

How Confident Are You to Win Your Fantasy League: Exploring the Antecedents and Consequences of Winning Expectancy

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The purpose of this study is to propose a conceptual model for investigating the antecedents and consequences of winning expectancy in the fantasy sport consumption context. Employing the illusion of control theory as a conceptual framework, the study hypothesized that perceived football knowledge, perceived ease of use the service Website, and enjoyment as predictors of winning expectancy and time and money involvement as consequences. The proposed model is tested using a convenience sample ($N = 244$) of college students and the *SEM* results supported all hypotheses. Further, the proposed model was more parsimonious and performed better than the competing model.

The explosive growth of the Internet has dramatically changed the business environment in sport and media (McDaniel & Sullivan, 1998). Increased levels of interactivity and personalization potential have shifted market power from suppliers to consumers (Mahan & McDaniel, 2006; Pires, Stanton, & Rita, 2006). In particular, the online sport phenomenon, 'fantasy sport,' has gained unprecedented popularity, with about 30 million participants in the United States and Canada accounting for more than \$4 billion spent online (Fantasy Sports Trade Association, 2009). This participation rate indicates that among Internet users of age between 18 and 49, 22% of US adult males play fantasy sport (Fantasy Sports Trade Association, 2009). A recent industry report points to considerable demographic expansion in the fantasy sport. For example, females represent one-third of more than 1.2 million

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people who play NASCAR fantasy games (Fisher, 2007a). According to the Fantasy Sports Trade Association (2009), participants spend an average of over \$460 annually and use Internet three hours weekly to manage their virtual team. Given the estimated number of participants and time and monetary investment, the growth of fantasy sport as a marketing platform is unquestionable (Roy & Goss, 2007).

Despite its proliferation as a multibillion dollar industry, however, there is a lack of theory-driven research on fantasy sport consumption behavior (Davis & Duncan, 2006). Likewise, there is need for understanding participants beyond their sociodemographic factors (Bernhard & Eade, 2006). As some researchers have contended, the characteristics of fantasy sport consumption have profound similarities with gambling (cf. Bernhard & Eade, 2006; Davidson, 2002). For example, fantasy sport participants actively engage in various decision-making processes to outperform other team owners. Although participants use their sport knowledge and statistical information to increase the probability of winning, the outcome of each match up remains unpredictable since it is based on the actual performance of athletes. Nevertheless, some participants seem to overestimate their control over the outcome and invest extra time and money managing their team(s). This notion of overestimation of successful outcome in chance-based situations has been documented under the theory of illusion of control (Langer, 1975).

The purpose of this study is to investigate the overestimation phenomenon in the fantasy sport consumption context. Specifically, the study develops a conceptual model that incorporates both antecedents and consequences of *winning expectancy*, which is a function of illusion of control, and analyzes said model in an undergraduate student population. Recent industry data has pointed to those in the undergraduate college age range (i.e., between 18 and 25 years old) as important to the growth of fantasy sport, with nearly one in five individuals in that age group participating in a fantasy league (Fantasy Sports Trade Association, 2009). As such, gaining insight into the fantasy sport consumption behaviors of this population could serve to provide a foundation for future research in this area. This conceptual framework is grounded in illusion of control theory and, based on existing literature, the present research investigates the influences of sport knowledge, familiarity with the Website, and enjoyment on winning expectancy. In terms of consequences, participants' monetary and time involvement is examined as a function of winning expectancy.

Theoretical Background

Conceptualizing Fantasy Sport Consumption

The development of Internet technology has revolutionized fantasy sport, in that participants can be more interactive (e.g., person vs. person, person vs. service provider; Mahan & McDaniel, 2006). Fantasy sport consumption is a relatively new form of sport spectatorship (Davis & Duncan, 2006) in which participants actively engage in the consumption process including drafting teams from active players, tracking real-time statistics, and winning based on athletes' statistical performances.

While several researchers have identified characteristics of fantasy sport consumption (cf. Davidson, 2002; Roy & Goss, 2007), we propose three main characteristics from marketing and psychological perspectives that typify the

consumption of fantasy sport. Specifically, these attributes are characterized by: *empowerment*, *achievement/reward*, and *outcome uncertainty*.

Empowerment. One of the main differences between fantasy sport consumption and traditional media consumption (e.g., television viewing) is that it allows participants to become actively engaged in the consumption process. Using the Internet allows higher levels of interactivity and personalization over the traditional broadcast media (Chan-Olmsted & Park, 2000). Likewise, owning a team in the virtual world allows a person to participate vicariously in spectator sports (Bernhard & Eade, 2005). Fantasy sport consumers actively involve in various decision-making processes such as drafting players for a team, trade players from other fantasy teams, and signing players from free-agent pools. Thus, the interactive nature of many fantasy sport Websites offer fantasy team owners a feeling of control and such empowerment has been argued to be a strong psychological motivating factor on fantasy sport consumption (cf. Farquhar & Meeds, 2007; Roy & Goss, 2007).

