

BEYOND ECONOMIC IMPACT: THE PSYCHIC INCOME RECEIVED BY THE  
CHAPEL HILL COMMUNITY FROM CAROLINA ATHLETICS

Lea Jeanne Zagorin

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Approved by:

Erienne Weight

Nels Popp

Korie Sawyer

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## **ABSTRACT**

Lea Jeanne Zagorin: Beyond Economic Impact: The Psychic Income Received by the Chapel Hill Community from Carolina Athletics  
(Under the direction of Erianne Weight)

Social and emotional benefits have often been cited as reasons for a community to invest in a college athletics program, despite there being little data to support or refute these assumptions. Athletics administrators often cite these social and emotional benefits (in addition to economic impact) as key justifications of public subsidy of collegiate athletics. In light of today's rapid commercialization of college athletics and heavy media scrutiny, an intense pressure on student-athletes and coaches to win and skyrocketing coaching salaries, it is important to gather data on the social, emotional and psychological impacts (psychic income) of collegiate athletics on the community that supports it.

The purpose of this study is to measure the psychic income residents of Chapel Hill, North Carolina receive from the university athletics department. Psychic income is the emotional and psychological benefit that residents perceive they receive from a local sports team or event, even though they may not physically attend sports events, and are not involved in organizing them. A modified scale of the Kim and Walker (2012) psychic income survey was used to evaluate psychic income received by Chapel Hill residents. Results demonstrated Chapel Hill residents receive an overall positive psychic income from Carolina athletics. This study fills an important gap in the literature relative to the measurement of non-economic benefits intercollegiate athletics can provide a college community. Results also provide helpful insight to athletics administrators about the perceptions community members hold of their athletic department.

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## **CHAPTER I**

### **INTRODUCTION**

Universities in the United States are not only considered to be some of the leading institutions of knowledge in the world but also a quintessential part of American culture. Local universities are often geographical markers for the surrounding region and in many cases, the university preceded the formation of the surrounding community. At the outset of higher education in the U.S., universities were considered “elite bastions of information and knowledge” and academic gowns were as distinct from townfolk as university campuses were from their surrounding architectures (Martin, 2012). This contrast invoked the expression “town and gown” which highlighted the vast separation between the culture of the academics and that of the citizens who lived in the surrounding towns (Martin, 2012). Many universities were eventually threatened by urban expansion and became geographically swallowed up by their surrounding communities. These schools became “urban campuses” not by design but by circumstance. In fact, 1914-1980 was known as the “Ivory Tower” period of higher education in the U.S. as these schools responded by building higher walls and stronger gates in an attempt to keep their campus separate from their surrounding communities (Martin, 2012). However, economic and social issues of the broader society continued to infiltrate



university campuses (Martin, 2012). From there, the relationships between universities and communities began to decline even further (Martin, 2012).

Eventually, universities began to realize that their futures were inextricably linked with those of their surrounding communities (and vice versa) (Rubin, 2000). University and community leaders realized they needed to begin working together, rather than both sides suffering from protectionist policies. College football emerged as a way to bridge the gap between the “high brow” collegiate environment and the “low brow” community members (Ingrassia, 2012). With this gradual shift in ideology, faculty, administrators, and politicians embraced a new model of sanctioned varsity athletics in the United States distinct from the athletics systems in the rest of the world (Ingrassia, 2012; Rader, 1999). Progressives in this movement believed the integration of football into the academy would foster town-gown relations in an era of “ivory tower” public-faculty dissonance, and provide an avenue to facilitate publicity for the university (Ingrassia, 2012; Oriard, 2012). The historical premise is that both academics and athletics are part of the American campus (Thelin, 2008).

“Town and gown” is still used today, but far more often to describe scenarios in which university and community (town-gown partnerships) are blossoming. Contrasting with many practices throughout the “Ivory Tower” period, many current academics embrace opportunities for their students to engage in the surrounding community and local residents feel welcome on campus and take ownership of their regional university. College athletics, integral to the identity of many institutions, are often praised for their intangible ability to help forge these

partnerships by uniting universities with their students, fans, friends and alumni (Kirwan & Turner, 2010). Fall Saturdays breathe excitement and camaraderie into college towns all across America as college football takes center stage. In the spring, NCAA March Madness grabs the attention of fans young and old as they painstakingly attempt to pick the perfect bracket and cheer their team on to the Final Four. “While it is undeniable that sports have tremendous cultural, social, and economic impacts, scholars have long struggled on how to distill and operationalize these impacts so that decision makers can make use of this research” (Chapin, 2002, p. 9). The social effects of college sport are undeniable but they are difficult to measure and quantify.

### **Purpose of the Study**

The purpose of this study is to measure the psychic income residents of Chapel Hill, North Carolina receive from the university athletics team and department. Psychic income, as defined by Crompton (2004), is the emotional and psychological benefit that residents perceive they receive from a local sports team or event, even though they do not physically attend sports events, and are not involved in organizing them. Crompton’s definition recognizes seven contributing factors of psychic income: community pride resulting from increased visibility, civic pride from being a sport event/host city, pride in efforts to resuscitate deteriorated areas, enhanced collective self-esteem, tangible focus for social bonding, excitement from the event visitors and emotional involvement with a sport event/team (Crompton, 2004; Walker & Kim, 2012). This theoretical framework will guide research into the following four research questions explored within the college

town context of Chapel Hill, North Carolina and the University of North Carolina at Chapel Hill Athletics Department.

### **Research Questions**

- RQ1: Which elements of psychic income are most significant within a college town community/collegiate athletics department relationship?
- RQ2: How does psychic income of college town residents vary based on a) gender; b) age; c) ethnicity; d) marital status; e) highest level of education completed; f) income; g) age of children; h) length of time lived in Chapel Hill; and i) self-identified affiliation and Carolina Athletics?
- RQ3: How much would Chapel Hill residents be willing to pay in order to keep Carolina Athletics from being dissolved? And finally,
- RQ4: Post-“scandal”, do Chapel Hill residents believe athletics is a valuable educational component of higher education?

### **Definition of Terms**

“Chapel Hill residents”, within the context of this study, refers to people who live within the official city limits of Chapel Hill, North Carolina and due to our sampling method, are designated to vote at a polling place under the jurisdiction of the Orange County Board of Elections during the 2016 presidential elections.

“Carolina Athletics” is a term used throughout this study that encompasses all teams, facilities, staff, logos, merchandise, broadcasts, history, etc. pertaining to the University of North Carolina at Chapel Hill’s department of athletics.

Other important terms related to the above stated research questions are “dissolved” and “valuable educational component”. Both terms are defined as they

pertain to Carolina Athletics. “Dissolved” means that the Carolina Athletics department would no longer exist: all teams would be eliminated, all staff would be laid off and the Carolina Athletics brand would no longer exist. “Valuable educational component” is a term used within this study to determine whether community residents believe varsity athletics hold educational value and should be housed within the University of North Carolina as it serves an educational function for student-athletes.

### **Assumptions**

It is assumed that all survey respondents will provide honest and accurate responses. This study also assumes that every survey respondent will interpret each of the survey questions in the same way.

### **Delimitations**

This study has been delimited by restricting the sample size to residents of Chapel Hill as stated above.

### **Limitations**

Limitations of this study include the fact that it is difficult to match the sample demographics of Chapel Hill residents exactly to the demographics of the entire city population. Another limitation is that respondents may interpret terms used in the survey differently, thus causing results to vary. However, in an effort to combat this limitation, definitions of these specific terms will be provided within the survey to give all participants the same interpretation of the questions.

## **Significance of the Study**

This study has the potential to provide significant data detailing the relationship between a collegiate athletics department and the community that it exists within, especially with regard to the non-economic benefits received by a community from a collegiate athletics program. Given the findings of Chapin (2002), Sanderson (2000) and Johnson & Whitehead (2000), it is clear that economic impact is no longer a strong enough justification for public subsidy of collegiate athletics (these studies address specifically the need to consider non-economic benefits created from public subsidy of sport facilities). The current body of literature addressing non-economic public benefits of sport is limited to facility construction (the aforementioned studies) and recently, specific sporting events (Kim & Walker, 2012). This study aims to expand upon the existing literature to examine the non-economic benefits received by a community from not only a single event or construction of a specific facility, but the long-lasting emotional and social impact of an entire collegiate athletics department upon its surrounding community.

This study has the potential to provide collegiate athletics administrators with alternative justifications for using public dollars to maintain college sport on campus and within a community. One such justification is the idea that collegiate athletics helps foster community bonding among students and the city community at large through major events and games, not to mention the bonding that can take place amongst community residents at such events. This study offers an opportunity to support this concept with data generated from city residents themselves. Psychic income is one avenue to quantifying this emotional benefit received by city

residents from collegiate athletics. Currently, there is very little data demonstrating the psychic income received by residents of a college town from their local collegiate athletics department/team. Ultimately, the results of this study will be able to shed light on the actual psychological and emotional benefits that city residents receive from their local university athletics department and therefore will be able to help collegiate athletics administrators make decisions better tailored to fostering their relationship with the community. Depending on the findings of this study, it also has the potential to better equip collegiate athletics administrators to justify the presence of athletics on campus and in the college town community at large.

