that fans of sporting events prefer (Humphreys et al., 2013; Paul & Weinbach, 2010). In other words, sports bettors who are intrinsically motivated seem to be influenced to engage in sports betting by the same attributes that impact the consumption of sporting events of sports fans. One explanation

for this, based on SDT, is that intrinsically motivated people engage in a certain activity for their enjoyment and entertainment (Ryan & Deci, 2000, 2019). Thus, intrinsically motivated sports bettors have preference in games that fulfill the needs of their enjoyment and entertainment. The game characteristics that they have preference display entertainment value of the games.

Lastly, the result of the conjoint analysis indicates that all four groups have preference for games that they have access to watch on TV in terms of likelihood of betting and magnitude of betting amount. This shows that sports bettors, regardless of their main motivation, are more likely to bet as well as wager more money on sporting events that they can watch the game on TV. This finding provides the evidence that “sports betting and watching games on television appear to be complementary activities” (Humphreys et al., 2013, p. 386).

Theoretical Implications

The findings from this study offer important theoretical implications. Several scholars suggest that consumer behavior should be examined comprehensively by considering multiple factors together in order to attain better insights (Bem & Funder, 1978; Funk, 2017). Thus, this study contributes to the gambling literature by exploring the interrelatedness of game and consumer characteristics in relation to sports gambling provides better understandings of consumers’ sports gambling behavior.

Additionally, findings from the current study runs counter to theoretical knowledge of SDT. Previous literature suggests that different types of motivation (i.e., intrinsic vs extrinsic) can lead to distinct consumer attitudes and behaviors (Chantal et al., 1995; Lamont & Hing, 2018; Lee et al., 2013; Rodriguez et al., 2014). Contrary to these

previous findings, the result from current study shows that there were no big differences among four different motivational groups in terms of preference of different game characteristics. All four groups clearly displayed that they are likely to consider the quality of the two teams playing when making betting decisions. No matter what their main motivations are, consumers appear to demonstrate similar betting intentions. Specifically, when you compare between intrinsic vs extrinsic groups, they display very similar game characteristic preferences in terms of likelihood of betting and magnitude of betting amount. Thus, it contradicts with the previous findings that different motivation leads to different consumer attitudes and behaviors.

Managerial Implications

The findings from this study offer valuable managerial implications. Notably, this study provides insight into effective marketing strategies to influence sports bettors' behavior, improve the consumer experience, and ultimately increase their customer base. The findings regarding the relative importance of game characteristics can help inform marketers as to which characteristics should receive more emphasis in marketing strategies or be prioritized to increase betting. Based on the result of the conjoint analysis, the quality team attribute was undoubtedly the most important attribute that affects sports bettors' likelihood of betting and magnitude of betting amount regardless of their main motivations. Thus, sports betting platforms should highlight the standings and winning percentage of respective teams to consider the preference of sports bettors, which will lead to higher likelihood and magnitude of betting amount.

In addition, all four motivation groups indicate that they, regardless of their main motivation, are more likely to bet as well as wager more money on sporting events that

they have access to watch the game whether its TV broadcast or online streaming services. As sports betting platforms, they should make an effort to provide TV coverage information of different sporting events as detail as possible. Not only do they provide TV coverage information on their platform, but they can send out push notifications to inform this information to consumers. For example, for NBA games, sports betting platforms can distribute push notification saying “Philadelphia 76ers vs. Los Angeles game will be televised on ESPN! There is still time to bet on this game!” This will undoubtedly attract more sports bettors to the platform, which will ultimately increase their customer base. Further, sports betting companies could integrate live streaming of sporting events to their mobile application platforms to meet the needs and desires of sports bettors who indicated that they are more likely to bet and wager more money on games that they can watch live.

Lastly, since intrinsically motivated group clearly displayed their preference in games between high quality teams (i.e., quality team vs. quality team), games that feature high level of uncertainty (i.e., pick'em game), and games that they have access to via TV broadcast as well as through online live streaming services, sports gambling platforms should make an effort to learn more about consumers' dominant motivation and tailor the marketing message to target this specific consumer segments, which will eventually attract more consumers to their platforms.

Limitations and Future Research

As with all research, the current study is not without its limitations. First, this study presented one type of sports and league (i.e., NBA) in the choice set scenarios. To improve generalizability, future research should incorporate other sports and leagues in

the choice set scenarios to reveal broader implications of the effects of game characteristics and their relative importance on consumers' likelihood of betting and the magnitude of their monetary wager based on different motivations (intrinsic vs. extrinsic).

Second, current conjoint analysis investigated two behavioral intention variables: likelihood of betting and magnitude of betting amount. Future research could investigate other behavioral intention variables including betting frequency. Certain individuals may have preference in wagering small amount of money in a frequent manner rather than wagering large amount of money infrequently. Thus, investigating betting frequency will broaden the implications of the effects of game characteristics and their relative importance on consumers betting intentions.

Third, even though the findings from conjoint analysis provide meaningful implications, it is limited to discussing the relative importance of the three game characteristics examined in this study. Future research should incorporate experimental design to investigate cause and effect relationship between the different game characteristics and consumers' likelihood of betting and the magnitude of their monetary wager. Experimental design is a method well-suited to investigate causal effects (Fong et al., 2016; Highhouse, 2009).

Fourth, the three attributes considered in the current study may not represent a comprehensive list of factors that sports bettors consider during their decision-making process. Future research should include other factors such as day of the week, time of day to uncover additional significant variables that influence consumers' betting behavior.

Fifth, the sample of the current study was recruited only in the United States. Past literature indicate that gambling behavior is impacted by cultural differences (Raylu & Oei, 2004). To improve generalizability, future research should broaden the samples by recruiting respondents from other countries where they offer legalized sports gambling.

Lastly, this study used actual NBA team names, rather than hypothetical ones, in the choice set scenarios to enhance the realism of the experiments. Given that fandom influences consumer behavior including purchase intention (Drayer et al., 2018), the current study controlled for fandom by excluding 53 respondents who indicated that they are the fans of the teams in the scenarios from the analysis. This sample restriction is performed to limit the confound findings due to respondents' fandom toward their favorite teams. Future research could implement field experiments to further investigate the relative importance of different game characteristics on consumers' betting intentions. This would overcome the limitations of this study by integrating the influence of fandom in a real-world setting.

Conclusion

The purpose of this study was to provide meaningful insights on consumer's betting intentions by investigating the effects of game characteristics and their relative importance on consumers' likelihood of betting and the magnitude of their monetary wager based on different motivations (intrinsic vs. extrinsic). Contrary to past literature suggesting that different types of motivation can lead to distinct consumer behaviors, the findings of study indicate that all four motivational groups showed that quality team (i.e., which team is playing against each other) is the most important game characteristic in making the betting decision. Managerially, the findings regarding the relative importance

of game characteristics provides what features of the game (e.g., quality team, TV coverage, and game uncertainty) they should put more emphasis on developing marketing strategies to attract more consumers.

