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Fan Involvement with Regional or City Affiliated NFL Teams

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Abstract
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Fan Involvement with Regional or City Affiliated NFL Teams

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Introduction

Within the United States sport industry, immense research has been done on how fans relate and interact with their favorite teams, especially within the National Football League (NFL). Much of such research focused on what factors influence a fan’s level of involvement and identification with their team. Prior to this study, it was known that one’s level of identification with a local sports team is indeed positively correlated with psychological well-being (Wann, 2006). In addition, prior research found that people typically view a team as a reflection of the city in which they play, which is most likely due to well-formed brand associations (Aiken, Campbell, & Koch, 2013). However, prior research has not been done on whether a team’s association with its home region plays any role in how fans interact or relate with the team.

Such research into the relationship between team location affiliation and fan identification is something that had never been directly studied, thus the new findings within this research was viewed as quite important within the academic community. Many researchers have previously examined several different components of both fan involvement and team affiliation; however, nothing had been done/found concerning how the two directly relate to one another. In addition, this research was beneficial within the sport industry, as it will provided much insight as to whether it is beneficial for a NFL team to affiliate itself directly with a city or within its general location (e.g. Carolina Panthers instead of Charlotte Panthers). This research provided influential reasoning as to how a NFL team should affiliate with its home area in regards to the team’s popularity and brand growth.
The purpose of this study was to explore the possibility of a potential relationship between how fans interact with NFL teams in regards to the team’s location affiliation. The research question of this study was:

**How does fan involvement differ based on NFL team identity?**

The aim of such research was to uncover a deeper understanding of how involved NFL fans are with their favorite teams based on the factor of how the team affiliates itself (i.e. regional or city affiliation).
Literature Review

Fan Involvement

Developing Identification

Taking a look into how one first develops identification and the resulting involvement with a sports team, a study was conducted in 2012 by Lock, Taylor, Funk, and Darcy. This study focused in on the application of prior social identity theories and the psychological continuum model (PCM). Through the use of such previous research, the development of a fan’s internal attachment and resulting external actions and behaviors is examined throughout the research (Lock et al. 2012). In order to conduct this study, 21 participants were interview several times via e-mail.

This study first found that though regular exposure to a team, a fan’s team identification does indeed develop and then become an increasingly central part of a fan’s day-to-day behavior and planning (Lock et al., 2012). Next, the more a fan develops an understanding of the individual players on a team, as well as how often the fan is subject to media coverage of both the individual players and overall team, the more complexly the fan identifies themselves with that team (Lock et al., 2012). In addition, a final finding was that once a fan does strongly and positively identify themselves with a team, they will often attempt to promote their team to others in order to make a more positively distinct group to identify themselves with (Lock et al., 2012). Sport teams and marketers within all major sports may use the concepts found in this study, as an understanding has been uncovered of how fans become identified with their favorite teams. This information may be used when examining what teams are most popular within certain regions, as well as identifying how useful a team’s marketing strategy has been. Also, such information should for team in
all markets (new and old) in their attempts to always bring in new fans/customers, as well as increase the involvement of the teams current fans.

Another study regarding a fan's newly formed identification and involvement with a team was performed by O'Shea and Alonso (2012). This study took a look into how teams and sport marketers are able to develop and mature relationships with new generations of fans. With the sport/entertainment marketplace rapidly growing, O'Shea and Alonso also used the PCM as a framework to understand the issues and successes in forming relationships with new generations of sport fans. In order to conduct this study, the CEO's and marketing managers of three professional sport teams were interviewed on the basis of expanding their fan bases, building on the current fan base, and addressing challenges within either of these processes (O’Shea & Alonso, 2012).

This study went on to find that the building of team identification through converting awareness into allegiance is extremely important for organizational success as a result of attracting and retaining fan (O'Shea et al., 2012). The findings note that the vast competition within the sport industry makes it quite difficult for teams to expand their market, making it is essential for teams to increase fan allegiance, which again can be done through the conversion of fan awareness (O'Shea et al., 2012). These findings are very valuable when combined with what has already been found about fan awareness. Teams that are successful in creating awareness among their fans will be able to use this study's findings in order to transition such awareness into allegiance and increase team popularity.
Fan Interaction and Loyalty

Relating to a team’s ability to attract loyal fans, a team’s ability to increase positive evaluations by their fans and even increase the fan’s (new and old) intentions to purchase extensions of their team was studied by Papadimitriou, Apostolopoulou, and Loukas in 2004. The main purpose of this study was to assess a sports fan’s evaluation of a professional team and that team’s brand extensions. The authors surveyed 300 attendees of a professional basketball game.