In this regard, service providers recognize consumers' need to experience sense of control and use it in their products and services. For example, one fantasy football service provider (e.g., CBS Sportsline) promoted its 2008 product, 'Fantasy Football Commissioner' using such ad copy as "Customize virtually every feature: draft date and style (online or offline), rosters, transactions, rules, scoring system and much more" (CBS Sportsline, 2008). As Roy and Goss (2007) suggested, the explosive growth of the fantasy sport industry is another indication of the increasingly empowered nature of sport fans in the digital media era.

Achievement/Reward. Like any other sports, fantasy sport is highly competitive in nature and a consumer's goal is to outperform other fantasy teams. Highly-involved fantasy sport players strive for success over other team owners by utilizing their sport knowledge and experience (Roy & Goss, 2007). The need for winning motivates players to invest more time and money in acquiring and analyzing information (i.e., statistics and expert analysis) that could improve their chances of winning (Roy & Goss, 2007).

Another attribute that corresponds to achievement is extrinsic rewards. Several researchers argued that the various forms of extrinsic rewards are one of the main driving forces that stimulate the growth of fantasy sport participation (Davidson, 2002; Fisher, 2008). Monetary incentives are becoming increasingly used by the fantasy sport service providers that they distribute cash or other prizes to winners, not to mention wagering among participants (Birch, 2004; Thompson, 2007). Therefore, one could argue that such extrinsic rewards can increase desire for winning, which adds a gambling incentive for creating the most competitive team (Davis & Duncan, 2006).

Outcome Uncertainty. Another important factor that is a characteristic of fantasy sport consumption is outcome uncertainty (cf. Davidson, 2002). Uncertainty of outcome means that the competition does not have predetermined winner at the start of the competition (Forrest & Simmons, 2002). Although fantasy sport participants use their knowledge and strategies to increase chances of winning for their teams, it remains impossible for them to control the real-world performances of their chosen athletes. Furthermore, the means of determining the winner of each match-up in fantasy game is more complex than simply predicting winning or losing

teams. For example, each participant's statistics are compiled from their chosen athletes' performances and the team with the strongest statistics wins the league (Davis & Duncan, 2006). Therefore, regardless of the knowledge or skill levels of consumers, predicting the outcome of each match-up in fantasy game is difficult. Perhaps this outcome uncertainty characteristic would be one of the main factors that explain ever-growing fantasy sport participation.

Another factor related to outcome uncertainty surrounds the financial component often associated with fantasy sports. For example, Bernhard and Eade (2005) equated fantasy sport participation with gambling in that both can involve monetary investment by participants on an activity with a largely undetermined outcome (i.e., dependent on the actions of professional football players). Moreover, while skill has been recognized as helpful in playing fantasy sports, chance is the central component in being successful (i.e., winning; Davidson, 2002). As such, the notion of illusion of control (Langer, 1975), which is found in both gambling and psychology literature appears conceptually similar.

Illusion of Control

Empirical research has contributed considerably to the understanding of psychological processes related to the maintenance of habitual chance-based gaming behaviors (Thompson, Armstrong, & Thomas, 1998). It has been well-documented that people often assume they can exert control over the outcomes of chance-based events (e.g., gambling, trading; Fenton-O'Creedy, Nicholson, Soane, & William, 2003; Ladouceur & Sévigny, 2005; Langer, 1975; Presson & Benassi, 1996). When individuals perceive that they have such feelings in situations based largely on chance, then they are led to overestimate their subjective probability of success. This inflated belief toward the desired outcome (i.e., winning) is termed as the 'illusion of control' (Langer, 1975) and has been extensively documented in a variety of contexts (e.g., Fenton-O'Creedy et al., 2003; Ladouceur & Sévigny, 2005).

The underlying mechanism of why people develop illusion of control was first addressed by Langer (1975). Langer proposed in a series of studies that people confuse skill and chance situations. This confusion is particularly likely to happen when chance situations have the trappings that have skill-based characteristics (e.g., foreknowledge, familiarity, choice, and involvement). In one of Langer's studies, for example, some people were allowed to pick their own lottery ticket, while others received a ticket chosen for them. Later, participants were given the option of exchanging their ticket for one in a lottery with higher odds. Although exchanging the ticket increased the odds of winning, participants who had personally selected their own lottery ticket refused to change their personally chosen ticket. In this case, people seemed to believe that their personal choice influenced their chances of winning. Following Langer's (1975) initial work, a line of research demonstrated that these increased feelings of control are due in part to decision makers increasing their subjective probability estimates of success (e.g., Thompson et al., 1998).

With regards to operationalization, different measures have been proposed to gauge the illusion of control phenomenon. For example, some studies used actual bet size, used discrepancy scores between expected performance and actual performance, while other used self-ratings of perceived control and used self-ratings

of confidence in winning (see Presson & Benassi, 1996, for a review). Although there are different ways to assess the phenomenon, the current study explores the illusion of control as an overestimation of winning confidence and proposed the term '*winning expectancy*,' which is defined as the degree to which an individual feels confident about winning his/her fantasy league.

Antecedents of Winning Expectancy

Previous research has found that winning expectancy or overestimation of control becomes more salient when skill-relevant factors are associated within the task. For instance, people will overestimate their control and have high confidence in winning when such factors as choice, foreknowledge, familiarity, and competition are involved in the decision making processes (see Thompson et al., 1998, for a review). In addition, affect-based elements, such as task enjoyment, can also increase subjective beliefs in successful outcome (Goodman & Irwin, 2006).