CHAPTER 4

ESSAY THREE: THE EFFECTS OF FIT BETWEEN PROMOTIONAL MESSAGE AND REGULATORY FOCUS ON CONSUMERS' BETTING BEHAVIOR

Since the U.S. Supreme Court lifted the federal ban on sports wagering, the sports gambling industry has grown rapidly. U.S. sports gambling revenues surpassed \$800 million in 2019, up from \$249 million in 2017, and they are expected to reach roughly \$7 billion by 2025 (Imbert, 2019). Additionally, sports betting organizations have been gaining legitimacy; one of the major sports gambling platforms, DraftKings, is now a publicly traded company and listed on the NASDAQ stock exchange (Marcus, 2019). Despite its enormous growth and its potential to become a large industry, the sports gambling industry is an extremely competitive market (Smith, 2020). Most casinos in legalized states are opening both on-site sportsbooks for wagering on professional and amateur sports and online sportsbooks where people can bet on sporting events via their connected devices (Hing et al., 2019). Since these casinos are competing for customers' time and money, many casinos have invested (or plan to invest) more than eight figures in implementing marketing strategies, with many offering marketing promotions at a loss to build their customer base (Smith, 2020). Thus, sport gambling organizations are looking to utilize the most effective marketing and promotional strategies to grow their consumer base.

To attract more consumers, sport gambling organizations are primarily employing one of two welcome offer strategies, namely 'risk-free bet' (RFB) or 'bonus money' (BM) (Newall et al., 2019). With RFB, users make deposits and place bets. If the user loses the bet, the site will refund their money as a site credit that can be used to bet again

but cannot be cashed out. For example, for a site offering a RFB up to \$200, a user can deposit \$200, make an initial bet of that amount, and lose it; then, the site will refund the money as a \$200 site credit that can be used to bet again. On the other hand, BM promotions operate such that the betting site matches a user's initial deposit up to a certain amount as 'BM' that can be used to place a bet. For example, if a site is offering up to \$200 of BM, then a user can deposit \$200 and receive \$200 in BM for betting. RFB and BM promotional strategies can be classified as loss- or gain-related messages, respectively. RFB promotions feature a loss-related frame because they emphasize being 'risk-free', underscoring the negative and loss aspect of the bet. Conversely, BM promotions have a gain-related frame, focusing on providing additional money. These two distinct strategies leave online sports gambling platforms wondering which of these two welcome offer strategies to employ to target specific consumers.

According to Regulatory Fit Theory, the optimal promotional strategy depends upon fit, or alignment, between the message framing and the regulatory focus of the consumer (Fransen et al., 2010; Motyka et al., 2014). As stated in regulatory focus theory, consumers can be categorized into two motivational orientations: prevention-focused and promotion-focused (Higgins, 1997). Whereas prevention-focused people are motivated by goals related to security and protection, promotion-focused people are motivated by goals related to achievement and advancement (Higgins, 1997). When there is a fit between communication message framing (i.e., loss vs. gain) and consumers' regulatory focus (i.e., prevention vs. promotion), customers exhibit increased motivation and performance relative to persuasion (Higgins, 2000; Hsu & Chen, 2014). Effectively, advertising efficacy is conditional upon the nature of the advertisement and the

consumer, indicating a need to evaluate fit between different types of advertisements and consumers to optimize advertising outcomes.

Several researchers have examined the efficacy of different types of advertising and promotions in the context of sports gambling (Hing et al., 2015; Hing et al., 2014; Lamont et al., 2016). For example, research has found that different types of promotions evoke different emotional responses in consumers (Lamont et al., 2016) and that increased exposure to promotions integrated into sport broadcasts resulted in higher betting intentions on sporting events (Hing et al., 2014). However, this body of scholarship has failed to consider the effectiveness of the most utilized promotions in the United States, specifically RFB and BM, relative to consumers' regulatory focus. Thus, the current study focuses on the influence of marketing promotions and their fit with consumers' regulatory focus on sports gambling behavior.

Additionally, gambling research has examined the illusion of control, the belief that individuals possess specific skills that increase one's chances of winning. Research has found that the illusion of control influences gambling behavior and betters' level of engagement in skill-based gambling games, including sports betting (Steenbergh et al., 2002). In the context of sports betting, individuals that possess a higher illusion of control tend to overrate their skills, engaging in the belief that gathering and analyzing relevant information such as team statistics, previous head-to-head match-ups, player information, and injury reports will increase the chances of making a profit (Huberfeld et al., 2013). Previous research has suggested the illusion of control is positively related to the wager amount in playing gambling games (Langer, 1975; Steenbergh et al., 2002). Hence, it is

important to uncover how regulatory fit and illusion of control interact and thereby shape consumers betting intentions and behavior.

In summary, the purpose of this study is twofold: (i) to explore the effects of marketing promotions and their fit with consumers' regulatory focus on consumers' betting intentions and behavior; namely, one's likelihood of exploiting these two promotional offers and the magnitude of initial deposit amounts and (ii) to assess the moderating effect of illusion of control on the relationship between regulatory fit and consumers' betting intentions and behavior.

Literature Review

Sports Gambling

The enormous growth of the sports gambling market has been attributed to the proliferation of easily accessible online sports gambling platforms as well as sports gambling organizations' extensive advertising and promotional efforts (Hing et al., 2017; Thomas et al., 2012). Sports gambling organizations' marketing strategies include airing commercials on television, promoting their online platforms during live sporting events, engaging in sponsorship contracts with different sports organizations, and advertising their promotions on the internet and social media platforms (Thomas et al., 2012). As sports gambling organization's marketing efforts have become increasingly widespread around the United States, several researchers have examined the impact of different types of advertising and promotions on consumers attitudes and behavior (Hing, 2014; Hing et al., 2014; Hing et al., 2017; Lamont et al., 2016).

Hing et al. (2014) conducted a study to investigate the influence of advertising and promotion on online gambling behavior. Findings suggest that increased gambling

consumption in online gamblers was due to promotions such as free bet and BM offers (Hing et al., 2014). Online gamblers were also significantly impacted by advertising and promotions as they increased online gambling spending (Hing, 2014). Hing et al. (2014) conducted an online survey of 131 Australian adolescents to explore the influence of sports-embedded gambling promotions on consumers' behavioral intentions. Findings indicated that increased exposure to promotions during the live sport broadcast led to higher sports betting intentions. In addition, Lamont et al. (2016) examined the affective responses (e.g., positive, negative, and neutral) towards different types of sports gambling promotions (e.g., static signage at the venue, logo on the players' uniform) presented during National Rugby league game broadcasts. The findings showed that regular sports bettors exhibited positive affect towards different types of sports gambling promotions (e.g., stadium signs, uniform logos) while non-sports bettors expressed negative affect towards different types of promotions. Lastly, Hing et al. (2017) explored the impact of various attributes of advertising messages on sports gamblers' attitudes and behaviors. The authors developed mock television advertisements which included various bet types (i.e., tradition bet, betting on if a team will win or not; exotic bet, betting on which team will score the first point; risk-free bet, wagered money will be refunded if your team loses by 10 points or less; and micro-bet, which team will give away the next penalty) and different featured presenter type (e.g., expert commentator and attractive non-expert female announcer). Findings indicated sport gamblers showed increased attention to an advertisement when it featured an attractive non-expert female announcer as well as higher betting likelihood on risk-free bet type.

