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THE EFFECT OF ENVIRONMENTAL FACTORS ON FRANCHISE SUCCESS IN THE NBA'S DEVELOPMENT LEAGUE: AN APPLICATION OF ORGANIZATIONAL THEORY

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by

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DISSERTATION

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DEDICATION

This dissertation is dedicated to the precious memories of Janette and Robert Keiper. Your unconditional love, even after both of you were gone, is what kept me dedicated to this endeavor. I am thankful for the endless encouragement both of you showed to me in the pursuit of all my goals. You both taught me to operate with high character, work hard at everything I do, and to appreciate the great outdoors. Despite the infinite lessons I learned from the both of you, the thing I am most grateful for is to have been able to call you "Mom and Dad". I am forever indebted and you are eternally in my heart.

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ABSTRACT

In 2001 the National Basketball Association (NBA) formed its own minor league: The

National Basketball Development League (D-League). The D-League was originally

designed as a vertical extension of the NBA and to act as a farm-system for the NBA.

There has been instability in the make-up of the teams within in the D-League since the

inception of the League. Instability is a shared characteristic among all minor league

basketball operations. However, unlike its minor league counterparts, the D-League has

promise to endure long-term.

In this study, external environmental factors that are linked to competition,

demographics and structure are analyzed. Organizational theory takes into account the

role of the external environment in regards to the survival of a new firm. Factors

analyzed were: market size, per-capita income, market education, presence of other

professional sports teams, presence of NCAA Division I men's collegiate basketball

teams, stadium location, stadium age, stadium ownership, the number of large businesses

within the market place, and business ownership model were all considered.

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CHAPTER I. INTRODUCTION

The economics and characteristics of professional sports teams have been historically referred to as being unique compared to other industries (Cairns, Jennett, and Sloan, 1986, p. 4). Monopolistic practices, territorial rights in predetermined markets, depreciation of player contracts, and other factors have all been considered to be distinctive to professional sport. However, not all of the economic characteristics of professional sports are unique in comparison to other industries – especially the attributes of minor league basketball. Difficulty to endure and high mortality rate are prime examples of the shared struggles that nearly all industries face. High mortality makes minor league basketball organizations not-so-unique to the difficulties of new firm survival and reveals the *lack* of peculiarity in the economics of minor league basketball compared to other industries.

Within the minor league basketball market place there are always numerous leagues competing for the sports entertainment dollar. For example, in 2010-2011 there were thirteen minor leagues in operation within the United States (Krieger, 2012). Since the collapse of the American Basketball Association (ABA) in 1967, over 30 minor league basketball organizations have operated– the vast majority of which are now defunct (D. Jones, 2001, p. 3). Minor league basketball leagues typically have little to no cooperation with each other and lack business experience, which leads to a revolving door of teams and leagues (Janas, 2011). The difficulties minor league basketballs organizations have experienced uphold the idea that professional sport, though unique in some attributes, is not exempt from the complexity of new business survival. The National Basketball Association Development League (NBA D-League) is no exception.

The D-League is the official minor league of the National Basketball Association (NBA) and has been in operation since 2001. The D-League represents the vision of the NBA to have a sustainable minor league, or farm system. The D-League is the first league in history to be the *official* minor league for the NBA. Despite the affiliation with the NBA, the D-League has faced similar struggles that other organizations and industries encounter. Financial struggles, team relocations, and lack of league identity have all plagued the D-League (Lombardo, 2010).

Organizations, regardless of industry, are notoriously ill-fated at surviving the preliminary years of business (Freeman, Carrol & Hannan, 1983, p. 692). One of the reasons that new firms fail is they do not consider factors that are initially controllable by the organization or entrepreneur. For example, though the demographics of a market are considered to be uncontrollable, the selection of which market to enter is initially controllable by the organization. Conditions that are considered to be initially controllable are referred to as being contextual conditions. Contextual conditions, according to Stearns, Carter, Reynolds, and Williams (1995), are "distinguished from other attributes in that founders, once committed to the condition, may have little opportunity to change their impact on the firm" (p. 25).

Contextual conditions are composed of environmental characteristics. If an organization is deficient in its ability to respond to the various environmental pressures or it neglects to consider flexibility with its organizational design, it is likely that the organization will decline and fail (G. Jones, 2010, p. 13). Market characteristics, competition, customers, demographic, structural, and cultural pressures are all types of forces that can directly affect the ability of an organization to survive. All of these

environmental forces are something that ownership should consider prior to choosing where to locate a D-League team.

Research Problem

From 2001, the D-Leagues initial year, to the end of season in 2012, a total of 32 teams have existed in 27 different markets ("D-League Team Index", n.d.). The D-League has struggled to maintain a consistent group of teams. Even with heightened NBA affiliation, the D-League has only once observed two consecutive seasons where the teams within the League remained the same. The lack of consistency has not strictly been related to growth or expansion of the league; many teams have relocated or ceased operation. The two seasons where the assembly of teams remained the same, 2001-2002 and 2002-2003, represent the first two years the league operated.

Since the initiation of the league, the viability of the D-League was of concern; accurate projections for attendance, sponsorships, and coverage were all struggles (Lombardo, 2002). Regardless of some of the struggles the D-League has faced, it is believed that the D-League will be the first minor league basketball league to operate as a farm system for the NBA and survive long-term (D. Jones, p. 3, 2001). The main problem that was analyzed and evaluated was the role initially controllable environmental factors have on the success of an NBA Development League team.

Purpose Statement

The purpose of this study is to identify the relationship between environmental characteristics of all NBA Development League markets from 2001-2012 and the success of a D-League team based on the average attendance capacity for the 2012 season, or last year of operation if a team is no longer operating.

Justification for Research

Researchers have determined various factors that attribute to the valuation, attendance, and market viability of professional sports teams in both major and minor leagues. The characteristics of the facility in which a team plays, accessibility of resources, and demographics of the city in which a team plays have all been researched as a means to determine franchise placement, attendance figures, or franchise valuation. All of these factors are environmentally related factors.

The population of a city has long been considered as a predictor of increased franchise value, pricing of seating, or attendance within professional sport. All researchers found that population is an important factor that attributes to franchise value, attendance, or franchise placement (Alexander & Kern, 2004; Branvold, Pan, and Gabert, 1997; Davis, 2006; Humphreys and Lee 2010; Humphreys and Mondello 2008; Jones and Ferguson 1988; Miller, 2007; Miller 2009; Rascher, 2004; Rascher, Baehr, Wolfe, and Frohwerk, 2006; Siegfriend and Eisenberg, 1980). These studies suggest that a larger population leads to more available resources and an increased demand for professional sports. It is generally accepted that larger markets offer more support than smaller markets in terms of desirable economic characteristics and resources available to a team (Rascher, 2004). A team should want to consider more urban and populated markets as opposed to less populated, rural markets.

Other factors that have been considered for franchise viability, value, or attendance are related to the facility in which a team plays. Jones and Ferguson (1988) considered the location of the stadium. Numerous studies have analyzed how the age of a facility affects a franchise (Alexander and Kern, 2004; Baade and Sanderson, 1997;

Coates and Humphreys, 2005; Howard and Crompton, 2003; Humphreys and Lee, 2010; Humphreys and Mondello 2008; Miller, 2007; Miller, 2009; Rascher, 2004; Roy 2008). Stadium ownership has also been considered on multiple occasions (Humphreys and Mondello 2008; Miller 2007; Miller, 2009). Lastly, it is known that the D-League looks for arenas with seating fewer than 6,000 and a curtain system (Barrett Sports Group, LLC, 2011).

Variables related to competition, structure, and resources have also been examined. Several studies, (Bruggink and Zamparelli, 1999; Humphreys and Lee 2010, Humphreys and Mondello, 2008; and Shapiro, DeSchriver, and Rascher, 2012) researched competition within the market place as it affects professional sports franchises. Market income as it affects professional sports organizations has also been considered (Alexander and Kern 2004; Bruggink and Zamparelli, 1999; Humpreys and Mondello, 2008; Miller, 2009; Rascher, et al., 2006; Shapiro et al., 2012).

Even though none of the original eight teams exist and the D- League seems to continually be going through restructuring, there is still an extremely convincing impression that the D-League will continue to exist long-term. The D-League's growth strategies have become more deliberate and the league has shown positive growth and progress in recent years (Lombardo, 2010). League president, Dan Reed, said that every franchise within the League is now valued at over $2 million each, but there is still hesitation to expand the League and add new franchises (Lombardo, 2011). There is hesitance to expand too quickly because the D-League wants to make sure the new franchises can sustain. It is believed that the D-League will be the first minor league basketball league to operate as a farm system for the NBA and survive long-term (D.

Jones, 2001, p. 3). Consequently, understanding what environmental factors attribute to franchise success is essential for the future of the D-League and minor league basketball as a whole.

Deficiencies in Evidence

Whereas there is a substantial amount of research on franchise valuation for major league sports and a few studies on minor league baseball, there is minimal research on other minor league basketball. There is not – to the researcher's understanding – any research that has been conducted on the D-League. The lack of research on the D-League is potentially due to the relative novelty of the league.

Because of the lack of information on the D-League, there is a gap in the literature. This gap is important to fill because of the anticipation and future implications that the D-League embodies. The D-League represents the future of minor league basketball. It is possible that if the D-League is not successful, then minor league basketball will never be viable in the United States because of the precipitous history surrounding minor league basketball. The D-League is accomplishing the ultimate goal that all other minor leagues wanted to accomplish: being partnered with the NBA (Pilato, 2013).

Another deficiency in the literature was in regard to the type of competition considered and the factors that affect franchise survival or success. For major league sports, larger markets are typically more favorable; however, minor league sports typically look for mid-size markets or smaller markets. Also, though sport-specific competition as a predictor of franchise success has been considered on the professional level, there has been minimal consideration given to competition from collegiate sports. It

is well understood that big-time collegiate athletics, specifically NCAA Division I Men's

Basketball and Football, often have significant sponsors, attendance, and media coverage.

Accordingly, the type of competition considered left a gap in the literature as well.

■ Figure 1.1: Proposed Framework
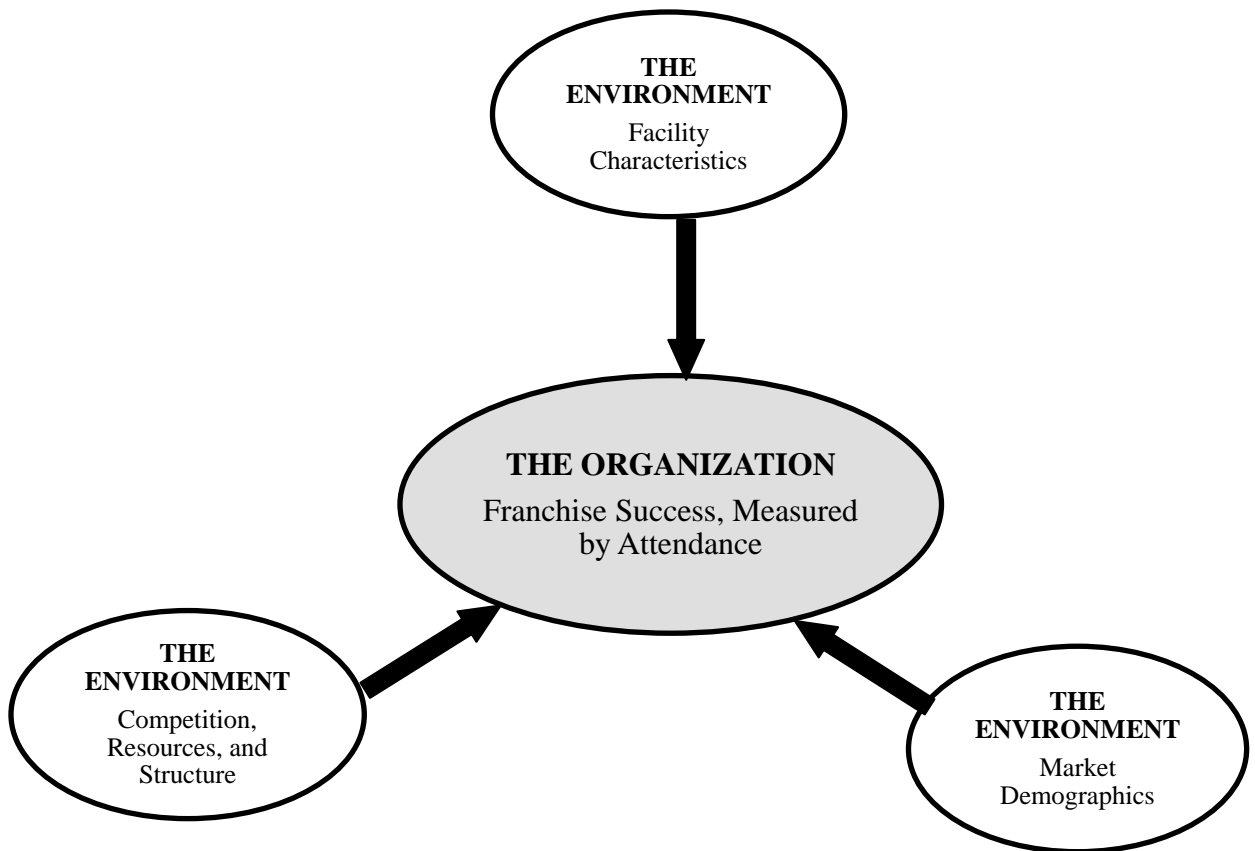
■ *Figure 1.1*: The proposed framework shows various characteristics that make up
the environment of a sports organization and how all elements of the environment
can put pressure on an organization. This figure was adapted based on the
organization-environment relationship.

Theoretical Framework

For this research, the theoretical basis is structured around fundamental

organizational theory. Organizational theory ultimately considers how firms function and

how they are affected by the environment (G. Jones, 2010). When entering a new market,

a D-League team must first choose a market, location, and structure that will allow for success. Characteristics of the market, resource availability, and structure of the organization are all initially controllable environmental factors when a new franchise is formed.

Despite the interest by scholars of predictors determining new firm survival, there is still a bit of uncertainty and lack of sufficient data in regards to determinants of success and failure of new firms (Fritsch, Brixy & Falck, 2006, p. 286). It is believed that environmental factors are the first things that must be considered when placing a firm, because these factors can affect the success of an organization. The context within which the organization operates is due largely to the economic pressures as well as the design of the organization itself (Child, 1974, p. 2). Jones (2010) agreed that if an organization lacks structure and does not consider the environment in which they operate it is likely that the organization will not survive (p. 13). Figure 1.1 shows a breakdown of the proposed framework used in this study.

Consumer motivation characteristics, winning percentage, and marketing strategies – though possibly strong predictors – are not related to the theory at hand and are subsequent to firm location, market selection, and structure. Also, the personal characteristics of the ownership will also not be considered because of the theory being assessed. The theoretical framework is based off the organization-environment relationship which is a component of organizational theory.

For this research and theoretical framework, it essential to understand that it is a goal of every organization to create value; the D-League is no different. Value creation is critical to any for-profit firm because of how economic value is typically measured.

Economic value is typically measured by total revenue, and revenue is achieved by the value outweighing the costs to create the product (Amit and Zott, 2001). Every organization, regardless of industry, has three stages that it will experience in its efforts to create value: input, conversion, and output (G. Jones, 2010, p. 6). Inputs for a professional team would include raw materials, human resources, information, knowledge, capital, and customers. The conversion process for a sports organization would be comprised of the ability of the staff, tracking, reporting, and market research. Outputs for a professional sports team include satisfied customers, attendance at games, and sponsorship procurement. The environment influences all three stages of the value creation process for any organization (G. Jones, 2010). If value creation is the process that profit is made, and the environment influences the value creation process, then for value creation to be maximized the environment should absolutely be examined and understood.

It is simply not enough for an organization to have goals, skilled workers, and high motivation. An organization must consider the constraints of the environment. An organization must have the ability to accommodate to the environment (Child, 1974). For example, a D-League team may have a state of the art facility with a very talented staff and excellent funding; but if the team is located where people cannot easily access the facility or where few people live, then it could be assumed that the team would struggle to survive or not survive at all. The environment is one of the critical variables in organizational theory that should be considered when a decision-maker within an organization is making the choice of where the organization should be located (Child, 1974, p. 17). However, simply being aware of the environment is not sufficient. A firm

must be more specific as to what factors attribute to survival and financial viability. The

specification of precise environmental factors is imperative for the reason that every

business venture, whether new or established, needs to be aware of the particular

environmental mix that attributes to its survival (Zimmerman and Zeitz, 2002, p. 416).

■ Figure 1.2: Value Creation Within a Professional Sports Organization

Outputs
(Attendance, sponsorship procurement, etc.

Inputs
(Raw materials, people, knowledge, etc.)

Conversion
(Ability to staff, reporting, market research, etc.)
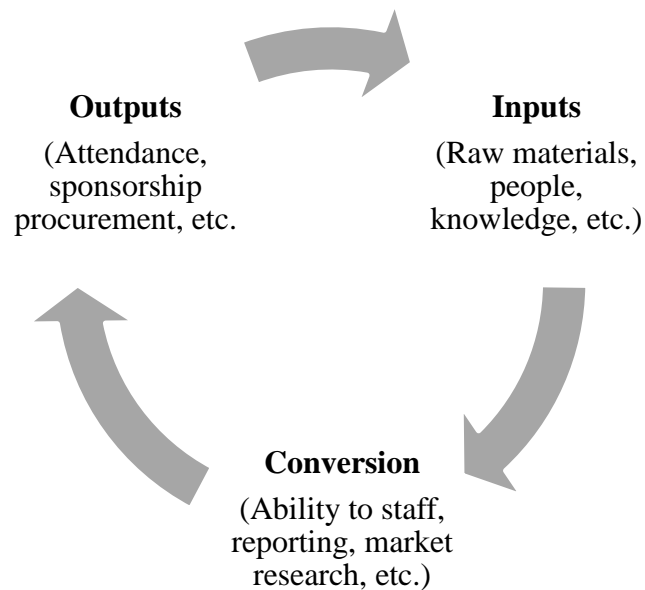
■ *Figure 1.2*: The process of creating value within a sports organization. Value creation is a continuous cycle which is represented by the arrows in this figure. This figure was adapted and created from "How an Organization Creates Value" by Gareth R. Jones, 2010, *Organizational Theory, Design, and Change,* 6, p. 4.

Research Questions

R_1: To what extent do city demographics (MSA, income, and education level)

within a market have a relationship with the success, as defined by

percentage of attendance capacity, of a D-League team?

R_2: To what extent do facility characteristics (facility age, facility location,

facility size) have a relationship with the success, as defined by percentage

of attendance capacity, of a D-League team?

R_3:   To what extent does the ownership model, pro and college teams within the

market, and presence of large business within the market have a

relationship with the success, as defined by percentage of attendance

capacity, of a D-League

team?

Hypotheses

H_1:   The city demographic factors: population, income, and education level

within a market will have a relationship with the success, as defined by

attendance capacity of a D-League team.

H_2:   The facility characteristics: facility age, facility location, and facility size,

will have a relationship with the success, as defined by attendance

capacity, of a D-League team.