Knowledge. Researchers have suggested that knowledge and skills strengthens illusion of control (Cantinotti, Ladouceur, & Jacques, 2004; Ladouceur, Giroux, & Jacques, 1998). For example, in an experiment on sport betting, Cantinotti and his colleagues (2004) found that so-called skills and knowledge of the sport bettors were cognitive distortions which strengthen inflated winning expectancy. Specifically, sport bettors' perceived knowledge and near-misses reinforce such inflated beliefs. In a similar study, Ladouceur and his colleagues (1998) found that participants who perceive themselves as expert horse racing bettors did not perform better than chance. From this line of empirical findings, researchers posited that perceived knowledge or skills do not increase the actual probability of winning but rather the expectancy of winning.

As Davis and Duncan (2006) noted, fantasy sport league participants use their sport knowledge (e.g., game rules, statistical sport information) to outperform other teams. Further, participants spend a large amount of time to integrate and analyze statistical sport information from media. Therefore, it is hypothesized that the more one perceives him/herself to be knowledgeable about the sport, the more likely one would feel confident about winning his or her league.

H1: Perceived sport knowledge will have a positive effect on winning expectancy.

Familiarity. People feel more confident about the outcome when they are introduced with more familiar tasks than less familiar tasks (cf. Thompson et al., 1998). For instance, participants who were given more trials on a chance task felt more confident in their outcome predictions (Bouts & Avermaet, 1992). Fantasy sport is played on the Internet and service providers usually offer various features for users to take control (Davis & Duncan, 2006). For example, various functions and features include draft, lineups, trades, and message boards. This interactive nature of fantasy sport service indicates that a consumer not only needs an access to the Website but also needs to understand how to use various functions and features to compete with others. It seems plausible that consumers who feel it is easy to use fantasy sport Websites would have higher winning confidence than those who feel it is not easy to use or are unfamiliar with those Websites. Therefore, we hypothesize that ease of use of the fantasy sport Websites induces confidence in winning.

H2: Perceived ease of use of a fantasy sport Website will have a positive effect on winning expectancy.

Enjoyment. Along with knowledge and familiarity, enjoyment can also increase illusion of control. In a set of experiments, Goodman and Irwin (2006) examined the link between enjoyment and illusion of control. They showed that the more participants enjoyed the task (i.e., choosing specialized nonrandom numbers), the more they were likely to value their choices over less-enjoyed tasks. Thus, the playing-induced enjoyment created cognitive distortion and participants significantly increased their betting amount (Goodman & Irwin, 2006). Given that feeling of enjoyment is significantly related to cognitive bias, the more people perceive fantasy games to be enjoyable, the greater the likelihood that they will overestimate their winning expectancy.

H3: Perceived enjoyment of fantasy sport will have a positive effect on winning expectancy.

Consequences of Winning Expectancy

Existing research has documented the consequences of consumers' irrational cognitions in gambling behaviors (Jefferson & Nicki, 2003; Ladouceur, 2004). Further, behavioral outcomes of inflated winning beliefs have direct implications for service providers or operators in that they often involve excessive gaming behavior (Chau & Phillips, 1995; Jefferson & Nicki, 2003; Ladouceur, 2004). When people believe that they have control over the outcome or feel confident that they will succeed in chance situations, they take more risks and spend more money. For example, Chau and Phillips (1995) investigated the effect of illusion of control on risk-taking behavior in a computerized card-playing game. They found that people who believed they had control over the outcome bet more than those who had less control. In another empirical study, Moore and Ohtsuka (1999) uncovered a significant link between illusion of control and gambling addiction that problem gamblers reported to have the ability to manipulate probability. They also demonstrated that illusion of control is significantly related to gambling frequency and problem gambling.

A line of previous research on the illusion of control demonstrated that inflated winning confidence leads to participants' excessive gaming behavior such as addiction or increased monetary involvement. In a fantasy sport consumption context, serious participants not only spent extra money for high-stake contests (cf. Fisher, 2007b) but also devoted a large amount of time to integrate and analyze game-relevant information. Therefore, based on previous findings, the current study hypothesizes that the more people believe that they can perform well in their fantasy league the more they will likely to spend extra time and money managing their teams.

H4: Participants' winning expectancy will have a positive direct effect on time and monetary involvement managing their fantasy sport teams.

Method

Sample and Procedure

Similar to existing studies on fantasy sport participation (e.g., Davis & Duncan, 2006; Farquhar & Meeds, 2007), data were collected using undergraduate students at a large university in the Eastern United States. Using convenience sampling, participants were recruited from undergraduate classes in exchange for course credit. Questionnaires were administered by using a web-based survey program.

Prospective participants were informed about the purpose of the study, process of the participation, and course credit. An invitation e-mail was delivered to these individuals with the URL of the online survey attached. All participants were required to have some previous knowledge about fantasy sport to participate in the study. Individuals who were not familiar with fantasy sport were asked not to participate in the study, as they would potentially bias our findings. Data collection started two weeks before the kickoff of the 2006 NFL season and continued for three weeks since most of fantasy sport service providers begin their services around this time of the year. The final sample consisted of 244 students (male = 121, female = 123) who completed questionnaires. Mean participant age was 22.03 ($SD = 2.03$) and 66% identified themselves as Caucasians. About 31% of the sample reported that they are actively participating in a form of fantasy sport.