The literature on the influence of sports gambling advertising and promotion on consumer attitudes and behavior generally showed that consumers are influenced by different types of advertising and promotional messages used by sport gambling organizations. However, no studies investigated the effectiveness of the two distinct types of promotions: risk-free bets and BM. Further, no studies investigated the effectiveness of promotional strategies in relation to consumers' regulatory focus (i.e., motivational orientation) in the gambling context.

Regulatory Fit

According to Motyka et al. (2014), "regulatory fit, or the match between an individual's regulatory orientation and the strategy used to sustain it, offers a pervasive predictor of customer behavior" (p. 394). Regulatory fit theory has been applied to examine how the alignment between motivational orientation and communication messages impacts consumers' attitudes and behaviors. Commonly, motivational orientation is captured under regulatory focus theory (Cesario et al., 2008), which classifies consumers into prevention- or promotion-focused motivational orientations (Higgins 1997). Prevention-focused consumers are primarily sensitive to the presence or absence of negative consequences; as such, they tend to pursue goals with vigilance. Conversely, individuals who are promotion-focused are generally sensitive to the presence or absence of positive outcomes, causing them to pursue their goals eagerly (Higgins, 1997; Hsu & Chen, 2014). Specifically, prevention-focused people are sensitive to losses and non-losses, whereas promotion-focused people are sensitive to gains and non-gains (Aaker & Lee, 2006; Lee & Aaker, 2004). Although regulatory focus

orientations can be activated by situational stimuli or priming, Higgins et al. (2001) posited that people often possess an inherently dominant regulatory focus orientation.

Drawing upon regulatory fit, scholars have found that alignment between consumers' regulatory focus and message framing (i.e., losses vs. gains) positively influences consumers' attitudes and behavioral intentions (Fransen et al., 2010; Hsu & Chen, 2014; Lee & Aaker, 2004; Lockwood et al., 2002). A match between regulatory focus and message framing creates a "just right" feeling, which leads to positively impacting consumer attitudes and behaviors (Cesario et al., 2008).

Fransen et al. (2010) discovered that amidst regulatory fit (i.e., the alignment between consumers' regulatory focus and communication message/framing), consumers display more positive attitudes toward a given message and stronger purchase intentions than in the absence of regulatory fit. In addition, Lockwood et al. (2002) pointed out that prevention-focused people are primarily motivated by negative role models who emphasized ways to avoid failure. Conversely, promotion-focused people are more motivated by positive role models who revealed strategies for success. Lastly, Hsu and Chen (2014) confirmed this pattern when they noted that a fit between one's regulatory focus orientation and message framing positively influenced consumers' attitudes and purchase intentions toward organic food. Specifically, prevention-focused people demonstrated positive attitudes and greater intentions to purchase organic food when presented with a loss-related message. Comparatively, promotion-focused customers displayed positive attitudes toward organic food when exposed to gain-related messages. Essentially, prevention-focused individuals are more likely to be influenced by negative

(i.e., loss-related) frames and messages, whereas promotion-focused people are more likely to be affected by positive (i.e., gain-related) frames and messages.

In the sports gambling context, casinos use two distinct promotional tactics to attract new consumers to register and make a deposit on their online sport gambling platforms. Specifically, RFB promotions correspond to a loss-related frame: Such promotions emphasize being ‘risk-free’, thus underscoring the loss aspect of the bet. By comparison, BM promotions feature gain-related framing given their focus on providing additional money. Because prevention-focused consumers concentrate on information related to avoiding failure (Lockwood et al., 2002), these consumers would respond best to risk-free bet promotions, which highlight loss-related messages. Similarly, BM promotions would resonate with promotion-focused customers who are sensitive to positive outcomes (Higgins, 1997). Thus, the following hypotheses are suggested:

H1a: The presence of regulatory fit will evoke greater likelihood of exploiting the promotion compared to the absence of regulatory fit.

H1b: The presence of regulatory fit will evoke greater magnitude of initial deposit amount compared to the absence of regulatory fit.

Illusion of Control

In the gambling context, previous studies indicate that individuals who gamble on games of skill (e.g., sports betting, horse racing betting, poker, etc.) exhibit higher levels of misplaced confidence in comparison with individuals who prefer gambling on games of chance activities (e.g., lottery, slot machines, etc.) (Myrseth et al., 2010; Toneatto et al., 1997). In other words, gamblers who prefer playing games of skill overrate their chance of winning because they believe that gathering and analyzing the relevant

information will give them a better chance of winning (Bjerg, 2010). As stated earlier, these erroneous perceptions and the associated phenomenon impact is known as the illusion of control (Myrseth et al., 2010).

Several researchers have examined the illusion of control in the context of gambling (Mitrovic & Brown, 2009; Myrseth et al., 2010; Toneatto et al., 1997). According to Toneatto et al. (1997), illusion of control levels are different between gamblers who have preferences for games of skill and those of who prefer playing games of chance. The authors posit that the majority of illusion of control were related to gambling on the games of skill such as sports betting and horserace betting. This is because skill game gamblers are more likely to believe that their skills can influence the outcome of the betting. Thus, the skill aspect misleads these gamblers to overrate their control of the game, which leads to the illusion of control. In addition, Mitrovic and Brown (2009) have examined the influence of illusion of control on problem gambling in poker players. In the skills games, gamblers tend to overestimate their ability to win, which leads to the illusion of control. The authors posit that problem gambling is distinctly related to illusion of control in poker players who consider poker as a game of skill (Mitrovic & Brown, 2009). Subsequently, Myrseth et al. (2010) conducted a study to examine whether there is a level of difference in illusion of control in relation to preference of game of skills versus chance. Also, the findings of this study suggest a positive relationship between levels of gambling problems and the degree of illusion of control. Most importantly, higher levels of illusion of control were discovered in players who preferred games of skills in comparison with those of who prefer games of chance (Mitrovic & Brown, 2009).

