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**The Impact of Fantasy Football Participation on Ticket Sales, Merchandise Sales
and Team Loyalty**

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Abstract

The growth of fantasy football has opened new economic opportunities for a variety of companies (Otto, Mets and Ensmenger 2011) and many have taken advantage of them. The question remains as to the impact of fantasy sports on actual sports leagues that gave rise to the fantasy experience. Drawing on reports from the popular press and academic research on the topic, a series of hypotheses is developed and empirically tested to determine how fantasy sports impacts the ticket and merchandise sales of the sports on which they are based as well as the impact of fantasy sports on the team specific loyalty of participants.

With the development of interactive media, fantasy sports have reached mainstream recognition. Though some people have still not partaken in fantasy sports, the total number of participants has risen significantly. According to a 2008 report by the Fantasy Sports Trade Association, there are 29.9 million fantasy sports participants in the U.S. and Canada alone (Suh, Lim, Kwak & Pedersen 2010). The expansion of fantasy sports brings a whole new market that businesses can reach. Some businesses outside of professional sports teams have taken notice of the expanding market and have become active in fantasy sports. Fantasy sports have sparked interest from many different industries including: web sites, magazines, books and television. According to Otto, Mets and Ensmenger (2011), fantasy sports are an economic opportunity on a large scale for the sports industry. While other industries have pursued fantasy sports, it seems that professional sports teams have not done the same. Some individual sports teams may feel that fantasy sports can take away from their fan loyalty. For instance, a devoted fantasy sports participant may buy a jersey featuring their top fantasy player rather than their favorite home team player. Dwyer (2009) notes that traditional loyalty in fans of the NFL was typically targeted to a single team until the advent of fantasy sports shifted the focus in favor of individual player. With growing interest in fantasy sports, it is difficult for individual sports teams to create fan loyalty.

The potential lack of fan loyalty could negatively affect professional sports team revenues. Decreases in merchandise and ticket sales for a specific team could be directly caused by fantasy sports loyalty. This study is important because it will empirically examine the impact of fantasy sports on professional sport team revenue streams of ticket and merchandise sales as well as fantasy football participant's team specific loyalty which can be a driver of these revenue streams. While other studies have looked at this issue they have been qualitative (Drayer et al. 2010). The expectation is that the more loyal one is to fantasy football, the less loyal they are to an individual

sports team. The results of this study could be valuable for professional sports teams to make adjustments to their marketing strategies.

Literature Review

Due to the recent increase in popularity of fantasy sports, little research has been done comparing fantasy sports participation and team loyalty. Before explaining the relationship, it is important to understand how fantasy football operates.

Understanding Fantasy Football

To understand how fantasy football works, one must know what it involves. Typically, a fantasy football owner joins a league with a group of friends or family. There are also people who decide to join leagues where they are unknown. This gives people who want to participate in fantasy football many options. After the owner has joined a league, they participate in a draft. A fantasy football draft can be much compared to the live draft that the NFL does every year. Each player takes a turn picking players until all roster spots are filled (Suh, Lim, Kwak & Pedersen 2010). At the fantasy football draft, players are selected to fill about 12 roster spots.

After the roster spots have been filled, the fantasy owner chooses players to start and sit the bench on a weekly basis. The starting players are the ones who amass stats for owner. The players who are put on the bench also accumulate stats, but these do not count towards the weekly total. This decision of who will start and sit each week becomes very important to the fantasy owner. Fantasy owners want to choose their best players against the best match ups. After this decision has been made, the fantasy owner will face another fantasy player in their league.

Each league has a different set of customized rules for a scoring system. In most leagues, stats such as receiving yards, rushing yards, passing yards and touchdowns receive points. There are plenty of other stats that are included as well. These stats are added up together based on the

league's point system. Similar to most sporting events, the team with the most points at the end of the week wins. Fantasy football leagues also have a playoff bracket after the regular season is over. The process of how a fantasy football league operates illustrates that it can be extremely competitive and time consuming.

Due to the competitiveness of fantasy football some people may lose interest in their favorite NFL team. During any week in the season, a fantasy owner can manage up to 12 players. They may also pay attention to the players of the owner they are up against. This means that this one participant may have interest in almost every NFL game. If these participants are showing more interest in NFL teams other than their favorite team, this can result in reduced team specific loyalty. Dwyer and Drayer (2010) explain, "This phenomenon has the potential to create a psychological paradox for individuals with a vested interest in their favorite NFL team" (pg. 208). If fantasy players are investing more time in games that do not involve their favorite team, it can directly affect that NFL team's revenues.