Among various types of fantasy sport games, fantasy football was selected for the current study because it is the most popular form of the fantasy sport league (Fantasy Sports Trade Association, 2009). According to a survey by Fantasy Sports Trade Association (2009), 82% of the total fantasy sport participants played fantasy football. Therefore, this fantasy sport was deemed appropriate for this study.

Measure Development

Table 1 shows a description of all the variables included in the study.

Winning Expectancy (WE). There have been different ways to operationalize the illusion of control (see Presson and Benassi, 1996, for a review). Studies have employed varying assessments such as measuring actual bet size, using discrepancy scores between expected performance and actual performance, self-ratings of perceived control, and self-ratings of confidence in winning. However, in a meta-analytic review, Presson and Benassi (1996) found larger effect sizes in studies that measured participants' perceived ability to predict outcomes as opposed to participants' perceived ability to control outcomes. The current study employed self-ratings of winning perception to assess individuals' illusion of control in fantasy sport consumption. As such, participants were instructed to respond to four seven-point Likert-type items gauging their winning confidence.

Perceived Football Knowledge (PFK). Participants' perceived football knowledge questionnaire was adapted from Brucks' (1985) three-item perceived knowledge scale. The measure was comprised of three seven-point Likert-type items and asked the subject to assess their perceived football knowledge.

Perceived Ease of Use (PEOU). To assess the individual's familiarity with the task, four-item Perceived Ease of Use scale was employed to measure the degree to which a person believes that using a fantasy league Website would be free from effort. The perceived ease of use is part of the larger Technology Acceptance Model (Davis, 1989).

Enjoyment (ENJ). Respondents' degree of enjoyment of playing fantasy football league was adapted from Koufaris (2002) and Voss, Spangenberg, and Grohmann (2003). Participants were asked to rate their overall enjoyment playing fantasy football league using a measure consisting of five five-point Likert-type items.

Table 1 Reliability, Indicator Loadings, Average Variance Extracted, and Means

| Constructs (Cronbach's α) | Items | Indicator Loadings | Construct Reliability | AVE | Means |
|--|--|-----------------------|--------------------------|-----|-------|
| Perceived Football Knowledge ($\alpha = .97$) | <i>PFK1</i> . Rate your knowledge of football compared with the average foot- ball fan | .97 | .97 | .92 | 4.01 |
| | <i>PFK2</i> . Rate your confidence in using football Knowledge compared with the average football fan | .97 | | | 3.71 |
| | <i>PFK3</i> . Rate your ability to comprehend football information compared with the average football fan | .93 | | | 4.30 |
| Perceived Ease of Use ($\alpha = .86$) | <i>PEOU1</i> . Playing fantasy football leagues online would be easy | .81 | .86 | .60 | 3.23 |
| | <i>PEOU2</i> . For me, the ease of playing fantasy football leagues online is important | .72 | | | 2.98 |
| | <i>PEOU3</i> . Learning how to play fantasy football leagues online would be easy | .79 | | | 3.35 |
| | <i>PEOU4</i> . For me, learning how to play fantasy football leagues online is important | .78 | | | 2.67 |
| Enjoyment ($\alpha = .98$) | <i>ENJ1</i> . Playing fantasy football is fun | .95 | .98 | .90 | 3.16 |
| | <i>ENJ2</i> . Playing fantasy football is exciting | .97 | | | 3.08 |
| | <i>ENJ3</i> . Playing fantasy football is delightful | .95 | | | 2.99 |
| | <i>ENJ4</i> . Playing fantasy football is thrilling | .92 | | | 2.95 |
| | <i>ENJ5</i> . Playing fantasy football is enjoyable | .96 | | | 3.13 |
| Winning Expectancy ($\alpha = .84$) | <i>WE1</i> . How confident are you that you will win the league you are currently playing? | .60 | .77 | .56 | 3.72 |
| | <i>WE2</i> . How much control do you have over your team's weekly performance? | .59 | | | 3.51 |
| | <i>WE3</i> . How confident are you that you can play well in the future? | .80 | | | 3.74 |
| | <i>WE4</i> . How willing are you to play fantasy football league next season? | .93 | | | 3.50 |
| Time/Money Involvement | <i>INV1</i> . How many hours a day do you spend on managing your fantasy football team? | .57 | .82 | .55 | 1.30 |
| | <i>INV2</i> . For this season, how much in average have you spent on your fan- tasy football league? | 1.03 | | | 1.95 |
| | <i>INV3</i> . How often do you visit your fantasy football league's Websites? | .53 | | | 1.74 |

Time/Money Involvement (INV). To measure respondents' consumption of fantasy football league, the questionnaire included a three-item measure. A single item of monetary investment (e.g., For this season, how much on average have you spent on your fantasy football league?: ranging from 1 = \$0, to 9 = \$71 and more) and two items of time investment (e.g., How many hours a day do you spend on managing your fantasy football team?: ranging from 1 = less than 30 min, to 9 = 7 hr or more; How often do you visit your fantasy football league's Websites?: ranging from 1 = less than once/week, to 9 = 10 or more times/week) were used respectively. Respondents' answers were compiled to create a composite involvement score in nine categories: one indicating the least amount of time and money spent while nine indicating the most amounts of time and money spent.