In sum, illusion of control is more prevalent to the individuals who gamble on games perceived to require skill (e.g., horserace betting, sports betting, poker) compared to those who gamble on the games of chance (e.g., lottery and slot machines). Because of this reason, these individuals continue to gamble on games of skill despite financial losses, and suffer from detrimental outcomes over time (Myrseth et al., 2010; Raylu & Oei, 2002). Furthermore, findings from previous studies suggest that there is a positive relationship between illusion of control and amount of wager in playing gambling games (Langer, 1975; Steenbergh et al., 2002). Thus, it is anticipated that illusion of control will moderate the relationship between regulatory fit and gambling intentions and behaviors. Specifically, a greater illusion of control results in a stronger influence of regulatory fit on likelihood of exploiting the promotion magnitude of initial deposit amount. Based on the above discussions, the following hypotheses are suggested:

H2a: The greater the illusion of control, the stronger the relationship will be between regulatory fit and likelihood of exploiting the promotion.

H2b: The greater the illusion of control, the stronger the relationship will be between regulatory fit and magnitude of initial deposit amount.

Method

A 2 (message framing: gain-related message vs. loss-related message) x 2 (regulatory focus: promotion vs. prevention) between-subjects experimental design was used to test the proposed hypotheses. An experimental design is well-suited to examining a cause and effect relationship, and it can effectively control for confounding variables when well-executed (Emilien et al., 2017; Fong et al., 2016; Highhouse, 2009). Previous findings suggest that demographic variables such as age, gender, and income can impact

consumer's gambling intentions and expenditure (Castrén et al., 2018; Hing et al., 2014; Moore & Ohtsuka, 1997). Along with the aforementioned variables, we also include measures of commitment, social desirability, the amount of money spent on sports gambling per month, and frequency of engaging in sports gambling as control variables.

Participants

Survey participants were recruited and rewarded through Amazon's MTurk (\$0.95 per participant). Only participants who live in the United States and who have a high approval rate (>95%) in relation to other Amazon's MTurk tasks were included in the survey to ensure high quality data. To ensure participants are 'real sports gamblers,' respondents were asked "Have you placed a bet on a sporting event(s) in the past 12 months?" with the options of Yes or No and followed by two multiple choice questions: "How much do you profit (only the net win), if you bet \$10 on +100 odds?" (correct answer: \$10), "Philadelphia Eagles are favored to win the game by 6 points against Dallas Cowboys, what is the point spread of the game?" (correct answer: Eagles - 6). Based on the results of the screening questions, only participants who placed a bet on sporting events in the past 12 months and answered the two screening questions correctly were included in the study.

In this study, 676 potential respondents started the survey through Amazon's MTurk. However, 521 respondents failed the screening questions. Moreover, 19 respondents failed the attention check questions, leaving a final sample of 136 adults. According to the Fantasy Sports & Gaming association and industry demographics, active participants of sports betting are mostly male (80% male), hold bachelor's degree or higher (>60%), and the average age is approximately 37 ("American Sports Bettors",

2020; “Industry Demographics,” n.d.). Thus, the sample, provided in Table 11, is representative of the target population.

Table 11. *Descriptive Statistics*

Variable	Category	Participants (<i>n</i> = 136)
Gender	Male	83.3%
	Female	16.7%
Income (annual)	Less than \$25,000	6.5%
	\$25,000-\$50,000	16.7%
	\$50,001-\$75,000	34.1%
	\$75,001-\$100,000	23.2%
	\$100,001-\$125,000	15.2%
	\$125,001-\$150,000	3.6%
	More than \$150,000	0.7%
Education	Less than High School	0.0%
	High School/GED	0.7%
	Some College	5.8%
	2-year college degree	2.2%
	4-year college degree	71.7%
	Master's degree	17.4%
	Doctoral degree	0.7%
	Professional degree	1.4%
Age	Mean	33.57
	Standard Deviation	8.59

Experimental Stimuli

Two scenarios were created based on message framing (i.e., loss- vs. gain-related promotion) and participants were randomly assigned to one of the two cells (see Appendix B). The closer the stimuli aligns with actual life experiences, the higher the effectiveness of the manipulation, which in turn provides crucial insights about actual consumer behaviors (Morales et al., 2017). To ensure the stimuli have a high level of realism, participants were exposed to visual static ads (i.e., RFB vs. BM promotion) that

resemble actual sports gambling organizations' advertisements. The scenarios were identical in terms of content except for types of message framing; loss-related promotion (e.g., RFB) vs. gain-related promotion (e.g., BM).

Procedure

First, participants were asked to answer the aforementioned screening questions. Only participants who passed both screening questions were included in the study to ensure sample reliability. Participants then completed an evaluation examining their chronic regulatory focus, after which they were randomly assigned to one of the two message frames. Half of the participants saw the gain-related marketing message (e.g., the BM promotion), and the other half saw the loss-related marketing message (e.g., the risk-free bet promotion). After reading the scenario and being exposed to visual ads, participants were asked to answer questions related to the illusion of control, and sports wagering opportunity followed by demographics questions.

After the data collection, to create a regulatory fit and non-fit condition, first, chronic regulatory focus was analyzed to determine the dominant regulatory focus. Since the promotion and prevention focus scales were significantly correlated, items were averaged to develop chronic promotion and prevention focus indices. Following previous research (e.g., Hsu & Chen, 2014; Lockwood et al., 2002; Uskul et al., 2009), dominant regulatory focus was calculated by subtracting the prevention focus score from the promotion focus score. Thus, positive difference in scores specifies individuals with chronic promotion focus orientation whereas negative difference in scores indicates individuals with chronic prevention focus orientation. The regulatory fit condition was determined by aligning promotion-focused subjects who were randomly assigned to gain-

related messages and prevention-focused subjects who were randomly assigned to loss-related messages. The regulatory non-fit condition was determined by aligning promotion focus subjects who were randomly assigned to loss-related messages and prevention focus subjects who were randomly assigned to gain-related messages. Then, the impact of regulatory fit or non-fit on betting intentions and behavior, namely, the likelihood of exploiting these two promotional offers and the magnitude of the initial deposit amount, were investigated using MANCOVA.

Measures

Chronic Regulatory Focus. Chronic regulatory focus was measured using the regulatory focus scale (RFS) (see Table 12 for the items). The RFS contains a total of 18 items which consist of two subscales, nine items each, to measure promotion and prevention orientation (Lockwood et al., 2002). All items were measured on a 9-point scale (i.e., 1 = ‘not at all true of me’, and 9 = ‘very true of me’). According to previous studies using RFS (e.g., Hsu & Chen, 2014; Lockwood et al., 2002; Lockwood et al., 2005), reliability of both subscales was assessed using Cronbach’s alpha, and they were both above .80, which falls above the accepted value ($\alpha = .80$; George & Mallery, 2019; Nunally & Bernstein, 1978).