H_3:   The ownership model, pro and college teams within the market, and presence

of large business within the market will have a relationship with the

survival of a D-League team.

Significance of Study and Audience

Research in the subject area of organizational theory, specifically environmental

factors and initially controllable factors contributing to success within a professional

sports organization, are essential to be aware of for franchise placement. A poor fit

between an organization and the environment leads to failure (G. Jones, 2010). This

study is beneficial for current and past D-League owners, cities, and league officials. It

applies components from basic organizational theory to possibly explain the relationship

a D-League team has with the environment in which it operates. Moreover, this study offers recommendations on how to evaluate the placement of an NBA Development League franchise.

Ultimately, this research will also be helpful to other leagues by informing them of environmental factors that could attribute to increased chance of success based on franchise location and the initially controllable environmental characteristics of the market. This research contributes to previous explorations related to factors that determine franchise success and survival within North American sports leagues. As a result, by understanding if any of the competition, demographic, structural, or facility characteristics being considered do affect team success, it may help a league as well as potential owners to understand which markets may be ideal for housing a future professional sports franchise.

This research also adds to the literature on new sports facilities and could benefit individual cities and communities. Although many owners of professional sports teams and local political and community leaders claim that professional sports facilities and franchises have a positive economic impact on urban areas, economists have not found any support of these claims (Coates & Humphreys, 2003, p. 335). Construction of new sports stadiums often utilizes some form of public funding (Siegfried & Zimbalist, 2000). Considering that the D-League has now operated 32 different franchises in 27 different states, it is important for communities to understand the impact of a new stadium on a team's survival, if there is one.

Delimitations

- Data represents entire population from 2001 to 2012

- Data will be collected through secondary data sources

- Access to city demographic information

- Researcher worked in the D-League and is familiar with league operations

- Contact and relationship with League officials

Limitations

- May not be generalizable beyond the population being studied

- Time of the study (instability of teams)

- Attendance reporting measures (teams may inflate attendance numbers)

- Ability of theory to address the problem of firm survival

- Differences in folded teams and current teams

Assumptions

- Attendance is a viable means of predicting franchise success

- All variables can be accurately measured

- The secondary data sources are all accurate sources of data

- Data is normally distributed

- The size of the population is sufficient to detect significance if it exists

Definition of Terms

- *Attendance:* The percentage of total attendance capacity for the last year of operation or 2012-2013 season, if a team is still operating. This figure will be found by taking the total attendance for the year divided by the total possible capacity in the given stadium for that same year, which will give the attendance capacity. The attendance capacity will then be multiplied by 100 to calculate a percentage of capacity for the season.

- *Direct Competition:* For the purpose of this research, it is a situation where two firms are offering the sport product within the same market. Specifically, one of the two firms will be the D-League team within the market, the other competitor would be one of the following: NBA, NHL, NFL, NBA, WNBA, MLS, MiLB, AHL, or NCAA Division I Men's Basketball team.

- *Farm-system*: Refers to a minor league that provides players, coaches and officials to a parent major league sport organization.

- *Franchise*: Synonym for sports team or sports organization

- *Initially Controllable Factors:* For this study, this term refers to characteristics that are related to the environment and are difficult to change once market entry occurs.

- *Major College Basketball:* A men's basketball team that competes as the NCAA Division I level.

- *Organizational Environment:* The set of forces and conditions that operate beyond an organization's boundaries but affect its ability to acquire and use resources to create value. (Jones, 2010, p. 2)

- *Organizational Theory:* The study of how organizations function and how they affect and are affected by the environment in which they operate. (Jones, 2010, p. 7)

- *Ownership Model:* Refers to the ownership structure of the D-League teams. Three different types of affiliation exist: direct affiliation, hybrid ownership, and independent ownership.

- *Franchise Success:* The ability for a team to remain operating within the NBA's Development League without an involuntary exit from the market. For this study, success and survival is based on attendance due to the relationship between attendance and profit generation.

- *The Four Major Leagues:* Refers to the four major sports leagues within the United States: National Basketball Association (NBA), National Football Association (NFL), National Hockey League (NHL) and Major League Baseball (MLB)

CHAPTER II: REVIEW OF LITERATURE

The purpose of this chapter is to give a comprehensive review of current literature associated with minor league basketball, environmental factors, and firm survival as it pertains to the National Basketball Association Development League. This chapter is subdivided into the following areas: (1) The Professionalization of Basketball; (2) The D-League, (3) The Character of Minor League Basketball; (4) New Firm Survival; (5) Theoretical Framework; (6) Factors That Attribute to Franchise Success.

It is important to first understand a brief history of professional basketball and how the struggle for franchise survival is not a complication solely restricted to modern day basketball leagues. It is also essential to grasp the nature and traits of current minor league basketball. Basketball specific literature is followed by literature relevant to the theoretical framework and information on new firm survival. The last section of the literature review describes research that has been conducted regarding factors attributing to franchise success or increased franchise value.

The Professionalization of Basketball

An instructor in Springfield, MA, Dr. James Naismith invented the game of basketball in the fall of 1891. The original design of the game of basketball has changed significantly over time. Naismith originally designed a game consisting of 13 rules and 9 players on each team (Shoals et al., 2010, p. 18). Rules, equipment, and style of play have developed drastically since its origin in the late 1800's. The game Dr. Naismith invented started out as an experiment for a physical education class and over time has evolved into a multi-billion dollar sport in the United States (Stewart, 1998, p. 7). The

most compelling and significant progressions of basketball occurred when the sport became professionalized.

Basketball was originally played in the gymnasium at the Young Men's Christian Association (YMCA) Training School (now Springfield College) as a noon-time casual game (Naismith and Baker, 1941, p. 60). The popularity of the game grew quickly and was adopted by many other YMCAs around the United States in the late 1890's and early 1900's (Stewart, 1998, p. 9). Teams developed and the competition level began to increase which led to teams buying their own equipment, paying for uniforms, traveling to play, and paying for practice time (Stewart, 1998, p. 11). Hence, the professionalization of basketball began and the transformation process from a make-shift game to a multi-billion dollar business came into existence.

Between basketball's origin in 1891 and the 1930's there were various efforts to develop a uniform professional basketball league. During the first few decades in the 20th century there were over twenty professional basketball leagues in operation (Stewart, 1998, p. 16). None of the professional basketball leagues were able to withstand the hardships of World War I and World War II which plagued the entire country. Either leagues struggled financially or they were forced to give up their venues because the venues were needed for ammunition and machinery storage (Stewart, 1998, p. 17). All of the leagues that were developed followed in the steps of the rest of the country and succumbed to the economic hardships that inundated the United States in the era of the Great Depression (Shoals, et al., 2010, p.18).

Some of the original leagues included the Metropolitan League, American Basketball League, and Midwestern Basketball Conference (Shoals, et al., 2010, p. 18).

A few of the leagues, such as the Midwestern Basketball Conference, had financial backing from local factories. Even with some financial backing, professional leagues still encountered a number of hardships and often struggled to maintain operation. However, struggling to maintain operation was not a problem for another form of basketball that was coming into existence. This other form of basketball was the "barnstorming circuit."

The teams in the barnstorming circuit ranged from the Harlem Globe Trotters (the infamous 'show' basketball team from Harlem, though originally from Chicago) to the group of women who were all red headed known as the All American Red Heads, and played against the men's teams (Shoals et. al, 2010, p. 21-25). Barnstormers were able to organize individual games for themselves and traveled the nation, often playing more than a hundred games a year (Shoals et. al., 2010, p. 20). Because of the lack of organization and structure in professional basketball and the high rate at which professional leagues entered and exited the market, the barnstorming circuit was able to be wildly successful for a period of time prior to teams operating in unison as a league.

The first attempt to form a national league began in 1925. The American Basketball League was the first professional league to offer written contracts. But, like many of its counterparts, the league could not endure the Great Depression and folded in the 1930s (Shoals et. al, 2010, p.18). The National Basketball League (NBL) was the next true attempt at a league that would compete nationally. The NBL was formed in the season of 1936-1937 after a group of teams which had formed the Midwest Basketball Conference (MBC), decided to change its name to further validate the significance to the league (Shoals et al., 2010, p. 19; Stewart, 1998). The NBL had enough economic accomplishment to pay its players more than the average American worker. The teams

were backed by local factories, thereby providing monetary stability for each team (Shoals et. al., 2010, p. 18).

The financial success of the NBL from 1938 to 1946 provided insight and a sense of opportunity to a group of hockey arena and team owners. These owners formed their own basketball league known as the Basketball Association of America (BAA) to fill their empty arenas when their hockey teams were out of town (Stewart, 1998; Shoals et. al., 2010). The NBL and BAA were some of the first truly organized leagues that operated within professional basketball; they were also competitors.

The BAA and NBL operated simultaneously until 1949 when the two leagues merged (Stewart, 1998; Shoals et. al., 2010). The BAA typically played in large arenas in top-tier cities but had less talent than its competitor the NBL. The NBL had more stable franchises, better attendance, and more talent than the BAA, but the facilities and cities the NBL played in were smaller and undesirable (Stewart, 1998, p. 52). The strong identification with each local community in which the NBL played made the league successful. There was a strong sense of local pride within NBL communities (Nelson, 2009). The BAA, on the other hand, lacked the support from the communities in which they operated but had stronger financial support. The strong financial support for the BAA led to, in 1949, the ability of the BAA to attract the talent from the NBL. The loss of talent within the NBL made the owners in the NBL approach the BAA to suggest a union of the two leagues. Owners from the BAA and NBL decided if professional basketball were to ever be successful in the United States the two leagues would need to merge. Thus, in 1949 the NBL and BAA merged to form a new league the National Basketball Association (NBA) (Stewart, 1998; Shoals et. al., 2010).

Even with the NBL and BAA merging to form the NBA, the NBA would not go unrivaled as the sole major league until the 1970s. In 1967 the American Basketball Association was established and began to compete with the NBA for its talent (Shoals, et. al., 2010, p. 73). The American Basketball Association (ABA), by 1970, instituted a unique presence in the realm of professional basketball. The ABA brought in a different style of play, renegade marketing ideas, and a bit of instability (Shoals, et. al., 2010, p. 73). Though the ABA was a bit ambiguous, the ABA still attracted enough talent in its league to be a competitor, and partial nuisance, to the NBA. (Shoals, et. al., 2010, p. 85). In 1970 there was an attempt by NBA owners to merge the two leagues. However, Oscar Robertson (NBA Players Association President) filed and won a lawsuit based on antitrust and the basis that the NBA was monopolizing professional basketball by suggesting a merger of the two leagues (Shoals, et. al., 2010, p. 85). In spite of the successful lawsuit and claim of monopolization, the ABA only lasted six more years. In 1976 the ABA halted operation (Shoals et. al, 2010, p.85). Consequently, from 1976 on, the NBA has been the only major basketball league in the United States.

While the NBA and ABA were competing with each other, another league was also vying for a piece of the professional basketball market in the United States. The Continental Basketball Association (CBA) was formed 2 ½ months before the NBA was founded. In the 1960s and 1970s the CBA, despite being around since 1946 as the Eastern Pennsylvania Basketball League, found itself competing with the ABA for players. The CBA operated in a regional sense as opposed to nationally like the NBA and ABA. When the ABA and NBA merged in 1976 the CBA remained in operation and claimed to be the NBA's minor league, though there was not a true affiliation with the

two leagues (Eide, 2011). The major difference in the CBA and the NBA/ABA is that the CBA was never considered a true major league; they were always viewed as minor league.

In 1999 the CBA was sold to an NBA veteran with little business experience. Two years later, in 2001, the CBA was plagued with financial difficulties and filed for bankruptcy (Waldstein, 2009, D6). Even with bankruptcy the league still reorganized and merged with another league, the International Basketball Association (IBA). However, the CBA did not endure. With only four teams playing, the CBA decided to go on a hiatus and has not operated since 2009. Part of the disappearance of the CBA is likely attributed to the formation of a new league: the National Basketball Development League (NBDL). In 2006 the CBA was again in the midst of economic grief and found four of its teams leaving to join the NBDL (Eide, 2011). Prior to downfall, the CBA historically had claimed to be "The oldest professional basketball league in the world" until its demise in the early twenty-first century (Eide, 2011).

The D-League

In 2005, Sporting News writer Sean Deveney wrote: "Hallelujah, we finally have a real minor league for basketball" (Deveney, 2005, p. 49). Deveney was referring to the NBA's minor league, the National Basketball Development League (NBDL). The NBDL was formed in 2001. Four years after being formed, in 2005, the NBDL was renamed to the NBA Development League and the nickname "D-League" was officially adopted (Lombardo, 2005). The D-League was initially an eight-team league housed in midsize cities in the Southeastern United States (Apostolopoulou, 2005, p. 59). From

inception, the initiative of the NBA was to produce a league to be a farm-system that would act as the official minor league of the NBA.

The farm-system would operate in a way that not only players, but coaches, officials and front office staff would use the minor league as a training method to sharpen skills, gain experience, and eventually filter into the NBA. Apostolopoulou (2005) described this new minor league as a "vertical extension of the NBA". Initially the NBA used a distancing technique for the formation of the new minor league. The NBA is headquartered in New York City, but the NBA decided to have the main offices for the D-League in Greenville, South Carolina (Apostolopoulou, 2005, p. 59).   Also, the NBA wanted the NBDL teams to operate in markets that lacked the physical presence of an NBA team which allowed the NBA to enter into new markets (Apostolopoulou, 2005, p. 57).   The tactics employed by the NBA proved to be unsuccessful. The NBA incorporated a mistakenly ineffective approach to marketing the league and there were obvious adverse issues that all of the original franchises were exposed to (Muret, 2003). The original D-League teams all faced the problem of finding a niche within their market (Lombardo, 2010). Similar to the historical jagged path of professional basketball, the NBA's minor league was not able to establish a position within the industry without complication.

Originally, the D-League struggled to develop any sort of reputation other than that of a tag-along league of the NBA's (Scheitrum, 2012). The eight original teams "were owned by the NBA, and they shared the same generic logo – along with the same financial struggles" (Lombardo, 2010, para. 4).   Financial struggles and the inability to form an identity weighed down the D-League so much that at one point only six teams

were operating. For two consecutive seasons between 2003 and 2005 there were only six teams in the NBA Development League. The lack of teams within the D-League could ultimately have steered it towards the same fate as the CBA. When the CBA folded in 2009, they only had four teams in the league; without having enough teams a league cannot realistically survive (Waldstein, 2009, p. D6). However, the NBA recognized the issue the D-League was facing and the NBA intervened with its newly formed minor league.

Strengthening the relationship.

In 2005, it was reported by Naples Daily News that the NBA would be increasing its role with the NBDL. Phil Evans, the former NBDL President, confirmed that the NBA would be playing a more critical role for the NBDL and emphasis of the link between the two leagues had become a priority (Lombardo, 2005). From 2005 on, there were many changes for the NBDL. League headquarters were moved to New York City, each NBA team was assigned a NBDL team, and the name of the league was changed to emphasize the association (Lombardo, 2005). The National Basketball Development League would, as of 2005, be known as the NBA's Development League or "D-League" (Lombardo, 2005). The D-League went from a league that shared the same generic logo and similar financial struggles, to a League comprised of individual teams which were finding a strong foothold in their respected market (Lombardo, 2010).

The major strengthening of the relationship between the NBA and the D-League has come through individual D-League teams and their relationship with the parent NBA team. Some of the parent NBA teams took over the basketball operations for their respective D-League teams as opposed to simply being an affiliate which had the first

option for a player being called up to the League (Lombardo, 2011). Being affiliated with a well-established professional team reinforces the permanence of a team. With some of the NBA teams taking over the basketball operations for their given D-League teams, the D-league has continued to advance and gain strength based on the amplified connection with the NBA (Lombardo, 2010). As of 2012, eleven of the sixteen teams had some sort of single-affiliation relationship with a parent NBA team (Scheitrum, 2012). The other five D-League teams had multiple NBA teams that share affiliation.

The target market for the D-League also changed. Teams went from being located strictly in the Southeast region of the United States to being located all over the country in larger markets that were closer to NBA teams (Lombardo, 2011). The D-League, as of 2013, had 17 teams entering the season, representing 13 different states. Also, the NBA increased its ties in oversight of the D-League by not allowing individual teams to pay the players. Players are compensated based on three separate levels of contracts ranging from \$15,000 to \$25,000 a year and are funded by the NBA – not the individual franchises (Niesen, 2013). Having the league pay the players' salaries helps ownership by increasing cash flow and by keeping costs down for the individual franchises.

The D-League has built viability and a bit of consistency with teams operating within the league. Table 2.1 shows the number of teams that operated per basketball season. (The table does not include the 2013-2014 season because research was conducted prior to the end of the playing season.) The increased affiliation with the NBA, undoubtedly, has given the D-League a competitive advantage in the realm of minor league basketball.

Table 2.1

Number of teams in the D-League per year

Season	Number of Teams
2001-2002	8
2002-2003	8
2003-2004	6
2004-2005	6
2005-2006	8
2006-2007	12
2007-2008	14
2008-2009	16
2009-2010	16
2010-2011	16
2011-2012	16
2012-2013	16

A competitive advantage. Romanelli (1989) stated if a firm is a first mover in

the market then that firm has more of a chance for survival (p. 371). The D-League

cannot claim the status of a "first mover" because there have been nearly thirty other

minor league basketball leagues prior to the D-League that have entered the same market.

If the D-League was the first-mover within a market, the D-League would have had a

competitive advantage it may have been able to sustain depending on how many

followers entered the market.   The first-mover advantage, that would commonly accrue

long-term competitive advantages, is dependent upon a firm offering a specific product or

service that is new or by entering a market that has not been claimed (Kerin, Varadarjan

and Peterson, 1992, p. 33).   However, the D-League does not offer a new product nor is

it tapping into a market that has not been claimed on prior occasions.

The D-League is considered to be a late follower into the minor league basketball

market. Ultimately, being a late-follower could have given the D-League an advantage

because of the ability to recognize past failures of other minor league operations. Having

information from past failed ventures may allow for the development of a product that better meets the needs of the consumer (Shepherd, 1999, p. 622). With all of the failure and instability of previous minor leagues, the D-League stands a better chance at survival if consideration is given to issues that have deterred previous minor league basketball teams and leagues from surviving.

Regardless of the previous failures of minor league teams, the D-League still has a competitive advantage in its relationship with the NBA. The endorsement and financial support of the NBA helped create a strategic advantage for the D-League. The D-League is a vertical brand extension of the NBA because it is a new product/service offered in the same class as the NBA but considered a *step-down* because it is of lower price level and quality of core brand, the NBA (Apostolopoulou, 2005, p. 57). It is believed that when the NBA emphasized the association with the D-League, the credibility of the D-League improved due to the previous accomplishments of the NBA. Since the invention of basketball, there have been very few leagues that have maintained authenticity within the marketplace. Arguably, the NBA may be considered the only league that has maintained true legitimacy by its consistency and fiscal strength.

The D-League, even with a competitive advantage of being backed by the NBA, is not impervious to the difficulties that have traditionally beset minor league basketball. The same struggle for success and viability is the same trouble that plagued, and continues to plague, minor league basketball operations. Those struggles were the reason for the accentuation of the relationship between the D-League and NBA. As a result of past failures, the D-League shows hesitance and caution for league expansion.