Data Analysis

Structural Equation Modeling (*SEM*) was employed to test the proposed hypotheses (cf. Hur, Ko, & Valacich, 2007; Morgan & Hunt, 1994). The measures of the constructs in the structural model were developed based upon relevant literature. Analysis of the proposed model was constructed using AMOS 5.0. Based on the literature in marketing and mass communication (e.g., Morgan & Hunt, 1994), a competing model was also developed to compare with the proposed model. The initial proposed model (see Figure 2) suggests that WE fully mediates the relationships between PFK, PEOU, ENJ, and INV. To the contrary, the rival model (see Figure 3) posits that all antecedent variables as well as WE have direct effects on INV. This rival model differs from the initial model in that WE is considered as one of exogenous variables that directly influence INV. Thus, the rival model is not nested with the initial model.

After finalizing both structural models, Akaike's Information Criterion (AIC) statistics were used to compare nonnested alternative models (Loehlin, 2004). For additional support of the final model, the Comparative Fit Index (CFI), Root Mean Square Error of Approximation (RMSEA), and Standardized Root Mean Square Residual (SRMR) are reported. Further, the Parsimonious Normed Fit Index (PNFI) was used to test the parsimony among the proposed and the rival model (cf. James, Mulaik, & Brett, 1982). Similar to Morgan and Hunt (1994), the current study examined the percentage of significant hypotheses in the model. Given that AMOS does not provide the significance test for the indirect effects, the current study used Sobel's (1986) test.

Results

Descriptive Statistics

The summed means of predictor variables were 4.01 (perceived football knowledge), 3.06 (perceived ease of use), and 3.06 (perceived enjoyment), and the standard deviations ranged from .91–1.87. For the mediating variable (i.e., winning expectancy) the mean score was 3.62 ($SD = 1.82$).

Measurement Model

Before testing the proposed conceptual model, a first order confirmatory factor analysis was performed to evaluate the appropriateness of measurements with the five latent constructs (i.e., perceived football knowledge, perceived ease of use, and perceived enjoyment, winning expectancy, and involvement; see Figure 1).

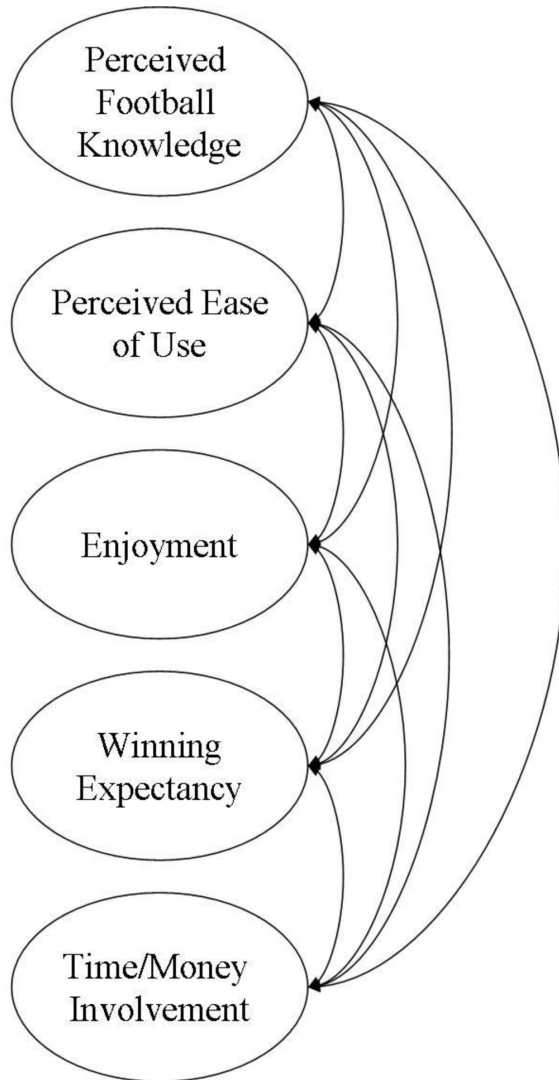


Figure 1 — Measurement model of fantasy league participation.

The measurement model reached acceptable level of S-B χ^2/df ratio (i.e., $475.51/142 = 3.35$, $p < .05$), and other fit indices also suggested the model achieved acceptable fit for the data (CFI = .93; RMSEA = .09; SRMR = .05; IFI = .93; Hair, Black, Babin, Anderson, & Tatham, 2005). All scaled measures included in the proposed model reached satisfactory reliability level measured by Cronbach's alpha, ranging from .84 to .98 (see Table 1). Likewise, all constructs showed acceptable average variance extracted (AVE) levels of greater than .50 (Hair et al., 2005). According to Bagozzi and Yi (1988), AVE measures the variance in the indicator variables as explained by the latent variables. PFK, PEOU, and ENJ reached .92, .60, and .90 respectively, while WE and INV had .56 and .55 respectively. Further, the factors in the measurement model showed convergent validity, as all items were significant, ranging from .52–1.03 ($p < .05$). Kline (2005) suggested the discriminant validity will be reached when the correlations between the latent factors are lower than .85. As shown in Table 2, the correlations between the factors ranged from .52 (between ENJ and INV) to .74 (between PEOU and WE).