Through Papadimitriou’s (2004) surveys, it was found that extensions that have higher perceived identification with a fan's favorite team received higher evaluations by the fans (Papadimitriou et al., 2004). With this, it was concluded that fans are willing to pay more in order to purchase team extensions that are highly identified with their team (Papadimitriou et al., 2004). A major takeaway of this study is that sports teams have the ability to capitalize on both their tangible and intangible assets when it comes to forming relationships with fans. Such team extensions should be used in order to successfully promote themselves to both fans and non-fans (Papadimitriou et al., 2004). By doing so, teams in all regions will be able to generate more highly involved fans, which of course will increase the team's popularity and be beneficial to the “fans mental well-being’s.”

Looking further into how fans relate to their favorite sports teams, Wann (2006) researched the relationship between one’s team/fan identifications and an individual’s psychological well-being. Wann discussed his proposal for a “team identification – psychological health model” to be created, expanding on his past research, which had already found positive relationships between local team identifications and the well being of fans. For the study, a longitudinal cross-lag design was used in order to examine causal
paths between team identification and the psychological health of those identifying themselves with the team (Wann, 2006). In the process, 214 university students were measured on both their identification with a local sport team and their psychological health through a questionnaire, with 45 of the students being tested again at a later date.

Through the tests, it was found that one’s level of identification/involvement with a local sports team is indeed positively correlated with psychological well-being (Wann, 2006). Such a relationship appears to involve identification to psychological health causal patterns. In addition, it was found that identification with distant teams and general sport fandom are not directly related to one’s psychological health (Wann, 2006). The findings of this study are useful due to the supporting evidence that the psychological health of fans has a direct relationship with the individual’s team identification. Such information may be used by psychologists for diagnosis and treatment of sport fans, as well as by those within the sport industry for marketing and community relations’ strategies, as well as determining whether a fan has a psychological preference to associate themselves with a regionally or city affiliated team. Such an preference may also have impact on the fan’s mental well-being.

Wu, Tsai, and Hung (2012) studied the effects of fan identification on fan loyalty, along with noting antecedents that may trigger such effects. This study integrated trust as a key relationship marketing construct within the sport industry and went on to examine the relationship between trust, fan loyalty, identification, and achievement motives (Wu, Tsai, & Hung, 2012). This all was examined through the perspectives of both fan-to-player and fan-to-team, with 26 college students filling out questionnaires and then being brought to a baseball stadium and directly interview by the authors of this study. Overall, the main
purpose of both stages was to examine the two dimensions of trust: trust in a player and trust within a team (Wu et al., 2012).

Overall, Wu et al.’s (2012) study found that the impact of team identification is considerably greater than the impact of player identification. With this, team identification was found to be a major determinant in how loyal and involved fans are, with respect to the fan’s level of trust help to the team. In addition, player identification seemed to have an indirect effect and one must go through team identification in order to determine a fan’s loyalty (Wu et al., 2012). This research is then important as it suggested that teams should invest in activities and transactions that will generate long-term effects with their fans, instead of relying on short-term plans, such as star players. Doing so should result in fans having greater loyalty connections to their teams. Also, it may be processed whether fans have more trust and resulting loyalty to teams that are affiliated with the fan’s current city, which may in turn affect the popularity of such a team.

Potter and Keene (2012) completed a study that investigated fan identification, investigating the impact of fan identification on the cognitive and emotional processing of sports-related news media. This study featured two coaches, one of which was conceptualized as having a negative valence, and the other having a positive portrayal. For the study, 50 undergraduate participants were tasked with watching press conferences done by each of the featured coaches (Potter & Keene, 2012). The three variables of arousal, valence, and resource allocation were the main focus of the study (Potter et al., 2012).

Overall, the results of this study found that the highly identified fans partaking in the study processed sports-related news much differently than the moderate fans (Potter et al.,
The highly identified fans distributed much more cognitive resources and showed much larger negative reactions towards the negatively valenced coach than did the moderate fans. This meant that the highly identified fans expressed much more negative responses/expressions towards this coach throughout the study. In addition, the negatively portrayed coach evoked much more arousal from all participants that the positive coach, even though such responses were still much greater from the highly identified fans. In all, this study is quite important within the sport industry, as showed that there are correlations between a fan’s feelings of connection to their favorite team and psychological factors (Potter et al., 2012). The psychological states studied may be broken down in order to determine whether or not fans identify themselves more strongly with regionally or city affiliated teams, as well as if such differing identifications have any impact on the fans’ mental state.