## **CHAPTER II**

### **REVIEW OF LITERATURE**

#### **Evolution of Intercollegiate Athletics Within the Academy**

Since the very first intercollegiate athletics contest, a crew race between Yale and Harvard in 1852 organized completely by students, college sport has played a key role in defining the student experience within the greater history of higher education in America (Hyman & Van Jura, 2009; Smith, 2011). College athletics have precipitated universities adopting their own unique traditions including colors, mascots, fight songs and alma maters that create a bond between alums and the school, as well as a distinct brand that represents the school to the outside world (Hyman & Van Jura, 2009). These school traditions and trademarks, popularized through intercollegiate athletics, helped establish the institution of higher education as a hallmark of American culture.

As college athletics gained popularity among students on campuses across the country, institutions of higher education began to understand the importance of intercollegiate relations through sports (Hyman & Jura, 2009). College athletics had also gained tremendous viewership and fan interest, and thus, academic administrators began to take note of the opportunity college sports presented to foster positive public relations. However, by the end of the nineteenth century, college sport had experienced such quick growth in popularity of participation and

viewership that leading academics, such as President Eliot at Harvard and President Walker of MIT, were voicing their concern that intercollegiate athletics were out of control (Smith, 1991). Their concerns at the time mirror issues university presidents and collegiate athletics administrators struggle with today: the extreme pressure to win, compounded by the commercialization of sport, and the need for regulations and a regulatory body to ensure fairness and safety (Smith, 1991).

By the 1920s, intercollegiate athletics were quickly becoming an integral part of higher education in the United States. Faculty, administrators and politicians at this time had embraced a new model of sanctioned varsity athletics (at the crux of which was the regulatory power of the National Collegiate Athletic Association) that distinguished the model of athletics within higher education in the U.S. from other athletics systems around the world (Ingrassia, 2012; Rader, 1999). Public interest in collegiate athletics, which had always been high, continued to increase in intensity, due in part to particularly successful, entertaining programs but also to increased access to higher education throughout all segments of society (Smith, 1991).

Progressives in higher education believed that the integration of football into the academy was helping to foster “town-gown” relationships, facilitate publicity of the university and ultimately, make higher education more relatable to a wider range of the population (Ingrassia, 2012; Oriard, 2012). This train of thought set the historical premise that both academics and athletics were valuable parts of the American campus (Thelin, 2008).

With this ever-increasing interest in collegiate athletics, came increased commercialization, much as Presidents Eliot and Walker had predicted decades



before. Revenue from lucrative television broadcast rights ushered in a new era of commercialization in collegiate athletics and the trend only ballooned further after the *NCAA vs. Board of Regents of the University of Oklahoma* (1984) ruling allowed individual schools and conferences to negotiate their own contracts and reap direct financial benefits of televising their football games, without the NCAA as the middle man (Smith, 2001). With these revenues flowing directly to conferences and schools, an expectation emerged that athletics be financially self-sufficient within each university.

However, as the opportunities to commercialize collegiate athletics only grew in the late 20<sup>th</sup> century and on into the present college sport environment, a constant tug-of-war emerged between the values of big business and those of the academy. The NCAA was, and has continued to be, simultaneously criticized for both unfairly exercising its regulatory power, and also for inadequately responding to increased commercialization and ensuing excesses in college sport. University presidents have found themselves caught between the pressure applied by influential members of boards of trustees and alumni, who often demanded winning athletics programs, and faculty and educators who fear the rising commercialization of athletics and its impact on academic values (Smith, 2001). “Though conflict between the educational mission of the academy and the commercial pull of intercollegiate athletics has been a topic of public discourse since the inception of intercollegiate athletics within the American university (Chu, Segrave, & Becker, 1985; Rader, 1999), the number of issues and strength of the reformer voice seemed to be reaching a turning point in the early 2010s with dominant issues including

unprecedented spending (Knight Commission, 2009; 2010; Weight, Weight & Schneider, 2013), a call for additional athlete compensation (Benford, 2007; Forde, 2011; *O'Bannon v. NCAA*, 2009; Sack & Staurowsky, 1998), and a win-at-all-costs mentality placing the commercial and competitive pressure to win ahead of the academic mission of the university (Enlinson, 2013; McCormick & McCormick, 2006; Sack & Staurowsky, 1998; Sperber, 2000; Zimbalist, 1999)" (Weight & Cooper, 2015, p. 62).

Given the vast complexity of the current economic climate in collegiate athletics, and that a pillar of the industry's founding was to help bridge the gap between community and academy, it is important to take the current public perception of collegiate athletics into consideration when evaluating its place in American higher education. Many researchers have documented the powerful role the media plays in shaping the public perceptions related to issues, individuals and organizations (Bennett & Serrin, 2005; Lippmann, 1922; Scheufele, 1999) which implies a strong need for college athletics stakeholders to understand what messages the public is taking away from media coverage, and how that shapes their perception of collegiate athletics" (Weight & Cooper, 2015). According to a 2015 study by Weight and Cooper, front-page coverage of intercollegiate athletics presents "an industry characterized by lavish spending, unpaid workers in football and men's basketball, indulgence of entitled athletes and widespread corruption facilitating unpunished criminal activity" (Weight & Cooper, 2015, p. 17). The findings of this study show that to the casual, non-sport observer, the media leaves a largely negative opinion of college athletics, characterized by critical coverage of

financial exorbitance, conflicts between athletics and the academy and scandal (Weight & Cooper, 2015).

While this media coverage of the industry only highlights a small fraction of the overall institution of intercollegiate athletics, it could cause issues if the general public develops a poor opinion of college sport based on what they see on the front page (Weight & Cooper, 2015). While the industry does reap significant financial rewards from TV broadcasting rights and corporate sponsorships, the majority of schools still rely on institutional support (tax dollars) and student fees to keep their programs afloat (Weight & Cooper, 2015). Given the initial public benefits seen in collegiate athletics at its inception, these public subsidies were justified. However, amidst the current financial climate and media-fueled criticism of the industry, the institution of collegiate athletics must prove that its non-economic benefits to the academy, and society in general, are still substantial enough to warrant public support.

### **Psychic Income**

Sport plays a major role in American life. In fact, according to a study conducted by the United States Anti-Doping Agency, USADA, more than three-fifths of U.S. adults, approximately 162 million people, claim some relationship to sport-related activities (usada.org). Whether it is as an active participant or as a spectator, we, as a society, are drawn to sport for many reasons and it offers many positive benefits to society. Participation in sport provides an extensive array of benefits both to individuals and the collective community including confidence building, empowerment, social integration and cohesion, entertainment, and in helping to

define a national and cultural identity (Grieve & Sherry, 2012; Long & Sanderson, 2001). Sport can also teach important life lessons and bring people together in ways that strengthen communities (usada.org).

When discussing the purpose and public benefit of sport within a community or justifications for public subsidy of sport or sport facilities, one must go beyond economic impact to understand a concept that addresses the internal benefit of sport to the existing members of a community, as economists have consistently found that sport stadiums do not create a locale economic impact equal to that touted by supporters of these projects (Groothuis & Rotthoff, 2016; Dougherty, 2010). Looking past the dollars and cents that a sports team or event can bring to a community through tourism, new business, etc. one is confronted with the notion that citizens of any given community have an inherent emotional connection to sport.

Many residents experience feelings of enthusiasm, satisfaction and pleasure when a major sporting event is held in their town (Grieve & Sherry, 2012). Athletic team and event administrators continue to argue this side of the issue by touting the civic pride benefits they bring to a community when lobbying for public subsidy (Dougherty, 2010). Waitt supported this argument with the findings of his 2003 study in which he examined host city residents' enthusiasm towards the Sydney 2000 Olympic Games. He found that the majority of respondents perceived the benefits associated with hosting the event outweighed any costs (Waitt, 2003). Following this train of thought, "a sports team is an investment in the emotional infrastructure of a community" (Crompton, 2004, p. 49). One such avenue to

examining this emotional attachment a community feels toward a sport event or franchise is psychic income.

Researchers have examined individuals' psychological benefits as part of social impact analysis within the fields of tourism and event management since 1984, (Ritchie, 1984) however the specific term, "psychic income" was first used in the field of human resource management to describe an intrinsic reward contained in the job, such as emotional satisfaction and sense of achievement (Reif, 1975). Burgan and Mules later applied psychic income in the economic assessment of sport events, identifying this psychological benefit as an important piece of the overall assessment of large-scale sporting events on a community, albeit a new piece of assessment requiring further investigation (Burgan & Mules, 1992). This study explained that economists use the "contingent valuation method" (CVM) to quantify such abstract factors as psychic income when surveying a population. The CVM approach relies on questions of the "how much would you be willing to pay for \_\_\_\_\_?" variety in order to assign monetary value to benefits such as community excitement, civic pride, and social bonding (Burgan & Mules, 1992; Barlow & Forrest, 2015; Dougherty, 2010). These types of studies aimed to identify and measure any additional benefits to a community from the existence of a sports team (typically a professional one) not captured by the revenue generated from the team (Barlow & Forrest, 2015). A 2002 study investigating the social benefits received by citizens of Minneapolis from the Minnesota Vikings using a CVM approach revealed that on average, each household in Minnesota would be willing to pay \$530.65 to keep the Vikings in their state (Dougherty, 2010; Fenn & Crooker 2009).