The Proposed and Rival Model

As shown in Table 3, the goodness-of-fit statistics of the two structural models (Figures 2 and 3) indicated that they all achieved fair fit for the data (cf. MacCallum, Browne, & Sugawara, 1996) while there are no large differences between models. The significance test of each path is also presented in Table 3. In the proposed model, all paths were significant ($p < .05$). In the rival model, the significant test shows that the path from WE to INV is the only significant path. The chi-square difference test after eliminating the three insignificant paths showed that the difference was not significant ($p > .05$). After finalizing the two structural models, AIC statistics were used to determine a better performing model. The AIC scores indicated that the proposed model (570.49) was better than the second rival model (571.51). Further, when considering the model parsimony, the results revealed that the proposed model (PNFI = .77) performed slightly better than the rival model (PNFI = .75). Based on the combined results of these tests, the proposed model was more parsimonious and performed better than the competing model.

Table 2 Zero-Order Correlations Among Variables

| Variables | 1 | 2 | 3 | 4 | 5 |
|---------------------------------|-----|-----|-----|-----|---|
| 1. Enjoyment | — | | | | |
| 2. Perceived Ease of Use | .59 | — | | | |
| 3. Perceived Football Knowledge | .65 | .67 | — | | |
| 4. Winning Expectancy | .69 | .74 | .71 | — | |
| 5. Time/Money Involvement | .52 | .56 | .53 | .75 | — |

Table 3 Analysis of Competing Structural Models

| Initial Proposed Model | | | | Rival model | | | |
|---------------------------------------|---|-----------|-------|---------------------------------------|---|-----------|-------|
| Path | | Estimates | | Path | | Estimates | |
| <i>Direct Effects</i> | | | | <i>Direct Effects</i> | | | |
| PFK | → | WE | .315* | PFK | → | INV | .019 |
| PEOU | → | WE | .990* | PEOU | → | INV | .068 |
| ENJ | → | WE | .578* | ENJ | → | INV | -.019 |
| WE | → | INV | .161* | WE | → | INV | .134* |
| <i>Indirect Effects</i> | | | | <i>Indirect Effects</i> | | | |
| PFK | → | INV | .152* | | | | |
| PEOU | → | INV | .241* | | | | |
| ENJ | → | INV | .195* | | | | |
| $\chi^2/df = 475.51/142$; CFI = .93; | | | | $\chi^2/df = 475.51/142$; CFI = .93; | | | |
| IFI = .93; PNFI = .77; SRMR = .05; | | | | IFI = .93; PNFI = .75; SRMR = .05; | | | |
| RMSEA = .098; AIC = 570.49 | | | | REMSA = .099; AIC = 571.51 | | | |

Note: PFK= Perceived Football Knowledge; PEOU = Perceived Ease of Use; ENJ = Enjoyment; INV = Time/Money Involvement

* $p < .05$

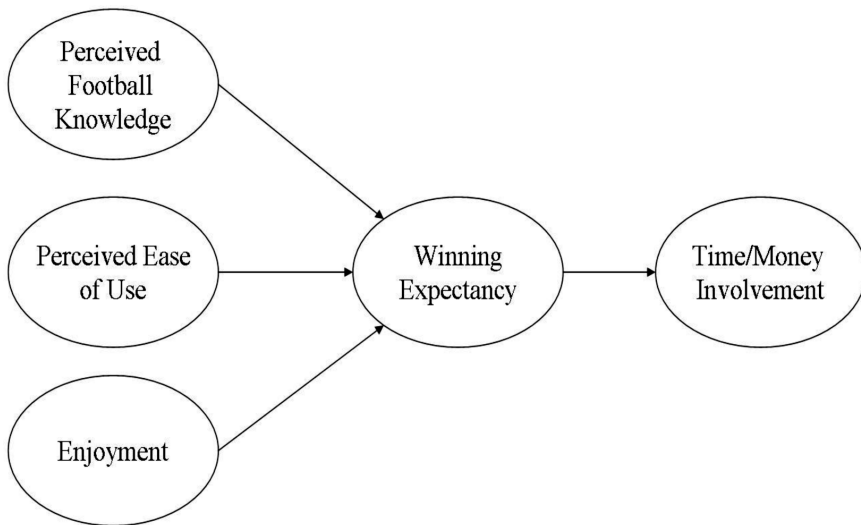


Figure 2 — The proposed model of antecedents and consequences of winning expectancy.