Hesitance for expansion. Even with the league gaining strength, like its other minor league counterparts, the D-League has yet to show true stability with its teams. Aside from the first two years of operation the D-League has seen teams either enter or exit the league on a yearly basis. Also, there is still a lack of clarity for how many teams within the D-League make a profit and what the teams are valued at (Lombardo, 2010). The end of the 2012-2013 season marked the first time, since the D-Leagues first two years, the League did not have a team cease operation or move.

Since its inception in 2001 the D-League has made significant shifts in expansion, ownership, and business models (Niesen, 2013). Though the league is beginning to resemble a true feeder system for the NBA, there is still caution in expansion of the league as stated by current D-League president, Dan Reed (Lombardo, 2011). According to Reed (2012) the ultimate goal is to have 30 D-League teams, though it will be a slow process and cautionary measures are being taken (Niesen, 2013). It is believed the deliberate caution for expansion is fueled by the high mortality rate for individual teams within the D-League, as well as all of minor league basketball. The D-League also shares similar struggles to that of Minor League Baseball (MiLB).

Similar to minor league basketball, the evolution of minor league baseball was also very volatile; teams and leagues were frequently entering or exiting the market place (Land, Davis, and Blau, 1994, p. 783). It wasn't until the 1920s that baseball implemented a farm system for the major leagues. The actualization of a farm system allowed the major league teams to develop players via an exclusive minor league team. Land et al. (1994) stated that "The farm system for baseball is considered the single most important event in the history of minor league baseball" (p. 786).

The D-League has evolved into a league that is starting to resemble a successful minor league similar to the minor leagues that operate in baseball and hockey (Niesen, 2013). Though there have been a number of minor league basketball leagues that have operated over the years, none have ever acted as a *true* farm system for the NBA, until the D-League made its change in 2005. Comparing the similarities between the D-League and minor league baseball, it is conceivable that the D-League will be able to sustain long term. In order to endure, the league must continue to refine the configuration and model to mimic minor league baseball. As the D-League grows, the league must be selective with the markets that the teams enter.

Implications of growth. In 2001 – the inaugural season of the D-League – Jones wrote a thesis on how to make minor league basketball organizations work. In reference to the National Basketball Development League, Jones stated, "The chances for the D-League's survival are far greater than any other minor league (p. 18)." Jones' insight from 2001 has proven to be quite accurate. The National Basketball Association, the highest level of basketball in the world, endorsed, formed, and is successfully running its own minor league. The D-League is officially operating as the NBA's minor league using the league as training grounds for officials, staff, and players. According to Scheitrum (2012) over 23% of all NBA players had playing experience within the D-League. In 2011-2012 the NBA called up 44 D-League players to an NBA roster. This was higher than any other minor league in the United States or overseas (Niesen, 2013).

Sport Business Journal (SBJ) biannually ranks the top minor league markets based on attendance, economic factors, and tenure within a market. In 2005, the D-Leagues fourth year of operation, none of the *SBJ* top 10 minor league markets were

home to a D-League team. However, in the 2013 *SBJ* ranking, four of the top 10 cities were home to NBA Development League (D-League) teams. It is possible that the presence of D-League markets on *SBJ*'s biannual ranking is an indicator of the growth of the D-League.

The 2013-2014 season marks an all-time high for the number of teams operating within the D-League. The D-League will enter season with 17 teams, the highest since the inception of the league in 2001. In 2012-2013 the D-League saw overall league attendance figures reaching well over 1,000,000 for the fourth year in a row and a three percent increase of overall attendance, which also marked an all-time league high (Warden, 2013). With attendance figures increasing, the D-League is gaining some traction and starting to see value in the individual franchises and league (Lombardo, 2011). The promise to endure is further supported by the implication of increased franchise values and claims of profitability. (Neither can be validated because the information is not public). Team values cost $400,000 to buy into at the initiation of the D-League; now they are "being valued at close to $4 million" according to Thompsen (2013). More than half of the franchises claim to be profitable (Thompsen, 2013).

Regardless of recent success, long-term prosperity has been a jagged path for any team or league in minor league basketball, including the D-League. Characteristics of minor league basketball should be considered because of some shared similarities that the D-League has with other minor league basketball operations. For instance, the D-League shares many similar characteristics with one of its predecessors: the Continental Basketball Association.

The Character of Minor League Basketball

Like the D-League, the CBA had successful attendance at games and financial value. The CBA had many successful years in the 1980's and 1990's, where teams were playing in front of crowds of over 5,000. In the 1980s, the CBA's 14 franchises "were valued at roughly $500,000 a piece" (Eide, 2011). Also, in 1999 the CBA was purchased for $10 million dollars, which shows the CBA had significant financial value (Eide, 2011). Despite the financial value, the CBA did not survive. Like the initial years of the D-League, the CBA dealt with shifting platforms which lead to struggling small-town teams (Waldstein, 2009).

The demise of the Continental Basketball Association (CBA) indicated the end of a truly legitimate independent minor league and the loss of a league that had been around for over fifty years (Waldstein, 2009, p. D6). However, the fall of the CBA and initiation of the D-League did not hinder other leagues from forming and striving for possible prosperity in minor league basketball. Since the downfall of the ABA in 1967 there have been over 30 other minor league basketball organizations that have formed (Jones, 2001, p. 3). In 2011-2012 alone, there were 13 minor basketball leagues operating in the United States (Krieger, 2012). In addition, four other short-season development leagues were categorized as professional minor leagues operating within the United States (Krieger, 2012, p. 84).

Table 2.2 contains a breakdown of team consistency for each of the minor leagues that operated from the 2010-2011 to the 2011-2012 season. The Independent Basketball Association (IBA) was not included in Table 2.2 because 2011-2012 was the inaugural season. By taking the total number of teams in a league at the beginning of a season and

dividing it by the number of teams that do not operate within that same league the following season, will give a rate of exit within that league. Likewise, by taking the number of teams still in operation at the end of the 2010-2011 season and dividing that by the total number of teams that started the season, the rate of retention in 2010-2011 may be calculated. The importance of the exit and retention rate is to show the precariousness and lack of consistency within minor league basketball. The retention rates also emphasize the low exit rate of the NBA Development League (D-League) compared to all other minor leagues that operated in 2011-2012 (aside from the Universal Basketball League).

Table 2.2

Exit and Survival Rates for Minor League Basketball Teams from 2010-2011 to 2011-2012

League	Teams 2010-2011	Teams Not Returning	Exit Rate	Retention Rate
D-League	16	2	12%	88%
PBL	8	6	75%	25%
ACPBL	8	4	50%	50%
IBL	15	6	40%	60%
UBA	23	7	30%	70%
ABA-2	60	21	35%	65%
EBA	14	7	50%	50%
WBA	6	3	50%	50%
CBL	5	3	60%	40%
TPBL	6	4	67%	33%
WCBL	6	2	33%	67%
UBL	6	0	0%	100%

Similar to the initial owners in the early stages of professional basketball, new entrepreneurs continually see the potential financial gain that could be made in operating

a professional basketball team or league. The following is a brief description of some of the commonalities the leagues shared. Illustrating the volatility in minor league basketball is beneficial to this research because it allows for an accurate depiction of the D-League's significance. It also demonstrates the conflicts that minor league basketball encounters and instability within the market, which further supports the need for research on firm success in the D-League.

Shared characteristics. Not including the D-League, there were 12 other minor leagues operating in 2011-2012 in minor league basketball. Aside from the location and names of the teams, the differences among the 12 leagues are nearly indistinguishable. Despite the different names, locations, and structure of the leagues, many minor league basketball organizations share the same ill fate: the inability to endure (Jones, 2001, p. 7). The inability to endure in minor league basketball is believed to be explained by some of the shared characteristics among the leagues. Ease of market entrance, low operating costs, identity changes, and similar league visions, are all commonalities in minor league basketball.

One of the reasons for the high number of minor league basketball leagues to be in operation is because of the ease of ownership. Start-up costs are minimal and it seems as though anyone with access to a gym can start a league; there is not an organized credentialing process for minor league teams or leagues (Janas, 2011). It seems rather uncomplicated and quite inexpensive to buy into many of the minor league basketball organization. For example, the IBA advertises that operating costs for teams typically range from 50k to 80k (Bradford, n.d.). The Premier Basketball League (PBL), on the other hand, only listed the financial commitment to include "the ability to pay the $3,500

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annual fee to the PBL"; other operating costs for the PBL are dependent upon the ownership ("Own a Team", n.d., para. 4).

The financial commitment needed to form a minor league basketball team or league is undoubtedly considered a barrier to market entry. Typical barriers for market entry and exit include capital, government regulation, intellectual property, permitting, established brand identity, investment in specialist equipment, and high fixed costs. Based on the number of leagues and teams operating within minor league basketball, capital investment is a weak barrier for market entry or exit (Janas, 2011).

Having two new leagues start operation in 2011-2012 further demonstrates that there is frequent entrance into the market place of minor league basketball. The Universal Basketball Association (UBA) and the Continental Basketball League (CBL) were both finishing their second season in 2011-2012 (Krieger, 2012). The ease of ownership could help to explain why the minor league basketball market place experiences such a vast number of leagues competing. Low operating costs further help to clarify the ease of ownership.

Low operating costs are largely due to the geographical distance of teams from each other, salaries, and the venues that teams play in. Many of the leagues operate only within a specific region of the United States to cut-down on travel expenses. The Eastern Basketball Alliance (EBA) is an example of operating within a single region of the US; the EBA operates only in Pennsylvania and surrounding states ("About the EBA", n.d.). It is also common for leagues to not require player compensation. By having no salary cap or requirements, the IBA is "allowing teams the opportunity to compensate players an amount feasible to each team's overall operating budget….and

eliminates the instance of over promising player compensation" ("Player Compensation", n.d., para 1). Also, most minor league basketball leagues play in high school gymnasiums.

Another example of the ease of ownership is with the International Basketball League (IBL). The IBL offers three different ownership models for teams: full season, branding, and tour. A branding team plays only a partial schedule with the goal of becoming a viable team within three years of operation. A tour team is an international team that operates outside of North America and participates in no less than five games per year ("Own a Team", 2013). By having three different levels of ownership it allows potential owners to minimally financially invest in a team.

The IBL seems to take an attentive approach for ownership by offering different levels of ownership, but it is unclear if it is truly a beneficial structuring tactic for the IBL compared to other leagues. The American Basketball Association (ABA-2), which is not affiliated with the original ABA that folded in 1976, seems to place emphasis on the number of teams operating within the league. Unlike the IBL, the ABA-2 did not offer the ability to ease into ownership, nor did any other minor leagues. The ABA-2 anticipated reaching over 100 teams by the beginning of the 2012 season and claimed the reasoning for having so many teams "is because we have the best business model in professional sports" (Newman, n.d., para. 1). Even with different ownership structures, the IBL and ABA-2 both saw retention rates within their respected leagues hovering between 60% and 65% as shown in Table 2.2. At the end of the 2011-2012 season 21 of the original 82 teams that started the ABA-2 season did not return to the league for the

2012-2013 season. For the IBL, 6 of the 15 teams from the 2010-2011 season, did not return for operation in 2011-2012.

It is important to note that if a team did not return to the league in which it previously competed, it does not necessarily mean that the team no longer exists or that it folded. Many of the teams switched leagues. For example, in 2011-2012 the PBL had four teams join their league from the ABA (Krieger, 2012, p. 66). In 2011-2012, six of the thirteen leagues, had team movement. The ACPBL, IBL, IBA, ABA, EBA, and CBL all had teams either leave for another league or join from another league (Krieger, 2012). The shifting of teams from one league to another, again, illustrates the inconsistent nature of minor league basketball and exemplifies a commonality among leagues.

The changing of league identity, or complete league mergers, is another common theme in minor league basketball. For example, the United Basketball League (UBL) evolved from the Regional Basketball League (RBL) in 2005 and began operation in 2006. The Atlantic Coast Professional Basketball League (ACPBL) also adopted a change in identity. The ACPBL changed its name to the American Professional Basketball League (APBL) in 2011-2012. An example of leagues merging together is the Premier Basketball League (PBL) merging with the Independent Basketball Association (IBA). The two leagues combined based on the notion that it would bring strength, unity, and more competition to minor league basketball. However, the merger did not last and the two leagues split again in 2013 (Sharer, 2013).

Another shared trait within minor league basketball is the vision and the missions of the leagues. The majority of the leagues emphasize community interaction, a unique basketball experience, and the development of the players. For example, the mission of

the World Basketball Association is "to teach, develop, and expose basketball players to NBA, D-League, and International Scouts while providing each community an exciting brand of basketball and entertainment" ("The WBA Mission", n.d.). Similarly, the Eastern Basketball Alliance "allows aspiring players the opportunity to showcase their skills and talents in a highly competitive league, while providing affordable, quality family entertainment ("About the EBA, n.d.).

The difference of the D-League. Many of the characteristics just mentioned are characteristics that the D-League has been exposed to during its tenure. From the inception of the league, the D-League was backed by the NBA, yet still shared many of the hardships that other minor leagues face. The D-League went through an identity change in 2005; many of the teams have ceased operation, the D-League had teams from other leagues join the league, and the D-League originally operated within a single region of the US. Based on the shared characteristics, it could be assumed that the D-League is, in fact, not different from the other minor leagues in operation. However, that is not the case; the D-League is different from the other minor leagues because of its mission, franchise values, and affiliation with the NBA.

Compared to the IBA which anticipates an average operating cost of $50k-$80k, the individual D-League franchises are reportedly valued at close to $4 million (Thompsen, 2013). Though many of the other minor leagues have missions that emphasize players moving up to the NBA, the D-League is the only league to have ever been a *true* feeder system into the NBA. Also, the D-League has the financial backing from the NBA (Jones, 2001, p. 18). All of these characteristics, though somewhat similar to characteristics of the CBA, are significantly strengthened with the D-League.

Franchise values are significantly higher in the D-League than they were in the CBA. Also, the CBA was never truly affiliated with the NBA.

It is without a doubt, that the D-League has more potential for long term success than any minor basketball league that has ever operated. However, as shown by the demise of the CBA, a minor league can have financial strength and strong attendance, yet still decline. The possibility of firm failure introduces the theory that minor league basketball is not exempt from the complexities of new firm survival. Novel organizations, regardless of industry, are notoriously woeful at surviving the introductory years of business (Freeman, Carroll, and Hannan, 1983, p. 692).

New Firm Survival

There is an interdependence that exists in professional sports that requires a team to not only compete with other teams, but also co-operate with one another (Clairns, Jennet, and Sloan, 1986, p. 4). An individual team is dependent upon other teams to compete within a league. The idea of being reliant upon the competition for survival is one of the uncharacteristic attributes that makes professional sports economically unique (Clairns et al., 1986, p. 4). Consequently, if a franchise has to halt operation then the damage is done to the entire league, not just the individual firm.

The fact that the product, if unused, is unsalvageable for future use makes sport economics, again atypical. Considering sport consumption of the products occurs at the same time as the last stage of production upholds the notion that sport is a very perishable product (Clairns et al., 1986, p.11). Nevertheless, these uncommon characteristics do not make sport solely unique or worthy of independent treatment in regards to economic

analysis (Clairns et al., 1986, p.4). Thus, minor league basketball is not exempt from the hardships often faced by new firms.

Entrepreneurs and the process of doing business will vary by the line of business, but one common factor all firms have is that the first one to three years are typically the toughest (Gibb, 1990, p. 17). The struggle of the D-League and other minor league basketball firms is evidence that minor league sport, despite the peculiarity of the sports industry, is not economically distinctive. Survival in minor league basketball past its initial three years is difficult and frequently nonexistent for teams and leagues equally.

If a business venture survives for three years it can, within reason, say they officially passed through the valley of death (Gibb, 1990). If a firm is unable to adapt and grow within the industry then it is likely the firm will be forced to exit the marketplace in which it competes (Audretsch, 1991). Whereas the emphasis is put on the first two-three years of business it is longevity that is often difficult to establish for any new firm. According to the Small Business Administration (SBA) (2011), "49 percent of establishments survive 5 years or more, 34 percent survive 10 years or more; and 26 percent survive 15 years or more" (SBA, 2011, p. 1). As of 2012, the longest stint a D-League team has operated has been seven years, which reflects the turnover within the league.

The rate in which businesses turnover and are replaced can reflect barriers for existence within the market (Headd, Nucci & Boden, 2009 p. 1). Looking back at Table 2.2, the average rate of exit for a minor league basketball team within its league is nearly 42%. Exit rate percentiles are calculated by taking the number of firms exiting the market in a given year as a percentage of the active firms in the market at the end of that

year (Lopez-Garcia and Puente, 2006, p.15). Using that same methodology, Table 2.3

shows the yearly exit rates for the D-League franchises.

Table 2.3

Exit rate percentiles by year for the D-League

Year	Number of Teams	Number Exiting	Exit Rate Percentile
2001-2002	8	0	0%
2002-2003	8	0	0%
2003-2004	6	2	33%
2004-2005	6	1	17%
2005-2006	8	3	38%
2006-2007	12	3	25%
2007-2008	14	3	21%
2008-2009	16	0	0%
2009-2010	16	2	13%
2010-2011	16	2	13%
2011-2012	16	2	13%

Overall the D-League has experienced a total of sixteen firms either relocating

and moving or folding completely. This would give the League as a whole a survival rate

of exactly 50% for the time it has been in existence. Headd et al. (2009) reported that the

five year survival rate for firms started in the year 2000 was right at 50.7% (p. 1). The D-

League seems to be comparatively consistent with the rest of the new business survival

cycle within the United States. However, the exit rate for firms within the United States

from 1977 to 2004 remained 13% or below (Headd et al., 2009, p. 1). The D-League has

an average exit rate of 16% per year, making the League's exit rate above the national

average yet lower than other minor league basketball leagues.

The high exit rate for the D-League is important because of the industry in which

the D-League operates. The sports industry is a multi-billion dollar industry (Kurtzman,

2011). According to Herstein and Berger (2013) "today's global sports industry is worth

between $480 and $620 billion" (p. 40). With the D-League showing promise to sustain long-term and with the aspiration to grow up to 30 teams, it is imperative for the league to understand possible factors that could attribute to the survival of a team. In doing so, the D-League may be able to successfully sustain long-term within the profitable sports industry.

Importance of the environment. There is still an uncertainty and lack of sufficient data in regards to the determinants of success and failure in newly established businesses (Fritsch, Brixy & Falck, p. 286, 2006). There are a variety of established theories in regard to factors or contributors to new firm survival.   There has long been an interest by business scholars for predictors of new venture survival (Dahlqvist, Davidson, and Wiklund, 2000 p. 1). One suggested predictor of new firm survival is pre-startup planning. It has been suggested that more consideration should be given to pre-startup planning and how it influences business survival (Castrogiovnni, 1996, p. 818).

Understanding the environment in which a firm operates is the first step a new venture must recognize and comprehend. It is an initial step because many environmental factors are considered contextual. Contextual meaning that once the firm has committed to the condition, there is minimal opportunity to change the impact the condition has on the firm (Stearns et al, 1995).