Building off of this work, Gibson not only agreed that psychic income must be included in any economic impact analysis of sporting events within a community, but was also able to demonstrate that psychic income may play a greater role in the impact analysis of a small-scale event within a smaller community versus a large-scale event in a large metropolis (Gibson, 1998). Gibson asserted that a small-scale local event was more likely to enhance the way of life of the host community because in such a scenario, more community residents are likely to be involved in the event in some way, creating a greater overall positive effect within the community (Gibson, 1998). This finding directly addresses the immense potential impact of psychic income within a college town community as many college towns are small, tightknit communities and college athletics events are a major community event.

In application within a collegiate setting, sport economists Johnson and Whitehead employed the CVM method to quantify the positive externalities in the form of “direct benefits” or “public goods” produced by University of Kentucky’s men’s basketball team among residents of Lexington, Kentucky in an attempt to gauge community support for the public subsidization of a new Rupp Arena (Johnson & Whitehead, 2000). In their study “direct benefits” encompassed civic pride, fan loyalty and community spirit, all non-rival and non-excludable public goods (Johnson & Whitehead, 2000). These are all benefits incorporated within psychic income measures. This study marks one of the few examples of an attempt to measure non-economic impact benefits created by a collegiate athletics team within a college town community. While this study did find that 72% of respondents

regularly discussed UK basketball with others and about one third of respondents claimed they “live and die” with Wildcat basketball, more than two thirds of the respondents said they would be unwilling to pay higher taxes for a new Rupp Arena (Johnson & Whitehead, 2000). However, these researchers acknowledged that willingness to pay assessments didn’t deliver a complete assessment of the direct public benefits (psychic income components) in such a situation where there was no credible threat of losing the collegiate team to another city, as is often the case in these analyses of professional franchises (Johnson and Whitehead, 2000). Given the results of this study, further investigation into psychic income benefits (not solely based in CVM measures) generated by a collegiate athletics team within a college town community is necessary in order to advance the literature in this area.

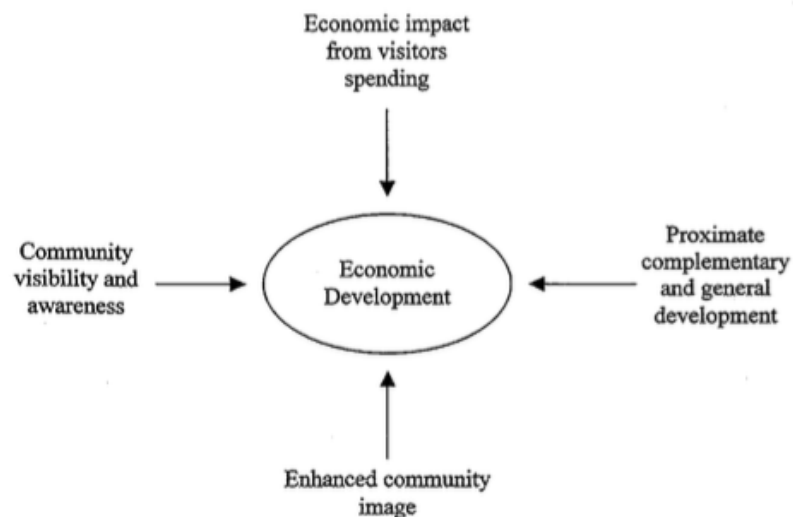
It is of note that when it comes to intangible benefits of civic pride, the results have been mixed. Using various techniques economists have concluded that sports teams do indeed provide public good benefits but that in general these benefits do not justify the entirety of public spending on sport teams (Groothuis & Rotthoff, 2016). For instance, Johnson, Groothuis and Whitehead (2001) looked at the Pittsburg Penguins’ ability to generate noneconomic community benefits in the form of civic pride (Johnson, Groothuis & Whitehead, 2001). They found that while the Penguins did generate substantial civic pride, residents did not transfer this civic pride into a willingness to pay for a new arena (similar to Johnson and Whitehead’s 2000 study findings on UK basketball) (Johnson, Groothuis & Whitehead, 2001). Again, these findings are mixed but point to the need for more research in this area.

## Conceptual Framework: Crompton's Psychic Income Paradigm

Building upon the psychic income and economic impact research, Crompton (2004) created the seminal definition and framework for psychic income within sport communities. Crompton defined psychic income as the emotional and psychological benefit residents perceive they receive, even though they do not physically attend sports events, and are not involved in organizing them (Crompton, 2004, p. 49). Instead of focusing on the benefits that outside visitors will bring to a community when they visit for a game or event, psychic income shifts to measuring the benefits that accrue to existing residents of the community due to the presence of a sport team/event (Crompton, 2004, p. 55). Crompton created his psychic income paradigm in an effort to identify a non-economic rationale for public subsidy of major league sports facilities (Crompton, 2004), however his framework for psychic income can be applied beyond the justification of new facility construction.

The conceptual framework Crompton created to define psychic income stems

**Figure 1 The Economic Development Paradigm**

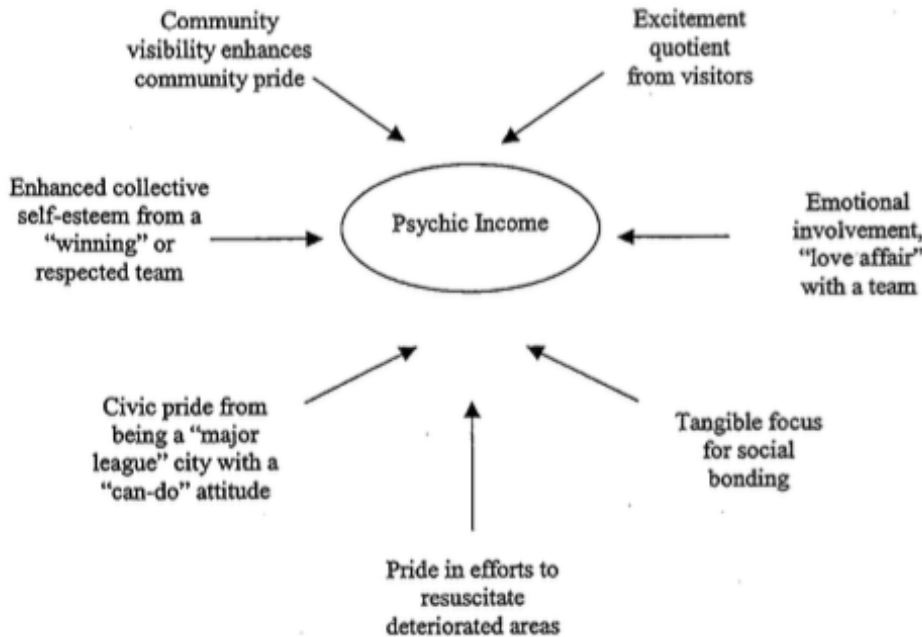




from the economic development paradigm, which is illustrated in Figure 1. Thus far, justifications for public subsidy have been almost exclusively external, meaning that they focus on the direct and indirect benefits a team or new facility can bring to a community by way of bringing in visitors and new dollars from outside cities (Crompton, 2004, p. 53). As seen in Figure 1, the components of the economic development paradigm are weighted toward these external benefits: economic impact from visitors spending, proximate complementary and general development, community visibility and awareness, and enhanced community image (Crompton, 2004, p. 54). However, as Crompton concluded, justifications for public subsidy that rely only on economic impact to a community are largely unconvincing, and as a result, he refocused this argument for public subsidy of sport away from economic impact to psychic income benefits.

Crompton's psychic income paradigm, as depicted in Figure 2, consists of seven components: community pride resulting from increased visibility, civic pride from being a sport event host city, pride in efforts to resuscitate deteriorated areas, enhanced collective self-esteem, tangible focus for social bonding, excitement from the event visitors and emotional involvement with a sport event (Crompton, 2004, p. 56). This model suggests that sports make a valuable contribution to the "excitement quotient" of a host community (Crompton, 2004, p. 55). The components of this paradigm create a framework for examining the increased community pride that residents feel when they live in a "city of stature" that is prominently featured on game broadcasts or whose name is mentioned in conjunction with reputable sports teams. This paradigm also encompasses the

**Figure 2 The Psychic Income Paradigm**



forum sports provide within a community for shared excitement and tangible social bonding opportunities. Crompton asserts that these opportunities, especially when the team is successful reinforce society’s emotional attachment to sports and confirm that society receives a psychic income from them” (Howard & Crompton, 2004).