In October 2013, Aiken, Campbell, and Koch studied whether or not professional sports teams (as brands) have personalities that reflect associative traits of the geographic locales in which they play. For such a study, a hypothesis was formed, stating that people tend to view a sports team similarly to the way they view the city in which the team plays (Aiken, Campbell, & Koch, 2013). With this, two studies were conducted to evaluate ten NFL teams and their respective homes. Data was collected from 434 respondents from five diverse locations within the United States, who were subjected to questionnaires rating their views on the included NFL teams.

The findings of this study agreed with the original hypothesis that people attribute personality traits to both teams and cities (Aiken et al., 2013). The study concluded that people typically view a team as a reflection of the city in which they play, due to well-
formed brand associations (Aiken et al., 2013). In addition, the findings of this study are important because they were able to suggest that professional sports teams are seen as brand extensions of their cities, providing valuable data for those who market both sports teams and the cities/regions where the professional sports teams are located, as well as be used to determine factors that influence team popularity. “Sports bind people to place simply through ascription… and fan allegiance fosters localism, regionalism, and even nationalism” (Aiken et al., 2013).

**Franchise Value**

Looking into the value of sports franchises, Alexander and Kern published a study that examined the effects of team nomenclature; team relocation, and new stadiums on franchise values for the four major professional sports within the United States (NFL, Major League Baseball [MLB], National Basketball Association [NBA], and National Hockey League [NHL]). For this study, background research was first done to identify how many teams in each league are regionally identified, have new stadiums, have moved to new locations, have new teams, and have changed their identity. Within the created formula, per-capita income, city populations, the team’s final standings from the previous season, were used as factors; along with the variables of regional identification, new stadiums, new locations, changing of team identification, and the addition of new teams (Alexander & Kern, 2004).

Through the use of the empirical formula, franchise values were determined for each league, along with the means and standard deviation values for each league. Through finding such values, the study was able to conclude that market size, team performance,
and the presence of a new facility increases a team’s franchise value. In addition, the use of a regional identity actually increased franchise value within the MLB, but not within the other three professional sports leagues (Alexander et al., 2004). All of this is beneficial knowledge because it provided great insight as to what variables impact the value of a professional sports franchise within the United States, which may help teams and leagues to plan their future decisions and expenditures. There is now much more knowledge on how market size, team performance, and the presence of new facilities and teams will impact the values of both individual franchises and overall leagues (Alexander et al., 2004).

**Team Affiliation (Regional or City)**

**Fan Interest**

In 2011, Heere, James, Yoshida, and Scremin conducted a study that focused on assessing how identification with a city, state, or even university may affect an individual’s identification process with a sport team (Heere, James, Yoshida, & Scremin, 2011). In addition, this study looked to present additional evidence of the reliability and validity of group identity measures. For the study, 476 surveys were first gathered and examined from the spectators of two indoor soccer league teams. In addition, a second study was done where 262 undergraduate students were surveyed based on how strongly they identify themselves to the university’s football teams as well as several other sports teams within the area (Heere et al., 2011).

Through both of such studies, Heere et al. were able to find that everyone who took part in either survey identified themselves with multiple groups/teams. Supporting evidence was also found that group identity instruments were valid with the four settings
of team, state, city, and university. Within such settings, team identity was found to be the most positively influenced by associated group identities (Heere et al., 2011). In addition, this research found further evidence that group (team) identities are in fact influenced by an individual’s relationship with other groups, such as college or location (Heere et al., 2011). With this, the study is important as it provides much evidence that one’s team association/fandom is in fact influenced by several factors, including state/city locations and characteristics.

In order to gain an even greater understanding of sport fans associate with teams within their city/region, Miller and Washington (2013) conducted a study in order to measure sporting interest across the United States. The main purpose of such a study was to determine the residential interest in sports throughout several locations within the United States (Miller & Washington, 2013). For the study, surveys were presented within 81 metropolitan areas throughout the nation, questioning the participants about 29 major spectator sports (Miller et al., 2013).

This study was able to find the percentage of avid fans within all 81 metropolitan areas who claim to be avid sports fans of several major sports, including professional, collegiate, and minor league sports (Miller et al., 2013). Such results found that Columbus, Boston, Buffalo, and Pittsburgh are the top four cities with the most avid sports fans. As for professional sports, Boston, Detroit, Denver, and Southern New Hampshire were found to have the best fan markets (Miller et al., 2013), two of which do not have a National Football League (NFL) team associated with the direct city market, and two with no Major League Baseball (MLB) team. Miller’s study and findings are of course important, as an advanced look into which markets across the Untied States contain the most avid sports fans was
provided. This information is very useful to sport markets for promoting teams and products. In addition, this information may be used in order to view a relationship between what cities/regions host major sport teams and where the most passionate fans are located.