Platt (1989), Platt and Platt (1994) have all concluded that external factors significantly influence business failure rates (As cited by Rogoff, Lee, and Suh, 2004). New firm survival starts with the understanding of the environment in which the business functions (Stearns, et al., 1995, p. 24). Shepherd (1999) stated a lack of understanding of the environment can deter an organization from succeeding from the commencement of

business (p. 622). Shepherd (1999) and Stearns et al. (1995) both implied that one of the

initial decisions for a business should be the environment in which they choose to

operate. Even though entrepreneurial characteristics, technology, strategic tools,

planning, financial skills, and many other factors can attribute to firm failure, if a firm

does not initially comprehend the importance of the environment in which it operates the

firm is put at a significant disadvantage from its inception.

Only characteristics initially controllable will be considered for the purpose of

this research because the choice of the environment and structure of the firm are some of

the most fundamental decisions an organization will make. For example, if a D-League

team enters a market that is not a good fit for a minor league basketball team, the firm

will be at a high risk of failure based on the location and the other environmental factors

associated with the market. Even though the D-League has been in operation since 2001,

the league itself is still considerably new. Establishing legitimacy within the realm of

minor league basketball is also crucial. The notion of legitimacy is exceptionally critical

to new ventures seeking resources because legitimacy is not truly obtained unless

survival occurs (Zimmerman and Zeitz, 2002, p. 417).

Legitimacy. According to Stinchcombe (1965), a new firm does not have a

history of success nor does it have legitimacy in the eyes of the consumer (p. 152).

Stinchombe (1965), Macmillan (1983), Starr (1990) and Hunt and Aldrich (1996) all

consider legitimacy a critical factor for new ventures (As cited by Zimmermand and

Zeitz, 2002). In 1965, Stinchcombe stated: *"As a general rule, a higher proportion of

new organizations fail than old"* (Stinchcombe, 1965, p. 148). It has been found that

younger firms will face far more complexity than older firms due to the resources

available to them (Stinchcombe, 1965, p.152). Freeman, Carroll and Hannan (1983) empirically confirmed Stinchcombe's statements that there certainly is a liability of newness for new organizations. New firm failure is linked to the inability of a firm to obtain resources. The failure, Stinchcombe (1965) said, is due to a 'liability of newness', low levels of legitimacy, and the dependence upon the cooperation of strangers who are unfamiliar with the new organization. The concept of legitimacy is further supported by the fact that, in order to survive, a firm must obtain resources from the environment (Zimmerman & Zeitz, 2002, p. 416). A lack of legitimacy for a business can lead to the failure of the business and the exit of the business from the marketplace. With such high turnover and the lack of any truly strong firms within minor league basketball, it can be assumed, historically, minor league basketball has lacked legitimacy.

The hesitation to expand the D-League stems from the lack of legitimacy within the marketplace which is reinforced by other minor league struggles. Also, there is very little time for a new firm to establish reliable exchange relationships because there is no justifiable proof of success, which will limit the growth of an organization (Hannan & Freeman, 1984). Because of the newness of the D-League, the initial teams in the league would only have found out about their forthcoming profitability or ability to obtain resources by market entry. When a new firm enters a market there will inevitably be an uncertainty in understanding the potential profitability (Lopez-Garcia, 2006, p. 19). The novelty of the D-League may explain some of the failure observed within the league. Table 2.4 contains a list of each team that has ever operated within the D-League, their current status, and number of years they have operated as of the end of season 2012.

Table 2.4

All D-League teams, years of operation, and status as of 2012

Team	Years of Operation	Status: Active, Defunct or Moved
Anaheim Arsenal	3	Moved – Became Springfield Armor
Arkansas RimRockers	3	Defunct
Asheville Altitude	4	Moved – Became Tulsa 66ers
Austin Toros	7	Active
Bakersfield Jam	6	Active
Canton Charge	2	Active
Colorado 14ers	3	Moved – Became Texas Legends
Columbus Riverdragons	4	Moved – Became Austin Toros
Dakota Wizards	6	Moved – Became Santa Cruz Warriors
Erie Bayhawks	4	Active
Fayetteville Patriots	5	Defunct
Florida Flame	6	Defunct
Fort Wayne Mad Ants	5	Active
Fort Worth Flyers	2	Defunct
Greenville Groove	2	Defunct
Huntsville Flight	4	Moved – Became Albuquerque Thunderbirds
Idaho Stampede	6	Active
Iowa Energy	5	Active
LA D-Fenders	5	Active
Maine Red Claws	3	Active
Mobile Revelers	2	Defunct
New Mexico Thunderbirds	6	Moved – Became Canton Charge
North Charleston Lowgators	3	Moved – Became Florida Flame
Rio Grande Valley Vipers	5	Active
Reno Bighorns	4	Active
Roanoke Dazzle	5	Defunct
Santa Cruz Warriors	1	Active
Sioux Falls Skyforce	6	Active
Springfield Armor	3	Active
Texas Legends	2	Active
Tulsa 66ers	7	Active
Utah Flash – Orem, UT	4	Defunct

To be considered a legitimate league it is a necessity for the individual teams within the D-League to survive. For the D-League, the support of the NBA not only adds a competitive advantage based on a strong financial backing and previous accomplishment, but it also adds legitimacy to the D-League. Survival and legitimacy are both fueled by the ability for a firm to obtain resources which forms the basis of value

creation within an organization. Value creation and the ability to obtain resources are

both directly affected by the environment of the firm. Thus, the effect of the environment

on D-League success is the theoretical basis used in this study.

Theoretical Framework

Each organization, despite industry, subsists in an unambiguous physical, cultural,

technological, and social environment in which the organization must adapt in order to

endure (Scott T., Mannion R., Davies H., and Marshall M., 2003, p. 23). Sheperd et al.

(2000) stated that a new venture will initially be more susceptible to the threats associated

with environmental uncertainty than a firm that is more established (p. 397). Considering

the D-League is relatively new in the market place, it is likely that the D-League is more

susceptible to environmental threats than another entertainment firm that is already

established – such as another professional sports team, a movie theatre, or a collegiate

basketball team within the market. All organizations, regardless of maturity, are

dependent upon exchanges with the environment and are typically dominated by the

environment in which they operate (Katz & Kahn, 1966).

When analysts initially began looking at organizations and organizational theory,

there was a tendency to underestimate the environment in which the organization

operates (Scott et al., 2003, p. 23).   Organizational theory considers how firms function

and how they are affected by the environment in which they operate (Jones, 2010, p. 8).

The environment of an organization can be defined as: "The set of forces and conditions

that operate beyond the organization's boundaries but affect its ability to acquire and use

resources to create value" (Jones, 2010, p. 2). The D-League, like any other organization,

uses environmental factors to create value within the organization. Outcomes and value

created are the true measure of quality and financial success within an organization. Therefore, for survival, a firm must be able to create value for its consumers without exceeding the cost of creating it (Porter, 1985, p. 3). Figure 2.1 shows the process in which value creation occurs within an organization.

■ Figure 2.1: Value Creation Within an Organization
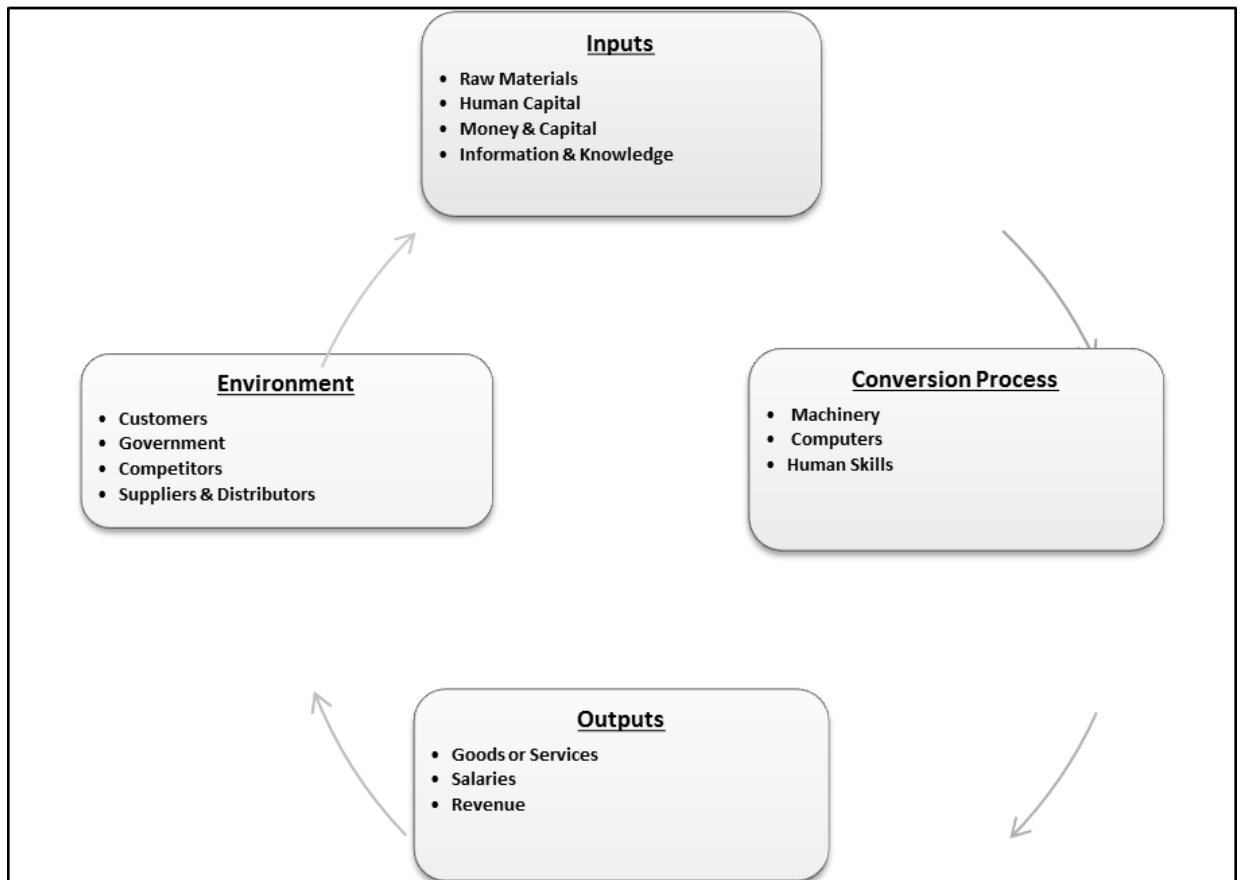
Figure 2.1: Process of how an organization creates value. The arrows represent a continuous cycle where organizations acquire inputs which are converted to outputs and released into the environment. Adapted from "How an Organization Creates Value" by Gareth R. Jones, 2010, *Organizational Theory, Design, and Change,* 6, p. 4.

According to Jones (2010), there is a three stage process in order to create value within an organization: input, conversion, and output (p. 2). The theory behind value creation is that inputs are transformed into outputs through the conversion stage and all

three stages are affected by the environment in which they operate (Jones, 2010, p. 3).

One of the most influential ways the environment has an effect on the process of creating

value is in regard to resource availability and the capability of a firm to obtain those

resources. Aldrich (1979) stated that the way an environment affects an organization is

in the process of obtaining or withholding resources (p. 61). Jones (2010) concurred and

determined it is the design of an organization that determines how efficiently an

organization can acquire scarce resources (p. 11). An organization obtains value from its

inputs, and the inputs come from the environment that the firm operates in.

Inputs are resources and come in the form of raw materials, capital, human

resources, information or other means. The inputs of a D-League team come from inputs

such as staff, fans, sponsorship, and other resources. In essence the environment can

either restrict or compel the organization's growth based upon the environmental factors

present in which the organization operates (Child, 1972, p. 3). If a D-League team

cannot obtain resources then it is likely the D-League team will not create value, which

will hinder the goals of the franchise.

It is critical to understand the environment is where resources or inputs are

derived. It is generally accepted that organizations operate within two types of

environment: one environment is more general and other is more precise (Slack & Parent,

2006, p. 151; Jones, 2010, p. 60). Often the two environments are referred to as the

general environment and the specific (or task) environment. Slack and Parent (2006)

state anything outside of an organization can be studied as part of the environment that an

organization operates within (p. 151). Both types of environment, directly or indirectly,

have an impact on the operations of an organization and some general environmental

factors even influence the industry in which an organization operates (Slack & Parent, 2006, p. 151). Figure 2.2 shows the various factors that attribute to both the general and the task environment.

■ Figure 2.2. Factors of a Sports Organizations Environment
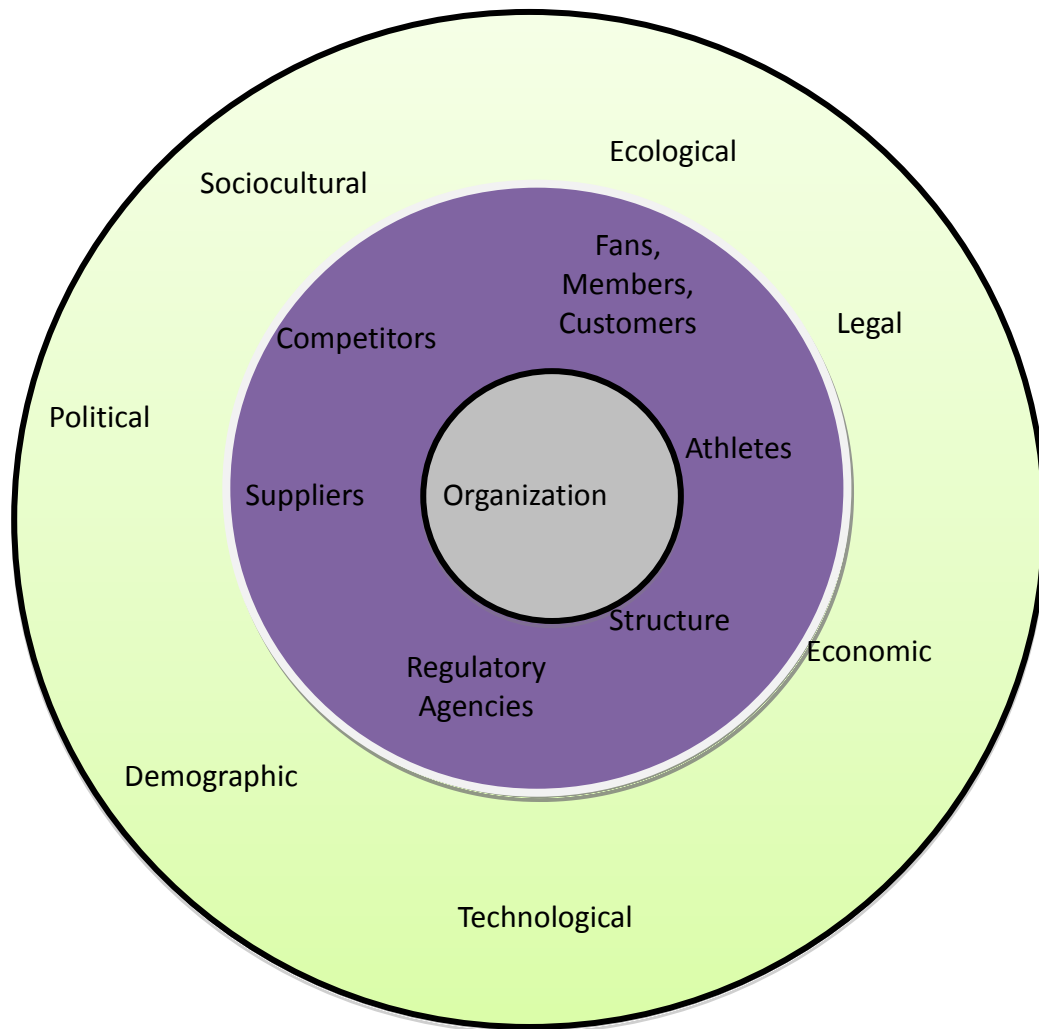
Figure 2.2: The inner circle represents the organization, second circle represents the task/specific environment, and the outer circle represents the general environment of an organization. The circle levels show how aspects of the task/specific environment have a direct affect on the organization and are related to the ability to secure resources. The general environment is made up of forces that shape the task/specific environment. Adapted from "*The Organizational Environment*" by Gareth R. Jones, 2010, *Organizational Theory, Design, and Change,* 6, p. 60.

Factors That Attribute to Franchise Success

It is the goal of sports marketers to attract as many consumers as possible into watching, attending, or purchasing their sport product – that is how value is created. Knowing that ticket sales and game attendance is an outcome that reflects revenue and value for professional sports teams, it is necessary for teams to identify the variables that affect spectator attendance (Zhang, Pease, Hui, Michaud, 1995, p. 29). Game attendees provide professional sports firms with a direct revenue stream that often equates to more than one-third of the revenue for a team (Wakefield, 2006). Game attendees also generate indirect revenue streams such as merchandise, parking, and concession sales (McDonald, 2010, p. 676). Also, corporate sponsorships are more likely to renew based on the notion that the more people that attend a game, the more views the sponsorship gets, thus adding value to the sponsorship (McDonald, 2010, p. 676). Understanding the best markets to accomplish the goal of obtaining and maintaining game attendees is vital to a D-League team.

From a resource-based perspective it is understood that resources individually are not enough to gain a competitive advantage; rather, a combination of resources must be used (Flagestad & Hope, 2001, p. 446). Therefore, a professional sports team – minor or major league – must give consideration to a variety of factors that can attribute to the acquiring of various resources necessary to increase the outputs of the organization. Again, the outputs that are important in professional sport are associated with consumption because the sports industry is a consumer industry.

It is essential to note there are two types of factors that affect the attendance to sporting events: those that are controllable and those that are not controllable (Al-Thibiti, 2004, p. 15). For example, when a D-League team initially forms and looks to enter a market, the market they choose to enter is initially a controllable choice. The structure of team ownership is also initially controllable. When selecting a location for a firm, the franchise owners should take into considerations such environmental factors considered to be uncontrollable prior to entering the market. If a sports organization does not consider the environment, then it is possible that the environment will influence the ability for organization to reach its goals (Parent & Slack, 2006, p 153).

The following section considers research conducted on various factors related to franchise value, attendance, or success in professional sport. Factors considered will all be factors that are initially controllable and related to the internal or external environment of a team. Specifically, some of the factors will come from the general environment in which the franchise operates and others will be derived from the task/specific environment. The reason for the specific selection of the factors that were considered is based on current literature and the state of the D-League. Characteristics of the facility, demographics of the market, competition, ownership structure, and sponsorship resources are all taken into consideration.   Noteworthy is that the business structure of a D-League team is, in this research, considered a resource because of the financial support some of the hybrid or full-ownership models create. Table 2.5 shows a breakdown of research that has studied initially controllable environmental factors for franchise valuation, increased attendance, or viable markets for professional sports teams within the United States. The reason franchise valuation, increased attendance, and the viability of

potential markets were all considered in the literature review is because they are all

intertwined with the prediction of success or survival of professional sports teams.