Table 12. *Regulatory Focus Scale (Lockwood et al., 2002)*

Type	Items	M	SD	α	
Promotion Focus		6.46	1.38	.86	
	I frequently imagine how I will achieve my hopes and aspirations.	6.43	1.95		
	I often think about the person I would ideally like to be in the future.	6.40	1.95		
	I typically focus on the success I hope to achieve in the future.	6.57	1.95		
	I often think about how I will achieve success.	6.40	2.16		
	My major goal right now is to achieve my ambitions.	6.68	1.88		
	I see myself as someone who is primarily striving to reach my “ideal self”—to fulfill my hopes, wishes, and aspirations	6.33	2.06		
	In general, I am focused on achieving positive outcomes in my life.	6.46	2.13		
	I often imagine myself experiencing good things that I hope will happen to me.	6.53	1.85		
	Overall, I am more oriented toward achieving success than preventing failure.	6.38	2.07		
		6.10	1.55	.87	
	Prevention Focus	In general, I am focused on preventing negative events in my life.	6.18	2.28	
		I am anxious that I will fall short of my responsibilities and obligations.	6.03	2.25	
		I often think about the person I am afraid I might become in the future.	5.82	2.32	
I often worry that I will fail to accomplish my goals.		6.00	2.21		
I often imagine myself experiencing bad things that I fear might happen to me.		6.13	2.04		
I frequently think about how I can prevent failures in my life.		5.99	2.39		
I am more oriented toward preventing losses than I am toward achieving gains.		6.20	2.06		
My major goal right now is to avoid becoming a failure.		6.34	2.05		
I see myself as someone who is primarily striving to become the self I “ought” to be—to fulfill my duties, responsibilities, and obligations.		6.22	2.02		

Message Framing. Participants were exposed to one of the two different marketing messages in relation to sports betting. One was framed as gain-related (e.g., BM) and the other was framed as loss-related (e.g., RFB). Participants were randomly assigned to either of these messages. The gain-related marketing messages highlighted the receiving BM aspect of the marketing promotion whereas the loss-related marketing message highlighted the RFB, which focuses on an absence of losses. The scenarios were identical in terms of content except for message framing (i.e., gain-related vs. loss-related) and are available in Appendix B.

Illusion of Control. Illusion of control was measured using the illusion of control scale adapted from Gambler's Beliefs Questionnaire (GBQ; Steenbergh et al. 2002) (see Table 13 for all the items). This scale contains a total of 8 items and all items were measured on a 7-point scale (i.e., 1 = 'strongly disagree, and 7 = 'strongly agree'). According to previous studies using this measure (Mitrovic & Brown, 2009; Myrseth et al., 2010; Steenbergh et al., 2002), reliability of scale was assessed using Cronbach's alpha, and they were both above .80, which falls above the accepted value ($\alpha = .80$; George & Mallery, 2019; Nunally & Bernstein, 1978).

Table 13. *Illusion of Control Scale (Steenbergh et al., 2002)*

Type	Items	M	SD	α
Illusion of Control		5.02	.91	.84
	I think of sports betting as a challenge	5.08	1.49	
	My knowledge and skill in sports betting contribute to the likelihood that I will make money	5.12	1.56	
	My choices or actions affect the game on which I am betting	5.06	1.50	
	I do keep track of previous winning bets so that I can figure out how I should bet in the future	5.09	1.60	
	Sports betting is more than just luck	4.97	1.54	
	My sports betting wins are evidence that I have skill and knowledge related to gambling	5.06	1.55	
	I have more skills and knowledge related to sports betting than most people who bet on sports	5.15	1.44	
	I have a “lucky” technique that I use when I bet on sports.	4.64	1.53	

Betting Intentions and Behavior. Two measures were collected pertaining to betting behavior, namely, the likelihood of taking advantage of the promotional offer and the magnitude of the initial deposit amount, to be used as dependent variables. Participants were asked to answer, “How likely are you to take advantage of this promotional offer?” on a 7-point Likert scale (1 = *Extremely unlikely*, 7 = *Extremely likely*) to capture their likelihood of exploiting the promotion offer. To capture the magnitude of the initial deposit amount, participants were asked to write in an amount to answer the following “In response to the promotional offer you just saw, how much will you place for your first deposit?”

Demographics. Previous studies have found that age, gender, and income affected consumers’ gambling intentions and expenditure (Castrén et al., 2018; Hing, Lamont, et al., 2014; Moore & Ohtsuka, 1997). Thus, age, gender, and income were collected as control variables.

Amount of Money Spent Per Month and Frequency of Betting. The amount of money spent per month on sports betting was assessed by asking participants, “On average, how much money do you spend on sports betting per month?” In addition, participants were asked to answer, “How frequently do you place a bet on sporting events?” This was measured on a 10- point scale (1 = Never, 2 = Once a year, 3 = 2–3 times per year, 4 = Every other month, 5 = Once a month , 6 = 2–3 times per month, 7 = Weekly, 8 = More than once per week, 9 = Every other day, 10 = Every Day) (Neighbors, Lostutter, Larimer, & Takushi, 2002).

Commitment. Since commitment influences sport consumption behavior such as game attendance and media consumption (Kim, James, & Kim, 2013), commitment was measured as a control variable using a scale adopted from Pritchard, Havitz, and Howard (1999) (see Table 14 for the items). This 3-item instrument was measured on a 7-point Likert scale (1 = strongly disagree, 7 = strongly agree). Based on Doyle, Kunkel, and Funk (2013) and Kim, Kang, and Johnson (2012), reliability of this scale was assessed using Cronbach’s alpha. Both were above .80, which falls above the accepted value ($\alpha = .80$; George & Mallery, 2019; Nunally & Bernstein, 1978).

Table 14. *Commitment Scale (adapted from Pritchard, Havitz, and Howard, 1999)*

Type	Items	M	SD	α
Commitment		5.36	.95	.81
	To change my preferences for following sports that I regularly bet on would require major rethinking	5.36	1.18	
	Even if close friends recommended following other activities, I would not change my preference for following sports that I regularly bet on	5.31	1.18	
	My preference for following sports that I regularly bet on would not willingly change	5.43	1.36	

Social Desirability. Social desirability was measured using Haghghat’s (2007) 4-item scale. It consists of four binary questions (i.e., Yes or No) (see Table 15 for the items). The response “Yes” is a socially desirable answer and given a score of 1, whereas the response “No” is not a socially desirable answer and given a score of 0. Thus, the sum of the scores reflects respondent’s social desirability tendency, as the higher scores reflect a tendency to provide socially desirable answers.

Table 15. *Social Desirability Scale (Haghghat, 2007)*

Type	Items	M	SD
Social desirability	Do you always practice what you preach to others?	.60	.49
	Would you ever lie to people?	.55	.49
	Would you smile at people every time you meet them?	.78	.41
	If you say to people that you will do something, do you always keep your promise no matter how inconvenient it might be?	.73	.44

Attention Check

Previous literature suggests that respondents who failed to answer the attention check questions submitted inconsistent responses in relation to measured variables, and spent considerably less time finishing respective experimental design studies (Oppenheimer et al., 2009; Sato et al., 2016). Thus, this study included an attention check question that read “Please select strongly disagree in this question.” to measure participants’ attention level. Of our sample, 19 respondents who failed to answer attention check questions were removed from the sample.