Sport Media Consumption

Participants of fantasy football rely greatly on sport media to keep up with news and advice that can help them. For instance Drayer et al. (2010) noted that fantasy football participants use many different sources of media to stay informed. In recent years, the Internet has been the main source of information for fantasy football players, and the Internet can be considered the reason why fantasy football has become so popular (Evans, 2007). Web sites like Yahoo! and cbssportsline.com have made it very easy for fantasy football lovers to gain information. These web sites not only crunch the numbers for your league's scoring system, but they also have articles with expert advice available. CBS Sportsline even takes it a step above for more committed fantasy players by providing continuous updates via email (Evans 2007).

Another important source for fantasy football participants to obtain NFL information comes from television. Before opening kickoff on Sunday, there seems to be an endless amount of NFL coverage on multiple channels. NBC, CBS, Fox and ESPN are the main broadcasters that provide games. These channels offer fantasy owners valuable last minute information about their players. For instance, these programs can tell owners if their fantasy player is going to play in the game. Most of these channels also provide live tickers on the bottom of the screen to provide player's stats. The coverage before the games is important, but most fantasy participants want to see their players in action on the field.

On basic television, there are only one or two games on at a time. These games that are usually between teams in the geographic area of the broadcast. While this promotes team loyalty, some fantasy lovers might want to watch other games that their players are featured. A way they can view their players live is by purchasing premiere channels such as DirecTV's NFL Sunday Ticket. Recently, DirecTV announced that they will be offering NFL Sunday Ticket to non-subscribers (Pegoraro 2010). NFL Sunday Ticket makes it easier for fans to watch every game rather than just the one that is selected for their area. Dwyer and Drayer (2010) note that the new information, analysis, score and league wide on-demand content of providers such as NFL Sunday Ticket encourages sports media consumption among fantasy football participants.

Another premium channel directed towards fantasy football players is the NFL Network's RedZone which has changed the way NFL sports media is consumed (Lovett and Whitaker 2011). RedZone is a channel that switches viewers to a game whenever an offense is inside its opponent's 20-yard line. As many football fans now, this area is referred to as the red zone because the offense is close to scoring. This channel is perfect for fantasy football owners who want to monitor when their fantasy player might score. Every football fan enjoys touchdowns, especially if it is your

fantasy player that is scoring. This adds excitement to watching the game. Instead watching their favorite team go three and out, fans can watch players throughout the NFL scoring touchdowns. This concept could significantly affect team loyalty. Lovett and Whitaker (2011) explain, “RedZone, reacting to a new kind of demand, seems a kind of naked acknowledgment that a viewer’s interest in his or her fantasy leagues may actually trump loyalty to a single team” (pg. 12).

Ticket Sales and Merchandise

The massive amount of convenient media consumption can negatively influence ticket sales. Due to the popularity of big-screen TV’s and channels mentioned above, some NFL fans might have more inclination to stay at home to view the game. According to Leahy (2010), approximately one million fans attended games in stadiums across the nation for the opening week of games in 2010 while another 16 million fans watched each of the 16 opening-weekend games. In fact, some of the most committed fans will watch NFL games at the comfort of their own homes. As Dwyer and Drayer (2010) note, some of the fans with the highest involvement in games are more likely to stay at home. The accessibility of information and games through television and electronic media has made it easier for fans to stay at home to watch the games.

In recent years some NFL teams have had trouble selling tickets and have had to enforce TV blackouts. According to Leahy (2009), 11 teams were faced with the possibility of local blackouts due to the decrease in stadium attendance. The NFL has rules set in place for TV blackouts that require games to tell out at least 72 hours before kickoff to avoid being blacked out on local stations to encourage fans to attend home games (Leahy, 2009). If fans choose not to attend home games, they risk not being able to see the game at all. This can be very frustrating to loyal fans because they are being restricted from seeing their favorite team play. TV blackouts make it difficult for some fans to stay loyal to their local teams.

Merchandise is very important to NFL teams. According to NFLShop.com for 2010, the three top selling teams in order were the New Orleans Saints, Pittsburgh Steelers and the Dallas Cowboys (Rovell 2010). In the same research, the top three player jerseys sold in order were Brett Favre from the Vikings, Drew Brees from the Saints and Peyton Manning from the Colts. This means that two of the top three jersey sales were not in the top three top selling NFL teams. Dwyer (2009) notes that the growth of fantasy football has had a very real impact on merchandising dollars for the NFL. Many committed fantasy football fans enjoy buying jerseys that belong to their favorite fantasy player. It is well known that Brett Favre and Peyton Manning are fantasy football stars. Many fantasy owners feel connected with their players and are very committed to their own fantasy teams. For instance, Brett Favre has played for three different teams in three years, but his jersey sales still top the list each year (Rovell 2010).