**Team Location**

Wann, Polk, and Franz (2011) conducted study in order to test the effects on the state of psychological health of individuals based on the distance away from their identifiable sport team. Wann’s preceding research has already found that one’s sport team identification is positively related to their social well-being, especially when leading to social connections. Now, it was hypothesized that fans of a sport team of a distant location would find increased levels of social psychological health when found in circumstances gatherings where there are obvious similarities between team followers (Wann, Polk, & Franz, 2011).

In this study, 71 participants were tested twice based off of Wann’s hypothesis (71 of the original 675 were brought back for the second trial). These participants were observed watching highlights of both favorite (distant) team and a controlled team (variable). In addition, the same participants were observed watching one of the videos either alone or within a group (Wann et al., 2011). Such tests found that fans who do not reside in the locale where their identified team is located reported much greater decreases in levels of loneliness when viewing the videos in a group of persons with similar credentials/fan identification (Wann et al., 2011). In addition, the same persons, who resided some distance away from their reams, exhibited large levels of loneliness when
viewing the videos alone; showing that distance from the team does in fact play a factor in one’s psychological health (Wann et al., 2011). This research completed by Wann et al. is important, as it indicated that geographical distance away from a team has negative impacts on the psychological lifestyles of fans, which may be an occurrence for those who live in a regionally named team’s area, but are still a large distance away from such a team (e.g., one who lives in upstate Minnesota but is still hours of travel time away from the Vikings [NFL] who are named after Minnesota but located in Minneapolis).

Fitting in with the idea of fan association in relation to a team’s distance, Mohan and Thomas performed (2012) study examined the impact that distance has on a fan’s intention to attend team-sporting events. For this study, the authors examined the National Hockey League (NHL), primarily the Carolina Hurricanes (regionally identified with the Carolina region, but located in Raleigh, North Carolina). This study investigated the influence that distance plays on the travel behavior of fans for NHL teams doing so with reference to previous theories of distance decay (Mohan & Thomas, 2012). For this study, 824 surveys were completed and analyzed by attendees of two Carolina Hurricane home games. These surveys were distributed to every fourth fan entering into the game, with 1,500 originally handed out, with the purpose of measuring the independent variables of team identification, destination image, and distance decay (Mohan et al., 2012).

Mohan et al.’s study found that distance does in fact influence the travel behavior of fans, specifically fans of professional hockey teams for this study. It was determined that there is a generally direct relationship between distance and travel behavior among fans (Mohan et al., 2012). In addition, it was found that the fans who live greater distances away from their identified team are willing to travel greater distances to watch their favorite
team compete on the road, than are fans who live in close location to the team (Mohan et al., 2012). Of course, Mohan’s findings are important, as such knowledge about the relationship between distance and fan identity and/or travel behavior of fans will allow teams, marketers, etc. to better interact with and attract fans of all distance parameters.

Theodorakis, Wann, Nassis, and Luellen also explored distance in a 2012 study. The overall goal of the research conducted was to discover a relationship between one’s team identification and need to belong. The variables that act as the background of team identifications were examined due to the important role that such identification play on the levels of attendance and overall consumption within higher-level sports (Theodorakis, Wann, Nassis, & Luellen, 2012). For Theodorakis et al.’s research, two studies were conducted, both with the objective of uncovering the relationship between one’s need to belong and their resulting team identification. Between both studies, 219 participants would be examined through the use of surveys.

Theodorakis et al.’s study first found that there was in fact a positive correlation between one’s desire to fit in and their identification with a local sports team. However, such a correlation was not found between individuals and distant sport teams (Theodorakis et al., 2012). In addition, the second study simulated very similar positive correlations between individuals and identification with local teams, as well as no such correlation with distant teams (Theodorakis et al., 2012). This study is of course important due to its ability to relate the desires of sports fans to be associated with their home/local sports teams. However, it seems that fans do not have a need to identify themselves with distant teams, which means that just because someone lives in the ‘region’ of a sport team does not mean that they will be a fan or that the regionally named team will be more
popular than city named teams (e.g. just because someone lives in one of the Carolina’s
does not mean that the Carolina Panthers are the closest and/or most associated team by
that fan).
Conceptual Framework

The first concept of the research question “How does fan involvement differ based on NFL team identity?” was in fact fan involvement. This first concept referred to how fans choose to identify themselves with their favorite team and the resulting psychological effects of being associated with such a team. The second concept then examines the team’s affiliation, in other words, whether the team is regionally or city affiliated.