Manipulation Check

Manipulation checks must be performed to ensure the effectiveness of the experimental design. To evaluate the effectiveness of the message framing manipulation,

the following manipulation check question were asked and rated on a 7-point scale: “Was the promotional message you just saw ... (1 = focused heavily on gaining money and 7 = focused heavily on protecting money). This single item measure has been used in previous message framing studies (e.g., Latimer et al., 2008). A one-way ANOVA revealed a significant statistical difference between the two message framing groups [loss-related (e.g., RFB): $M = 5.58$, $SD = 1.04$; gain-related (e.g., BM): $M = 5.14$, $SD = 1.51$; $F(1, 136) = 3.93$, $p < .05$]. This result suggests that message framing was successfully manipulated as intended.

Results

Data Analysis

To test H1a and H1b, a MANCOVA was conducted (Table 16). We find statistically significant differences between regulatory fit and non-fit groups on two dependent variables after controlling for age, gender, income, frequency of engaging in sports betting, amount of money spent per month, commitment, and social desirability; $F(2, 126) = 6.17$, $p < .05$; Wilk's $\Lambda = 0.91$, $\eta^2 = .08$). Pairwise comparisons revealed that the regulatory fit group ($M = 5.58$, $SE = .15$) scored statistically significantly higher on the likelihood of taking advantage of the promotional offer than the regulatory non-fit group ($M = 5.04$, $SE = .13$). Thus, H1a was supported (mean difference = 0.54, $p = .01$). The regulatory fit group ($M = 119.18$, $SE = 9.41$) deposit significantly more money than the regulatory non-fit group ($M = 89.64$, $SE = 7.96$). Thus, H1b was supported (mean difference = 29.54, $p = .02$). According to Cohen (1988), partial $\eta^2 > .01$ are small effect sizes, partial $\eta^2 > .06$ are medium, and partial $\eta^2 > .15$ are large effect sizes. The effect size for regulatory fit on likelihood of taking advantage of the promotional offer (partial

$\eta^2 = .05$) and on magnitude of the initial deposit amount (partial $\eta^2 = .04$) were relatively small.

To test the moderating effects of illusion of control (H2a and H2b), moderation analysis was conducted using the SPSS PROCESS Macro Model 1 (Hayes, 2013). Median Split procedure was performed to dichotomize the illusion of control variable into high and low segments. The median-split is a well-established method for examining differences in consumer behavior in the domain of sport management (Drayer et al., 2019). The overall model to test moderating effects of illusion of control on likelihood of taking advantage of the promotional offer was significant ($R^2 = 0.13$, $F(10,125) = 1.93$, $p = 0.04$). However, the interaction effect of regulatory fit and illusion of control on the likelihood of taking advantage of the promotional offer was insignificant ($\beta = 0.01$, $t(125) = 0.03$, 95% CI [-0.80 to 0.83], $p = 0.97$). Thus, H2a was not supported. Conversely, the overall model to test moderating effects of illusion of control on the magnitude of the initial deposit amount was significant ($R^2 = 0.16$, $F(10,125) = 2.49$, $p = 0.01$). The interaction effect of regulatory fit and illusion of control on the magnitude of the initial deposit amount was statistically significant ($\beta = 53.04$, $t(125) = -1.45$, 95% CI [3.69 to 102.39], $p = 0.03$). Thus, H2b was supported.

To test the robustness of the moderating effects of illusion of control, a three-way split procedure was performed to segment illusion of control variable into three groups (i.e., High, Moderate, and Low). Only the high and low groups were included in the analysis. The model to test moderating effects of illusion of control on likelihood of taking advantage of the promotional offer was not significant ($R^2 = 0.20$, $F(10,73) = 1.84$, $p = .06$). Also, the interaction effect of regulatory fit and illusion of control on the

likelihood of taking advantage of the promotional offer was insignificant ($\beta = 0.27$, $t(73) = 0.45$, 95% CI [-0.91 to 1.45], $p = 0.65$). Thus, H2a was not supported. Additionally, the model to test moderating effects of illusion of control on the magnitude of the initial deposit amount was significant ($R^2 = 0.26$, $F(10,73) = 2.59$, $p = 0.01$). The interaction effect of regulatory fit and illusion of control on the magnitude of the initial deposit amount was statistically significant ($\beta = 69.92$, $t(73) = 2.18$, 95% CI [6.13 to 133.71], $p = 0.03$). Thus, H2b was supported.

Table 16. MANCOVA Results

Dependent Variables	Means		<i>p</i> -value	Partial η^2
	Regulatory fit	Regulatory non-fit		
Likelihood of taking advantage of the promotional offer*	5.58	5.04	0.01	0.05
Magnitude of the initial deposit amount*	119.18	89.64	0.02	0.04
$F(2, 126) = 6.17$, $p < .05$; Wilk's $\Lambda = 0.91$, $\eta^2 = .08$				

Notes. Likelihood of taking advantage of the promotional offer is measured using a 7-point Likert Scale from “Extremely unlikely” to “Extremely likely”. Magnitude of the initial deposit amount item is measured by respondents writing the dollar amount. * $p < .05$

Discussion

The primary purpose of this study was to investigate the effectiveness of marketing promotions as per their fit with consumers’ regulatory focus on consumers’ betting intentions and behaviors. The findings from this study extend the sports gambling literature by drawing on regulatory fit theory to examine the effectiveness of the two most widely used promotions (i.e., “BM” and “RFB”) to attract sports betting consumers. The findings indicate that the presence of regulatory fit between regulatory focus and message framing both a) positively affected the likelihood that consumers would exploit both promotional offers and b) was positively related to the magnitude of initial deposit

amounts. Consistent with previous research (Fransen et al., 2010; Hsu & Chen, 2014; Lee & Aaker, 2004; Lockwood et al., 2002), this study found that alignment between a consumer's regulatory focus and a message's framing (i.e., losses vs. gains) positively influenced their intentions. Specifically, individuals with a promotion-focus were more likely to exploit promotional offers and made greater initial deposit when they were presented with "BM" promotions emphasizing the gain aspect than "RFB" promotions highlighting the prevention of loss. In contrast, prevention focused individuals exhibited higher likelihoods of exploiting promotional offers and greater magnitudes of initial deposit amounts when they were exposed to "RFB" promotions versus "BM" promotions. The findings from the current study indicate that the creation of regulatory fit plays an important role in improving consumers' levels of likelihood of exploiting the promotion and enticing consumers to deposit more money in the context of sports betting.

Additionally, this study builds on existing regulatory fit research by considering the illusion of control, which is the important construct in gambling research as a moderator. To the author's knowledge, illusion of control has not been examined as a moderator in exploring the effect of regulatory fit on consumers' betting intentions. The findings indicate that individuals with a high level of illusion of control exhibited a greater intention to deposit more money when there was a fit between their regulatory focus orientation and message framing. Conversely, the findings showed that whether individuals' illusion of control is high or low, regulatory fit did not affect the likelihood that gamblers would take advantage of promotions.