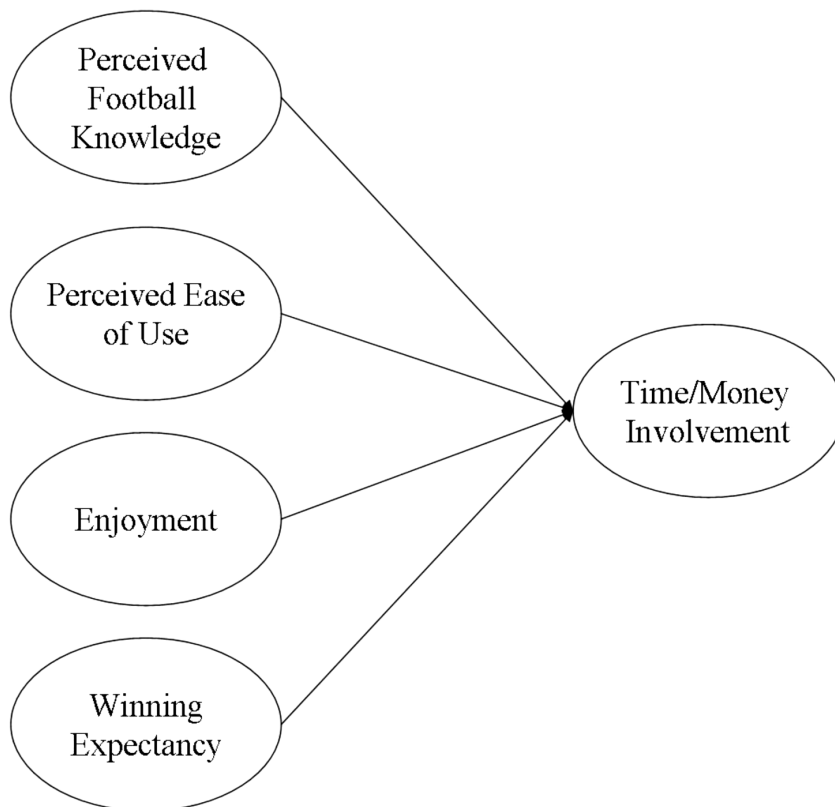


Figure 3 — Rival model.

Discussion

The current study employed the illusion of control theory as a conceptual framework to examine the determinants and consequences of winning expectancy in a fantasy sport consumption context. Based on the existing literature, we developed and tested the proposed model that incorporates antecedents (i.e., sport knowledge, familiarity, and enjoyment) and consequences (i.e., monetary and time involvement) of winning expectancy. *SEM* results led us to suggest that the proposed model was parsimonious and performed better than the competing model.

Consistent with theoretical expectations, all proposed hypotheses were supported. In particular, sport knowledge had direct and significant effects on winning expectancy (H1). In line with previous research, when people perceived that they are more knowledgeable and are experts about the sport, they reported higher winning expectations (cf. Cantinotti et al., 2004; Ladouceur et al., 1998; Thompson et al., 1998). Empirical research in sport betting indicated that such confidence

developed from perceived knowledge or skill was indeed a cognitive distortion (Cantinotti et al., 2004; Ladouceur et al., 1998). For example, Cantinotti and his colleagues found that expert hockey bettors did not make better predictions than random selections. Further, they concluded that information used by bettors, along with near-misses, reinforced their perception of expertise, which subsequently led to greater illusion of control. Similarly, this study supported the notion that knowledge and skills strengthened inflated winning beliefs, not the actual probability. However, further research is needed to examine the link between perceived knowledge and actual performance to better understand the overestimation of winning phenomenon in the fantasy sport consumption domain.

The results also showed that familiarity with the task increases winning expectancy (H2). In particular, the more individuals were familiar with the use of fantasy sport Websites, the more confident they were to win. This finding supported previous research on gambling that familiarity with the task can result in illusion of control (Langer, 1975; Thompson et al., 1998). Existing research has suggested that when tasks or materials being worked with are familiar, it is easier to develop inflated judgments of personal control than when the situation or task is new (Bouts & Avermaet, 1992). Similarly, if individuals thought that they are given a week to practice a gambling game, illusion of control increased (Dykstra & Dollinger, 1990). Therefore, if participants perceived that the service platform (e.g., fantasy league Website) is easy to use, then positive outcome expectancy also increased.

As hypothesized, enjoyment of fantasy sport participation increases inflated winning beliefs (H3). The results demonstrate that when participants perceive the fantasy sport consumption experience to be exciting and fun, they report higher winning expectancies. This finding is in line with a previous study where enjoyment with the task increased illusion of control (Goodman & Irwin, 2006). Using a gambling simulation, Goodman and Irwin (2006) found that when people were exposed to a specific system (i.e., fortune telling system) as a guide to select their own numbers in, only participants who enjoyed the task preferred to bet more on their 'special random numbers.' However, participants who did not enjoy the task did not take the risk (i.e., bet on those numbers).

With regards to behavioral consequences of winning expectancy, people who have higher winning expectations invest more time and money on fantasy sport experiences (H4). Gambling research has consistently documented that heavier gambling is associated with positive expectancies about the outcome (Ladouceur et al., 2003; Walters & Contri, 1998). For instance, Walters and Contri (1998) used the Gambling Expectancy Effects Questionnaire and found that positive and arousing expectancies had significant relationship with excessive gambling activities. Similarly, Wasserman (2002) found that outcome expectancy factors (risk-taking, arousal, and negative effects) were predictive of addictive gambling behavior. Moore and Ohtsuka (1999) also found a positive link between illusion of control and problem gambling. Along with our findings, this line of study lead us to suggest that winning expectancy is a powerful trigger which influences gambling duration and higher risk-taking behaviors (cf. Ladouceur et al., 2003). Therefore, significant link between winning expectancy and extra time/money investment offers some valuable implications for sport marketers.