The emotional involvement people feel with “their” team acts as a vehicle to help them escape the boredom or difficulty of everyday life and allows them to identify with a team, take part in the team’s success and feel better about themselves. In addition, sport acts a vehicle for developing a sense of community and for social bonding, as illustrated by one of the factors in the paradigm (Howard & Crompton, 2004, p. 182). These benefits are important to consider when taking stock of the value added to a community by a sports team.

Thus far, psychic income has almost exclusively been used to help justify the public subsidy of new sport facilities in a community or the cost of bringing a professional sports franchise to a new city (Chema, 1996, Sanderson 2000). Recently, it was also applied to measuring the social impact associated with major sporting events in a community. Kim and Walker (2012) created a scale of psychic income (SPI) to measure the social impact of Super Bowl XLII in Tampa Bay, Florida. This study modified Crompton's seven-factor psychic impact paradigm into their own conceptual framework and subsequent survey that allowed the researchers to quantify the psychic income for Tampa Bay residents (Kim & Walker, 2012). For their modified psychic income framework, Kim and Walker defined "community pride" as residents' sense of self-respect due to increased visibility nationally and internationally owing to an event (Kim & Walker, 2012). They clarified that, for the purposes of their study, Crompton's psychic income component of "community pride resulting from increased visibility" referred to a region's increased profile and affiliated pride when images of their city were showcased on television during event broadcasts (Hiller, 1989; Kim & Walker, 2012). They defined "civic pride from being a sport event host city" as an individual's positive mental reconstruction due to the enhanced image of their community being an event host city (Crompton, 2004; Johnson & Whitehead 2000, 2004; Kim & Walker). They detailed that "pride in efforts to resuscitate deteriorated areas" encompassed the local population's enhanced sense of community due to their belief that the community as a whole attempted to improve dilapidated areas of town for the sport event (Kim & Walker, 2012). The "enhanced collective self-esteem" component in the Super Bowl XLII

study examined how community members perceived their own community (also known as an internal self-esteem model). The “tangible focus for social bonding” element encompassed the notion that local sporting events increased residents’ interactions including friendships, sentiment and social participation (Funk, Mahony & Ridinger, 2002; Jurowski 2002; Trail & James, 2001; Wann, 1995). The researchers specified that “excitement from the event and visitors” referred to the residents’ emotionally stimulated state from hosting a sport event caused by both the event itself and the influx of visitors for the event (Chalip, 2006; Green, 2001). The final component of Crompton’s psychic income paradigm, “emotional involvement with a sport event”, was incorporated into the SPI to investigate the psychological impact upon local residents’ sense of motivation, arousal or interest toward hosting sport events and any loyalty to the event or team that involvement created (Kim & Walker, 2012).

**Table 1** *Crompton’s Psychic Income Paradigm vs. Kim & Walker’s Scale of Psychic Income Interpretation*

<b>Crompton’s Psychic Income Paradigm</b>	<b>Kim &amp; Walker Scale of Psychic Income Interpretation</b>
Community pride resulting from increased visibility	A region’s increased profile and affiliated pride when images of their city were showcased on television during event broadcasts
Civic pride from being a sport event host city	Individual’s positive mental reconstruction due to the enhanced image of their community being an event host city
Pride in efforts to resuscitate deteriorated areas	Local population’s enhanced sense of community due to their belief that the community as a whole attempted to improve dilapidated areas of town for the sport event
Enhance collective self-esteem	How community members perceived their own community’s sense of collective self-confidence, self-respect and well-being
Tangible focus for social bonding	Increased opportunities for residents to socialize with other residents (demonstrated by increased friendships, social participation or opportunity to spend time with family)
Excitement from the event and visitors	Residents’ emotionally stimulated state from hosting a sporting event
Emotional involvement with a sport event	Residents’ interest, motivation or arousal towards hosting an athletic event and any loyalty to that team that hosting the event created

The results of Kim & Walker's 2012 study indicated that overall psychological benefits received by Tampa Bay residents from hosting Super Bowl XLIII were high (Kim & Walker, 2012). After performing confirmatory factor analysis, their study yielded a 5-factor model of psychic income. By their results, the five most relevant and crucial components comprising the overall psychic income received by a community from hosting a sporting event are community pride/image, community attachment, event excitement, community infrastructure and community excitement (Kim & Walker, 2012). Their results confirmed that Tampa Bay residents' overall perception of the impact of sporting events on the community was positive and that community members supported the decision to host the Super Bowl post-event (Kim & Walker, 2012). In summary, this study was able to identify enhanced community morale as a result of hosting a specific mega-sporting event (Kim & Walker, 2012) and through data, make a case for considering intangible benefits, more qualitative dimensions and alternative justifications for public subsidy when calculating the social impacts derived from hosting a major sporting event (Kim & Walker, 2012).

However, psychic income has yet to be applied to the social impact of a collegiate athletics department/team on its local college town community. Perhaps this is because there is less ability for a collegiate athletics team and brand to change locations than there is with a professional franchise (as hypothesized in the 2000 Johnson & Whitehead study on UK basketball), or simply because collegiate teams have historically been so intertwined with the local culture that this impact is

simply taken for granted. This study will fill this gap in the literature by analyzing and quantifying the psychological impact (psychic income) of the Carolina Tar Heels on the local Chapel Hill community.

## **CHAPTER III**

### **METHODOLOGY**

#### **Population**

The target population for the study included residents of Chapel Hill, age 18 and up, who were registered to vote on Election Day, 2016 (November 8<sup>th</sup>, 2016). A systematic sampling technique was used to select participants: every 10<sup>th</sup> resident was approached as they left their designated polling place and was asked to take a survey at a table (located 50 feet from the polling location entrance) after casting their votes. Residents who agreed, took the SPI survey either on an iPad or on paper and was offered a small gift (stickers, pencils, pens, etc.) courtesy of Carolina Athletics and The Rams Club (fundraising arm of Carolina Athletics). Any resident who approached the table on his or her own and requested to participate in the study was also given the survey. The questionnaires were self-administered and included an informed consent statement, the condensed SPI survey, and socio-demographic questions. Residents who declined were not surveyed but were still offered the same small gifts as those who did take the survey. Participants were able to choose between taking the survey via Qualtrics on an iPad or via a paper version. Surveying was conducted at the following polling sites on Election Day to ensure a sufficiently varied socio-economic sample: The Friday Center and The Chapel Hill Public Library. One day of surveying was also conducted at Chapel of the Cross, on

November 1st to capture residents who opted for early voting and to test best practices in administering the survey prior to Election Day.

A total number of 270 questionnaires, yielding 270 useable surveys were completed and returned. After collecting all data, the sample demographics were compared to the demographic makeup of the overall Chapel Hill population (as described in the Chapel Hill, NC Census from 2014/2010) as a method of verifying a representative sample. The breakdown of ethnicity demographics from the Census data compared with that from the survey sample is displayed in Table 2 below.

**Table 2** *Ethnicity Demographics of Population and Sample*

<b>Ethnicity</b>	<b>Census (% of total)</b>	<b>Sample (% of total)</b>
Caucasian	72.8%	76%
African American	9.7%	9%
Hispanic	6.4%	3%
Asian	11.9%	5%
Native American	<1%	<1%
Other	2.7%	6%

The age of participants ranged from 18 to 85 years ( $M=41.59$ ;  $SD=18.35$ ). Of the respondents, 41% ( $n=109$ ) were male and 60% ( $n=160$ ) were female. 53.4% of Census respondents were female. 45% of the sample was single and 55% was married. 28% of respondents indicated they had 18 years old or younger. Income breakdown for the sample was as follows:  $M=\$72,070$ ,  $SD=\$87,489$ ,  $Min=\$0$ ,  $Max=\$750,000$ . The mean household income from the 2010 Chapel Hill Census (in 2014 dollars) was \$62,620. In terms of Chapel Hill residency, the mean years lived in Chapel Hill for the sample was reported to be 14.25 years ( $Min=0$  years,  $Max=56$



years). 22% of respondents indicated that they are current students at UNC-Chapel Hill. Only 1% of respondents indicated that they are current Rams Club members. 16% of respondents indicated that they are alumni of Carolina and 14% of respondents indicated that they are current staff or faculty members at the university. 9% of respondents indicated that they were affiliated with Carolina Athletics in more than one of the provided affiliation categories.

### **Data Collection**

The survey used in this study was developed directly from the scale of psychic income (SPI) used in Kim and Walker's 2012 study "Measuring the social impacts associated with the Super Bowl XLIII: Preliminary development of a psychic income scale". Kim and Walker generated a list of items for each component of Crompton's (2004) psychic income framework to arrive at their measure of psychological impact (SPI). The survey used a seven point Likert scale, ranging from 1=strongly disagree to 7=strongly agree, to assess participants' attitudes towards each of the SPI components.