Theoretical Implications

The findings from this study offer significant theoretical contributions. From a theoretical perspective, this study extends scholarly understanding of regulatory fit by exploring its influence on consumers' betting intentions in the context of sports gambling. This contributes to the sports gambling literature by providing new insights on how the fit between individuals' regulatory focus orientation and promotional message framing affect their sports gambling intention. To my knowledge, this study is the first to show that regulatory fit positively impacts consumers' likelihood of betting and magnitude of deposit amount in the domain of sports gambling.

Second, this study extends sports gambling research by considering "magnitude of the initial deposit amount" as dependent variable. In order to bet on sporting events in online settings, individuals must deposit money into the sports gambling platforms. Hence, the investigation on "magnitude of the initial deposit amount" is crucial to have a better understanding of consumers' betting intentions in the context of online sports gambling. With the proliferation of online sports betting platforms (Reynolds, 2021), the findings on "magnitude of initial deposit amount" provides critical information regarding consumers' behavioral intentions to online sports gambling platforms.

Finally, the findings from this study extends sports gambling literature by providing new perspective that illusion of control moderates the relation between regulatory fit and magnitude of betting amount, but it does not moderate the relationship between regulatory fit and likelihood of exploiting the promotion. In other words, when individuals exhibited greater illusion of control, there was a stronger effect of fit between individuals regulatory focus and messaging framing (i.e., losses vs. gains) on magnitude

of initial deposit amount, but not on likelihood of exploiting the promotion. The presence or absence of a moderating effect of illusion of control dependent on the behavioral intention considered could be explained by Knowles' (1976) suggestion these two intentions are distinct concepts. Specifically, based on Knowles' (1976) proposition, likelihood of taking advantage of promotions (i.e., willingness to approach risk) and magnitude of initial deposit amount (i.e., strategy aspect of risk-taking situations) are two separate constructs.

Managerial Implications

Managerially, the findings from this study provide a critical implication for sports gambling organization. The findings from current study indicates that the creation of regulatory fit plays an important role in improving consumers' levels of likelihood of exploiting the promotion and enticing consumers to deposit more money on sports gambling platforms. Thus, sports gambling platforms should make an effort to learn more about consumers' dominant regulatory focus orientations (i.e., prevention vs. promotion). Sport gambling organizations may send out the survey to potential and existing customers to acquire their regulatory focus information. To improve survey response rates, sports gambling platforms could make the survey more attracting by making it a gamified quiz. Also, they could offer rewards to the consumers for completing the quiz. Past literature suggests that gamifying app or services increases consumers' engagement level and improves customer involvement (Kunkel et al., 2021).

Further, one of the effective gamification features is providing rewards for finishing the task at hand (Hamari et al., 2014; Kunkel et al., 2021). For example, sports betting platforms can frame the regulatory focus orientation survey as a quiz intended to

teach them more about themselves as a sports bettor. Likewise, they can offer a reward such as “Win Free \$5 site credit to bet on any sporting events” to entice more consumers to finish the survey. Once sport gambling organizations have the consumers’ dominant regulatory focus information, they can tailor promotions (e.g., risk-free or bonus money) to match their dominant regulatory focus. For example, if one consumer has promotion as dominant regulatory focus, sport gambling organizations should tailor the marketing promotion by sending out “bonus money” promotion to create the regulatory fit, which could possibly lead to enhancing message persuasion and eventually attracting more sports bettors to their platforms.

Limitations and Future Research

Although this study provided important implications, it is not without limitations. First, the sample of this study was restricted to the United States. Previous studies suggest that cultural differences play a role in influencing gambling behavior (Raylu & Oei, 2004). Thus, to improve generalizability, future research should collect samples from different countries in Europe, Asia, and Australia, where legalized sports gambling has been offered for a long time to account for cultural differences.

Second, this study utilized screening questions to recruit actual sports betting participants from Amazon’s MTurk. There are other methods to recruit quality samples such as recruiting active participants from various sports betting platforms. Although there was consistency across demographics among the current study’s sample and active participants of sports betting (“Industry Demographics,” n.d.), future research should consider other recruiting methods to increase generalizability of the findings

Third, the effect sizes of regulatory fit on the likelihood of taking advantage of the promotional offer and on the magnitude of the initial deposit amount were relatively modest (Cohen, 1988). According to Prentice and Miller (1992), in experimental design studies, the effect size is possibly reliant on the operationalization of the independent variables. Future research can extend relevant findings by replicating the current study with different methods to operationalize the independent variable (i.e., regulatory fit).

Lastly, the current study measured individuals' predominant regulatory focus using regulatory focus scale (Lockwood et al., 2002). Previous research has found that individual's dominant regulatory orientation can be triggered temporarily with proper priming of promotion and prevention focus (Fransen et al., 2010; Lockwood et al., 2002). Future research should replicate the current research using priming of regulatory orientation to investigate whether the results will be consistent with the current study. This will extend the reliability of current study's results. Finally, the manipulation of message framing was executed by providing two different marketing messages with respect to gain- vs loss-related, while holding other aspects of the advertisement constant (e.g., amount of money). Future research could consider manipulating other aspects of the advertisements, such as the amount of money, to further understand how to optimize marketing messages.

Conclusion

This research sought to examine how consumers' betting intentions are impacted when exposed to promotional messages that "fit" with their regulatory focus. The results from this study suggest that regulatory fit had a positive effect on consumers' likelihoods of exploiting two distinct promotional offers and the magnitude of initial deposit amounts

when there was a regulatory fit between individuals' regulatory focus and message framing. Additionally, the result of this study confirms the moderating effects of illusion of control on the relationship between regulatory fit and magnitude of initial deposit amount. when individuals showed higher level of illusion of control, there was a stronger influence of fit between regulatory focus and messaging framing on magnitude of initial deposit amount. Managerially, the results from this study provide sports marketing professionals with an understanding of how to effectively develop promotional messages to enhance message persuasion by considering regulatory fit. Specifically, findings inform sports gambling organizations the importance of the regulatory focus of consumers, which could be incorporated into developing consumer profiles for a targeted marketing approach.

CHAPTER 5

CONCLUSION

The growing popularity of sports gambling around the globe led to a proliferation of sports gambling providers, resulting in marketers seeking better understanding of consumers' betting motivations to attract and retain their consumers. Thus, this dissertation containing three essays seeks to provide such guidance through investigation of the drivers of sports gambling participation and its influence on consumers' betting intentions and behavior. These three standalone essays examine consumer motivation alongside several other factors (e.g., game characteristics, other consumer characteristics) that are critical to sports gambling. Consequently, these essays elucidate the motivational characteristics of sport gambling participants and provide meaningful theoretical and managerial insights.