Table 2.5

Summary of Literature for Initially Controllable Environmental Factors Affecting

Success

Study and Authors	Brief Description	Leagues Studied		Relevant Findings
Alexander, D. L., & Kern, W. (2004). The economic determinants of professional sports franchise value. *Journal of Sports Economics*, 5(51), 51-66. doi: 10.1177/1527002503251715	Used regression analysis to determine if per-capita income, population, teams standing, regional identity, new team, facility newness, and new franchise location, had an effect on franchise value as reported from *Financial World*.	MLB NBA NFL NHL	- - - -	Population had a positive effect in MLB, NBA, and NHL Newer facilities lead to higher franchise values in all leagues except NFL Regional Identity in MLB lead to higher franchise value Per capita income lead to higher franchise value
Bruggink, T. H., & Zamparelli, J. M. (1999). Emerging markets in baseball: An econometric model for predicting the expansion teams. In E. Gustafson & L. Hadley (Eds.), *Sports Economics: Current Research* (pp. 49-59). Westport: Praeger Publishers.	Used population, growth rate of population, per-capita income, other major leagues, corporate market base, TV Share, and distance to MLB franchise to determine viable markets for MLB expansion teams.	MLB	- -	Population was a major indicator of market viability. Other pro sport competition and distance to major league team all affect the viability of housing an MLB team.
Branvold, S. E., Pan, D. W., & Gabert, T. E. (n.d.). Effects of winning percentage and market size on attendance in minor league basketball. *Sport Marketing Quarterly*, 6(4), 35-42.	Assessed winning percentage and market size through multiple regression on attendance in Minor League Basketball (MiLB)	MiLB	-	Market size has a prominent relationship with attendance
Davis, M. C. (2006). Called up to the big leagues: An examination	Used model to determine if population, income,	MiLB	-	Population, per capita personal income have a positive and

of the factors affection the location of minor league baseball teams. *International Journal of Sport Finance*, *1*(4), 253-264.	presence of competition, proximity to MLB team, and CSA are determinants of predicting if a city has a MiLB team.		significant effect across all levels of MiLB - Driving time to the nearest MLB team has a positive effect on presence of MiLB team.
Howard, D. R., & Crompton, J. L. (2003). An empirical review of the stadium novelty effect. *Sport Marketing Quarterly*, *12*(2), 111-116.	Empirically considered the impact of new facilities on attendance figures over time in the four major leagues in the US.	MLB NFL NBA NHL	- Most teams will not experience increased attendance beyond the first year when a new stadium is built
Humphreys, B. R., & Lee, Y. S. (2010). Franchise values in north american professional sports leagues: Evidence from the repeat sales method.*International Journal of Sport Finance*, *5*(4), 280-295.	Uses regression analysis to determine if facility age, winning percentage, championships won, and population effect franchise value over times based on repeat sales model.	MLB NFL NBA NHL	- Market income, population, and facility characteristics, were all associate with franchise quality in North American Leagues.
Humphreys, B. R., & Mondello, M. (2008). Determinants of franchise values in north american professional sports leagues: Evidence from a hedonic price model. *International Journal of Sport Finance*, *3*(2), 98-105.	Uses hedonic price framework to determine if population, stadium ownership, franchise age, competition in market, winning percentage, and franchise age effect the franchise value of a team.	MLB NFL NBA NHL	- The larger the MSA the more valuable the franchise for all leagues - If a team owns their own facility the franchise value increases - Facility age does not affect value. - The higher number of competing leagues in market the higher the franchise value
Miller, P. (2007). Private financing and sports franchise values: The case of major league baseball.*Journal of Sports Economics*, *8*(5), 449-467. doi: 10.1177/1527002506292583	Examination of the impact of new stadiums and stadium ownership on franchise values reported by *Financial World* and *Forbes*. Includes population (SMSA), winning percentage, team tenure, stadium age, and stadium ownership.	MLB	- Per capita income do not affect franchise value - SMSA positively and significantly affect franchise value - New stadiums increase franchise value. - Privately owned and privately financed stadiums increase franchise value

Miller, P. A. (2009). Facility age and ownership in major american team sports leagues: The effect on team franchise values. *International Journal of Sport Finance*, *4*(3), 176-191.	Uses regression analysis to determine if facility age, facility ownership, years in city, winning percentage, population, and per-capita income attribute to franchise value based on *Financial World* and *Forbes* reported value.	NHL NBA NFL	- Teams in higher per-capita income cities have higher franchise values - Positive and significant relationship between a teams tenure and franchise value - Facility age and ownership does not have an effect on NBA franchise value - NHL teams that own their facility have higher franchise values - Negative and significant relationship between facility age and franchise value
Rascher, Daniel A., "NBA Expansion and Relocation: A Viability Study of Various Cities" (2004).*Kinesiology (Formerly Exercise and Sport Science).* Paper 20. http://repository.usfca.edu/ess/20	Used population, income, competition, basketball fanaticism, prices, winning percentage, arena quality, and corporate depth to examine prospective NBA expansion or future cities.		- Household income and age of the arena both had a positive effect on attendance.
Rascher, D. A., Baehr, M. J., Wolfe, J., & Frohwerk, S. (2006). An analysis of expansion and relocation sites for major league soccer.*International Journal of Sport Management*,*7*(1), 1-12.	Used population, MSA, population growth, male residents, youth soccer, , recreation index ranking, , cost of living, income level, other professional corporate base in market, other soccer teams, other leagues, and Hispanic population to examine prospective MLS markets.	MLS	- Population, higher level of 18-34 year old males, higher disposable income, larger Hispanic or Latino population, and lower cost of living increased probability of MLS team in market
Roy, D. P. (2008). Impact of new minor league baseball stadiums on game attendance. *Sport Marketing Quarterly*, *17*(3), 146-153.	Examined the impact of new minor league stadiums on annual attendance for Minor League Baseball	MiLB	- Market for minor league baseball expands when a new stadium opens, novelty effect present

Facility age. It has been common to hear professional sports teams declare they need a new facility to play in so they can remain financially competitive (Miller, 2009, p. 176). There has been an array of previous research conducted in regards to new facilities and attendance. Miller (2009) defined the age of the facility as the difference between the season the facility first opened and the time period of the observation (p. 181).

New facilities tend to generate fan interest initially, but that interest tends to die out. The notion of a new stadium gaining attention initially is known as "stadium novelty affect" (Howard & Crompton, 2003, p. 111). Even though new stadiums may have a positive impact at first, the novelty wears off and does not endure long-term. Howard and Crompton (2003) determined that data collected indicated an increase in attendance though it did tend to wear off after the first year (p. 115).

Miller (2009) performed a regression analysis that took into consideration the age of the facility, team winning percentage, stadium ownership status, per capita income, and population of metropolitan area of the team as a means to predict or estimate of franchise value. The data Miller gathered was from the National Basketball Association (NBA), National Football League (NFL) and the National Hockey League (NHL) (Miller, 2009, p. 182). For the facility age, the NBA franchise values were not affected, however the NFL and NHL franchise values were both negative and significant in both regressions (Miller, 2009, p. 186). This means that as the age of the facility increased, the value of the franchise decreased.

Alexander and Kern (2004) found a similar relationship between the age of the facility and the franchise value of a team in the NHL and NBA by using an ordinary least

squares regression analysis. Alexander and Kern (2004) found that if a team plays in a newer facility they will have a higher franchise value (p. 59). The "novelty effect" is also known as the "honeymoon effect", which was explored by Alexander and Kern (2004). Having an increase in attendance from a new stadium being built also indicated the value of the franchise increasing (Alexander and Kern, 2004, p. 62). Alexander and Kern (2004) said the increase in franchise value can be attributed to the opportunity for more revenue via naming rights and possibly additional seats or corporate seating (p. 59). The potential to generate revenue is largely the reasoning used to justify the need for a new stadium– not the inadequate seating capacity, sightlines, or other structural integrities. A new stadium can generate more revenue through more advertising, added luxury seats, or high-class catering facilities (Siegfried & Zimbalist, 2000, p. 98).

Roy (2008) considered attendance figures in minor league baseball as it attributed to new stadiums. Roy's research is an important study to consider because he researched other minor league sports. Roy included data from 1993-2004 and looked at 48 minor league baseball teams. Roy's results showed an increase in attendance for all teams that moved into new stadiums within their market for years 2-5 (Roy, 2008, p. 151). The increase in attendance for years 2-5 was termed 'novelty effect' which is synonymous to 'honeymoon effect' which was termed by Alexander and Kern (2004). To the contrary, Humphreys and Mondello (2008) showed that when using a Hedonic Pricing Model to value teams, stadium age did not have an effect on the team value (Humphreys & Mondello, 2008, p. 16).

Facility location. According to Smallbone and North (2000), there is a strong correlation between a firm's location and its growth. The locality of a firm explained a

great deal in regards to the survival or non-survival of young firm (Smallbone & North, 2000). It is generally supported that having a facility in a downtown location can help to invigorate the suburbanization trend that has been occurring in U.S. cities since the 1950s. A facility downtown can revitalize the atmosphere in a downtown area that is struggling, thus adding to economic development for the city (Siegfried & Zimbalist, 2000 p. 109).

A D-League team entering into a market has the choice of selecting the environment in which it operate and the facility in which they operate. As stated by Zimmerman and Zeitz (2002), it is with the best interest of the new venture that the selection of the environment and actual geographic location is the one most advantageous to the new venture (p. 423). Chawla, Pullig and Alexander (1997) found neither industry nor owner experience played a vital role in success of a firm; rather they determined that location of the firm and market knowledge played a critical role in the success of firms (Chawla et al., 1997, p. 47). The actual physical location is believed to have a direct impact on survival because of the opportunities and abundance of resources available within the location (Stearns et al., 1995, p. 25).

Littunen (2000), through logistic regression, found it was not necessarily the location of the firm within a city but actual regional differences that contribute to the success of new firms. Though regional differences will not be considered, Littunen's conclusion may help to explain why the D-League struggled in its initial venture in the Southeast Region of the United States. Littunen's research did note the firm's local environment would affect survival during the operational phase of a new business (Litunen, 2000, p. 68). Stearns, Carter, Reynolds and Williams (1995) concurred that the

location of a new firm can indeed have important implications on the performance and survival of a new business venture (p. 23). Most importantly, it was found the accessibility to a facility for fans have a positive effect on attendance for professional sports events (Hansen & Gauthier, 1989, p. 18).

Facility ownership. The next factor that has been looked at previously by scholars concerns the ownership of the facility in which a team plays. It is believed that if a team owns its own facility then the profits of the firm are maximized (Miller, 2009, p. 6). Profit maximization is based on the theory that if a team owns its own facility then they have more control over other revenue streams coming in. Concessions, parking, tickets, and other events would all be profit for the individual team as opposed to having to pay part of the revenue to an outside ownership source. A team owning its own facility would realize higher franchise value because it can capitalize on the facility (Miller, 2008, p. 19). Also, to revisit the issue of the D-League not having substantial media coverage, facility ownership may be a significant predictor in this study.

Humphreys and Mondello (2008) also found that teams who own their own facilities see an increase in franchise value as opposed to teams that do not own their own facility (p. 4). Their findings coincided with Miller's findings from 2009, which support that same theory (Miller, 2009, p. 186). Miller (2009) found that if a National Hockey League (NHL) team or National Football League (NFL) team owned their own facility then the franchise value of the team did indeed increase. In fact, if an NHL team owned the facility in which it played, Miller found that the franchise value would increase 20.5% higher. However, findings were not statistically significant in regards to the NBA (Miller, 2009, p. 187 & 189).

Facility Size. Attendance is, no doubt, a major source of revenue for all sports teams. However, more seating in an arena does not necessarily mean more attendance. In a 2007 report done by the city of Baltimore looked at building a new arena, one of the leagues included in the report was the D-League. The report indicated that the D-league, when targeting a new market to enter, looks for arenas with a capacity of less than 10,000 (KPMG LLP, 2007, p. 44). However, in 2011, a report from Richmond, Virginia, concluded that the D-League looks for arenas that seat 6,000 people or less with the ability to tarp off sections (Barrett Sports Group, 2011). The change of recommended seating capacity for a D-League team over time may indicate the D-Leagues gaining a better understanding in arena size that is more favorable for franchise success. Having operated over 30 teams in over 30 different markets, it seems logical to consider facility size as a potential predictor of franchise success in the NBA's D-League.

Market population. It may be a truism that it is ultimately the fan who determines the fate of a team or a league (Mason, 1999, p. 409). The idea the consumer (fan) could be the determining factor in the survival of a firm gives valid reason to consider the demographics of a market. Nearly all researchers that have considered franchise valuation or predicting franchise success within professional sport have considered the population within a city.

Populations of the market, as well as data on personal income in the market, are considered when the placement of a minor league baseball team or prediction for success is being determined (Davis, 2006, p. 4). Branvold, Pan, and Gabbert (1997) found market size was a prominent indicator of increased attendance in Minor League Baseball

(MiLB) (p. 13). Davis (2006) also found the higher the population in the metropolitan statistical area the more likely it was that a city would have an MiLB franchise.

Market size is also linked to franchise value. The sales price of professional teams was positively and significantly related to the size of the metropolitan area in which the team resides (Humphreys and Mondello, 2008, p. 9). Humphreys and Lee (2010) also found the population of the market was associated with the franchise quality in North American sports Leagues. In both of these studies the higher the population of the area the more valuable the professional sports franchise was. Miller (2007) also found the population of the area positively and significantly affected the franchise value of MLB franchises.

Rasche, Baehr, Wolfe, and Frohwer (2006) found the higher a population, the greater probability that a Major League Soccer team would be in the market. Also, based on their study they were able to determine possible markets for expansion based on similar characteristics to current MLS cities. Bruggink and Zamparelli (1999) concurred in regards to a similar analysis that showed the market population helps to determine the viability for success in a market. Stearns et al. (1995) findings contained similar results in that the more urban a setting a firm is located in the more likely the firm is to survive (p. 34). Conclusively, all studies that used some form of population as an indicator found that a higher population relates to higher franchise value, higher attendance, or is more likely to house a professional team.

Per-Capita income of the market. The D-League's website describes the League's role not only as the NBA's official minor league but also describes the League as doing the following:

In fostering the league's connection to the community, its teams, players and staff promote health and wellness, support local needs and interests, and assist in educational development through NBA D-League Cares programs. The NBA D-League also advances the game of basketball as the research and development arm of the NBA ("NBA D-League 101", 2013).

Considering the emphasis that the D-League puts on community it is reasonable for a team to consider the demographics of a market. The target consumers for sports can largely influence the organization (Slack & Parent, 2006, p. 152).

Over 60% of NBA season ticket holders had an annual income of over $75,000 (Ellis, Braunstein, Zhang, 2003, p. 86). Considering the NBA owns the D-League and uses similar marketing techniques in both leagues, it seems logical to hypothesize that the NBA fan would share similar socio-demographic background characteristics to that of a D-League fan. Also, the median household income for Minor League Baseball (MiLB) attendees is at $73,000 (Scarborough, 2012). Because the NBA and MiLB have similar fan income levels, it made sense to consider market income.

Per capita income has also shown to have a positive effect on attendance or franchise value, as supported by Davis (2006) and Humphreys & Lee (2010). Davis (2006) used a generalized ordered logit model to conduct probabilities for viability for minor league baseball teams based on market characteristics. Davis (2006) gave a table with the top 10 cities with lowest probabilities to have a minor league baseball, team at the particular level that do have a team at that level; seven of the cities listed either currently or previously housed a D-League team (p. 17). If a city is listed as being a 'weak' market for minor league baseball it is likely that the selection of these markets for

minor league basketball would also be considered a weak or poor choice based on the resources available. Perhaps market selection is a reason that the D-League has struggled so much; strengthening the theory that certain factors must be considered prior to market entry.

Rascher et al (2006) also found the higher disposable income within a market indicated a higher probability of housing an MLS team.   Similarly, Rascher (2004) found the household income had a positive effect on attendance in the NBA. Miller (2007) had opposite findings which determined that the per capita income does not affect the franchise value for MLB teams. However, Miller (2009) found for NHL, NBA, and NFL teams the higher per-capita income in the market the higher the franchise value of a team.

Market education level. Another demographic variable that has had an effect on the attendance of sports fans is the education level. Market education was taken into consideration based on the same premise as per-capita income: research shows that sports fans or ticket holders have some sort of college education. Similarly to income as a predictor, NBA fans largely share similar academic achievements. Over 62% of fans have a few years of college education or have completed a college degree (Scarborough, 2012). Also, Zhang et al (1995) suggested when a team does not perform well it is likely that a team will have an easier time maintaining the support of a more educated fan base, than if a team had a less educated fan base (p. 37). It is more likely for a fan to be more educated than the general population (Shank, 2005). Thus, the education level within a market was considered as a predictor as well.

Market Competition. "When it comes to minor leagues no one really identifies with the team, and on a cold winter night, it finds itself competing with a college or an

NBA team on television"(Rovell, 2001). This quote was from Dan Panaggio, a former head coach in the now defunct Continental Basketball Association. Panaggio was referencing the belief minor league basketball will always be in competition with the NBA or major college teams.

For general business firm survival, Fritsch (2006) found the number of start-ups in an industry and region did have a negative impact on new firm survival (p. 189). This means that the more competition within the area, the lower the chance of survival. Conversely, Davis (2006) found the existence or absence of other sports options within a market did not have an impact on franchise value for professional sports teams (p. 5). Humphrey & Mondello (2008) determined the number of competing professional sports teams in the metropolitan area also affect the franchise value. They found more professional teams in the area meant lower franchise values, thus competition reduced the franchise value price.

According to Shepherd (1999) the nature of the market, competition within the market, and decisions made by a firm have an impact on the survival likelihood for a new venture (p. 621). High rates of new firm failure typically indicate a strong and powerful level of competition within the market place (MacDonald, 1986, Sterlacchini, 1994; Audretsch, 1995). For that reason, competition within a market place will be considered as an indicator of new firm survival.

Romanelli (1989) agreed that if there is an untapped demand for a product or service as well as absence of competition, then a business is more likely to survive (p. 371). Furthermore, the higher likelihood for failure, as it is linked to competition, is due to a high density of firms competing for the same market, thus saturating the market.

Romanelli (1989) stated that excess competition within an industry will hinder the survival of a new firm (p. 370). Fritch, Brixy, and Falck (2006) agreed that if competition within a market is high, it will negatively impact a firm's chance for survival (p. 289).

As stated by Lopez-Garcia (2006), the degree of competition within the given industry is an important characteristic in regards to firm survival. If a firm is to introduce its product to a market that is saturated with a similar product, they are doing so with a greater risk which heightens the probability of exit from the industry (Lopez-Garcia, 2006, p. 29). The knowledge of the market in which a firm enters is crucial; firms should not enter into markets that are saturated (Bates, 1995).

If a D-League team is operating within a market with other strongly supported sports teams, it could be concluded that the other teams within the market would be direct competition to the D-League team. Based on that same notion, if there is an abundance of direct competition already operating within a market and a D-League looks to enter that market, it may be likely that it will lead to market saturation and the D-League team will struggle. For the D-League there is substantial competition within minor league basketball, as shown by the other twelve leagues in operation in the 2011-2012 season. This concept of high competition helps to explain the struggle the D-League went through in its early years of formation and is continuing to go through. Additionally, other sports and entertainment outlets – such as movie theatres – are also competition for the D-League as they are all vying for resources and consumers within the entertainment marketplace.