Through such concepts, two variables are next identified. The first variable is that of involvement. In order to understand the variable, fan preferences and recognition should both be thoroughly defined as a sport fan’s greater liking of one team/situation over another; and as the act of acknowledging the existence of a team, respectively. However, the variable of involvement may be moderated by different family histories/traditions or the location of the fan. In addition, a second variable obtained form the concepts was affiliation, primarily used in the discussion of whether a team is regionally or city recognized (affiliated). In order to understand affiliation, it must be defined as one’s ability to attach/connect themselves with a sport team, and then differentiated between what it means for a team to be regionally or city recognized. The affiliation variable may be intervened with as a result of not knowing an area’s market history and actual value.

In addition, variables of involvement and affiliation may be related to each other through examining whether or not a team affiliating itself regionally influences its market and how fans choose to identify themselves with such a team. This will help to answer the question of whether or not regionally affiliated fans will encompass a larger market radius and thus be more popular than city affiliated teams. Finally, it may be found whether fans
prefer to identify themselves and become involved with a team that is directly affiliated with their home/favorite city or an overall region, which is currently unknown.

It must also be noted that there are a couple of potential issues within this research. First of, it is possible that the data may become skewed through the fact that some teams, regardless of affiliation, have longer and more successful franchise histories than other teams. This may impact the number of fans that identify themselves with historical teams. In addition, there may be unaccounted for differences between the American Football Conference (ACF) and National Football Conference (NFC) within the variables used for this study.

Summary

In all, it has been known that there are direct correlations between NFL team and the psychological well-being of its fans. It also has been recognized that there are several factors that influence how fans choose what team(s) they will support and how strongly they affiliate with such team(s). However, this study worked to answer the question of how fan involvement differs between regionally and city affiliated NFL teams. This is a factor that had not been examined prior to this study. There are countless dynamics that influence how and why NFL fans involvement themselves with certain teams. Through this study, knew knowledge had been establish on the impacts of how NFL teams choose to affiliate themselves with their surrounding location.
Methods

Research Question

Within the United States sport industry, immense research has been done on how fans relate and interact with their favorite teams, especially within the National Football League (NFL). Much of such research has focused on what factors influence a fan’s identification and thus involvement with their team. To date, it is known that one’s level of involvement/identification with a local sports team is indeed positively correlated with psychological well-being (Wann, 2006). In addition, prior research has found that people typically view a team as a reflection of the city in which they play, which is most likely due to well-formed brand associations (Aiken, Campbell, & Koch, 2013). However, it is not known whether or not a team’s association with its home region plays any role in the popularity of the team and thus how fans identify and interact with the team. With this, the research question of this study was:

How does NFL regional or city affiliation relate to the involvement of the team’s fans?

The aim of such research was to uncover a deeper understanding of how NFL fan involvement relates to team affiliation (i.e. regional or city affiliation). A cross sectional design was used and secondary data was collected.
Desired Sample

The desired sample for this study included NFL fans who directly identify themselves with the Carolina Panthers, New England Patriots, Minnesota Vikings, Tampa Bay Buccaneers, Arizona Cardinals, Tennessee Titans, New York Jets, Atlanta Falcons, Jacksonville Jaguars, Cincinnati Bengals, Green Bay Packers, and San Diego Chargers. Such teams were selected in order to represent each regionally identified team along with the geographically closest city affiliated team from each regional team. One note should be that the Atlanta Falcons are the geographically closest city affiliated team to both the Carolina Panthers and Tennessee Titans, thus the Cincinnati Bengals (second closest team to the Tennessee Titans) was brought into the sample. Fans of each team were accessed through SBRnet, the Entertainment and Sport Programming Network’s (ESPN) resources, and Forbes’ resources. In addition, the Jets were selected as a result of a coin flip due to there being two teams located in New York City.

Procedure

Sampling

The samples used within this study were primarily accessed as secondary data via the SBRnet, ESPN, and Forbes databases. Each of the twelve teams mentioned in the desired sample (six regionally affiliated teams and six city affiliated teams) were used as the study’s sample.
Data Collection

For this study, secondary and quantitative data was collected with a cross sectional design. Secondary data was collected due to the difficulties that would arise in attempting to personally access sufficient individuals that identify themselves with each selected NFL team. Quantitative data was selected for collection and comparison of fans from each NFL team used in the study with the goal of determining any existing relationship between team affiliation and fan involvement.

The data used in this study was obtained through the use of online databases. SBRnet, ESPN and Forbes were the primary databases used to collect the quantitative secondary information. Information collected through SBRnet included attendance statistics, and television ratings. ESPN’s databases (espn.go.com) were used for the collection of attendance figures for each individual NFL team and fan base rankings. Forbes (forbes.com) was used to collect information of team popularities throughout NFL fans. In addition to the United States Census (census.gov) to obtain city and metropolitan populations, and social media cites (Twitter and Facebook) were used to collect data on fan social media involvement, as well as identify where fans are located for each team.