To assess some overall economic perceptions of the Carolina Athletics department, the survey included one item regarding community members' perception of the economic impact (i.e. "What are your perceptions of the economic impact of Carolina Athletics on the Chapel Hill community?"). 7% of respondents held negative impressions of the economic impact of Carolina Athletics. 86% of participants held positive perceptions of the overall economic impact of Carolina Athletics on the Chapel Hill community. To gauge respondents' positive and negative

perceptions of Carolina Athletics on the community, one open-ended question was included.

For initial validation, Kim and Walker established face and content validity for their SPI through a panel of experts and field tests. A pilot study was then conducted to eliminate any poor performing items and test reliability of each item, which led to the finalized SPI used for their study with its 42 items. The reliability of each item in this pilot test was assessed using Cronbach’s alpha coefficients, corrected item-total correlations, means, standard deviations, and Cronbach’s alpha if-item-deleted statistics.

**Table 3** *Crompton’s Seven-factor Scale and Corresponding Survey Items*

<b>Factor</b>	<b>Item</b>
<b>Community pride resulting from increased visibility</b>	Enhanced media visibility
	Nationally known city
	Television stations broadcasted
<b>Civic pride from being a major college athletics host city</b>	Positive image as college athletics host city
	Positive recognition*
	Opportunity to show
<b>Pride in efforts to resuscitate deteriorated areas</b>	Campus regeneration**
	The quality of community public services and facilities**
	Opportunities to revive the community
<b>Enhanced collective self-esteem</b>	Community confidence
	Self-respect for the community
	Sense of well-being
<b>Tangible focus for social bonding</b>	Social interactions within my community
	Sense of belonging
	More socializing opportunities
<b>Excitement from athletic events and visitors</b>	Enjoyed interacting with visitors
	Brought excitement*
	Provided new activities*
<b>Emotional involvement with a college athletic department</b>	Very important
	Enjoyed watching more college athletics games and events **
	Interest in college athletics **

The Kim and Walker SPI survey was paired down for the purposes of this study from its original 42 items under 7 factors to 21 items under 7 factors. For the purposes of this survey, a new version of the Kim and Walker survey was created.

The factors and items were adjusted from the original Kim and Walker SPI survey to better fit the context of assessing the social impact of a collegiate athletics department instead of a Super Bowl. The 21 items were selected from the original 42 primarily based on which factors had achieved the highest Cronbach alpha coefficients in the original SPI survey. However, in a few instances, items with slightly lower alpha levels were incorporated into this new SPI survey due to their extreme relevancy to this study centered on intercollegiate athletics' impact on a college town community. These instances are marked with an asterisk (\*) in Table 3. Table 3 details each of the 7 factors and their corresponding survey items (3 per factor). Items in Table 3 marked with two asterisks (\*\*) are items that have been slightly modified from their original phrasing in the Kim & Walker SPI to be more applicable to the college athletics context. Two original questions were added at the end of the SPI questions for the purposes of this study. The first of these additional questions was "How much would you be willing to pay to keep Carolina Athletics from being dissolved?" and respondents indicated their willingness to pay (in dollars) on a sliding scale from \$0 to \$500. There was also an option for respondents to indicate an amount greater than \$500 should they wish to answer with a larger dollar figure. The second added question came in the form of a statement, "I believe athletics is a valuable educational component of higher education", that respondents were asked to indicate their agreement with on a sliding scale from 0 (strongly disagree) to 7 (strongly agree).

## **Data Analysis**

STATA statistical software was the main tool used in data analyses to estimate test reliability coefficients and further test the hypothesized measurement model (SPI instrument). Summary statistics, one-way ANOVA testing and a simple regression were run to analyze the data.

## CHAPTER IV

### RESULTS

#### Demographic Statistics

Residents of Chapel Hill, North Carolina were surveyed at three different polling locations during early voting and Election Day voting 2016. After collecting and organizing the survey responses, 269 total residents (*N*) were surveyed.

Descriptive statistics for the sample of Chapel Hill residents surveyed are found in Table 4 and Table 5. As discussed in Chapter 3, the sample demographic statistics aligned very well with the Chapel Hill Census data from 2010.

**Table 4** *Demographic Information of Chapel Hill Residents Surveyed (categorical)*

	%	<i>n</i>
<b>Sex</b>		
Male	41%	109
Female	60%	160
<b>Ethnicity</b>		
Caucasian	76%	204
African American	9%	25
Hispanic	3%	7
Asian	5%	12
Other	6%	16
<b>Marital Status</b>		
Single	45%	120
Married or domestic partnership	55%	147
<b>Highest Level of Education Completed</b>		
Some high school, no diploma	2%	4
High school graduate or equivalent	20%	55
Associate's Degree	5%	13
Bachelor's Degree	29%	78
Graduate Degree	43%	115
<b>Age of Children</b>		
No children	41%	109
Children in the house (18 and under)	28%	75
Children out of the house (19 and older)	23%	62
Children both in and out of the house	5%	12
<i>Overall N=269</i>		

**Table 4 (continued)** Demographic Information of Chapel Hill Residents Surveyed (categorical)

	%	n
<b>Affiliation to Carolina Athletics</b>		
Current student	22%	59
Alumnus	16%	44
Rams Club member	1%	2
Faculty	9%	23
Staff	5%	13
Current or former student-athlete	3%	7
No affiliation	34%	92
Multiple affiliations	9%	23
Strongly Agree	28%	76
No Impact	4%	11
Little-Positive	15%	40
Moderately Positive	37%	101
Largely Positive	34%	91
<b>Athletics is a Valuable Component of Higher Education</b>		
Strongly Disagree	5%	12
Moderately Disagree	6%	16
Slightly Disagree	9%	24
Neither Agree or Disagree	10%	28
Slightly Agree	19%	50
Moderately Agree	15%	40
Strongly Agree	28%	76
<i>Overall N=269</i>		

**Table 5** Demographic Information of Chapel Hill Residents Surveyed (continuous)

	<i>Mean</i>	<i>n</i>	<i>Std. Dev.</i>	<i>Min</i>	<i>Max</i>
Age	41.59	259	18.35	18	85
Income	\$72,070.00	207	\$87,489.00	\$0	\$750,000
Years lived in Chapel Hill	14.25	258	14.66	0	56
Educational Value	5.07	246	1.83	1	7
Dollar amount willing to give	\$688	184	\$4,070.22	0	\$50,000

In examining what dollar amount residents stated that would be willing to give to keep Carolina Athletics from being dissolved, it was determined that it was necessary to remove outliers from the data set. Three outliers (>\$1,000,000) were removed from the data set yielding a mean dollar amount of \$688, with the minimum amount listed being \$0 and the maximum amount being \$50,000. The median amount residents were willing to give was \$10.

### Summary Statistical Analysis

Simple summary statistical analyses were conducted to determine the mean (*M*) and standard deviation (*SD*) for the Scale of Psychic Income (SPI) questions (21 questions across 7 categories). SPI questions consisted of a statement about Carolina Athletics' impact on the Chapel Hill community and asked that respondents

indicate their agreement with the statement on a scale ranging from 1- strongly disagree to 7- strongly agree. The term “SPI ranking” is used throughout this study to refer to the Likert-scale score residents selected on the SPI questions (21 overall questions across seven categories). These results are displayed in Table 6. Also displayed in Table 6 are the reliability measures ( $\alpha$ ) for each of the seven categories as a whole. The overall mean ( $M=5.12$ ) and alpha-level ( $\alpha=.954$ ) of the SPI is listed at the bottom of Table 6.

**Table 6** Summary Statistics for Scale of Psychic Income Questions

	Mean	n	Std. Dev.	Min	Max	$\alpha$
<b>Community pride resulting from increased visibility</b>	5.76	264	1.26	1	7	0.844
Our community receives enhanced media visibility due to Carolina Athletics.	5.99	261	1.31	1	7	
Our city is a nationally known city due to Carolina Athletics.	5.9	264	1.48	1	7	
Television stations showcase our community due to Carolina Athletics.	5.46	255	1.47	1	7	
<b>Civic pride from being a major college athletics host city</b>	5.35	260	1.31	1	7	0.822
Our community has a positive image as a college athletics host city.	5.4	255	1.53	1	7	
Our community receives positive recognition because of Carolina Athletics.	5.19	255	1.51	1	7	
Carolina Athletics provides opportunities to show our community off.	5.54	258	1.42	1	7	
<b>Pride in efforts to resuscitate deteriorated areas</b>	4.95	249	1.42	1	7	0.907
Carolina Athletics helps with campus regeneration and beautification efforts.	5.08	245	1.52	1	7	
Carolina Athletics has helped improve the quality of community public services and facilities.	4.87	245	1.59	1	7	
Carolina Athletics provides opportunities to revive the community.	4.92	248	1.56	1	7	
<b>Enhances collective self-esteem</b>	5.01	256	1.5	1	7	0.932
Carolina Athletics enhances community confidence.	5.14	253	1.56	1	7	
Carolina Athletics enhances self-respect for the community.	4.95	253	1.58	1	7	
Carolina Athletics enhances our community sense of well-being.	4.97	253	1.65	1	7	
<b>Tangible focus for social bonding</b>	5.47	258	1.46	1	7	0.901
Carolina Athletics creates social interactions within my community.	5.63	257	1.56	1	7	
Carolina Athletics creates a sense of belonging within my community.	5.28	253	1.65	1	7	
Carolina Athletics creates socializing opportunities within my community.	5.58	253	1.48	1	7	
<b>Excitement from athletic events and visitors</b>	5.23	257	1.45	1	7	0.834
I enjoy interacting with visitors in town for Carolina Athletics events.	4.65	251	1.88	1	7	
Carolina Athletics brings excitement to our community.	5.88	256	1.42	1	7	
Carolina Athletics provides new activities to our community.	5.17	248	1.6	1	7	
<b>Emotional involvement</b>	4.3	256	1.99	1	7	0.884
Being emotionally involved in a collegiate athletics department is very important to me.	4.04	253	2.17	1	7	