Professional sports teams aren't the only direct competition previously considered. In Davis' study, he included Bowl Championship Series (BCS) schools as a dummy variable; though he found there was no effect on the likelihood of having a minor league baseball team in the area (Davis, 2006, p. 6). One could argue the reason for not having an effect is due to the very little overlap in seasons. Major college basketball programs may be worth considering as direct competition for the D-League because the D-League and NCAA Division I Men's Basketball would share not only the same sport but same season as well. An example of a market that would potentially struggle due to the presence of collegiate teams is Kansas City, Kansas. Kansas City has had many major basketball leagues attempt to base their operations in Kansas City. However, with the University of Kansas, University of Missouri, and the University of Missouri-Kansas City all operating within a close market, it would be very difficult for a professional basketball team to develop any kind of large fan base necessary for financial success (Fearing, 2002, p. 10).

In their research, Davis (2006) and Humphreys and Mondello (2008) took into consideration the number of other professional teams for the greater metropolitan area in which a team operates, though they did not consider major NCAA Division I college basketball programs. Bruggink and Zamparelli (1999) found that having other professional sports teams within a market affected the viability of housing an MLB franchise because the leagues would be competing for resources. As Neale (1964) pointed out, sports leagues would ideally compete with each other if there were several leagues (p. 6). However, in the United States there has historically only been one *major* league operating for the four major league sports (MLB, NBA, NFL, NHL) which limits

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interleague sporting competition (Neale, 1964, p. 6). The commercialization of college

sports has left an indistinguishable breach between college and real professional sports

(Sack & Thiel, 1985, p. 196).

Considering the popularity of NCAA Division I men's college basketball and the

fact they share the same season as the D-League, it would be worthwhile to consider

them a strong competitor for consumers and sponsorship dollars. Accordingly, it would

seem reasonable to consider Men's Division I college basketball teams as direct

competition for the D-League. Thus, Men's NCAA Division I basketball teams, for this

study, will be considered direct competition for the D-League.

Business Structure. One of the strategic decisions a business must make is the

design of the organizational structure of the business (Flagestad et al, 2001, p. 446).

Teece, D.J., Rumelt, R., Dosi, G. & Winter (1994); Portner (1981); and Porter & Millar,

all stated that the organizational design and structure is a significant component that

relates to the success of an organization.   The organizational structure of each D-League

team varies and is one of three structures: hybrid, full-scale ownership by an NBA team,

and private ownership. There is emphasis on the full-scale ownership model because it

allows for the NBA teams to control the basketball operations (Lombardo, 2011).

As of 2012, eleven of the sixteen teams have a single-affiliation relationship with

a parent NBA team; however, there is a movement for D-League teams to move into full-

scale ownership with an NBA parent club. Scheitrum (2012) stated that the D-League

transformed from being the tag-along league of the NBA to the NBA's best friend.

Scheitrum was referring to how the League has developed and changed due to the

relationship with NBA clubs.

The movement for Development League teams to convert their ownership models into hybrid or full-out ownership began to take full-effect in 2009 (Lombardo, 2011). The trend of having NBA teams buy into D-League teams helps to build on the past while promising a strong future (Reed, 2011). According to Davis (2006), minor league baseball exhibits a higher level of stability for those teams that are affiliated as opposed to the ones that are independent (Davis, 2006, p. 6). The D-League is similar because with heightened affiliation the D-League moved into a more conventional minor league model. However, not all teams have adopted the full-scale ownership or hybrid ownership model. With the D-League having a number of different ownership models and the growing trend of single team affiliates, it is important to consider the ownership structure as a potential predictor of franchise success.

Large Businesses in the Market. Large businesses in the market allow for professional sports teams to have the opportunity for sponsorship, premium seating, and luxury suites. Research shows that over 80% of teams and venues have over 90% of their luxury suites purchased by corporations, which is based on the notion that luxury suites and premium seats are typically higher in cost than regular seats (Titlebaum, Lawrence, Moberg, & Ramos, 2013, p. 49). Luxury seating inventories have significantly increased in professional sports franchises between 1990 and 2000 (Titlebaum et al., 2013, p. 48). Also, corporate sponsorship has long been recognized as a vital element to the marketing strategies for sports organizations (Cornwell, 2008; Cunningham, Cornwell, & Coote, 2009; Fahey, Farrelly, & Quester, 2004).

Rascher et al (2006) used the number of Fortune 500 companies within an area to determine the likelihood of housing an MLS team. It was found that the more Fortune

500 companies there were in the area, the smaller the likelihood that a city would house an MLS team.

Luxury seating and premium seating are important to franchises because of the opportunity of added revenue streams associated with them. It can be assumed that if a D-League team has luxury suites or premiums seats to sell then they will typically be purchased by corporations. Lawrence et al. (2009) found that a significant portion of luxury suite customers were corporations that grossed over $50 million in annual sales. It is imperative to understand the number of corporations that operate within a market as a basis for having a potential resource for luxury seating and sponsorship.

CHAPTER III METHODOLOGY

The purpose of this chapter is to discuss the methodology used for this study. The chapter is divided into the following subsections: Research Design, Data Source and Study Rationale, Data Analysis, and Limitations. The researcher has taken responsible conduct of research courses for research involving human subjects through Collaborative Institutional Training Initiative (CITI). However, this study did not involve human subjects and all data derived from respected secondary data sources.

This study was submitted through the University of New Mexico's (UNM) Institutional Review Board (IRB). Because the research was considered to have minimal risk, the study was reviewed through the expedited process. Moreover, the data that was used consisted of existing data and is publicly available which allowed for exemption of having to go through the entire Human Research Review Committee (HRRC). The IRB approved the ability to conduct the research study in February of 2014.

Research Design

The purpose of this study was to identify the relationship between environmental characteristics of all NBA Development League markets from 2001-2012 and the success of a D-League team based on the average attendance capacity for the 2012 season or the last season of operation if a team was defunct in 2012. Thus, a correlational research design was used. Correlational studies are defined to be quantitative, multi-subject design in which participants have not been assigned to treatment conditions (Thompson, Diamond, McWilliam, Snyder, & Snyder, 2005, p. 182). Even though definitive causal claims cannot be reached through correlational research, it can be used as a means of prediction. Correlational methodology is ideal in this study because the possibility to

predict franchise success or survival within the D-League is the basis of the practical application for this study.

Multiple regression and correlation can be used to forecast an outcome based on previously collected data (Cohen et al, 2003, p. 3). The main goal of this study was to see if there are relationships present with the predictors and franchise success, as denoted by attendance, within the NBA Development League. Furthermore, it was the goal of the study to make suggestions on future markets to expand the D-League into based on the analysis. Multiple regression analysis was suitable because this research uses a combination of variables to increase the accuracy of prediction of a given outcome. The predictors, their abbreviations, and the level of at which they were analyzed are listed in Table 3.1.

Table 3.1

Predictors

Predictor	Abbreviation	Level
Pro and College Teams in Area	COMP	Continuous
Ownership Structure of D-League Team	MOD	Categorical
Large Businesses in the Market	BUS	Continuous
Population	POP	Continuous
Education Level in the Market	EDU	Continuous
Median Household Income	INC	Continuous
Age of the facility	AGE	Continuous
Location of the facility	LOC	Continuous
Facility Size	SIZE	Continuous

Data Source and Study Rational

Correlational research provides a natural view of what is being researched because the researcher is not influencing what happens; instead, the researcher is measuring variables that should not be biased by the researcher (Fields, 2010, p. 12).

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Secondary sources were the best available sources for this study because most of the data would have been impossible to collect if it weren't for secondary data sources. Also, the breadth of the data available for analyzing was an advantage to using secondary sources because of the magnitude in which some of the data was collected. For example, demographic information from the US Census Bureau was collected on a large, national scale; which would not have been possible for the researcher to do. By using secondary data sources it improved the ecological validity of the study because the data sources were not influenced by the researcher. Ecological validity allows for the research to be applied to real-world circumstances (Fields, 2010, p. 785).

There are disadvantages to using secondary data sources. The main disadvantage of using secondary data sources in this study was that the researcher could not control the selection, quality, or method of collection. Without having control of these factors it was impossible to validate all sources (Sorensen et al., 1996). However, it is still important that the methodology used can be interpreted consistently across different situations (Field, 2010). The notion of consistency of a measure and the ability for a measure to be replicated is known as reliability. For this study, reliability refers to the ability for this research to relate to different professional sports leagues. By using factors affecting franchise success in the NHL, NFL, NBA, MLB, MLS, and MiLB it helped to improve the reliability of the study.

Johnson and Turner (2003) point out that one of the main types of data collection is to use secondary data, which is also known as 'existing' or 'available' data (p. 319). Though secondary data is not collected by the researcher first hand there is much strength to using archived research data. Using existing data is very useful when exploring or

confirming a theory.   Also, archived research data, such as that from the Census Bureau, is often to be considered to be very reliable and have a high measurement of validity (Johson and Turner, 2003, p. 317).   Sorensen, Sabroe, and Olsen (1996) agree that secondary data also reduces the likelihood of bias due to recall non-response.

For US Census measures, it is understood that all survey and census estimates include some degree of error because often they are based on a sample of the population rather than the full population (US Department of Commerce, 2010, p. A-11). One way that the U.S. Census Bureau measures the reliability of their surveys is through calculating standard errors to provide an indication of the extent of the variation due to sampling. The US Census Bureau, for all of its surveying, acknowledges that all data is subject to sampling and nonsampling error (US Census Bureau, 2013). The Census Bureau states that "precautionary steps were taken in all phases of the collection, processing, and tabulation of the data in an effort to minimize the effects of nonsampling and sampling errors" (US Census Bureau, 2013).

According to Sorensen et al. (1996) when using secondary data sources there are typically two types of problems that can occur:

1) Errors in the data set may reflect incorrect data entry or lack of entry of available information, and 2) the original source of information may be correctly entered into the data source but may not reflect the true condition or characteristic of the subject (p. 439).

Despite the inevitable inability to identify all possible cases in the universe, the US Census Bureau data is still the best available data for US demographic and economic information. The US Census Bureau is considered to be the leading source of quality

data about the United States' people and the US economy.   Likewise, data collected

directly from the D-League, city website, and Research USA was considered the best

available data for this study.

Power Analysis. Wilkinson and the Task Force on Statistical Inference (1999)

noted that power computations are most meaningful when done prior to data collection

and examination (p. 598). Cohen (1969, 1988) was the initial researcher who raised the

awareness of the need to do power analysis prior to data collection. The researcher

considered the power of the study prior to data collection by using the statistical software

G*Power 3.1.7.   According to Cohen (1992), if a researcher uses the standard alpha level

of .05 it is recommended to have a power falling in the range of .70 to 90 with the general

proposal to use a power of .80. By doing an a priori power analysis using G*Power the

researcher determined that only three predictors could be used in order to maintain a

power of .80. The effect size that would be able to be detected, with n =32 and a power of

.80, would be .40 which is considered to be a large effect size based on Cohen's rule of

thumb for f^2. Cohen's effect size index for f^2 is .02, .15, and .35 are termed *small,*

medium, and *large* in multiple regression analysis (Cohen, 1988).

This study analyzed three separate multiple regression equations. Undoubtedly,

there is a disadvantage to doing three separate regression equations that do not take into

account all predictors at once. However, the reason for doing so is based on the idea that

if there is indeed a relationship between the predictors and the criterion the researcher

wanted to be able to detect the effect. Hence, the reason for doing an a priori power

analysis.   The predictors were split into three groups of three based on their similar

characteristics.

All facility characteristics were grouped together in one regression equation. Similarly, all of the demographic characteristics of the market were grouped together in another regression equation. Competition, large business access, and business structure were grouped together. It is believed that all pertinent predictors were analyzed, based on the literature and theoretical framework.

Data Assembly. This study included all teams, both active and defunct, from the NBA Development League teams for this study. In order to obtain information on past and present teams, the Development League Website was used as well as the D-League Digest; the website is an affiliate of Entertainment Sports and Programming Network (ESPN). Table 3.2 is a list of all of the teams and their locations.

Table 3.2

Names and Locations of D-League Teams

ACTIVE	DEFUNCT
Canton Charge – Canton, OH	Utah Flash – Orem, UT
Erie Bayhawks – Erie PA	New Mexico Thunderbirds – Albuquerque, NM
Fort Wayne Mad Ants – Fort Wayne, IN	Anaheim Arsenal – Anaheim, CA
Iowa Energy – De Moines, IA	Arkansas RimRockers – Little Rock, AR
Maine Red Claws – Portland, ME	Asheville Altitude – Asheville, NC
Sioux Falls Skyforce – Sioux Falls, SD	North Charleston Lowgators – Charleston, SC
Springfield Armor – Springfield, MA	Colorado 14ers – Broomfield, CO
Austin Toros – Cedar Park, TX	Columbus Riverdragons – Columbus, GA
Bakersfield Jam – Bakersfield, CA	Dakota Wizards – Bismark, ND
Idaho Stampede – Boise, ID	Fayetteville Patriots – Fayetteville, NC
LA D-Fenders – El Segundo, CA	Florida Flame – Fort Myers, FL
Reno Bighorns – Reno, NV	Fort Worth Flyers – Fort Worth, TX
Rio Grande Valley Vipers – Hidalgo, TX	Greenville Groove – Greenville, SC
Santa Cruz Warriors – Santa Cruz, CA	Huntsville Flight – Huntsville, AL
Texas Legends – Frisco, TX	Mobile Revelers – Mobile, AL
Tulsa 66ers – Tulsa, OK	Roanoke Dazzle – Roanoke, VA

Data assembly for this study occurred in March of 2014. The data were gathered by the researcher through various government, state, facility, and NBA sources. As the

data was assembled, it was entered into an Excel spreadsheet and then entered into SPSS.

Upon completion of data assembly, the researcher analyzed the data using SPSS version

17.0. The source of data table is shown in Table 3.3.

Table 3.3

Source of Data Table

Predictor	Abbreviation	Level
Pro and College Teams in Area	CMP	Categorical
Business Structure of D-League Team	STR	Categorical
Large Businesses in the Market	BUS	Continuous
Population	POP	Continuous
Education Level in the Market	EDU	Continuous
Median Household Income	INC	Continuous
Age of the facility	AGE	Continuous
Location of the facility	LOC	Continuous
Facility Ownership	OWN	Categorical

Research Questions

R_1: To what extent do city demographics (MSA, income, and education level)

within a market have a relationship with the success, as defined by

percentage of attendance capacity, of a D-League team?

R_2: To what extent do facility characteristics (facility age, facility location,

facility size) have a relationship with the success, as defined by percentage

of attendance capacity, of a D-League team?

R_3: To what extent does the ownership model, pro and college teams within the

market, and presence of large business within the market have a

relationship with the success, as defined by percentage of attendance

capacity, of a D-League

team?

Team Market. In order to go into the specifications of each variable, it must first be understood what is meant by the market in which a team operates. For the purpose of this study a 'market' was considered the city or census designated place (CDP) as defined by the US Census Burea. The definition of a CDP, from the US Census Bureau is "Unincorporated community, concentration of population, housing, and commercial structures, identifiable by name, but not within an incorporated place" (Ratcliffe, 2010). Using the CDP or the city allowed for considering only the city or town where the franchise played as opposed to the metropolitan statistical area (MSA). Some teams, though having a city identity, were not located within the city in which they identified. For example, the Austin Toros play in Cedar Park though identify with Austin. The researcher believed the CDP or city demographics better represented the demographics of the area as opposed to the MSA because an MSA would potentially include many other outlying towns and would not give a representation of what the true potential target market for the team would be. The researcher used the US Bureau of Census' definition for city or CDP for all variables that were linked to the market.

Measuring Attendance. The first variable that will be defined in this study is the criterion, or dependent variable. For the purpose of this study, attendance will be used as the dependent variable (criterion) and will synonymously be referred to as measuring success for a D-League team. Though longevity and profitability could be viable options for predicting success, the researcher felt the attendance was the most accurate depiction of success in minor league sports. Attendance is related to the aggregate of gate revenue, team related merchandise, and corporate sponsorship in professional sport leagues. Another major source of revenue is media and television (Mason, 1999, p. 402). Because

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the D-League is not extensively covered by media sources, game attendance weighs heavily on revenue generation for a team.

The reason for the emphasis on attendance and not on team tenure or franchise value was that the D-League is relatively new and the tenure of a team may not be a viable measure. As stated by Rogoff et al (2004), "longevity and viability are crude measures of business success". Some businesses cease to exist based on the decision by the owner to sell the business, resulting in a profit, while other businesses may continue to operate long term and see minimal profits (Rogoff et al, 2004, p. 365). Also, franchise valuation in minor league basketball is not publically reported. Even if franchise valuation were reported by an independent source, such as *Financial World*, the researcher would face the same issue as other studies in that, typically, franchise valuation can leave a lot of room for error and inaccuracy.

The attendance measure that was used is based on the attendance figures for the last year of operation if a team is defunct. If a team is still in operation then the 2012 season was considered. Attendance was measured by taking the sum of attendance for all games and dividing that by the possible capacity to give a percentage of capacity for the team. The reason for using the percentage of capacity was to account for the differing sizes of facilities. By using a mean it takes into consideration every game from the season allows the researcher not to ignore any scores within the data set (Fields, 2010, p. 23).

Arena capacity, or the number of seats an arena has for a D-League game, was gathered from each individual arena's website. If the arena capacity for a basketball game was not available online then the researcher called the box office for the given arena to verify the capacity for a basketball game. It should be noted that it is not

uncommon practice for professional sports teams to block off or tarp sections of an arena in order to create a more vibrant game-day environment. The possibility of tarping or blocking off sections in an arena was not taken into consideration for this study, only the maximum capacity for a basketball game.

Attendance figures were collected from various sources. The main source for attendance reporting was the NBA D-League's website and the individual team websites. Other sources included Sports Illustrated and city newspapers. No matter if a team website was used or a local news paper reporting attendance was used as the data source, it is the individual team/franchise reporting the attendance to the source. Extending the data sources for average attendance for the season is not believed to cause any validity issues more than what already existed with reporting attendance figures in professional sport. It is generally accepted in sports that the reported attendance figures may be inflated. It is not an uncommon practice for teams to consider tickets sold as opposed to actual gate attendance. This issue, the researcher believes, does not affect the use of the reported attendance as a means to measure franchise success in this study as attendance capacity was the best possible measure for franchise success in the D-League.

Research Question 1: Market Demographics.

The first groups of variables analyzed, in one regression equation, were directly related to the demographics of each market. In regard to the population of each market the data collected was done by considering the census designated place (CDP) or the city in which a team was located. Population was a continuous variable and reported in thousands based on US Census data from 2010. For example, 258 would represent a population of 258,000.

Similarly, income was collected from the US Bureau of Census , reported in thousands, and was a continuous variable measured in US dollars based on the median household income reported in thousands.   It should be noted that several researchers have found that subjective discretionary income (SDI), or how wealthy someone feels, is considered to better predictor of purchasing power as opposed to median income (Guinn & Wells, 1989; Wachtel & Blatt, 1990; Rossiter, 1990; and Kardes & Sujan, 1995). However, median income was used for this study because the purpose of this study was to determine the best markets in which to enter for a minor league team based on the actual characteristics of the market, not the consumer's perception of the market. Moreover, all other studies that have been done in regard to professional sport or data collected by teams strictly use some form of income, not the SDI.