Essay One explored differences in motivation and perceived behavioral control between DFS and sports betting participants. This study extends the sports gambling literature by comparing motivations and perceived behavioral control between DFS and sports betting participants; this is in contrast to previous scholarship, which has focused on comparing these factors between DFS and TFS participants (Billings et al., 2017; Weiner & Dwyer, 2017). The results indicated that there are differences between DFS and sports betting participants in terms of entertainment and social interaction motivations. These findings ultimately suggest that DFS and sports betting participants may be regarded as two independent consumer segments. Moreover, this research offers important managerial implications for sport gambling platforms that entertainment aspect

could be highlighted in the marketing communication to target sports betting participants whereas social interaction aspect could be underscored to efficiently target DFS participants.

Essay Two investigated the impacts of game characteristics and their relative importance on consumers' betting intentions based on different motivations (intrinsic vs. extrinsic) utilizing a conjoint analysis. While past studies indicated that different types of motivation can lead to distinct consumer behaviors, the findings of current study revealed that all four motivational groups showed similar preference in terms of game characteristics. Specifically, all four motivational groups showed that quality team (i.e., which team is playing against each other) is the most significant game characteristic in making the betting decision. Thus, this study's findings run counter to previous theoretical knowledge of SDT that suggested that different motivations lead to different consumer attitudes and behaviors. Managerially, the findings regarding the relative importance of game characteristics provides what features of the game (e.g., quality team, TV coverage, and game uncertainty) they should put more emphasis on developing marketing strategies to attract more consumers.

Finally, Essay Three employed an experimental design to investigate the influence of different marketing promotions (i.e., RFB vs. BM) and their fit with consumers' regulatory focus relative to consumers' betting intentions and behavior. This study extends the regulatory fit literature by investigating its influence on consumers' betting intentions in the context of sports gambling. It also contributes to the sports gambling literature by offering new insights regarding how the fit between individuals' regulatory focus orientation and promotional message framing affect individuals' sports

gambling intention. In addition, by examining “magnitude of the initial deposit amount” as a dependent variable, this study constitutes a more comprehensive examination at consumers’ betting intention in the context of online sports gambling than currently exists in the literature. These findings offer a new perspective that when individuals exhibited greater illusion of control, there was a stronger effect of fit between individuals regulatory focus and messaging framing (i.e., losses vs. gains) on the magnitude of the initial deposit amount, but not on the likelihood of exploiting the promotion.

Managerially, these findings suggest to sports gambling organizations that the creation of regulatory fit plays a crucial part in enhancing consumers’ likelihood of exploiting the promotion and attracting consumers to deposit more money on sports gambling platforms. Therefore, marketers should attempt to learn more about consumers’ dominant regulatory focus orientations (i.e., prevention vs. promotion) to effectively develop marketing strategies to improve their customer base.

Collectively, while all focusing on sports gambling, these three standalone essays each embraced a different focus to explore sports gambling motivations. The research findings increase our understanding of betting intentions and behavior through the examinations into motivation, perceived behavioral control, and marketing. Moreover, the findings also set up future streams of inquiry in relation to consumer behavior in the ever-growing sports gambling industry.

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APPENDIX A: EXPERIMENT STIMULI 1

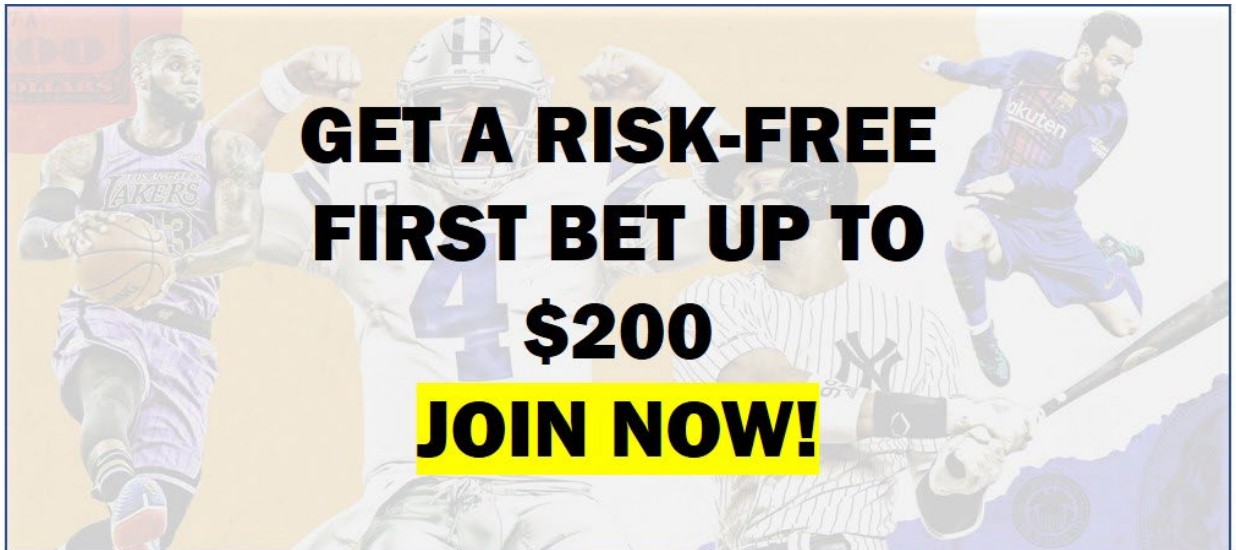
“You are looking forward to betting on this weekend’s NBA games. The current standings in the Eastern Conference are as follows. For each of the following games this weekend, **please indicate the likelihood that you would place a bet on this game and how much you would be willing to wager on the game.**”

NBA EASTERN CONFERENCE STANDING			
	Teams	Record	
		Wins	Losses
1	Milwaukee Bucks	52	18
2	Toronto Raptors	49	21
3	Boston Celtics	45	25
4	Indiana Pacers	44	26
5	Miami Heat	43	27
6	Philadelphia 76ers	36	33
7	New Jersey Nets	36	36
8	Orlando Magic	33	36
9	Washington Wizards	33	38
10	Charlotte Hornets	31	38
11	Chicago Bulls	30	41
12	New York Knicks	24	47
13	Detroit Pistons	20	52
14	Atlanta Hawks	18	53
15	Cleveland Cavaliers	14	57

7:30 PM ET	SCOTIABANK ARENA TORONTO, ON
1. MILWAUKEE BUCKS (52-18) 2. TORONTO RAPTORS (49-21)	SPREAD : EVEN
*YOU HAVE ACCESS TO WATCH TV BROADCAST	

APPENDIX B: EXPERIMENT STIMULI 2

Loss-related promotion. For the first time, you are deciding on which sports betting online platforms to use to place a bet on a sporting event. You are searching for online sports betting sites and find the following advertisement.



Gain-related promotion. For the first time, you are deciding on which sports betting online platforms to use to place a bet on a sporting event. You are searching for online sports betting sites and find the following advertisement