Practical Implications for Sport Marketers

The results of the *SEM* indicated that winning expectancy fully mediated the relationship between antecedents and behavioral outcomes. Therefore, this suggested that service providers should consider the marketing consequences of winning expectancy and make an effort to increase winning perceptions. Conceptually, winning expectancy is an illusory cognition that could result from 'skill-based' elements such as knowledge and familiarity (Ladouceur, 2004; Langer, 1975; Thompson et al., 1998). In this regard, compared with purely chance-based games (i.e., lottery, slot machines), fantasy sport games possess greater potential for marketers to tap into consumers' biased perceptions.

Given the present finding that sport knowledge played an important role in winning expectancy, service providers could offer up-to-date and in-depth analysis of the game. It is not surprising that the industry's top three service providers (Yahoo! Sports, ESPN, and CBSSports) have recently begun to launch their own sport news site or buy out Websites offering content (Fisher, 2008). As Roy and Goss (2007) contended, the more knowledge one has about players' statistics, the stronger the feelings of confidence in decision making become for fantasy team owners. Therefore, providing extensive player analysis, projections, and concrete statistical reports readily accessible on the service Website would help increase consumers' perceived knowledge. Further, supplying additional information could serve as another revenue source for service providers. For example, Yahoo!'s fantasy football game offers in-depth NFL player and team scouting reports that can be purchased for a one-time fee of \$9.99. Thus, service providers such as Yahoo! are able to capitalize on the dual benefit of meeting consumer needs (i.e., adding value to the player experience) as well as generating additional revenue.

Fantasy sport marketers should also consider the design of the service Website. Since fantasy sport has become very sophisticated, developing an easy-to-use Website could be important in increasing positive outcome expectations among participants. Although many fantasy sport leagues constantly offer variety of tools to enhance user experience, these variations need to be implemented with some cautions. Given that familiarity affects winning expectancy, creating easy-to-follow features or offering instructions built around them would facilitate perceived ease of using the Website. Designing less complicated service Website or differing feature levels for experts and beginners would attract new fantasy sport consumers, enabling them to try the product with less complexity. For example, Yahoo! offers different page views, such as 'Classic' and 'Drag and Drop,' and allows players the choice of selecting one or switching between the two. Thus, providing options such as this could allow a player the opportunity to modify game format to best meet his/her needs (cf. Roy & Goss, 2007).

Limitations and Future Directions

The results of this study were all in accord with our theoretical expectations, however, further research is needed to replicate and extend our findings. For example, this study was limited in terms of generalizability because the data were collected from a convenience sample of college students. While the sampling technique and parameters were in line with existing research (cf. Davis & Duncan, 2006), future study of this phenomenon should seek to confirm the proposed model with

data collected from a randomized sample. Further, the present research should be replicated with other sport types (e.g., baseball or basketball) as each fantasy sport experience differs on a variety of factors, such as scoring format and season length. The current study also used cross-sectional data to investigate the antecedents and consequences of winning expectancy. As such, alternative explanations could be possible for causal relationships among constructs. For instance, while enjoyment was a significant antecedent of winning expectancy in this study, it could also be considered a result of high winning expectancy (cf. Ladouceur, 2004). Thus, future studies need to consider using different methodological designs to identify causal relationships among variables. Following existing research, employing experimental designs would be useful in identifying causal relationships under specific situations.

While this study adapted measures from existing literature, additional measures of winning expectancy and behavioral outcomes could serve to inform future research. Despite the theoretical and practical importance of the concept, winning expectancy measurement has not been extensively used in previous studies, as there are different ways to measure illusion of control (Presson & Benassi, 1996). Thus, future investigation into the development of better measures of winning expectancy could prove fruitful. Similarly, in addition to the measures of time and monetary involvement, other behavioral outcomes such as number of teams managing and relevant message processing (i.e., ad recall, ad evaluations) need to be assessed in future studies to examine marketing consequences of winning expectancy. In addition, given fantasy sport consumption has been reported to be a male-dominant phenomenon (cf. Davis & Duncan, 2006), potential gender differences should be explored in future studies. In particular, future studies need to investigate if men and women differ in the development of inflated winning perception.

The findings of this study provide initial understanding of the decision-making process of fantasy sport consumers. Given that the future of fantasy sport as a marketing platform is promising (Roy & Goss, 2007), it would be useful to examine the effects of various marketer-controlled features on the development of biases. For example, manipulating the source of content (i.e., expert vs. nonexpert information; Goodman & Irwin, 2006), the level of customizability (i.e., high vs. low; Langer, 1975), and outcome needs (i.e., free-to-play vs. pay-to-play; Biner, Angle, Park, Mellinger, & Barber, 1995; Ladouceur, 2004; Thompson et al., 2004) would be interesting avenues for future investigations that would benefit both theory and practice.

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