I enjoy watching more college athletics games and events because of Carolina Athletics.	4.64	254	2.15	1	7
I am interested in college athletics because of Carolina Athletics.	4.23	255	2.29	1	7
<i>*Scale ranged from 1=Strongly disagree to 7=strongly agree</i>					
<b>Overall Scale mean=5.12</b>					
<b>Overall Scale <math>\alpha</math> = .954</b>					

## One-Way Analysis of Variance

One-way analysis of variance (ANOVA) was conducted to determine the degree to which different demographic groups perceived their psychic income from Carolina Athletics. The results of this one-way ANOVA evaluation for all categorical demographic variables are displayed in Table 7. These categorical demographic variable were “sex”, “ethnicity”, “marital status”, “highest level of education completed”, “age of children”, and “affiliation to Carolina Athletics”. The mean (*M*) SPI ranking and standard deviation (*SD*) for each demographic subgroup is displayed in Table 7 Demographic categories with  $p < 0.05$  indicated a statistically significant difference in perceived psychic income received between at least one (or more) subgroups of that demographic factor. There was a significant interaction,  $F(1, 264) = 7.83, p = 0.006$ , in psychic income received within the “marital status” demographic category. Single residents indicated a mean SPI ranking of 5.35, as compared to married residents who indicated a mean SPI ranking of 4.93. Again, “SPI ranking” refers to the score residents selected on the seven-point Likert-scale SPI questions (21 questions across seven categories).

The other demographic category that yielded a statistically significant difference,  $F(4, 259) = 5.16, p = 0.001$ , in perceived psychic income received between subgroups was “highest level of education completed” ( $p = 0.001$ ). Here again, the *p-value* is far below the significant threshold. With five (5) subgroups in this



demographic category, a post-hoc test was conducted to determine which specific subgroups yielded statistically significant differences in perceived received psychic income. Post-hoc testing revealed that residents whose highest level of education completed was a high school degree (or the equivalent) perceived a statistically significant ( $p=0.001$ ) higher level of psychic income than those who'd completed a graduate degree. Post-hoc testing also showed that residents whose highest level of education completed was a high school degree (or the equivalent) perceived a statistically significant ( $p=0.005$ ) higher level of psychic income than those who'd completed a bachelor's degree. Residents with a graduate degree had a mean SPI ranking of 4.78, versus a mean SPI ranking of 5.56 for residents whose highest level of education completed was a high school diploma. Residents whose highest level of education completed was a bachelor's degree had a mean SPI ranking of 5.39.

All other demographic categories did not yield statistically significant differences between subgroups according to the one-way analysis of variance. Summary statistics for each of these groups is listed below in Table 7.

**Table 7** Degree of Psychic Income Received varying by Demographics (categorical)

	<i>N</i>	<i>Mean</i>	<i>SD</i>	<i>F</i>	<i>p</i>
<b>Sex</b>	266	5.12	1.25	1.192	0.276
Male	106	5.01	1.27		
Female	160	5.19	1.23		
<b>Ethnicity</b>	263	5.13	1.25	0.472	0.797
Caucasian	202	5.11	1.28		
African American	25	5.39	1.23		
Hispanic	7	5.23	0.69		
Asian	12	5.12	1.03		
Other	16	4.86	1.36		
<b>Marital Status</b>	266	5.12	1.25	7.83	0.006
Single	120	5.35	1.11		
Married or domestic partnership	146	4.93	1.32		
<b>Highest Level of Education Completed</b>	264	5.14	1.23	5.16	0.001
Some high school, no diploma	4	5.18	0.23		
High school graduate or equivalent	55	5.56	1.03		
Associate's Degree	13	5.08	0.844		
Bachelor's Degree	78	5.39	1.08		
Graduate Degree	114	4.78	1.37		
<b>Age of Children</b>	257	5.12	1.25	1.94	0.124
No children	109	5.27	1.14		
Children in the house (18 and under)	74	5.08	1.35		
Children out of the house (19 and older)	62	5.04	1.27		
Children both in and out of the house	12	4.41	1.29		
<b>Affiliation to Carolina Athletics</b>	262	5.12	1.25	1.61	0.133
Current student	59	5.38	1.16		
Alumnus	44	4.88	1.32		
Rams Club member	2	5.59	1.59		
Faculty	23	4.98	1.24		
Staff	13	5.1	1.32		
Current or former student-athlete	7	5.45	1.61		
No affiliation	92	4.94	1.26		
Multiple affiliations	22	5.66	1		

## Simple Regression

To assess the relationship between the continuous demographic variables and SPI rankings, a simple linear regression was performed. “Age”, “income”, “fan identity”, “total time lived in Chapel Hill”, and “perception of economic impact of Carolina Athletics on Chapel Hill community” were the explanatory variables in this

regression analysis. SPI ranking was the dependent variable. The overall  $R^2$  for this regression was  $0.441$ , meaning that the four significant explanatory variables explain 44.1% of the variance in the dependent variable—SPI ranking. All explanatory variables except for “income” and “total time lived in Chapel Hill” yielded statistically significant results, with  $p < 0.05$ . “Age” significantly predicted SPI ranking,  $\beta = -0.207$ ,  $t(190) = -2.573$ ,  $p = .011$ . The beta coefficient ( $\beta$ ) for “age” was the only negative beta coefficient, signifying that as age increases by one year, SPI ranking decreases by 0.207 units. “Fan identity” significantly predicted SPI ranking,  $\beta = 0.359$ ,  $t(190) = 6.09$ ,  $p < 0.001$ . The beta coefficient ( $\beta$ ) for “fan identity” was 0.359, signifying that as the fan identity index increases by one unit, SPI ranking increases by 0.359 units. “Perception of economic impact” significantly predicted SPI ranking,  $\beta = 0.445$ ,  $t(190) = 7.726$ ,  $p < 0.001$ . The beta coefficient ( $\beta$ ) for “perception of economic impact” was 0.445, signifying that as perception of economic impact increases by one unit, SPI ranking increases by 0.445 units. These results are displayed in Table 8.

**Table 8** *Correlation of Psychic Income Received & Demographics (continuous)*

	$\beta$	$t$	$p$
Age	-0.207	-2.573	0.011
Income	0.09	1.393	0.165
Fan Identity	0.359	6.094	0.000
Perception of Economic Impact	0.445	7.726	0.000
Total Time Lived in CH	0.021	0.285	0.776
$R^2 = 0.441$			

## Open-Ended Responses

Two open-ended questions were posed at the end of the survey asking respondents to list the primary positive and primary negative impacts of Carolina

Athletics on the Chapel Hill community. All responses were transcribed and grouped into general themes. The most commonly cited positive impacts of Carolina Athletics were that sport teaches important life lessons, that UNC/college athletics brings people together, that it brings publicity and recognition to the school/community, economic impact and overall enjoyment/excitement. The most commonly cited negative impacts of Carolina Athletics on the Chapel Hill community were traffic, the academic “scandal” and its subsequent effects (bad publicity, disappointed fans/community members), and the general public perception of overspending on athletics coupled with unpaid workers in revenue sports (men’s basketball and football).

## **CHAPTER V**

### **DISCUSSION**

American universities and colleges have long played significant roles in the formation and cultivation of the communities they exist within. Collegiate athletics, commonly dubbed “the front porch of the University”, has historically played a crucial role in connecting the community to the campus (Hyman & Van Jura, 2009; Ingrassia 2012; Kirwan & Turner, 2010; Oriard 2012;). In doing so, collegiate athletics has traditionally been assumed to provide excitement, socializing opportunities and a unifying cause for residents to rally behind. These social and emotional benefits have often been cited as reasons for a community to invest in a college athletics program, despite the fact that there is little data to support or refute these assumptions. Athletics administrators often cite these social and emotional benefits (in addition to economic impact) as key justifications of public subsidy of collegiate athletics (examples include student fees or tax increases to help fund a new facility, etc.). In light of today’s rapid commercialization of college athletics and heavy media scrutiny, an intense pressure on student-athletes and coaches to win and skyrocketing coaching salaries, it is important to gather data on the social, emotional and psychological impacts (psychic income) of collegiate athletics on the community that supports it.