 The education level was a continuous variable and was reported as a percentage. The education level was based on the population that is 25+ in age and reports a bachelor's degree or higher. Education level data was also gathered from the US Census Bureau.

Research Question 2: Facility Characteristics.

The age of the facility was a continuous variable measured in years and is defined exactly how Miller (2009) defined it: the difference between the season that the facility first opened and the time period of the observation. If the age of the facility is considered to be zero, then the team will be playing in the facility for the first season in 2012. Noteworthy is that facility renovations were not considered in this study.

Facility capacity was a continuous variable. The facility capacity is the same capacity that was used in calculating the average percentage of attendance. Again, tarping or blocking off areas was not considered for this study.

Facility location was a categorical variable and dummy coded. Often a downtown area of a city is considered a prime location for a stadium or sports team. However, the term 'downtown' is a vague concept that is not defined by an exact geographical location (Montello, Goodchild, Gottsegan, and Fohl, 2003). Using a categorical variable instead of a continuous variable allowed the downtown area to be considered a region. Being considered a region is important because downtown areas are not precise with specific boundaries; rather downtowns have discrete boundaries that vary in degree of interpretation (Montello, et al, 2003).

The downtown location was determined by inputting it into Google Maps. Google Maps was used because downtown is considered a vague region or term. For example, by inputting in "Downtown, Portland, ME", Google Maps marks a spot considered to be downtown Portland, Maine. The arena in which the Portland team plays was then added as the 'destination' and mileage was given. To account for the fact that downtown areas typically span for many blocks, categories of mileage was used. There were five categories for stadium distance to downtown: 0 – 2.4 miles from downtown, 2.5– 4.9 miles from downtown, 5.0 – 7.4 miles from downtown, 7.5 – 9.9 miles from downtown, and over 10.0 miles from downtown. The reason the categories are divided by factors of 2.4 was to consider the largest reported downtown area in the United States. The largest geographical downtown in the United States is San Antonio which spans for 5.5 square miles (University of Pennsylvania, 2001; US Bureau of Census, 2000). The

square root of 5.5 is 2.35 and represents a distance not an area, which allows for the use of Google Maps. Thus, using 2.4 miles as the maximum distance for a stadium to be considered downtown allowed for the ability to capture all downtown geographical areas. A stadium had to have been 2.4 miles or less of the downtown area as designated by Google Maps to be considered downtown.

Facility ownership was not considered in this study because it was found that all D-League teams played in public facilities except for one. Thus, it was not considered a predictor of franchise success.

Research Question 3: Resources within the Market

The next predictor considered was the ownership model of each D-League team. This variable was a categorical variable and dummy coded. Ownership model falls under one of the three following categories: 1) direct affiliation, 2) hybrid, or 3) independent. The distinction between the three categories of business structure is based on the relationship with the affiliated NBA team(s). A team was considered to be independent if they are not funded or owned by the NBA parent teams. If the parent NBA team funds the basketball operations, they were considered to operate under the hybrid ownership model based on the financial partnership. Finally, if an NBA team operates and owns their own D-League team then they were considered to be a direct affiliation team. This variable was dummy coded. The data for the predictor "ownership model" used by the team was gathered by using the NBA Development Leagues website.

With respect to the competition, predictors of other professional sports teams and major college basketball teams, city or state websites were used. The direct competition within the market is based on the number of other professional sports teams combined

with the number of NCAA Division I Men's Basketball teams. This variable was measured as a continuous variable. This variable is technically a discrete variable because the range is limited and can only take on a certain value (Fields, 2010, p. 9). The reason for a limited range is that cities typically do not have an unlimited number of professional sports teams or universities in the area. This variable, though a continuous variable, was represented as frequency that can take on only certain values as opposed to a true continuous variable.

In order to be counted as another professional sports team the team must have been one of the following leagues: National Football League (NFL), National Basketball Association (NBA), Major League Baseball (MLB), National Hockey League (NHL), Women's National Basketball Association (WNBA), Major League Soccer (MLS), American Hockey League (AHL), East Coast Hockey League (ECHL), Arena Football League (AFL) or any class of Minor League Baseball (MiLB). All other leagues or college divisions were not considered for the purpose of this study.

The final predictor variable in this study was for financial resources within the operating market. The number of businesses within the market that a team operates is considered a resource for sponsorships and premium/luxury seating for a D-League team. The number of businesses operating within the market was measured as a continuous variable and was based on the number of firms within the market as of 2012. This data was collected from DemographicsNow which is a comprehensive database that contains information, including annual sales, on over 20 million businesses within the United States. The search criteria for companies in the data base were to search for companies that grossed over ten million dollars in annual sales as well as were headquartered in the

market. Though other studies used Fortune 500 companies as the definition for a large business, most of the D-League markets operate in small to medium size cities which often don't house Fortune 500 companies.

Data Analysis

Data were analyzed using Statistical Package for the Social Sciences version 17.0 (SPSS). The statistical procedure that was used was multiple regression to determine if there is a statistically significant difference in any of the predictors on the criterion. Multiple regression was used to identify if any of the predictors had an effect on the success of a D-League franchise. This method was selected because the common justification for using multiple regression is to study the relationship between multiple independent variables (predictors) and a dependent variable (criterion) (Field, 2010, p. 198).

Inferential and descriptive statistics will be considered as a means of analyzing the data. All three regression equations will be analyzed at the $\alpha = .05$ level. Setting alpha to .05 is a widely accepted standard.   Multiple regression was used as a means to assess factors that might explain any relationship between the predictors and team attendance that may exist.

Each of the three multiple regression models are specified by:

$$Y_i = B_0 + B_1 X_{1i} + B_2 X_{2i} + B_3 X_{3i} + e_i$$

An example of result interpretation is, all other things equal, if one of the predictors, for example X_{1i} , is increased one unit then the mean level of Y_i (attendance capacity) will change by B_1 units. In simple terms, this tells the effect of the predictors on attendance capacity or the effect of X on Y.

Assumptions. Part of the regression analysis involved checking the assumptions associated with regression analysis. To infer conclusions concerning a population, by means of a regression analysis on a sample, several assumptions should be evaluated (Berry, 1993). Pedhazur (1997) notes that violations of assumptions can lead to serious biases in the research being conducted (p. 33). In order to conduct a consequential data analysis, the researcher tested assumptions about variables in the analysis to ensure that the results and conclusions are not heavily influenced by bias. The six assumptions, in no particular order, tested by using SPSS were: 1) Linear relationship between independent variables and dependent variable 2) Normal distribution of errors 3) Independent errors 4) Homoscedasticity 5) Correct specification of variables and 6) Multicollinearity.

When using multiple regression the relationship between the dependent and independent variables should be linear in nature (Osborne & Waters, 2002, p. 2). A preferable way to check for linearity is to inspect and examine the residual plots (Cohen & Cohen, 1983; Pedhazur, 1997). By looking at the residual plots it allowed the researcher to check that the relationship between each independent variable and the dependent variable is linear. The basis of regression is that there is a linear relationship between the criterion and predictors; so, the assumption that the relationship between the dependent and independent variables is linear was tested.

The next assumption considered was the distribution of the errors. Like many statistical models, regression assumes a form of normality. Multiple regression assumes that the residuals in the model are normally distributed with a mean of 0 (Fields, 2010, p. 221). Ultimately, if the errors are normally distributed, it means there is very little difference between the model and the observed data. A probability-probability (p-p) plot

was used to check the normality of the errors. It is generally accepted that graphical

examination of this error is often more useful than the significance or nonsignificance of

a formal statistical test (Cohen et al., 2003, p. 141).

Another assumption is related to the errors and residual terms and that the residual

terms should be uncorrelated, or independent.   Independence of the residuals means that

for any two observations the residual terms should not be correlated (Fields, 2010, p.

220). The researcher tested this assumption through the examination of index plots.

Homoscedasticity was also tested.   Homoscedasticity basically means that the

residuals at each level of the predictor should have the same variance (Fields, 2010, p.

220). According to Cohen et al. (2003) the confidence interval and significance tests are

potentially compromised if the variance of the residuals is not constant and is related to

any of the independent variables or predicted values (p. 130). To detect possible

homoscedasticity violations, the researcher examined plots of the standardized residuals

with the IV's and standardized residuals with the predicted values.

The final assumption considered is whether the correct variables have all been

included in the model. The foundation of this assumption is based on literature and

theory. This assumption is mainly tested via the notion that prior empirical research and

theory provides strong guidelines for the variables that should be included (Cohen et al.,

2003, p. 127). In this study, based on previous literature and the theoretical backing, it is

supported that all relevant variables have been included.

When all assumptions for the regression are met, the model can then most

accurately be applied to the population of the D-League teams.   If any or all of the

assumptions are not met, the researcher will consider remedial actions to try to identify

where the problems may have occurred. Again, the importance of meeting these assumptions increased the likelihood of this research and that it is representative of the sample. It also increased the possibility that this research is generalizable to other sports leagues.

Limitations

The main concern of conducting this research was the limited number of teams from which to derive data. Technically, the sample is really a census of the entire population of teams from the inception of the D-League (2001) up until the end of the 2012-2013 season. Obviously, this will accurately represent the D-League as it will include the entire population of NBA D-League teams for a certain point in time. Due to the limited number of years that the league has operated, there are not many teams that have operated, thus leaving the size of the population narrow for the purpose of using regression analysis. The sample size, as previously mentioned, also largely affects the ability to include all predictors into one regression equation. Thus, the results do not consider all predictors at once, rather they are considered in groups of three, which make it more difficult to draw conclusions about all predictors simultaneously.

Another limitation of the study was the possibility that other factors, that are considered uncontrollable or not related to the theory at hand, attribute to franchise survival or increased value of a team. There was often consideration given to winning percentages and other non-environmental factors. Though these factors are not directly related to the environment, there is still the possibility they have a relationship to the survival and success of a team.

CHAPTER IV - RESULTS

This research study examined the relationship between environmental characteristics of all NBA Development League teams that existed from 2001-2012 and the success of each D-League team, which was defined as the average attendance capacity attendance.   This chapter begins with a data analysis procedures section which includes all three research questions being analyzed and an overview of the characteristics of the sample. The data analysis procedures section is followed by individual analysis of each of the three research questions.   This chapter was organized based on the three research questions analyzed in this study designated by the following headlines: Research Question 1 – Market Demographics; Research Question 2 – Facility Characteristics; and Research Question 3 – Market Resources. Under each of the three research question sections all findings related to that question and the statistical analyses were described. Chapter IV concludes with a comprehensive summary of the data findings as they relate to the purpose of this study.

Data Analysis Procedures

The researcher conducted a non-experimental, correlational study for this research. Though there have been previous studies conducted on franchise valuation or franchise success in the major leagues, there has not been any research done on franchise success in the NBA Development League. This research was exploratory by nature and had the goal of providing a better understanding which environmental factors, based on previous literature, may attribute to franchise success in the NBA D-League.

The sample for this study consisted of 32 NBA Development League teams which represented teams operating from the initiation of the League in 2001 to end of the season

in 2012. Data came from the year the team folded or 2012 if the team was still in

operation. Table 4-1 displays the teams included in this study as well as the year the data

was collected from. For example, if a team was still in operation then data came from

2012; if they folded in 2005 then data came from 2005, if available.

Table 4-1

Sample Information and Year of Data Considered

ACTIVE TEAMS	DATA YEAR	DEFUNCT TEAMS	DATA YEAR
Austin Toro's	2012	Anaheim Arsenal	2009
Bakersfield Jam	2012	Arkansas RimRockers	2007
Canton Charge	2012	Asheville Altitude	2005
Erie Bayhawks	2012	Colorado 14ers	2009
Fort Wayne Mad Ants	2012	Columbus Riverdragons	2005
Idaho Stampede	2012	Dakota Wizards	2012
Iowa Energy	2012	Fayetteville Patriots	2006
Los Angeles D-Fenders	2012	Florida Flame	2006
Maine Red Claws	2012	Fort Worth Flyers	2007
Reno Bighorns	2012	Greenville Groove	2003
Rio Grande Valley Vipers	2012	Huntsville Flight	2005
Santa Cruz Warriors	2012	Mobile Revelers	2003
Santa Cruz Warriors	2012	New Mexico Thunderbirds	2011
Sioux Falls Skyforce	2012	North Charleston Lowgators	2004
Texas Legends	2012	Roanoke Dazzle	2006
Tulsa 66ers	2012	Utah Flash	2011

Note: Some of the demographic information was based on a three year average
containing the year listed because single year averages weren't reported by the US
Census Bureau in some cases.

Three separate multiple regression analyses were conducted to examine the data.

The foremost reason why three multiple regressions were conducted was to ensure there

was enough power to detect an effect is one existed and also to meet the assumption that

all possible independent variables were included in the analysis. Based on literature and

theoretical framework the researcher determined that all of the nine predictors should be

included in this study, hence the reason for nine predictors.

Data were analyzed using SPSS version 17.0. Forced entry method was used for all three regression equations. Forced entry method is sometimes regarded as the only appropriate method for theory testing because it does not allow for influence by random variation as stepwise techniques do (Fields, 2010, p. 212). Because all of the predictors originated from literature and theory, forced entry seemed like the best entry method. The criterion, or dependent variable, for all three research questions was franchise success which was measured by the percentage of attendance capacity, referred to as simply 'attendance', for the last year of operation of a team or the 2012 season if a team was still operating.

Research Question 1 – Market Demographics

The first research question (R_1) for this study was: "To what extent do city demographics within a market have a relationship with the success, as defined by percentage of attendance capacity, of a D-League team?" The three predictors in this equation were population, income, and education level within the market. The data from all three predictors came from the US Census Bureau. Table 4-2 contains the descriptive statistics for research question one.

Table 4-2

Descriptive Statistics for Demographic Characteristics

VARIABLE	MEAN	STANDARD DEVIATION	N
CAP	37.6757	26.8711	32
POP	162.3000	146.1166	32
EDU	31.2250	11.2965	32
INC	45.8220	15.2890	32

A multiple linear regression model was used to determine if the attendance for a D-League team could be predicted from three demographic characteristics of the city that the team plays in: population, education achievement, and median income in the market.

The null hypothesis tested was that the regression coefficients, or slopes of the lines, were equal to zero. Prior to analysis the data were screened for violation of assumptions.

The assumption of linearity was reviewed through a scatterpolot matrix which plotted each predictor against the criterion. Reviewing the scatterplots indicated that linearity, though not perfect, did not seem to be in serious violation for any of the predictors. Fit lines were added for both linear and loess lines. Though all three predictors indicated dips or jumps in the loess lines, however, none seemed to indicate a serious violation of linearity. Further testing of linearity was done by plotting the standardized residuals against the predicted values which indicated a slight curve which further confirmed no significant violation of linearity was present.

To test for the normality of errors the researcher looked at the histogram and the probability – probability (P-P) plot which showed the standardized residuals plotted against the predicted values. The P-P plot indicated a bit of deviation from normality as some of the data points strayed from the line. Similarly, the shape of the distribution in the histogram indicated a bit of positive skewness. Based on the results of the P-P plot and histogram of the residuals, the researcher concluded that there may be a violation of normality in this model, though it is not completely clear.

The next assumption tested was homoscedasticity, or the constant variance of errors. To test this assumption the standardized residuals were plotted against the predicted values. The researcher determined that the data seemed to be reasonably random and scattered. There did not appear to be a violation of homoscedasticity.

Multicollinearity was tested by looking at the variance inflation factor (VIF) and the tolerance statistics. The VIF test for multicollinearity indicated that there was a low

level of multicollinearity present though not an area of concern (POP VIF = 1.132, EDU

VIF = 1.606, and INC VIF = 1.508). Similarly, the tolerance statistics did not show any

substantial problems of multicollinearity issues (Tolerance POP = .844, Tolerance EDU =

.623, and Tolerance INC = .663).

To test the hypothesis that the three city demographic characteristics of

population, education, and income within the market had a relationship with the success

of a D-League team, as defined by attendance, a forced entry multiple regression analysis

was performed.   The results of the regression indicated the three predictor model of

Population (POP), Education (EDU), and Income (INC), accounted for 37.9% of the

variance in the attendance capacity and was statistically significant, $F(3, 28) = 5.164$, p <

.006, $R^2 = .356$. The adjusted R^2 value was .287. The shrinkage between the R square

and adjusted R square indicates that if the model were derived from the population, rather

than a sample, it would account for approximately 6.9% less variance in the outcome.

There was statistical evidence that population was statistically significant. The

slope for population of the city in which the teams stadium was located (β = -.064) was

statistically significant from 0 (t = -2.168, p = .039). With every one-point increase in the

criterion, the population in a D-League team's city would decrease by -.064 points when

controlling for education and income.   This interpretation means that for every one

percentage increase in attendance the population of the city decreases by 640 people

(population was entered in thousands).

Income within the market was also a significant predictor of average percentage

of attendance capacity. The slope for income of the market *(β = 1.007)* was statistically

significant from 0 (*t* = 3.078, *p* = .005).   The slope for income can be interpreted such

that with every one point increase in percentage of attendance the median income level within a D-League city will increase by 1.007 units. Practically interpreted this indicates that for every one percentage increase in attendance the median income level within the city will increase by $1,007, assuming population and education are held constant.

Though population and income were shown to be statistically significant predictors of attendance, the education level within the market was not ($\beta = -.250$, $t = -.546$, $p = .589$). Table 4-3 gives a description of the regression coefficients from the analysis.

Table 4-3

Diagnostics: Demographic Predictors of Attendance Capacity in the D-League

Variable	B	SE B	Sig	95% CI
CAP (Constant)	9.760	15.246	.527	[-21.469, 40.990]
POP	-.064	.030	.039	[-.125, -.004]
EDU	-.25	.457	.589	[-1.186, .687]
INC	1.007	.327	.005	[.337, 1.677]
R^2	.356			
F	5.164			

Note. N = 32. CI = Confidence Interval, SE B=Standardized Betas,

Research Question 2 – Facility Characteristics

Research question (R_2) for this study was: "To what extent do facility characteristics (facility age, facility location, and facility size) have a relationship with the success, as defined by attendance, of a D-League team?" The three predictors in this equation were facility age, facility location, and facility capacity. Table 4-4 gives the descriptive statistics for research question 2.

Table 4-4

Descriptive Statistics for Facility Characteristics

VARIABLE	MEAN	STANDARD DEVIATION	N
CAP	37.6757	26.8711	32
AGE	21.1250	22.0479	32
SIZE	7571.53	3901.738	32
LOC	3.2031	4.6800	32

A three predictor multiple regression analysis was used to develop a model for predicting D-League attendance based on characteristics of the facility in which the team plays. Prior to analysis the data were screened for violation of assumptions.