It should be noted that the data collected throughout this study was continuous, covering the past ten NFL seasons (2004-2013). The data gathered was broken into several categories, with the descriptive statistic of mean used for differentiation and comparison. Each team represented a different category for the sample of fans to be placed into, with the mentioned variables measured as subcategories for each team’s fans. Teams and fans were also broken into the categories of regionally identified teams and city
identified teams (six teams in each category). In addition, since secondary data was collected and used for this study, no questions were directly asked to any of the sample members. Data was gathered on the identified fans of each NFL team used within the study and then compared against each other in order to determine the different tendencies of NFL fans from each team and affiliation categories, regarding fan to team involvement, allowing for an overall conclusion to be drawn.

Analysis

The research done in this study has allowed for a conclusion to be drawn on whether there is a difference between how involved fans are based on their acknowledgment to either a regionally or city affiliated NFL team. Numerous factors of fan involvement, which have been previously stated, were brought into play throughout the collection and examination of data throughout this study. The use of secondary data allowed for data to be collected specifically from each team used within the study. In addition, descriptive statistics were used as a means of communicating what was known prior to the research conducted in this study, which were followed up with significant differences between the variables of fan involvement being recognized. Also, each regionally affiliated NFL team was accounted for along with a city-affiliated counterpart form the same region, thus allowing for much accuracy within this study.
Results

In the study, data regarding the home game attendance and average attendance over the past three NFL seasons (2011-2013), national television rankings, seasons ticket holders, social media interactions, popularity index, and fan allegiances throughout each county within the United States was all collected. Such data was collected for each of the twelve NFL teams used within the study. The databases and sources used for gathering data included SBRnet, ESPN, Forbes, Facebook, and Twitter. The population of this study included data on all persons possible, provided as secondary data through such databases. The study gathered data on all six regionally affiliated NFL teams and six city affiliated NFL teams, selected based upon geographical factors, which all provided a sample size that was indeed representative of population.

It was found that regionally affiliated NFL teams have averaged 65,218 attendees per home game over the past three seasons with a standard deviation of 5,900 fans, where city affiliated teams averaged 67,437 fans per home game with a standard deviation of 9,922 fans over the same period of time. When placed into a scatter plot analysis, regional teams were found to have a baseline of 69,671 fans per home game with an $R^2$ value of 15.435%. The baseline statistic identifies the minimum number (of home game attendees) that can be expected, with all factors (team location, market size, history, etc.) put aside. In addition, the $R^2$ value determines the accuracy of the baseline calculations based upon a best fit trend line for the plotted data. With this, on the same scatter plot, city fans were found to have a baseline of 77,515 fans per game with 50.176% accuracy. (See Appendix A)

For national television rankings, it was found that regional team averaged a rating of 26.450 with a standard deviation of 6.016 points from the mean. For city teams used in the
study, the average rating was found to be 24.867, with a 10.748 point deviation from the mean. With this, the regional teams averaged a league ranking of 19th out of all 32 NFL teams, where the city teams averaged a ranking of 20th, also out of 32.

As for season tickets, regional teams averaged 16,400 fans on their waiting lists, with the average length of the wait being 4.200 years. The city team used averaged 27,500 fans on their waiting lists with the average wait being 6.000 years. However, the standard deviation for regional teams was 26,169 fans on the list form the mean and 8.843 waiting years from the mean. The city teams showed standard deviations of 44,917 fans on the list from the mean, as well as 13.416 waiting years form the mean.

The social media aspect of the study looked into how many Twitter (See Appendix B1) and Facebook (See Appendix B2) followers each team had. It was found that the six regionally affiliated NFL teams totaled 1,922,100 Twitter followers, with a mean of 320,350 followers (standard deviation [SD] = 278,221 followers from the mean). The city affiliated teams used totaled 2,296,600 Twitter followers, with a mean of 382,767 followers (SD = 224,480 followers). When plotted on a scatter plot, it was found that regionally affiliated teams had a baseline of 716,180 followers at 57.832% accuracy, where city affiliated teams had a baseline of 537,687 followers at 11.908% accuracy. Looking at Facebook, regionally affiliated teams totaled 10,408,382 likes for team pages, with a mean of 1,734,731 likes (SD = 1,673,866 likes from the mean). The city affiliated teams totaled 10,500,217 likes for the team pages of the six teams used in the study, along with having a mean of 1,750,037 likes (SD = 1,334,210). Also, when plotted, regionally affiliated teams were found to have a baseline near 4,000,000 likes at 47.080%, compared to city affiliated teams having a baseline of about 2,000,000 likes at 0.129%.
Additional data was collected based upon how extreme fans are within a team’s metropolitan area. A popularity index (See Appendix C1) was formed by Forbes resources (See Appendix C2), with a 100-point scale (100 being the highest, zero the lowest) accounting for the involvement of fans against the size of the team’s metropolitan area. It was found that the regionally affiliated teams averaged a popularity index rating of 46.500 (SD = 15.003 points). When placed onto a scatter plot, the regional teams were found to have a baseline of 45.000 points with 0.286% accuracy. For the city affiliated teams, an average index rating of 44.667 points (SD = 14.194 points). Additionally, the city affiliated teams were found to have a baseline of 32.867 points at 19%747% accuracy when plotted.