**RQ1: Which elements of psychic income are most significant within a college town community/collegiate athletics department relationship?**

To answer this research question, the means of each of the seven SPI categories were examined. The seven SPI categories were: pride from visibility, pride from being a collegiate athletics host city, pride from resuscitation of the campus/community, enhancement of collective community self-esteem, increased opportunity for social bonding and emotional involvement. “Pride from visibility” had the highest mean across all categories ( $M=5.76$ ). Questions posed within this category aimed to examine the social benefit residents feel they receive from having their community showcased on local and national media due to Carolina Athletics. This was one of the SPI categories hypothesized to be most significant within the Chapel Hill community, in part due to the easily understood and recognized themes it described. For example, it is much easier to recognize that seeing shots of your local downtown area on television gives you a sense of pride for your city (“pride from visibility”) than to decide whether Carolina Athletics enhances self-respect for the community. The second-most highly rated SPI category was “increased social bonding” ( $M=5.47$ ). The questions from this section inquire about residents’ perceived opportunities to socialize due to Carolina Athletics. The third-most highly ranked category was “pride from being a collegiate athletics host city” ( $M=5.35$ ), which addresses the positive image and recognition Carolina Athletics helps to create and develop for the Chapel Hill community.

These results mirror those of Waitt’s 2003 study examining Sydney residents’ enthusiasm towards the hosting the Olympic games, which determined

that the majority of respondents perceived the benefits associated with hosting the event outweighed any costs (Waitt 2003). These results also align with conclusions from numerous other psychic income studies asserting that sport teams do indeed generate significant intangible public good benefits such as civic pride (Groothuis & Rotthoff 2016; John, Groothuis & Whitehead 2001) as well as the findings of more general social impact analyses concluding that residents feel enthusiasm, satisfaction and pleasure when sporting events are held in their town (Grieve & Sherry, 2012). The results of this study, however, make an important contribution to the literature in that they confirm a collegiate team is capable of providing psychic income benefits (not solely based in contingent-valuation measures) to a college town community.

All SPI category means were greater than “4”, meaning that on average, residents agreed with the scale of psychic income statements. Because all statements were phrased in a positive manner (e.g. “our community receives enhanced media visibility due to Carolina Athletics”) and residents were asked to rank their agreement with the statement, these results indicate that Chapel Hill residents perceive that they receive an overall positive psychic income from Carolina Athletics. They feel as though they receive social benefit from Carolina Athletics being a part of their community. In fact, the overall SPI scale mean was 5.12, demonstrating that on average, Chapel Hill residents feel a moderately strong positive psychic income. For practitioners, particularly athletics administrators at UNC-Chapel Hill, these results present several exciting opportunities to justify public support of the athletics department. Administrators could cite these results

when asking for public subsidy of a new facility or when asking a community member to give a charitable contribution to the athletics scholarship endowment as these results substantiate the claim that their gift would not only be benefitting student-athletes, but the community at large as well. The results of this study could also aid a corporate sponsorship seller at UNC attempting to sign a deal with a local Chapel Hill company. They could even be an asset to Carolina coaches in recruiting, helping to showcase the tremendous community support Chapel Hill offers its student-athletes and UNC athletics programs.

In answering this research question, it is also important to note the reliability measures associated with the SPI instrument, as this was the first study to use this adaptation of the scale. The overall scale alpha-level was 0.954, indicating that the scale as a whole was very reliable and could be used for future studies. The alpha-levels for each of the seven SPI categories were also very high—0.844, 0.822, 0.907, 0.932, 0.901, 0.834, 0.884 respectively. These results suggest that each of the three questions asked within each of the seven SPI categories reliably allowed respondents to evaluate the overarching SPI category (in other words, they all accurately asked residents to evaluate the same thing). For an initial investigation into the psychic income received by college town residents from the local collegiate athletics program, the strong alpha-levels demonstrated by this SPI scale indicate that this scale could reliably be used for future research in this area. This is highly important for researchers, as all former psychic income instruments have been geared toward professional teams or specific athletics events rather than college sport impact.



Also of note were the standard deviations of the scale. For all 21 SPI questions and for the seven SPI categories, the standard deviation was greater than one. These large standard deviation values indicate that there was a wide range of answers to the SPI questions; there were a large number of respondents answering the questions on the low end of the Likert-scale and a large number of respondents answering the questions on the high end of the Likert-scale. Ultimately, these responses averaged to a relatively moderate and positive overall mean ( $M=5.12$ ). This polarization is concerning, but is supported by previous research and could be unique to the Chapel Hill area because of the unresolved “scandal” which has brought tremendous negative publicity to the university and community over the last five years (Lewinter, Weight, Osborne, Brunner, 2013).

***RQ2: How does psychic income of college town residents vary based on a) gender; b) age; c) ethnicity; d) marital status; e) highest level of education completed; f) income; g) age of children; h) length of time lived in Chapel Hill; and i) self-identified affiliation with Carolina Athletics?***

To answer this research question, one-way ANOVA tests were performed between all categorical demographic variables and SPI rankings. Simple regression testing was run to determine the correlation between all continuous demographic variables and SPI rankings.

Two categorical demographic variables indicated statistically significant differences ( $p<0.05$ ): “marital status” and “highest level of education completed”. Singles perceived greater overall psychic impact than married couples. The mean SPI ranking for singles was 5.35 and the mean SPI ranking for those who are

married was 4.93. Bringing in some findings from RQ1, a conclusion can be drawn that perhaps part of the reason singles perceive a great psychic income from Carolina Athletics is because it creates social bonding opportunities (the second-most highly rated SPI category was “increased social bonding”). Based on these results, it’s possible that singles may feel that Carolina athletics creates opportunities for them to meet other people in the community and build their network of acquaintances, friends, possible significant others, etc. Understanding this distinction between perceived psychic income of singles versus married people is important for athletics administrators. Used properly, this data affords sport marketers, fundraisers, and even corporate sponsorship sellers to tailor their messages more specifically to their audience. For example, if a Rams Club gift officer were going to ask a single donor (rather than a married donor) for a scholarship, they could, emphasize the social bonding opportunities both the donor and the community would receive from the gift.

The second categorical demographic variable that yielded a statistically significant result was “highest level of education completed”. There existed a significant difference in SPI means between respondents with a high school diploma ( $M= 5.56$ ) and those with a graduate degree ( $M=4.78$ ), and those with a high school diploma ( $M=5.56$ ) and a bachelor’s degree ( $M=5.39$ ). These results indicate that Chapel Hill residents with a higher-level degree perceive less psychic income than those with a high school diploma only. One possible explanation for this phenomena could that be that residents who have obtained a graduate degree have invested an extensive amount of time and money into a university to earn their graduate degree

and therefore may have more of a vested interest in the academic aspects of a university rather than athletics.

Following simple regression analysis, three continuous demographic variables yielded statistically significant results. The variable “age” was the only one to yield an inverse relationship with SPI ranking ( $\beta=-.207$ ). In other words, according to the results, as age increases by one year, psychic income received decreases by 0.207 SPI scale units. “Fan identity” and “perception of economic impact” yielded positive relationships with psychic income with beta-values of 0.359 and 0.445 respectively. Therefore, based on these results, it can be concluded that as fan identity increases by 1 scale unit, psychic income increases by 0.359 scale units; and as perception of economic impact increases by 1 scale unit, psychic income increases by 0.445 scale units.

Age, gender, highest level of education completed, length of time lived in Chapel Hill and affiliation to Carolina Athletics were all the demographic variables that were hypothesized would demonstrate significant difference in psychic income received. Of those five variables hypothesized, two did not result in statistically significant results; however, the fact that one of these two variables did not reveal statistically significant results is practically significant. These results suggest it doesn’t matter if you are affiliated with Carolina Athletics or not (or in what way), you will still receive psychic income from Carolina Athletics because the mean of the overall SPI scale was 5.12 (positive end of the Likert-scale). Here again, these results help practitioners make the case for public subsidy of college athletics because they

show that Carolina Athletics benefits the entire community, whether you are affiliated in a direct way or not.

These results build on the 2012 Kim & Walker study (from which the SPI used in this UNC study was adapted) in that they provide a breakdown of psychic income by demographic, where the Tampa Bay Super Bowl study did not. Granted, one study looked at psychic income generated by a professional sports mega-event and the other examined psychic income from a sustained college athletics program, the additional information and specific demographic breakdown of perceived psychic income received is important to building the body of research in a relatively young area of study.

***RQ3: How much would Chapel Hill residents be willing to pay in order to keep Carolina Athletics from being dissolved?***

The mean dollar amount Chapel Hill residents stated that they would be willing to pay to keep Carolina Athletics from being dissolved was \$688, with a standard deviation of \$184. After removing outliers (three responses were greater than \$1,000,000) above \$750,000, the minimum amount respondents were willing to give was \$0 and the maximum amount was \$750,000.