Hypotheses

The Internet has made fantasy football very accessible and easy to manage. Almost all age groups can participate and follow their favorite players. “Thanks to the Internet, fantasy football is no longer limited to number crunchers and sports dorks. Anyone can set up a league in minutes” (Evans, 2007 pg. 75). With so much new found interest and involvement in fantasy football, the competition between fantasy owners could cause questioning of team loyalty. For instance, a fantasy owner might rather see their fantasy team win rather than their favorite team in any given week. Thus, the following hypothesis is proposed:

H₁: Participation in fantasy football is negatively related to team loyalty.

Due to immense number of sports media outlets, NFL fans do not have to go to an actual game to find enjoyment. The Internet, RedZone channel and NFL Sunday Ticket have made following the NFL effortless and customizable. These programs have made it possible to watch

virtually any team or player at any moment during the game from the comfort of home. A loyal fan may lose interest in a game where their favorite team is getting blown out. Lovett and Whitaker (2011) explain, that the RedZone channel has made it easier for fantasy fans to get the information and sports entertainment they want without the other filler (e.g., ads and breaks in the action). “RedZone” and “Sunday Ticket” make it effortless for fans to change the channel and watch a more interesting game. With on demand access to any game, fans may lose their team loyalty. Based on this, the following hypothesis is proposed:

H₂: Access to specialized fantasy football channels is negatively related to team loyalty.

Ticket sales can also be negatively affected by the number of sports media consumption. According to King and Nesbit (2009), the NFL was projected to see a decline in ticket sales. With the growing popularity of big screen T.V.’s and premium NFL channels, NFL fans might have more inclination to stay at home to view the game. Many fans enjoy watching their favorite team at the comfort of their own home. It is much easier for a non-loyal fan to turn on the T.V. and watch the game rather than actually going to the game. Going to NFL games can be a long process and takes effort in planning. The fan going to the game must account for transportation, parking, money and weather. Conversely, a fan watching the game at home does not have to factor any of these elements. Based on this, the following hypotheses are proposed:

H₃: Fantasy football participation negatively impacts ticket sales.

H₄: Access to fantasy football specific channels also negatively impacts ticket sales.

Fantasy football loyalty can also negatively affect merchandise sales for a specific team. For instance, a fantasy football owner may want to purchase their favorite fantasy player’s jersey. This can take away from jersey sales from individual NFL teams. Authentic NFL jerseys are not considered cheap. This means that the fan purchasing the jersey will spend plenty of time thinking

about which player's jersey they want. The fan might chose between someone on their favorite NFL team, or chose an individual on another team that they enjoy watching play. Drayer et al . (2010) state that consumption based on fantasy sports behaviors is likely to be more diverse and league-wide rather than focused on a specific team. It all boils down to how much team loyalty this fan possesses. They can either support their favorite team, or concentrate on an individual player on another team. Based on this, the following hypothesis is proposed:

H₅: Fantasy football participation negatively impacts merchandise sales for individual teams.

Research Methods

The target population for the present study is undergraduate students from a Regional Midwest University. Survey participants were randomly drawn from the class list of undergraduate students. It is important to receive both participants and people who do not participate in fantasy football to understand the impact of fantasy football on fan loyalty. Ideally, of the 100 participants in the sampling frame, 50 have participated in fantasy football while the other 50 are nonparticipants in fantasy football.

Survey items were developed based on a comprehensive literature review of the impact of fantasy football on professional sports teams' revenues. Six measures are regarding the frequency of sports media consumption relative to both one's fantasy team and favorite team were used to assess an individual's behavior (Dwyer, Drayer pg. 210). The measures include both concrete and abstract measures such as: team loyalty, fantasy football participation, access to fantasy football channels, demographics, ticket sales and merchandise sales. There is a 5 point likert scale where '1' indicates strong disagreement and '5' indicates strong agreement. Along with the likert scale there are yes/no, multiple choice and fill in the blank questions.

The survey was conducted online through Qualtrics.com for convenience. It is believed that college students will be more willing to participate in a survey online at the comfort of their own home rather than in person with pencil and paper. Given that the attention span of the average college student is relatively low, the survey was short to ensure quality data.

Analysis/Results

In order to test the five hypotheses, regressions were used because it allows examination of the predictive value of the measures on the outcomes better than simple correlations. In this study, regression was used to see how increasing fantasy football participation and access to fantasy sport specific technologies influence team loyalty, ticket sales and merchandise purchased. Regression was also used to see how access to premium fantasy football channels effects team loyalty, ticket sales and merchandise purchased. For the first hypothesis, a simple regression with the variable “How many fantasy football teams do you manage in a given season?” as the independent variable was utilized. This question was the measure of participation in fantasy football. The dependent variable was a likert scale question stating “I consider myself loyal to one NFL team.” This dependent variable is the best indicator of team loyalty. After the regression there was an unexpected positive relationship between the two variables with a .060 adjusted R square and a standardized beta of .263 which is significant at the .05 level. This means that the first hypothesis is not supported because it was the opposite of what was expected. According to the data, the more people participate in fantasy football, the more team loyalty they claim to possess.