NFL fan allegiance and geographical involvement (See Appendix D) was also examined based on what NFL team had the most involved fans in each county throughout the United States. It was found that regionally affiliated teams averaged having the most involved fans in 46 counties within the teams’ home states, with a standard deviation of 37 counties. The city affiliated teams averaged 43 counties within the teams’ home states with a standard deviation of 56 counties. With this, the regional teams were found to have the most involved fans of any NFL team within 13 U.S. states, showing a mean of 2.167 states and a standard deviation of 2.317 states form the mean. The city teams examined had majorities in only two states, showing a standard deviation of 0.333 states and a standard deviation of 0.516 states form the mean. In all, it was found that regionally affiliated teams had at least one county with the most involved fans within 21 different U.S states, finding a mean of 3.500 states and a standard deviation of 3.146 states from the mean. The city affiliated teams also were found to have involved fans within 21 different U.S states, having a mean of 3.500 states and a standard deviation of 2.881 states.
Discussion

The purpose of this study was to explore the relationship between how involved fans are with NFL teams with respect to the team’s location affiliation. The aim of such research was to uncover a deeper understanding of how NFL fans interact with their favorite teams with respect to how the team affiliates itself (i.e. regional or city affiliation). With this, the results indicate that there is no direct or definite impact on the involvement of a team’s fans based upon the team being regionally or city affiliated. Throughout all of the data collected and descriptive analysis taking place, no consistent or significant differences were found between the involvement of the fans of regionally affiliated NFL teams compared to the fans of city affiliated NFL teams.

The results showed a difference of only 2,200 home game attendees in the three year average game attendances that were examined, which accounted for less than a three percent difference in home game average stadium capacity over the same period of time. When plotted, a home game attendance baseline difference of nearly 8,000 attendees was found in favor of city affiliated teams, however the $R^2$ value, which determines the accuracy of the baseline calculations based upon a best fit trend line for the plotted data, were found to be only 15% for regional teams and 50% for city teams. Such low $R^2$ values, especially for the regionally affiliated teams, suggests much inaccuracy in the baseline data due to inconsistent data points, thus no conclusions could be deemed relevant to the study.

The national television rankings found average rankings that rounded to 25.0 as the nearest whole number for both types of teams, with average NFL rankings of 19th for regional teams and 20th for city teams (out of 32 possible rankings). Such TV figures were too similar for any difference in fan involvement to be determined, which was found to be
the same for social media interactions. Both team categories averaged around 1.75 million Facebook likes for their team pages with identical overall figures and standard deviations. In addition, regional and city teams were found to have no significant difference in the overall or average numbers of Twitter followers. Also, the low $R^2$ values disallowed for the use of the baseline data to draw any positive conclusions within the study.

The data collected regarding season ticket holders was not complete for every team used within the study due to insufficient data being available, however conclusions were still drawn on the data available. Such conclusions did find a difference of 1.8 years between the season ticket holding waiting lists for the two types of teams. A difference of over 11,000 persons was found between the two types of waiting lists, however standard deviations of over 26,000 persons for regional teams and nearly 45,000 for city teams provided absolutely no consistency in the data.

The Forbes rabid fans popularity index once again found very similar data regarding fan involvement between the two types of teams of NFL teams. On Forbes’ 100 point popularity index, the six regionally affiliated teams averaged a popularity index rating of 46.5, with a standard deviation of 15.003 index points away from the mean. The city affiliated teams used in the study were found to have very similar results with an average index rating of 44.667 points and a standard deviation of 14.194 points. When plotted, trend lines showed that regionally affiliated teams having a baseline of 45.0 points with at 0.29% certainty ($R^2$), where city affiliated teams were found to have a baseline of 32.867 points at 19.75% certainty. Even though there were differences in data when plotted, the very low $R^2$ values proved such data to be inconsistent and inconclusive.
The final tests ran in the study regarding the NFL fan map would again find a lack of differences between the two categories of NFL teams and their fans. It was established that the regionally affiliated teams averaged having the most involved fans in 46 of the counties within the team’s home state, compared to an average of 43 counties for city affiliated teams. Also, it was found that both the six regionally affiliated teams and six city affiliated teams used had the most involved fans in at least one county of 21 different U.S. states (average of 3.5 states for each). Such lack of differences in these test results again led to the finding of a lack of differences between how involved fans are based upon their favorite team being either regionally or city affiliated.