The assumption of linearity was reviewed through a scatterplot matrix which plotted stadium size, age, and location against the criterion capacity of attendance. Stadium size verses capacity appeared to have a relatively strong linear relationship. Location of the stadium, when plotted against the capacity, showed three outliers that seemed to be affecting the linearity of the data. The age of the stadium verse the capacity of the attendance was less clear and a violation of linearity seemed to be present as the loess line indicated a quadratic relationship. To further test the assumption of linearity a scatterplot of the standardized residuals and the predicted values was used. The shape of the data dispersion for this graph showed a funnel shaped dispersion. Similarly, the loess line on this graph showed an almost cubic relationship. Both of these observations indicated a violation of linearity was likely present.

The assumption of normality was tested via examination a P-P plot of the residuals plotted against the theoretical normal distribution a histogram of the standardized residuals. The P-P plot suggested a relatively normal distribution of the residuals. Moreover, the histogram also indicated that the assumption of normality was met.

To test for homoscedasticity the researcher evaluated the standardized residuals plotted against the predicted values. The data in this model seemed to possibly have heteroscedasticity because they seemed to funnel out, which means there may be a violation of the assumption of independent errors. However, because of the lack of data points it was difficult to tell if the data was indeed funneling out.

The VIF and tolerance statistics were both considered to identify if any of the predictor variables highly correlated with each other. Tests for multicollinearity showed there was no indication of concern for multicollinearity based on the VIF and tolerance diagnostics. The VIF values were all hovering close to 1 (AGE VIF = 1.111, LOC VIF = 1.034, SIZE VIF = 1.034). Tolerance outputs also showed no problems of multicollinearity issues (Tolerance AGE = .900, Tolerance LOC = .894, and Tolerance SIZE = .967). The researcher concluded there was no reason to regard the model as violating the assumption of multicollinearity.

A forced entry multiple regression was performed to test the hypothesis that the three facility characteristics of facility age, facility size, and facility distance from downtown, had a relationship with the success of a D-League team, as defined by average attendance capacity. Results from the multiple regression analysis reveal the three predictor model of facility age (AGE), facility size (SIZE), and the facilities distance from downtown (LOC), accounted for 45.7% of the variance in the attendance capacity, $F(3, 28) = 8.428$, $p < .001$, $R^2 = .475$. The difference between R^2 and adjusted R square (.418) indicated that if the model were derived from the population rather than a sample it would account for approximately 5.7% less variance in the outcome.

The results indicated that the size of the facility (SIZE) was the only predictor to have statistical evidence of having a relationship with the criterion, or being non-zero, $\beta =$ -.474, $t = $ -4.942, $p < .001$. The beta coefficient can be interpreted such that with every one unit increase in capacity of attendance the size of the facility decreases by -.474 units. This could be further interpreted that for every one percentage increase in percentage of attendance the facility capacity decreases by 47.4 seats (capacity was divided by 100 when entered), when holding facility age and facility location constant.

For the sake of completeness, the other two beta coefficients for predictors were facility age, $\beta = $ --.038, t = -.215, p < .831; and distance of the facility from downtown $\beta = $ -.857, t = -1.407, p <.171. Neither predictors were statistically significant predictors of the percentage of attendance capacity. Regression coefficients for R2 are shown in Table 4-5.

Table 4-5

Diagnostics: Facility Predictors of Attendance Capacity in the D-League

Variable	B	SE B	Sig	95% CI
CAP (Constant)	77.675	10.156	.001	[56.871, 98.479]
AGE	-.038	.176	-.215	[-.398, .323]
LOC	-.857	.609	-.204	[-2.105, .391]
SIZE	-.474	.096	-4.942	[-.671, -.278]
R^2	47.5			
F	8.428			

Note. N = 32. CI = Confidence Interval, SE B=Standardized Betas,

Research Question 3 – Ownership Model, Competition, Businesses in Market

The final research question (R_3) for this study was: " To what extent does the ownership model, pro and college teams within the market, and presence of large business within the market have a relationship with the success, as defined by percentage

of attendance capacity, of a D-League team?" Ownership model, competition within the

market, and the presences of large businesses within the market were the three predictors

in this model. Table 4-6 is a portrayal of the descriptive statistics for research question

number three.

Table 4-6

Descriptive Statistics for Resource Characteristics

VARIABLE	MEAN	STANDARD DEVIATION	N
CAP	37.6757	26.8711	32
COMP	2.06	1.777	32
BUS	73.97	68.206	32
Multi v. Hybrid	.2188	.4201	32
Multi v. NBA	.1875	.39656	32

A multiple linear regression model with three predictors was conducted to

determine if the attendance for a D-League team could be predicted from ownership

model, competition within the market, and the presence or large businesses within the

market. Ownership model was a categorical variable and was dummy coded in SPSS.

The ownership model of the team was a true nominal variable and could only take on one

of three ownership models: multiple affiliation, outright NBA team ownership, or hybrid

model. The baseline group used for the dummy coding was the multiple affiliation model

because that was the original ownership model used by all teams in the league. The

competition within the market where the team operated was a bit less clear; however, the

researcher treated this as a continuous variable even though the range of the data was

limited to values between 0 and 10. Prior to analysis the researcher tested for violation of

assumptions.

The assumption of linearity was reviewed through a scatterplot matrix which

plotted each predictor against the criterion. All of the scatterplots of the individual

predictors against the criterion seemed unclear if they were in violation of linearity. The loess lines for all predictors, aside from competition, seemed relatively linear aside from a dip in the data. The loess line for competition within the market place was a bit more unclear as it dipped twice and may have indicated a quadratic relationship. Further exploration of linearity through a plot of the standardized residuals and the predicted values showed that there did not seem to be a serious violation of linearity despite a slight dip in the line.

For normality, it is assumed that the residuals in the model are random, normally distributed variables with a mean of zero. This assumption was tested through a P-P plot and histogram that compared the model and the observed data. The histogram suggested, though, not a perfect bell shape, that there was no violation of normality. Similarly, the P-P plot, although some data points drifted from the line, did not indicate a significant violation of normality.

Homoscedasticity was tested by looking at the standardized residuals plotted against the predicted values. The output of the plot indicated that there was a bit of grouping present though there was no distinct funnel shape with the data points. The researcher determined that there did not seem to be a violation of homoscedasticity. .

The variance inflation factor and tolerance diagnostics were both considered to test for violation of the assumption of multicollinearity. The VIF values indicated that there was not significant multicollinearity issues (BUS VIF = 1.012, Multi v. Hybrid VIF = 1.051, Multi v. NBA VIF = 1.129, and COMP VIF = 1.080). Likewise, the tolerance statistics also suggested there was no indication of correlational issues between predictor

variables (BUS Tolerance = .989, Multi v. Hybrid Tolerance = .951, Multi v. NBA Tolerance = .886, and COMP Tolerance = .926).

After the assumptions were tested, forced entry multiple regression analysis was used to test the hypothesis that large businesses within the market place, competition within the market place, and the ownership model of the team, had a relationship with the success of a D-League team, as defined by percentage of attendance capacity. The results of the multiple regression indicated the model accounted for 35.6% of the variance in the attendance capacity, F (3, 28) = 3.728, $p < .021$, $R^2 = .356$.

The output of the multiple regression analysis specified the hybrid ownership model and outright NBA ownership model both differed from the multiple affiliation ownership model of a D-League team. The slope for multiple affiliation ownership compared to the hybrid ownership model was statistically significant $\beta = 31.204$ $t = 2.972$, $p < .006$, controlling for the number of large businesses in the market and the competition within the market. Similarly, the beta coefficient for multiple affiliation ownership compared to the outright NBA ownership model was also statistically significant, $\beta = 27.423$, $t = 2.522$, $p < .018$, controlling for the number of large businesses in the market and the competition within the market.

Results also indicated that the number of businesses within the market and the competition within the market were not statistically significant. For the sake of completeness the outputs were, $\beta = -.060$, $t = -.957$, $p < .347$; and competition within the market $\beta = -.008$, $t = -.003$, $p < .997$. Regression coefficients for R3 are shown in Table 4-7.

Table 4 – 7

Diagnostics: Resource Predictors for Attendance Capacity in the D-League

Variable	B	SE B	Sig	95% CI
CAP (Constant)	30.143	8.991	.002	[11.695, 48.591]
COMP	-.008	2.349	.997	[-4.829, 4.813]
BUS	-.060	.062	.347	[-.188, .068]
Multi v. Hybrid (MOD)	31.204	10.500	.006	[9.660, 52.747]
Multi v. NBA (MOD)	27.423	10.875	.018	[5.109, 49.737]
R^2	.356			
F	3.728			

Note. N = 32. CI = Confidence Interval, SE B=Standardized Betas

CHAPTER V - CONCLUSION

This chapter presents an overall summary of the study and essential conclusions from the data analysis in Chapter 4. This chapter begins with an overall summary of the study and overview of the methodology. Subsequent to the summary will be implications for action and suggested recommendations for future research.

Summary of the Study

As stated in Chapter 1, the purpose of this study was to determine if any environmental characteristics had a relationship with the success of D-League team as measured by capacity of attendance for the last year of operation or the 2012 season. The theoretical framework to the study was based on basic organizational theory and environmental characteristics of an organization. Predictors for this study were included based on previous research studies which considered factors to predict franchise success, franchise valuation, or attendance in professional sport. The predictors included in the study were all contextual factors in that they are factors that cannot be easily changed upon market entry and are typically made prior to market entry or early during market entry. Other predictors included in the study were derived from D-League literature.

The methodology for this study utilized three separate multiple regression equations to account for enough power in the study to detect an effect size if one existed. The reason for not drawing a larger sample is that the researcher used the entire available population for D-League franchises from 2001-2012. Similarly, the researcher did not want to leave possible environmental predictors out of this initial study because of the exploratory nature of the study and the theory. This methodology was not ideal because not all predictors could be analyzed at once. However, the researcher believed that the

methodology being used was suitable because it is an investigative study and the first study done on the NBA's Development League.

Implications of Results

The results from the three multiple regression analyses indicated that population (POP), education level within the market (EDU), stadium size (SIZE), and team ownership model (MOD) were all statistically significant predictors of the percentage of attendance capacity for NBA Development League teams that have operated from 2001-2012. It is important to note that though these predictors are statistically significant in the individual equations there cannot be any conclusions drawn based on the predictors from all three equations at once. The individual equations can only be interpreted based on the group of predictors included in the individual multiple regression analysis.

For research question one it was found that size of population within the market and education level within the market were identified as being statistically significant. Researchers have found across many levels of professional sport there is a significant and positive relationship between population and determining franchise placement, franchise value, and/or attendance (Alexander & Kern, 2004; Branvold, Pan, and Gabert, 1997; Bruggink & Zamparelli, 1999; Davis, 2006; Humphreys and Lee 2010; Humphreys and Mondello 2008; Jones and Ferguson 1988; Miller, 2007; Miller 2009; Rascher, 2004; Rascher, Baehr, Wolfe, and Frohwerk, 2006; Siegfriend and Eisenberg, 1980). The finding that population was a predictor of attendance was not surprising. However, the relationship with population is converse to what other studies have found. The relationship between attendance and population had a negative and significant effect across the D-league. This negative relationship was important and expected by the

researcher because the D-League looks to place franchises in small to mid-size markets. On the contrary, major league teams often look for markets with larger populations which is the reason that other research has found larger markets being predictors of increased attendance or increased franchise value.

It was also not surprising to the researcher that median income was a statistically significant predictor of attendance in the D-League when controlling for population and education. Other researchers (Alexander & Kern, 2004; Davis, 2006; Humphreys & Lee, 2010; Miller, 2007; Miller, 2009; Rascher, 2004; Rascher, Baehr, Wolfe & Frohwerk) all found income to be statistically significant predictors in their studies. In addition, the average median household income for D-League markets was just over $45,000 per year. This average is in sync with the demographic of NBA fans for median household income indicated that 65% of their fans made over $40,000 (Thompson, 2014). The association in median household income between the D-League and NBA is important because the D-League uses similar ticket sales techniques and has the same target market as the NBA.

The finding of a statistically significant relationship with attendance and facility size, it seemed to be in direct relation to what the D-League looks for when placing new franchises. Small to mid-size arenas seem to be the most ideal for D-League teams. As stated by the market analysis done by the city of Richmond, the D-League looks for facility with approximately 6,000 seats and a curtain system (Barrett Sports Group, 2011). Furthermore, in looking at the average capacity of arenas in teams that are no longer in operation compared to teams that are currently still operating the difference is nearly double. Teams that are no longer in operation had an average capacity of 9438 seats compared to teams still operating averaging just 5700 seats.

The last regression equation indicated the ownership model of a team being significant predictors of attendance. The results indicated that the hybrid ownership model and the single affiliation model were both significant predictors. This finding is not a revelation considering in 2012 that 11 of the 16 D-League teams had either a single affiliation or hybrid affiliation. The hybrid and single affiliation models are expected to continue to be the pattern as it increases the attention that D-League owners can place towards the commercial side of their venture without having to worry about the basketball operations side of owning a professional team (Lombardo, 2011). Further indication of the hybrid and single affiliation models being the trend for D-League teams are the New York Knicks and Detroit Pistons both acquiring D-League teams in 2014 with the plan of operating the D-League franchises under the hybrid ownership model.

For the predictors included in the study that were not found to be statistically significant, the only one the researcher found surprising to not be a predictor of increased attendance was competition within the market place. Even though Humphreys & Mondello (2008) found a positive relationship between the number of leagues in a market and higher franchise values, the researcher theorized that competition would be a crucial factor in determining success. However, a possibility for not having a relationship may be due to the small sample size and methodology used. It is quite possible if analysis was done to consider teams in operation compared to teams no longer operating, the competition within the market place may have an effect on success of a D-League team.

Another reason for competition maybe not being a significant predictor in this study is the D-League teams have typically operated in smaller markets which leads to less established sports teams. Unlike larger markets, the smaller markets may not

consistently house other sports teams; meaning other leagues, such as minor league hockey, have the same issue as minor league basketball where teams enter and exit the market regularly. Minor league firms are typically not as established in a market. It may be beneficial to consider, instead of teams currently operating, but teams that have operated in the past five years or a similar time frame. The reasoning behind recognizing previously operating teams would allow for consideration to be given to the impact a previously operating team may have left in the market place. Despite a team no longer operating, a team may leave a negative stigma in the market place which could be considered competition, or a barrier to entry, for future sports teams. As is the case of market entry in economics, it is difficult to access which factors may affect the ease of entrance into a market and even more difficult to measure the affect of such barriers (Schmalensee, 1981). Thus, even though a team does operate within the same market as a D-League team or did previously operate, the influence they have on the market could largely vary from market to market. Also, it may be worth considering a wider variety of leagues as competition to include any indoor football league, junior hockey, any hockey league, and any soccer league. This study only considered the more established leagues.

The last major implication that can be derived from this study is in reference to the future direction of the D-League. It has been well documented one of the main goals of the NBA D-League is for every NBA team to have a single-affiliate D-League team (Lombardo, 2013). As of May, 2014 there were 18 D-League teams in operation. Of the 18 D-League teams operating in 2014, 15 of the teams have some type of single affiliation ownership with a parent NBA club. With a total of 30 NBA teams in

operation, that leaves half of the NBA without a single affiliate D-League team. The

following is a list of NBA teams that do not have their own D-League team and a

proposed location for a potential D-League single team affiliate. The proposed locations

are based on markets that made the 2013 Top Minor League Market Rankings from

Sports Business Journal (SBJ) which have a population of 250,000 or less and are within

a four hour driving distance from the parent NBA team. The reason for considering the

SBJ list is because in the study 235 markets were considered based on attendance figures

from the five most recently completed seasons ("Top Minor League Markets: About this

Project", 2013). Having a population of approximately 250,000 or less indicates a mid-

size city or smaller (Common Core of Data, 2014). Also, for expansion it has been

indicated that each NBA team will have a D-League team within driving distance to

alleviate logistical issues (Zillgitt, 2013).

Table 5.1 *Proposed Cities for future D-League Expansion*

NBA TEAM	PROPOSED D-LEAGUE LOCATION	POPULATION (thousands)	DISTANCE FROM NBA TEAM (miles)
Atlanta Hawks	Savannah, GA	142,022	248
Charlotte Bobcats	Winston-Salem, NC	234,349	79
Chicago Bulls	Toledo, OH	287,208	246
Denver Nuggets	Casper, WY	55,316	277
Indiana Pacers	Fort Wayne, IN (*Mad Ants*)	254,555	120
Los Angeles Clippers	Modesto, CA	201,165	61
Memphis Grizzlies	Knoxville, TN	182,200	391
Milwaukee Bucks	Appleton, WI	72,623	108
Minnesota Timberwolves	Des Moines, IA (*Energy)*	203,433	243
New Orleans Pelicans	Pearl, MS	25,092	189
Orlando Magic	Clearwater, FL	107,685	106
Phoenix Suns	San Bernardino, CA	209,924	298
Toronto Raptors	Rochester, NY	210,565	169
Utah Jazz	Idaho Falls, ID	136,108	214
Washington Wizards	Harrisburg, PA	49,673	120

Note: Toledo and Fort Wayne both have populations slightly exceeding 250,000.

Future Direction

It is very obvious that the D-League is not the first sports leagues to struggle for survival – nor will it be the last. The need for future and continuing studies on the D-League and minor league basketball as a whole is apparent. The D-League represents the first ever true minor league basketball system that has been endorsed by the NBA. Studying the growth and development of a successful professional sports league, such as the D-League, is very important as it provides insight to obstacles and successes that can be shared among franchises. Moreover, as more professional sports leagues continue to emerge it is pertinent, in the field of sport management and sport economics, to understand the intricacies of franchise success and sustainability. The impact of studying league success is vital not only to the D-League but other leagues within North America and around the world.

One of the main future focuses should be on characteristics of franchise and leagues that are successful outside of the four major leagues (NBA, NFL, NHL, and MLB). Minor league sports are a very valuable and important part of the sports realm. They offer, if structured properly, a system where players, coaches, officials, and all employees can go through a training system for the parent major league or team. Also, minor league sports, offer a family-friendly and affordable entertainment option for communities. All of the D-League teams aside from one (Bakersfield Jam) play in public facilities. If a community is considering constructing a new facility for housing a D-League team, they need to absolutely understand what factors may help increase the success of the facility and the team.

Though this study considered only environmental and economic characteristics as predictors, it is possible that other factors could be major predictors of franchise success. A future path of study would be to consider the entrepreneurial and staffing characteristics of the D-League franchises. The global business environment for sport is continually changing as it is filled with innovation and is constantly growing more competitive. Thus, understanding entrepreneurship as it links to various aspects of sport is important for sports organizations to grow (Ratten, 2010). Similarly, it would be interesting to look at the entrepreneurial characteristics of D-League owners compared to other minor league basketball owners and see if they differ. Comparing other minor leagues to the D-League would be advantageous for leagues that are unaffiliated with the four major leagues as they may rely more heavily on the entrepreneurial nature as opposed to the brand extension like that of the NBA/D-League relationship.

Finally, there needs to be research that continues to explore the D-League and characteristics linking the D-League to success. A future route of study may be to consider the differences between D-League teams that have survived compared to teams that have not survived. If similar theoretical framework were to be used however, the issue of a limited sample size would still exist. Thus, other statistical methodologies should be explored in the future or a model that considers the significant predictors from this study could be considered.

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