Before conducting the survey, the hypothesized dollar amount that Chapel Hill residents would be willing to give was \$30 per person. To a large extent, this hypothesis was an estimation based on previous literature stating that perceived psychic income does not necessarily translate in a dollar amount that residents are willing to give to the athletics team in question (CITE). However, one study by Fenn and Crooker (2009) determined that the average household valuation of the

Minnesota Vikings franchise was \$530.65, an amount not vastly different from the \$688 valuation of Carolina Athletics found in this study.

For a collegiate athletics administrator, this mean dollar amount (\$688) demonstrates Carolina Athletics has an overall value to Chapel Hill residents that is relatively high. The median amount residents were willing to give was \$10. While this median dollar amount depicts a much more mild relationship between psychic income and dollar amount willing to give, it still supports the conclusion that non-economic benefits are capable of translating into some type of economic value. It is important to note the question was intentionally posed to residents in a manner that required them to consider what they would give in an effort to keep Carolina Athletics from dissolving (something that is highly unlikely to ever come to fruition), this data does show how highly valued Carolina Athletics is within the community. On average, residents would be willing to pay \$688 each to keep Carolina Athletics in tact. This information gives fundraisers a useful reference point. The Rams Club (fundraising arm of Carolina Athletics) offers an annual giving level of \$600 per year (called the "Rameses" giving level), with annual memberships starting at only \$100 (a figure much closer to the median dollar value Chapel Hill residents listed). These giving levels, of course, must be renewed each year to maintain benefits with The Rams Club. While there isn't an credible risk of Carolina Athletics actually being dissolved, rapidly rising scholarship costs do pose an immediate threat to the current spending model and often force administrators to consider avenues to reduce spending (options include decreased team travel, uniform budget cuts across the department, consideration of cutting a sport, etc.) (Brady, Berkowitz & Upton,

2016). This data would suggest that Rams Club fundraisers would have some luck bringing in gifts using the argument that without increased giving from community members, Carolina Athletics may be forced to make decisions/budget cuts that change its structure/sport offerings significantly.

These results are also significant as they relate to the literature. Previous contingent-valuation method (CVM) studies, such as the 2001 Johnson & Whitehead study on University of Kentucky men's basketball, have shown that perceived psychological benefit from an athletics team doesn't necessarily translate into a dollar value that residents are willing to pay. For example, Johnson & Whitehead concluded that while 72% of respondents in Lexington, KY "regularly discussed UK basketball" and 1/3 of respondents claimed they "lived and died" with Wildcat basketball, yet more than 2/3 of respondents said they would be unwilling to pay higher taxes to support the building of a new Rupp Arena. Again, it is important to note that this study was inquiring whether Lexington residents would be willing to help shoulder the financial burden of building a new arena for their Cats, while the survey given to Chapel Hill residents asked what they would be willing to pay to keep Carolina Athletics in tact. Other previous psychic income studies have had similar focuses to that of the UK men's basketball study in that they asked about dollar amounts residents would be willing to give (public subsidy) to keep a professional sports team from relocating (Dougherty, 2010; Fenn & Crooker, 2009) or to help a college team build a new facility (Johnson & Whitehead, 2001). While this psychic income survey asked the dollar figure residents would be willing to give to keep Carolina Athletics from being dissolved (an important distinction from the

aforementioned previous psychic income studies), the results of this study do show that perceived psychic income translates into real dollars that residents would be willing to contribute.

***RQ4: Post-“scandal”, do Chapel Hill residents believe athletics is a valuable educational component of higher education?***

Respondents were asked to indicate their agreement with the following statement: “Varsity athletics should be a part of the University of North Carolina because it serves as an educational function for student-athletes and is therefore a valuable component of higher education.” The mean response ranking was 5.07 on a scale of 1-7, indicating on average, residents do feel that athletics is a valuable component of higher education. These results support the originally stated hypothesis. It is of particular interest to note that the academic “scandal” at UNC was highly discussed in the open-ended response section of the survey as one of the negative impacts of Carolina Athletics on the Chapel Hill community, nevertheless respondents asserted that athletics is still a valuable educational component of higher education. These findings support the body of research that asserts that even amidst a highly commercialized industry, collegiate athletics remains dedicated to preserving the educational value of the student-athlete experience. (Benford, 2007; Smith, 2001). However, these same studies have cautioned that the responsibility lies with the NCAA and with institutional athletics administrators to maintain these academic values (Smith, 2001). One would argue that given the results of this study, UNC athletics administrators should do all they can to maintain

Chapel Hill residents' favorable view of the academic value of Carolina Athletics, especially given the academic "scandal" saga that unfolded over the past five years.

These results are highly actionable and significant for practitioners who continue to assert that college athletics plays an important role in American higher education. This question was specific to the Chapel Hill community and to the current state of Carolina Athletics (post-"scandal") however, the results suggest that even given the negative media coverage, Chapel Hill residents continue to view athletics as educational and valuable. These results aid athletic administrators in making the assertion that college athletics remains focused on the "student-athlete" experience and it strengthens their argument for continued resources being allocated to cultivating athletics within the academy (Kirwan & Turner, 2010; Knight Commission, 2010).

## **Conclusion**

In summary, this study demonstrated reliability of the modified SPI instrument and provided evidence to support the assertion that residents of Chapel Hill, NC receive a positive psychic income from Carolina Athletics. Of particular interest is that those psychic income subcategories with the highest category means (pride from increased visibility, opportunities for social bonding, civic pride from being a major college athletics host city) were also some of the most prevalent themes listed by residents in the open-ended response section of the survey as positive impacts of Carolina Athletics. Residents cited pride from seeing their town on national media outlets, the Tar Heels bringing people together and providing a cause to rally behind as being important positive impacts of Carolina Athletics. It



was interesting that not only did residents rank these psychic income components highly within the SPI questions, but they also arrived at these benefits on their own in the open-ended response section. Several of the most commonly cited responses from the open-ended questions were also supported in the literature. For example, residents stated that sport teaches important life lessons and that Carolina Athletics/college athletics in general brings people together as positive impacts. Both of these qualities are also cited by USADA as benefits of sport within the community (usada.org). The themes emerging in the negative impacts section mirror the findings of Weight and Cooper's 2015 study on media depiction of collegiate athletics (bad publicity regarding academic "scandal", overspending, unpaid workers).

For practitioners, the results of this survey demonstrate that psychic income should be considered, along with economic impact when discussing the overall impact college athletics has on a community. This study also helps to substantiate claims that college athletics helps foster community bonding and provides quantifiable psychological and emotional benefits to a community, and in doing so, helps athletics administrators justify their department's presence on campus and in the community. And on the simplest level, the results of this study afford administrators at UNC better understand the perceptions city residents hold of their athletic department.

### **Limitations & Suggestions for Future Research**

The results of this study support Crompton's assertion that "a sports team is an investment in the emotional infrastructure of a community" (Crompton, 2004, p.

49). While further research is needed to expand this claim beyond Chapel Hill and the scope of Carolina Athletics, this study fills an important gap in the literature by evaluating the psychic income received by residents of a college town from a college athletics department outside the context of building a new facility.

While it may be possible that these results can be replicated in similar college towns and sport-affiliated communities, it should be noted that Chapel Hill and Carolina Athletics present a unique sample size for several reasons. Specifically,, Carolina Athletics has had incredible athletic success over its history both in men's basketball (six national titles) and Olympic sports such as women's soccer, men's and women's lacrosse and women's tennis (all have won national titles within the last five years). There are few other institutions that sustain this level of success across its athletic programs, especially while maintaining high academic rankings (UNC ranks 27<sup>th</sup> among the world's top 500 research universities and 9<sup>th</sup> among US public campuses according to the *2015 US News and World Report Best Global Universities* rankings). Therefore, while the specific results of this study are highly actionable for athletic administrators at UNC-Chapel Hill, perhaps the most important takeaway from this study is the testing of the SPI instrument modified for a collegiate athletics/college town community context.

With the validated instrument, future research is needed to evaluate the psychic income received in other college towns from other collegiate athletics programs for comparative and potential generalizable purposes. Researchers could examine the psychic income from college athletics programs in other environments such as a larger metropolitan area (ex: Northwestern or Boston College) or the

psychic income received by residents of a college town but from a program with less athletic and academic success than UNC (ex: Iowa State or Arizona State). Other suggestions for future research include performing the same study in Chapel Hill in the future with years removed from the “scandal”, or surveying residents of other college towns regarding psychic income received from their local collegiate athletics program and comparing results to the psychic income received by Chapel Hill from Carolina athletics.

In conducting this study, I would suggest that the term “psychic income” be renamed to “emotional impact”. As Crompton’s quote suggests, sports teams are an investment in emotional infrastructure and when the seven components of psychic income are closely examined, they related much more to the title of “emotional impact” than “psychic income”. The term “psychic income” itself can be misleading and I believe “emotional impact” more accurately describes the benefits that the idea encompasses.

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