Previously, it had been known that a fan’s level of identification with their favorite sports team is positively correlated to the fan’s psychological well-being (Wann, 2006), meaning that fans are directly affected by the actions, successes, failures, etc. of their team. One’s favorite team is a part of their daily lives and decision-making process. It had already been found that team identification is a major determinant in how loyal and involved fans are, with respect to the fan’s level of trust within the team (Wu, Tsai, & Hung, 2012). In addition, prior to this study it was known that fans who develop loyal relationships toward their team they become more and more involved with the team, positively identify themselves with the team, and even promote the team to others (Lock, Taylor, Funk, & Darcy, 2012).

Prior to this study being conducted, it was known that fans are directly impacted by their favorite team and that there are several factors that indicate how loyal and involved fans are to their team (Wu et al., 2012). However, no previous research had been done on whether a team being regionally or city affiliated impacts how involved and interactive fans
are to the team. The study conducted was an attempt to uncover new information through research that has never been done before.

Several limitations existed throughout the study. One limitation that may have led to inaccuracy within the data collection and overall test results was the fact that the teams used had noticeable differences throughout their franchise histories. Such differences may have included the length of time that a team has been in existence and/or in its current location, any relocations and/or name changes that may have occurred, the team’s history of winning, and so on. A second limitation was that the twelve teams used, regardless of affiliation, did not evenly represented between the two NFL conferences, the AFC and the NFC. It is possible that fan involvement could be impacted based upon a team’s conference, which was not accounted for within the study.

Another limitation occurred throughout the data collection phase, as much of the (secondary) data originally hoped to be obtained for the study was not available on a team-by-team basis. Much of the planned data to be collected was found to only be available for the overall conferences (AFC and NFL) or even the entire NFL. This resulted in much of the data originally collected being incomplete or unusable due to lack of specification, thus the range of such collection had to be expanded. Such expanded searches resulted in the overall study having to switch focus from examining differences in fan identity to exploring fan involvement, which was not as specific of a study as originally intended. In addition, the study was not able to conduct logistic regressions to test the data due to limitations in technology and knowledge. With this, the results of the study were forced to be based only upon descriptive statistics, which was not necessarily ideal for drawing the most accurate conclusions possible.
Also, a major delimitation within the study was the choice to solely use secondary data throughout the study due to the drastic difficulties that would have risen from attempting to directly reach out to sufficient fans of each specific team used within the study. The use of secondary data made data collection convenient but did not allow for maximum accuracy throughout the study and testing.

Moving forward, any future research that is done on the topic of fan involvement should most definitely take the time and effort to directly reach out to fans of each specific team used within the study. Doing so would allow for each team's fans to be directly and accurately represented throughout the study, making for much more precise conclusions to be drawn through the use of primary research opposed to secondary information. Future research should also ensure that the drastic differences between the histories of each team used are accounted for in order to eliminate the inaccuracies based upon some teams having more rich and successful histories than others.

In all, no conclusive evidence was found encouraging that there is a difference between how involved a NFL fan is based upon a team being regionally or city affiliated. Throughout the study, the twelve teams used were broken into two categories with six being regionally affiliated and six being city affiliated. Through the data collect and testing, many similar figures were found between both types of teams and their fans. Any figures that did have significant differences would be later disputed through inconsistencies and inaccuracies being unveiled when plotted and having trend lines added. Overall, the lack in significant differences between the two types of teams led to the overall conclusion that fan involvement did not differ based on NFL team identity.
References


**Appendices**

Appendix A
Series 1 = Regional Affiliated Teams (Top Formula)

Series 2 = City Affiliated Teams (Bottom Formula)

Appendix B1
Series 1 = Regional Affiliated Teams (Top Formula)

Series 2 = City Affiliated Teams (Bottom Formula)
Series 1 = Regional Affiliated Teams (Top Formula)

Series 2 = City Affiliated Teams (Bottom Formula)
### Appendix C²

<table>
<thead>
<tr>
<th>Team</th>
<th>Popularity/Market Size</th>
<th>Popularity Index</th>
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Sources: Forbes; Nielsen Co.
Series 1 = Regional Affiliated Teams (Top Formula)

Series 2 = City Affiliated Teams (Bottom Formula)