To measure the specialized fantasy channels, the sum total of how many technical devices and channels to which the person has access was calculated into a variable. The variable was called the total technologies measure and it served as the independent variable. The dependent variable was the same as the first hypothesis as the outcome of team loyalty was the same construct. After

running the regression it was clear that there was not a relationship between the two variables with a .009 adjusted R square and the standardized beta of .136 ($P > .10$). This means that the second hypothesis is not supported at all by the data collected. According to the data, access to specialized fantasy football channels does not impact team loyalty.

For the third hypothesis, a regression was run with the same question “How many fantasy football teams do you manage in a given season” as the measure of participation in fantasy football. Unlike the first hypothesis, the dependent variable was the question “How many NFL games do you attend yearly?” After running the regression there was a slight relationship found between the two variables with a .025 adjusted R square and a standardized beta of .186 which is significant at the .10 level. According to the data, fantasy football participation does marginally impact ticket sales, but in the opposite direction than what was hypothesized.

For the fourth hypothesis, a regression was run with the total technologies measure as the best predictor for measuring access to specialized fantasy football channels. The dependent variable was “How many NFL games do you attend yearly?” After the running the regression, it was apparent that there was absolutely no relationship between the two variables with a .000 adjusted R square and a standardized beta of .100 ($P > .10$). This means that the fourth hypothesis is not supported at all. According to the data, access to specialized fantasy football channels has no impact on ticket sales.

In the last hypothesis, a regression was run using “How many fantasy football teams do you manage in a given season?” as the independent variable measuring participation in fantasy football. To better measure merchandise sales for individual teams, the number of different jerseys each person owns was added up. This dependent variable was called estimated team sales. After running the regression it was evident there was not a relationship between the two variables with a

.002 adjusted R square and a standardized beta of .131 ($P > .10$). Later, the total football expenditures were divided by the number of team jerseys owned as a dependent variable. It did not result in a significant relationship either. This means that the fifth hypothesis is not supported at all by the data collected. According to the data, fantasy football participation does not impact merchandise sales for individual teams.

Discussion/Conclusion

All of the five hypotheses were not supported by the data collected. The data set did not come out the way that it was expected. After looking at the frequency statistics, it was clear that this was where most of the problems occurred. The data was skewed towards the lower end of most questions. When it came to the measure of access to fantasy football technologies, over 80% answered with a one or a zero. There was also a problem when measuring the data set for fantasy football participation. Nearly 70% of respondents said they spend 0 hours a week following their fantasy football team. 70% of respondents also said they manage 0 teams in a given season. The original spilt was supposed to be 50% fantasy football participates and the other 50% non fantasy football participates. If the original 50/50 spilt was achieved, then there might have been more accurate results because the data would not have been as skewed towards the lower end.

After collecting the data for hypotheses 1 and 2, it is clear that different predictors should have been chosen because they were too interrelated. The predictors did not allow accurate measuring of how fantasy football participation and access to specialized fantasy football channels relates to team loyalty. The third hypothesis was the only one that was marginally supported at the .10 significance level, but support at the .05 level would have been better in this exploratory research. It was apparent in the fourth hypothesis that time based questions should have been used on the surveys. Survey takers should have been allowed the option to type in their own responses.

In hindsight, categories should have been used to avoid answers of zero. After collecting the data for the fifth hypothesis, it was clear that the total number of jerseys was not the correct measure that should have been used. One of the main reasons that the five hypotheses were not supported by the data was because the predictors were too interrelated and running into problems with multicollinearity.

Many statistical problems occurred with the data because a pretest was not performed. In retrospect, a pretest should have taken place in order to ensure better measures. Instead of waiting for 100 respondents, the first 50 people's results could have been measured to make sure that the target population was evenly split between fantasy football participants and non fantasy football participants. Ultimately, this study could be used again and the hypotheses could be supported given the correct measures and population. Although the hypotheses were not supported, there is enough evidence in literature to indicate that fantasy football can negatively affect team loyalty.

Contributions

This was an early attempt to understand the marketing implications fantasy sports on professional sports teams. This initial exploration into the phenomenon is the necessary beginning to fully understanding its import and implications for these firms that represent billions of dollars a year in revenues. Based on this study, it was clear that additional research is needed. Better measures need to be identified so that they are not too interrelated in order to have a clearer understanding of the data.

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